Government of Western Australia
Department of Environment Regulation

Works Approval

Environmental Protection Act 1986, Part V

Works Approval Holder: Ransberg Pty Ltd

Works Approval Number: W5787/2015/1

Registered office: 401 Spearwood Avenue
BIBRA LAKE WA 6163

ACN: 009 468 464

Premises address: Bayswater Concrete Batching Plant
277 – 279 Collier Road
BAYSWATER WA 6053
Being Lot 2 on Diagram 55129
as depicted in Schedule 1

Issue date: Thursday, 19 January 2017

Commencement date: Monday, 23 January 2017

Expiry date: Tuesday, 22 January 2020

The following category/s from the *Environmental Protection Regulations 1987* cause these Premises to be prescribed premises for the purposes of the *Environmental Protection Act 1986*:

Category number	Category description	Category production or design capacity	Approved premises production or design capacity
77	Concrete Batching or Cement Products Manufacture: premises on which cement products or concrete are manufactured for use at places or premises other than those premises.	100 tonnes or more per year	365,000 tonnes per year

Conditions
This Works Approval is subject to the conditions set out in the attached pages.

Date signed: 19 January 2017
.....
Caron Goodbourn
A/Manager Licensing – Industry Regulation (Process Industries)
Officer delegated under section 20
of the *Environmental Protection Act 1986*

Works Approval Conditions

1 General

1.1 Interpretation

1.1.1 In the Works Approval, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 In the Works Approval, unless the contrary intention appears:

'Act' means the *Environmental Protection Act 1986;*

'CEO' means Chief Executive Officer of the Department of Environment Regulation;

'CEO' for the purpose of notification means;

Chief Executive Officer
Department Pt. V Div. 3 EP Act
Locked Bag 33
CLOISTERS SQUARE WA 6850
Email: info@der.wa.gov.au

'Noise Report' means *Herring Storerer Acoustics WA Premix (WA Limestone) Proposed Concrete Batch Plant 277 – 279 Collier Road, Bayswater Acoustic Assessment October 2014.*

'Premises' means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Works Approval;

'Schedule 1' means Schedule 1 of this Works Approval unless otherwise stated;

'Works Approval' means this Works Approval numbered W5787/2015/1 and granted under the Act; and

'Works Approval Holder' means the person or organisation named as the Works Approval Holder on page 1 of the Works Approval.

1.1.3 Any reference to an Australian or other standard in the Works Approval means the relevant parts of the standard in force from time to time during the term of this Works Approval.

1.1.4 Any reference to a guideline or code of practice in the Works Approval means the current version of the guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guidelines or code of practice made during the term of this Works Approval.

1.2 General conditions

1.2.1 The Works Approval Holder shall construct the works in accordance with the documentation detailed in Table 1.2.1:

Table 1.2.1: Construction Requirements[1]

Document	Parts	Date of Document
W.A. Premix Works Approval Application (Category 77) Concrete Batching Plant 277 – 279 Collier Road Bayswater.	All, including Drawings and Appendices	1 December 2014

Note 1: Where the details and commitments of the documents listed in condition 1.2.1 are inconsistent with any other condition of this works approval, the conditions of this works approval shall prevail.

2 Monitoring

2.1.1 The Works Approval Holder shall retain the services of a person competent in environment noise assessment whose qualifications and experience qualifies them a membership of the *Australian Acoustical Society* or the *Australian Association of Acoustical Consultants* to undertake and report to the Works Approval Holder on conditions 2.1.2 and 3.1.4.

2.1.2 The Works Approval Holder shall undertake the monitoring specified in Table 3.1.1 within two weeks of the commissioning of the plant.

