



# Licence

## *Environmental Protection Act 1986, Part V*

**Licensee:** Shire of East Pilbara

**Licence:** L7059/1997/12

**Registered office:** Corner Kalgan & Newman Drives,  
NEWMAN WA 6753

**Premises address:** Newman Refuse Site  
Crown Reserve 44274,  
NEWMAN, WA, 6753  
Being Lot 129 on Plan 218264 as depicted in Schedule 1.

**Issue date:** Thursday 18 June 2015

**Commencement date:** Sunday, 28 June 2015

**Expiry date:** Monday, 27 June 2031

**Prescribed premises category**

Schedule 1 of the *Environmental Protection Regulations 1987*

Category number	Category description	Category production or design capacity	Approved Premises production or design capacity
61	Liquid waste facility: premises on which liquid produced on other premises (other than sewerage waste) is stored, reprocessed, treated or irrigated	100 tonnes or more per year	32,000 tonnes per annual period
62	Solid waste depot: premises on which waste is stored, or sorted pending final disposal or reuse	500 tonnes or more per year	12,000 tonnes per annual period
64	Class II or III putrescible landfill site: premises on which waste (as determined by reference to the waste type set out in the document entitled 'Landfill Waste Classification and Waste Definitions 1996' published by the Chief Executive Officer and as amended from time to time) is accepted for burial.	20 tonnes or more per year	50,000 tonnes per annual period

**Conditions**

This Licence is subject to the conditions set out in the attached pages.

Date signed: 8 July 2016

.....  
Steve Checker  
MANAGER LICENSING (WASTE INDUSTRIES)  
Officer delegated under section 20  
of the *Environmental Protection Act 1986*



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## Introduction

This Introduction is not part of the Licence conditions.

### **DER's industry licensing role**

The Department of Environment Regulation (DER) is a government department for the state of Western Australia in the portfolio of the Minister for Environment. DER's purpose is to advise on and implement strategies for a healthy environment for the benefit of all current and future Western Australians.

DER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DER regulates to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DER also monitors and audits compliance with works approvals and licence conditions, takes enforcement action as appropriate and develops and implements licensing and industry regulation policy.

### **Licence requirements**

This Licence is issued under Part V of the Act. Conditions contained within the Licence relate to the prevention, reduction or control of emissions and discharges to the environment and to the monitoring and reporting of them.

Where other statutory instruments impose obligations on the Premises/Licensee the intention is not to replicate them in the licence conditions. You should therefore ensure that you are aware of all your statutory obligations under the Act and any other statutory instrument. Legislation can be accessed through the State Law Publisher website using the following link:

<http://www.slp.wa.gov.au/legislation/statutes.nsf/default.html>

For your Premises relevant statutory instruments include but are not limited to obligations under the:

- *Environmental Protection (Unauthorised Discharges) Regulations 2004* – these Regulations make it an offence to discharge certain materials such as contaminated stormwater into the environment other than in the circumstances set out in the Regulations.
- *Environmental Protection (Controlled Waste) Regulations 2004* - these Regulations place obligations on you if you produce, accept, transport or dispose of controlled waste.
- *Environmental Protection (Noise) Regulations 1997* – these Regulations require noise emissions from the Premises to comply with the assigned noise levels set out in the Regulations.



You must comply with your licence. Non-compliance with your licence is an offence and strict penalties exist for those who do not comply.

Licence holders are also reminded of the requirements of section 53 of the Act which places restrictions on making certain changes to prescribed premises unless the changes are in accordance with a works approval, licence, closure notice or environmental protection notice.

#### **Licence fees**

If you have a licence that is issued for more than one year, you are required to pay an annual licence fee prior to the anniversary date of issue of your licence. Non payment of annual licence fees will result in your licence ceasing to have effect meaning that it will no longer be valid and you will need to apply for a new licence for your Premises.

#### **Ministerial conditions**

If your Premises has been assessed under Part IV of the Act you may have had conditions imposed by the Minister for Environment. You are required to comply with any conditions imposed by the Minister.

