

# **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's Hitchcock Road Sand Project approval (06\_0104) dated 3 February 2009 and provided in Appendix 1 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 15 November 2011 the Department of Planning & Infrastructure advised PF Formation it had reviewed the first Independent Environmental Audit dated April 2011 and the response to the audit recommendations and it was satisfied with the form, content and presentation and they had no further requirements. The form, content and presentation was then generally followed in the April 2014 audit and in this April 2017 audit. The independent environmental audit also acknowledges the use of AS/NZS ISO 19011:2014 *Guidelines for auditing management systems* and the NSW Government *Independent Audit Guideline* dated October 2015. On 13 February 2017 the Department of Planning and Environment approved Mr Bruce Adcock of Environmental Planning Pty Ltd to complete the 2017 independent environmental audit. A completed independent audit certification form is provided in Appendix 5.

## 2. Site Operations

Figure 1 over provides an aerial view of the Hitchcock Road Sand Project (the site) showing approximate external cadastral boundaries (in red) bounded by Old Northern Road to the east, Wisemans Ferry Road and Hitchcock Road to the west. Large portions of the site are undergoing extraction with other areas devoted to processing, stockpiles, clean water storage dams, silt or tailings ponds and rehabilitation. Total extraction area is approximately 75 hectares. Extraction areas are required to be progressively rehabilitated. A number of rural residential detached dwellings owned by PF Formation and occupied by their employees also occupy the site.

Figure 2 over provides a site plan of the project area as at November 2016. Note that the contours on the plan were based on a survey in 2009 and have since been modified due to the extraction, rehabilitation and silt ponds activity areas shown.

**Figure 1 Aerial View of Hitchcock Road Sand Project Site**



*Source: Landair Surveys December 2016*







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 The Hills Shire and Hornsby Shire since 1983. PF Formation refers to the sand quarries within the Hitchcock Road Sand Project site as Pit 6, Pit 7 and Pit 12. The Maroota survey landmark at 241 metres Australian Height Datum was located near the centre of the site and this portion (Lot 1 DP 1013943) of the site is leased until 2045 from the Crown. Permission to remove the Maroota survey landmark and the nearby Sydney Hinterland Transition Woodland was granted and removal commenced in the first quarter of 2014. The majority of the Sydney Hinterland Transition Woodland has now been removed to enable extraction.

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 located in the northern portion of the site. 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.

Figures 3, 4, 5, 6, 7 and 8 provide various views of the Hitchcock Road Sand Project site entrance, main pit, operations and extraction areas, tailings ponds and rehabilitation area as at April 2017. Figures 9 and 10 provide views of the breach in the Hitchcock Road landscaped bund and the dust gauge located at Jurd's property (Lot 1 DP 223323) as at April 2017.

**Figure 3 View of Site Entrance on Wisemans Ferry Road**





**Figure 4 View of Main Pit at Hitchcock Road Sand Project**



**Figure 5 View of Extraction Machinery at Hitchcock Road Sand Project**





**Figure 6 View of Processing Plant at Hitchcock Road Sand Project**



**Figure 7 View of Clean Water and Tailings Ponds at Hitchcock Road Sand Project**





**Figure 8 View of Site Rehabilitation Area at Hitchcock Road Sand Project**



**Figure 9 View of Breach at Hitchcock Road Landscaped Bund**





**Figure 10 View of Dust Deposition Gauge Located at Jurd's Property**



### **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 renamed Department of Planning and Environment. 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. The project approval is provided in Appendix 1 and is also available for download from PF Formation's website at [www.pfformation.com.au](http://www.pfformation.com.au).
- Review of the 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 were revised by PF Formation in May 2016 and approved



by the Department of Planning and Environment on 21 July 2016 in partial fulfilment of the project approval conditions and are the principal environmental reference documents for the site. These documents are available at [www.pfformation.com.au](http://www.pfformation.com.au).

- Review of Annual Environmental Management Reports (AEMR) for 2013-2014, 2014-2015 and 2015-2016 for the project. The 2015-2016 AEMR is available at [www.pfformation.com.au](http://www.pfformation.com.au).
- Review of Environment Protection Licence No. 3407 and associated 2013-2014, 2014-2015 and 2015-2016 annual returns for the site. Appendix 2 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 overcast weather on 16 March 2017 and in fine weather on 18 April 2017. On-site guidance and interviews were held with PF Formation's Joint Managing Director Mr Joshua Graham, former General Manager Mr Peter Cummins, Office Manager Ms Dianna Rea and the Weighbridge Officer Ms Milena Tavan. Requests were made for relevant documentation, records, information and correspondence.
- The locations of three dust monitoring deposition gauges were checked.
- Production, safety, induction, employee timesheets, weighbridge records, waste disposal, water licences, environmental and monitoring records were checked. Environmental components of the Mine Safety Management Plan were reviewed. The Pollution/Incident Response Management Plan was checked.
- Site boundary setbacks and rehabilitation areas were checked.
- Subsequent email and telephone enquiries with Mr Joshua Graham on some issues of concern and requests for further information and documents.
- Issue of consultation letters on 17 February 2017 to three public authorities (Office of Environment and Heritage, Department of Industry – Resources & Energy and The Hills Shire Council) requesting a response within 21 days including any comments or issues on the project.
- A review of correspondence between PF Formation and the EPA, Department of Primary Industries – Water and Department of Planning and Environment.
- A review of the implementation of the April 2014 audit recommendations.

This third independent environmental audit covers the three year period from April 2014 to April 2017.

#### **4. Audit Evidence and Environmental Monitoring**

In addition to the review of formal documentation produced for the project site and referred to in Section 3, on-site inspections of the site and checking of other 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 AEMR requirements.

No complaints were received or recorded in the Complaints Register or EPA Annual Returns during the audit period from April 2014 to April 2017.

The Environment Protection Licence covering the site allows up to 500,000 tonnes/annum and the project approval provides for 400,000 tonnes/annum. The 2013-2014 AEMR did not disclose annual production from the project other than being less than 400,000 tonnes/annum. Annual production from the project of 254,727 tonnes and 275,924 tonnes was disclosed in the 2014-2015 and 2015-2016 AEMRs respectively. The Hills Shire Council receives Section 94 contributions based on monthly production records which in turn are based on weigh bridge records.

Weigh bridge records detailing the type of material and mass to be transported off-site were reviewed and were satisfactory. A sample of weigh bridge records also demonstrated that laden truck movements were less than 200 vehicles per day and less than 10 vehicles per day entering/exiting the site between 6am and 7am. Truck movements are regularly audited by the Environmental Manager.

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

The groundwater report included in the 2015-2016 AEMR provides a plan showing the maximum extraction depth of RL 191m AHD near the middle of the site as at 8 March 2016. PF Formation management advised that no groundwater ingress was observed over the audit period from April 2014 to April 2017 which indicates that the maximum depth of mining of 182 AHD in the main extraction pit has not been exceeded. A sump was excavated in the southern section of the main extraction area which was used to guide the extraction depths for the pit. No groundwater ingress was observed in the sump and it has remained dry unless heavy rainfall occurs and it then fills with stormwater. PF Formation management also advised no further extraction will occur at the bottom of the main pit and in the sump as the area is needed to store tailings.

The maximum extraction level of RL 191m AHD is above the revised depth of mining contours plan for that portion of the site. However, the 2014 independent environmental audit for the project stated the maximum depth of extraction at April 2014 was 186m AHD. As maximum extraction levels have generally been calculated at various points near the perimeter of the extraction areas over time it is not clear what existing maximum extraction levels are within the main pit. A permanent survey marker showing AHD needs to be established within the main extraction area or pit so that maximum extraction levels can be surveyed from the benchmark as required. Similarly, a groundwater monitoring well needs to be established within the main pit to ensure maximum extraction levels are at least two metres above the established wet weather groundwater level.

The aerial photograph of the site (Figure 1) and site plan (Figure 2) both need to be updated to show contours at one metre intervals.

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 weigh bridge so that the site could commence operations at 6am.

A rehabilitation and offset bond (project approval condition 27 of schedule 3) 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. In September 2011 and March 2014 PF Formation confirmed to the Department of Planning and Environment that no revision of the rehabilitation and offset bond was required. In May 2016 PF Formation re-calculated the bond based on an area of 31,750 square metres that will be disturbed (extraction area) in the three year period to 2017 and an area of 314,500 square metres that has been disturbed but not reached final rehabilitation. The rehabilitation bond calculated in this manner totals \$393,875 and as PF Formation considered it appropriate to continue with the \$500,000 bond to cover any inherent uncertainty in the calculation and any inflationary impact. On 10 May 2016 the Department of Planning and Environment accepted PF Formation's review of the bond and agreed that \$500,000 remains an appropriate amount to adequately cover the area of disturbance.

On 10 May 2016 the Department of Planning and Environment advised that it has concerns with the long term security for the off-set strategy required under project approval condition 23 of schedule 3. PF Formation previously advised the 20 year conservation life of the project as a suitable long term arrangement as outlined in the Environmental Strategy and Landscape Management Plan. The Department of Planning and Environment has advised PF Formation to reconsider the long term security options for the on-site revegetation area. This issue needs to be resolved.

The areas of rehabilitation shown in Figure 2 of this audit and Figure 1-1 in the *2015 Monitoring of Revegetation at Hitchcock Road, Maroota* differ. The existing offset areas of rehabilitation have not been legally delineated and need to be pegged out and established on a survey plan and shown in future AEMRs.

On both site inspections in March and April 2017 there was some mud and dirt on Wisemans Ferry Road tracked from the main access road to the quarry (see Figure 3). The Department of Planning and Environment audit in August 2015 found a similar situation. The on-site mechanical broom sweeper needs to remove mud and dirt as a corrective action more regularly.

Since the last 2014 audit a 3m high peripheral bund planted with screening vegetation has been located 30m from the Hitchcock Road boundary except for a breach providing access to the site. This breach needs to be filled in and access provided either over the bund or a new offset bund provided behind the existing bund to allow vehicular access.

At present nearby trees do not allow a 120 degree minimum clear sky angle above the sampling inlet for the dust deposition gauge at Jurd's property (see Figure 10). These nearby trees, while typical of the area, would affect actual dust deposition data and results. The dust deposition gauge needs relocation to meet the requirements of AS/NZS 3580.1.1:2016 *Methods for sampling and analysis of ambient air Part 1.1: Guide to siting air monitoring equipment*.

Automatic weather station records held at the weighbridge and included in the 2013-2014, 2014-2015 and 2015-2016 AEMRs were reviewed and are satisfactory. It is noted that the weather station was not operational from 20 November 2016 until January 2017 when a new system was implemented.

Minutes of the Community Consultative Committee included in the 2013-2014, 2014-2015 and 2015-2016 AEMRs were reviewed and they provide another perspective on the progress and impacts of the project.

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.

The pollution incident response management plan available at [www.pfformation.com.au](http://www.pfformation.com.au) and prepared to comply with section 153A of the *Protection of the Environment Operations Act 1997* was reviewed. The plan was last tested on 9 October 2016. PF Formation should consider including landslip or land stability as an additional hazard to be considered in the plan. The pollution incident response management plan lists 30 Dangerous Hazardous Substances and 25 Non Dangerous Hazardous Substances. The pollution incident response management plan should be amended to conform with the *Work Health and Safety Regulation 2011* so that a Hazardous Chemicals Register is provided plus another Safety Data Sheet Register.

The Dangerous Hazardous Substance Register located in the weighbridge office which includes 34 products/chemicals and associated material safety data sheets was viewed. The Non Dangerous Hazardous Substance Register located in the weighbridge office which includes 27 products/chemicals and associated material safety data sheets was viewed. Both registers need to be renamed and updated to conform with the pollution incident response management plan.

Documents show regular removal of waste recyclables and waste disposal from the site is by The Hills Shire Council and EPA licensed waste transport providers.

The visitor/contractor induction forms, site safety rules, truck driver safety rules and safety booklet were viewed and are satisfactory.

The 2012-2013, 2013-2014 and 2014-2015 annual returns for Environment Protection Licence No. 3407 showed compliance with all conditions of the licence including dust and noise monitoring and compliance requirements.

A Development Application was lodged with The Hills Shire Council in February 2017 for retrospective use of two shipping containers for storage at 1774 Wisemans Ferry Road (Lot 198 DP 752025), Maroota. Development consent has not yet been granted.



## 5. Consultation with Agencies

On 17 March 2017 consultation letters were sent to three government agencies (Office of Environment and Heritage, Department of Industry – Resources & Energy and The Hills Shire Council) requesting a response within 21 days including any comments or issues on the project. Copies of the consultation letters are provided in Appendix 3. In summary, The Hills Shire Council email response dated 7 March 2017 stated as follows.

*“Thank you for the opportunity to review and comment on the ‘Independent Environmental Audit of the Hitchcock Road Sand Project’ which is operated by PF Formation. You are advised that Council staff have no comments to make regarding the various documents and no issues to raise regarding compliance with any conditions of consent.”*

In response the EPA on behalf of the Office of Environment and Heritage offered an emailed copy of the 15 April 2015 risk assessment inspection report for the site. No response was received from the Department of Industry – Resources & Energy.

## 6. Audit Findings

### 6.1 Implementation of the April 2014 Audit Recommendations

Implementation of the April 2014 independent environmental audit recommendations and the PF Formation 12 June 2014 response in italics is provided below.

1. The Environmental Strategy needs to be updated including the date of publication, new names of NSW government departments, new legislation, updated emergency response management, revised Australian Standards and references. The revised documents should then be made available on the PF Formation website.

