

**ENVIRONMENTAL MANAGEMENT PLAN**

**EXTRACTIVE INDUSTRY AT LOT 2 DP 748820**

**311 OLD TELEGRAPH ROAD, MAROOTA**

**PREPARED FOR PF FORMATION PTY LTD**

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## DISTRIBUTION LIST AND REVISIONS

### DISTRIBUTION OF EMP

LOCATION	RESPONSIBLE PERSONNEL	NUMBER OF COPIES
PF Formation Pty Ltd, 1774 Wisemans Ferry Road, Maroota, NSW 2756	Joshua Graham, Joint Managing Director and Environmental Manager; Luke Graham, Joint Managing Director.	1 electronic pdf copy
Hornsby Shire Council	Rod Pickles and/or Cassandra Williams	1 electronic pdf copy
Maroota	Maroota Residents Community Committee if required	Electronic pdf copies if required
Environmental Planning Pty Ltd, PO Box 6443 Silverwater, NSW 1811	Bruce Adcock	Master electronic copy

### REVISIONS OF EMP

REVISION No.	ISSUE DATE	DESCRIPTION	RESPONSIBLE PERSON	APPROVAL
0	February 2011	Revised EMP issued	Bruce Adcock	Peter Cummins, General Manager
1	September 2012	Attachment 7 replaced with Pollution Incident Response Management Plan. Monitoring reports included in AEMRs.	Joshua Graham  Bruce Adcock	Peter Cummins, General Manager
2	August 2013	Single occurrence checklist deleted plus minor edits.	Bruce Adcock	Peter Cummins, General Manager
3	May 2017	Updated with modified Development Consent 342/98/F conditions. Updated Pollution Incident Response Management Plan. Revised rehabilitation plans. Minor edits.	Bruce Adcock  Joshua Graham	Joshua Graham, Joint Managing Director and Environmental Manager
4	May 2021	Revised with Development Consent 342/1998/G; updated EPA licence; Dust Monitoring Plan and other minor edits. Corrective Action Requests and Register deleted. Complaints Register revised.	Bruce Adcock  Joshua Graham	Joshua Graham, Joint Managing Director and Environmental Manager
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## 1. Aims of Environmental Management Plan

The aims of this Environmental Management Plan (EMP) are to ensure that:

- Environmental effects of the site operations are identified.
- Conditions of Development Consent No. 342/1998/G including any modifications and Environment Protection Licence No. 10357 licence requirements including any variations for the site are specified.
- Environmental controls to be implemented are specified.
- A monitoring program is specified and implemented.
- Responsible staff, target dates and reporting protocols are specified.
- Requirements of all relevant environmental NSW legislation are complied with.
- PF Formation Pty Ltd environmental policies, procedures and guidelines are implemented.

## 2. General Description of Site and Operations

### 2.1 Description of Site

Lot 2 DP 748820 at 311 Old Telegraph Road, Maroota is an irregular shaped lot of 30.7 hectares located on the north side of the road near the intersection with Old Northern Road. The land is located east of the Maroota Ridge which is composed of sandstone terrain with steep ridges and gullies. The site geology is weathered Hawkesbury sandstone underlain by shale. Within the land surface of the site elevations range from 144 metres to 200 metres AHD. The sandstone within both the eastern and western precincts of the land has been partially extracted and processed for sand. The eastern precinct also has native bushland covering varied topography.

Marramarra National Park is located east and north of the land and other land uses in the Maroota area include extractive industry, rural residential development and market gardens. The land is located within the upper catchment of Coopers Creek which drains to the Hawkesbury River approximately 4km to the east. Annual rainfall in the Maroota area averages 885mm.

Two threatened flora species, the shrubs *Tetratheca glandulosa* and *Darwinia biflora* occur on the land and extraction areas were adjusted to conserve populations of these species. No archaeological sites occur on the land. A licensed groundwater production bore and three groundwater monitoring wells are located within the land.

The land is also known as Pit 4 by PF Formation Pty Ltd. An office and amenities shed with adjacent staff and visitor parking are located near the site entrance off Old Telegraph Road. Toilet facilities are provided in the amenities shed for the workforce. A power room, electrical board, cyclone and power screens used for processing sand are located east of the amenities shed within the western extraction area or precinct. Temporary internal access tracks, haul roads, loading and service areas, stockpiles, many internally draining sediment ponds and a large pond for recycled water storage are located within the western extraction area. Hornsby Shire Council collects garbage from the site on a weekly basis. Other recyclable wastes (for example, metals and paper) are transferred by road to PF Formation Pty Ltd's main head office and operational site at 1774 Wisemans Ferry Road, Maroota.

A landscaped mound within the site along the western extraction area and parallel to Old Telegraph Road limits views in the site. Another landscaped mound is located near the site entrance and along the northern boundary of the western extraction area. The closest occupied dwelling is located approximately 50 metres north of the site entrance. The site can also be viewed from some dwellings located along Old Telegraph Road and Hart Place located approximately 1.1 km to the south-east.

Figure 1 provides an aerial view of Lot 2 DP 748820 and the surrounding area with site boundaries shown in red. The western extraction area is shown as the mainly white area north-east of Old Telegraph Road. Extraction commenced in the eastern extraction area in 2011. Figure 2 provides a view of the processing plant within Lot 2 DP 748820 taken in May 2021 from near the site

entrance. Figures 3 and 4 taken in May 2021 provide panoramic views of the eastern and western extraction precincts. Figure 5 taken in May 2021 provides a view east towards the eastern precinct.

**Figure 1 Aerial View of Lot 2 DP 748820 and Surrounds**



*Source: SIX Maps May 2021*

**Figure 2 Existing Processing Plant Located on Lot 2 DP 748820**



**Figure 3 Panoramic View Towards Western Precinct**



**Figure 4 Panoramic View Towards Eastern Precinct**



**Figure 5 View Towards Eastern Precinct**



## **2.2 Site Operations**

The site operations area located mainly within the western precinct is used for sand and clay extraction and on-site processing in accordance with Hornsby Shire Council's modified development consent No. 342/1998/G conditions and Environment Protection Licence No. 10357 varied requirements. The modified development consent permits for the staged extraction of material and rehabilitation while there are approved extraction areas in Maroota and while quarry material in the Maroota area is available for processing. All fill material imported into the site must be Virgin Excavated Natural Material (VENM) or Excavated Natural Material (ENM).

Approximately 11.6 hectares of the land has development consent for the extraction and processing of sand and clay which commenced in 2001 by Maroota Mining Pty Ltd. On 5 June 2009 Etra Pty Ltd now trading as PF Formation Pty Ltd took over ownership of the land and extractive industry operations for the site. Operational areas include the western extraction precinct (nearly all disturbed by operations) divided by two gullies and tributaries of Coopers Creek from the eastern extraction precinct in which operations commenced in 2011. The maximum extraction depth in both precincts is 160 metres AHD. The site extraction areas will be progressively rehabilitated for agricultural uses in the western precinct and with bushland in the eastern precinct. A previously cleared area of 1.4 hectares east of a tributary of Coopers Creek and near the western extraction precinct was the first priority for bushland rehabilitation.

The Environmental Impact Statement (June 1998) for the project estimated that between 2.9 and 3.1 million tonnes of material would be extracted from the site at the rate of 250,000 tonnes per annum over a period of 15 years terminating in 2014 (since extended). An estimated 500,000 tonnes of material was extracted from the site up to mid-2010 with the remainder to be extracted in the future plus material from other approved extraction areas in the Maroota area. Since 2001 extraction rates have been less than the approved production rate of 250,000 tonnes per year.

Extraction will be generally carried out in two stages from east to west and progressively backfilled with overburden including up to 30% of waste excavated material in the form of "boulies" (large boulders) and silt. The extraction areas will be reshaped and contoured with 1:3 batters and

stockpiled topsoil will be placed on top and then progressively revegetated. Completion of extraction and progressive rehabilitation in the eastern precinct will be the first stage followed by progressive rehabilitation in the western precinct. The processing plant area will be maintained while there are approved extraction areas in Maroota and while quarry material is available for processing.

The extraction operation uses bulldozers, a mobile scalping machine, front end loaders and crusher to rip and excavate friable sandstone for transport to either an on-site fixed wash plant or mobile dry screening plant. Processing operations within the wet plant involve dry screening of the extracted material followed by washing to produce coarse and fine sand products. Clay and silt fines are pumped in suspension to a settling pond and the water is recycled within the wash plant.

Surface water is captured in a series of tailings ponds and sediment dams on site and directed to clean water dams for reuse in the processing of sand. The tailings ponds are progressively capped and rehabilitated as they fill with silt derived from the process water. Rainfall runoff is lost either by infiltration, evaporation or consumption in processing the sand. No water is drawn from Coopers Creek for the process.

Operating hours are between 7am and 6pm Monday to Saturday and at no time on Sundays and Public Holidays. No more than 10 laden trucks may enter or leave the site between the hours of 6:00am and 7:00am Monday to Saturday. No more than an average of 35 truck loads of material are removed from the site each work day averaged over one month.

The workforce on-site will generally include 2 or 3 persons operating a bulldozer, front end loader with weigh cell, screening plant, power screen (rinsing unit), radial conveyors, pumps and water cart. These vehicles, plant and equipment are fuelled on-site from a 26,500 litre storage vessel complying with AS 1940:2017 *The storage and handling of flammable and combustible liquids*. No other bulk storage of fuel or hazardous materials takes place within the site. Administration of the site is carried out from PF Formation Pty Ltd's main processing plant and offices located on Patricia Fay Drive at 1774 Wisemans Ferry Road, Maroota approximately 2 km south-west of the site. PF Formation Pty Ltd's all diesel vehicle fleet is equipped with two-way and UHF radio for communications. The workforce also uses mobile phones although the reception in the area is poor.

### **2.3 Responsible Personnel**

The responsible persons for operations of the site, implementation and compliance with the EMP are the Joint Managing Directors of PF Formation Pty Ltd Pty Ltd. Both these personnel are located at 1774 Wisemans Ferry Road, Maroota and as required part time on-site. Their names and contact details are listed below.

*Joint Managing Director and Environmental Manager* Mr Joshua Graham  
Phone No. (02) 4566 8257  
Mobile Phone No. 0418 439 923  
Email [josh@pfformation.com.au](mailto:josh@pfformation.com.au)

*Joint Managing Director* Mr Luke Graham  
Phone No. (02) 4566 8257  
Mobile Phone No. 0407 415 413  
Email [luke@pfformation.com.au](mailto:luke@pfformation.com.au)

The responsible personnel will be assisted as required by specialist contractors or consultants engaged by PF Formation Pty Ltd Pty Ltd to collect water samples quarterly, conduct noise monitoring quarterly, check extraction depths monthly and complete the environmental commitments monthly site inspections and checklists.

### 3. Environmental Management System

#### 3.1 Environmental Policies

PF Formation Pty Ltd's environmental goal is to carry out its extractive industry operations in a legally compliant and environmentally responsible manner. The goal is supported by the environmental operating philosophy of PF Formation Pty Ltd being committed to continuous improvement in extractive industry technology and protection of the environment. The environmental goal is reinforced by PF Formation Pty Ltd's work, health, safety and environmental policies dated 27 August 2020 which are as follows.

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#### Work Health Safety & Environmental Policy

##### WHS Obligations

This policy has been developed and reviewed jointly by management and employees. Management is firmly committed to a policy enabling all work activities to be carried out safely, and with all possible measures taken to remove (or at least reduce) risks to the health, safety, environmental and welfare of workers, contractors, authorised visitors, and anyone else who may be affected by our operations.

Mine legislation is controlled and administered by NSW Planning and Environment Resources Regulator and we are committed to ensuring we comply with the current legislation but without being limited to Work Health & Safety (Mines & Petroleum) Act 2013, Work Health and Safety Regulations (Mines & Petroleum) 2014, Work Health and Safety Act 2014, the Work Health and Safety Regulations 2017 and applicable Codes of Practice and Australian Standards as far as possible.

##### Environmental Obligations

PF Formation is committed to safeguarding the environment during the operation of the project and the rehabilitation of the site. The environmental policy is to:

- conduct activities taking into consideration the efficient use of energy and materials, the sustainable use of renewable resources and the minimization of adverse environmental impact (including noise, dust, other emissions, and visual intrusion)
- ensure that the development occurs in an ecologically sustainable manner
- search for and employ low-polluting technologies whenever reasonably practicable
- adopt waste management practices which include source reduction, recycling and safe disposal
- work closely and constructively with regulatory agencies, community interest groups and other institutions concerned with environmental issues
- develop and maintain emergency procedures, in co-operation with the relevant agencies and community groups, for responding to major hazards
- conserve and protect the natural environment and, where appropriate, adopt practices which preserve biodiversity
- promote environmental awareness among staff and customers through specific training and awareness programmes.