Table 3.1.1: Monitoring of Noise

Monitoring points	Parameter	Units	Averaging period
Locations: Res 7 Res 10 Res 11 Res 13 Identified in Table 7 of the Noise Report.	Measure noise levels during operating conditions and weather conditions for maximum sound levels at the monitoring points.	dB(A)	A Representative assessment period in accordance with the *Environmental Protection (Noise) Regulations 1997*.(Noise Regulations)

3 Information

3.1 Reporting

3.1.1 The Works Approval Holder shall submit a compliance document to the CEO, following the construction of the works and prior to commissioning of the same.

3.1.2 The compliance document shall:

(a) certify that the works were constructed in accordance with the conditions of the works approval;

(b) be signed by a person authorised to represent the Works Approval Holder and contain the printed name and position of that person within the company.

3.1.3 The Works Approval Holder shall submit a commissioning report for the concrete batching plant, to the CEO within 1 month of the completion of commissioning.

3.1.4 The Works Approval Holder shall ensure the commissioning report includes;

(a) a summary of the monitoring results recorded under condition 2.1.2;

(b) a copy of any original monitoring reports submitted to the Works Approval Holder from third parties for the commissioning report;

(c) an assessment of whether noise emissions from the Premises comply with the assigned noise level in the Noise Regulations; and

(d) where they have not been met, measures proposed to meet the assigned noise levels, together with timescales for implementing the proposed measures.

Schedule 1: Maps

Premises map

The Premises are shown in the map below. The pink line depicts the boundary of the Premises, being the whole of Lot 2 on Diagram 55129.

Government of Western Australia
Department of Environment Regulation

Decision Document

Environmental Protection Act 1986, Part V

Applicant: Ransberg Pty Ltd

Works Approval: W5787/2015/1

Registered office:	401 Spearwood Avenue BIBRA LAKE WA 6163
ACN:	009 468 464
Premises address:	Bayswater Concrete Batching Plant 277 – 279 Collier Road BAYSWATER WA 6053 Being Lot 2 on Diagram 55129
Issue date:	Thursday, 19 January 2017
Commencement date:	Monday, 23 January 2017
Expiry date:	Tuesday, 22 January 2020

Decision

Based on the assessment detailed in this document the Delegated Officer has decided to grant a works approval. The Delegated Officer considers that in reaching this decision, all relevant considerations have been taken into account.

Contents

1 Purpose of this Document

This decision document explains how the Delegated Officer has assessed and determined the application and provides a record of the Delegated Officer's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to the Delegated Officer's assessment and decision-making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the Applicant's responsibility to ensure they have all relevant approvals for their Premises

2 Administrative summary

Administrative details		
Application type	Works Approval ☒ New Licence ☐ Licence amendment ☐ Works Approval amendment ☐	
Activities that cause the premises to become prescribed premises	**Category number(s)**	**Assessed design capacity**
	77	365 000 tonnes per year
Application verified Application fee paid	Date: 5 January 2015 Date: 19 January 2015	
Works Approval has been complied with Compliance Certificate received	Yes☐ No☐ N/A☒ Yes☐ No☐ N/A☒	
Commercial-in-confidence claim	Yes☐ No☒	
Commercial-in-confidence claim outcome		
Is the proposal a Major Resource Project?	Yes☐ No☒	
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the *Environmental Protection Act 1986*?	Yes☒ No☐	Referral decision No: Managed under Part V ☒ Assessed under Part IV ☐
Is the proposal subject to Ministerial Conditions?	Yes☐ No☒	Ministerial statement No: N/A

		EPA Report No: N/A
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the *Environmental Protection Act 1986*)?	Yes☐ No☒ Department of Water consulted Yes ☐ No ☒	
Is the Premises within an Environmental Protection Policy (EPP) Area Yes☐ No☒		
Is the Premises subject to any EPP requirements? Yes☐ No☒		

3 Executive summary of proposal and assessment

Ransberg Pty Ltd (the Applicant) trading as WA Premix intends to construct and operate a concrete batching plant at 277-279 Collier Road, Bayswater (Lot 2 on Diagram 55129). The site is zoned for industrial use and backs on to Joan Rycroft Reserve, a public recreational area. There is a 200m separation distances from the activity boundary of the premises to the nearest residence in Shalford Street Bayswater to the north of the premises. This distance includes a 54m wide landscaped area within the premises on the northern boundary.

