Government of Western Australia
Department of Environment Regulation

Decision Document

Environmental Protection Act 1986, Part V

Proponent: Sims Group Australia Holdings Ltd

Licence: L8920/2015/1

Registered office:	Sir Joseph Banks Corporate Park Level 2 34 Lord Street BOTANY NSW 2019
ACN:	008 634 526
Premises address:	Sims Metal Management Lot 100 on Plan 73740 KWINANA WA 6167
Issue date:	Thursday, 30 June 2016
Commencement date:	Monday, 11 July 2016
Expiry date:	Thursday,10 July 2036

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER) has decided to issue a licence. DER considers that in reaching this decision, it has taken into account all relevant considerations.

Decision Document prepared by:	Lauren Fox A/Senior Licensing Officer
Decision Document reviewed by:	Caron Goodbourn A/Manager Licensing (Waste Industries) Delegated Officer
Decision Document authorised by:	Ruth Dowd Senior Manager – Industry Regulation (Waste Industries) Delegated Officer

Contents

1 Purpose of this Document

This decision document explains how DER has assessed and determined the application and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER'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 proponent'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**
	47	400,000 tonnes per annual period
Application verified Application fee paid	Date: 21/09/2015 Date:13/10/2015	
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	N/A	
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: EPA Report No:
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☐ Premises falls within the Kwinana EPP area however the operations of the premises do not trigger any specific additional conditions to the current Licence.		
Is the Premises subject to any EPP requirements? Yes☐ No☒		

3 Executive summary of proposal and assessment

Sims Group Australia Holdings Ltd (Sims Group) is an Australian company involved in the "buying, processing and selling of ferrous and non-ferrous recycled metals." The facility is located on a 10 ha site in the Kwinana industrial area, approximately 40 km south of Perth. The land is currently owned by the Western Australian Land Authority (WALA). Sims Group has signed a lease agreement with WALA for a period of 25 years. The premises is within the City of Kwinana (the City) in an area zoned General Industry under the City's Town Planning Scheme No. 2. The City of Kwinana advised DER that planning approval from the South-West Metropolitan Development Assessment Panel was granted on 18 August 2015, as a permanent approval with no expiry date.

The nearest residences are located approximately 1.6 km south-east from the premises. The Environmental Protection Authority's Guidance Statement No. 3, *Separation Distances between Industrial and Sensitive Land Uses* (June 2005) (EPA GS3), recommends a minimum separation distance of between 300 - 500m. This distance has been met for this premises. EPA GS3 identifies that noise, dust and odour emissions are associated with this type of activity. The Kwinana Motorplex is situated 300m east to north-east from the Premises.

Bush Forever areas, as classified under the Department of Planning's *State Planning Policy 2.8 Bushland Policy for the Perth Metropolitan Region* (June 2010), are located 400m south-east and 3.8km east of the Premises. Two unidentified surface water bodies (lakes/wetlands) are located within the south-western Bush Forever area and are approximately 2km and 2.6km from the site. One of these water bodies is within the Kwinana Golf Club. Long Swamp is located 2.8km north-east of the site within the suburb of Hope Valley. Cockburn Sound is located approximately 2.4km west of the site, with an inferred north-east groundwater flow direction, as determined during groundwater monitoring and well surveys undertaken by the proponent's consultants in October 2015.

Using the Department of Water's *Perth Groundwater Atlas (PGA),* groundwater has been identified between 4 to 5m below ground level with the width of the aquifer being 21m. The Site is underlain by calcareous Safety Bay Sand. *PGA* classifies the groundwater to be marginal to brackish (total dissolved solids between 1500 – 3000mg/L), low risk of iron staining and no known risk of acid sulfate soils. *PGA* identifies the surface geology to be Safety Bay Sand (Aeolian and beach lime sand). This geological profile is more conducive to higher permeability. Groundwater monitoring undertaken by the proponent in October 2015 confirmed that groundwater is marginal to brackish as well as identifying that water has a neutral to alkaline pH.

The premises was classified in October 2008 under the *Contaminated Sites Act 2003* as *Contaminated – Restricted Use,* with these restrictions related to the abstraction and use of groundwater, which has been contaminated with nitrate.

This is a new facility constructed under works approval number W5695/2014/1. The plant infrastructure consists of the following:

- shredder including acoustic enclosure for shredding light gauge metal and car bodies;
- static sheer for sheering heavy gauge metal;
- baler for baling non-ferrous metals ready for containerisation;
- weighbridge double lane at centre of site;
- off line recovery plant for separating non-ferrous metals from shredder residue waste in the discharge from the shredder;
- two infiltration stormwater basins (Basins A and B); and
- one lined stormwater basin (Basin C).

The proposed activities on site include the following:

- metal recycling which comprises both ferrous and non-ferrous metals;
- receive ferrous and non-ferrous metals and stockpiling on site for sorting according to type and grade;
- shredding of light gauge metals and car bodies. Shredded ferrous material is typically shipped out in bulk;
- bulk non-ferrous material is sorted and compress baled for shipment;
- waste products from all processing are stockpiled and taken off site for disposal to a licensed premises; and
- items not recyclable on site such as gas bottles and tyres etc., that are collected as incidental are separately stored and removed from the site.

The proposed hours of operation are 0700 to 2200 Monday to Sunday. The occupier may operate the site outside of these hours to meet operational needs. The occupier intends to extend the plant's operations in the future to be continuous (24 hours, 7 days a week).

The main emissions from the premises are noise, dust and contaminated stormwater.

This Licence is for the operation of a new facility established under works approval W5695/2014/1. It was identified through a review of the commissioning data and compliance report that some conditions of the works approval where not complied with. Any gaps identified through the works approval review have been included as licence conditions were applicable and included in accordance with DER's *Guidance Statement: Setting Conditions* (October 2015). In general commissioning data and compliance report appear to be consistent with the requirements of the works approval.

4 Decision table

All applications are assessed in line with the *Environmental Protection Act1986*, the *Environmental Protection Regulations 1987*and DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises, DER's *Guidance Statement: Land Use Planning* (October 2015), DER's *Guidance Statement: Licence Duration* (Revised May 2015) and DER's *Guidance Statement: Setting Conditions* (October 2015). Where other references have been used in making the decision they are detailed in the decision document.