*Agreed. Within 3 months of this response being issued i.e. by 12 September 2014, any updated environmental management and monitoring strategies/plans/programs are to be forwarded to the Director-General for approval. After this approval is received the updated Environmental Strategy will be made available on the PF Formation website.*

2. All AEMPs need to include the EPA annual returns.

*Agreed. The 2010 and 2011 EPA annual returns were inadvertently excluded from the 2011 and 2012 AEMP. The 2012 EPA annual return was included in the 2013 AEMP.*

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

*In the Water Management Statement of Commitments it says 'All retention basins will be regularly inspected and an annual report prepared on their effectiveness'. This commitment was incorporated into Strategy 5.1 of the Environmental Operation Procedures and is reviewed as part of the monthly checklist. These reports are signed off, dated and copies included in the AEMR (Chapter 3). Whilst there is no separate report it is reported in the AEMR in a satisfactory manner. Specific reference to the effectiveness of the retention basins will be incorporated in the AEMR in the future.*

4. The monthly operational checklists in the AEMPs need more complete heading descriptors for the first three columns.

*The monthly operational checklist is a monthly summary of the Environmental Operating Procedures. The headings will be improved to better reference back to the Environmental Operating Procedures.*

5. 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 Environment 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. Alternatively a Section 96 modification could be made to amend this consent condition.

*The AEMR is available on our website for public viewing and therefore we are reluctant to include the detail of our sales as disclosed in the annual production data provided to the Department of Primary Industries. This is particularly the case when the information provided to the Department of Primary Industries is a total of all our sales not just those from this Approval. In the second paragraph of Chapter 2 of the AEMR we confirm that our annual volume was within the limit of 400,000 tonnes. We will show the data relating to this development within bands as suggested.*

6. The Complaints Register needs to be recorded in full in response to any complaints on the project and any corrective actions undertaken.

*Agreed. The one complaint in the period should have had a better documented response.*

7. With the consent of the Department of Planning and Environment 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. Alternatively a Section 96 modification could be made to amend this consent condition.

*Whilst the Approval refers to several residences in the area the noise assessment locations are those closest to the quarry covering all directions and all residences mentioned. We could apply to remove some of the locations that are duplicated but as our testing covers all the locations and meets the Approval requirements we will not apply to change the Approval wording unless it is in conjunction with other Section 96 modifications.*

8. The EPA approved pollution incident response management plan needs updating (on page 11) to include telephone contacts for all authorities and inclusion of Attachment A Hazardous Substances Register, Attachment B Emergency Procedure and Attachment C Site Plans/Map. PF Formation should consider including landslip or land stability as an additional hazard to be considered in the plan. The revised plan then needs to be made available on the PF Formation website.

*Agreed.*

9. Procedures must be improved so that the site operations including truck movements and use of the weigh bridge do not commence before 6am and that no more than 10 laden trucks enter and leave the site between 6am and 7am.

*No trucks left the site before 6am. Trucks were going on the weighbridge and getting their paperwork (the earliest was at 5.56am) before moving forward 40 metres to a separate area to cover their load. We have advised the weighbridge staff that no trucks are to leave the weighbridge until 6am not just the site which was their understanding.*

*With regard to limiting truck numbers within defined hours it is very difficult to implement unless it is an average figure. Because trucks arrive from various locations every day you do not know there is a problem until they arrive. For a period we did have a truck operator that was sending their fleet of vehicles to Maroota at one time. We subsequently spoke with the operator and got them to limit the number of trucks sent to Maroota between 6am to 7am.*

*PF Formation also has Hills Shire Consent 2592/2005/HE which uses the same truck entry and has no numerical limit on the number of trucks between 6 am and 7 am. Therefore having more than 10 trucks before 7am does not necessarily mean the consent condition is not being adhered to.*

10. The Hazardous Substance Register needs revision to include only hazardous substances.

*All items with Material Safety Data Sheets are kept in one folder at our weighbridge for easy access. We will now separate them into two folders, one for hazardous substances and one for non-hazardous substances.*

11. At the site entrance on Wisemans Ferry Road a 20km/hour speed limit sign needs to be installed.

*There are several speed limit signs in our main quarry on the northern side of Wisemans Ferry Road. We will place a speed limit sign on the southern side of Wisemans Ferry Road.*

12. A 3m high peripheral bund planted with screening vegetation needs to be fully established all along and 30m away from the Hitchcock Road boundary to improve visual amenity. *As there are no residents in the area, only another approved quarry on the other side of the Hitchcock Road, we had considered our bunding sufficient. We will improve the peripheral bund wall.*

## **6.2 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. The sand extraction project has had impacts on the surrounding environment although the impacts are generally localised and contained within the project site. For example, removal of bushland and extraction of material has caused soil erosion, surface water quality and visual impacts within the boundaries of the quarry areas. The site operations use of heavy machinery also causes localised air and noise pollution. There are extensive areas of extraction, stockpiles, haul roads, tailing ponds and rehabilitation areas within the confines of the project area. Project approval and Environment Protection Licence conditions have been imposed to minimise any potential adverse impacts.

## **6.3 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.

### **6.3.1 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**

<b>Project Approval Schedule 2 Administrative Conditions</b>	<b>Compliance</b>
<b>Obligation to Minimise Harm to the Environment</b>	
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
<b>Terms of Approval</b>	
2. The Proponent shall carry out the project generally in accordance with the: (a) Environmental Assessment (EA); (b) preferred project report; (c) statement of commitments; and (d) conditions of this approval. <i>Notes: The layout of the project is shown in the figure in Appendix 2; and the statement of commitments is included in Appendix 3.</i>	Yes, generally with some non-compliances.



Project Approval Schedule 2 Administrative Conditions	Compliance
<p>3. If there is any inconsistency between the above:</p> <p>(a) the preferred project report shall prevail over the EA;</p> <p>(b) the conditions of this approval shall prevail generally, to the extent of the inconsistency.</p>	Noted
<p>4. The Proponent shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of:</p> <p>(a) any reports, plans, programs or correspondence that are submitted in accordance with the conditions of this approval; and</p> <p>(b) the implementation of any actions or measures contained in these reports, plans, programs or correspondence.</p>	Noted, only requirement to date is for a detailed report on rehabilitation and offset obligations already provided.
<b>Existing Sand Mining Consent</b>	
<p>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.</p>	Noted
<b>Limits on Approval</b>	
<p>6. Extraction and processing operations may take place until 30 November 2028.</p> <p><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></p>	Yes
<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>	Yes, no material accepted from Lot 2 DP 555184 and Lot 1 DP 34599 to date.
<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>	Yes Yes Yes
<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>	Yes, maximum extraction level at March 2016 was RL 191m AHD in the main pit.

<b>Project Approval Schedule 2 Administrative Conditions</b>	<b>Compliance</b>
<p>10. The Proponent shall not disturb any Sydney Hinterland Transition Woodland (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, 4.2 hectares of SHTW was established by November 2012. On 15 March 2013 the Department of Planning &amp; Infrastructure provided written approval for clearing of the SHTW.</p>
<b>Management Plans / Monitoring Programs</b>	
<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>	Yes
<b>Demolition</b>	
<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>	Yes, no demolition to date.
<b>Protection of Public Infrastructure</b>	
<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>	Yes, no public infrastructure affected to date.
<b>Operation of Plant and Equipment</b>	
<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>	Yes
<b>Crown Land</b>	
<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, extraction on leased Crown land (Lot 1 DP1013943). Approval obtained 16 March 2000.</p>
<b>Section 94 Contributions</b>	
<p>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.</p>	Yes

**Table 2 Compliance with Project Approval Environmental Performance Conditions**

<b>Project Approval Schedule 3 Environmental Performance Conditions</b>	<b>Compliance</b>
<b>GENERAL EXTRACTION AND PROCESSING PROVISIONS</b>	
<b>Identification of Boundaries</b>	
<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>	Yes, revised site survey plan approved. Most boundaries have permanent markers.
<b>General Limits of Extraction</b>	
<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>	Yes Yes
<b>Maximum Extraction Depth Map</b>	
<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>(d) comply with the extraction depths specified in the map, to the satisfaction of the Director-General.</p>	Yes, depth of Mining Contours and Water Table Contours plans revised. A permanent survey marker showing AHD needs to be established within the main pit so that maximum extraction levels can be surveyed from the benchmark.
<p>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.</p>	Yes

Project Approval Schedule 3 Environmental Performance Conditions				Compliance
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, R10 Tomatola, plus R7 Maroota Public School (see AEMRs).
Noise Assessment Location	Day	Night		
	L <sub>Aeq</sub> (15 minute)	L <sub>Aeq</sub> (15 minute)	L <sub>A1</sub> (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 <sub>(L<sub>Aeq</sub>(1 Hour))</sub>	N/A	N/A	
R8 – Portelli	39	35	45	
R9 – Young	39	35	45	
R10 - Tomatola	39	35	45	
Table 1: Noise Impact Assessment Criteria				
Notes:				
<ul style="list-style-type: none"><li>To determine compliance with the <i>L<sub>Aeq(15 minute)</sub></i> 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.</li><li>To determine compliance with the <i>L<sub>A1(1 minute)</sub></i> limit, noise from the project is to be measured at 1 metre from the dwelling façade.</li><li>The noise limits apply under meteorological conditions of:<ul style="list-style-type: none"><li>wind speed up to 3m/s at 10m above ground level;</li><li>temperature inversion conditions of up to 3 degrees C/100m and wind speed up to 2m/s at 10m above the ground;</li></ul></li><li>where the wind velocity and temperature gradients are determined to be relevant to the project site in accordance with the NSW Industrial Noise Policy.</li><li>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.</li><li>For more information on the noise assessment locations see Appendix 4.</li></ul>				
Cumulative Noise Criteria				
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: <i>L<sub>Aeq(11 hour)</sub></i> 50 dB(A) – Day; <i>L<sub>Aeq(4 hour)</sub></i> 45 dB(A) – Evening; and <i>L<sub>Aeq(9 hour)</sub></i> 40 dB(A) – Night.				Yes, see AEMRs.



Project Approval Schedule 3 Environmental Performance Conditions			Compliance
Operating Hours			
7. The Proponent shall comply with the operating hours in Table 2.			Yes, although some employee's timesheet records had a few earlier start times to enable opening up the weighbridge so that the site could commence operations at 6am.
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:			
<ul style="list-style-type: none"><li>Product transportation prior to 7.00am is restricted as per condition 8 of Schedule 2.</li><li>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.</li><li>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.</li></ul>			
Noise Management Plan			
8. The Proponent shall prepare and implement a Noise 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 DECC; (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 (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. <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>			Yes, revised Noise Management Plan approved 21 July 2016.
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.  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.			Yes, not required as noise compliance achieved.

Project Approval Schedule 3 Environmental Performance Conditions				Compliance
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.				Yes, see AEMRs.
Pollutant		Averaging period	Criterion	
Total suspended particulate (TSP) matter		Annual	90 µg/m <sup>3</sup>	
Particulate matter < 10 µm (PM <sub>10</sub> )		Annual	30 µg/m <sup>3</sup>	
Table 3: Long Term Impact Assessment Criteria for Particulate Matter				
Pollutant		Averaging period	Criterion	
Particulate matter < 10 µm (PM <sub>10</sub> )		24 hour	50 µg/m <sup>3</sup>	
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 g/m <sup>2</sup> /month	4 g/m <sup>2</sup> /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.				Yes
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.				Yes, revised Air Quality Monitoring Program approved 21 July 2016.
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, except weather station not operational from November 2016 to January 2017 when a new system was installed.

Project Approval Schedule 3 Environmental Performance Conditions	Compliance
<b>WATER</b>	
<b>Water Supply</b>	
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, water licences obtained.
<b>Discharges</b>	
15. The Proponent shall not discharge any water from the quarry or its associated operations except in accordance with an EPL.	Yes
<b>Water Management and Monitoring</b>	
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: <ul style="list-style-type: none"> <li>• Site Water Balance;</li> <li>• Erosion and Sediment Control Plan;</li> <li>• Surface Water Monitoring Program; and</li> <li>• Groundwater Monitoring Program.</li> </ul>	Yes, revised Water Management Plan approved 21 July 2016.
17. The Site Water Balance shall: (a) include details of: <ul style="list-style-type: none"> <li>• sources and security of water supply;</li> <li>• water use on site;</li> <li>• water management on site, including the location and capacity of water storages on site and the means of access;</li> <li>• off-site water transfers; and</li> <li>• reporting procedures; and</li> </ul> (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, 4<sup>th</sup> 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
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: <ul style="list-style-type: none"> <li>• surface water flows, quality, and impacts on water users;</li> <li>• stream health; and</li> <li>• channel stability.</li> </ul>	Yes

Project Approval Schedule 3 Environmental Performance Conditions	Compliance								
<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"> <li>• groundwater levels and quality in new and existing monitoring bores;</li> <li>• the impacts of the project on:</li> </ul> <p>- any groundwater bores, springs and seeps (including spring and seep fed farm dams) on privately-owned land; and</p> <p>- any groundwater dependent ecosystems; and</p> <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>	<p>Yes, but an additional monitoring bore is required within the main pit.</p>								
<b>LANDSCAPE MANAGEMENT</b>									
<b>Rehabilitation</b>									
<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>	<p>Yes, see Figure 2 and 2015-2016 AEMR.</p>								
<b>Offset Strategy</b>									
<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="256 1160 1214 1368"> <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><b>Total</b></td><td><b>12</b></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	<b>Total</b>	<b>12</b>	<p>Yes, revegetation (other woodland) areas in progress. 4.2 hectares of SHTW established by November 2012.</p>
Area	Minimum Size (hectares)								
On-Site Revegetation Area (SHTW)	7.9								
On-Site Revegetation Area (Other Woodland)	4.1								
<b>Total</b>	<b>12</b>								
<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>	<p>Yes, but not completely agreed and resolved.</p>								
<b>Landscape Management Plan</b>									
<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> <p>(a) be prepared in consultation with DECC by suitably qualified expert/s whose appointment/s have been approved by the Director-General;</p> <p>(b) be submitted to the Director-General for approval within 6 months of the date of this approval; and</p> <p>(c) include a:</p> <ul style="list-style-type: none"> <li>• Rehabilitation and Offset Management Plan; and</li> <li>• Quarry Closure Plan.</li> </ul>	<p>Yes, revised Landscape Management Plan approved 21 July 2016.</p>								