#### **Premises description and Licence summary**

The Shire of East Pilbara (the Shire) operate the unlined (Class II) Newman Landfill (the Landfill) located on Crown Reserve 44274, Newman. Newman is approximately 1186km north-east of Perth. The landfill is approximately 1.3km south of the Town of Newman; this is the nearest residential area. The Shire has operated the landfill since 1979 and contracts East Pilbara Recycling for the day to day management of the site. The landfill services the town population and surrounding mining camps; most of the waste received is construction and demolition (C&D) waste, municipal kerbside collected waste, and commercial & industrial wastes.

The site accepts:

- Inert Wastes Type 1;
- Inert Wastes Type 2;
- Putrescible Waste (including green waste);
- Special Wastes Type 1 (requires disposal by appointment to the Landfill)
- Special Wastes Type 2.
- Contaminated solid waste (requires meeting Class II landfill definitions and classification criteria)
- Liquid hazardous waste
- Liquid putrescible and organic wastes

Landfilling is undertaken in both trenches and above ground. Green waste is cured and burned under the direction of a Bushfire Control Officer. Some materials such as metals are stockpiled and removed on a campaign basis. Greater recycling will be undertaken in future with the proposed installation of a MRF on site.

A Liquid Waste Facility (LWF) also exists at the Landfill. The LWF accepts sewage, septage waste and grease trap waste from mining camps in the local area. Wastewater is treated in two anaerobic ponds, a facultative pond and a final aerobic pond, which has two aerators and lime dosed to assist in ammonia digestion which also assists with odour reduction. Treated Wastewater (TWW) is discharged via a pipeline to an unlined area of the landfill which is then left to evaporate and infiltrate.

Topography of the site is generally flat, surrounded by rocky hills on the east and west. Geological survey mapping indicates that the area forms part of the Hamersley Basin with medium to coarse grained metal-dolerite intruded into the Fortescue Group. The underlying geology as being part of the Jeerinah Formation: interbedded mudstone, siltstone and chert with minor-flesic tuff, dolomite and sandstone. The soil landscape zone for this area is described as having stony soils with red shallow loams and some red/brown non-cracking clay. Local soils at the landfill are described as Pindan.



There are no water courses in the area and any drainage would flow south. The landfill is surrounded by a Public Drinking Water Area to the north (P1 and P3) and east (P1). Depth to groundwater, as measured from monitoring bores on the Premises, varies between 11.5 to 6.1m below ground level (February 2015 results). Newman experiences an arid climate with a mean annual rainfall of 323 mm and a mean annual pan evaporation rate of approximately 3733 mm.

The main emissions from the landfill is potential odour from landfilling putrescible waste, processing of wastewater at the LWF and potentially landfill leachate coming into contact with stormwater and affecting local groundwater. There are no point source emissions to air, groundwater or surface water.

This licence amendment relates to consideration of findings from the May 2015 compliance audit, a review of the 2015 annual reporting, updating the licence to the latest licence format and for the operation of a Materials Recycling Facility (MRF). A risk assessment has been undertaken with the licence conversion for discharges to land, odour and fugitive emissions.

This Licence amendment has been initiated by DER as a result of the 2015 compliance audit and 2015 annual reporting submission. It also includes changes to the latest licence format. The licences and works approvals issued for the Premises since 17/06/2005 are:

Instrument log		
Instrument	Issued	Description
L7059/1997/5	05/07/2000	First Licence reissue recorded in the Industry Licensing System
L7059/1997/6	04/07/2001	Licence re-issue
L7059/1997/7	27/06/2002	Licence re-issue
L7059/1997/8	27/06/2003	Licence re-issue
L7059/1997/8	27/06/2004	Licence re-issue
L7059/1997/10	17/06/2005	Licence re-issue
L7059/1997/11	21/06/2007	Licence re-issue
L7059/1997/12	25/06/2010	Licence re-issue
L7059/1997/12	22/09/2011	Licence amendment
L7059/1997/12	25/06/2015	Licence amendment to extend expiry date for 12 months.
L7059/1997/12	29/04/2016	Licence amendment to extend expiry date to 2031.
L7059/1997/12	08/07/2016	Licence amendment to include category 62 and update format.

### Severance

It is the intent of these Licence conditions that they shall operate so that, if a condition or a part of a condition is beyond the power of this Licence to impose, or is otherwise *ultra vires* or invalid, that condition or part of a condition shall be severed and the remainder of these conditions shall nevertheless be valid to the extent that they are within the power of this Licence to impose and are not otherwise *ultra vires* or invalid.