Overall responsibility for the environmental management system for the project lies with PF Formation and that operator will be responsible for ensuring that work carried out meets the requirements of the environmental management system. This will include reporting regularly on compliance and performance, initiating independent audits as appropriate and ensuring that the implementation of this environmental management plan is undertaken in an appropriate manner. Generally, all employees on the project will take on a personal responsibility for environmental issues.

##### Responsibilities - Management / Supervisors

Will provide and maintain as far as possible:

- a safe working environment
- safe systems of work
- plant and substances in safe condition
- facilities for the welfare of workers
- information, instruction, training and supervision that is reasonably necessary to ensure that each worker is safe from injury and risks to health

- a commitment to consult and co-operate with workers in all matters relating to health and safety in the workplace
- a commitment to continually improve our performance through effective safety management.
- encouraging employees, contractors & visitors to report environmental pollution, safety hazards and unsafe acts by others.

### **Responsibilities - Workers**

Each worker has an obligation to:

- comply with safe work practices, with the intent of avoiding injury to themselves and others and damage to plant and equipment
- take reasonable care of the health and safety of themselves and others
- wear personal protective equipment and clothing where necessary
- comply with any direction given by management for health and safety
- not misuse or interfere with anything provided for health and safety
- report all accidents and incidents on the job immediately, no matter how trivial
- report all known or observed hazards to their supervisor or manager.

### **Application of this Policy**

- We seek the co-operation of all workers, customers and other persons. We encourage suggestions for realising our health and safety objectives to create a safe working environment with a zero accident rate.
- This policy applies to all business operations and functions, including those situations where workers are required to work off-site.

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The above PF Formation Pty Ltd work, health, safety and environmental policies will be met by operating and managing the plant and processing all clay and sand product with minimal environmental impact, while being a responsible corporate citizen and meeting all relevant legislative requirements. The aims of the work, health, safety and environmental policies are to ensure that:

- conditions of approval in the Shire of Hornsby modified development consent and EPA licence requirements for the site are implemented and complied with.
- the requirements of all relevant NSW environmental legislation are complied with.
- the site is operated and managed to minimise any adverse impacts and pollution on the surrounding environment and community.

PF Formation Pty Ltd and all of its employees and suppliers have legal obligations to ensure the plant operates in an environmentally sustainable manner now and in the future. PF Formation Pty Ltd has operated extractive industries in the Maroota area since 1983 with no significant environmental impact or harm and has successfully rehabilitated land previously used for extractive industry.

## **3.2 Ecologically Sustainable Development**

The principles of ecologically sustainable development as detailed in the *Environmental Planning and Assessment Act, 1979* and a response in relation to the operations and environmental policies for the site follow and in partial fulfilment of condition 90 of the development consent No. 342/1998/G.

*(a) The precautionary principle - namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:*

- (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and*
- (ii) an assessment of the risk-weighted consequences of various options.*

There are no known threats of serious or irreversible environmental damage associated with the site; hence lack of full scientific certainty has not been used as a reason for postponing any of the safeguard measures outlined in the EIS, development consent conditions and EPA licence requirements to prevent environmental degradation. Site operations have followed the

precautionary principle by ensuring that the environmental risks have been considered and relevant safeguards implemented to reduce any uncertainties and to avoid serious or irreversible damage to the environment (for example, use of monitoring, landscaped mounds, setbacks from site boundaries and Coopers Creek tributaries, maximum extraction depths, rehabilitation of extraction areas, and protection of *Tetratheca glandulosa* and *Darwinia biflora* habitat). The Maroota sand deposit including the land has been identified as a major source of sand within the Sydney region and this has been reinforced by the Department of Planning, Industry and Environment with the provisions of *Sydney Regional Environmental Plan No. 9 Extractive Industry (No. 2 - 1995)*.

*(b) Inter-generational equity - namely, that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.*

Site operations have been designed for future needs with the capacity to meet expected extraction rates in the Maroota area for at least the next 20 years. Progressive rehabilitation of the site will take place for the next generation and future uses including agricultural land uses in the western precinct and bushland in the eastern precinct. The health, diversity and productivity of the environment will be maintained for the benefit of future generations with implementation of the safeguards, development consent conditions and EPA licence requirements. The project will continue to contribute to the local and regional economy and have medium term benefits for future generations by providing a secure sand and clay resource close to the metropolitan Sydney market with acceptable environmental impact.

*(c) Conservation of biological diversity and ecological integrity namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration.*

The project will help conserve biological diversity and ecological integrity by retaining existing areas of *Tetratheca glandulosa* and *Darwinia biflora* habitat. Site rehabilitation will conserve biological diversity and ecological integrity with use of locally indigenous species in rehabilitation and revegetation of the site. Other mitigation measures including monitoring will be implemented to minimise any adverse impacts on soils, waterways, groundwater, water and air quality, noise and vibration, landscape and visual qualities, and the nearby Maroota rural community. The water cycle for the site is self-enclosed except for a licenced production bore. A rehabilitation bond has been lodged with Council for the site.

*(d) Improved valuation, pricing and incentive mechanisms namely, that environmental factors should be included in the valuation of assets and services, such as:*

- (i) polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,*
- (ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,*
- (iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.*

The cumulative impacts of the site operations will be beneficial and manageable in the medium term. However, while prices for natural resources should be set to recover the full social and environmental costs for their use, many environmental values cannot be set in monetary terms. Nevertheless, the site's extractive resources will provide beneficial uses and economic benefits to the community with supply of product that is essential to the viability of the Sydney metropolitan building and construction industries. The on-site EMP will continue commitments to monitor any impacts and provide corrective actions. After completion of extraction the area will be rehabilitated for agricultural use and bushland to improve valuation of the site. Waste generation from the site will continue to be managed responsibly. In addition, based on extraction rates Section 7.11 contributions will be paid to Council for the maintenance and improvement of main roads in the Maroota area. The value placed on environmental resources in and around the site is evident in the extent of previous environmental investigations, planning and design of impact mitigation measures to prevent irreversible damage of those resources. PF Formation Pty Ltd currently undertakes environmental monitoring of the existing development and this will continue for the life of the project.

### 3.3 Legislation Applicable to Site

The requirements of the following NSW legislation and their associated regulations directly apply to the site and will be complied with by PF Formation Pty Ltd.

- *Biodiversity Conservation Act 2016*
- *Biosecurity Act 2015*
- *Environmental Planning and Assessment Act 1979*
- *Heritage Act 1977*
- *National Parks and Wildlife Act 1974*
- *Protection of the Environment Operations Act 1997*
- *Rural Fires Act 1997*
- *Soil Conservation Act 1938*
- *Waste Avoidance and Resource Recovery Act 2001*
- *Water Management Act 2000*
- *Work Health and Safety Act 2011*
- *Work Health and Safety (Mines and Petroleum Sites) Act 2013.*

In addition, the site is subject to the following planning and legislative controls.

- *Biodiversity Conservation Regulation 2017*
- *Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)*
- *Protection of the Environment Operations (Clean Air) Regulation 2010*
- *Protection of the Environment Operations (General) Regulation 2009*
- *Protection of the Environment Operations (Noise Control) Regulation 2017*
- *Protection of the Environment Operations (Waste) Regulation 2014*
- *Sydney Regional Environmental Plan No. 20 Hawkesbury-Nepean River (No. 2 - 1997)*  
Note this plan will be merged into *State Environmental Planning Policy (Environment)* which was on exhibition until 31 January 2018.
- *Sydney Regional Environmental Plan No.9 Extractive Industry (No. 2 - 1995)*
- *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries), 2007*
- *Hornsby Local Environmental Plan 2013*
- *Hornsby Development Control Plan 2013 – Part 2 Rural - Section 2.5 Extractive Industries*
- *Hornsby Shire Council Section 94A Development Contributions Plan 2014 - 2024*
- *NSW Aquifer Interference Policy 2012*
- *Water Management (General) Regulation 2018*
- *Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources 2011*
- *Work Health and Safety Regulation 2017*
- *Work Health and Safety (Mines and Petroleum Sites) Regulation 2014.*

### 3.4 Environmental Impact Assessment and Implementation

The environmental impacts of the project were considered during preparation of the *Environmental Impact Statement, Sand Extraction, Lot 2 DP 748820, Old Telegraph Road, Maroota* (June 1998, Nexus Environmental Planning). Approval for operations of the site was granted on 1 July 1999 via conditional development consent No. 342/98 which has been modified many times including a Land and Environment Court Order.

An up to date copy of development consent No. 342/1998/G including all modifications is provided in Attachment 1. Development Consent Plans CH2677G1 dated 1 May 1996, MP-01B dated April 1999, MP-02B dated January 1999, MP-03C dated July 2000, Drawing No. 8703 sheet 1A dated July 2000 and a Plan dated May 2004 Sheet 1 of 3 are provided in Attachment 2. The Environment Protection Licence No. 10357 for the site as at 3 May 2021 is provided in Attachment 3.

The EMP is a requirement of development consent number 90 to ensure all environmental controls developed during preparation of the EIS and listed in the development consent and EPA licence requirements for the site are implemented during site operations and rehabilitation.

### **3.5 Amendments and Variations to the EMP**

Two EMPs (*Maroota Sand and Clay Extraction, Environmental Management Plan*, June 2001, International Environmental Consultants Pty Ltd; and *Annual Environmental Management Report for Maroota Mining Pty Limited*, May 2005, South West Planning) for the site were previously submitted to Hornsby Shire Council. On behalf of PF Formation Pty Ltd another EMP was submitted to Hornsby Shire Council in February 2011 and revised in September 2012, August 2013 and May 2017. This revised EMP is based on the best available information for the site as at May 2021.

The requirements of this EMP may need to be amended during operations of the site. This could be, for example, because of issues raised by neighbouring residents, changes in legislation and associated regulations, the development consent or EPA licence. The need for variations may also occur as site operations progress and specific circumstances vary from those envisaged during the formulation of the safeguards in the EIS and the modified development consent for the site.

The procedure for amending the EMP, where requirements are considered not applicable, or additional requirements are needed, is a formal process in order to ensure that the environmental implications for any amendments are acceptable. The procedure outlined below will maintain the integrity of the EMP and ensure that any amendments are approved by the Environmental Manager.

For all amendments or variations to the EMP, the Environmental Manager will be notified, the reasons for the amendment explained and approval sought. Following approval by the Environmental Manager with notification to Hornsby Shire Council, the amendment together with the responsibility and timing will be issued by the Environmental Manager and documented in Section 8.3. Any revisions will be referenced on page *iii* of the EMP and the revised EMP issued to those on the distribution list. The revised contents of Section 8.3 will then be treated the same as the requirements of Section 8.2 in relation to checking procedures.

## **4. Safeguards**

Safeguards and/or environmental mitigation measures were developed during the assessment of impacts on the environment during preparation of the EIS, issuing of the modified development consents and EPA licence. The safeguards generally follow the format of development consent No. 342/1998/G including modifications plus other requirements. The safeguards are summarised in Section 8 - Schedule of Environmental Actions for the following key issues and activities.

- Environment Protection Authority (EPA) requirements.
- National Parks and Wildlife Service requirements.
- Planning requirements.
- former Department of Land and Water Conservation requirements.
- Environment requirements.
- Sediment and erosion control requirements.
- Water quality requirements.
- Waste management requirements.
- Rehabilitation requirements.
- Air quality requirements.
- Monitoring and management requirements.
- Engineering requirements.
- Contributions requirements.
- Other operational requirements.

## 5. Environmental Monitoring

The objectives and/or requirements for the monitoring programme are detailed below for the key issues and activities for the site. The results of the monitoring programme and audits will be included in Annual Environmental Management Reviews (AEMRs). The first AEMR was produced in August 2011. The AEMRs will be based on the October 2015 NSW government publication *Annual Review Guideline*. The following parameters will be regularly monitored by the Environmental Manager assisted by specialist contractors and consultants.

### **Operational**

The EIS provided information on a maximum production rate of 250,000 tonnes/annum to a maximum extraction depth of 160 metres AHD in both precincts. Total extraction of weathered Hawkesbury sandstone in the western precinct has been an estimated 800,000 tonnes in the last 20 years or about 25% of the approved rate. The EPA licence provides for a production rate of between 100,000 and 500,000 tonnes/annum. Monitoring of contributions paid to Hornsby Shire Council by the Environmental Manager will establish that annual production rates are less than 250,000 tonnes/annum.

Operating hours are between 7am and 6pm Monday to Saturday and at no time on Sundays and Public Holidays. No more than 10 laden trucks may enter or leave the site between the hours of 6:00am and 7:00am Monday to Saturday and no more than an average of 35 truck loads of material can be removed from the site each work day averaged over one month.

The Environmental Manager will monitor and ensure operating hours are adhered to including a maximum of 10 laden truck movements between 6am and 7am and that an average number of truckloads removing material averaged over one month does not exceed 35 per work day.

The Environmental Manager will monitor that the maximum extraction depth of 160 metres AHD is not exceeded using survey points that have been established in the pits as benchmarks to determine maximum extraction depths. No explosives or hazardous chemicals will be used in processing of material.