Project Approval Schedule 3 Environmental Performance Conditions	Compliance
<b>Rehabilitation and Offset Management Plan</b>	
<p>25. The Rehabilitation and Offset Management Plan must include:</p> <p>(a) the rehabilitation objectives for the site, vegetation offsets and landscaping;</p> <p>(b) a description of the short, medium, and long term measures that would be implemented to:</p> <ul style="list-style-type: none"> <li>• rehabilitate the site;</li> <li>• implement the Offset Strategy; and</li> <li>• maintain and enhance existing site vegetation outside the disturbance area;</li> </ul> <p>(c) detailed performance and completion criteria for the site rehabilitation and implementation of the Offset Strategy;</p> <p>(d) a detailed description of the measures that would be implemented over the next 3 years, including the procedures to be implemented for:</p> <ul style="list-style-type: none"> <li>• progressively rehabilitating disturbed areas;</li> <li>• implementing vegetation offsets;</li> <li>• protecting vegetation and soil outside the disturbance areas;</li> <li>• rehabilitating creeks and drainage lines on the site to ensure no net loss of stream length and aquatic habitat;</li> <li>• undertaking pre-clearance surveys;</li> <li>• managing impacts on fauna;</li> <li>• landscaping the site to minimise visual impacts;</li> <li>• conserving and reusing topsoil;</li> <li>• collecting and propagating seed for rehabilitation works;</li> <li>• salvaging and reusing material from the site for habitat enhancement;</li> <li>• controlling weeds and feral pests;</li> <li>• controlling access; and</li> <li>• bushfire management;</li> </ul> <p>(e) a program to monitor the effectiveness of these measures, and progress against the performance and completion criteria;</p> <p>(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</p> <p>(g) details of who would be responsible for monitoring, reviewing, and implementing the plan.</p>	Yes
<b>Quarry Closure Plan</b>	
<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>	Noted

Project Approval Schedule 3 Environmental Performance Conditions	Compliance
<b>Rehabilitation and Offset Bond</b>	
<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/m<sup>2</sup> for the area of disturbance in each 3 year review period, including the offset areas; and</p> <p>(b) \$1.00/m<sup>2</sup> for the total area of land previously disturbed by the quarry, or as otherwise directed by the Director-General.</p> <p>Notes:</p> <ul style="list-style-type: none"> <li><i>If the rehabilitation and offsets are completed to the satisfaction of the Director-General, the Director-General will release the bond.</i></li> <li><i>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.</i></li> </ul>	<p>Yes, bond lodged November 2010.</p> <p>On 10 May 2016 the Department of Planning &amp; Environment agreed to the existing \$500,000 bond.</p>
<b>ABORIGINAL HERITAGE</b>	
<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>	<p>Yes, no Aboriginal relics or skeletal remains found to date.</p>
<b>TRAFFIC AND TRANSPORT</b>	
<b>Materials Transport</b>	
<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>	<p>Yes</p>
<b>Haulage Records</b>	
<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>	<p>Yes</p>
<b>Road Haulage</b>	
<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 the road, before they leave the site.</p>	<p>Yes</p>
<b>VISUAL</b>	
<b>Visual Amenity</b>	
<p>32. The Proponent shall minimise the visual impacts of the project to the satisfaction of the Director-General.</p>	<p>Yes</p>

<b>Project Approval Schedule 3 Environmental Performance Conditions</b>	<b>Compliance</b>
<b>Lighting Emissions</b>	
<p>33. The Proponent shall:</p> <p>(a) take all practicable measures to mitigate off-site lighting impacts from the project; and</p> <p>(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.</p>	Yes
<b>Advertising</b>	
<p>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.</p> <p><i>Note: This does not include traffic management and safety or environmental signs.</i></p>	Yes, replacement advertising sign on Wisemans Ferry Road installed March 2014.
<b>WASTE MANAGEMENT</b>	
<b>Waste Minimisation</b>	
<p>35. The Proponent shall:</p> <p>(a) only import VENM to the site; and</p> <p>(b) minimise the amount of waste generated by the project to the satisfaction of the Director-General.</p>	Yes, nil VENM imported to date.
<b>EMERGENCY AND HAZARDS MANAGEMENT</b>	
<b>Dangerous Goods</b>	
<p>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>.</p>	Yes, no dangerous goods on site.
<b>Safety</b>	
<p>37. The Proponent shall secure the project to ensure public safety to the satisfaction of the Director-General.</p>	Yes
<b>Bushfire Management</b>	
<p>38. The Proponent shall:</p> <p>(a) ensure that the project is suitably equipped to respond to any fires on-site; and</p> <p>(b) assist the Rural Fire Service and emergency services as much as possible if there is a fire on site.</p>	Yes, site has a 10,000 litre tanker and a 32,000 litre water truck plus fire extinguishers in vehicles and workshop.
<b>PRODUCTION DATA</b>	
<p>39. The Proponent shall:</p> <p>(a) provide annual production data to the DPI using the standard form for that purpose; and</p> <p>(b) include a copy of this data in the AEMR.</p>	Yes No, but annual production included in last two AEMRs.

**Table 3 Compliance with Project Approval Additional Procedures Conditions**

<b>Project Approval Schedule 4 Additional Procedures Conditions</b>	<b>Compliance</b>
<b>NOTIFICATION OF LANDOWNERS</b>	
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.	Yes, no notifications required to date.
<b>INDEPENDENT REVIEW</b>	
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.	Yes, no independent reviews required to date.
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.	Noted
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).	Noted
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).	Noted



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

<b>Project Approval Schedule 5 Environmental Management, Monitoring, Reporting and Auditing Conditions</b>	<b>Compliance</b>
<b>ENVIRONMENTAL MANAGEMENT STRATEGY</b>	
<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"> <li>• keep the local community and relevant agencies informed about the construction, operation and environmental performance of the project;</li> <li>• receive, handle, respond to, and record complaints;</li> <li>• resolve any disputes that may arise during the life of the project;</li> <li>• respond to any non-compliance;</li> <li>• manage cumulative impacts; and</li> <li>• respond to emergencies; and</li> </ul> <p>(e) describe the role, responsibility, authority, and accountability of the key personnel involved in the environmental management of the project.</p>	Yes, revised Environmental Strategy approved 21 July 2016.
<b>ENVIRONMENTAL MONITORING PROGRAM</b>	
<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 within revised Environmental Strategy approved 21 July 2016.
<b>REPORTING</b>	
<b>Incident Reporting</b>	
<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.
<b>Annual Reporting</b>	
<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>	Yes, annual AEMRs

Project Approval Schedule 5 Environmental Management, Monitoring, Reporting and Auditing Conditions	Compliance
<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 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"> <li>• impact assessment criteria/limits;</li> <li>• monitoring results from previous years; and</li> <li>• predictions in the EA;</li> </ul> <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>	submitted to date.
<b>INDEPENDENT ENVIRONMENTAL AUDIT</b>	
<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>	Yes, but delayed approval of auditor in July 2010. First audit April 2011 and second audit April 2014.
<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>	Yes, audit response forwarded to the Director-General in June 2014.
<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"> <li>• the effects of inflation;</li> <li>• any changes to the total area of disturbance; and</li> <li>• the performance of the vegetation offsets against the completion criteria of the Rehabilitation and Vegetation Offset Management Plan,</li> </ul> <p>to the satisfaction of the Director-General.</p>	Yes, in May 2016 PF Formation advised the Department of Planning & Environment of changes to the plans and that no revision of vegetation offset bond is required.

<b>Project Approval Schedule 5 Environmental Management, Monitoring, Reporting and Auditing Conditions</b>	<b>Compliance</b>
<b>COMMUNITY CONSULTATIVE COMMITTEE</b>	
<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
<b>ACCESS TO INFORMATION</b>	
<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, AEMRs also provide the results.

### 6.3.2 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. In particular the Environmental Manager's monthly checklists and annual environmental operations procedures checklists in the AEMRs provide for self-assessment and whether compliance is achieved.

**Table 5 Compliance with Project Approval Statement of Commitments**

<b>Project Approval Statement of Commitments</b>	<b>Compliance</b>
<b>Noise and Vibration</b>	
<ul style="list-style-type: none"> <li>Site activities will be managed so that any necessary high noise and vibration levels occur at times of least impact.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>All equipment used on site will be certified in relation to noise performance.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Panels and covers of silenced plant will be kept shut and plant and equipment switched off when not in use.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>All plant and equipment will be inspected regularly to ensure that it is well maintained to minimise noise emissions.</li> </ul>	Yes

<b>Project Approval Statement of Commitments</b>	<b>Compliance</b>
<ul style="list-style-type: none"> <li>The L<sub>10</sub> 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).</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Compliance monitoring of noise levels will be undertaken and appropriate records of measurements kept.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes
<b>Air Quality and Greenhouse Gas Emissions</b>	
<ul style="list-style-type: none"> <li>Ambient air quality monitoring will be conducted at identified sites.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Trafficable areas will be defined to prevent unnecessary vehicle movement into other parts of the site.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes, water carts used.
<ul style="list-style-type: none"> <li>Speed controls will be applied to all unsealed areas (maximum speed of 20 km/h) and signposted accordingly.</li> </ul>	Yes.
<ul style="list-style-type: none"> <li>All semi-permanent stockpiles will be vegetated with suitable groundcover and regularly watered until the vegetation is well established.</li> </ul>	Yes, not required to date.
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes, not required to date.
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>No fires will be permitted on-site without a permit.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes, but some mud and dirt on road.
<ul style="list-style-type: none"> <li>Exhausts from all vehicles and plant/equipment will be inspected to ensure that they are maintained at an acceptable level.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>All vehicles will be regularly serviced to ensure that exhaust emissions comply with the regulations. Appropriate service records will be maintained.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Any opportunities to minimise machinery use and ensure that all equipment used on the site is energy efficient will be identified.</li> </ul>	Yes
<b>Access and Traffic</b>	
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes, not required to date.

Project Approval Statement of Commitments	Compliance
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes
<b>Erosion and Sediment Control</b>	
<ul style="list-style-type: none"> <li>Soil and Water Management Plan will be reviewed and revised, if required.</li> </ul>	Noted
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Silt traps and erosion control fencing will be erected as appropriate along extraction area boundaries and drainage lines.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Sediment basins with a minimum storage capacity of 400 m<sup>3</sup> per hectare of catchment will be constructed. Spillway capacity and stability will be designed as follows:               <ul style="list-style-type: none"> <li>life of less than 5 years, adopt the 20 year time of concentration event;</li> <li>life between 5 and 10 years, adopt the 50 year time of concentration event; and</li> <li>life greater than 10 years, adopt the 100 year time of concentration event.</li> </ul> </li> </ul>	Noted
<ul style="list-style-type: none"> <li>Stormwater control measures will be assessed and routine inspections conducted to ensure that compliance with best practice guidelines and relevant legislation is achieved.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Areas of exposed land will be kept to a minimum compatible with operational requirements.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Exposed areas not in use will be stabilized with an appropriate cover crop and watered until well established.</li> </ul>	Noted
<ul style="list-style-type: none"> <li>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 300mm below the spillway crest. Sediment will be removed to a location where further pollution to downslope lands and waterways will not occur.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Maintenance of erosion and sediment controls will be undertaken when any deterioration is identified or when replacement is necessary.</li> </ul>	Yes



<b>Project Approval Statement of Commitments</b>	<b>Compliance</b>
<ul style="list-style-type: none"> <li>Stored stormwater will be reused for dust control and the watering of site vegetation.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Noted
<b>Water Management</b>	
<ul style="list-style-type: none"> <li>Maximum depth of extraction will be restricted to not less than two metres above the wet weather high groundwater level (nominally 181 m AHD).</li> </ul>	Yes, maximum depth of extraction at March 2016 was RL 191m AHD.
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes, no breaches or contamination to date.
<ul style="list-style-type: none"> <li>Retention basins will be designed to accommodate the 100-year time of concentration event. The minimum basin capacities are: <ul style="list-style-type: none"> <li>Northern catchment 10,000 m<sup>3</sup></li> <li>Southern catchment 38,000 m<sup>3</sup></li> </ul> </li> <li>The volume of these basins can be varied depending on the extent of the area exposed for extraction within each catchment.</li> </ul>	Noted, revised and approved Environmental Strategy nominates 7,800 m <sup>3</sup> northern catchment and 19,400 m <sup>3</sup> southern catchment.
<ul style="list-style-type: none"> <li>All retention basins will be regularly inspected and an annual report prepared on their effectiveness.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes
<b>Flora and Fauna</b>	
<ul style="list-style-type: none"> <li>All areas which are not to be disturbed will be clearly marked.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Topsoil will be separated and stored or use in rehabilitation works.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes, shown in revised site survey.
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Noted, topsoil is stockpiled on-site.
<ul style="list-style-type: none"> <li>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</li> </ul>	Yes

<b>Project Approval Statement of Commitments</b>	<b>Compliance</b>
fenced to prevent external access.	
<b>Rehabilitation</b>	
<ul style="list-style-type: none"> <li>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.</li> </ul>	Noted, not required to date.
<ul style="list-style-type: none"> <li>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.</li> </ul>	Noted, not required to date.
<ul style="list-style-type: none"> <li>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.</li> </ul>	Noted, not required to date.
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Noted, not required to date.
<ul style="list-style-type: none"> <li>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.</li> </ul>	Noted, not required to date.
<ul style="list-style-type: none"> <li>Revegetation of the site will be undertaken on the following basis: <ul style="list-style-type: none"> <li>as far as possible re-establish the Sydney Hinterland Transitional Woodland using seed and mulch collected from the area;</li> <li>rehabilitate other areas to native species with a light sowing of cereal and allowing natural regeneration;</li> <li>rehabilitate the soil to achieve a full profile;</li> <li>lime, fertilise and sow areas where improved grass cover is required; and</li> <li>suitably turf surfaces expected to experience high surface flows leaving the site.</li> </ul> </li> </ul>	Yes, generally not required to date except for Sydney Hinterland Transitional Woodland rehabilitation area.
<ul style="list-style-type: none"> <li>A maintenance programme aimed at promoting and protecting the growth of the rehabilitated areas will be established.</li> </ul>	Yes
<b>Social Impact Management</b>	
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Regular bi-annual meetings of community representatives will be established to discuss issues in relation to sand extraction on the site.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes

Project Approval Statement of Commitments	Compliance
<b>Heritage</b>	
<ul style="list-style-type: none"> <li>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.</li> </ul>	Noted, no items identified to date.
<ul style="list-style-type: none"> <li>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.</li> </ul>	Noted, not required to date.
<b>Visual Amenity</b>	
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes, except the breach in the vegetated bund along the Hitchcock Road boundary needs to be rectified.
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes, generally not required to date except for a portion of The Northern Road frontage.
<ul style="list-style-type: none"> <li>The final rehabilitated landform will be established in conformity with the Rehabilitation Plan.</li> </ul>	Noted, not required to date.
<ul style="list-style-type: none"> <li>All temporary fencing will be removed when no longer required.</li> </ul>	Noted, not required to date.
<ul style="list-style-type: none"> <li>Vegetation in areas suitable for agricultural/horticultural uses will be re-established.</li> </ul>	Noted, not required to date.
<ul style="list-style-type: none"> <li>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.</li> </ul>	Noted, not required to date.
<ul style="list-style-type: none"> <li>All waste materials will be removed and disposed of in an appropriate manner.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>The final Rehabilitation Plan will be reviewed and proposals for future use of the site prepared.</li> </ul>	Noted, not required to date.
<b>Waste Management</b>	
<ul style="list-style-type: none"> <li>Waste handling areas will be clearly delineated.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Specific areas for the collection of materials for reuse and recycling will be defined and clearly labelled.</li> </ul>	Yes

<b>Project Approval Statement of Commitments</b>	<b>Compliance</b>
<ul style="list-style-type: none"> <li>Cleared vegetation will be used within the landscape programme.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>All topsoil will be stored in stockpiles for later use in site rehabilitation.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Hazardous wastes (including empty drums, rags, soil contaminated with oil) will be separated from nonhazardous wastes and managed in accordance with the relevant legislation.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Copies of current licences of all waste removal contractors on site will be retained.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Waste material will be progressively separated and stockpiled in designated areas for collection. Adequately secure waste disposal areas to prevent access by wildlife.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>All waste licences will be reviewed and terms and conditions for compliance monitored.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Noted, not required to date.
<b>Emergency Response</b>	
<ul style="list-style-type: none"> <li>All personnel on site during operations will be trained in appropriate procedures including site induction, materials handling and response procedures.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Emergency response procedures will be developed and put in place. Appropriate individuals will be appointed as emergency services liaison officers.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>An emergency response table listing contact details of all relevant parties required in an environmental emergency will be prepared.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>A Register of Environmentally Hazardous Materials to be stored and used on site will be established.</li> </ul>	Yes, but needs revision.
<ul style="list-style-type: none"> <li>Appropriate safety and spill response equipment will be made available on site.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>All materials to be used and stored on site will be clearly labelled.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Emergency response procedures will be reviewed and updated bi-annually.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Appropriate safety and response equipment will be available at all times.</li> </ul>	Yes



<b>Project Approval Statement of Commitments</b>	<b>Compliance</b>
<b>Hazard, Risk and Safety</b>	
<ul style="list-style-type: none"> <li>A licence to keep dangerous goods will be obtained from WorkCover NSW for all materials stored on site which require licensing.</li> </ul>	Noted, not required.
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes, but needs revision.
<ul style="list-style-type: none"> <li>Material Safety Data Sheets for all hazardous materials stored on site will be obtained.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>A Safety Officer will be appointed for the development.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>All flammable material storage areas will be located at least ten metres from possible ignition sources.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Contents of all above ground storage areas will be clearly labelled.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>All hazardous and dangerous goods storage areas will be secured and appropriate signage displayed. All incompatible material will be segregated.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>All personnel will be trained in the handling and safety procedures required for the hazardous materials stored and used on site.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>An Emergency Response Plan will be developed and put in place.</li> </ul>	Yes, an EPA approved pollution incident response management plan is in place.
<ul style="list-style-type: none"> <li>A mobile spill control kit containing appropriate absorbent materials, neutralising chemicals and other spill containment equipment will be provided.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Personal protective equipment will be provided and personnel instructed in its use.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Any spills beyond the bunded area will be cleaned up immediately and the contaminated material disposed of in an appropriate manner.</li> </ul>	Yes
<ul style="list-style-type: none"> <li>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.</li> </ul>	Noted, not required to date.
<ul style="list-style-type: none"> <li>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.</li> </ul>	Yes

### 6.3.3 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 The Hills Shire and includes lands in addition to the Hitchcock Road Sand Project. Since the 2014 audit a condition preventing possible mud tracking by vehicles on to public roads was added to the Environment Protection Licence and the requirement for pollution reduction programs deleted. The next review date for the Environment Protection Licence is 5 May 2021.

**Table 6 Compliance with Environment Protection Licence Conditions**

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, 1774 Wisemans Ferry Road, Maroota). The activities are listed according to their scheduled activity classification (extractive activities), fee-based activity classification (land-based extractive activity) and the scale of the operation (100,000 – 500,000 tonnes extracted, processed or stored). The licence applies to all other activities carried on at the premises including the ancillary activity concrete works.				Yes																
Discharges to air and water and applications to land																				
Location of monitoring/discharge points and areas																				
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																
<div><div>Air</div><table><tr><th>EPA identi- fication no.</th><th>Type of Monitoring Point</th><th>Type of Discharge Point</th><th>Location Description</th></tr><tr><td>1</td><td>Dust monitoring</td><td></td><td>Dust gauge labelled "1- School" on the Map faxed to the EPA on 5 August 2002</td></tr><tr><td>2</td><td>Dust monitoring</td><td></td><td>Dust gauge labelled 2 - intersection of Hitchcock and Wisemans Ferry Road</td></tr><tr><td>3</td><td>Dust monitoring</td><td></td><td>Dust gauge labelled as "Jurds Paddock - 3 Por168" on the map faxed to the EPA on 5 August 2002</td></tr></table></div>				EPA identi- fication no.	Type of Monitoring Point	Type of Discharge Point	Location Description	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	
EPA identi- fication no.	Type of Monitoring Point	Type of Discharge Point	Location Description																	
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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																
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																

Environment Protection Licence Conditions				Compliance
<b>Noise Limits</b>				
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
Location	Day	Night	Night	
	LAeq(15 minute)	LAeq(15 minute)	LA1(1 minute)	
Maroota Public School	40	NA	NA	
Pignataro	40	37	52	
Tornatola	39	38	52	
<p>The Locations are as described in the <i>Maroota Sand Extraction Project Noise Impact Assessment Report 10-3138-R1, 13 April 2005</i>, for Lot 198 DP 752025 Old Northern Road, by Richard Heggie Associates Pty</p> <p>For the purposes of the above condition:</p> <ul style="list-style-type: none"> <li>• Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public holidays.</li> <li>• Evening is defined as the period 6pm to 10pm,</li> <li>• Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays.</li> </ul>				Noted
<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 <math>L_{Aeq,(15min)}</math> 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 <math>L_{A1(1\text{ minute})}</math> 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 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:</p> <ul style="list-style-type: none"> <li>• documenting noise complaints received to identify any higher level of impacts or patterns of temperature inversions;</li> <li>• 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.</li> </ul>				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
<b>Hours of Operation</b>				
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.				Yes

<b>Environment Protection Licence Conditions</b>	<b>Compliance</b>
<b>Potentially offensive odour</b>	
The licensee must not cause or permit the emission of offensive odour beyond the boundary of the premises.	Yes
<b>Operating conditions</b>	
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 prevent any tracking of mud on to public roads by vehicles leaving the premise.	No
<b>Monitoring and recording conditions</b>	
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



Environment Protection Licence Conditions	Compliance																								
<p>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:</p> <p>POINT 1</p> <table><tr><th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr><tr><td>Particulates - Deposited Matter</td><td>grams per square metre per month</td><td>Monthly</td><td>AM-19</td></tr></table> <p>POINT 2</p> <table><tr><th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr><tr><td>Particulates - Deposited Matter</td><td>grams per square metre per month</td><td>Monthly</td><td>AM-19</td></tr></table> <p>POINT 3</p> <table><tr><th>Pollutant</th><th>Units of measure</th><th>Frequency</th><th>Sampling Method</th></tr><tr><td>Particulates - Deposited Matter</td><td>grams per square metre per month</td><td>Monthly</td><td>AM-19</td></tr></table>	Pollutant	Units of measure	Frequency	Sampling Method	Particulates - Deposited Matter	grams per square metre per month	Monthly	AM-19	Pollutant	Units of measure	Frequency	Sampling Method	Particulates - Deposited Matter	grams per square metre per month	Monthly	AM-19	Pollutant	Units of measure	Frequency	Sampling Method	Particulates - Deposited Matter	grams per square metre per month	Monthly	AM-19	Yes
Pollutant	Units of measure	Frequency	Sampling Method																						
Particulates - Deposited Matter	grams per square metre per month	Monthly	AM-19																						
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Pollutant	Units of measure	Frequency	Sampling Method																						
Particulates - Deposited Matter	grams per square metre per month	Monthly	AM-19																						
<p>Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with:</p> <p>(a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or</p> <p>(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</p> <p>(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.</p>	Yes																								
<p>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.</p>	Yes																								
<p>The record must include details of the following:</p> <p>(a) the date and time of the complaint;</p> <p>(b) the method by which the complaint was made;</p> <p>(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;</p> <p>(d) the nature of the complaint;</p> <p>(e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and</p> <p>(f) if no action was taken by the licensee, the reasons why no action was taken.</p>	Yes																								
<p>The record of a complaint must be kept for at least 4 years after the complaint was made.</p>	Yes																								
<p>The record must be produced to any authorised officer of the EPA who asks to see them.</p>	Noted																								
<p>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.</p>	Yes																								
<p>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.</p>	Yes																								

<b>Environment Protection Licence Conditions</b>	<b>Compliance</b>
The preceding two conditions above do not apply until 3 months after the date of the issue of this licence.	Noted
<b>Reporting conditions</b>	
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
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

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

On 15 April 2015 the EPA undertook an on-site environmental risk assessment as part of the transition to the risk based licencing system. The inspection report found that all the major processing and loading plant/equipment operating at the site appeared to be well maintained; no evidence of any water or sediment having been discharged from the site; and general housekeeping at the site appeared to be good, with chemicals and equipment stored in an orderly manner within workshops.

The EPA observed that the bund for the 45,000 litre diesel storage tank appeared to be inadequate although PF Formation stated that the bund capacity was greater than that of the tank. The EPA stated that the height of the bund was likely to be insufficient to capture a leak from the upper half of the tank although it considered that the risk to the environment appeared to be minimal as any spill would be contained within the workshop area.

#### **6.4 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.**

The Environmental Strategy and associated Noise Management Plan, Air Quality Monitoring Program, Water Management Plan and Landscape Management Plan for the project were originally approved by the Department of Planning on 8 July 2009. All of these documents were revised by PF Formation in September 2011 and approved by the Department of Planning & Infrastructure on 15 November 2011. All documents were then revised again in May 2016 and approved by the Department of Planning and Environment on 21 July 2016. There is need to regularly review these documents to account for any changes in relevant legislation, revised Australian Standards, names of government departments and references.

#### **6.4.1 Environmental Strategy**

The Environmental Strategy approved by the Department of Planning and Environment on 21 July 2016 is adequate, appropriate and satisfactory to date.

#### **6.4.2 Noise Management Plan**

The Noise Management Plan approved by the Department of Planning and Environment on 21 July 2016 is adequate, appropriate and satisfactory to date.

#### **6.4.3 Air Quality Monitoring Program**

The Air Quality Monitoring Program approved by the Department of Planning and Environment on 21 July 2016 is adequate, appropriate and satisfactory to date.

The need to relocate the dust deposition gauge at Jurd's property to meet the requirements of AS/NZS 3580.1.1:2016 *Methods for sampling and analysis of ambient air Part 1.1: Guide to siting air monitoring equipment* has been noted.

#### **6.4.4 Water Management Plan**

The Water Management Plan approved by the Department of Planning and Environment on 21 July 2016 is adequate, appropriate and satisfactory to date but needs some revision in future.

In February 2017 the Department of Primary Industries – Water met with PF Formation management and their groundwater specialist consultant for a discussion on groundwater management issues and the need for more information.

PF Formation will undertake some further surveys, investigate installing a number of extra clustered monitoring wells and monitor water extractions and returns along with placing loggers on dams and bores to measure water levels. All this data will be useful in developing a site water balance. PF Formation agreed to provide a cross section of the site which will be informed from bore log data to determine the locations of aquifers and the water table in relation to pit floors and bottom level of dams.

It was agreed that the Annual Groundwater Report for the site due at the end of June 2017 will provide all the information that was requested in previous correspondence with the Department. This is pertinent in that Department of Planning and Environment has approved the Water Management Plan in 2016. The next plan will be revised to incorporate Department of Primary Industries – Water comments and all relevant audit recommendations to be implemented.

#### **6.4.5 Landscape Management Plan**

The Landscape Management Plan approved by the Department of Planning and Environment on 21 July 2016 is adequate, appropriate and satisfactory to date.

The project approval conditions required clearing of 3.7 hectares of Sydney Hinterland Transition Woodland and the majority has now been removed. This clearing would be offset with revegetation and recreation of this community within a 7.9 hectare area on the western boundary of the site. To date an area of 4.2 hectares has been completed.

The 2015-2016 AEMR included the rehabilitation report *2015 Monitoring of Revegetation at Hitchcock Road, Maroota* (7 December 2015, Parsons Brinckerhoff, Sydney). The discussion stated as follows.

*There has been a stabilisation or general improvement in the habitat quality and native species diversity cover and vegetation structure since the previous monitoring survey in 2013. Erosion noted in previous years appears to be stable with increasing cover of groundcover vegetation. Weed cover has generally stabilised in the 2004 and 2006 revegetation areas although a general increase in weed cover within the ground layer was observed in the 2011 revegetation area. Key findings include meeting the 10 and even 15 year targets in the majority of criteria.*



*The rehabilitation is progressing well and is generally meeting or exceeding the targets set with the exception of 2011. This suggests that given time the 2004 and 2006 revegetation areas are likely to continue to meet and exceed the target criteria. Given the promising results to date and the fact that the 2011 revegetation has been undertaken using similar methods as the 2004 and 2006 areas, with time, this area is likely to have similar success provided appropriate weed control and supplementary plantings are undertaken.*

#### **6.4.6 Annual Environmental Management Reports for 2013-2014, 2014-2015 and 2015-2016**

The three AEMRs include the following information.