DECISION TABLE			
Works Approval / Licence section	**Condition number** **W = Works Approval** **L= Licence**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
General conditions	L1.2.1 – L1.2.3	Please refer to Appendix A	Application supporting documentation
Premises operation continued	L1.3.1 – L1.3.8	Condition L1.3.1 (and Table 1.3.1) has been included on the licence to limit the types and quantities of waste for acceptance at the premises to only scrap metal (both ferrous and non-ferrous) which have been applied for and assessed under this application and can be adequately managed under the occupier's infrastructure and process controls. Any additional wastes not included on the licence are not authorised and are required to be removed from the Premises under condition L1.3.2, which assists in mitigating the potential leachate risk of runoff from stockpiling non-conforming waste, as well as reducing fire/explosive risk in storing hazardous wastes onsite. Condition L1.3.3 (and Table 1.3.2) has been included on the licence to specify the authorised processing of the wastes. These processes have been proposed by the occupier and have been assessed as suitable in regards to site capacity and infrastructure. The process limits assist in preventing unauthorised discharges beyond the premises boundary, and reducing the risk of fires. Condition L1.3.4 (and Table 1.3.3) is discussed in Appendix A. Conditions L1.3.5 to L1.3.8, relating to fire risk, are discussed in Appendix A	Application supporting documentation *Environmental Protection (Unauthorised Discharges) Regulations 2004*

DECISION TABLE			
Works Approval / Licence section	**Condition number W = Works Approval L= Licence**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
Fugitive emissions	N/A	Please refer to Appendix A	Application supporting documentation *Environmental Protection Act 1986*
Noise	L2.1.1 – L2.1.3 and L3.5.1	Please refer to Appendix A	Application supporting documents *Environmental Protection (Noise) Regulations 1997*
Monitoring general	L3.1.1 and L3.1.2	Condition L3.1.1 has been included on the licence to specify the methodology that is required to be undertaken for monitoring of groundwater and wastewater. These methods assist in ensuring reliability and accuracy of results. Condition L3.1.2 has been included on the licence to specify the minimum period of time authorised between sampling rounds and has been included to allow a more accurate representation a seasonal data obtained throughout the year.	N/A
Monitoring of inputs and outputs	L3.2.1	Condition L1.3.1 specifies the types and volumes of materials permitted to be accepted at the premises. To allow DER to regulate the volume of wastes in compliance with this condition, condition L3.2.1 has been included on the licence to monitor the inputs and outputs of the premises. This condition also assists in assessing that the wastes accepted and processed at the site are at a throughput that can be sufficiently managed by the premises infrastructure and controls.	Application supporting documentation

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Works Approval / Licence section	**Condition number W = Works Approval L= Licence**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
Process monitoring	L3.3.1	Based on the risk assessment detailed for 'General conditions' in Appendix A, condition L3.3.1 (and Table 3.3.1) has been included on the licence to require quarterly monitoring of wastewater that is contained within Basin C. This condition has been included to assist in monitoring the effectiveness of the Gross-Pollutant Trap and oil/sediment separator that are installed as part of the stormwater/wastewater treatment system for Basin C.	Application supporting documentation
Ambient quality monitoring	L3.4.1	Please refer to Appendix A	Application supporting documentation
Information	L4.1.1 – L4.1.3, L4.2.1, L4.2.2 and L4.3.1	Condition L4.1.1 sets out the requirements for any records that are required under this licence, such as ensuring they are legible and retained for 6 years which assists DER in regulating the conditions of this licence. Condition L4.1.2 requires the occupier to undertake an audit of their operations against the conditions of the licence and to report on this compliance in an Annual Audit Compliance Report (AACR). This condition assists DER in regulating the occupier's compliance with licence conditions and allows an opportunity for DER to review the occupier's environmental performance. L4.1.3 requires a complaints management system to be implemented where the occupier can internally address any issues that arise from premises operations. DER will review these complaints as reported in the Annual Environmental Report (AER) and can consider the requirement for reassessment of any regulatory controls to address the complaints. L4.2.1 requires the occupier to submit an AER. The AER is required to include the AACR and a summary of the complaints required under condition L4.1.3. The AER is also required to provide the results for the monitoring of inputs/outputs,	N/A

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Works Approval / Licence section	**Condition number W = Works Approval L= Licence**	**Justification (including risk description & decision methodology where relevant)**	**Reference documents**
Information continued		wastewater monitoring and groundwater monitoring. The occupier is also required to provide a summary of any malfunction of pollution control equipment or any environmental incidents. DER reviews all of the data provided in the AER to assess compliance with the licence conditions and to monitor the environmental impacts from the premises. Condition L4.2.2 has been included to require the occupier to provide an assessment of the data provided with the AER and to discuss this in relation to monitoring that has been previously undertaken. This condition assists in identifying any trends in the data such as any impacts to groundwater. Condition L4.2.3 has been included to require airblast data required under condition 2.1.3) to be provided to DER on a quarterly basis. This condition allows DER to check for compliance against the EP Noise Regulations. Condition L4.3.1 requires the occupier to notify the CEO if there is a breach of any licence limit (i.e. processing limits). This condition also requires the occupier to advise of any fires at the premises. The notifications required under this condition give DER sufficient notice of any environmental impacts at the premises so that DER can determine if any further action is required to address the incident.	
Licence Duration	N/A	The proponent has a lease with the landowner for a period of 25 years, up to 1 October 2038. There is currently no expiration on the planning approval however therefore it is recommended that the licence be granted for a period of 20 years in accordance with DER's *Guidance Statement: Licence Duration* (revised May 2015).	

5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
19/10/2015	Application advertised in West Australian (or other relevant newspaper)	No comments received	N/A
3/11/2015	Application referred to the City of Kwinana	No comments received however additional correspondence with the City of Kwinana confirmed that the proponent received planning approval from the South-West Metropolitan Development Assessment Panel on 18 August 2015, as a permanent approval with no expiry date.	N/A
3/05/2016	Proponent sent a copy of draft instrument	The occupier provided comments to DER on 25/05/2016 which raised the following main proposed changes: (a) Change of premises throughput from 200,000 to 400,000 tonnes per annum; (b) Minor changes to wording in Executive Summary /Premises description and licence summary; (c) Clarification of operational hours to include Monday to Sunday from 0700 to 2200 with additional hours outside of these as required. (d) Querying if the term 'waste' should be applied in the Decision table to describe recyclable materials; (e) Clarifying that all waste stream conveyors will be covered (previously stated all conveyors); (f) Clarification of bund installation	The following changes have been made in response to the occupiers comments: (a) Premises throughput has been changed to 400,000 tonnes per annum as the risks to the environment and public health associated with the increased throughput are still considered to be acceptable; (b) Proposed wording changes were incorporated; (c) Operational hours updated as requested; (d) Given the broad definition and application of 'waste' under section 3 of the EP Act, this term is sufficient to use in reference to recyclable materials and has remained within the Decision table; (e) Clarification to the covered