### **Meteorological Monitoring Station**

An automatic weather station located on the roof of the workshop at 1774 Wisemans Ferry Road, Maroota (Lot 198 DP 752025) has monitored temperature, wind speed and direction, rainfall and barometric pressure for PF Formation Pty Ltd quarries since December 1999. The EPA considers this existing weather station is in reasonable proximity to the site and can be used for meteorological monitoring of the site. The weather station will be operated for the life of the project and is located approximately 1.6km directly south west of the site as shown in Figure 6. The weather station records will be available for inspection at the weighbridge.

**Figure 6 Location of Weather Monitoring Station**



Source: Six Maps May 2021

## **Traffic**

Daily records will be maintained by the weighbridge operator located on Patricia Fay Drive, Maroota recording each truck movement from the site in terms of date, time, vehicle registration number, type of material, mass/tonnage and job number. Transport of material is limited to 35 truck loads a day averaged over one month. Monthly monitoring of production records held at 1774 Wisemans Ferry Road, Maroota by the Environmental Manager will establish the number of daily truck loads. The Maroota Local Traffic Management Policy (shown below) will be implemented.

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### *Maroota Local Traffic Management Policy*

The Maroota Local Traffic Management Policy is an inter-pit agreement signed on 17 January 2020 between local sand quarries (PF Formation Pty Ltd, Dixon Sand Pty Ltd and Hodgson Quarries and Plant Pty Ltd).

Extractive industry operators and their customers benefit from the use of local and arterial roads, in particular Old Northern Road and Wisemans Ferry Road. These roads are shared between local residents, businesses, travellers and haulage vehicles.

As a licenced driver in the Maroota area you are aware of the existing local speed limitations and the speed restrictions at the Maroota Public School, along Old Northern Road.

All haulage vehicles entering and leaving the quarry sites must comply with the Traffic Management Policy including:

- The speed limit as observed on all local and arterial roads in the Maroota and surrounding areas.
- The speed limit on Old Northern Road at Maroota Public School is 60 km/h.
- The speed limit on Old Northern Road during school zone times is 40 km/h between the hours of:
  - 8:00 - 9:30 am, and
  - 2:30 - 4:00 pm
- All loads must be covered before leaving quarry sites, and
- Drivers are requested to limit the use of engine / exhaust braking in considering potential noise impacts.

Repeated failure to comply with the Traffic Management Policy may result in refusal of entry to all quarries under this agreement.

The growing importance of Maroota sand resource as a valuable commodity for the Sydney sand market warrants a high standard of compliance and self-regulation to ensure our joint commercial future.

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## **Soil and Water Management**

A soil and water management plan for the eastern precinct is provided in Attachment 4. In addition, the relevant measures in *Managing Urban Stormwater: Volume 2E Soils and Construction - Mines and Quarries* and *Soils and Construction 2004* (the Blue Book, NSW Government, 2004) will be implemented and monitored for both the eastern and western precincts.

All surface water run-off from site operations will be contained within the clean water storage dam, sediment ponds and tailings ponds within the extraction areas of the site. Rainfall will discharge over the disturbed and undisturbed portions of Coopers Creek catchment. No water will be drawn from Coopers Creek and where possible minimal use of groundwater from the production bore.

### **Surface Water**

The objectives are that all surface water is contained within the site and that no sediment laden run-off water (<50mg/litre non-filterable residues) reaches Coopers Creek.

Each quarter the Environmental Manager or delegate collects a water quality sample from an on-site tributary of Coopers Creek (near a causeway crossing in the eastern precinct when running) for testing at a NATA registered laboratory for analyses of pH, turbidity, oil and grease, total dissolved solids, total suspended solids and conductivity. Acceptable limits are the preferred EPA

criteria and ANZECC guidelines for discharge of stormwater runoff. The surface water results will be included in the AEMRs with full documentation held at 1774 Wisemans Ferry Road, Maroota and available for inspection. Water quality results will also be published on PF Formation Pty Ltd's website at [www.pfformation.com.au](http://www.pfformation.com.au).

### Groundwater

The objective is that no groundwater is breached or used in production except for the licenced 30 ML/year production bore.

Groundwater quality and depth of groundwater has been continuously monitored in the Hawkesbury Sandstone aquifer below the site by contractors since October 1997.

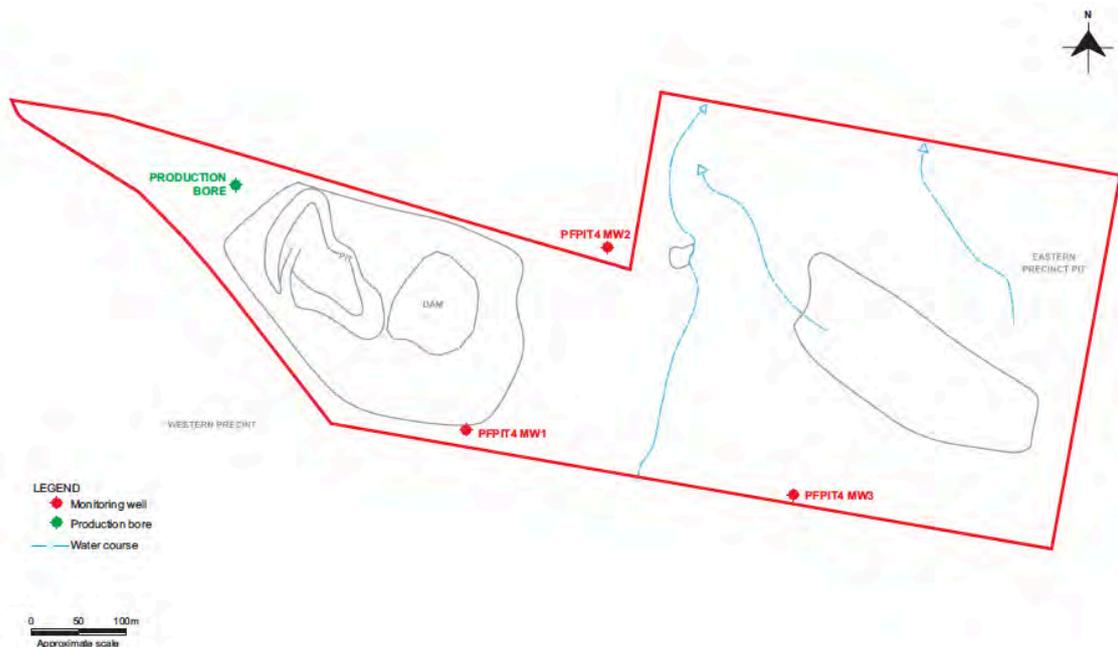
As agreed with DIPNR (now the Department of Planning, Industry and Environment - Water) in 1998 groundwater quality will be monitored for:

- pH, electrical conductivity and total dissolved solids.
- calcium, magnesium, sodium and potassium.
- chloride, sulphate and bicarbonate.
- oil and grease.

Testing for the above analytes is completed at a NATA registered laboratory. The Environmental Manager or delegate ensures that groundwater levels and water quality samples are taken annually and results reported for monitoring wells PFPIT4MW-1, PFPIT4MW-2 and PFPIT4MW-3. Acceptable limits are the preferred EPA criteria and ANZECC guidelines. The groundwater results will be included in the AEMRs with full documentation held at 1774 Wisemans Ferry Road, Maroota and available for inspection. The groundwater results will also be provided to the Department of Planning, Industry and Environment – Water.

The location of production and groundwater water quality monitoring sites is shown in Figure 7.

**Figure 7 Location of Water Monitoring Sites**



### Air Quality

The EPA does not require dust monitoring for the site although upper limit dust deposition rates should not exceed 4.0 grams/m<sup>2</sup>/month. Dust deposition will be monitored monthly by a private contractor with a NATA registered laboratory via five dust deposition gauges located near other PF Formation Pty Ltd quarries and Maroota Public School in the surrounding area. If required, a summary of the monthly results in accordance with 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* will be provided in the AEMRs. If publically available, additional analysis of

TEOM rolling 24-hour average PM<sub>10</sub> impacts at Maroota Public School from surrounding quarries (including the site) will be reported annually and included in the AEMRs. The Environmental Manager will be responsible for ensuring the air quality monitoring is completed by others with full documentation held at 1774 Wisemans Ferry Road, Maroota and available for inspection. Dust deposition results will also be published on PF Formation Pty Ltd's website at [www.pfformation.com.au](http://www.pfformation.com.au).

In addition, regular on-site checks will be made by the Environmental Manager that there is no visible dust blowing across the site on windy days; there are no visible continuous exhaust emissions on public lands for greater than 10 seconds; and that dust suppression techniques have been applied during operations including on-site watering, keeping stockpiles damp and using the installed sprinkler system to ensure the haul roads are kept moist constantly during dry weather.

The NSW Resources Regulator also requires health monitoring of the workforce for exposure to total respirable dust, total inhalable dust and crystalline silica.

### **Noise**

The EPA licence requires noise generated at the premises to be monitored at 325 Old Telegraph Road, Maroota and 1 Hart Place. Maroota. Noise generated at the premises must not exceed:

- an L<sub>Aeq (15 minute)</sub> measurement parameter continuous frequency noise level of 40 dB(A) during the day (7am to 6pm Monday to Saturday); and
- an L<sub>Aeq (15 minute)</sub> measurement parameter continuous frequency noise level of 38 dB(A) during the night (10pm to 7am Monday to Saturday).

Noise will be monitored at the two locations by the Environmental Manager for at least 15 minutes on one operating day each quarter using a calibrated noise meter and as specified in the EPA licence. Noise will be measured using AS 1055.1 - 1997 *Acoustics - Description and measurement of environmental noise. Part 1: General procedures*. Instrumentation is held at 1774 Wisemans Ferry Road, Maroota and monitoring equipment includes a Class 1 Svan Sound Level Meter and a Class 1 Svantek Acoustic Calibrator. Instructions are available for the use of the equipment and the Environmental Manager has been trained in their use.

The Noise Management Plan (Attachment 5) for loading trucks between 6am to 7am Monday to Saturday will also be implemented.

Full documentation and results will be held at 1774 Wisemans Ferry Road, Maroota and available for inspection. A summary of the quarterly results will be provided in the AEMRs. Noise monitoring results will also be published on PF Formation Pty Ltd's website at [www.pfformation.com.au](http://www.pfformation.com.au).

### **Waste Management**

The Environmental Manager (or delegate) will be responsible for monthly monitoring of all on-site waste management, ensuring that all waste disposal, recycling and reuse procedures are followed as shown in the Waste Management Plan in Attachment 6. No waste will be buried or burnt on site. Any waste identified on site will be classified in accordance with the EPA's *Waste Classification Guidelines* and disposed of to a licenced waste facility.

All VENM or ENM material imported to the site will be classified and documented by a suitably qualified environmental consultant in accordance with the NSW Environment Protection Authority's *Waste Classification Guidelines* and *Protection of the Environment Operations (Waste) Regulation 2014* prior to importation.

A summary of the waste management monthly monitoring results will be provided in the AEMRs.

### **Rehabilitation**

The site will be progressively rehabilitated in accordance with the revised rehabilitation management plans-shown in Attachment 7. The maximum extraction depth is 160 metres AHD. The western precinct will be progressively rehabilitated for agricultural uses and for bushland in the eastern precinct. The rehabilitation progress will be monitored by the Environmental Manager and the results will be summarised for inclusion in the AEMRs. Full documentation will be held at 1774 Wisemans Ferry Road, Maroota and available for inspection.

### **Risk Management**

The Pollution Incident Response Management Plan for the site is part a plan for all of PF Formation Pty Ltd operating sites and quarries which require Environment Protection Licences in the Maroota area. The Pollution Incident Response Management Plan identifies hazards on-site and pre-emptive actions to be undertaken to minimise risk and any pollution incidents. The Joint Managing Directors will be responsible for implementing and compliance with the Pollution Incident Response Management Plan.

The Pollution Incident Response Management Plan is tested and reviewed annually and the latest version (November 2020) can be downloaded at [www.pfformation.com.au](http://www.pfformation.com.au).

In addition, in March 2020 PF Formation Pty Ltd completed a risk assessment for the COVID-19 (coronavirus) pandemic with management actions and controls to keep employees and sites safe. The COVID-19 risk assessment, safety alert and declaration form can be downloaded at [www.pfformation.com.au](http://www.pfformation.com.au).

### **Community and Complaints**

One community meeting for the site was held by Maroota Mining Pty Ltd in July 2004. The Maroota Residents Community Committee is composed of residents, Council Managers, PF Formation Pty Ltd employees and consultants and other NSW government representatives as required. Since PF Formation Pty Ltd acquired the site in June 2009 the February 2011 EMP was discussed at the first Maroota Residents Community Committee meeting held on-site on 26 July 2011. At that meeting neighbouring residents and a Hornsby Shire Council representative confirmed that they were happy to have communication by residents calling PF Formation Pty Ltd direct if there were any issues rather than formal annual meetings. It was agreed at the meeting that this action would meet the requirements of condition number 11 in development consent No. 342/1998/G.