**END OF INTRODUCTION**



## Licence conditions

### 1 General

#### 1.1 Interpretation

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

1.1.2 For the purposes of this Licence, unless the contrary intention appears:

**'Acceptance Criteria'** has the meaning defined in Landfill Definitions;

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

**'ACM'** means asbestos containing material and has the meaning defined in the Guidelines for Assessment, Remediation and Management of Asbestos Contaminated Sites, Western Australia, (DOH, 2009);

**'AHD'** means the Australian height datum;

**'annual period'** means the inclusive period from 1 January until 31 December in the same year;

**'AS/NZS 5667.1'** means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples*;

**'AS/NZS 5667.10'** means the Australian Standard AS/NZS 5667.10 *Water Quality – Sampling – Guidance on sampling of waste waters*;

**'AS/NZS 5667.11'** means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on sampling of groundwaters*;

**'averaging period'** means the time over which a limit is measured or a monitoring result is obtained;

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

**'CEO'** for the purpose of correspondence means;

Chief Executive Officer  
Department Administering the Environment Protection Act 1986  
Locked Bag 33  
CLOISTERS SQUARE WA 6850  
Email: [info@der.wa.gov.au](mailto:info@der.wa.gov.au);

**'clean fill'** has the meaning defined in Landfill Definitions;

**'contaminated solid waste'** has the meaning defined in Landfill Definitions;

**'Construction and Demolition Waste'** has the meaning defined in Landfill Definitions;

**'controlled waste'** has the definition in *Environmental Protection (Controlled Waste) Regulations 2004*;

**'cover material'** means subsoil or other approved inert waste used for covering of waste;



**'designated burning area'** means an area of a landfill site that has been designated by the occupier of the site as a designated burning area;

**'Fire Control Officer'** means a person who has such qualifications in fire fighting or fire control and is approved and appointed to that position by the occupier of the premises;

**'freeboard'** means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point;

**'green waste'** means waste that originates from flora and which does not contain or has not been treated or coated with, preserving agents, biocides, fire retardants, paint, adhesives or binders;

**'hardstand'** means a surface with a permeability of  $10^{-9}$  metres/second or less;

**'Hazardous Waste'** has the meaning defined in Landfill Definitions;

**'Inert Waste Type 1'** has the meaning defined in Landfill Definitions;

**'Inert Waste Type 2'** has the meaning defined in Landfill Definitions;

**'Landfill Definitions'** means the document titled "Landfill Waste Classification and Waste Definitions 1996" published by the Chief Executive Officer of the Department of Environment and as amended from time to time;

**'leachate'** means a liquid containing contaminants leached from the waste mass produced as water percolates through a landfill;

**'Licence'** means this Licence numbered L7059/1997/12 and issued under the Act;

**'Licensee'** means the person or organisation named as Licensee on page 1 of the Licence;

**'MRF'** means Materials Recycling Facility

**'NATA'** means the National Association of Testing Authorities, Australia;

**'NATA accredited'** means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;

**'normal operating conditions'** means any operation of a particular process (including abatement equipment) excluding start-up, shut-down and upset conditions, in relation to stack sampling or monitoring;

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

**'quarterly'** means the 4 inclusive periods from 1 April to 30 June, 1 July to 30 September, 1 October to 31 December and in the following year, 1 January to 31 March;

**'rehabilitation'** means the completion of the engineering of a landfill cell and includes capping / and or final cover;

**'Schedule 1'** means Schedule 1 of this Licence unless otherwise stated;

**'Schedule 2'** means Schedule 2 of this Licence unless otherwise stated;

**'six monthly'** means the 2 inclusive periods from 1 April to 30 September and 1 October to 31 March in the following year;



**'spot sample'** means a discrete sample representative at the time and place at which the sample is taken;

**'surface water body'** means a water course or wetland (as those terms are defined in the *Right in Water and Irrigation Act 1914*) and any other surface water, whether artificial or natural;

**'tipping area'** means the area of the Premises where waste currently being brought to the Premises is being deposited;

**'usual working day'** means 0800 – 1700 hours, Monday to Friday excluding public holidays in Western Australia;

**'waste'** has the meaning defined in the *Environmental Protection Act 1986*; and

**'Waste Code'** means the Waste Code assigned to a type of controlled waste for purposes of waste tracking and reporting as specified in the Department of Environment Regulation "Controlled Waste Category List" (July 2014), as amended from time to time.