Date	Event	Comments received/Notes	How comments were taken into consideration
		around Basin A (previously referred to isolation drains); (g) Noise emission monitoring to not be required as part of licence conditions; (h) Proposed groundwater monitoring in only 3 of the 5 bores and reduce frequency to six-monthly instead of quarterly; (i) Clarification to waste acceptance in Table 1.3.1; (j) Clarification to 'process' and 'process limit' columns in Table 1.3.2; (k) Proposed change of wording in condition 1.3.7 regarding community notification about wastes accepted onsite; and (l) Requesting that limits on when airblast levels is linked to reporting requirements.	conveyors has been made; (f) Wording regarding bund installation was updated; (g) Noise emission monitoring has remained in the licence and is discussed further in Appendix A; (h) Groundwater frequency has been reduced however the requirement to monitor all 5 bores remains. Further information provided in Appendix A; (i) Waste acceptance has been clarified as requested however throughput has not been changed from 200,00 tonnes as discussed above; (j) Changes made as requested per Table 1.3.2; (k) Proposed wording in condition 1.3.7 has not been changed as this condition is intended to specifically state only the wastes that are authorised, not those that are not. The list of unauthorised wastes would be significant in volume. The occupier can specifically include certain prohibited wastes on the signage however the condition has not been changed; (l) Airblast reporting requirements have been amended and is discussed in Appendix A.
14/06/2016	Proponent sent a copy of the revised draft instrument	The occupier provided comments to DER on 30/06/2016 which raised the following main proposed changes: • Changing definition of 'de-pollution'	The following changes have been made in response to the occupiers comments: • The definition of de-pollution has been changed as requested. Table

Date	Event	Comments received/Notes	How comments were taken into consideration
		to not include the requirement for removal of brake pads; • Changes to the waste processing requirements in Table 1.3.2 to exclude the requirement for heavy gauge steel to be stored in a bunded hardstand area. Notification that only the de-pollution and battery storage areas are bunded. All other areas are engineered to direct runoff to the stormwater system for containment and treatment; • Re-wording of 1.3.7 (d) to specify which materials are not accepted onsite given that the scrap metal wastes that can be accepted is too comprehensive to include for signage; • Additional wording to 2.1.3 to remove requirement to sweep and wet down areas daily and change to 'as required to minimise fugitive dust' given that the site will not need to be wet down as often during winter when rainfall assist in dust suppression; and • Changing condition 2.2.1 to require only the shredder within an acoustic enclosure as designed.	1.3.2 requires non-conforming material to be removed if identified. This has been amended to require that any brake pads identified as potentially containing asbestos, are required to be removed prior to further processing. • The storage requirements in Table 1.3.2 have been changes as requested by the occupier. During phone conversations the occupier advised that heavy gage steel is within an area covered with blue metal which does not meet the requirement of a bunded hardstand. The occupier has described this area as being a medium risk area as detailed further in Appendix A; • Condition 1.3.7 has been amended to reflect the occupier's request. Given that the list of wastes both authorised and not authorised is too extensive to include on signage, the strictly prohibited items not accepted by the occupier is sufficient for signage purposes. It is the occupier's responsibility to comply with the waste acceptance criteria listed in Table 1.3.1; • Condition 2.1.3 changed as requested; and • Condition 2.2.1 has been changed to reflect that only the shredder has been constructed within an acoustic enclosure.

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

General Conditions

Emission Description

*Emission: S*tormwater contaminated with hydrocarbons and other environmentally hazardous materials, such as acids and heavy metals, from premises operations and storage of wastes.

Impact: Contamination of surrounding land and groundwater systems. Potential impacts on ecology of soil and land from the addition of hydrocarbons and heavy metals, which are likely to be generated from the activities of scrap metal yard. Potential offsite migration and environmental detriment.

Controls: Under the works approval the majority of the site has been sealed with a concrete hardstand, with areas prone to exposure from heavy metals constructed from a "compacted sub-base material underlain with an impermeable geosynthetic clay liner (GCL)".

The site has been partitioned into three sub-catchment areas based on the level of metal recovery process involved. The proponent has classified these as low, medium and high risk areas. The occupier has classified low risk areas to include car parks, roof areas, shredded ferrous stockpile which passes through air blowers, magnetic filters and spray and direct roof run-off without interacting with sediment, oils and chemicals. Medium risk areas include large metal stockpile (heavy gauge steel) and minor operational areas. High risk areas include shredder operational zones and stockpiles.

The occupier has constructed three stormwater basins on site (Basin A, B and C as depicted in Appendix B) with each basin having its own designated catchment area. Basin A is an infiltration basin which is designed to contain stormwater runoff from the non-ferrous storage areas and baler. The occupier has advised that it is designed to contain a 1 in 100 year Average Recurrence Interval (ARI) event for 48 hours. The proponent has installed a bund around the baler to contain spills and to prevent contaminates entering Basin A. The site has been designed and constructed to direct any runoff into the stormwater treatment systems of each catchment. The battery storage car de-pollution areas have been constructed as bunded hardstands.

Basin B is also an infiltration basin designed to capture runoff from the public drop-off and workshop areas and is designed for a 1 in 100 year ARI event for 72 hours. Pollutant interceptors, designed to cater for a 1 year, 1 hour ARI event, as required by the Department of Water, have been installed to screen water from areas the proponent considers as low risk.

Basin C has been constructed as a lined basin with a GCL overlain by 2.00mm High Density Polyethylene (HDPE) to contain any stormwater contaminated from the medium to high risk premises operations which may contain environmentally hazardous materials such as heavy metals and hydrocarbons. This basin has been designed to contain a 1 in 100 year ARI event for 24 hours. The drainage system for Basin C is connected to a Gross-Pollutant Trap (GPT) designed to remove floating debris. The water then passes through an oil and sediment separator prior to entering the basin. The occupier has proposed to use the treated water from Basin C onsite for dust suppression, irrigation and for use as cooling water for the shredder.

Risk Assessment

Consequence: Moderate
Likelihood: Possible
Risk Rating: Moderate

Regulatory Controls

As Basins A and B are infiltration basins with direct discharge into the environment, condition L1.2.1 has been included on the licence to require that any stormwater within Catchments A and B does not become contaminated from premises operations. This assists in reducing the risk of contaminated stormwater entering the environment. Discharges of contaminated stormwater may be subject to the *Environmental Protection (Unauthorised Discharges) Regulation 2004.*

Condition L1.2.2 has been included on the licence to require all stormwater and wastewater discharging to Basin C is directed through the GPT and an oil and sediment separator prior to discharge into the basin.

Condition 1.2.3 has been included on the licence to require the GPT and oil/sediment separator to be maintained as per manufacturer's specifications. This condition assists in maintaining the effectiveness of the stormwater treatment system.

In the 'Process Monitoring' section of the licence, condition L3.3.1 (and Table 3.3.1) has been included to require quarterly monitoring of wastewater that is contained within Basin C. This condition has been included to assist in monitoring the effectiveness of the Gross-Pollutant Trap and oil/sediment separator that are installed as part of the stormwater/wastewater treatment system for Basin C.

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

Premises Operations

Emission Description
Emission: Smoke, including particulates and air emissions containing hydrocarbons and heavy metals released in the event of a fire. Firefighting foam may contain hazardous materials including surfactants, emulsifiers and modifiers.