A covered part of the Water Corporation's Troy Street Branch Drain runs along the northern fence line of the property and public open place including sports fields occupies the land between the premises and the houses to the north. The depth to groundwater is 7.38 to 10.44 metres. Additional measures to reduce the impact of dust and noise adopted by Applicant are discussed in the decision table below.

The approved design capacity of the plant is 365 000 tonnes per year with an expected average throughput of 100 000 tonnes per year.

The plant infrastructure to be installed includes:

- 4.5m^3 twin shaft "wet mix" mixer;
- 4 cement storage silos;
- Drive over aggregate and sand storage bins;
- 6 overhead 200m^3 sand and aggregate storage bins;
- 8 overhead 20.6m^3 storage bins;
- 3 temporary aggregate storage bins for emergency use;
- Aggregate reclaimer for recycling of returned concrete; and
- Agitator truck wash bays.

The principal environmental impacts from this type of premises are:

- Noise from machinery on site, delivery vehicles and agitator trucks,
- Dust from delivery and handling of sand, aggregate and cement, and;
- Sediment runoff in water.

Planning approval for the Applicant was granted under appeal to the State Administrative Tribunal (SAT) under decisions DR242 of 2011 and DR243 of 2011 issued on 15 July 2014. Following the approval, the City of Bayswater received an amended development application for the proposed plant which was rejected by the council meeting held on 26 May 2015 and the Applicant subsequently

appealed to SAT to review that decision. The Delegated Officer wrote to the Applicant on the 9 February 2016 advising of the intent to grant a works approval, subject to conditions, and provided draft copies of the works approval and decision document. The Delegated Officer advised the Applicant that in accordance with DER's *Guidance Statement: Land use planning*, the works approval would not be granted until relevant planning approval was in place and placed the Application on hold.

The SAT approved the development application on 14 December 2016, subject to conditions. The following planning conditions imposed by the SAT are relevant to the Delegated Officer's assessment of the works approval application:

- requirements for fugitive dust emissions as PM_{10} including:
    - ambient PM_{10} limits;
    - ambient PM_{10} monitoring;
    - ambient dust management actions;
    - ambient dust limit exceedance reporting to City of Bayswater;
    - quarterly and annual reporting of ambient dust monitoring data to City of Bayswater
    - meteorological monitoring
- Noise management including the use of acoustic barriers and low noise front end loaders.
- Operating hours restricted to 6am to 6pm Monday to Saturday (excluding public holidays), however no front end loader may operate or any raw materials be delivered to the premises prior to 7am;
- Management of dust emission controls such as:
    - bag filters on ventilation systems, water sprays and sprinklers;
    - cement silo filter maintenance;
    - Covering of conveyors and transfer stations with belt cleaners maintained;
    - stored aggregate or sand outside the building is to be wetted or covered;
    - material spills are to be immediately wetted;
- Concrete produced cannot include fly ash as an input.

Subsequent to the SAT decision to grant the development application, the Delegated Officer granted the Works Approval W5787/2015/1.

During the operation of the site the premises will be subject to the *Environmental Protection (Concrete Batching and Cement Products Manufacturing) Regulations 1998* (Concrete Batching Regulations) which address the issues of dust and sediment. The Delegated Officer is satisfied that the premises has been designed to comply with the Concrete Batching Regulations once it is operational. During construction and operation, the premises are subject to the *Environmental Protection (Noise) Regulations 1997* at all times.

4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987*, and the Concrete Batching Regulations. Where other references have been used in making the decision they are detailed in the decision document.