PF Formation Pty Ltd will contact the neighbouring residents by letter at least annually requesting them if there are any issues to resolve and to inform them of the AEMRs which are available on PF Formation Pty Ltd's website at [www.pfformation.com.au](http://www.pfformation.com.au).

Community complaints will be monitored and procedures implemented by the Environmental Manager to rectify any problems and considering EPA requirements for pollution complaints. A complaints register is provided in Attachment 8 of the EMP and will be maintained by the Environmental Manager. The objective is to have nil complaints.

Environmental audits of the site, the EMP and its effectiveness and implementation may be completed as required. These audit reports would be confidential to PF Formation Pty Ltd but made available to Council and the EPA where required.

### **Contributions**

Section 7.11 contributions will be paid on a monthly basis depending on the rate of extracted material in accordance with condition 108 of the development consent.

## **6. Monthly Site Assessments**

Monthly site assessments will be completed on the listed environmental commitments. Environmental commitments completed during construction are included in Section 8.1. All environmental commitments and/or actions, responsibilities and their timing for implementation are summarised in Section 8.2 and detailed in Section 8.3 Environmental Checklist for Operations. After completion of the designated environmental commitments and/or operational actions listed in Section 8.3, the Environmental Manager or delegate is to sign off and date copies of the Environmental Commitments Summary Checklist provided in Section 8.2 for inclusion in the AEMRs. Comments and references can be completed as required. The completed checklists will be held by the Environmental Manager at 1774 Wisemans Ferry Road, Maroota.

A number of site assessments on a monthly basis are required to be completed to assess the implementation and effectiveness of all actions specified in the Section 8.3 Environmental Checklist for Operations, as follows.

To ensure that all environmental commitments and controls are in place and are being implemented during operations they have been nominated as routine monthly site activities to be checked by the Environmental Manager (or delegate). The monthly checklists will be accompanied by any comments, corrective actions and additional environmental requirements to ensure that the safeguard measures are achieved. In addition, extraction depths, noise and water quality monitoring by the Environmental Manager will be included in the monthly checklists as they are obtained.

Any complaints received on site operations and associated corrective actions will be documented on the checklist and in the Complaints Register in Attachment 8.

## **7. Responsibilities and Reporting**

### ***Environmental Manager (assisted by specialist contractors and consultants)***

- ensure implementation and maintenance of environmental actions and controls as provided in the Environmental Checklist for Operations in Section 8.3.
- ensure that where relevant all Environmental Checklists are completed, signed and dated and are included in the AEMRs.
- maintain a register of all completed monthly Environmental Checklists provided in Section 8.2 and include them in the AEMRs.
- issue and follow up on complaints, non-conformances and observations.
- report on effectiveness of safeguard measures.
- address any environmental or community complaints made about the site.
- activate the Pollution Incident Response Management Plan and COVID-19 management actions and controls as required.
- ensure all weigh dockets are recorded and a log book maintained verifying the extraction quantities and vehicle movements in and out of the site.
- ensure that AEMRs are completed and posted on the website and a copy is provided to Hornsby Shire Council.
- ensure that the annual groundwater management plan is forwarded to the Department of Planning, Industry and Environment – Water.
- ensure annual returns are forwarded to the EPA.
- ensure that all site personnel are aware of their environmental responsibilities in the management and implementation of safeguard controls and actions.
- ensure that site assessments by specialist contractors and consultants are carried out and reported.
- ensure that corrective and preventative actions arising from internal assessments or environmental audits are implemented.
- address any environmental or community complaints made about the site.
- contact neighbouring residents annually and keep Hornsby Shire Council informed of site operations via amendments to the EMP and AEMRs.

## 8. Schedule of Environmental Actions

### 8.1 Completed Prior to Commencement of Works Commitments

Some conditions in development consent No. 342/1998/G were prior to commencement of works and have either been completed or current status as shown in the table below.

No.	Development Consent No. 342/1998/G Conditions	Status
1.	The proponent is to obtain all necessary operating licences and permits from all relevant public authorities including the Environment Protection Authority and the Department of Land & Water Conservation and details of which are to be submitted to Council prior to the commencement of on-site works.	Completed
2.	<p>Prior to commencement of the quarry operations the proponent is to undertake the following:-</p> <p>2.1 Construct all internal all weather surfaced access tracks with crossfall and associated table drains and lead out, designed to carry the extraction vehicle loading;</p> <p>2.2 Provision of headwalls, scour protection and sedimentation traps for all drainage systems and leadouts mentioned in 2.1 above;</p> <p>2.3 The provision of erosion and sedimentation control. Details to be shown on engineering plans and the devices to be established prior to the commencement of engineering works;</p> <p>2.4 Provision of safety protection fencing and guard rail where vertical faces are proposed in the quarry area and adjacent to the access track.</p>	<p>Completed</p> <p>Completed</p> <p>Completed</p> <p>Completed</p>
3.	<p>Prior to the commencement of extraction, the proponent shall:</p> <p>3.1 Prepare and submit to Council for its endorsement, an Environmental Management Plan which addresses performance and management of the operation, including matters of sediment and erosion control, waste, rehabilitation (incorporating staging throughout the life of the consent), air quality and monitoring;</p> <p>3.2 Lodge with Council a contract for a Rehabilitation Bond based on an amount per tonne of extracted material. The total of this amount will be sufficient to cover the cost rehabilitating the approved extraction area and other likely disturbed areas.</p>	<p>Annual EMPs submitted in 2001 and 2005. Revised EMPs in 2011, 2012, 2013 and 2017.</p> <p>Lodged and accepted by Council in May 2010.</p>
4.	A site contamination investigation report is to be submitted prior to the commencement of any works on the site. Should evidence of contaminated land be apparent, the Environment Management Plan shall detail how such material is to be remediated and/or disposed of to the satisfaction of Council and the Environment Protection Authority.	No site contamination investigation report has been sighted or received by PF Formation Pty Ltd. Extraction since June 2009 has shown no evidence of any land contamination.
5.	Fencing is to be provided to separate extraction areas and the internal haul road from habitat areas to reduce potential impacts to native vegetation and the habitat it provides.	Completed

No.	Development Consent No. 342/1998/G Conditions	Status
31.	<p>Prior to the commencement of any extractive operations on the site, the following works will be required to have been undertaken to Council's satisfaction.</p> <p>(a) (i) installation of the earth mounding and the planting of screen vegetation within the setback area to Old Telegraph Road in accordance with the detail contained in drawing No. 1530 – MP03 Issue C, dated July 2000 by Scott Murray &amp; Associates.</p> <p>(ii) construction of the haul road in accordance with drawing No. 8703 Sheets 1A and 2A of Lyle Marshall and Associates Pty Ltd dated July 2000 subject to that section of the haul road located between section C-C and the southern most point of the frontage of the site to Old Telegraph Road being lowered by 1 m in relation to existing surface levels.</p>	Completed works as per consent condition 31 amended by Land and Environment Court Order of 4 October 2000.
91.	Council's public road between the entrance to the extraction site and the northern intersection of Old Northern Road and Old Telegraph Road shall be constructed to the satisfaction of Baulkham Hills and Hornsby Shire Councils.	Completed
92.	The northern intersection of Old Northern Road and Old Telegraph Road, Maroota, shall be constructed of Type B intersection to the requirements of the Roads and Traffic Authority (RTA), Baulkham Hills Shire Council and Hornsby Shire Council.	Completed
93.	In the proposed intersection and public road, design and construction of pavement shall cater for both the existing traffic volumes and equivalent standard axle (ESA) loadings, allowing for reasonable growth for a period of 20 years, as well as the maximum permissible number of fully loaded design semi trailer vehicles for the life of the extraction industry.	Completed
94.	Access from Old Telegraph Road to the site and an internal haul road shall be constructed to Council's standard and the requirements of the Department of Land and Water Conservation.	Completed
95.	<p>The proposed intersection and Old Telegraph Road design and internal haul road shall incorporate the following design constraints:-</p> <p>95.1 The intersection, public road, internal road and associated works shall cater for all anticipated classes of vehicle and any turning manoeuvre.</p> <p>95.2 Roads shall be designed and constructed as generally two-way with lane widths to be at least 3.0 m. Shoulders to be designed and constructed at least 1.0 m wide.</p> <p>95.3 Verges, batters and table drains to be designed and constructed in accordance with common Austroads and Council design standards. Verge width and lateral clearances for road shoulder, road furniture and trees are to be at least 1.0 m clear of the outer edge of road shoulder. Maximum side slopes of batters to be designed and constructed to prevent vehicles from overturning.</p> <p>95.4 Sight lines are to be at least the minimum given topographic and geometric considerations, horizontal and vertical alignment and maximum grade considerations in accordance with common Austroads and Council design standards.</p> <p>95.5 Drainage details to ensure that pre-construction stormwater runoff patterns shall be the same as after construction. Table drains and culverts are to have a capacity of not less than the 20 year average recurrence interval (ARI) storm capacity. Longitudinal slopes of drains shall be designed to prevent scour and siltation.</p> <p>95.6 All engineering works required by these conditions must be designed and constructed in accordance with:</p> <p>(a) Australian Rainfall and Run-Off 1987 and</p>	Completed

No.	Development Consent No. 342/1998/G Conditions	Status
	<p>(b) Hornsby Shire Council's Civil Works, Design and Construction Specifications 1999</p> <p>95.7 Embankments where required shall have maximum slope determined by nature of their being cut or fill and the soil used. Creation of batters for support on roadsides as necessary and submission of a copy of the registered document of transfer to Council immediately after construction of such batters.</p> <p>95.8 Accurate discovery and location of all services and marked on the plans and proposals to adjustments to same as required with the written authority of the utility or service provider.</p> <p>95.9 Access into the lot affected by boundary subdivision is to be shown on the Engineering plans and is to be constructed to Council's satisfaction.</p> <p>95.10 In order to incorporate biodiversity issues of roadsides, design and construction of all works are to be in accordance with Council's "Management Plan for Rural Roads".</p> <p>95.11 In order to provide safety, appropriate signage, warning, traffic control and safety measures are to be installed in Old Northern Road and Old Telegraph Road on all approaches prior to work commencement. Such measures shall be signposted and illuminated with flashing beacons between sunset and sunrise for the duration of the road works. Signage advising of altered traffic conditions shall be installed for a reasonable time after the completion of works.</p> <p>Such measures are to be proposed on Engineering plans for construction in accordance with AS 1742.3 - 1996 and the relevant SAA HB81 Handbooks.</p>	Completed
96.	<p>In order to ensure adequate safety, a proposal shall be prepared by a suitably qualified Traffic Engineer for agreement by the RTA in respect of maximum speed, safety and advisory signposting and line marking given the proposed alignment and geometry of the works. Such report is to be lodged with the Construction Certificate. Subsequently, construction of approved signage and line marking to RTA and Council standards.</p>	Completed
98.	<p>A Construction Certificate with Engineering plans is to be lodged for examination. The plans are to be submitted using Council's <u>Civil Works Specifications</u>. This information shall include the following:-</p> <p>98.1 Design constraints from abovementioned conditions.</p> <p>98.2 Any Construction Certificate that may be issued in association with this development consent must also ensure that any proposed plans and designs are generally consistent (in terms of site layout, site levels, building location, size, external configuration and appearance) with Development Application plans as already determined.</p> <p>98.3 Previous written consent from RTA and Baulkham Hills Shire Council, referring to relevant plan numbers, stating there is no objection to commencement of construction and extraction activities.</p> <p>98.4 Plans of longitudinal sections, cross sections, drainage sections, drainage catchment plans and soil and water management plans.</p> <p>98.5 Position of all lot boundaries, and all existing and proposed features and structures.</p> <p>98.6 Chainages, existing and proposed topography, limits of work, bench marks and Datum.</p> <p>98.7 A check including a report by a suitably qualified Civil Engineer of advisory speed capacities given the final alignment.</p> <p>98.8 Four sets of A1 or A2 size sheets suitable for black and white copying. Plans to be clearly set out so the works may be understood.</p>	Completed

No.	Development Consent No. 342/1998/G Conditions	Status
	Logical collection of information on sheets in order to avoid onerous effort in cross referencing.	
103.	<p>A works-as-executed plan prepared by a suitably qualified and certified Chartered Civil Engineer shall be submitted on the completion of the works showing:-</p> <p>103.1 The levels and datum for all survey marks found or placed</p> <p>103.2 Where the works-as-executed plans differ from the approved plans, the information shown on the plan is to be neatly crossed out and the new information substituted in such a manner that it can be clearly distinguished on a print taken from microfilm.</p>	Completed
104.	Construction of proposed intersection. Old Telegraph Road construction and internal haul road to be completed in accordance with the approved Engineering plans and any consent, and to the satisfaction of Council and the Roads and Traffic Authority prior to commencement of any extraction on the site.	Completed
105.	Lodgement and approval of a Subdivision Certificate is required to authorise the plan of boundary adjustment. It should be noted that a Subdivision Certificate can only be issued by Council unless an Environmental Planning Instrument identifies that an Accredited Certifier can undertake the work.	Completed
106.	<p><i>Amended consent condition 106.</i></p> <p>There shall be no commencement of extraction works until all conditions Nos. 91 to 106 inclusive, have been completed to the satisfaction of Council and the Roads and Traffic Authority.</p>	Completed
107.	Dedication of proposed Lot 11 to Council and the Roads and Traffic Authority. Such land to be free from any taxes, rates and charges owing.	Completed
109.	<p>109. To obtain a Subdivision Certificate (in relation to condition No. 107), you must submit a Subdivision Certificate application form, pay the appropriate fee and provide the following:</p> <p>109.1 A Final Survey Plan together with eight (8) exact copies prepared by a Registered Surveyor.</p> <p>109.2 An original Section 88B document (if required) together with one additional copy, in accordance with the Conveyancing Act, 1919.</p>	Completed

## 8.2 Environmental Commitments Summary Checklist

A summary checklist for monthly recurring commitments follows. The checklist will be completed by the Environmental Manager with assistance from specialist contractors and consultants as required. The completed summary monthly checklists will be included in the AEMRs by the Environmental Manager.