- Identify the standards and performance measures that apply to the project.
- Describe the works that will be carried out in the next 12 months.
- A summary of the complaints received during the past year and compares this to complaints received in previous years.
- A summary of the monitoring results for the project during the past year to 30 June.
- An analysis of these results against the relevant impact assessment criteria/limits, monitoring results from previous years and predictions in the EA.
- Identify any trends in the monitoring results over the life of the project.
- Identify any non-compliance during the previous year.
- Describe what actions were, or are being, taken to ensure compliance.

Signed monthly and annual checklists based on the Environmental Strategy, actions and management controls are included in the AEMRs. The Environmental Strategy nominates the Environmental Manager (Mr Joshua Graham) and Quarry Manager (Mr Peter Watt) as responsible for implementing the Environmental Strategy.

The 2013-2014, 2014-2015 and 2015-2016 AEMRs all noted *“All monitoring indicated that quarry operations were within any defined limits and no indicators of new potential issues were identified. From the procedures conducted there are no trends identified as yet and no areas of non-compliance.”*

There was general compliance with the monitoring conditions.

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

- Checking and updating of all relevant Australian Standards. For example, the 2015-2016 AEMR incorrectly referred to AS/NZS 3580.10.1:1991 *Methods for sampling and analysis of ambient air - Determination of Particulates – Deposited Matter – Gravimetric*. The current standard is AS/NZS 3580.10.1:2016 *Methods for sampling and analysis of ambient air. Method 10.1: Determination of particulate matter – Deposited matter – Gravimetric method*.
- As required, the 2013-2014 AEMR did not include annual production data other than stating it was less than 400,000 tonnes.
- The format and content of future AEMRs should be based on the October 2015 NSW government publication *Annual Review Guideline*.

#### **6.5 Department of Planning and Environment Audit 2015**

The Department of Planning and Environment conducted a compliance audit of the Hitchcock Road Sand Extraction and Rehabilitation Project as part of the State Sand Quarries Campaign (May – August 2015). A site inspection of the quarry was made by Department of Planning and Environment officers together with PF Formation management on 5 August 2015 and a compliance audit was issued in December 2015. The *Summary of the Compliance Audit Campaign of NSW Sand Quarries (May – August 2015)* concluded for the Hitchcock Road Sand Project compliance audit as follows.

*“The compliance audit of the PF Formation Sand Quarry consent (PA 06\_0104), Statement of Commitments and the associated Landscape Management Plan identified an adequate level of compliance, whilst also identifying several non-compliances and administrative non-compliances.*

*In summary, PF Formation Sand Quarry was found to be operating generally in compliance with a number of conditions and/or commitments. However, 15 administrative non-compliances and seven low risk non-compliances with conditions and/or commitments (or sub elements of conditions/commitments) were identified where action is required to ensure compliance is achieved.*

*The key non-compliance issues identified as part of the compliance audit against the PF Formation Sand Quarry development consent are in relation to the ineffective controls for dust emissions and the tracking of material on to public roads, and the potential risk associated with the diesel storage facility.*

*The key non-compliance associated with the Statement of Commitments relates to the failure to minimise exposed areas on the site.*

*The key non-compliance issue with respect to the Landscape Management Program relates to the compliance of site bunds with commitments.*

*Site and corporate staff demonstrated an understanding of the importance of environmental management and compliance with conditions of consent. At the time of the audit identified non-compliances were in the process of being addressed.*

In response to the compliance audit PF Formation developed an Action Plan for the project approval conditions, statement of commitments and landscape management plan non-compliances. The updated Action Plan with completion of all actions is provided in Appendix 4.

## **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 audit findings including assessment of the compliance tables (section 6), the environmental performance of the sand project is satisfactory with some non-compliances. 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-compliances that can be rectified. There is a need to improve on some environmental commitments and record keeping in accordance with the audit recommendations (Section 8).

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

All relevant strategies/plans/programs required under the project approval to date have been updated and will be adequate after implementation of the audit recommendations.

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 Environment, 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. The Wisemans Ferry Road access road entry/exit to the site needs to be checked daily for mud and dirt and cleaned off as per the environmental commitments.
2. The breach in the landscaped bund along the Hitchcock Road frontage providing access to the site needs to be filled in and access provided either over the bund or a new offset bund provided behind the existing bund to allow vehicular access.
3. The dust gauge located at Jurd's property needs relocation to meet the requirements of AS/NZS 3580.1.1:2016 *Methods for sampling and analysis of ambient air Part 1.1: Guide to siting air monitoring equipment*.
4. A permanent survey marker showing Australian Height Datum needs to be established within the main pit so that maximum extraction levels can be surveyed from the benchmark as required. The maximum extraction depth levels for the project need to be monitored at least monthly to ensure compliance with the approved maximum extraction depth plan and the results recorded in future AEMRs.
5. A groundwater monitoring well needs to be established within the main pit with monthly monitoring of groundwater levels to ensure maximum extraction levels are at least two metres above the established wet weather groundwater level. The groundwater levels need to be recorded in future AEMRs.
6. The existing offset areas of rehabilitation need to be pegged out and established on a survey plan and shown in future AEMRs.
7. The long term security for the off-set strategy needs to be resolved and agreed with the Department of Planning and Environment.
8. The December 2015 aerial photograph of the site shown in Figure 1 should be updated to show contours with one metre intervals and this data and any future updates used to amend the Site Plan shown in Figure 2 and in future AEMRs.
9. The Department of Primary Industries – Water issues outlined in February 2017 need to be addressed and new information included in a revised Water Management Plan. The revised Water Management Plan also needs to include procedures for monthly monitoring of maximum extraction depth levels and levels from the groundwater monitoring well within the main pit.
10. The pollution incident response management plan should be amended to include a Hazardous Chemicals Register plus another Safety Data Sheet Register.
11. Both the Dangerous Hazardous Substance and Non Dangerous Hazardous Substance Registers located in the weighbridge office need to be updated with nomenclature, a list of hazardous chemicals and safety data sheets to conform with the pollution incident response management plan.
12. Future AEMRs should be based on the October 2015 NSW government publication *Annual Review Guideline*.

After consideration of the audit recommendations by PF Formation and endorsement by the Department of Planning and Environment, 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

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### 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 <sub>Aeq</sub> (15 minute)	L <sub>Aeq</sub> (15 minute)	L <sub>A1</sub> (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 <sub>Aeq</sub> (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<sub>Aeq</sub>(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 $\mu\text{m}$ (PM <sub>10</sub> )	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 $\mu\text{m}$ (PM <sub>10</sub> )	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:
- be submitted to the Director-General within 3 months of the date of this approval;
  - be prepared in consultation with DWE and DECC; and
  - include a:
    - Site Water Balance;
    - Erosion and Sediment Control Plan;
    - Surface Water Monitoring Program; and
    - Groundwater Monitoring Program.
17. The Site Water Balance shall:
- 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
  - investigate and describe measures to minimise water use by the project.
18. The Erosion and Sediment Control Plan shall:
- be consistent with the requirements of *Managing Urban Stormwater: Soils and Construction, Volume 1, 4<sup>th</sup> Edition, 2004* (Landcom);
  - identify activities that could cause soil erosion and generate sediment;
  - describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters;
  - describe the location, function, and capacity of erosion and sediment control structures;
  - demonstrate that the design capacity of basins intended to collect storm runoff will not be compromised by storage of operational water; and
  - describe what measures would be implemented to maintain (and if necessary decommission) the structures over time.
19. The Surface Water Monitoring Program shall include:
- detailed baseline data on surface water flows and quality in downstream watercourses that could be affected by the project;
  - surface water quality and stream health assessment criteria, including trigger levels for investigating any potentially adverse surface water impacts; and
  - 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:
- provision of additional monitoring bores around the periphery of the site;
  - 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;
  - groundwater assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts;
  - 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
<b>Total</b>	<b>12</b>

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/m<sup>2</sup> for the area of disturbance in each 3 year review period, including the offset areas; and
  - (b) \$1.00/m<sup>2</sup> 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).

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## **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"><li>• Lots 1 &amp; 2 DP 570966</li><li>• Lots 1 &amp; 2 DP 1063296</li><li>• Lot 1 DP 1013943</li><li>• Lot 2 DP 233818</li><li>• Lot 1 DP 1091018</li><li>• Lot 1 DP 223323</li></ul>
Processing Plant	<ul style="list-style-type: none"><li>• Lots 167 &amp; 214 DP 752039</li><li>• Lot 198 DP 752025</li></ul>



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 m<sup>3</sup> 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 m<sup>3</sup>
  - Southern catchment 38,000 m<sup>3</sup>

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.