Works Approval	Condition Number W = Works Approval	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions	W1.2.1	**Construction** Works approval condition 1.2.1 requires the Applicant to construct the concrete batching plant in accordance with supporting documentation in order to comply with the regulations. **Operation** Operations will be regulated under the provisions of the Concrete Batching Regulations.	Application supporting documentation General provisions of the *Environmental Protection Act 1986* *Environmental Protection (Concrete Batching and Cement Products Manufacturing) Regulations 1998*
Premises operation	N/A	**Construction and Operation** <u>Emission Description</u> *Emission:* Pollutants such as hydrocarbons and high pH water contaminating clean stormwater runoff which is discharged via the two detention basins onsite. *Impact:* Changes to land and surface water quality affecting its beneficial use by surrounding businesses and playing fields. *Controls:* Wastewater from the plant or truck washdown area may contain suspended solids and other minor contaminants. All water from these areas will be collected for recycling in a closed loop utilising the "Eco-Frog" unit which separates most solids	Application supporting documentation *Environmental Protection (Concrete Batching and Cement Products Manufacturing)*

Works Approval	Condition Number W = Works Approval	Justification (including risk description & decision methodology where relevant)	Reference documents
		and agitates the recycled water to keep any remaining particulates in suspension prior to reuse in subsequent batches of concrete. The closed loop area consists of the agitator wash-out areas, re-fuelling station and agitator loading area. All other stormwater runoff from graded sealed surfaces will be directed and retained within the premises by the two detention basins. The site, with the exception of the landscaped area, will be completely sealed with concrete or asphalt. <u>Risk Assessment</u> *Consequence:* Minor *Likelihood:* Unlikely *Risk Rating:* Moderate <u>Regulatory Controls</u> The operation of concrete batching plants are regulated under the Concrete Batching Regulations. Contaminated stormwater is addressed under regulations 11 and 12 of the Concrete Batching Regulations and regulation 3 of the *Environmental Protection (Unauthorised Discharge) Regulations 2004.* The Concrete Batching Regulations specify the treatment of wastewater prior to discharge and maintenance of water treatment and management equipment. The unauthorised discharge regulations make it an offence to discharge waters contaminated with sediment, oils and other materials or water that has a pH greater than 10. <u>Residual Risk</u> *Consequence:* Minor *Likelihood:* Unlikely *Risk Rating:* Moderate	*Regulations 1998*

Works Approval	Condition Number W = Works Approval	Justification (including risk description & decision methodology where relevant)	Reference documents
Point source emissions to air including monitoring	N/A	**Construction** There are no point source emissions to air during construction of the premises. No specific conditions relating to point source emissions or the monitoring of these are required to be added to the Works Approval. **Operation** <u>Emission Description</u> *Emission:* Cement dust escaping during filling of silo form cement tankers due to equipment malfunction such as holes in bag filters and overfilling of silos .Cement dust is a very fine alkaline powder containing silica, calcium silicates, gypsum, aluminium oxides, iron oxides and lime. Acute and long term health respiratory impacts may result in instances, primarily due to the fine (PM_{10}) nature of the dust. *Impact:* Fine dust particles leaving the site and entering neighbouring properties. The closest residential receptors are located approximately 200m to the north of the process area with a playing field approximately 60 metres from the baghouse and raw material delivery area. *Controls:* The cement silos will be fitted with a reverse jet pulse filter with ducting to within one metre of the ground. Each silo has an overfill protection system with an audible alarm and test circuit with automatic cut-off valve in the fill pipe linked to the overfill detection system. <u>Risk Assessment</u> *Consequence:* Minor *Likelihood: Unlikely* *Risk Rating:* Moderate <u>Regulatory Controls</u> The Concrete Batching Regulations regulate the equipment on site and its maintenance. They also require that deliveries stop when visible dust escapes the silo. The design proposal complies with the Concrete Batching Regulations.	Application supporting documentation *Environmental Protection (Concrete Batching and Cement Products Manufacturing) Regulations 1998* Ambient Air Assessment Criteria, National Environmental Protection Measure (Ambient Air Quality)

