Government of **Western Australia**
Department of **Environment and Conservation**

Your ref: L8681/2012/1
Our ref: 2012/006094
Enquiries: Garth Grimsley
Phone: (08) 9921 5955
Fax: (08) 9921 5713
Email: Garth.grimsley@dec.wa.gov.au

Ravensdown Fertiliser Co-operative Limited
Local Agent: Mr Alan Anthony Thomson
Locked Bag 10
NORTH FREMANTLE WA 6159

Attention: Mr Michael Till

Dear Mr Till

***ENVIRONMENTAL PROTECTION ACT 1986*: LICENCE GRANTED**

Premises
Geraldton Fertiliser Facility
Lot 12 on Plan 6087 Edward Road
MERU WA 6530
Licence Number: L8681/2012/1

A licence under the *Environmental Protection act 1986* (the Act) has been granted for the above premises. The Department of Environment and Conservation will advertise the issuing of this licence in the public notices section of *The West Australian* newspaper.

The licence includes attached conditions. Under Section 58(1) of the Act, it is an offence to contravene a condition of a licence. This offence carries a penalty of up to $125,000 and a daily penalty of up to $25,000

In accordance with section 102(1)(c) of the Act, you have 21 days to appeal the conditions of the licence. Under section 102(3)(a) of the Act, any other person may also appeal the conditions of the licence. To lodge an appeal contact the Office of the Appeals Convenor on 6467 5190 or by email at admin@appealsconvenor.wa.gov.au.

Where a licence is issued for more than one year it requires payment of an annual fee and will cease to have effect if the fee is unpaid. It is the occupier's responsibility to lodge a fee application and pay the annual fee in sufficient time to avoid incurring a late payment fee and for processing to be completed before the licence anniversary date.

If you have any queries regarding the above information, please contact Garth Grimsley on (08) 9921 5955.

Yours sincerely

Peter Skitmore
Officer delegated under Section 20
of the *Environmental Protection Act 1986*
enc: *Environmental Protection Act 1986* Licence L8681/2012/1, EAR

Government of **Western Australia**
Department of **Environment and Conservation**

LICENCE FOR PRESCRIBED PREMISES
Environmental Protection Act 1986

LICENCE NUMBER: L8681/2012/1 **FILE NUMBER: 2012/006094**

LICENSEE
Ravensdown Fertiliser Co-operative Limited
Local Agent: Mr Alan Anthony Thomson
2 Birksgate Road
NORTH FREMANTLE WA 6159

PREMISES
Geraldton Fertiliser Facility
Lot 12 on Plan 6087 Edward Rd
MERU WA 6530
(as depicted in Attachment 1)

PRESCRIBED PREMISES CATEGORY
Schedule 1 of the Environmental Protection Regulations 1987

CATEGORY NUMBER	CATEGORY DESCRIPTION	CATEGORY PRODUCTION OR DESIGN CAPACITY	PREMISES PRODUCTION OR DESIGN CAPACITY
33	Chemical blending or mixing: premises on which chemicals or chemical products are mixed, blended or packaged in a manner that causes or is likely to cause a discharge of waste into the environment.	500 tonnes or more per year	45,000 tonnes per year

CONDITIONS OF LICENCE
Subject to the conditions of licence set out in the attached pages.

Peter Skitmore
Officer delegated under Section 20
of the *Environmental Protection Act 1986*

ISSUE DATE Thursday, 20 December 2012
COMMENCEMENT DATE: Monday, 24 December 2012
EXPIRY DATE: Wednesday, 23 December 2017

DEFINITIONS

In these conditions of licence, unless inconsistent with the text or subject matter:

"AS 1940:2004" means the Australian Standard AS 1940:2004 – The Storage and Handling of Flammable and Combustible Liquids;

"AS/NZS 5667" means the most recent version and relevant parts of the Australian and New Zealand series of guidance standards on Water Quality Sampling;

"Director" means Director, Environmental Regulation Division of the Department of Environment and Conservation for and on behalf of the Chief Executive Officer as delegated under Section 20 of the *Environmental Protection Act 1986;*

"Director" for the purpose of correspondence means-

Regional Manager, Midwest Region
Department of Environment and Conservation
PO Box 72
Geraldton WA 6531
Telephone: (08) 9921 5955 Facsimile: (08) 9921 5713; and

"NATA" means the Australian National Association of Testing Authorities.

GENERAL CONDITIONS

DUST EMISSIONS

1 The licensee shall ensure that no visible dust generated onsite is discharged beyond the boundary of the premises.

2 The licensee shall ensure that, in the event of visible dust being discharged beyond the boundary of the premises, all operations (except for dust suppression operations) cease immediately.

WASTE MANAGEMENT

3 The licensee shall ensure that all fertiliser and chemical products that are spilt onto or gain access to areas outside of the shed on the premises are immediately recovered, or removed to prevent access to any portion of the environment.

GROUNDWATER ASSESSMENT

4 The licensee shall conduct a hydrogeological assessment, undertaken by a qualified and experienced hydrogeologist, and submit a Hydrogeological Assessment Report to the Director within six months of the commencement of this licence.

5 The Hydrogeological Assessment Report referred to in condition 4 shall include but not be limited to:

(i) details of the local setting in terms of topography, surface water drainage, the position of the premises in the landscape and the location of local users of groundwater resources;
(ii) details of the quality of groundwater down hydraulic gradient and up hydraulic gradient of the premises;
(iii) reporting on groundwater elevations which are relative to the Australian Height Datum (AHD), flow directions and seasonal variability within these parameters; and

(iv) recommendation of locations for monitoring bores to ensure that sampling is representative of potential impacts from the discharge to groundwater from the premises.

