



Decision Document

Environmental Protection Act 1986, Part V

Proponent: **GMA Garnet Pty Ltd**

Licence: **L6145/1983/11**

Registered office: Suite 2, Floor 18, Exchange Plaza
2 The Esplanade
PERTH WA 6000

ACN: 009 344 227

Premises address: GMA Garnet Narngulu
122 Goulds Road
NARNGULU WA 6532
Being Lot 141 on Diagram 79746 as depicted in Schedule 1.

Issue date: Thursday, 7 August 2014

Commencement date: Wednesday, 01 October 2014

Expiry date: Monday, 30 September 2019

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:

Caroline Conway-Physick
Licensing Officer

Decision Document authorised by:

Steve Checker
Manager Licensing (Midwest)



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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.

Works approval and licence conditions

DER has three types of conditions that may be imposed on works approvals and licences. They are as follows;

Standard conditions (SC)

DER has standard conditions that are imposed on all works approvals and licences regardless of the activities undertaken on the Premises and the information provided in the application. These are included as the following conditions on works approvals and licences:

Works approval conditions: 1.1.1-1.1.4, 1.2.1, 1.2.2, 5.1.1, 5.1.2 and 5.3.1.

Licence conditions: 1.1.1-1.1.4, 1.2.1-1.2.4, 5.1.1-5.1.4 and 5.2.1.

For such conditions, justification within the Decision Document is not provided.

Optional standard conditions (OSC)

In the interests of regulatory consistency DER has a set of optional standard conditions that can be imposed on works approvals and licences. DER will include optional standard conditions as necessary, and are likely to constitute the majority of conditions in any licence. The inclusion of any optional standard conditions as a result of this application is justified in Section 4 of this document.

Non standard conditions (NSC)

Where the proposed activities require conditions outside the standard conditions suite DER will impose one or more non-standard conditions. These include both premises and sector specific conditions, and are likely to occur within few licences. Where used, justification for the application of these conditions will be included in Section 4.



2 Administrative summary

Administrative details		
Application type	Works Approval <input type="checkbox"/> New Licence <input checked="" type="checkbox"/> Licence amendment <input type="checkbox"/> Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	8	3 000 000 tonnes per annum
Application verified	Date: 25/06/2014	
Application fee paid	Date: 03/07/2014	
Works Approval has been complied with	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Compliance Certificate received	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	
Commercial-in-confidence claim	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Commercial-in-confidence claim outcome		
Is the proposal a Major Resource Project?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	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 <i>Environmental Protection Act 1986</i>)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Department of Water consulted Yes <input type="checkbox"/> No <input type="checkbox"/>
Is the Premises within an Environmental Protection Policy (EPP) Area Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes include details of which EPP(s) here.		
Is the Premises subject to any EPP requirements? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, include details here, eg Site is subject to SO ₂ requirements of Kwinana EPP.		



3 Executive summary of proposal and assessment

GMA Garnet Pty Ltd (previously Garnet Millers Australia Pty Ltd) constructed a dry processing, packaging and storage facility on the present site at 122 Goulds Road in 1983. The plant was set up to treat garnet sand concentrates supplied from the company's mine and wet processing facilities located near Port Gregory. The garnet sand product is supplied world-wide as an industrial abrasive for blast-cleaning and water-jet cutting. Garnet has largely replaced hazardous abrasives such as silica sand and smelter slags.

Since 1983, the facilities have progressively been expanded to treat in excess of 300,000 tonnes per annum of garnet concentrates. Most of the product is in the form of dried and graded natural garnet, supplied in bulk, bulk bags, paper sacks on pallets or paper sacks inside bulk bags. Ilmenite sand is produced as a by-product. Recovery of small quantities of zircon-rutile concentrate from dry plant tailings commenced late 2007.

The extraction of garnet and ilmenite products from the raw garnet concentrates and zircon-rutile concentrate requires only relatively simple processing and materials handling equipment. There are no chemicals or hazardous substances involved in the process (other than diesel fuel for a front-end loader). Dust emission levels are low due to garnet being a naturally hard, tough mineral and the fact that the feed concentrates are washed during processing at the mine site. Dust collectors are installed to collect any process dust emissions. Strategically placed water cannons are used to suppress dust in unsealed sections of the yard during windy summer periods.