Works Approval	Condition Number W = Works Approval	Justification (including risk description & decision methodology where relevant)	Reference documents
		Conditions of the planning approval require monitoring for dust at the boundaries of the property. Residual Risk *Consequence:* Minor *Likelihood:* Rare *Risk Rating:* Low	
Point source emissions to surface water including monitoring	N/A	There are no point source emissions to surface water during either construction or operation of the concrete batching plant. No specific conditions relating to point source emissions to surface water are required. The Concrete Batching Regulations prevent the discharge of sediment in water from this site.	Application supporting documentation *Environmental Protection (Concrete Batching and Cement Products Manufacturing) Regulations 1998*
Point source emissions to groundwater including monitoring	N/A	Emission Description *Emission:* Contaminants such as hydrocarbons and high pH water infiltrating to the ground water via the detention basins. *Impact:* Changes to groundwater quality affecting its beneficial use by surrounding businesses and playing field. *Controls:* Preventing contaminated water entering the detention basin by control of drainage from process areas directing potentially contaminated water to on-site storage and recycling. Only uncontaminated stormwater is to be directed to the detention basins. Risk Assessment *Consequence:* Minor *Likelihood:* Unlikely	Application supporting documentation *Environmental Protection (Unauthorised Discharge) Regulations 2004*

Works Approval	Condition Number W = Works Approval	Justification (including risk description & decision methodology where relevant)	Reference documents
		Risk Rating: Moderate Regulatory Controls Discharge of this nature is addressed by the *Environmental Protection (Unauthorised Discharge) Regulations 2004*. Residual Risk *Consequence:* Minor *Likelihood:* Rare *Risk Rating:* Low	
Emissions to land including monitoring	N/A	There are no emissions to land during the construction or operation of the premises. No specific conditions relating to emissions to land are required.	Application supporting documentation *Environmental Protection (Concrete Batching and Cement Products Manufacturing) Regulations 1998*
Fugitive emissions	N/A	**Construction** Emission Description *Emission:* Dust from construction activities. *Impact:* Transient exposure to dust from the soils present on site caused by construction activities. Exposure may cause irritation and nuisance at nearby sensitive premises. *Controls:* Use of sprinklers and water tankers wetting down vulnerable areas to control of dust generated by vehicles and earthworks. Risk Assessment	Application supporting documentation *Environmental Protection (Concrete Batching and Cement Products Manufacturing) Regulations 1998*

Works Approval	Condition Number W = Works Approval	Justification (including risk description & decision methodology where relevant)	Reference documents
		Consequence: Minor *Likelihood:* Possible *Risk Rating:* Moderate <u>Regulatory Controls</u> During construction the premises will be subject to the general provisions of the *Environmental Protection Act 1986* which prevent dust emissions causing pollution or environmental harm. <u>Residual Risk</u> *Consequence:* Minor *Likelihood:* Unlikely *Risk Rating:* Moderate **Operation** The Delegated Officer's assessment and decision-making are detailed in Appendix A.	Ransberg Pty Ltd and City of Bayswater [2016] WASAT 43
Odour	N/A	Odour emissions are not expected to be generated during the construction or operation of the premises. No specific conditions relating to odour emissions are required.	N/A
Noise	W2.1.1, W2.1.2. W3.1.3 and W3.1.4	**Construction** Noise emissions from the construction of the plant are expected to comply with the *Environmental Protection (Noise) Regulations 1997* (Noise Regulations). **Operation** <u>Emission Description</u> *Emission:* Noise from the aggregate delivery to feed bins and hoppers, warning devices, process equipment and associated activities 6 days a week between 6am and 6pm, Monday to Saturday, Public Holidays excluded. *Impact:* Noise emissions affecting the health and wellbeing of people at sensitive	Application supporting documentation *Environmental Protection (Noise) Regulations 1997*