6 The licensee shall within six months of the commencement of this licence submit a Groundwater Monitoring Program to the Director based on the findings of the Hydrogeological Assessment Report required by condition 4.

7 The Groundwater Monitoring Program referred to in condition 6 shall include but not be limited to:

(i) the proposed locations for the monitoring bores and timeframe for installation of the monitoring bores;
(ii) the proposed parameters to be measured including but not limited to total petroleum hydrocarbons, total dissolved solids, total nitrogen, total phosphorus, copper, zinc and cobalt;
(iii) site specific intervention values for parameters that will trigger further groundwater management;
(iv) an outline of contingency actions, including procedures for the further assessment or remediation to be implemented in the event that intervention values are exceeded;
(v) proposed monitoring frequency and reporting mechanisms; and
(vi) proposed improvements to mitigate groundwater impacts.

8 The licensee shall ensure that all monitoring bores installed at the premises comply with the following:

(i) monitoring bores shall be constructed using similar construction materials in order to minimise sources of variation within data;
(ii) monitoring wells shall be screened across the groundwater interface;
(iii) drilling technique chosen shall minimise compaction or smearing of borehole walls and transport of geological formation materials into different zones;
(iv) drilling fluids used shall cause minimal impact on groundwater chemistry;
(v) drilling method, drilling fluids used and bore development details shall be recorded;
(vi) at least one groundwater monitoring bore shall be installed up hydraulic gradient from any potential contaminant sources;
(vii) the location of the up hydraulic gradient monitoring bores shall be located at a distance from the premises that is sufficient to enable the monitoring of background water quality;
(viii) the installation of at least one groundwater monitoring bore down hydraulic gradient of each soak well; and
(ix) the development of a quality assurance/quality control program and the establishment of acceptability criteria for data quality.

HYDROCARBON AND CHEMICAL STORAGE

9 The licensee shall only store Dangerous Goods below Placard Quantities and Environmentally Hazardous Materials not classified as Dangerous Goods including fuel, oil or other hydrocarbons (where the total volume of each substance stored on the premises exceeds 250 litres) if they are stored within:

(i) low permeability (10^{-9} m/s or less) bunded compounds designed to contain not less than 110% of the volume of the largest storage vessel or inter-connected system, and at least 25% of the total volume of vessels stored in the compound; or
(ii) double-walled tanks complying with AS 1940:2004.

10 The compounds described in condition 9 shall:
- (i) be graded or include a sump to allow recovery of liquid;
- (ii) be chemically resistant to the substances stored;
- (iii) include valves, pumps and meters associated with transfer operations wherever practical. Otherwise the equipment shall be adequately protected (e.g. bollards) and contained in an area designed to permit recovery of spilled chemicals;
- (iv) be designed such that jetting from any storage vessel or fitting will be captured within the bunded area [see for example AS1940-2004 Section 5.8.3 (h)]; and
- (v) be controlled such that the capacity of the bund is properly maintained (e.g. regular inspection and pumping of trapped uncontaminated rainwater).

11 The licensee shall immediately recover, or remove and dispose of, liquid resulting from spills or leaks of chemicals including fuel, oil or other hydrocarbons, whether inside or outside the low permeability compound(s) or double walled tank.

MONITORING CONDITIONS

13 The licensee shall take representative water samples from the monitoring site shown in column 1 Table 1 at the frequencies stated in column 2 Table 1, and have analysed for the parameters listed in column 3 Table 1.

Table 1: Water monitoring schedule

Column 1	Column 2	Column 3
Monitoring site	**Sampling Frequency**	**Parameters to be measured**
Within the premises drainage channels at a location closest to where drainage of each channel discharges water to the soak well.	Monthly and within 48 hours of a rainfall event that causes a discharge of stormwater to the environment from the monitoring site.	Chemical oxygen demand
		Total Phosphorus
		Total Nitrogen
		Cobalt
		Zinc
		Total Dissolved Solids
Within the soak wells.		Total Suspended Solids
		Total Petroleum Hydrocarbon
		Copper

14 The licensee shall ensure that all water samples required by condition 13 are collected, handled and preserved in accordance with AS/NZS 5667 and have analyses conducted by an organisation with current NATA accreditation for the specified parameters.

ENVIRONMENTAL IMPROVEMENT PLAN

15 The licensee shall submit an Environmental Improvement Plan to the Director for approval by 1 May 2013.

16 The licensee shall ensure that the Environmental Improvement Plan required by condition 15 includes:
- (i) detail on the installation of an dust collector system which will enable the extraction of fertiliser dust from the shed interior and enable activities such as unloading, loading, movement, tipping or blending of materials to occur with shed doors closed;
- (ii) details on the installation of a truck and equipment washdown facility and the management of wastes generated from this activity;
- (iii) details on the installation of an onsite stormwater retention system (capacity is expected to contain runoff from a 10 year ARI 24 hour storm event, however other suitable design criteria may be employed) ; and

(iv) the development of timelines for any proposed upgrades and works to the premises resulting from the above environmental improvement plan.

REPORTING CONDITIONS

ANNUAL ENVIRONMENTAL REPORT

17 The licensee shall by **April 30** each year, provide to the Director an Annual Environmental Report containing the monitoring results and data collected as a requirement of any condition of this licence during the period **1 January** the previous year and ending on **31 December** of that year.