Impact: Contamination of local air quality. Fires can result in polluted soil and surface water from both fallout and runoff from firefighting waters/foams discharged to the environment via drainage systems. In addition, gases from fire smoke can significantly impact on the respiratory system of the community through inhalation of particulates.

Controls: The occupier has proposed the following controls for fire prevention:

- *A ring main fire hydrant system will be installed around the site to provide coverage to all stockpiles, other material storage, plant and buildings on site.*
- *All hydrants and hose reel stations will be protected in bollarded islands to prevent operational damage.*
- *There will be tanked water storage on site to serve the fire suppression systems and this storage will be fully automated through a pumped system. This will ensure sufficient flow and pressure relative to the hazard.*
- *A mobile water tanker with water cannon attachment will be retained on site. This will be a dual use vehicle also operating as a water spray dust suppression vehicle.*
- *An electronic fire detection system will be installed in all built environments and to major plant and equipment installations. Fire detection systems will constitute smoke and thermal detection as appropriate in accordance with Australian Standards and Authority requirements.*
- *There will also be an emergency warning interconnecting system. All alarm systems will have visual and audible alarms all in accordance with Australian Standards.*
- *Fire Sprinkler systems will be installed at points of critical fire loads of the Shredder Plant.*

- *In addition a foam suppression system will be installed at car body storage and processing locations.*
- *There will be no recovery of scrap metals by burning of flock or non-metal encasing materials.*
- *Rubber linings and surface/sub-surface treatments will be removed from scrap metal prior to processing. If the removal process involves flame cutting a fire suppression system shall also be employed.*
- *Flammable liquids required in workshops will be stored in dedicated storage cabinets.*

Risk Assessment
Consequence: Major
Likelihood: Possible
Risk Rating: High

Regulatory Controls
The Premises has the potential to receive waste onsite that is hazardous or explosive in nature and a fire has already occurred at the Premises in November 2015. Given the high risk rating for fires at the Premises, condition L1.3.6 has been included on the licence to require adequate security measures are implemented at the site to prevent unauthorised access which may result in vandalism such as fires.

Condition L1.3.7 has been included to provide contact numbers in the event of a fire to assist emergency services or other persons in the event of a fire, as well as specifying what wastes are not accepted to assist in reducing non-conforming wastes being accepted at the site which may pose a higher fire risk (i.e. gas tanks).

Condition L1.3.8 has been included to assist in fire prevention by requiring fire prevention equipment to be maintained and in working order at all times.

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

Fugitive Emissions

Emission Description – dust
Emission: Fugitive dust emissions from onsite activities such as shredding, floc storage, stockpiling, vehicle movements and transfer of materials via conveyor system.
Impact: Reduced local air quality from airborne particulate. Nuisance and potential health impacts to nearby residents and commercial neighbours.
Controls: As specified in the supporting documentation, the applicant has proposed the following controls.

- *All work areas and driveways will be sealed. All other areas on site will have stabilized surfaces;*
- *Sweeping of pavements, work areas and driveways will be done on a daily basis and watering will be undertaken on an as needs basis following daily inspections;*
- *Floc will be stored under cover and in a three walled bay. This area will be wetted down as required. Removal of floc will occur at regular intervals to ensure minimum levels are stored on site;*
- *The shredder will have a closed circuit cyclone for flock recovery and be fitted with water spray jets;*
- *The waste/floc bay will be kept damp with an overhead sprinkler system.*

- *Soil stockpile resulting from sweeping activities will be located away from prevailing winds and below the perimeter landscaping mound. This stockpile will be stabilised if not of sufficient volume to be removed from site on a monthly basis;*
- *Should wind direction remain constant from the north-west quarter during dry conditions or in high wind conditions activities on site will be amended to minimize dust exiting the site; and*
- *All non-work or non-storage areas on site will be landscaped and/or stabilized.*

The occupier has also advised that all waste stream conveyors will be covered.

Risk Assessment
Consequence: Moderate
Likelihood: Unlikely
Risk Rating: Moderate

Regulatory Controls
The moderate level of risk from fugitive emissions is considered to be acceptable when controls are in place therefore the proposed controls that are most likely to be effective in reducing dust emissions have been included as regulatory controls (condition L2.1.1 to L2.1.3).

Condition 1.3.3 and Table 1.3.2 specify processing limits, such as keeping floc damp, assist in reducing the impacts of fugitive dust emissions.

In consideration of the occupier's request that premises throughput is up to 400,000 tonnes per annum, the CEO's Delegated Officer considers that the initial risk assessment (based on 200,000 tonnes) applies for the higher throughput given that dust emissions only pose a moderate risk to the environment and public health and that the occupier's proposed controls have been incorporated as regulatory controls. Should dust emissions cause an impact in the future, additional controls such as reducing the waste acceptance throughput limit can be considered.

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

Emission Description – asbestos in fugitive dust
Emission: Release of asbestos fibres in fugitive dust emissions from onsite activities such as shredding and crushing of asbestos contaminated brake pads.
Impact: Reduced local air quality from airborne particulate. Nuisance impacts and significant health impacts such as asbestosis to nearby residents and commercial neighbours.
Controls: As specified above under the 'dust' risk assessment, the applicant has proposed a number of dust emission controls however no specific controls have been proposed for asbestos management.

Risk Assessment
Consequence: Severe
Likelihood: Unlikely
Risk Rating: High

Regulatory Controls
Although the likelihood of asbestos fibres impacting on public health is unlikely, the severe consequence associated with asbestos emissions brings the overall risk rating to high. Given the high level of risk, condition 1.3.3, related to waste processing, included a processing limit that de-pollution of vehicles (defined as the removal of brake pads and draining of fuel tanks) occurs on a bunded

hardstand prior to shredding, shearing, crushing or compacting activities. The asbestos risk is only expected when brake pads are crushed. The removal of brake pads prior to the shredding, shearing, bailing or compaction activities assists in maintaining the integrity of the brake pads so that asbestos fines are not released.

The occupier provided further comments to DER (consultation table) and in phone discussions to inform that the inclusion of asbestos in brake pads was ceased in the 1980's and that that the majority of the cars received for processing are post 1980's, recuing the risk that the cars that are crushed have asbestos containing brake pads. The occupier also advised that asbestos is a waste that is prohibited on site. In light of the occupier's comments, it requested that the requirement to remove all brake pads be taken off the definition of 'de-pollution'. The requirement to remove brake pads from cars as part of the definition for 'de-pollution' has been removed. Table 1.3.2 has been amended to require the removal of brake pads that are suspected to contain asbestos prior to further processing. This condition meets the intent of the previous definition of 'de-pollution' which is to reduce the risk of asbestos fibres being released.

Residual Risk
Consequence: Severe
Likelihood: Rare
Risk Rating: High

Emission Description - Infiltration
Emission: Fugitive emissions of stormwater and waste water discharging to environment from the infiltration basins, as well as potential offsite discharges from uncontrolled run-off and potential over topping of Basin C.