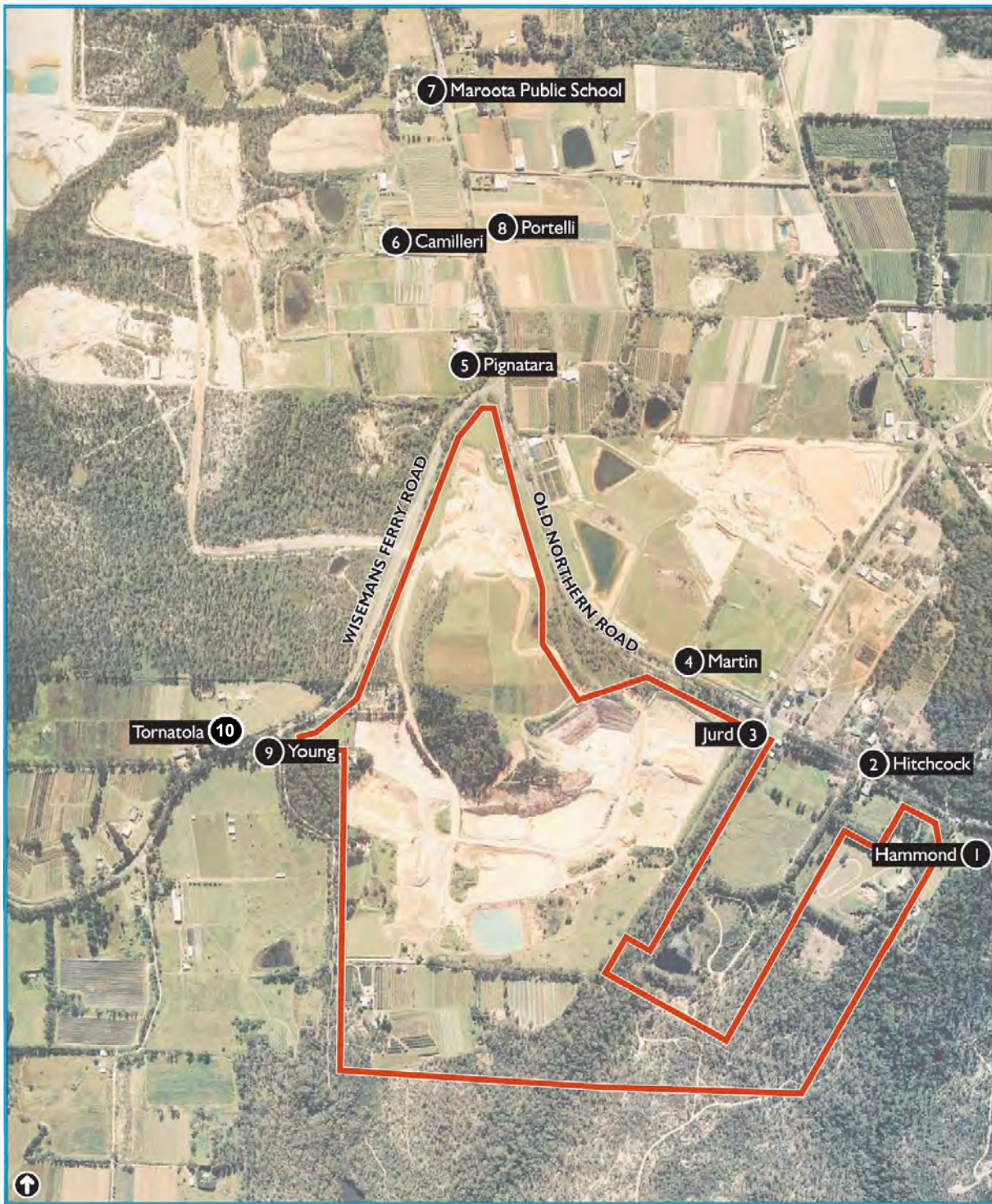


Figure 4.7

NOISE MONITORING AND ASSESSMENT LOCATIONS

Scale  
0 500 Metres

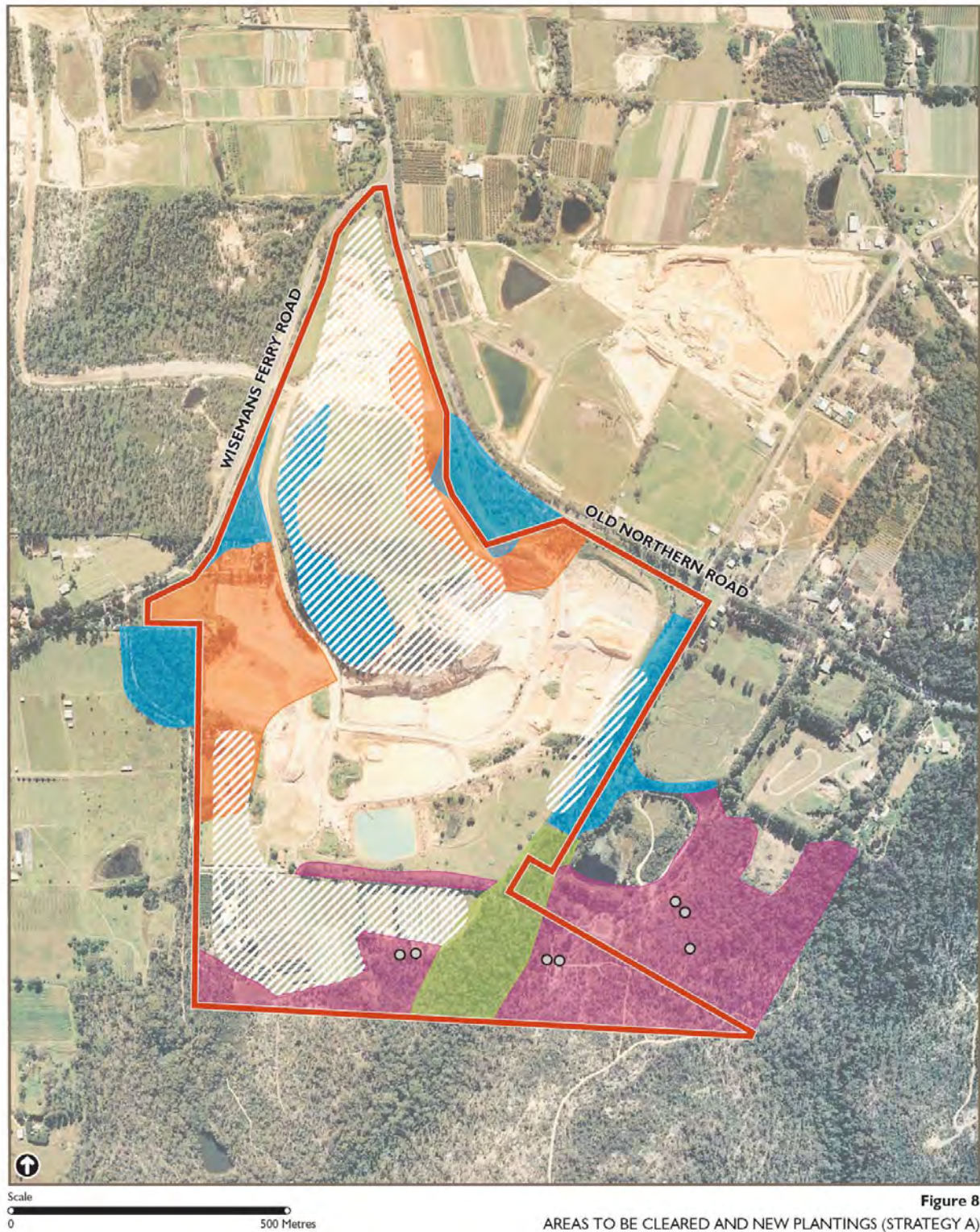
— Hitchcock Road site boundary

● Monitoring locations

## APPENDIX 4 NOISE ASSESSMENT LOCATIONS



## APPENDIX 5 VEGETATION OFFSET PLAN



- |  |  |
|--|--|
| <span style="color: red;">—</span> Hitchcock Road site           | <span style="color: green;">■</span> Sydney Sandstone Gully Forest             |
| <span style="color: orange;">■</span> Areas for new plantings    | <span style="color: purple;">■</span> Sydney Sandstone Ridgetop Woodland       |
| <span style="color: blue;">○</span> <i>Tetratheca glandulosa</i> | <span style="color: lightblue;">■</span> Sydney Hinterland Transition Woodland |
|  | <span style="color: black;">▨</span> 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 <sup>2</sup> quadrat)	20	35	40	46
	Average number of characteristic species for the site occurring within 400m <sup>2</sup>	15	20	27	34.5 (+/- 1.5)
	Native species cover (% of vegetation cover in 400m <sup>2</sup> quadrat)	>50	>85	>95	99
Weeds	Weed abundance (% of vegetation cover in 400m <sup>2</sup> 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 <sup>a</sup>	Average canopy height (m)	4	8	12	12-16
	Native canopy cover (minimum % cover) [modified braun blanquet scale] <sup>b</sup>	5 [3]	5 [3]	5 [3]	5 [3]
Shrub layer <sup>a</sup>	Native shrub cover (minimum % cover) [modified braun blanquet scale] <sup>b</sup>	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] <sup>b</sup>	5 [3]	10 [3]	10 [3]	15 (+/-5) [3]

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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%

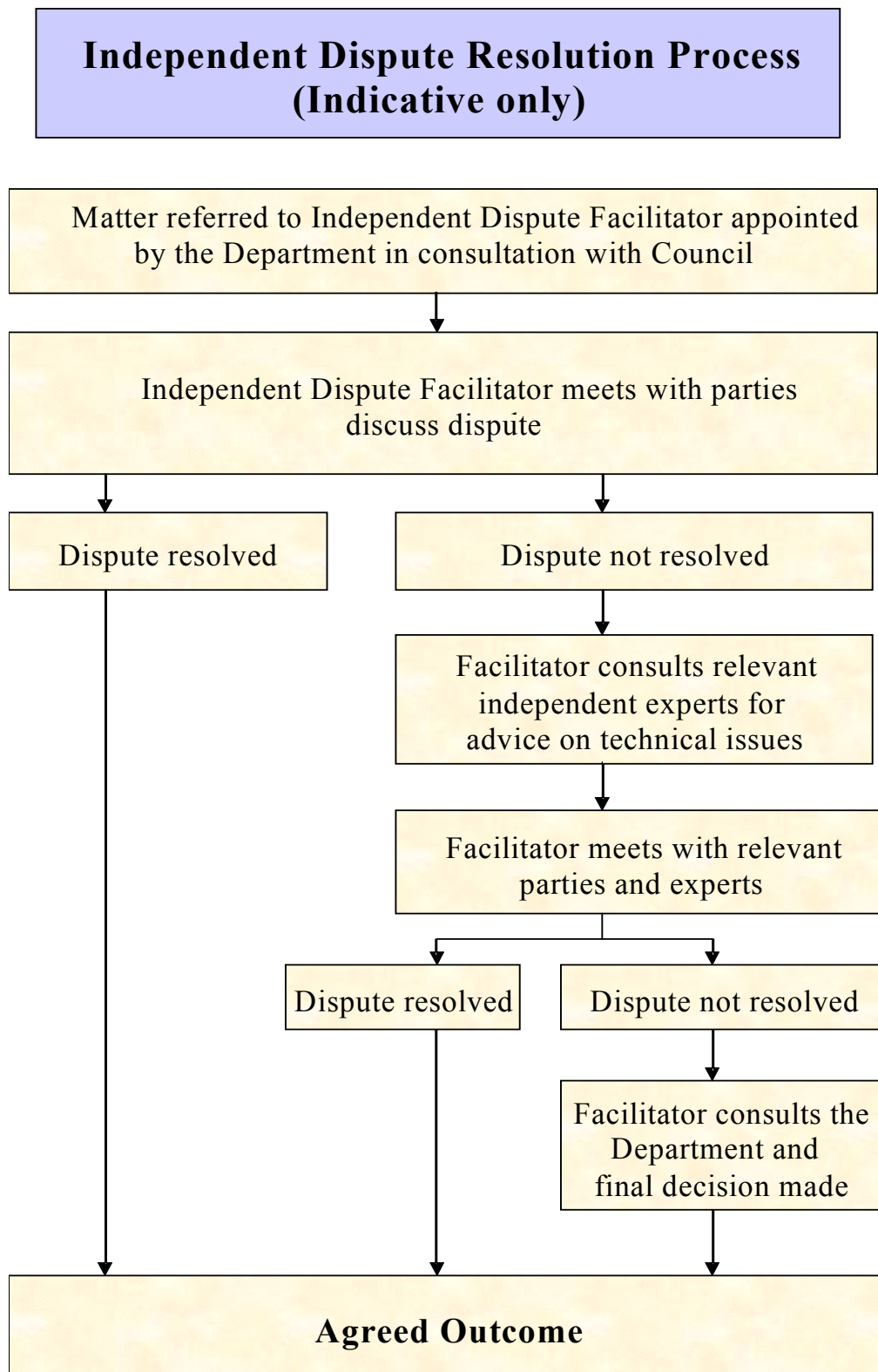


## APPENDIX 7 FINAL LANDFORM PLANS





**APPENDIX 8  
INDEPENDENT DISPUTE RESOLUTION PROCESS**



## **Appendix 2**

### **Environment Protection Licence No. 3407**

# Environment Protection Licence



Licence - 3407

<b><u>Licence Details</u></b>	
Number:	3407
Anniversary Date:	30-September

<b><u>Licensee</u></b>
ETRA PTY LTD
1774 WISEMANS FERRY ROAD
MARROOTA NSW 2756

<b><u>Premises</u></b>
ETRA PTY LTD
WISEMANS FERRY ROAD
MARROOTA NSW 2756

<b><u>Scheduled Activity</u></b>
Extractive Activities

<b><u>Fee Based Activity</u></b>	<b><u>Scale</u></b>
Land-based extractive activity	> 100000-500000 T extracted, processed or stored

<b><u>Region</u></b>
Metropolitan - Sydney Industry
Level 13, 10 Valentine Ave
PARRAMATTA NSW 2150
Phone: (02) 9995 5000
Fax: (02) 9995 6900
PO Box 668 PARRAMATTA
NSW 2124



# Environment Protection Licence

Licence - 3407



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# Environment Protection Licence



Licence - 3407

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# Environment Protection Licence

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Licence - 3407



## 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);
- 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).

# Environment Protection Licence

Licence - 3407



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

# Environment Protection Licence

Licence - 3407



## 1 Administrative Conditions

### A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Extractive Activities	Land-based extractive activity	> 100000 - 500000 T extracted, processed or stored

### A2 Premises or plant to which this licence applies

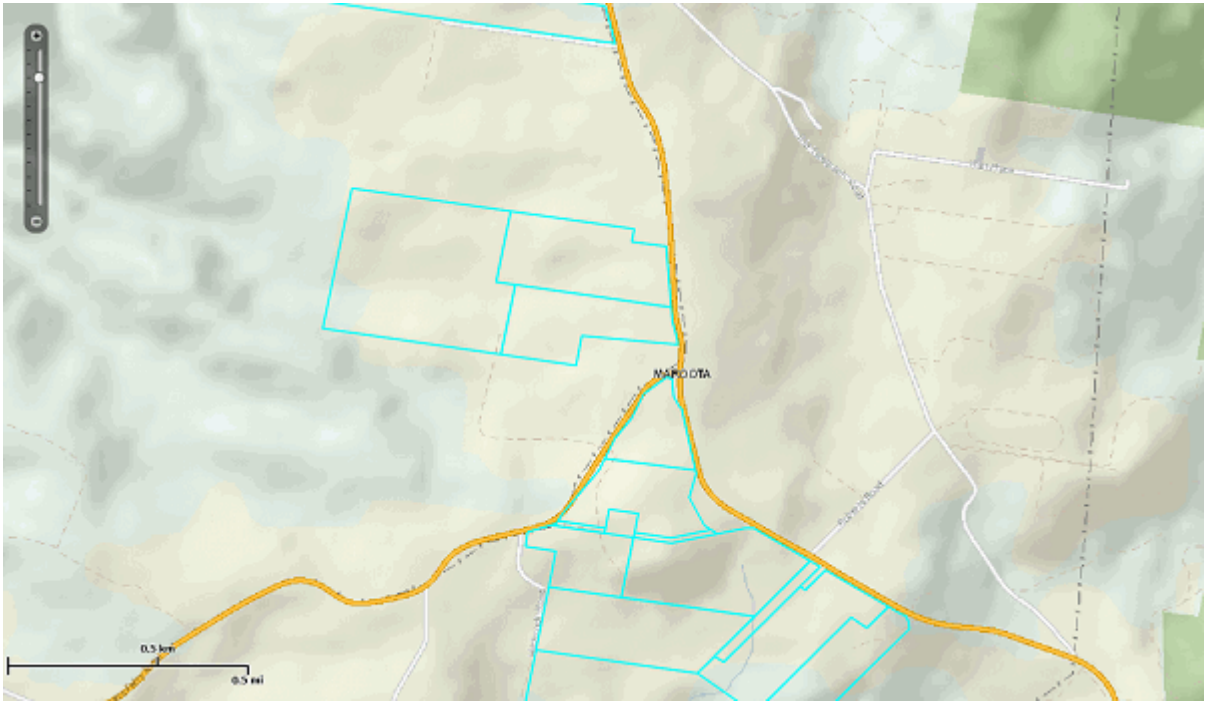
A2.1 The licence applies to the following premises:

Premises Details
ETRA PTY LTD
WISEMANS FERRY ROAD
MARROOTA
NSW 2756
LOT 1 DP 34599, LOT 1 DP 223323, LOT 2 DP 233818, LOT 2 DP 555184, LOT 1 DP 570966, LOT 2 DP 570966, LOT 1 DP 588936, LOT 1 DP 595538, LOT 2 DP 703821, LOT 198 DP 752025, LOT 167 DP 752039, LOT 214 DP 752039, LOT 1 DP 1013943, LOT 1 DP 1063296, LOT 2 DP 1063296, LOT 1 DP 1091018

A2.2 The premises location is shown on the map below.

# Environment Protection Licence

Licence - 3407



**A3 Other activities**

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

Ancillary Activity
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
- 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**

# Environment Protection Licence

Licence - 3407



- 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.

<i>Air</i>			
EPA identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
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

## 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 Waste

- L2.1 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.
- L2.2 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.

### L3 Noise limits

- L3.1 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.

Location	Day	Night	Night
	LAeq(15 minute)	LAeq(15 minute)	LA1(1 minute)
Maroota Public School	40	NA	NA
Pignataro	40	37	52
Tornatola	39	38	52

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

# Environment Protection Licence

Licence - 3407



Ltd.

**L3.2** For the purposes of condition L2.1:

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

**L3.3** 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 LAeq,(15min) limits in condition L2.1.

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 condition L2.1.

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

LAeq(15 minute) represents the equivalent continuous noise level- the level of noise equivalent to energy average of noise levels of the source when measured over a 15 minute period.

LA1(1 minute) represents sound pressure level that is exceeded for 1% of the time over a 1 minute measurement period.

Where A-weighting is an adjustment made to sound pressure level measurements to approximate the response of the human ear.