ANNUAL AUDIT COMPLIANCE REPORT

18 The licensee shall **by April 30** in each year, provide to the Director an annual audit compliance report in the form in Attachment 2 to this licence, signed and certified in the manner required by Section C of the form, indicating the extent to which the licensee has complied with the conditions of this licence, and any previous licence issued under Part V of the Act for the Premises, during the period beginning **1 January** the previous year and ending on **31 December** of that year.

ATTACHMENT 1

LICENCE NUMBER: L8681/2012/1 **FILE NUMBER** 2012/006094

PLAN OF PREMISES

LEGEND

Cadastre
- Freehold
- Crown Reserve
- State Forest / Timber Reserve
- Marine Park
- Crown Lease
- Lease / Reserve
- Lease on State Forest / Timber Reserve
- Public Roads (cont)
- Unallocated Crown Land
- Water
- Local Government Authorities
- Road Centrelines
- Contaminated - Reported Sites (cont)
- Contaminated - remediation required
- Contaminated - restricted use
- Remediated for restricted use
- Possibly contaminated - investigation required
- Not contaminated - unrestricted use
- Decontaminated
- Report not substantiated
- Awaiting Classification

Geraldton Townsite 10cm Orthomosaic - Landgate 2007

N

0 ~62 m

Scale 1:2086
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

Prepared by: garthg
Prepared for:
Date: 22/10/2012 3:01:58 PM

Information derived from this map should be confirmed with the data custodian acknowleged by the agency acronym in the legend.

Department of Environment and Conservation

Our environment, our future

* Project Data. This data has not been quality assured. Please contact map author for details.

ISSUE DATE Thursday, 20 December 2012
COMMENCEMENT DATE: Monday, 24 December 2012
EXPIRY DATE: Saturday, 23 December 2017

LICENCE NUMBER: L8681/2012/1 **FILE NUMBER** 2012/006094

ANNUAL AUDIT COMPLIANCE REPORT

SECTION A
LICENCE DETAILS

Licence Number:	Licence File Number:
Company Name: Trading as:	ABN:
Reporting period: _____ to _____	

STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS

1. Were all conditions of licence complied with within the reporting period? (please tick the appropriate box)

Yes □ Please proceed to Section C
No □ Please proceed to Section B

Each page must be initialed by the person(s) who signs Section C of this annual audit compliance report

INITIAL:_____

LICENCE NUMBER: L8681/2012/1 **FILE NUMBER** 2012/006094

SECTION B - DETAILS OF NON-COMPLIANCE WITH LICENCE CONDITION.

Please use a separate page for each licence condition that was not complied with.

a) Licence condition not complied with?	
b) Date(s) when the non compliance occurred, if applicable?	
c) Was this non compliance reported to DEC?	
☐ Yes ☐ Reported to DEC verbally Date _____ ☐ Reported to DEC in writing Date _____	☐ No
d) Has DEC taken, or finalised any action in relation to the non compliance?	
e) Summary of particulars of non compliance, and what was the environmental impact?	
f) If relevant, the precise location where the non compliance occurred (attach map or diagram)	
g) Cause of non compliance	
h) Action taken or that will be taken to mitigate any adverse effects of the non compliance	
i) Action taken or that will be taken to prevent recurrence of the non compliance	

Each page must be initialed by the person(s) who signs Section C of this annual audit compliance report

INITIAL:_____

SECTION C - SIGNATURE AND CERTIFICATION

This Annual Audit Compliance Report may only be signed by a person(s) with legal authority to sign it. The ways in which the Annual Audit Compliance Report must be signed and certified, and the people who may sign the statement, are set out below.

Please tick the box next to the category that describes how this Annual Audit Compliance Report is being signed. If you are uncertain about who is entitled to sign or which category to tick, please contact the licensing officer for your premises.

If the licence holder is		The Annual Audit Compliance Report must be signed and certified:
an individual	☐	by the individual licence holder, or
	☐	by a person approved in writing by the Chief Executive Officer of the Department of Environment and Conservation to sign on the licensee's behalf.
A firm or other unincorporated company	☐	by the principal executive officer of the licensee; or
	☐	by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment and Conservation.
A corporation	☐	by affixing the common seal of the licensee in accordance with the Corporations Act 2001; or
	☐	by two directors of the licensee; or
	☐	by a director and a company secretary of the licensee, or
	☐	if the licensee is a proprietary company that has a sole director who is also the sole company secretary – by that director, or
	☐	by the principal executive officer of the licensee; or
	☐	by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment and Conservation.
A public authority (other than a local government)	☐	by the principal executive officer of the licensee; or
	☐	by a person with authority to sign on the licensee's behalf who is approved in writing by the Chief Executive Officer of the Department of Environment and Conservation.
a local government	☐	by the chief executive officer of the licensee; or
	☐	by affixing the seal of the local government.

It is an offence under section 112 of the *Environmental Protection Act 1986* for a person to give information on this form that to their knowledge is false or misleading in a material particular. There is a maximum penalty of $50,000 for an individual or body corporate.

I/We declare that the information in this annual audit compliance report is correct and not false or misleading in a material particular.