Works Approval	Condition Number W = Works Approval	Justification (including risk description & decision methodology where relevant)	Reference documents
		receptors. The premises is located in an Industrial zoned area, with the closest residences positioned approximately 150 metres from the premises boundary and 200 metres from the operational areas. Noise impacts are short term and localised. The Applicant has submitted noise modelling that predicts that maximum daytime noise levels including a 5dB penalty will be 53dB LA10 where permitted noise levels under the regulations are 56 dB LA10 which therefore complies with the regulations. *Controls:* The operating hours are restricted by the SAT approval conditions which also require that the frontend loader will not operate before 7am. Delivery of sand and aggregate will occur within an enclosed shed. The wet mixing method eliminates the need for slumping, a major source of noise at dry mix batching plants. A noise assessment and modelling has been submitted which concludes that the plant will comply with the *Environmental Protection (Noise) Regulations 1997* at nearby residences. The Applicant has made an undertaking to do a post commissioning noise assessment to ensure compliance with the regulations in the works approval documents. <u>Risk Assessment</u> *Consequence:* Minor *Likelihood:* Possible *Risk Rating:* Moderate <u>Regulatory Controls</u> Conditions 2.1.1 and 2.1.2 have been included as a monitoring condition requiring verification of compliance with the *Environmental Protection (Noise) Regulations 1997* and prescribing a date and type of report to be submitted to DER has been added to the works approval. <u>Residual Risk</u> *Consequence:* Minor *Likelihood:* Unlikely *Risk Rating:* Moderate	

Works Approval	Condition Number W = Works Approval	Justification (including risk description & decision methodology where relevant)	Reference documents
Monitoring general	N/A	Dust emissions from the plant have been assessed in the fugitive emissions section of this table.	Application supporting documentation *Environmental Protection (Concrete Batching and Cement Products Manufacturing) Regulations 1998* SAT decision DR242 of 2011.
Monitoring of inputs and outputs	N/A	There are no specific conditions relating to the monitoring of inputs and outputs during construction or operation of the premises. The premises are regulated under the Concrete Batching Regulations.	Application supporting documentation
Process monitoring	N/A	There are no specific conditions relating to process monitoring during construction or operation of the premises. The premises are regulated under the Concrete Batching Regulations.	Application supporting documentation
Ambient quality monitoring	N/A	There are no specific conditions relating to ambient quality monitoring during construction.	Application supporting documentation
Meteorological monitoring	N/A	There are no specific conditions relating to meteorological monitoring during construction of the premises.	Application supporting documentation
Information	W3.1.1 and W3.1.2	**Construction** Works approval conditions will require the Applicant to submit a compliance document to DER once construction has been completed and prior to commissioning.	General provisions of the *Environmental Protection Act 1986*

Works Approval	Condition Number W = Works Approval	Justification (including risk description & decision methodology where relevant)	Reference documents
			Application supporting documentation
Works Approval Duration	N/A	The Works Approval will be issued for a standard 3 year period. After construction of the concrete batching plant, the Applicant will need to submit a compliance document to DER and may apply for a category 77 registration.	Application supporting documentation

5 Advertisement and consultation table

Date	Event	Comments received/Notes	Delegated Officer considerations
26/1/2015	Application advertised in West Australian (or other relevant newspaper)	N/A	N/A
27/1/2015	Application referred to interested parties listed • The City of Bayswater • 13 individuals who have expressed a direct interest.	Insufficient separation distance to sensitive land users according to EPA guidance note;	The concrete batching plant is to be located in an industrial zoned area and the *Environmental Protection (Concrete Batching and Cement Products) Regulations 1998* and *Environmental Protection (Noise) Regulations 1997* are generally sufficient to manage activities on such sites. Separation distances within the EPA guidance note should be considered as conservative planning guidance and proposals may be adopted where acceptable environmental impacts can be demonstrated.
		Concrete batching plant will cause excessive dust, noise and traffic in the area affecting the residents	Cement will be delivered by enclosed tanker vehicle and pumped to the silos by air pressure in a closed system. The cement silos will be fitted with a reverse jet pulse filter with overflow ducting to within one metre of the ground. Each silo has an overfill protection system with an audible alarm and test circuit with automatic cut-off valve in the fill pipe linked to the overfill detection system. Should a malfunction cause a release of cement dust during delivery regulations require that the delivery ceases immediately. The plant will have multiple methods of