**Note:**

**Noise measurement**

For the purpose of noise measurements required for this condition, the LAeq(15 minute) noise level must be measured or computed at any point specified in L2.3 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:*

- a) 1 metre from the facade of the residence for night time assessment.
- b) At the residential boundary.
- c) 30 metres from the residence (rural situations) where the boundary is more than 30 metres from residence.

**L3.4**

The noise emission limits identified in L2.1 apply for prevailing meteorological conditions (winds up to



# Environment Protection Licence

Licence - 3407



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:

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

L3.5 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 achieving noise contributions not exceeding the Project Specific Noise Levels at all receiver locations.
- c) Measures to monitor noise performance and respond to complaints.

## L4 Hours of operation

L4.1 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.

## L5 Potentially offensive odour

L5.1 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.

## 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.

# Environment Protection Licence

Licence - 3407



## **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**

- 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 or leaving the premises must have their loads covered.

## **O4 Other operating conditions**

- O4.1 The licensee must prevent any tracking of mud on to public roads by vehicles leaving the premises.

# **5 Monitoring and Recording Conditions**

## **M1 Monitoring records**

- M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.
- M1.2 All records required to be kept by this licence must be:
- a) in a legible form, or in a form that can readily be reduced to a legible form;
  - b) kept for at least 4 years after the monitoring or event to which they relate took place; and
  - c) produced in a legible form to any authorised officer of the EPA who asks to see them.
- M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:
- a) the date(s) on which the sample was taken;
  - b) the time(s) at which the sample was collected;
  - c) the point at which the sample was taken; and
  - d) the name of the person who collected the sample.

## **M2 Requirement to monitor concentration of pollutants discharged**

- M2.1 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:
- M2.2 Air Monitoring Requirements

# Environment Protection Licence

Licence - 3407



## 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
  - 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
  - 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 2010* 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".

## 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:
- the date and time of the complaint;
  - the method by which the complaint was made;
  - any personal details of the complainant which were provided by the complainant or, if no such details

# Environment Protection Licence

Licence - 3407



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 The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.

## 6 Reporting Conditions

### R1 Annual return documents

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:  
a) a Statement of Compliance; and  
b) a Monitoring and Complaints Summary.

At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

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

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.

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

Licence - 3407



- 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').
- R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.
- R1.7 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.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

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

## R2 Notification of environmental harm

- 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.

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

## 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.
- R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.
- R3.3 The request may require a report which includes any or all of the following information:
- a) the cause, time and duration of the event;
  - b) the type, volume and concentration of every pollutant discharged as a result of the event;
  - c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
  - d) the name, address and business hours telephone number of every other person (of whom the licensee

# Environment Protection Licence

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Licence - 3407



is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;

e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;

f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and

g) any other relevant matters.

R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

## 7 General Conditions

### G1 Copy of licence kept at the premises or plant

G1.1 A copy of this licence must be kept at the premises to which the licence applies.

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.



# Environment Protection Licence

Licence - 3407



## Dictionary

### General Dictionary

<b>3DGM [in relation to a concentration limit]</b>	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
<b>Act</b>	Means the Protection of the Environment Operations Act 1997
<b>activity</b>	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
<b>actual load</b>	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
<b>AM</b>	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> .
<b>AMG</b>	Australian Map Grid
<b>anniversary date</b>	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.
<b>annual return</b>	Is defined in R1.1
<b>Approved Methods Publication</b>	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
<b>assessable pollutants</b>	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
<b>BOD</b>	Means biochemical oxygen demand
<b>CEM</b>	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> .
<b>COD</b>	Means chemical oxygen demand
<b>composite sample</b>	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.
<b>cond.</b>	Means conductivity
<b>environment</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>environment protection legislation</b>	Has the same meaning as in the Protection of the Environment Administration Act 1991
<b>EPA</b>	Means Environment Protection Authority of New South Wales.
<b>fee-based activity classification</b>	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
<b>general solid waste (non-putrescible)</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

# Environment Protection Licence



Licence - 3407

<b>flow weighted composite sample</b>	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
<b>general solid waste (putrescible)</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>grab sample</b>	Means a single sample taken at a point at a single time
<b>hazardous waste</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>licensee</b>	Means the licence holder described at the front of this licence
<b>load calculation protocol</b>	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
<b>local authority</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>material harm</b>	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
<b>MBAS</b>	Means methylene blue active substances
<b>Minister</b>	Means the Minister administering the Protection of the Environment Operations Act 1997
<b>mobile plant</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>motor vehicle</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>O&amp;G</b>	Means oil and grease
<b>percentile [in relation to a concentration limit of a sample]</b>	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.
<b>plant</b>	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
<b>pollution of waters [or water pollution]</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>premises</b>	Means the premises described in condition A2.1
<b>public authority</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>regional office</b>	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
<b>reporting period</b>	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.
<b>restricted solid waste</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>scheduled activity</b>	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
<b>special waste</b>	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
<b>TM</b>	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> .

# Environment Protection Licence

Licence - 3407



<b>TSP</b>	Means total suspended particles
<b>TSS</b>	Means total suspended solids
<b>Type 1 substance</b>	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
<b>Type 2 substance</b>	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
<b>utilisation area</b>	Means any area shown as a utilisation area on a map submitted with the application for this licence
<b>waste</b>	Has the same meaning as in the Protection of the Environment Operations Act 1997
<b>waste type</b>	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: 18-November-1999

# 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.
- 10 Licence varied by notice 1124599, issued on 08-Feb-2011, which came into effect on 08-Feb-2011.
- 11 Licence varied by notice 1527553 issued on 16-Feb-2015

## **Appendix 3**

### **Letters to Agencies**



**ENVIRONMENTAL  
PLANNING Pty Ltd**

ABN 23 064 176 174

PO Box 6443  
Silverwater NSW 1811

Phone (02) 9648 4400  
bruce@eplanning.com.au

17 February 2017

Ms Kristine McKenzie  
Principal Executive Planner  
The Hills Shire Council  
PO Box 7064  
Baulkham Hills BC NSW 2153

Dear Madam,

**Independent Environmental Audit of Hitchcock Road Sand Project at Maroota**

The Hitchcock Road Sand 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 February 2017 the Secretary of NSW Government Planning & Environment approved the undersigned to conduct the independent environmental audit. The first audit was completed in April 2011, the second audit in April 2014 and the third audit is now in progress. With regard to condition (b) above I am writing to you representing one of the relevant agencies.

The environmental strategy, various management plans, monitoring results, other relevant supporting documents and the 2015-2016 Annual Environmental Management Report 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/news-and-reporting.php>.

Could your agency please forward a response including any comments or issues on the project to the undersigned within 21 days or 10 March 2017.

Yours faithfully

Bruce Adcock  
**Director**





**ENVIRONMENTAL  
PLANNING Pty Ltd**

ABN 23 064 176 174

PO Box 6443  
Silverwater NSW 1811

Phone (02) 9648 4400  
bruce@eplanning.com.au

17 February 2017

Director  
Office of Environment and Heritage  
PO Box A290  
Sydney South NSW 1232

Dear Sir/Madam,

**Independent Environmental Audit of Hitchcock Road Sand Project at Maroota**

The Hitchcock Road Sand 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:

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- (b) include consultation with the relevant agencies;
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- (d) assess whether the project is complying with the relevant standards, performance measures and statutory requirements; and
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Could your agency please forward a response including any comments or issues on the project to the undersigned within 21 days or 10 March 2017.

Yours faithfully

Bruce Adcock  
Director



**ENVIRONMENTAL  
PLANNING Pty Ltd**

**ABN 23 064 176 174**

**PO Box 6443  
Silverwater NSW 1811**

**Phone (02) 9648 4400  
bruce@eplanning.com.au**

17 February 2017

Director  
NSW Department of Industry – Resources & Energy  
Level 48, MLC Centre  
19 Martin Place  
Sydney NSW 2000

Dear Sir/Madam,

**Independent Environmental Audit of Hitchcock Road Sand Project at Maroota**

The Hitchcock Road Sand 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:

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- (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 February 2017 the Secretary of NSW Government Planning & Environment approved the undersigned to conduct the independent environmental audit. The first audit was completed in April 2011, the second audit in April 2014 and the third audit is now in progress. With regard to condition (b) above I am writing to you representing one of the relevant agencies.

The environmental strategy, various management plans, monitoring results, other relevant supporting documents and the 2015-2016 Annual Environmental Management Report 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/news-and-reporting.php>.

Could your agency please forward a response including any comments or issues on the project to the undersigned within 21 days or 10 March 2017.

Yours faithfully

Bruce Adcock  
**Director**

## **Appendix 4**

### **Action Plan for Department of Planning and Environment 2015 Audit**



**Table 1 Action Plan for DP&E December 2015 Audit Project Approval Non-Compliances**

DP&E ID Number	Condition	Details of DP&E Non-Compliance	Action by PF Formation	Timing
1.1	Schedule 2 Condition 1	Existing controls to prevent tracking of material on to public roads were observed to be ineffective, as tracked material was observed on the public road on the day of the audit.	The two access roads near Wisemans Ferry Road will be re-asphalted to improve dust control. Daily check of Wisemans Ferry Road access roads to site on workdays and removal of any loose material by road broom or hand sweeping.	Re-asphalting of two access roads intersection with Wisemans Ferry Road was completed in December 2015 (see attached photos). Daily check of any material on road commenced in January 2016.
1.2	Schedule 3 Condition 11	<p>The system to minimise dust emissions from the site was observed to be ineffective, as on the day prior to the inspection, dust emissions from the site were visible across Old Northern Road.</p> <p>A water truck and road broom are in operation on the site, however there are no sprinklers on the stockpile.</p>	<p>More stringent implementation and monitoring of dust suppression techniques by the workforce as detailed in the Environmental Management Strategy Appendix A Environmental Operational Procedures.</p> <p>In addition, in December 2015 PF Formation purchased a new fit for purpose 32,000L water truck to improve dust suppression.</p>	Commenced January 2016.
1.3	Schedule 3 Condition 36	The diesel fuel storage facility was inspected. The diesel fuel dispenser is located outside of the bund wall, with a refuelling hose attached. If the nozzle or hose was damaged, fuel would spill on to the ground. In addition, the tank is located very close to the bund wall, which may be non-compliant with the tan theta rule in AS 1940. A plan of the facility was provided that was signed off by an accredited consultant; however this plan does not include the location of the diesel fuel bowser or the exact location of the tank within the bund.	<p>Workforce to more stringently implement existing controls to prevent spillage from the bowser onto unsealed ground.</p> <p>The Environmental Manager completed an assessment of the facility in January 2016 and confirmed the following components are compliant with AS1940-2004 <i>The storage and handling of flammable and combustible liquids</i>.</p> <p>Clause 7.3.1 (Location). In accordance with this clause the bowsers are located</p>	Assessment completed in January 2016 and thereafter continuous implementation of existing controls by the workforce.

DP&E ID Number	Condition	Details of DP&E Non-Compliance	Action by PF Formation	Timing
		A spill from an oil drum was noted on the sealed area in front of the workshop. No attempt to clean the spill up had been made at the time of the inspection.	<p>in a position to minimise the possibility of damage from vehicles.</p> <p>Clause 7.3.2 (Drainage) In accordance with this clause the area in which vehicles stand whilst being refuelled is graded away from any buildings and does not flow off site. The interceptor used to catch run off is available for inspection (the oil separator near the workshop.) AS 1940 does not require the bowzers to be located inside a bund.</p> <p>Clause 7.4.1 (Nozzle Design) The nozzle fitted to the bowzers complies with this clause.</p> <p>Clause 7.2.4 (Emergency power cut-off) The circuit breaker is clearly identified in the switch board so power can be isolated to fuel dispensers in the case of an emergency in accordance with this clause.</p> <p>Clause 5.8.1 (Bunds and Compounds) Provisions have been made to contain any leakage or spillage from the storage facility in accordance with this clause.</p> <p>Clause 5.8.2 (Capacity) The net capacity for the tank is regulated at 45,000L safe fill level. The bunding surrounding the storage facility has capacity of 52,560L allowing 7560L extra capacity for fire water over a 20 minute period in accordance with this clause.</p> <p>Given the diesel fuel storage facility was completed over 20 years ago in compliance with AS1940-1993 for a WorkCover licence in 1995, it is not</p>	

DP&E ID Number	Condition	Details of DP&E Non-Compliance	Action by PF Formation	Timing
			practicable to make all components of the facility comply with the current standard.	
1.4	Schedule 3 Condition 3c	The Maximum Extraction Depth Map was submitted on 19 May 2009 (not done within 3 months of the date of the approval).	No further action required.	Nil timing required.
1.5	Schedule 3 Condition 4	Letter sent dated 12/9/2014 indicating that no change was required to the Maximum Extraction Depth Map (letter not sent within 3 months).	No further action required.	Nil timing required.
1.6	Schedule 3 Condition 12 c and d	There is no explanation in the Air Quality Monitoring Program as to how monitoring of and compliance against the TSP/PM <sub>10</sub> parameters will be determined. A PM <sub>10</sub> Action Plan is provided in the AEMR (as attachment 5D), however is not included in the AQMP.	An explanation is provided in the revised Air Quality Monitoring Program as to how monitoring of and compliance against the TSP/PM <sub>10</sub> parameters is determined.	Completed in the revised Air Quality Monitoring Program approved 21 July 2016.
1.7	Schedule 3 Condition 19 a, b and c	Detailed baseline data is not included in the Surface Water Monitoring Program.  Stream health assessment criteria are not included in the Water Management Program.  A program to monitor stream health is not included in the Water Management Program.	Noted that there are no permanent streams located within the site hence a program to monitor stream health and stream health assessment criteria are not required.  Baseline data was included in the Water Management Plan including quarterly surface water monitoring.	Completed in the revised Water Management Plan approved 21 July 2016.  AEMRs to continue inclusion of results of surface water monitoring program.
1.8	Schedule 3 Condition 20 d	The Groundwater Monitoring Program (Chapter 8) of the Water Management Plan) does not provide auditable commitments for monitoring of water levels and water quality from monitoring bores.  The Plan states that monitoring of impacts on springs and seeps and groundwater dependent ecosystems is not required as sand extraction	The Groundwater Monitoring Program (Chapter 8) of the Water Management Plan) did provide auditable commitments for monitoring of water levels and water quality from monitoring bores. The revised Water Management Plan includes revised text to make the annual monitoring criteria clearer and will be	Completed in the revised Water Management Plan approved 21 July 2016.  November 2016 AEMR included monitoring of water



DP&E ID Number	Condition	Details of DP&E Non-Compliance	Action by PF Formation	Timing
		will remain above the required buffer zone of two metres above the wet weather water table.	reported on in future AEMRs, including water level trends for at least the past three years.	levels and water quality from monitoring bores. Water level results will be compared to extraction levels to confirm that the 2m extraction limit above the established wet weather groundwater level is being maintained.
1.9	Schedule 3 Condition 23	Suitable arrangements to provide appropriate long-term security for offset areas have not been made. A proposal was provided to the Department however a response has not been received. It is the responsibility of the proponent to ensure that the requirements of the condition are met.	Another response to the Secretary was sent to the Department on 5 May 2016 seeking approval of the long term strategy for the offset areas.	A letter response from the Secretary was received on 10 May 2016 requesting reconsideration of the long term security options for the on-site revegetation area.
1.10	Schedule 3 Condition 25 d	A detailed description of the required parameters is not provided for undertaking pre-clearance surveys and collecting and propagating seed for rehabilitation works (noted that these were included in the 2011 plan however were removed from the resubmitted 2014 plan).	All the required information is included in Section 3 in the revised Landscape Management Plan.	Completed in the revised Landscape Management Plan approved 21 July 2016.
1.11	Schedule 3 Condition 26 a, b and e	No provision for certification from a qualified geotechnical engineer that the final proposed landform is stable included in QMP submitted 2014 or approved 2011.  Criteria for closure of the quarry are not included.	The revised Landscape Management Plan (not the incorrect reference to a Quarry Management Plan) includes provision for certification from a qualified geotechnical engineer that the final proposed landform is stable.	Completed in the revised Landscape Management Plan approved 21 July 2016.