SIGNATURE: _____ SIGNATURE: _____

NAME: (printed) _____ NAME: (printed) _____

POSITION: _____ POSITION: _____

DATE: _____/_____/_____ DATE: _____/_____/_____

SEAL (if signing under seal)

ISSUE DATE Thursday, 20 December 2012
COMMENCEMENT DATE: Monday, 24 December 2012
EXPIRY DATE: Saturday, 23 December 2017

LICENCE NUMBER: L8681/2012/1
LICENCE FILE NUMBER: 2012/006094
APPLICATION DATE: 28 August 2012
EXPIRY DATE: 23 December 2017

PREMISES DETAILS

LICENSEE AND OCCUPIER
Ravensdown Fertiliser Co-operative Limited
Local Agent: Mr Alan Anthony Thomson
Level 2, 2 Birksgate Road
NORTH FREMANTLE WA 6159

PREMISES
Geraldton Fertiliser Facility
Lot 12 on Plan 6087 Edward Road
MERU WA 6530

PRESCRIBED PREMISES CATEGORY

Table 1: Prescribed premises category

Category number*	Category Description*	Category Production or Design Capacity*	Premises Production or Design Capacity#	Premises Fee Component **
33	Chemical blending or mixing: premises on which chemical products are mixed, blended or packaged in a manner that causes or is likely to cause a discharge of waste in the environment.	500 tonnes or more per year	45,000 tonnes per year	More than 10,000 but not more than 50,000 tonnes per year

* From Schedule 1 of the Environmental Protection Regulations 1987
\# From application
** From Schedule 4 of the Environmental Protection Regulations 1987

This Environmental Assessment Report (EAR) has been drafted for the purposes of detailing information on the management and mitigation of emissions and discharges from the prescribed premises. The objective of the EAR is to provide a risk assessment of emissions and discharges, and information on the management of other activities occurring onsite which are not related to the control of emissions and discharges from the prescribed premises activity. This does not restrict the Department of Environment and Conservation (DEC) to assessing only those emissions and discharges generated from the activities that cause the premises to become prescribed premises.

Basis of Assessment
The Geraldton Fertiliser Facility, which has been assessed as "prescribed premises" category number 33, under Schedule 1 of the Environmental Protection Regulations 1987.

Chemical blending or mixing: premises on which chemicals or chemical products are mixed, blended or packaged in a manner that causes or is likely to cause a discharge of waste into the environment.

The activities conducted at the Geraldton Fertiliser Facility include the blending of fertiliser products prior to dispatching. The nominated throughput of the shed is 31 500 tonnes (t) per year.

The design capacity is 45 000 tonnes per year. Current operations involve blending chemicals in an open shed with no dust extraction systems in place or mechanisms to remove fertiliser solids and dust from exiting trucks in wet weather. Fertiliser solids and dust are likely to be emitted beyond the premises boundary.

Ravensdown Fertiliser Co-Operative Limited (RFC) has been operating the Geraldton Fertiliser Facility since 1989. As the Geraldton Fertiliser Facility is currently operational and previously constructed, there are no works approvals associated with the site. However, should RFC decide to alter anything at the Geraldton Fertiliser Facility as outlined in section 53 of the *Environmental Protection Act 1986*, a works approval will be required.

1.0 BACKGROUND

1.1 GENERAL COMPANY DESCRIPTION

RFC is a New Zealand incorporated company which is registered in Australia as a foreign company and is authorised to carry out business as a co-operative in Western Australia under the *Co-operatives Act 2009*.

RFC is a supplier of agricultural products with operations in Australia and New Zealand. RFC provides fertiliser and chemical products to West Australian farmers. RFC also owns and operates fertiliser sheds located in Kwinana, Albany and Esperance, where fertiliser products are blended prior to dispatch.

1.2 LOCATION OF PREMISES

The Geraldton Fertiliser Facility premises boundary occupies approximately 24.3 hectares (243,000 m^2) on Lot 12 on Plan 6087 Edward Road, Meru. The Geraldton facility is approximately 10 kilometres (km) south-east of Geraldton.

The nearest sensitive receptors are located approximately 1 km north/north-east of the site in Narngulu as scattered residences. The nearest large sensitive receptor areas, being the suburbs of Wandina and Mount Tarcoola, are approximately 4 km west/south-west of the site.

The Geraldton area experiences a Mediterranean-type climate, characterised by warm to hot dry summers and mild wet winters. The mean annual rainfall is almost 460 millimetres (mm). June is the wettest month with three quarters of the total rainfall occurring between May and October. The driest months are December and January. Morning winds tend to be light with winds being southerly to easterly in summer and northerly to easterly in winter. South to south-westerly winds dominate in the afternoons year round with wind speeds up to 50 km/hour.

The nearest surface water body to the site is the Chapman River which is located approximately 2.5 km to the north-east. There are no 'Wetlands of Significance' in the surrounding area. Due to site elevations in the eastern corners, it is expected that natural surface water flows from east to west.

The facility is located in the Northern Perth Groundwater Basin. Below the site is the Tamala Limestone shallow aquifer. Groundwater in the area is generally brackish with Total Dissolved Solids at about 1900 mg/L.

1.3 PROCESS DESCRIPTION

RFC's Geraldton Fertiliser Facility receives bulk products for the purposes of blending or mixing into granulate material, and sells the product as blended fertiliser. The operation has a nominated throughput of 45,000 tonnes per annum (tpa).

Inputs

The Geraldton Fertiliser Facility receives the majority of its fertiliser via bulk deliveries at the Geraldton Port. Ships are unloaded at the port using grabs and hoppers and are trucked to the Geraldton Fertiliser Facility. The trucks unload their trailers in an enclosed shed into one of 16 bays, each of varying sizes for the different products which are dived with concrete walls. A front end loader is set up with a pusher bar to push the product into a larger stack. The truck is air blown, including the tailgate and tyres after the product has been emptied and before the truck leaves the shed to remove spilled material and avoid the transport of material beyond the Geraldton Fertiliser Facility.