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

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

## 1.2 Premises operation

1.2.1 The Licensee shall ensure that:

- (a) stormwater is directed away from the tipping area;
- (b) stormwater drains on the premises are kept clear of waste to allow for drainage; and
- (c) stormwater runoff resulting from site drainage is prevented from entering the wastewater treatment ponds or causing erosion of the outer pond embankments.

1.2.2 The Licensee shall only allow waste to be accepted on to the Premises if:

- (a) it is of a type listed in Table 1.2.1;
- (b) the quantity accepted is below any limit listed in Table 1.2.1; and
- (c) it meets any specification listed in Table 1.2.1.

Table 1.2.1: Waste acceptance			
Waste type	Waste Code	Quantity Limit	Specification <sup>1</sup>
Clean fill	N/A	N/A	None specified
Putrescible Waste (including green waste)	N/A	Combined total of up to 50,000 tonnes per year	None specified.
Inert Waste Type 1	N/A		None specified
Inert Waste Type 2	T140 (used tyres)		Tyres and plastic only
Special Waste Type 1	N220		Asbestos and asbestos cement products only. No fibrous asbestos shall be accepted.
Special Waste Type 2	R100		Biomedical/clinical waste which is radioactive must not be accepted <sup>2</sup> .
			The licensee or their representative must note in writing any discrepancies between waste declared and waste received.



Table 1.2.1: Waste acceptance			
Contaminated solid waste	N/A		Must meet the acceptance criteria for Class II landfills
Solid Hazardous Wastes	D221		Vehicle batteries. Drum Muster products. Drum Muster products must be triple rinsed prior to being accepted at the site
Liquid Hazardous Wastes	J100, F100, F120,		Limited to waste oil, paint and domestic chemicals.
Liquid Wastes (grease trap waste, sewage and septage)	K110, K130 and K210	Less than 32,000 tonnes per annual period	Tankered into the premises and discharged in the concrete lined receival pit.

Note 1: Additional requirements for the acceptance of controlled waste (including asbestos and tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

Note 2: Information relating to the classification of radioactive waste can be found in the *West Australian Radiation Safety Act 1975*.

1.2.3 The Licensee shall ensure that where waste does not meet the waste acceptance criteria set out in condition 1.2.2 of this Licence it is removed from the Premises by the delivery vehicle or, where that is not possible, the Licensee shall contact the CEO to agree a course of action in relation to the waste.

1.2.4 The Licensee shall ensure that wastes accepted onto the Premises are only subjected to the processes set out in Table 1.2.2 and in accordance with any process limits described in that Table.

Table 1.2.2: Waste processing		
Waste type	Process(es)	Process Limits <sup>1</sup>
All (excluding liquid wastes)	Disposal of waste by landfilling	<ul style="list-style-type: none"> <li>Shall only take place within the landfill area shown on the Landfill Infrastructure and Storage Area Map in Schedule 1.</li> <li>No waste shall be temporarily stored or landfilled within 35 metres from the boundary of the premises;</li> <li>Restrict the tipping area to a maximum linear length of 30 metres;</li> <li>Place waste within a defined trench or within an area enclosed by earthen or other bunds.</li> <li>Manage the active landfill area such that at no time does land filling result in an exposed face exceeding two (2) metres in vertical height.</li> <li>The separation distance between the base of the landfill and the highest groundwater level shall not be less than 3 m.</li> </ul>
Putrescible	Receipt, handling and storage prior to disposal	None specified.
	Disposal by burning	Only green waste is to be burnt on site. Green waste shall only be burnt if: <ul style="list-style-type: none"> <li>It has been dried and seasoned for at least 2 months before burning;</li> <li>it takes place in a designated burning area at least 25 m from the boundary of any</li> </ul>