Impact: Contamination of surrounding land and groundwater systems. Potential impacts on ecology of soil and land from the addition of hydrocarbons and heavy metals, which are likely to be generated from the activities of scrap metal yard. Potential offsite migration and environmental detriment.

Controls: As discussed above in 'General Conditions' the site has been predominantly sealed as a hardstand with designated catchment areas draining into respective basins. Catchments A and B are associated with activities that the occupier has classed as low-risk and drain into infiltration Basins A and B. The proponent has installed a bund around the baler to contain spills and to prevent contaminates entering Basin A as well as installing pollutant interceptors to screen water entering Basins A and B. Basin C has been constructed with a liner to contain treated stormwater and/or wastewater, with water from catchment C passing through a Gross-Pollutant Trap (GPT) and oil/sediment separator.

Risk Assessment
Consequence: Moderate
Likelihood: Unlikely
Risk Rating: Moderate

Regulatory controls: As discussed above in 'General Conditions', condition 1.2.1 has been included on the licence to require stormwater within Catchments A and B to not become contaminated from the Premises operations so that any emissions of waster infiltrating from Basins A and B is considered as clean stormwater which poses an acceptable level of risk to the environment. Water from Catchment C is required by condition 1.2.2 to pass through a GPT and oil/sediment separator prior to discharge in Basin C.

Condition L1.3.4 (and Table 1.3.3) under 'Premises Operations' has been included on the licence for the containment of contaminated stormwater in Basin C and reflects the occupiers infrastructure

requirements. This condition has been included to assist in the reduction of contaminated stormwater being discharged offsite by including the requirement to maintain sufficient freeboard to prevent over-topping. Any offsite discharge of contaminated water may be subject to the *Environmental Protection (Unauthorised Discharges) Regulations 2004* (UDR's).

The occupier has proposed to use the stormwater within Basin C for onsite activities such as dust suppression and irrigation, with this water potentially being used in Catchments A and B, for final discharge to the environment via infiltration Basins A and B. Although the stormwater/wastewater in Basin C will be treated through a GPT and oil/sediment separator, this treatment system will not remove the heavy metals or other contaminates such as acids that may be present in stormwater or process water within this catchment. Groundwater beneath the premises is contaminated with nitrate and the premises is subject to the classification of *Contaminated – Restricted Use* under the *Contaminated Sites Act 2003*, with the restrictions applying to the abstraction and use of groundwater.

To reduce the risk of contaminated water entering the environment through the infiltration basins, and to assist in reducing the risk further contamination to groundwater, Condition L1.3.5 has been included on the licence to reduce the area of stormwater reuse to operational areas within catchment C only. Any discharges of contaminated stormwater within Catchments A and B may be subject to the UDR's if infiltrated into the environment.

Condition 3.4.1 (and Table 3.4.1) has been included to require bi-annual monitoring of groundwater quality which assists in providing data for use in determining if stormwater infiltration is having an adverse impact on the environment. Should groundwater data show a decline to groundwater quality, DER may consider additional regulatory controls such as prevention of infiltration and the requirement to line Basins A and B.

Condition L1.3.5 has been included to require all truck washing activities to be contained within a bunded hardstand area. This condition assists in preventing offsite discharges of contaminated water.

Residual Risk
Consequence: Moderate
Likelihood: Rare
Risk Rating: Moderate

Noise Emissions

The proposed hours of operation are 0700 to 2200 Monday to Sunday. The occupier has advised that operations may occur outside these hours as commercial needs arise. The occupier intends to the plant in the future for 24 hours, 7 days a week. The assigned day time hours as prescribed in the *Environmental Protection (Noise) Regulations* (EP Noise Regulations) are between 0700 to 1900 Monday to Saturday and 0900 to 1900 Sundays and public holidays, with Sundays and public holidays being assigned a lower decibel (dB) level. As this premises is operating outside of the day time hours, noise emissions will need to comply with the lowest assigned dB levels specified in the EP Noise Regulations.

As part of the works approval conditions, the occupier was required to undertake noise monitoring (for LA_{10}) during commissioning operations and under weather conditions likely to yield maximum offsite noise impacts, at eight assigned locations depicted in Appendix C, to meet the relevant assigned levels in the *Environmental Protection (Noise) Regulations* (EP Noise Regulations) . The occupier provided the *SIMS Metal Management Noise Monitoring Report – WKB-10-00-R6* prepared by Eco Acoustics Pty Ltd (14 March 2016) (Noise Assessment).

The Noise Regulation (NR) functional group within DER completed an assessment of the proponent's Noise Assessment.

NR's assessment of the Noise Assessment noted the following:

- Based on the requirements of the works approval, the occupier was required to demonstrate compliance with the EP Noise Regulations in two areas:
  - At the boundary with adjacent industrial premises; and
  - Noise sensitive premises in the area.
- Only 7 of the 8 sites were measured;
- Monitoring was only undertaken near-field: within the boundary of the premises;
- The near-field noise measurements were used to confirm the sound power levels of the major onsite equipment that was used in previous modelling;
- The method for verification of sound power levels at the assigned locations appears to be inconsistent with the standard methods for measuring onsite sound power levels;
- It does not appear that noise modelling was verified;
- Compliance with the EP Noise Regulations has not been undertaken in the Noise Assessment, only verification of sound power levels for the noise modelling;
- Estimation of influencing factors for the neighbouring noise sensitive premises are not correct, with influencing factors for some areas being higher than what has been estimated (comparison depicted in Table A1 below);
- Given the large separation distance and high influencing factor, the proposal will likely comply with the EP Noise Regulations, however, the Noise Assessment has not demonstrated this and DER may require the assessment to be restarted to demonstrate compliance.

Area	Influencing Factors	
	Eco Acoustics	**Kwinana Industries Council (agreed)**
Calista	0	1
Hillman	0	10
Hope Valley	8	7
Leda	0	0
Medina (including Birgfield St)	0	4
North Rockingham	0	5
Wattleup	10	10

Table A1: influencing factors

Based on NR's review of the proponent's Noise Assessment, the following risk assessment has been completed for noise emissions during operations.

Emission Description

Emission: Unreasonable noise emissions from the following activities:

- metal shredder;
- airblast from compression of fuel tanks;
- offline recovery plant;
- Harris static shear;
- workshop;
- Harris baler;
- mobile metal shears; and
- trucks for delivery and dispatch.

Impact: Potential reduced wellbeing, amenity and comfort of sensitive noise receptors and to people on neighbouring industrial premises. Given that noise sensitive receptors are located 1.6km from the Premises and commissioning has been undertaken with no noise complaints received by DER, any impacts are anticipated to be minimal.

Controls: Metal shredder is housed in an acoustic enclosure. Workshop and offline recovery plant are housed within large sheds with majority of the openings facing to the west and north opposite to the residential areas.