**PF FORMATION PTY LTD EXTRACTIVE INDUSTRY AT PIT 4, 311 OLD TELEGRAPH ROAD, MAROOTA**

**ENVIRONMENTAL COMMITMENTS SUMMARY CHECKLIST**

**COMMITMENT/ACTION - MONTH ENDING ..... 202 .**

**Completed by Environmental Manager or delegate - Signature ..... Date .....**

<b>COMMITMENT GROUP</b>	<b>EMP Checklist Commitment Numbers</b>	<b>COMPLETED √ Satisfactory or X Needs Corrective Action</b>	<b>COMMENTS Include details of any Corrective Actions required, complaints received and implementation of any <i>As Required</i> commitments</b>
<b>EPA</b>	<b>1 to 37</b>		
<b>NPWS</b>	<b>38 and 39</b>		
<b>Planning</b>	<b>40 to 46</b>		
<b>DL&amp;WC</b>	<b>47 to 52</b>		
<b>Environment</b>	<b>53 to 62</b>		
<b>Sediment &amp; Erosion Control</b>	<b>63 to 73</b>		
<b>Water Quality</b>	<b>74 to 81</b>		
<b>Waste Management</b>	<b>82 to 87</b>		
<b>Rehabilitation</b>	<b>88 to 120</b>		
<b>Air Quality</b>	<b>121 to 135</b>		
<b>Monitoring and Management</b>	<b>136 to 151</b>		
<b>Engineering</b>	<b>152 to 155</b>		
<b>Contributions</b>	<b>156</b>		
<b>Other Operational</b>	<b>157 to 163</b>		
<b>Any <i>As Required</i> commitments implemented?</b>		<b>Yes or No</b>	

### 8.3 Environmental Checklist for Operations

A detailed checklist for operations and rehabilitation of Pit 4 quarries follows. The environmental commitments monthly summary checklist will be completed by the Environmental Manager with assistance from specialist contractors and consultants as required.

#### ENVIRONMENT PROTECTION AUTHORITY REQUIREMENTS

EPA Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
1. Dust deposition monitoring be carried out at the locations specified in Air Quality Impact Assessment by Holmes Air Sciences and the Environmental Management and Rehabilitation Plan. <i>Note: the EPA Licence does not require on-site dust deposition monitoring but it is carried out monthly at five nearby locations in the Maroota area.</i>	Consent condition 6	√		Environmental Manager
2. Consent condition 7 states noise monitoring is to be undertaken during the initial stages of overburden removal and construction activities to ensure compliance with the noise level predictions. EPA Licence condition P1.1 identifies 325 Old Telegraph Road, Maroota (point 1) and 1 Hart Place, Maroota (point 2) for the purposes of weather and/or noise monitoring and/or setting limits for the emission of noise from the premises.	Consent condition 7 and EPA Licence condition P1.1		√ Quarterly check	Environmental Manager
3. Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the <i>Protection of the Environment Operations Act 1997</i> .	EPA Licence condition L1.1		√	Environmental Manager
4. The licensee must not cause, permit or allow any waste to be received at the premises, except for excavated natural material as defined in the Resource Recovery Order under Part 9, Clause 93 of the <i>Protection of the Environment Operation (Waste) Regulation 2014 - The excavated natural material order 2014</i> .	EPA Licence condition L2.1	√		Environmental Manager
5. Noise generated at the premises that is measured at noise monitoring points 1 and 2 must not exceed: • an $L_{Aeq}$ (15 minute) measurement parameter continuous frequency noise level of 40 dB(A) during the day (7am to 6pm Monday to Saturday); and • an $L_{Aeq}$ (15 minute) measurement parameter continuous frequency noise level of 38 dB(A) during the night (10pm to 7am Monday to Saturday).	EPA Licence condition L3.1		√ Quarterly check	Environmental Manager

EPA Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
and in compliance with the EPA Licence conditions for noise limits L3.2 to L3.9.				
6. 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.	EPA Licence condition O1.1	√		Environmental Manager
7. 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.	EPA Licence condition O2.1	√		Environmental Manager
8. The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.	EPA Licence condition O3.1	√		Environmental Manager
9. Trucks entering and leaving the premises that are carrying loads must be covered at all times, except during loading and unloading.	EPA Licence condition O3.2	√		Environmental Manager
10. Unless permitted by another condition of this licence, any activities at the premises may only be carried out between 7:00am and 6:00pm Monday to Saturday, and at no time on Sundays and Public Holidays.	EPA Licence condition O4.1	√		Environmental Manager
11. No more than 10 laden trucks may enter or leave the site between the hours of 6:00am and 7:00am Monday to Saturday.	EPA Licence condition O4.2	√		Environmental Manager
12. 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.	EPA Licence condition M1.1		√ Quarterly check	Environmental Manager
13. 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.	EPA Licence condition M1.2		√	Environmental Manager
14. The following records must be kept in respect of any samples required to be collected for the purposes of this licence:	EPA Licence condition M1.3		√	Environmental Manager

EPA Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
(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.			Quarterly check	
15. 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.	EPA Licence condition M2.1	√		Environmental Manager
16. The record must include details of the following: (a) the date and time of the complaint; (b) the method by which the complaint was made; (c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; (d) the nature of the complaint; (e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and (f) if no action was taken by the licensee, the reasons why no action was taken.	EPA Licence condition M2.2	√		Environmental Manager
17. The record of a complaint must be kept for at least 4 years after the complaint was made.	EPA Licence condition M2.3		√	Environmental Manager
18. The record must be produced to any authorised officer of the EPA who asks to see them.	EPA Licence condition M2.4		√	Environmental Manager
19. 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.	EPA Licence condition M3.1	√		Environmental Manager
20. 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.	EPA Licence condition M3.2	√		Environmental Manager
21. The preceding two conditions do not apply until 3 months after the date of the issue of this licence.	EPA Licence condition M3.3	√		Environmental Manager

EPA Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
<p>22. The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:</p> <ol style="list-style-type: none"> <li>1. a Statement of Compliance,</li> <li>2. a Monitoring and Complaints Summary,</li> <li>3. a Statement of Compliance - Licence Conditions,</li> <li>4. a Statement of Compliance - Load based Fee,</li> <li>5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,</li> <li>6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and a Statement of Compliance - Environmental Management Systems and Practices.</li> </ol> <p>At the end of each reporting period, the EPA will provide to the licensee notification that the Annual Return is due.</p>	EPA Licence condition R1.1		√ Annually	Environmental Manager
<p>23. An Annual Return must be prepared in respect of each reporting period, except as provided below.</p>	EPA Licence condition R1.2		√ Annually	Environmental Manager
<p>24. Where this licence is transferred from the licensee to a new licensee:</p> <p>(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</p> <p>(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.</p>	EPA Licence condition R1.3		√	Environmental Manager
<p>25. 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:</p> <p>(a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or</p> <p>(b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.</p>	EPA Licence condition R1.4		√	Environmental Manager
<p>26. The Annual Return for the reporting period must be supplied to the EPA via eConnect EPA or by registered post not later than 60 days after the end of each reporting period or in</p>	EPA Licence condition R1.5		√ Annually	Environmental Manager

EPA Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').				
27. 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.	EPA Licence condition R1.6		√	Environmental Manager
28. 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.	EPA Licence condition R1.7		√ Annually	Joint Managing Director
29. Notifications of environmental harm must be made by telephoning the Environment Line service on 131 555.	EPA Licence condition R2.1		√	Environmental Manager
30. 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.	EPA Licence condition R2.2		√	Environmental Manager
31. 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.	EPA Licence condition R3.1		√	Environmental Manager
32. 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.	EPA Licence condition R3.2		√	Environmental Manager
33. 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	EPA Licence condition R3.3		√	Environmental Manager

<b>EPA Commitment and/or Action</b>	<b>Reference</b>	<b>Monthly Check</b>	<b>As Required</b>	<b>Responsibility</b>
the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort; (e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants; (f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and (g) any other relevant matters.				
34. 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.	EPA Licence condition R3.4		√	Environmental Manager
35. A copy of this licence must be kept at the premises to which the licence applies.	EPA Licence condition G1.1	√		Environmental Manager
36. The licence must be produced to any authorised officer of the EPA who asks to see it.	EPA Licence condition G1.2		√	Environmental Manager
37. The licence must be available for inspection by any employee or agent of the licensee working at the premises.	EPA Licence condition G1.3		√	Environmental Manager

#### NATIONAL PARKS AND WILDLIFE SERVICE REQUIREMENTS

<b>NPWS Commitment and/or Action</b>	<b>Reference</b>	<b>Monthly Check</b>	<b>As Required</b>	<b>Responsibility</b>
38. Bunding is to be provided on the lower sections of non-perennial drainage lines and to establish emergent aquatic vegetation in and around the dam area to maintain a suitable habitat for the Red-crowned Toadlet and Giant Burrowing Frog.	Consent condition 8	√		Environmental Manager
39. Local, endemic native species are to be used in any rehabilitation works for the development.	Consent condition 9	√		Environmental Manager

**PLANNING REQUIREMENTS**

Planning Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
40. No encroachment of extraction is to occur into the Environmental Protection B Zone.	Consent condition 10	√		Environmental Manager
41. Establishment of a community committee to Council's satisfaction to monitor the environmental impact through a Memorandum of Understanding to be agreed to prior to commencement of any works.	Consent condition 11		√	Environmental Manager
42. A standard method of determining weighted material be negotiated, being a method that is auditable by Council at six monthly intervals.	Consent condition 12		√	Environmental Manager
43. Processing of materials shall take place wholly on the site.	Consent condition 13	√		Environmental Manager
44. No more than 35 truck loads shall be removed from the site per day averaged over 1 month.	Modified consent condition 14	√		Environmental Manager
45. All unsealed haul roads within the site shall be kept damp at all times during transportation to minimise wind-blown or traffic-generated dust.	Consent condition 15	√		Environmental Manager
46. All bunds constructed on site will be rehabilitated with native vegetation to the satisfaction of the Council's Environment Division.	Consent condition 16	√		Environmental Manager

**DEPARTMENT OF LAND & WATER CONSERVATION REQUIREMENTS**

<b>DL&amp;WC Commitment and/or Action</b>	<b>Reference</b>	<b>Monthly Check</b>	<b>As Required</b>	<b>Responsibility</b>
47. A minimum of a 20m vegetated buffer shall be kept or established on either side of any drainage line in accordance with the Department's requirements.	Consent condition 17	√		Environmental Manager
48. Stockpiles of topsoil material removed from the grassland areas on site (which are dominated by introduced species such as kikuyu) shall not be used to rehabilitate native vegetation in the eastern precinct.	Consent condition 18	√		Environmental Manager
49. Prior to any site disturbance proceeds in the western precinct, provision shall be made for a non-eroding spillway to safely convey water into the nearest existing natural stable waterway.	Consent condition 19	√		Quarry Manager
50. Continuous monitoring be undertaken of the three ground water bores on the site.	Consent condition 20	√		Environmental Manager
51. Groundwater salinity and water levels should be measured and data from the nearest weather station collected every month. The information collected from groundwater monitoring should be used to update the groundwater model every five years to determine if there is significant deviations to the model predictions. The raw data should be kept in hard and digital form and should be readily available when requested by Council or the Department of Land and Water Conservation.	Consent condition 21	√		Environmental Manager
52. The proponent shall at least annually report all groundwater-related data to a dedicated website in accordance with the Integrated Mining Policy Web-based Reporting Guideline, and separately provide: a) All monitoring and modelling results in accordance with the requirements of the NSW Aquifer Interference Policy to Council and the Department of Primary Industries Water for review on an annual basis. b) An interpreted hydrogeological report describing the ongoing impacts of the operation in accordance with the requirements of the NSW Aquifer Interference Policy to Council and the Department of Primary Industries Water* for review on an annual basis. <i>Note* now Department of Planning, Industry and Environment – Water.</i>	Modified consent condition 22		√ Annually	Environmental Manager