Table 1.2.2: Waste processing		
Waste type	Process(es)	Process Limits <sup>1</sup>
		<p>active disposal areas as defined in the Landfill Infrastructure and Storage Area Map in Schedule 1;</p> <ul style="list-style-type: none"> <li>it takes place in trenches or windrows;</li> <li>a 6 m firebreak is established around the greenwaste pile prior to any burning;</li> <li>in a manner to minimise the generation of smoke;</li> <li>it takes place only when an adequate supply of water is available to effectively manage the burning process; and</li> <li>it is free of any contaminant.</li> </ul>
Clean fill	Receipt, handling and disposal by landfilling	None specified
Inert Waste Type 1	Receipt, handling, storage prior to removal offsite or disposal by landfilling	<p><u>Construction and demolition waste</u></p> <ul style="list-style-type: none"> <li>Crushing and screening of Inert Waste Type 1 is not permitted;</li> <li>Shall not be processed at the MRF; and</li> <li>Stored in an area delineated for this storage as defined in Landfill Infrastructure</li> </ul> <p><u>Scrap metal and other recyclables</u> Stored in an area delineated for recycling Construction and Demolition waste shall not be recycled.</p>
Inert Waste Type 2	Receipt, handling and disposal by landfilling	<p><u>Tyres<sup>2</sup></u></p> <ul style="list-style-type: none"> <li>Store less than 100 tyres above ground; and</li> <li>Only to be disposed of into a designated tyre cell within the landfill cell as shown on the Landfill Infrastructure and Storage Area Map in Schedule 1.</li> </ul>
Special Waste Type 1	Receipt, handling, storage prior to re-use or disposal by landfilling	<ul style="list-style-type: none"> <li>Only to be disposed of into a designated asbestos within the landfill cell as shown on the Landfill Infrastructure and Storage Area Map in Schedule 1;</li> <li>Not to be deposited within 2m of the final tipping surface of the landfill; and</li> <li>No works shall be carried out on the landfill that could lead to a release of asbestos fibres.</li> </ul>
Special Waste Type 2	Receipt, handling and disposal by landfilling	<ul style="list-style-type: none"> <li>Only to be disposed of into a designated biomedical waste within the landfill cell as shown on the Landfill Infrastructure and Storage Area Map in Schedule 1;</li> <li>Restrict access to parts of the premises where Special Waste Type 2 is buried by an authorised person;</li> <li>Not to be deposited within 2m of the final tipping surface of the landfill; and</li> <li>No works shall be carried out on the landfill that could lead to biomedical wastes being excavated or uncovered.</li> </ul>



Table 1.2.2: Waste processing		
Waste type	Process(es)	Process Limits <sup>1</sup>
Solid Hazardous Wastes	Receipt, handling and disposal by landfilling	<ul style="list-style-type: none"> <li>• DrumMuster products must be triple rinsed prior to acceptance on the premises; and</li> <li>• vehicle batteries must be stored in a fully enclosed bunded area/container.</li> </ul>
Liquid Hazardous Wastes	Receipt handling and storage prior to disposal offsite	<ul style="list-style-type: none"> <li>• Waste oil, paint, must be stored in a fully enclosed bunded area/container.</li> </ul>
Liquid waste (Septage waste, Sewerage waste, waste from grease traps)	Physical, biological and chemical (lime dosing) treatment	<ul style="list-style-type: none"> <li>• pH to be maintained at 6.5 to 9.</li> </ul>

Note 1: Additional requirements for the acceptance and landfilling of controlled waste (including asbestos and tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

Note 2: Requirements for landfilling tyres are set out in Part 6 of the *Environmental Protection Regulations 1987*.

- 1.2.5 The Licensee shall manage the landfilling activities to ensure:
- the size of the tipping face is kept to a minimum and not larger than 30m x 30m;
  - waste is levelled and compacted to ensure all faces are stable and capable of retaining rehabilitation material; and
  - rehabilitation of a cell or phase takes place within 6 months after disposal in that cell or phase has been completed.

- 1.2.6 The Licensee shall ensure that cover is applied and maintained on landfilled wastes in accordance with Table 1.2.3 and that sufficient stockpiles of cover material are maintained on site at all times.