Waste from the sand plant consists mostly of quartz and shell (calcium carbonate) sand which is removed as a non-magnetic fraction during processing and dust (predominantly calcium carbonate) from the plant's dust collectors, of relatively minor quantity. The combined waste is regularly trucked back to the mine site in bulk. At the mine site the waste is added to wet plant tailings for progressive back-filling of the mine pit.

The premises no longer operates the slime pits which have been closed in and revegetated. All wet processing occurs at the GMA Garnet, Port Gregory Mine Site.

The main emission from the premises is dust. Dust issues from windblown mineral sands stockpiles are regulated within the Licence under sections 1.2 and 2.6.

Currently washdown wastewater, from the washdown bay, flows into a grease trap with a pipe located 300mm from the top of the sump which runs to a soak well that drains to ground. In addition, stormwater contained within the diesel storage bunded area is drained to the immediate surrounds from the containment area. Approximately 20 cubic metres (m³) of hydrocarbon contaminated soil is remediated on site on an ongoing basis as required, from machinery and other spills.

The management of hydrocarbons at the premises from washdown bays, bunded areas and contaminated waste has been identified as an area for improvement and has been defined in sections 1.2, 1.3, 2.5, 3.5 and 4.1 of the Licence.

An Environmental Improvement Programme has been included to improve the hydrocarbon management at the premises.



4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. 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	OSC or NSC	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions	L1.2.3, L1.2.5, L1.3.1, L1.3.2, L1.3.3	OSC NSC	<p><u>Emission Description</u> <i>Emission:</i> Stormwater contaminated from washdown bays, hydrocarbon storage area and remediation pad and associated activities discharges to ground on a haphazard, consistent basis. <i>Impact:</i> Contamination of surrounding land and surface water drainage systems from the addition of hydrocarbon residues, sediments, oil and grease and heavy metals. <i>Controls:</i> Currently wastewater from the washdown bay flows into a grease trap with a pipe located 300mm from the top of the sump which runs to a soak well that drains to ground. Regular clearing/ maintenance of this sump is not in place. In addition, stormwater contained within the diesel storage bunded area is drained to the immediate surrounds from the containment area. At the remediation pad (direct to ground), approximately 20 cubic metres (m³) of hydrocarbon contaminated soil is remediated on site on an ongoing basis as required, from machinery and other spills.</p> <p>Recent testing (received 22/07/2014) has shown low levels of hydrocarbon contamination within the water discharged from the diesel storage bund area.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Moderate <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</p>



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			<p><u>Regulatory Controls</u> OSC 1.2.5 has been included to minimise the risk of stormwater being contaminated from activities on the site. OSC 1.2.3 (previous licence condition W3) , and NSC 1.3.2 (previous licence condition W7) have been included to identify the hydrocarbon storage areas within the premises and their management. OSC 1.3.1 has been included to outline containment requirements for potentially contaminated liquid wastes. NSC 1.3.3 has been included to ensure operation and management of the on-site remediation of contaminated soil is carried out adequately and is not discharged to ground.</p> <p>Previous licence condition W4 has not been included in the licence as the slimes pits have been filled in and revegetated. The premises no longer carries out wet processing.</p> <p>The site has had numerous uncontrolled discharges from the washdown bay, diesel storage bunded area and remediation pad. As the regulatory controls have not prevented discharges an improvement condition has been included in the licence requiring a stormwater management plan be developed. See section 4, Improvements, of this Table.</p> <p><u>Residual Risk</u> <i>Consequence</i>: Moderate <i>Likelihood</i>: Possible <i>Risk Rating</i>: Moderate</p>	
Emissions general	L2.1.1	OSC	This condition replaces condition G1(a) of the previous licence and requires that any exceedance of any descriptive or numerical target or limit in the licence is investigated.	
Point source emissions to	N/A	N/A	There are no point source emissions to air from the premises that require regulation through this section.	General provisions of the