The blending process can require the use of trace elements including zinc, copper, manganese and sulphur. These trace elements are transported to the site using curtain sided trailers and are stored in appropriate storage areas inside the shed. All trace elements are sent to RFC's Kwinana Facility initially and then distributed to regional sites. Trace elements can be blended into fertiliser products or sold individually. Humate may also be added on an order and product basis, although it must be supplied by the customer.

The Geraldton Fertiliser Facility also handles Agrochemicals (AgChem), which are classified as Dangerous Goods (DGs). All operations involving AgChem are conducted to industry standards. All DGs are stored within covered sheds with concrete floors, and walls or doors on all sides as well as concrete kerbing to minimise the potential for ingress of rainwater into the storage areas, as well as potential for generating contaminated stormwater from these areas. Solid DGs, such as sulphur, are stored in one tonne bulka-bags within a section of the main shed. The sulphur storage is enclosed by zincalume sheeting on one side and a brick wall on the other with the remaining two sides open. Liquid DGs such as AgChem and other chemicals (e.g. dust suppressants) are stored in 1000 L intermediate bulk containers (IBCs) or in plastic containers and drums (1 L, 5 L, 10 L, 20L or 110L). Figure 1 shows the layout of the site.

Diesel is stored on site in a self-bunded 2,000 L tank and is only used for refueling company vehicles. The area around the refueling station is concrete and any diesel spillage is immediately cleaned up using an absorbent material. Oil is stored in 210 L drums within a locked 20 foot sea container, and is used periodically as a lubricant for the blending machine.

Throughputs

The loading units are located inside the shed and consist of hoppers of various sizes with conveyors filling the trucks which are parked on a weighbridge. Loads vary from 12 to 60 tonnes and may consist of one straight product or a blend of products. Due to the nature of some products there is a conditioning hopper at the site which breaks up the lumps before being screened and placed in the truck.

The loading facility consists of one loading system with a maximum throughput of 150 tonnes per hour (t/h). The loading system will run out straight products or blends through the one system. The loading system consists of three main product hoppers and four trace element hoppers. The loading system uses a belt weighing unit in conjunction with a loss of mass system. This conveyor delivers the product into a sealed blending unit and from there it is conveyed into the truck situated on the weighbridge. The blending system has the capacity to load at 150 t/h.

The truck to be loaded is weighed and then parked under the loading point. Once all the bins have the required component loaded, the loading system is started and the product transferred into the truck. If the blend requires trace elements, smaller hoppers are filled which will meter the product out at the correct rate during loading. Some products require the application of a fungicide, which is sprayed onto the fertiliser at the time of loading. The fungicide is applied through a sealed blender. The blender sprays the liquid onto the fertiliser before the fertiliser is loaded on to trucks. A polymer is also applied to reduce dust issues.

In the event of any spillages during the blending process, the product can be easily cleaned up by sweeping the hardstand area within the shed. No liquid fertilisers are handled on site. All fertilisers handled on site fall under the description of granulated solid, crystalline solid or crystalline powder. The products are water soluble and all supply different nutrient bases.

Table 2 details the annual fertilizer quantities used for blending in the 2010/2011 financial year.

Fertiliser residue is removed from the trucks by blowing down the tailgate and rear tyres with an air compressor before the trucks leave the shed. This activity has the potential to generate dust emissions within the shed. This system is not effective if the truck is wet. There are no systems in place to clean trucks in wet weather. The covers of the trucks are replaced before the trucks exit the shed.

Fertiliser that accumulates on the floor from blowing or spills is swept and kept for sale as fertiliser sweepings. Lime sand is used to soak up any storm water that has collected on the shed floor during wet periods. This latter waste material is given away.