Date	Event	Comments received/Notes	Delegated Officer considerations
			fugitive dust control including sprinklers, a yard sweeper and enclosure of conveyors, and delivery areas. The Applicant's management plan includes the undertaking to cease operation should excessive dust emissions occur. SAT conditions require that dust emissions will be monitored with a TEOM recorder until it has been demonstrated to the satisfaction of the City of Bayswater that the plant is not causing a breach of the NEPM for PM_{10} dust. The Delegated Officer has assessed the impact of concrete batching plants in the Metropolitan Area (under fugitive emissions) that are also closer than the recommended distance from sensitive receptors that have not adopted the wet process and enclosed raw material delivery. These plants have demonstrated a satisfactory environmental performance when they are managed adequately. Traffic management is beyond the remit of Part V of the EP Act.
		Yard dust will be dragged onto Collier Road and then blow around	The problem of yard dust being dragged onto the road by trucks leaving the plant is not considered to be causing an environmental impact under this assessment. The operator is required by the regulations to keep the yard clear of accumulations of dust.

Date	Event	Comments received/Notes	Delegated Officer considerations
		Wet mix is still a dusty noisy operation;	The wet method eliminates the need for slumping, a significant source of noise at dry mix concrete batching plants. The Applicant will monitor noise at sensitive receptors after commissioning to confirm compliance with the *Environmental Protection (Noise) Regulations 1997* SAT approval requires that dust emissions be monitored to ensure compliance with the NEPM for ambient dust.
		Noise from silos, vibrators and cold feed bin vibrators;	The impact of noise from silos, vibrators and cold feed bin vibrators have been managed successfully at numerous other batching plants in the metropolitan area. All plants are required to comply with the *Environmental Protection (Noise) Regulations 1997.*
		Operations may start as early as 4:30 to 5:00 am;	SAT conditions prevent operation before 6 am and the operation of a front end loader before 7 am
		Hazardous nature of cement dust and health affects of silica dust and PM_{10} dust;	The works approval conditions, Concrete Batch Regulations and SAT requirements will ensure that ambient concentrations of PM_{10} at sensitive receptors don't exceed NEPM levels. Fine particulate exposure (including silica, silicates and Lime) is considered under the PM_{10} assessment and based on a 24 hour exposure. Exposure to dust from concrete batching plant is expected to be occasional and transient and therefore the combined precautions to prevent and monitor dust will be sufficient to prevent any adverse impacts

Date	Event	Comments received/Notes	Delegated Officer considerations
			from crystalline silica.
		Area is already affected by recycling plant;	The Delegated Officer considers that the plant will not significantly increase impacts of dust and noise over the impacts of the two prescribed premises in the immediate locality. Background noise has been considered in the assessment in the form of near field industry, far field industry and major arterial transport routes in the vicinity of the plant. Background particulates have been measured over an extended period and included in the assessment of the proposal. These issues are adequately addressed by the equipment and management plans adopted by the Applicant.
		Ground water and covered drain may be affected;	No stormwater or wastewater from the process area of the plant will flow into the stormwater drainage system and all operating areas will be sealed with concrete or bitumen. Process wastewaters will be recycled within the plant and all areas of the plant other than the landscaping will be sealed with concrete or bitumen. Impacts on groundwater and covered drains are extremely unlikely. The two soakwells on site within the landscaped area are for stormwater that has not come into contact with the concrete batching process.
11/01/2016	Applicant sent a copy of draft instrument	Applicant suggested minor wording changes to better reflect the proposed activity.	Wording changes were accepted by the Delegated Officer.