**ENVIRONMENT REQUIREMENTS**

Environment Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
<p>53. Prior to the commencement of extraction, the proponent shall lodge with Council a Restoration / Rehabilitation Plan based on ecological principles. This shall include but not be limited to the following:</p> <ul style="list-style-type: none"> <li>a) succession / progressive planting</li> <li>b) time frame for planting</li> <li>c) details / reasons for much use</li> <li>d) different soil / nutrient requirements for the different land use end uses.</li> <li>e) species selection variation bases on end use, aspect etc</li> <li>f) planting schedule</li> <li>g) demonstrate structural integrity of walls including hydrostatic pressure and root development</li> <li>h) grading details including the trapping of onsite water and the allowance for swaling.</li> </ul>	Consent condition 23		√	Environmental Manager
<p>54. All operations between the hours of 6am to 7am, Monday to Saturday are to be carried out in accordance with the Acoustic Assessment Report (prepared by Koikas Acoustic Pty Ltd dated 14 December 2020) and the 'Noise Management Plan' (Appendix B within the Statement of Environmental Effects dated December 2020) for Loading Trucks at Pit 4 Between 6am to 7am Monday to Saturday.</p> <p><i>Notes: The Noise Management Plan is also provided in Attachment 5. Consent condition 100 was deleted as a result of modified condition 24.</i></p>	Modified Consent condition 24	√		Environmental Manager
<p>55. Fuel storage areas shall be located to ensure protection from bushfire.</p>	Consent condition 25	√		Environmental Manager
<p>56. Extraction depths may extend to no more than two (2) metres above the wet weather height groundwater level in accordance with bore hole monitoring required by condition No. 20, and shall comply with the requirements of Council's Extractive Industry Development Control Plan (Water Resources). Under no circumstances shall extraction exceed a depth of RL 160 AHD.</p>	Consent condition 26	√		Environmental Manager
<p>57. The proponent is to ensure at all times that ground water is not breached nor contaminated. In the event of ground waters being breached or contaminated, operations are to cease and Council together with the Department of Land &amp; Water Conservation are to be immediately consulted to determine the basis upon which extraction may recommence.</p>	Consent condition 27	√		Environmental Manager

<b>Environment Commitment and/or Action</b>	<b>Reference</b>	<b>Monthly Check</b>	<b>As Required</b>	<b>Responsibility</b>
58. Annual volume of material (250,000t/pa) to be extracted shall be in accordance with the details provided in the Environmental Impact Statement and accompanying documents.	Consent condition 28		√	Quarry Manager
59. Care is to be taken at all times to ensure that all natural bushland directly adjoining the extraction site is not damaged or disturbed.	Consent condition 29	√		Environmental Manager
60. Consent for the staged extraction of material and rehabilitation is permitted while there are approved extraction areas in Maroota, based upon a high level of performance and while quarry material in the Maroota area is available for processing.	Modified consent condition 30		√	Environmental Manager
61. The area of the land disturbed for the purpose of extraction shall not exceed the overall extraction site as identified in the Environmental Impact Statement and supplementary information accompanying the application. In this regard extraction activities are not to encroach within the following setbacks: - a setback to Old Telegraph Road as depicted in drawing No. 8703, sheet 1A of Lyle Marshall & Associates Pty Ltd dated July 2000 - 50m from National Parks - 10m from all property boundaries not associated with the extraction operation. Condition 31 (b) The owner/operator of the site to maintain the landscaping works within the setback area at all times during the life of the operations to the best of their endeavour.	Part of consent condition 31 as amended by Land and Environment Court Order of 4 October 2000.	√		Environmental Manager
62. Strip and stockpiling of topsoil shall be placed at a designated area diverted away by a minimum 10 metre buffer zone from natural streams and overland drainage flow paths. Stabilisation protection such as siltation fencing and impervious covering to be applied. Mulching and seeding may be applied to stockpiles as a protective measure after 14 days exposure.	Consent condition 32	√		Environmental Manager

**SEDIMENT AND EROSION CONTROL REQUIREMENTS**

Sediment and Erosion Control Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
<p>63. The proponent is to submit every 12 months after the endorsed date of this consent a <u>Water Management Plan</u> (which may be referred to in the Environment Management Plan) in which Council is to be satisfied that adequate means of transferring and / or discharging the build up of ground water and surface waters is continually maintained and monitored particularly in relation to the following:</p> <ol style="list-style-type: none"> <li>1 certified and suitable arrangement for dewatering water pits including contingency arrangements</li> <li>2 means of treating polluted (including sediment laded) waters</li> <li>3 means of maintaining &amp; monitoring current surface and sub surface water quality</li> <li>4 identification and adequacy of existing destination points for waters collected within the extraction area.</li> <li>5 maximum and average water levels experienced and the capacity of the existing water sump to sustain major storm events</li> <li>6 on-site reuse of collected water and other potential uses</li> <li>7 state of the significant site features, ground water recharge areas and natural springs</li> <li>8 achievement of qualitative and quantitative criteria of the approved water management strategy including any improvements and / or adjustments now needed.</li> <li>9 maintenance of log book and recording rainfall</li> <li>10 the protection of water dependent features and ecosystems of the site and adjacent catchments;</li> <li>11 the actual source, quantity and quality of water used by all aspects of the operation;</li> <li>12 the effectiveness of the <i>Water Management Plan</i> in providing a framework for a complete balance for both artificial and natural surface and sub-surface waters;</li> <li>13 risks, safeguards and contingency plans for extreme climatic conditions and operational hazards including groundwater breach or contamination;</li> <li>14 the results of monitoring water quality at down stream boundaries relative to the stage of extraction;</li> <li>15 that the advice and licensing requirements of state agencies have been considered including DLWC Dam Safety Committee and the EPA;</li> <li>16 the following condition (34-43, <i>now 64 to 73</i>) shall be reported on within the Water Management Plan.</li> </ol>	<p>Consent condition 33</p>		<p>√ Annually</p>	<p>Environmental Manager</p>

Sediment and Erosion Control Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
<p>64. In order to protect the adjoining land and downstream water quality the following measures are required: -</p> <ol style="list-style-type: none"> <li>1 Sediment and erosion control measures are to be constructed in accordance with plans prepared by Morse &amp; McVey and shown on Plan No.975038- S1, dated April 1998 and shown on Plan No.985059-01 &amp; 985059-02, dated January 1999.</li> <li>2 No development works are to commence until the approved sediment and erosion control measures are implemented.</li> <li>3 All sediment and erosion control measures once installed are to be maintained in good working order and repair until development and rehabilitation / landscaping works have been completed.</li> <li>4 An amended plan for erosion and sediment control may be submitted for approval if new best practice measures proposed to be incorporated into the proposed development.</li> </ol>	Consent condition 34	√		Environmental Manager
<p>65. In order to protect downstream water quality and maintain public roads in a clean condition, sediment control measures (shake-down or other approved methods) are to be implemented and maintained at entry / exit points to ensure the removal of soils and other associated soil pollutants i.e. concrete slurry, from vehicles before leaving the site.</p>	Consent condition 35	√		Environmental Manager
<p>66. In order to protect downstream water quality the proposed sediment retention basin is to be maintained in good working order, ensuring that: -</p> <ol style="list-style-type: none"> <li>1 water in the basin must be discharged when it reaches 1/3 of the total capacity, this water must be treated with a flocculating agent prior to discharge:</li> <li>2 water in the basin can only be discharged if an acceptable water quality of 50mg/L non-filterable residues (NFR) has been achieved.</li> <li>3 disposed of pollutants removed from the basin to an authorised disposal site is to occur in areas where further pollution to downslope lands and waterways are not approved;</li> <li>4 details of water being discharged from the basin are to be recorded by the site supervisor (quantity, quality and time), and</li> <li>5 the basin's condition is to be regularly inspected by the site supervisor and recorded.</li> </ol>	Consent condition 36	√		Environmental Manager
<p>67. Check dams shall be incorporated with siltation fencing to be provided and constructed across catch drainage flows approximately at 10 metres intervals to facilitate velocity reduction and to further mitigate against sediment and erosion. Maximum height shall not</p>	Consent condition 37	√		Environmental Manager

Sediment and Erosion Control Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
exceed 600mm. A spillway provision shall be incorporated with the check dam, allowing 150mm spillway clearance.				
68. The sediment retention basin shall be provided and designed to accommodate a 5 year ARI time of concentration storm event, with a volume capacity of water that will enter in 6 minutes, one hour storm event with an additional 20% capacity provided for storage of sediment.	Consent condition 38	√		Environmental Manager
69. The riser shall be designed to discharge at peak flow a minimum of a 20 year frequency storm, trash collection devices and a geotextile filter shall also be incorporated.	Consent condition 39		√	Environmental Manager
70. All sediment controls shall be maintained and be fully operational until the final stage of the development is completed and all rehabilitation and landscaping has been established to the satisfaction of the consenting authority. All disused and discarded sediment controls shall be removed and disposed of to approved waste disposal depots or to approved landfill use.	Consent condition 40	√		Environmental Manager
71. Excavation or alteration of the natural gradient or flowpath of the watercourse is prohibited.	Consent condition 41	√		Quarry Manager
72. Instream sediment retention devices or excavations within the watercourse are prohibited without Council approval. Sediment retention structures shall be constructed off line and shall not impact or impede the frequency, depth, extent, or volume of the flow within the watercourse.	Consent condition 42	√		Environmental Manager
73. The NSW Department of Housing <i>Managing Urban Stormwater - Soils &amp; Construction</i> 1998 manual should be the basic reference used for the correct installation and maintenance of all proposed sediment and erosion control measures.	Consent condition 43		√	Environmental Manager

**WATER QUALITY REQUIREMENTS**

<b>Water Quality Commitment and/or Action</b>	<b>Reference</b>	<b>Monthly Check</b>	<b>As Required</b>	<b>Responsibility</b>
74. Surface water monitoring will be conducted within the tributaries of Coopers Creek on a quarterly basis as to ensure that there are no adverse impacts on water quality.	Best practice		√ Quarterly	Environmental Manager
75. Vegetation shall only be cleared from the banks of Coopers Creek tributaries only where it is absolutely necessary for construction and maintenance purposes.	Best practice	√		Environmental Manager
76. Safeguards to avoid spills of oil, fuel and other chemicals and the containment of such spillages at the site will be implemented including conducting all such operations within areas that are appropriately bunded and floored.	Best practice	√		Environmental Manager
77. Any waste rock/material or other waste will be carefully disposed of in such a way that it will not pollute the surface or groundwater resources.	Best practice	√		Environmental Manager
78. Groundwater will be automatically monitored and reported annually in monitoring wells PFPIT4 MW1, PFPIT4 MW2 and PFPITW MW3 for the following: <ul style="list-style-type: none"> <li>• pH, Electrical Conductivity and Total Dissolved Solids;</li> <li>• Calcium, Magnesium, Sodium and Potassium;</li> <li>• Chloride, Sulphate and Bicarbonate; and</li> <li>• Oil and Grease.</li> </ul> The results will be provided to the Department of Planning, Industry and Environment – Water.	Agreed with NSW Office of Water		√ Annually	Environmental Manager
79. All sedimentation control measures will be inspected regularly.	Best practice	√		Environmental Manager
80. Any damaged sedimentation control structural measures will be repaired as soon as possible.	Best practice	√		Environmental Manager
81. Stormwater collected by any sediment control structure within the site will not be pumped to any dam which lies outside the area of the premises, or to any watercourse if the concentration of non-filtrable residues in the water exceeds 50 milligrams per litre.	Best practice	√		Environmental Manager

**WASTE MANAGEMENT REQUIREMENTS**

Waste Management Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
<p>82. An annual <u>Waste Management Plan</u>, may be referred to as a chapter within the Environmental Management Plan, shall be submitted to demonstrate the: -</p> <ol style="list-style-type: none"> <li>1 type, composition and quantity of material proposed to be re-used, recycled and removed;</li> <li>2 source and quantity of material imported;</li> <li>3 destination of all material removed from the site;</li> <li>4 the following conditions are adhered to.</li> </ol>	Consent condition 44	√		Environmental Manager
<p>83. In order to prevent site contamination, no fill is to be imported onto the site without development approval unless it is for processing on-site (VENM only) or backfilling and meets the following requirements:</p> <ol style="list-style-type: none"> <li>a) The fill material imported to the site is to wholly consist of Virgin Excavated Natural Material (VENM) as defined in Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i>, or;</li> <li>b) The fill material is Excavated Natural Material (ENM) that meets the requirements of the Excavated Natural Material Exemption 2014 and Excavated Natural Material Order 2014 issued under Part 9, of the <i>Protection of the Environment Operations (Waste) Regulation 2014</i>;</li> <li>c) All material imported to the site must be classified and documented by a suitably qualified environmental consultant in accordance with the NSW Environment Protection Authority's <i>Waste Classification Guidelines</i> and <i>Protection of the Environment Operations (Waste) Regulation 2014</i> prior to importation:               <ol style="list-style-type: none"> <li>i) Material classification documentation for the total volume of imported material must be provided to Council upon request.</li> </ol> </li> </ol>	Modified consent condition 45		√	Environmental Manager
<p>84. All chemicals, fuels and compounds used in the proposed development are to be stored so as not to leak, leach or percolate into stormwater systems.</p>	Consent condition 46	√		Environmental Manager
<p>85. In order to provide for the storage and disposal of garbage / recycling at the proposed development the following must occur:-</p> <ol style="list-style-type: none"> <li>1 All putrescible waste generated is to be deposited in properly constructed water, fly, and vermin proof approved garbage containers.</li> <li>2 Garbage containers are to be cleaned off-site regularly by an authorised contractor.</li> </ol>	Consent condition 47	√		Environmental Manager