Truck loading and metal shearing are located on the northern and western sides of the stockpile, which will provide shielding to nearby residential areas. Stockpiles are earth bunded with solid barrier on the top. Machinery likely to generate significant noise includes acoustic enclosure to control noise emissions.

No LPG gas bottles are accepted for shredding. All materials are visually inspected prior to shredding. Fuel tanks are handled upside down so that any residual fuel can be identified, captured within holding containers and removed prior to shredding.

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

Regulatory Controls
Based on the moderate risk rating for noise emissions, condition 2.2.1 has been included on the licence to require the shredder to be fitted in an acoustic enclosure, as constructed, to assist in reduction of noise emissions from the Premises. This condition assists in noise emissions posing an acceptable risk to the environment and public health.

Requirement NM1 of condition 3.5.1 relates specifically to noise emitted from airblasts. As airblasts may occur at the Premises from the compression of fuel tanks, this requirement has been included on the licence to require the occupier to undertake continuous noise monitoring using sound level measuring instruments at the premises boundary at all times when the shredder is operational.

Condition 3.5.2 has been included to address airblast events and requires the Licensee to download the data required under NM1, prepare a report, and provide this data to DER on a quarterly basis. This condition assists in establishing if there have been any exceedances of the EP Noise Regulations from the blasts which may be used when considering any impacts to neighbouring premises or residential areas.

The occupier requested that a decibel limit be set for airblasts so that the occupier is only required to report on airblasts that meet or exceed the limit to prevent reporting each airblast including those that may not generate excessive noise emissions. In response to the occupier's request, condition 4.2.3 has been included on the licence to require that the licensee provide all airblast data to DER on a quarterly basis and Table 4.2.1 (Annual Environmental Report) has been modified to require a summary of airblast events when the $L_{A\ Peak}$ levels have exceeded the assigned levels in the EP Noise Regulations during that annual period.

As identified in NR's review of the Noise Assessment, the occupier has not demonstrated that noise emissions from the premises are compliant with the EP Noise Regulations. Given the moderate risk rating for noise emissions, requirement NM2 of condition L3.5.1 has been included on the licence to require noise monitoring to be undertaken to confirm compliance with the EP Noise Regulations, and to provide a report to the CEO detailing the methodology used, the result, and any proposed noise mitigation measures if the prescribed standards are not met.

The occupier requested that this requirement (NM2) be removed from the licence conditions and be undertaken as a separate matter outside of the licence however given that this premises is operating and compliance with the EP Noise Regulations has not yet been demonstrated, it is valid that the requirements be included as regulatory controls.

Although the proponent has not complied with the noise monitoring requirements to the full extent as required under the works approval, the information provided to DER in regards to noise emissions has been assessed by NR as being likely to meet the requirements of the EP Noise Regulations. NR has not identified there to be any unacceptable risks to the environment and public health from noise emitted from the Premises. DER requires this to be verified through the additional noise monitoring to confirm that the risk assessment for noise is correct and that the Premises can comply with the EP Noise Regulations.

It is unlikely that the increase to 400,000 tonnes per year (previously 200,000 tonnes) as requested by the occupier will pose an increased risk of noise emissions given that NR has assessed the risk as being low. The noise monitoring required above will assist in confirming this and if the premises is unable to meet compliance with the EP Noise Regulations, additional regulatory controls, such as reducing the authorised annual waste throughput, may be considered.

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

Ambient Emissions to Groundwater

Five groundwater monitoring bores are installed at the premises as depicted in Appendix D. Three of these were installed as part of the works approval and, as advised by the occupier, the additional two were installed for internal purposes. Groundwater has been identified between 4m to 5m bgl (using the Department of Water's Perth Groundwater Atlas) and confirmed at between 4 to 5.5m bgl identified during the installation of two groundwater bores at the premises, with an inferred groundwater flow to the north-east. The bore logs depicted a soil profile consisting of sand and gravel which is conducive to higher permeability.

The occupier has provided groundwater monitoring data undertaken in October 2015 which identified arsenic, copper, zinc and total nitrogen levels exceeding fresh water guidelines (FWG) in the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000)*. All total recoverable hydrocarbons, methyl tertiary-butyl ether (MTBE), naphthalene, benzene, toluene, ethylbenzene, and xylenes (BTEX) were below assessment criteria values as were Polycyclic Aromatic Hydrocarbons (PAHs). Total nitrogen levels exceeded FWG in all bores.

The *Sims Metal Management Targeted Ground Water Sampling* prepared by Emission Assessments Pty Ltd (16 November 2015) has recommended quarterly groundwater monitoring of the following parameters:

- Metals (aluminium, arsenic, cadmium, chromium (III), chromium (IV), copper, manganese, nickel, lead and zinc);
- Total recoverable hydrocarbons;
- BTEX;
- Naphthalene;
- PAHs;
- Total nitrogen;
- pH; and
- Electrical conductivity.

Emission Description
Emission: Contaminated stormwater from contact with processing areas and waste storage areas.

Impact: Groundwater contamination from hydrocarbons, heavy metals and other contaminates. Impacts to the already contaminated local groundwater ecology.

Controls: Stormwater from areas that the proponent has identified as being low risk is directed through pollutant interceptors prior to onsite infiltration basins. Stormwater from the medium to high risk areas is directed through a Gross-Pollutant Trap and an oil/sediment separator for discharge to a lined basin for containment onsite. The proposed controls are detailed further in 'General conditions' above.

Risk Assessment
Consequence: Moderate
Likelihood: Unlikely
Risk Rating: Moderate

Regulatory Controls
In addition to the proposed general conditions related to stormwater management (L1.2.1 – L1.2.3), condition L3.4.1 has been included to require monitoring of ambient groundwater emissions from the five bores installed at the Premises. The data required under this condition assists in determining if onsite activities are impacting on groundwater quality, when considered against background groundwater data.

In addition to the parameters recommended for sampling by Emission Assessments Pty Ltd, it is recommended that the nitrate and nitrite are included as it is known that this site has groundwater contaminated with bitrate and it is important to monitor the levels of that contamination and identify if levels are increasing due to site activities.