6 Risk Assessment

Note: This matrix is taken from the DER Corporate Policy Statement No. 07 - Operational Risk Management

Table 1: Emissions Risk Matrix

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Moderate	High	High	Extreme	Extreme
Likely	Moderate	Moderate	High	High	Extreme
Possible	Low	Moderate	Moderate	High	Extreme
Unlikely	Low	Moderate	Moderate	Moderate	High
Rare	Low	Low	Moderate	Moderate	High

Appendix A

Fugitive Emissions

Emission Description
Emission: Fine alkaline cement dust escaping from silos and delivery systems, sand and aggregates caused by the movement of vehicles, delivery from trucks and the general handling of these materials on site by conveyer belt and transfer points.
Impact: Exposure to dust, causing irritation during unfavourable weather conditions such as southerly winds blowing towards the playing field and residential properties. The Applicant has also provided modelling of the fugitive dust impacts that indicate that the dust emissions from the batching plant will not cause a breach of the PM_{10} guidelines.
Controls: The Applicant has a dust management plan which includes monitoring and contingency plans. Equipment and practices will include deliveries of damp material, covered truck trailers, enclosed storage bins and conveyors and wet mixing of concrete. Providing the operator adheres to the dust management plan and maintains the site fugitive dust is not likely even in windy conditions.

The Applicant has also provided modelling of the fugitive dust impacts that indicate that the dust emissions from the batching plant will not cause a breach of the PM_{10} guidelines. The Delegated Officer believes that modelling has limited application in this instance because of the inherent uncertainties in fugitive dust emission estimates. In general, the Delegated Officer considers that the estimation of truck weight for the purpose of determining uplift is likely to be erroneous. The Delegated Officer also considers that the proposed coverage of dust on the surface is likely to be over predicted, given the method of operation on site.

The most appropriate additional safeguard is the monitoring conditions prescribed by SAT to ensure and demonstrate compliance with the NEPM for ambient air quality. The use of a Beta Gauge may make it possible to distinguish between cement dust and other types of dust and the TEOM gauge will provide real-time data for the Applicant.

Risk Assessment
Consequence: Minor
Likelihood: Possible
Risk Rating: Moderate

Regulatory Controls
Dust emissions from concrete batching are regulated under Regulation 3,4,5,6 & 7 of the Concrete Batching Regulations. The Applicant has committed to keeping dust to a minimum by complying with the Concrete Batching Regulations and the implementation of dust management equipment and procedures. The Delegated Officer is satisfied the Applicant will be able to comply with relevant parts of the Concrete Batching Regulations once operational.

The controls are supported by benchmarking the plant against other concrete batching plants in the Metropolitan Area. The plants compared are the Holcim plant in Claisebrook Road, East Perth (R00278), the Hanson plant in Lord Street, East Perth (R00084) and the Hanson Plant in Landsdale (R00074) all with smaller separation distances than the proposed Bayswater plant.

The Applicant has included in the works approval application the following key contingency measures to be implemented as part of the dust management plan:

- Real-time monitoring of dust emissions with automatic alerts to plant personnel and company management.

- Manual overrides of automatic dust control equipment to provide additional dust suppression if required.
- Multiple layers of dust control (sprinklers, hoses, street sweeper, shrouding, etc.).
- Multiple redundant water sources (groundwater, scheme water, rainwater collection) to ensure adequate water supply in all situations.
- Finally should all the above measures fail and dust emissions cannot be effectively controlled then WA Premix will immediately shut down the activity or portion of the plant causing the excessive dust. The plant will then not be restarted until dust emissions can be managed effectively.

Residual Risk
Consequence: Minor
Likelihood: Unlikely
Risk Rating: Moderate