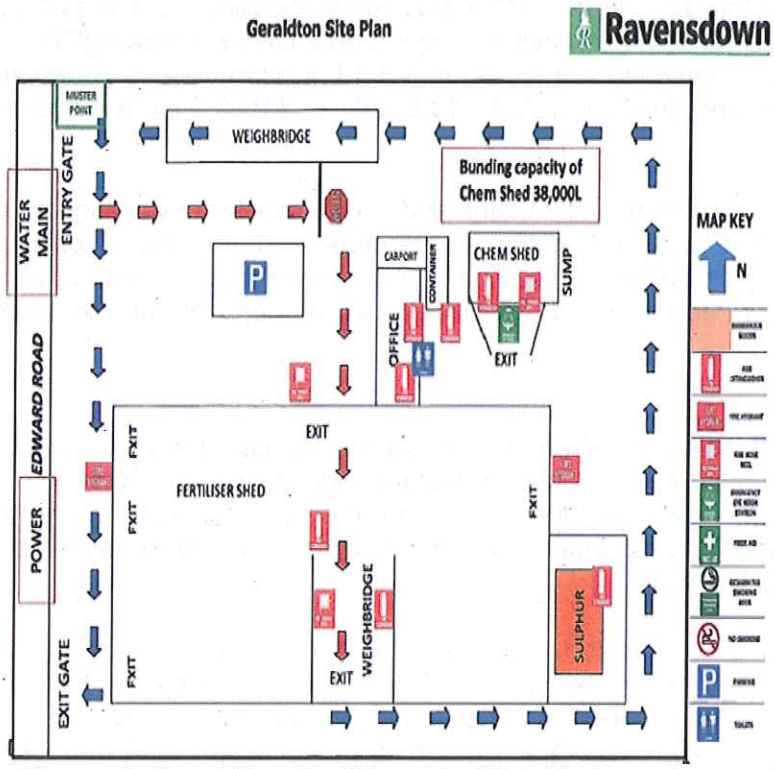

Figure 1. Geraldton Fertiliser Facility site layout

Table 2. Annual fertiliser quantities and throughput

Product	Throughput (FY 2010/11) (tpa)	Nominated Average Rate of Throughput (t/h)
Triple Superphosphate (TSP)	1069.7	150
Single Superphosphate (SSP)	3234.5	
Di-ammonium phosphate (DAP)	5494.1	
Di-ammonium phosphate with trace elements (DAP XTRA)	2449.0	
Mono-ammonium phosphate (MAP)	2556.4	
Mono-ammonium phosphate with trace elements (MAP XTRA)	920.7	
UNIMAP	1613.0	
Ravensdown NPKS	109.7	
K START XTRA	631.8	
Muriate of Potash (MOP)	1187.4	
Sulphate of Potash (SOP)	1070.9	
Urea - Granular	8245.4	
Sulam – Sulphate Of Ammonia	639.1	
Gransulam – Sulphate Of Ammonia	1524.3	
Sweepings	71.7	
Multimix	46.5	
Copper Oxy Sulphate 25% Cu	0.0	
Cu / Zn – Copper / Zinc 15 / 20%	6.7	
M_nSO_4 – Manganese Sulphate Granular	231.2	
Z_nSO_4 – Zinc Sulphate 33% Zn	2.7	
SUL – Sulphate Special 90%	319.3	
TOTAL	**31424.1**	

Waste Management

The site uses petrol-powered blowers to remove fertiliser remnants from transport trucks. The same process is used when vehicles are wet with the fertiliser dust then being swept up into a pile and sold as fertiliser sweepings. Site machinery such as front-end loaders, forklifts and bobcats are also blown down before being taken outside for washdown using water. Water that is contaminated with fertiliser is then directed via stormwater drains into a soak well on site. This allows for an unrestricted discharge of contaminated water to land and is not considered an appropriate method for disposal. Rainwater that falls on the hardstand areas of the Geraldton Shed is also directed to the soak well.

Ravensdown has committed to investigating more appropriate containment and disposal of contaminated wastewater. However, until such a time as this becomes possible, Ravensdown must cease the practice of allowing washdown water to be discharged to land.

1.4 REGULATORY CONTEXT

1.4.1 Part V Environmental Protection Act 1986, Environmental Management

The facility has been assessed as a "prescribed premises" under category 33 within Schedule 1 of the Environmental Protection Regulations 1987 and requires a licence to operate the facility.

In addition to the operation licence, it expected that the operation complies with the following guideline and regulations:

- Environmental Protection (Controlled Waste) Regulations 2004;
- Environmental Protection (Unauthorised Discharges) Regulations 2004;
- Environmental Protection (Clearing of Native Vegetation) Regulations 2004;
- Environmental Protection (Noise) Regulations 1997; and
- DEC Policy statement – Annual Audit Compliance Reports.

1.4.2 Other Decision-making Authorities' Legislation which applies

In accordance with the *Dangerous Goods Safety Act 2004* and Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007, RFC has acquired Dangerous Goods Licence: DGS021203 for the Geraldton Fertiliser Facility. Diesel storage will be in accordance with AS1940:2004.

1.4.3 Local Government Authority

The Geraldton Fertiliser Facility is located in the City of Greater Geraldton. The site is zoned as 'General Industry' under the City of Geraldton-Greenough Town Planning Scheme No.5. The City of Greater Geraldton has advised that the use has been granted approval.

2.0 STAKEHOLDER AND COMMUNITY CONSULTATION

SUBMISSIONS RECEIVED DURING 21 DAY PUBLIC COMMENT PERIOD

The Application for Licence details for this facility was advertised in the West Australian newspaper on 1 October 2012 as a means of advising stakeholders and to seek public comments. No submissions were received.

A letter was also sent to the City of Greater Geraldton notifying them of Ravensdown's licence application. The City of Greater Geraldton provided comment as follows:

- Disposal of wash down wastewater to land. The proponent has committed to ceasing the practice of washing down equipment with contaminated wash water entering the land through a soak and investigating more appropriate containment and disposal of contaminated wash water.
- Dust emissions during windy days. Dust emissions have been assessed in Table 3. A standard condition relating to the management of dust will be included on the licence including operations to cease (other than dust suppression operations) if dust is being discharged beyond the premises boundary.
- Odour management of stockpiles. Odour impacts are discussed in Table 3. Products stored on the premises are granular products with minimal odours. The proponent has committed to aerating stockpiles weekly in order to manage potential odour emissions.

A copy of the draft licence will be sent to the City of Greater Geraldton as an interested party for comment.

3.0 EMISSIONS AND DISCHARGES RISK ASSESSMENT

The DEC considers that conditions should focus on regulating emissions and discharges of significance. Where appropriate, emissions and discharges which are not significant should be managed and regulated by other legislative tools or management mechanisms.

The following section assesses the environmental risk of potential emissions from the Geraldton Fertiliser Facility. In order to determine the site's appropriate environmental regulation, an emissions and discharges risk assessment was conducted of the Geraldton Fertiliser Facility using the environmental risk matrix outlined in Appendix B. The results of this are summarised in Table 3.