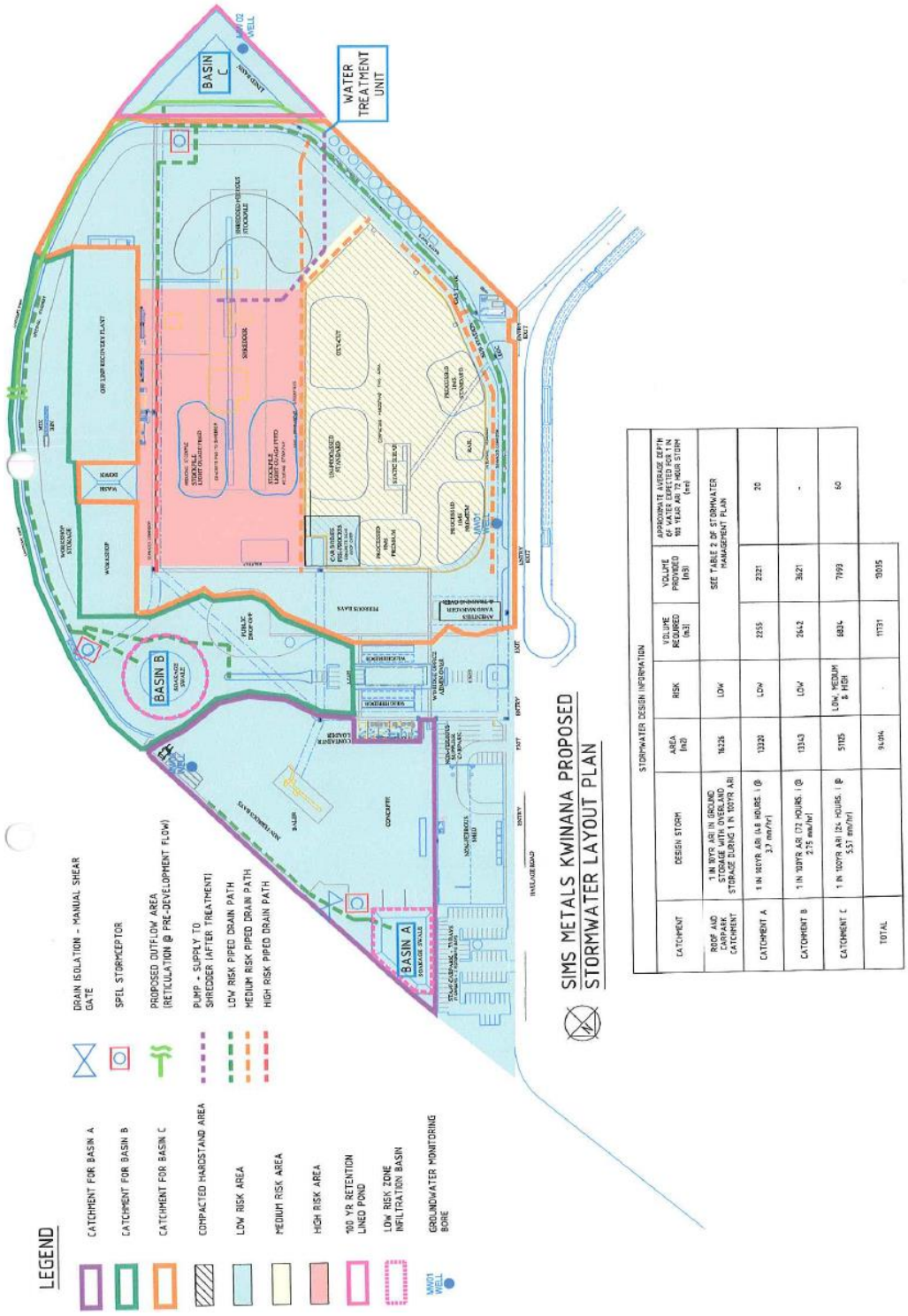
The occupier requested that the groundwater monitoring regime be reduced to sampling three bores to reflect those required under the works approval. Given that the inferred groundwater flow is towards north-west and not south-west as previously expected, the locations of the three bores required under the works approval (GWS3, GWS4 and GWS5) are insufficient to obtain a representative overview of impacts to groundwater from the site activities. The requirement to monitor all five bores has been reduced to only monitoring the four bores (GWS4 not required to be monitored) that are in line with the inferred groundwater flow. This will provide a more accurate and reliable representation of groundwater quality and obtain a better understanding of any impacts of discharges from the onsite Basins, including being a useful method to monitor liner integrity of Basin C.

The occupier has also requested that groundwater monitoring is undertaken on a bi-annual basis rather than the quarterly frequency recommended by their consultants, Emission Assessments Pty Ltd. Given that the risk rating of ambient emissions to groundwater is moderate, the CEO's Delegated Officer supports bi-annual monitoring of groundwater.