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air including monitoring				<i>Environmental Protection Act 1986.</i> <i>Environmental Protection (Unauthorised Discharges) Regulations 2004.</i>
Point source emissions to surface water including monitoring	N/A	N/A	There are no point source emissions to surface water from the premises.	
Point source emissions to groundwater including monitoring	N/A	N/A	There are no point source emissions to groundwater from the premises.	
Emissions to land including monitoring	L2.5.1 and L2.5.2 L3.5.1	OSC NSC	<p>Currently washdown wastewater, from the washdown bay, flows into a grease trap with a pipe located 300mm from the top of the sump which runs to a soak well that drains to ground. In addition, stormwater contained within the diesel storage bunded area is drained to the immediate surrounds from the containment area. Hydrocarbon contaminated soil from machinery and other spills is remediated on site as required, on unlined, in-situ soils.</p> <p>Monitoring carried out on rainwater captured within the diesel storage bunded area showed low levels of Total Recoverable Hydrocarbon contamination (received 22/07/2014). Cumulative effects or extent of contamination to the surrounding soils at the premises have not been identified or assessed, at the remediation pad or diesel storage bunded area discharge point.</p>	<p>General provisions of the <i>Environmental Protection Act 1986.</i></p> <p>Contaminated Sites Management Series 'Assessment levels for soil,</p>



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			Improved management of hydrocarbon discharges at the premises is required.	<i>sediment and water guidelines v4.1, 2010</i> '.
Fugitive emissions	L2.6.1 - L2.6.2	OSC	Fugitive emissions have not been reassessed as part of this amendment. OSC 2.6.1 and 2.6.2 have been included to replace condition A1 and A2 of the previous licence.	General provisions of the <i>Environmental Protection Act 1986</i> .
Odour	N/A	N/A	Odour has not been reassessed as part of this amendment. As the previous licence did not impose controls on odour, no specified conditions have been included in this section. SC 1.2.1 applies.	General provisions of the <i>Environmental Protection Act 1986</i> .
Noise	N/A	N/A	Noise has not been reassessed as part of this amendment. As the previous licence did not impose controls on noise, no specified conditions have been included in this section. The <i>Environmental Protection (Noise) Regulations 1997</i> and SC 1.2.1 apply.	<i>Environmental Protection (Noise) Regulations 1997</i> General provisions of the <i>Environmental Protection Act 1986</i>
Monitoring general	N/A	N/A	There is no requirement for general monitoring conditions.	
Monitoring of inputs and outputs	N/A	N/A	Monitoring requirements have not been reassessed as part of this amendment. As the previous licence did not require monitoring of inputs and outputs no specified conditions have been included in this section.	
Process monitoring	N/A	N/A	Monitoring requirements have not been reassessed as part of this amendment. As the previous licence did not require process monitoring no specified	



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			conditions have been included in this section.	
Ambient quality monitoring	N/A	N/A	Monitoring requirements have not been reassessed as part of this amendment. As the previous licence did not require ambient quality monitoring no specified conditions have been included in this section.	
Meteorological monitoring	N/A	N/A	Monitoring requirements have not been reassessed as part of this amendment. As the previous licence did not require meteorological monitoring no specified conditions have been included in this section.	
Improvements	L4.1.1, 4.1.2	OSC	An improvement programme in OSC 4.1.1 and 4.1.2 has been defined in relation to hydrocarbon management at the premises from washdown bays, diesel storage bunded areas and remediation of contaminated soils. The previous licence did not address hydrocarbon storage or management.	General provisions of the <i>Environmental Protection Act 1986</i> .
Information	L5.1.1-5.1.4 L5.1.5 L5.2.1 L5.3.1	OSC NSC	SC 5.1.5-5.1.3 and 5.2.1 replace conditions G2 and G3 of the previous licence. SC 5.1.4 is an addition to the licence which has not previously included reporting on complaints for the premises. NSC 5.1.5 has been included from the current licence, condition W1(d). SC 5.3.1 replaces G1(a) of the previous licence.	
Licence Duration	N/A	N/A	The Licence is issued for a five year period. The premises is considered a low risk site with a minor history of non-compliance issues, and does not require stricter enforcement through the reduction of the reissue licencing period for assessment purposes.	



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
14/07/2014	Application advertised in West Australian (or other relevant newspaper)	Nil	N/A
23/07/2014	Proponent sent a copy of draft instrument	The draft document was submitted to the proponent (Wayne Dawson) on 23/07/2014 for comment. Comments were received back on 29 July 2014 with only one change requested relating to condition 5.2.1, submission timeframe.	Licence condition 5.2.1 has been changed from 28 to 56 calendar days after the end of the annual period.



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