Table 3: Risk assessment and regulatory response summary table

Risk factor	Significance of emissions	Socio-Political Context of Each Regulated Emission	Risk Assessment	DEC Regulation (EP Act - Part V)	EAR Reference	Other management (legislation,tools,agencies)
Air emissions (point source)	Not applicable – There are no point source air emissions associated with the operation of the facility.	N/A	N/A	N/A	N/A	General provisions in the *Environmental Protection Act 1986.* Environmental Protection (Unauthorised Discharges) Regulations 2004.
Dust emissions	**Emission significance of 3** Significant volumes of fertiliser dust is likely to be generated when unloading material into the Geraldton Facility and offloading blended product into trucks for sale and from dry blowing of residues from trucks and equipment. RFC has committed to the following measures to reduce the dust by: 1. Spraying a polymer dust suppressant onto the product during loading; 2. Use of a sealed blending unit; 3. Keeping the shed doors closed during unloading. There is currently no dust collector system to collect the fugitive dust inside the shed, therefore once the doors are reopened to allow trucks through, unsettled dust is able to enter the atmosphere. All internal roads are sealed. However, further dust emissions beyond the shed may be generated from truck movements with unremoved residue fertiliser leaving the trucks. Current techniques employed by RFC for managing fertiliser dust emanating from the shed and trucks leaving the site are inadequate at preventing dust from entering the environment.	Low. The nearest sensitive receptor is approximately 1 km away.	D – EIPs, other management mechanisms/ licence conditions	LIC– EIP and conditions to control dust emissions.	N/A	General provisions in the *Environmental Protection Act 1986.* *Occupational Safety and Health Act 1984.* Occupational Safety and Health Regulations 1996.

Risk factor	Significance of emissions	Socio-Political Context of Each Regulated Emission	Risk Assessment	DEC Regulation (EP Act - Part V)	EAR Reference	Other management (legislation,tools,agencies)
Odour emissions	**Emission significance of 1** No significant odour emissions are emitted. Humates are not stored on site and is only brought in by the consumer where it is blended with fertiliser products on the same day. No composting occurs on site. The proponent has committed to aerating the stockpiles in the shed in order to manage odour emissions.	Low. The nearest sensitive receptor is approximately 1 km away.	E – no regulation, other management mechanisms.	LIC– No conditions.	N/A	General provisions of the *Environmental Protection Act 1986.*
Noise emissions	**Emission significance of 2** Noise is likely to be emitted from use of machinery such as conveyors, blowers, front end loader movement and truck movement. Although normal operations occur during the day, some night works will be carried out as and when high volumes of customer orders require it. To date this facility has not had to operate after hours. Noise emissions from machinery will be minimised by routine servicing and maintenance. The use of the Geraldton Facility and associated equipment is intermittent and will be shut down between periods of use. Additionally shed doors are closed during operation of machinery, which further reduces the likelihood of noise leaving the Geraldton Facility. Therefore noise emissions are given a low risk rating.	Low. The nearest sensitive receptor is approximately 1 km away.	E – no regulation, other management mechanisms.	LIC– No conditions	N/A	Environmental Protection (Noise) Regulations 1997
Light emissions	**Emission significance of 1** Operation is conducted in business hours however this may extend into the night when product demand is high. Light emissions are not expected to be significant due to the location of the plant inside the shed and the distance to nearest sensitive receptor.	Low. The nearest sensitive receptor is approximately 1 km away.	E – no regulation, other management mechanisms.	LIC– No conditions.	N/A.	General provisions of the *Environmental Protection Act 1986.*
Discharges to water	**Emissions significance of 1** No direct discharges to surface water expected. Seepage to groundwater is assessed as a discharge to land.	Low. The nearest sensitive receptor is approximately 1 km away.	E – no regulation, other management mechanisms.	LIC– No conditions.	N/A	General provisions of the *Environmental Protection Act 1986.* Environmental Protection (Unauthorised Discharges) Regulation 2004.

Risk factor	Significance of emissions	Socio-Political Context of Each Regulated Emission	Risk Assessment	DEC Regulation (EP Act - Part V)	EAR Reference	Other management (legislation,tools,agencies)
Discharges to land	**Emissions significance of 3** Fertiliser that escapes from the shed in the form of dust or solids and lands within the premises boundary can be transported by stormwater to directly into two soaks. To prevent this from occurring, Ravensdown regularly sweeps the site to collect spilled material. However, some fertiliser material is likely to remain and be transported with stormwater and vehicle washdown water to the two soaks. From there contaminated stormwater is directly discharged to soils and able to seep through to groundwater. Current controls to minimise fertiliser from leaving the shed include: 1. polymer dust suppressant sprayed onto the fertiliser on the conveyor prior to being loaded onto the truck; and 2. a sealed blender. Further improvements are required to manage discharge of contaminants. These include: 1. reducing areas through which dust can escape from the shed interior; 2. a dust collector system which removes fugitive dust emissions from the shed interior; 3. construction of a stormwater retention system which captures all site stormwater; and 4. groundwater and stormwater monitoring to assess impact of controls.	Low. The nearest sensitive receptor is approximately 1 km away.	**D** – EIPs, other management mechanisms /licence conditions.	LIC – Ravensdown will be required to conduct a hydrogeological assessment and report on the findings. A groundwater monitoring program will be required, including the installation of monitoring bores. Ravensdown will also be required by the licence to regularly monitor water from drainage channels. An Environmental Improvement Plan for the management of dust and stormwater will need to be submitted under the licence.	N/A	General provisions of the *Environmental Protection Act 1986.* Environmental Protection (Unauthorised Discharges) Regulation 2004.
Solid / liquid wastes	**Emissions significance of 3** Waste produced at the site includes: 1. office and domestic waste; 2. spilt fertiliser product; 3. waste oil; and 4. wastewater. General waste is contained within a skip bin at the rear of the premises. All powdered/solid waste from within the shed is collected and sold as lower grade fertiliser, or if in a	Low. The nearest sensitive receptor is approximately 1 km away.	**D** – EIPs, other management mechanisms /licence conditions.	LIC – refer to hydrocarbon /chemical storage.	N/A	General provisions in the *Environmental Protection Act 1986.* Environmental Protection (Controlled Waste) Regulations 2004.