DP&E ID Number	Condition	Details of DP&E Non-Compliance	Action by PF Formation	Timing
		While Section 4.6 is included, there are no performance monitoring measures.	The revised Landscape Management Plan confirms the objectives for closure of the quarry. Criteria for closure of the quarry will be determined after 2025.  The revised Landscape Management Plan describes how the performance of these measures would be monitored over time in the AEMRs.	
1.12	Schedule 3 Condition 39 b	The proponent noted that the information provided in this form is commercially sensitive and that the forms will not be included in versions of the AEMR that are publicly available. It was noted that the form included information from all PF Formation operations in the area (not only operations covered by PA 06_0104).	Production data was provided in the 2014-2015 AEMR and will be in future AEMRs.	Included in the November 2016 AEMR and future AEMRs.
1.13	Schedule 5 Condition 1 d	Cumulative impacts not specifically mentioned in Environmental Management Strategy document, however they are mentioned in the Noise Management Plan and Air Quality Management Plan.	Section discussing cumulative impacts of the operation included in the revised Environmental Management Strategy.	Completed in the revised Environmental Management Strategy approved 21 July 2016.
1.14	Schedule 5 Condition 5 e and f	Analysis of results against limits provided, however there is no comparison between years for noise and surface water monitoring results.  No trends available for noise and surface water monitoring results.	A comparison between years for noise and surface water monitoring results, and a discussion of trends for all monitoring results will be included in future AEMRs.	Included in the November 2016 AEMR and future AEMRs.
1.15	Schedule 5 Condition 6 and 6a	IEA 2014 states delayed approval of auditor in July 2010 resulted in first audit dated April 2011.  Environmental Planning was endorsed by the Director-General to undertake the 2011 audit; however endorsement was not sought for the 2014 audit. It is a requirement that auditors are	DP&E endorsement for IEA Auditors will be obtained prior to each audit.	DP&E approval of IEA auditor received on 13 February 2017 prior to next audit in April 2017.

DP&E ID Number	Condition	Details of DP&E Non-Compliance	Action by PF Formation	Timing
		endorsed prior to each audit to ensure any requirements of the Department are assessed as part of the audit.		
1.16	Schedule 5 Condition 11 b	The AEMR provides an annual update of results. It is not considered that this is a regular update.	PF Formation will provide a regular summary of monitoring results on the website.	Completed as first monitoring results for dusts, noise and water quality were published on the PF Formation website in November 2015 and will be updated quarterly.

**Table 2 Action Plan for DP&E December 2015 Audit Statement of Commitments Non-Compliances**

DP&E ID Number	Condition	Details of DP&E Non-Compliance	Action by PF Formation	Timing
2.1	Erosion and Sediment Control	<p>The nature of extracting from different areas to meet customer requirements requires areas to remain open, however extensive areas of exposed land were observed. Aside from the area which has been rehabilitated, no cover crops were observed on site to minimise exposed areas.</p> <p>It cannot be confirmed that sediment basins on site meet the specified design criteria.</p>	<p>Exposed areas will be maintained at a minimum in future.</p> <p>Exposed areas not in use will be stabilised with an appropriate cover crop and watered until well established.</p>	Continuous implementation of actions in accordance with revised Water Management Plan and revised Landscape Management Plan both approved 21 July 2016.
2.2	Rehabilitation	There were significant exposed areas on the site. Apart from the areas which have been rehabilitated and the bunds, no other areas appear to have been seeded.	Exposed areas of the site will be seeded with an appropriate vegetation cover where no activity is to take place for more than four weeks.	Continuous implementation in accordance with revised Landscape Management Plan approved 21 July 2016.
2.3	Visual Amenity	The height of the bunds is variable, with not all bunds being at least three metres high. The slopes of the bunds was not checked. The IEA notes that a complete vegetated bund needs to be established along the Hitchcock Road boundary.	<p>The Landscape Management Plan states bunds will not exceed 3m in height. The height and slopes of all bunds was checked by the Environmental Manager in January 2016 and confirmed that the majority were around 3m above the adjacent ground levels.</p> <p>All incomplete bunds will be raised in height to around 3m above the adjacent ground levels.</p>	<p>All incomplete bunds will be at around 3m high commencing in February 2016 for completion in August 2016.</p> <p>A complete vegetated bund will be established along the Hitchcock Road boundary commencing in February 2016 for completion in August 2016.</p>

DP&E ID Number	Condition	Details of DP&E Non-Compliance	Action by PF Formation	Timing
2.4	Hazard, Risk and Safety	A spill from an oil drum was noted on the sealed area in front of the workshop. No attempt to clean the spill up had been made at the time of the inspection.	Continuous implementation of clean up of all oil spills by the workforce in accordance with the revised Pollution Incident Response Management Plan.	Continuous implementation by the workforce.
2.5	Water Management	<p>EMS nominates 7,800 m<sup>3</sup> northern catchment and 19,400 m<sup>3</sup> southern catchment, which is not consistent with the design criteria in the SoC.</p> <p>No annual reports on the effectiveness of the retention basins have been prepared to date.</p>	<p>The Statement of Commitments states: <i>"Retention basins will be designed to accommodate the 100-year t<sub>c</sub> event. The minimum basin capacities are northern catchment 10,000m<sup>3</sup> and southern catchment 38,000m<sup>3</sup>. The volume of these basins can be varied depending on the extent of the area exposed for extraction within each catchment."</i></p> <p>The Environmental Management Strategy states: <i>"A review of design criteria for sediment basin design has shown that the EPA has developed an outcome based approach. This method recommends a sediment basin capacity of 150 m<sup>3</sup>/hectare. However, as no discharges are allowed from the site up to the 100 year ARI time of concentration event, and with rainfall intensities in excess of 16 mm per hour and Soil Hydrologic Group B soils, the required basin capacities exceed all current guidelines with 414 to 534 m<sup>3</sup>/hectare. The basin capacities for each of the catchments on the site are therefore:</i></p> <ul style="list-style-type: none"> <li><i>• northern (14.5 hectares) 7,800m<sup>3</sup></i></li> <li><i>• southern (42 hectares) 19,400m<sup>3</sup>.</i></li> </ul> <p><i>In practice the disturbed areas within each catchment are likely to be rather smaller than initially indicated due to the influence of unforeseen factors during operations.</i></p>	<p>Included in the November 2016 AEMR and thereafter included in all future AEMRs.</p> <p>Future AEMRs will confirm the capacities of the northern, southern and total catchments.</p>

DP&E ID Number	Condition	Details of DP&E Non-Compliance	Action by PF Formation	Timing
			<p><i>In this case the capacity of the appropriate basin will be correspondingly reduced or the current guidelines will be exceeded to an even greater extent.”</i></p> <p>The explanation for the basin capacities in the Environmental Management Strategy is not inconsistent with the Statement of Commitments. The Environmental Management Strategy has used the EPA outcome based approach and calculated smaller basin capacities than the Statement of Commitments. Both sets of capacities are valid although in the interests of consistency the larger Statement of Commitments capacities will be used as the reference.</p> <p>The site where sand extraction has taken place to date is inwardly draining due to a combination of topography and the effect of the peripheral bunds constructed as part of the project. No surface water is discharged beyond its boundaries. The site can be considered to be a detention basin capable of accommodating far in excess of the runoff from the 100 year ARI time of concentration event.</p> <p>The capacity of the various on-site basins is approximately 120,000 cubic metres approximately twice the Environmental Management Strategy requirements.</p> <p>An annual report on the effectiveness of the retention basins will be prepared for all future AEMRs.</p>	



DP&E ID Number	Condition	Details of DP&E Non-Compliance	Action by PF Formation	Timing
2.6	Emergency Response	It was indicated that the emergency response procedures are not being reviewed and updated bi-annually.	In accordance with the EPA licences held by PF Formation a Pollution Incident Response Management Plan was produced with the last version dated 7 August 2012.	The Pollution Incident Response Management Plan was revised by the Environmental Manager on 9 October 2016 and will be reviewed bi-annually.

**Table 3 Action Plan for DP&E December 2015 Audit Landscape Management Plan Non-Compliance**


<b>DP&amp;E ID Number</b>	<b>Section of Plan</b>	<b>Details of DP&amp;E Non-Compliance</b>	<b>Action by PF Formation</b>	<b>Timing</b>
3.1	3.3.8 - Conserving and reusing topsoil	It was indicated during the site inspection that topsoil is being used in bunds around the site. There is inconsistency between this commitment and conditions of consent regarding bunds i.e. bunds will not exceed 3 metres in height.	<p>The height and slopes of all bunds was checked by the Environmental Manager in January 2016 and confirmed that the majority of heights were approximately 3m above the adjacent ground levels.</p> <p>All bund slopes depending on location were within a maximum 3(H):1(V).</p> <p>All incomplete bunds will be raised in height using overburden to around but not exceeding 3m.</p> <p>Topsoil sourced from within the site is used in bunds around the site to assist in establishing vegetation within the 3m height limit.</p>	All incomplete bunds including topsoil will be at around but not exceeding 3m high commencing in February 2016 for completion in August 2016.

**Attachment - Photographs of Intersection of Access Roads and Wisemans Ferry Road  
Re-Asphalted in December 2015**



## Appendix 5

### Independent Audit Certification Form

Development Name	Hitchcock Road Sand Project
Development Consent No.	Project Approval 06_0104
Description of Development	Extraction and processing of sand
Development Address	<div style="display: flex; align-items: center;"> <div style="flex: 1;"> <p style="background-color: #e0e0e0; padding: 5px; margin-bottom: 5px;">Extraction Area</p> <p style="background-color: #e0e0e0; padding: 5px; margin-top: 5px;">Processing Plant</p> </div> <div style="flex: 1; padding-left: 10px;"> <ul style="list-style-type: none"> <li>Lots 1 &amp; 2 DP 570966</li> <li>Lots 1 &amp; 2 DP 1063296</li> <li>Lot 1 DP 1013943</li> <li>Lot 2 DP 233818</li> <li>Lot 1 DP 1091018</li> <li>Lot 1 DP 223323</li> <li>Lots 167 &amp; 214 DP 752039</li> <li>Lot 198 DP 752025</li> </ul> </div> </div>
Operator	Etra Pty Ltd trading as PF Formation
Operator Address	1774 Wisemans Ferry Road, Maroota, NSW, 2756
Independent Audit	
Title of Audit	Independent Environmental Audit of Hitchcock Road Sand Project
<p><i>I certify that I have undertaken the independent audit and prepared the contents of the attached independent audit report and to the best of my knowledge:</i></p> <ul style="list-style-type: none"> <li><i>The audit has been undertaken in accordance with relevant approval condition(s) and generally in accordance with the auditing standard AS/NZS ISO 19011:2014 and Post Approval Guidelines – Independent Audits;</i></li> <li><i>The findings of the audit are reported truthfully, accurately and completely;</i></li> <li><i>I have exercised due diligence and professional judgement in conducting the audit;</i></li> <li><i>I have acted professionally, in an unbiased manner and did not allow undue influence to limit or over-ride objectivity in conducting the audit;</i></li> <li><i>I am not related to any owner or operator of the development as an employer, business partner, employee, sharing a common employer, having a contractual arrangement outside the audit, spouse, partner, sibling, parent, or child;</i></li> <li><i>I do not have any pecuniary interest in the audited development, including where there is a reasonable likelihood or expectation of financial gain or loss to me or to a person to whom I am closely related (i.e. immediate family);</i></li> <li><i>Neither I nor my employer have provided consultancy services for the audited development that were subject to this audit except as otherwise declared to the lead regulator prior to the audit; and</i></li> <li><i>I have not accepted, nor intend to accept any inducement, commission, gift or any other benefit (apart from fair payment) from any owner or operator of the development, their employees or any interested party. I have not knowingly allowed, nor intend to allow my colleagues to do so.</i></li> </ul>	
Signature	
Name of Lead / Principal Auditor	Bruce Adcock
Address	PO Box 6443, Silverwater NSW 1811
Email Address	bruce@eplanning.com.au
Auditor Certification (if relevant)	Completed 2011 and 2014 audits
Date:	30 April 2017