Waste Management Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
86. In order to ensure adequate treatment and disposal of wastewater, an application to install or construct a sewage management facility is to be submitted for the proposed development prior to works commencing on site.	Consent condition 48		√	Environmental Manager
87. No burning or burying of wastes will be permitted on-site.	Best practice	√		Environmental Manager

**REHABILITATION REQUIREMENTS**

Rehabilitation Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
<p>88. To ensure rehabilitation progresses in an orderly and efficient manner the proponent is to submit every 12 months after the endorsed date of this consent a <u>Rehabilitation Management Plan</u>, which may be referred to as a chapter within the Environmental Management Plan, in which Council is to be satisfied of the following:-</p> <p>1 the rate of rehabilitation is similar to the rate of extraction and cleared/disturbed areas are minimised, including a requirement that rehabilitation of the western precinct is to be completed within six (6) months of the commencement of extraction of the Eastern precinct;</p> <p>2 vegetative buffer zones and rehabilitated areas are maintained</p> <p>3 vegetation outside the extraction areas are successfully retained and protected</p> <p>4 progressive rehabilitation integrates with the surrounding terrain and approved final landform</p> <p>5 vegetative covers are established at the earliest possible opportunities</p> <p>6 assessment / comment on the progress of rehabilitation carried out under the direction of the nominated supervisor, and</p> <p>7 method and progress of the rehabilitation of extracted areas are in accordance with current environmental laws standards and practice including guidelines published by the Australian Federal Environment Department and Department of Land and Water Conservation.</p> <p>8 rehabilitation management including results of flora and fauna monitoring programmes.</p> <p>The program outline shall describe the following monitoring details:</p> <p>8.1 the key information that will be monitored, its criteria and the reasons for monitoring (which may be compliance with regulatory requirements)</p> <p>8.2 the monitoring locations, intervals and duration (particularly of threatened species)</p> <p>8.3 procedures to be undertaken if the monitoring indicates a non-compliance or abnormality</p> <p>8.4 internal reporting and link to management practices and action plans</p> <p>8.5 reporting procedures to relevant authorities and, if appropriate, to the consent authority and the community.</p>	<p>Consent condition 49</p>		<p>√ Annually</p>	<p>Environmental Manager</p>

Rehabilitation Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
<p>9 the following conditions (50-80, now 89 to 119 in this EMP) may be reported on within the Rehabilitation Plan.</p> <p><i>Note: Rehabilitation Management Plans revised, see Attachment 7.</i></p>				
<p>89. Soil stripping, storing, and replacement methods shall include the following criteria:</p> <ol style="list-style-type: none"> <li>1 removal of topsoil removed in two (2) parts by saving the organic layer first, being 100-300mm;</li> <li>2 removal of the next layer (300-500mm) shall be stripped and stockpiled separate</li> <li>3 flat and low stockpiles no more than 3m high to ensure survival of organic material and aerobic organisms;</li> <li>4 stockpiles kept free of traffic and away from drainage lines;</li> <li>5 stockpiles stored for as brief a period as possible and no more than twelve (12) months at a time; and that</li> <li>6 stockpiles created for each soil type and which should not be mixed</li> <li>7 stockpiled remaining longer than 14 days shall be seeded with a temporary sterile vegetation cover;</li> </ol>	Consent condition 50	√		Environmental Manager
<p>90. Mulch from one vegetation community type shall be kept separate from mulch of another vegetation community.</p>	Consent condition 51	√		Environmental Manager
<p>91. Stockpile sites for mulch will be provided in the Rehabilitation Plan.</p>	Consent condition 52		√ Annually	Environmental Manager
<p>92. Topsoil from one area of a vegetation community type shall be kept separate from another vegetation type.</p>	Consent condition 53	√		Environmental Manager
<p>93. Appropriate measures for the collection, processing and storage of native seeds shall include:</p> <ol style="list-style-type: none"> <li>1 collection from site by a suitable horticulturist</li> <li>2 portion of the seeds collected shall be used as part of a hydro mulch mix. A sterile cereal seed mix shall be used for the other part:</li> <li>3 remainder of the seeds collected shall be propagated under appropriate nursery conditions and maintained:</li> <li>4 identification of collection areas;</li> <li>5 collect seed only when mature;</li> <li>6 avoid seeds attached by insects or showing signs of fungal infestation;</li> </ol>	Consent condition 54		√	Environmental Manager

Rehabilitation Commitment and/or Action		Reference	Monthly Check	As Required	Responsibility
7	consider establishing a seed orchard;				
8	seeds are cleaned before storage;				
9	use established processing techniques such as drying, threshing, burning;				
10	treat seeds with insecticide/fungicide, including 1 day exposure to carbon dioxide prior to storage;				
11	clean seeds stored in dry, insect and vermin free containers at low humidity and low temperatures;				
12	collection from a range of species and types;				
13	the type, composition of seed mixes, application rates, adaptation and expected growth of proposed species used in the rehabilitation shall be included in the rehabilitation plan.				
94.	Weed infestation on rehabilitated areas shall be controlled and prevented through:	Consent condition 55	√		Environmental Manager
1	the careful use of fertilisers and organic matters such as manure so as not to stimulate weeds;				
2	promotion of a vigorous cover of appropriate plant species in the agricultural area;				
3	hand weeding;				
4	selective application of herbicides; and mulching with weed free materials.				
95.	Rehabilitated areas shall be sustained by re-establishing nutrient cycles within the soil to:	Consent condition 56		√	Environmental Manager
5	store and supply water;				
6	support root growth; and				
7	improve water infiltration to reduce compaction.				
96.	Rehabilitated and/or disturbed areas shall be regularly maintained including:	Consent condition 57	√		Environmental Manager
1	replanting of exposed areas and replacing dead plants within six (6) months;				
2	repairing erosion problems				
3	pest and weed control				
4	fertiliser applications where appropriate on land for agricultural use;				
5	regular watering;				
6	application of lime or gypsum to control pH and improve soil structure where appropriate on land restored for agricultural use.				

Rehabilitation Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
97. Topsoil and overburden used as bund walls during extraction shall be stabilised using appropriate native species and rehabilitation techniques under the direction of a qualified Plant Ecologist or Landscape Architect and used as backfill only when not contaminated with exotic grasses or weeds.	Consent condition 58	√		Environmental Manager
98. Direct scaling shall be carried out in soft soil free of leaf litter/weeds and under favourable conditions of water, oxygen, temperature and light.	Consent condition 59	√		Environmental Manager
99. Permanent ground cover shall be established on areas disturbed for more than 14 days and be maintained by regular watering and additional applications of seed and fertiliser.	Consent condition 60	√		Environmental Manager
100. The extraction area is to be backfilled with materials imported in accordance with Condition Number forty-five (45) of this Development Consent. Solid waste or putrescible waste must not be disposed of within the site.	Modified Consent condition 61	√		Environmental Manager
101. The site is to be progressively rehabilitated in accordance with the rehabilitation provisions of the Environmental Impact Statement and other documents submitted. It is to be regularly reported in the Rehabilitation Management Plan the subject of condition 49 of this consent.	Consent condition 62		√	Environmental Manager
102. Trees to be retained shall be protected during site works and construction by the erection of solid barricades to the name/design specification of the Manager, Parks & Landscape Team, and generally at 4 metres or other specified distance, from the trunk/s of such trees.	Consent condition 63		√	Environmental Manager
103. All tree protection measures so approved and installed, shall be maintained in good working order and repair throughout the course of building or development works.	Consent condition 64	√		Environmental Manager
104. All environmental weeds, noxious and invasive plants are to be removed and continually suppressed using an appropriate method prior to release of the final plan.	Consent condition 65	√		Environmental Manager
105. No works, stockpiles, dams or clearing of bushland to occur in the designated area, as shown in red on attached property map. <i>Note: Property map is provided in Attachment 2.</i>	Consent condition 66	√		Environmental Manager
106. All natural landscape features including natural rock outcrops, natural vegetation, soil and water courses are to remain undisturbed except where affected by necessary works detailed on approved plans, or with Council's written consent.	Consent condition 67	√		Environmental Manager

Rehabilitation Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
107. No clearing of bushland to occur in the designated area, as shown in red on the attached property map. <i>Note: Property map is provided in Attachment 2.</i>	Consent condition 68	√		Environmental Manager
108. Prior to any construction work a protective barrier mesh fence must be installed along the edge of the internal haul road to protect the restricted bushland areas.	Consent condition 69	√		Environmental Manager
109. The areas within the 'restricted zone' containing threatened species should be fenced prior to any construction or excavation that occurs on the site.	Consent condition 70	√		Environmental Manager
110. All care shall be taken to ensure no areas are disturbed unnecessarily. In this regard, existing vegetation shall be undisturbed by a "no go" boundary constructed by silt fencing to facilitate the filtration and collection of runoff pollution emanating from the works.	Consent condition 71	√		Environmental Manager
111. The riparian buffer along the watercourse, as marked on the attached site plan, must be re-vegetated according to the <i>Sustainable Water Best Practice Q1.01 (riparian vegetation)</i> , <i>Q1.04 (stream rehabilitation)</i> and in accordance with the rehabilitation plan and EIS submitted.	Consent condition 72		√	Environmental Manager
112. The dam embankment adjacent to bushland is to be re-vegetated using native grass species, as per species list attached. In conjunction with native species the use of a sterile cover crop, as per attached species list, would provide quick growth for initial stabilisation of the embankment without spreading into the adjacent bushland.	Consent condition 73		√	Environmental Manager
113. Acoustic earth bunds and visual screen bunds shall be established and planted with appropriate native vegetation to facilitate screening and noise reduction of extraction works.	Consent condition 74	√		Environmental Manager
114. The north and west facing slopes shall be rehabilitated at a 1:4 grade and the south & east facing slopes shall be rehabilitated to 1:3 grade within the west precinct.	Consent condition 75		√	Environmental Manager
115. All slopes will be rehabilitated to 1:3 grade within the east precinct.	Consent condition 76		√	Environmental Manager
116. The Rehabilitation Management Plan shall include detailed species for each vegetation community type, densities for planting for individual seedlings and cutting stock.	Consent condition 77		√	Environmental Manager
117. The proponent is to ensure the conservation and on-going management of threatened species, populations and ecological communities, in particular those of <i>Acacia bynoeana</i> at all times and details of which are to be incorporated within the Rehabilitation Plan subject to condition No 79 of this consent.	Consent condition 78		√	Environmental Manager

Rehabilitation Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
118. The rehabilitation of the eastern sector must be undertaken in accordance with the submitted Rehabilitation Plan and undertaken by a suitably qualified person with experience in rehabilitation.	Consent condition 79		√	Environmental Manager
119. Any plans to propagate threatened species will require a licence from National Parks and Wildlife Service.	Consent condition 80		√	Environmental Manager
120. The Bushland Restoration & Rehabilitation Plan dated 19 September 2007 for 1.4 hectares of the site near Coopers Creek will be implemented over two years commencing in January 2011. Progress will be monitored every 6 months.	Council Order		√ Completed	Environmental Manager

**AIR QUALITY REQUIREMENTS**

Air Quality Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
<p>121. The proponent is to submit to Council every 12 months after the endorsed date of this consent an <u>Air Quality Report</u> (which may be referred to in the Environmental Management Plan) in which Council is to be satisfied that dust and noise levels generated by the extraction operations comply with the established practices and standards, including the EPA manual. The report shall include:</p> <ol style="list-style-type: none"> <li>1 a public complaint register</li> <li>2 recording of data from dust deposition gauge</li> <li>3 report on the following (82-88, 122 to 128 in this EMP) conditions</li> </ol>	Consent condition 81		√ Annually	Environmental Manager
<p>122. The proponent is to monitor dust generation from the extractive operations and associated activities and the results of which are to be detailed in the Air Quality report referred to in condition No.81 (121 in this EMP). In the event of dust nuisance being identified, the proponent shall immediately inform Council and implement any mitigation practice as required.</p>	Consent condition 82	√		Environmental Manager
<p>123. Proponents shall employ wind activated water sprinkler systems or any alternative method, to the satisfaction of Council, to ensure extraction sites minimise dust generation particularly during periods of high wind and when sites are unattended.</p>	Consent condition 83	√		Environmental Manager
<p>124. Proponents shall provide details (this can be included in the annual air quality report) of effective measures proposed to be implemented to suppress dust generated from:-</p> <ol style="list-style-type: none"> <li>1 Blasting;</li> <li>2 Removal of overburden</li> <li>3 Site clearing;</li> <li>4 Extraction and haulage;</li> <li>5 Moving material on to and from stockpiles;</li> <li>6 Mobile earthmoving equipment;</li> <li>7 Blow-off and spillage from truck loads; and</li> <li>8 Crushing and screening procedures.</li> </ol>	Consent condition 84		√	Environmental Manager