Risk factor	Significance of emissions	Socio-Political Context of Each Regulated Emission	Risk Assessment	DEC Regulation (EP Act - Part V)	EAR Reference	Other management (legislation,tools,agencies)
	mud form, given away. The wastewater generated from hosing the mobile machinery was discharged to a soakwell then to a sump on the premises. This practice is not considered adequate and the proponent has ceased the practice and will investigate options for better practices.					
Hydrocarbon/ chemical storage	**Emissions significance of 3** Table 2 lists the fertilisers stored on site. RFC hold a Dangerous Good licence for various substances including MAP (monoammonium phosphate) and DAP (diammonium phosphate). Oil is stored on site for use in the lubrication of the blending machine. Diesel is stored on site on a 2000L self bunded tank. Improvements required include: • bunding of all ICBs and oil drums; and • storage of any other substances (such as fungicide, humate and polymer) in accordance with DEC requirements and Australian Standards.	Low. The nearest sensitive receptor is approximately 1 km away.	D – EIPs, other management mechanisms /licence conditions.	LIC – condition requiring containment of hydrocarbons and chemicals.	N/A	General provisions of the *Environmental Protection Act 1986.* Environmental Protection (Unauthorised Discharges) Regulations 2004. Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007. *Occupational Safety and Health Act 1984.* Occupational Safety and Health Regulations 1996. Australian Standards 1940-2004 The Storage and Handling of Flammable and Combustible Liquids.
Native vegetation clearing	No clearing is required for the current operation or planned site improvements.	N/A	N/A	N/A	N/A	General provisions in the *Environmental Protection Act 1986.* Environmental Protection (Clearing of Native Vegetation) Regulation 2004.
Contaminated site identification	No contaminated sites are reported to exist within the proposed premises.	N/A	N/A	N/A	N/A	*Contaminated Sites Act 2003.*

4.0 GENERAL SUMMARY AND COMMENTS

The activities conducted at the Geraldton Fertiliser Facility include the receipt, storage and blending of bulk fertiliser products prior to dispatching. Other activities on site include the storage of diesel in a 2000 L self bunded tank and oil in 210 L drums. The nominated throughput of the shed is 31 500 tonnes per year. The design capacity is 45 000 tonnes per year.

The emissions and discharges associated with blending of fertilisers conducted at the shed has been assessed in Table 3 and is deemed to be of medium significance if managed as per the commitments outlined in the licence application. The main environmental concern associated with the operation of the shed is the emission of fertiliser solids and dust. It is recommended that conditions relating to containment of fertiliser solids and dust emissions and monitoring and reporting of the quality of the groundwater and stormwater to ensure the quality remains within the acceptable limits be included in the licence.

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APPENDIX B: EMISSIONS AND DISCHARGES RISK ASSESSMENT MATRIX

Table 4: Measures of Significance of Emissions

Emissions as a percentage of the relevant emission or ambient standard		Worst Case Operating Conditions (95th Percentile)			
		>100%	50 – 100%	20 – 50%	<20%*
Normal Operating Conditions (50th)	>100%	5	N/A	N/A	N/A
	50 – 100%	4	3	N/A	N/A
	20 – 50%	4	3	2	N/A
	<20%*	3	3	2	1

*For reliable technology, this figure could increase to 30%

Table 5: Socio-Political Context of Each Regulated Emission

		Relative proximity of the interested party with regards to the emission				
		Immediately Adjacent	Adjacent	Nearby	Distant	Isolated
Level of Community Interest or Concern*	5	High	High	Medium High	Medium	Low
	4	High	High	Medium High	Medium	Low
	3	Medium High	Medium High	Medium	Low	No
	2	Low	Low	Low	Low	No
	1	No	No	No	No	No

Note: These examples are not exclusive and professional judgement is needed to evaluate each specific case

*This is determined by DEC using the DEC "Officer's Guide to Emissions and Discharges Risk Assessment" May 2006.

Table 6: Emissions Risk Reduction Matrix

		Significance of Emissions				
		5	4	3	2	1
Socio-Political Context	High	A	A	B	C	D
	Medium High	A	A	B	C	D
	Medium	A	B	B	D	E
	Low	A	B	C	D	E
	No	B	C	D	E	E

PRIORITY MATRIX ACTION DESCRIPTORS
A = Do not allow (fix)
B = licence condition (setting limits + EMPs - short timeframes)(setting targets optional)
C = licence condition (setting targets + EMPs - longer timeframes)
D= EIPs, other management mechanisms/licence conditions (monitoring/reporting)/other regulatory tools
E = No regulation, other management mechanisms

Note: The above matrix is taken from the DEC "Officer's Guide to Emissions and Discharges Risk Assessment" May 2006.