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

Appendix B

Stormwater management system depicting catchment areas and basins

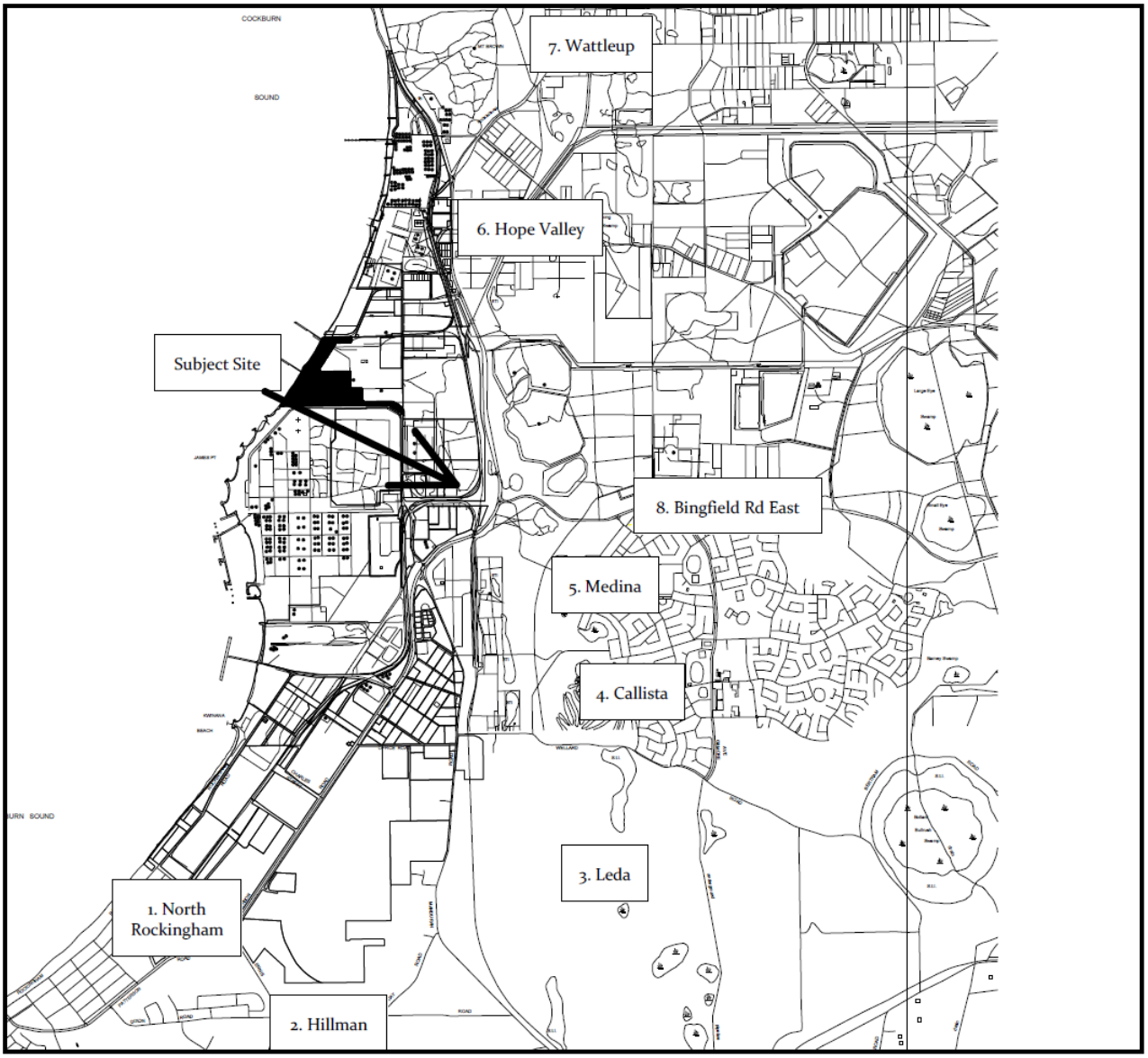


STORMWATER DESIGN INFORMATION

CATCHMENT	DESIGN STORM	AREA (m2)	RISK	VOLUME REQUIRED (m3)	VOLUME PROVIDED (m3)	APPROXIMATE AVERAGE DEPTH OF WATER DEPOSITED FOR 1 IN 100 YEAR 24 HOUR STORM (mm)
ROOF AND CARPARK CATCHMENT	1 IN 100YR ARI IN GROUND STORAGE WITH OVERLAND STORAGE DURING 1 IN 100YR ARI	16226	LOW	SEE TABLE 2 OF STORMWATER MANAGEMENT PLAN		20
CATCHMENT A	1 IN 100YR ARI (48 HOURS | @ 3.7 mm/hr)	13329	LOW	2255	2321	
CATCHMENT B	1 IN 100YR ARI (72 HOURS | @ 2.5 mm/hr)	13143	LOW	3642	3621	-
CATCHMENT C	1 IN 100YR ARI (24 HOURS | @ 5.51 mm/hr)	51125	LOW, MEDIUM & HIGH	8834	7993	60
TOTAL			94094	-	11731	13035	

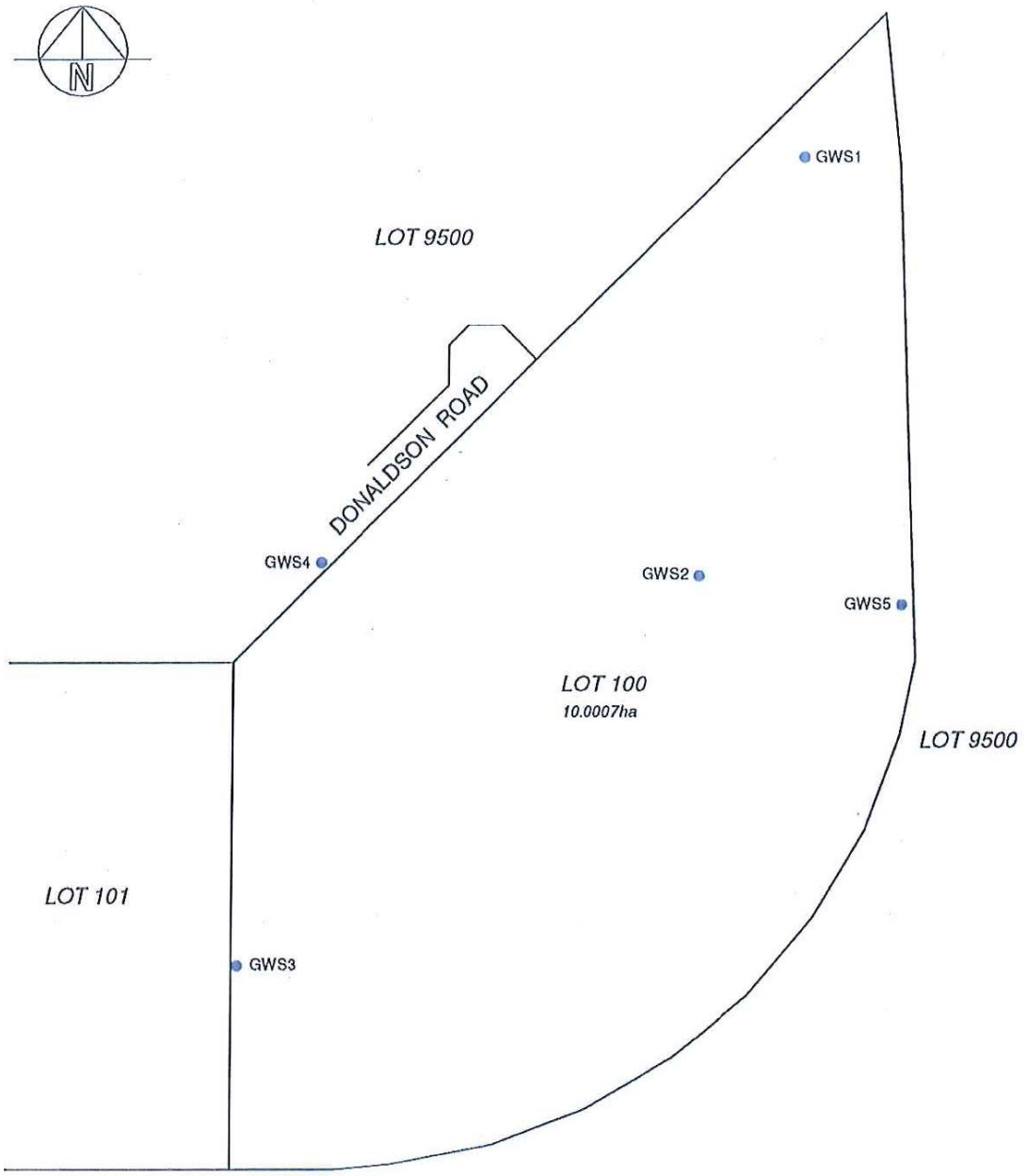
Appendix C

Noise monitoring locations



Appendix D

Locations of groundwater monitoring bores



Horizontal Datum: MGA94 (50)
Vertical Datum: AHD

Origin of levels: SSM KWIN25 & NAV20 Located by GPS
Elevations are taken on top the PVC collar

Point	Easting (m)	Northing (m)	Elevation (m)
GWS1	385461.842	6434395.221	5.453
GWS2	385415.850	6434207.762	5.495
GWS3	385209.859	6434033.012	5.174
GWS4	385246.567	6434213.776	4.781
GWS5	385507.194	6434194.882	6.207