Air Quality Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
125. Proponents shall ensure that prior to leaving extraction sites all laden trucks have their pay loads fully covered by suitable material to prevent spillage from the trucks on roads and adjoining properties.	Consent condition 85	√		Environmental Manager
126. Proponents shall ensure that any blasting is not undertaken in strong wind and/or prolonged dry weather periods.	Consent condition 86		√	Quarry Manager
127. Stockpiles of material and other sediment laden areas are to be maintained so as to prevent any dust nuisance.	Consent condition 87	√		Environmental Manager
128. Dust suppression equipment is to be fitted to all processing equipment and is to be maintained on a minimum of a six monthly basis and details of which are to be submitted to Council in accordance with condition No. 81 (121 in this EMP) of this consent and to any other relevant authority referred to under section 23 of the Clean Air Act 1961.	Consent condition 88	√		Environmental Manager
129. Upon activities commencing an acoustic report prepared by an acoustic consultant is to be submitted within the first 6 months, detailing the noise levels being emitted to adjacent premises from the new development. If noise levels exceed the background levels by more than 5dB(A) noise attenuation methods are to be installed. Details of all noise attenuation methods are to be submitted for approval prior to installation.	Consent condition 89		√	Environmental Manager
130. The proponent shall ensure employees are not subjected to noise or dust levels greater than those specified and prescribed by the NSW Resources Regulator and the <i>Work Health and Safety Regulation 2017</i> and <i>Work Health and Safety (Mines and Petroleum Sites) Regulation 2014</i> .	Legislation		√	Environmental Manager
131. An on-site water truck will be used whenever there is potential for dust generation.	Best practice		√	Environmental Manager
132. Signs requiring compliance with covered loads will be prominent on the site.	Best practice	√		Environmental Manager
133. Checks will be made that there is no visible dust blowing across the site on dry windy days.	Best practice		√	Environmental Manager
134. All internal combustion motors will not be permitted to emit continuous visible smoke for greater than 10 seconds on public lands.	Best practice		√	Environmental Manager
135. Exhaust systems and engines of site plant and vehicles will be properly maintained to minimise exhaust emissions and adverse impacts on air quality.	Best practice		√	Quarry Manager

**MONITORING AND MANAGEMENT REQUIREMENTS**

Monitoring and Management Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
<p>136. The proponent shall submit to Council every 12 months after the endorsed date of this consent an <u>Environmental Management Plan</u> in which Council is to be satisfied of the overall performance and management of the operation.</p> <p>The Environmental Management Plan should refer to the objectives and principles of Ecologically Sustainable Development and may use and/or reference as chapters the respective management plans required by condition Nos. 1 to 3, 6, 7 and 23 to 87 of this consent in order to address the following matters:-</p> <ol style="list-style-type: none"> <li>1 Acquisition of all necessary licences and permits and an indication of how compliance with licensing and approval requirements will be achieved and due diligence attained</li> <li>2 On site materials Management including management of operational impacts: if appropriate, include such as: : management of explosive, chemicals and fuel and their use : maintenance an site security plans</li> <li>3 Water Management</li> <li>4 Acoustic Management</li> <li>5 Air quality Management</li> <li>6 Transport routes, access &amp; movements</li> <li>7 Soil Conservation including geo-technical appraisal of tailing systems and erosion and sediment controls.</li> <li>8 Social impact management including consultation with community groups, nearby residents and monitoring of complaints received</li> <li>9 Identification, assessment and evaluation of risks, safeguards and the confidence level of contingency / emergency plans;</li> <li>10 Statement of Compliance with the approved EIS documentation, conditions of this consent and the objectives of Councils DCP - Extractive industries.</li> <li>11 Advice and recommendations of all relevant state government agencies;</li> <li>12 Reference to International Standards (ISO) 14001-14004 relating to Environmental Management Systems, which should address issues such as:- : the capacity and support mechanisms necessary to implement and achieve the proponent company's environmental policy, objectives and targets and</li> </ol>	<p align="center">Consent condition 90</p>		<p align="center">√ Annually</p>	<p align="center">Environmental Manager</p>

Monitoring and Management Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
13 : the means by which the proponent company measure, monitor and evaluate its environmental performance and Recommendations to adjust operation procedures to improve the overall performance of the operations. 14 Strategies to feed information from the monitoring program back into the management practices and action plans to improve the environmental performance and sustainability of all components of the proposal 15 Training programs for operational staff and incentives for environmentally sound performance 16 Performance indicators in relation to critical operational issues including: Compliance with the conditions of consent; Compliance with the objectives of this DCP;				
137. A Pollution Incident Response Management Plan will be implemented as required.	Best practice and EPA requirement		√	Environmental Manager
138. The Maroota Local Traffic Management Policy will be implemented.	Best practice		√	Environmental Manager
139. Emergency procedures will be displayed in a prominent position within the site office.	Best practice	√		Environmental Manager
140. Two persons will be nominated to be available to the EPA on a 24 hour basis and have authority to take any action to mitigate pollution on-site as directed by an authorised EPA Manager.	Best practice		√	Environmental Manager
141. If the Environmental Manager identifies or receives a complaint regarding any pollution caused by the work, a written report will be prepared within one working day of receipt of the complaint or identification of pollution. This report will include details of the pollution, action taken to correct the problem and measures to prevent the occurrence of a similar incident.	Best practice		√	Environmental Manager
142. Care will be taken to minimise fire risk from use of plant and equipment during total fire ban periods.	Best practice		√	Quarry Manager
143. One general purpose fire extinguisher suitable for control of oil/petrol fires will be available at the site at all times.	Best practice	√		Environmental Manager

<b>Monitoring and Management Commitment and/or Action</b>	<b>Reference</b>	<b>Monthly Check</b>	<b>As Required</b>	<b>Responsibility</b>
144. A minimum of two persons will be familiar or trained in the use of all fire-fighting equipment on-site.	Best practice	√		Environmental Manager
145. The requirements of all relevant legislation relating to air quality, water quality and noise will be met.	Best practice		√	Environmental Manager
146. Site safety and work conditions will be subject to SafeWork NSW requirements.	Best practice		√	Quarry Manager
147. Community complaints will be monitored and procedures implemented by the Environmental Manager to rectify any problems and a register of corrective actions maintained. The neighbouring residents will be contacted by letter at least annually requesting them if there are any issues to resolve and to inform them of the AEMRs.	Best practice		√ Annually	Environmental Manager
148. Environmental audits of the site, the EMP and its effectiveness and implementation may be completed as required.	Best practice		√	Environmental Manager
149. Daily records will be maintained recording each truck movement to the site in terms of date, time, vehicle registration number, type of material, mass/tonnage and job number.	Best practice	√		Environmental Manager
150. 24 hour access to the site will be maintained at all times for emergency purposes.	Best practice		√	Quarry Manager
151. In order to assist in the collection of construction material production data, the proponent shall provide annual production data for the subject site to the Department of Resources and Energy (DRE) in accordance with their requirements.	Modified consent condition 110		√ Annually	Environmental Manager

**ENGINEERING REQUIREMENTS**

<b>Engineering Commitment and/or Action</b>	<b>Reference</b>	<b>Monthly Check</b>	<b>As Required</b>	<b>Responsibility</b>
152. All truck traffic generated by this Consent shall access Old Northern Road and the extraction site via the northern intersection of Old Northern Road and Old Telegraph Road. No truck vehicles shall access Old Northern Road or the extraction site via Roberts Road.	Consent condition 97	√		Environmental Manager
153. At least two day's written notice must be given of the commencement of water and soil management, safety signage or engineering works.	Consent condition 99		√	Environmental Manager
154. In order to avoid air contamination and nuisance, frequent watering of internal haul road is to be undertaken by the Applicant when conditions prescribe or anytime at the written direction from Council.	Consent condition 101	√		Environmental Manager
155. Revegetation must be applied to disturbed areas and established. Such revegetation to be applied as soon as practicable after completion of earthworks or anytime at the written direction of Council.	Consent condition 102		√	Environmental Manager

**CONTRIBUTIONS REQUIREMENTS**

Contributions Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
<p>156. Subject to the following paragraphs of this condition, the party carrying on the extraction work shall pay to the Council a contribution under Section 94 of the Environmental Planning and Assessment Act, 1979 at a rate of \$0.63 per tonne for all extracted material transported from the site. The following provisions shall apply to the contribution:</p> <p>1 The contribution will be calculated and paid monthly in respect of all material transported from the site as from the date of this consent.</p> <p>2 The rate of the contribution will be varied annually with the first variation due as at 1 July, 2000. On each variation date, the rate per tonne shall be varied to an amount which bears to \$0.63 the same proportion as the Consumer Price Index (All Groups) for Sydney last published prior to the relevant date of variation bears to the same index last published prior to 1 September, 1998.</p> <p>3 On or before the fourteenth day of each month so long as extracted materials are transported from the site, there shall be delivered to the Council a true certified copy of returns or records acceptable to the Council showing the true quantities of extracted material transported from the site during the immediately preceding month and the Council will then as soon as it can conveniently do so issue to the Applicant or subsequent operator an invoice for the contribution payable for such material transported from the site. Payment of the amount of the invoice shall be made by the Applicant to the Council within 14 days of the invoice date. If the party carrying out the extraction work fails to deliver such returns to the Council in accordance with this clause by the fourteenth day of a particular month, the Council shall at its absolute discretion be entitled but not obliged to estimate the quantity of material transported from the site during the immediately preceding month and shall be entitled to issue such an invoice on the basis of such estimate <u>PROVIDED HOWEVER</u> that an appropriate adjustment shall be made between the parties when certified copies of the required returns in respect of such immediately preceding month have been provided to the Council as required by this clause.</p> <p>4 The Council shall be entitled to have any person or persons nominated by its internal accountant to inspect and audit the original records relating to any of the extracted material, including locality of destinations, numbers and types of laden trucks and</p>	<p align="center">Consent condition 108</p>	<p align="center">√</p>		<p align="center">Environmental Manager</p>

Contributions Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
<p>5 trailers and load quantities, transported from the site. Nomination of a person or persons to carry out such inspections and/or audit shall be in writing. Council will pay all of the contributions received by it into a specially identified trust account for payment towards the rehabilitation, restoration, repair and/or maintenance of Old Northern Road and Old Telegraph Road and of the road giving access to the site.</p> <p>6 If the Applicant ceases to carry out the approved extraction work or if a party other than the Applicant commences to carry out such work without the Applicant having started to do so, then the Applicant shall forthwith furnish to the Council notice of that fact together with the name and address of the party (if any) who has commenced or will thereafter commence to carry on the said work. Such notice shall be accompanied by an acknowledgment in writing by that party that it is aware of the obligations imposed on it pursuant to this condition. Until such time as the notice and acknowledgment are furnished to the Council by the Applicant, the Applicant will remain jointly and severally liable with the party for the time being carrying out the extraction work for payment of the aforesaid contribution and for compliance with the terms of this condition. The terms of this paragraph shall apply mutatis mutandis to any future operator of the extraction work in the event of his ceasing to carry out the work.</p>				

**OTHER OPERATIONAL REQUIREMENTS**

Other Operational Commitment and/or Action	Reference	Monthly Check	As Required	Responsibility
157. In the event that any archaeological material is found during extraction, operations are to cease in the immediate area and the National Parks and Wildlife Service and Council are to be consulted, with all reasonable directions to be complied with.	Best practice		√	Environmental Manager
158. No blasting will take place on site.	Best practice		√	Quarry Manager
159. No chemicals (other than fuels and lubricants) or hazardous materials will be used in extraction or processing.	Best practice		√	Quarry Manager
160. Fuel storage will be in above ground tanks within a roofed, impervious bunded area. <i>Note: Vehicles, mobile plant and equipment are now fuelled on-site from a 26,500 litre storage vessel complying with AS 1940:2017 The storage and handling of flammable and combustible liquids.</i>	Best practice	√		Quarry Manager
161. All plant and equipment operators and employees will be instructed to confine operations to within the clearly marked area of site operations.	Best practice	√		Environmental Manager
162. All plant/equipment will be inspected regularly to avoid leakage of fuel, oil or hydraulic fluid to the work site. Machinery found to be leaking will be repaired or replaced.	Best practice	√		Environmental Manager
163. Ensure all PF Formation Pty Ltd staff working on the site are inducted, trained and aware of their environmental responsibilities, emergency response procedures and the requirements of this EMP.	Best practice	√		Environmental Manager