Table 1.2.3: Cover requirements			
Waste Type	Material	Depth	Timescales
Inert Waste Type 1	No cover required		
Inert Waste Type 2	Inert Waste Type 1 or soil	100mm	As soon as practicable after deposit
Putrescible Wastes and Contaminated Solid Waste	Inert Waste Type 1 or soil	150mm	As soon as practicable and not later than the end of the working day
	Inert Waste Type 1 or soil	1,000mm	Within 3 months of achieving final waste contours
Special Waste Type 1	Soil or clean fill, or Dense, inert and non-combustible material	300mm	As soon as practicable after deposit and prior to compaction
		1,000mm	
Special Waste Type 2	Dense, inert and non-combustible waste or soil	1000mm	As soon as practicable after deposit

- 1.2.7 The Licensee shall ensure that waste material is only stored and/or treated within vessels or compounds provided with the infrastructure detailed in Table 1.2.4.



**Table 1.2.4: Containment infrastructure**

Vessel or compound	Material	Requirements
Receival pit	Wastewater	Concrete lined to achieve a permeability of no more than $10^{-9}$ m/s or equivalent
Anaerobic Pond 1	Wastewater	Clay lined to achieve a permeability of no more than $10^{-9}$ m/s or equivalent
Anaerobic Pond 2a	Wastewater	Clay lined to achieve a permeability of no more than $10^{-9}$ m/s or equivalent
Facultative Pond	Wastewater	Clay lined to achieve a permeability of no more than $10^{-9}$ m/s or equivalent
Aerobic Pond	Wastewater	Clay lined to achieve a permeability of no more than $10^{-9}$ m/s or equivalent.

- 1.2.8 The Licensee shall manage all wastewater treatment ponds such that:
- overtopping of the ponds does not occur;
  - the integrity of the containment infrastructure is maintained; and
  - vegetation and floating debris (emergent or otherwise) is prevented from encroaching onto pond surfaces or inner pond embankments.
- 1.2.9 The Licensee shall implement the following security measures at the site:
- ensure the Premises is manned at all times whilst open to the public;
  - maintain suitable fencing to prevent unauthorised access to the site;
  - ensure that any entrance gates to the premises are securely locked when the Premises are unattended; and
  - undertake regular inspections of all security measures and repair damage as soon as practicable.
- 1.2.10 The Licensee shall implement control measures to prevent infestations of pests, flies and vermin at the Premises.
- 1.2.11 The Licensee shall not allow windblown litter to escape from the Premises.
- 1.2.12 The Licensee shall collect any waste that has been washed or blown away from the tipping area and return it to the tipping area on a weekly basis.
- 1.2.13 The Licensee shall ensure that any unauthorised fires on the premises is extinguished as soon as possible.
- 1.2.14 The Licensee shall ensure that there are appropriate procedures in place at the premises so than any unauthorised fire is promptly extinguished.
- 1.2.15 The Licensee shall maintain a sign at the entrance to the Premises which clearly displays the following information:
- Hours of operation;
  - a contact telephone number for information and complaints or notification of fires;
  - a list of materials that are accepted at the Premises;
  - the types of waste that must not be deposited on the Premises and a contact telephone number for alternative disposal options; and
  - a warning, indicating penalties for people lighting fires.



## 2 Emissions

### 2.1 Emissions to land

2.1.1 The Licensee shall ensure that where waste is emitted to land from the emission points in Table 2.1.1 [and identified on the map of emission points in Schedule 1] it is done so in accordance with the conditions of this Licence.

Emission point	Emission point reference on Map of emission points	Description	Source including abatement
L1	Discharge from Aerobic Pond to unlined channel.	TWW discharge via pipe work to unlined area of the Landfill	TWW from LWF

## 3 Monitoring

### 3.1 General monitoring

3.1.1 The licensee shall ensure that:

- (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;
- (b) all wastewater sampling is conducted in accordance with AS/NZS 5667.10;
- (c) all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and
- (d) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured [unless indicated otherwise in the relevant table].

3.1.2 The Licensee shall ensure that:

- (a) quarterly monitoring is undertaken at least 45 days apart; and
- (b) six monthly monitoring is undertaken at least 5 months apart;

3.1.3 The Licensee shall ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer's specifications.

3.1.4 The Licensee shall, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.

### 3.2 Monitoring of emissions to land

3.2.1 The Licensee shall undertake the monitoring in Table 3.2.1 according to the specifications in that table.

Emission point reference	Monitoring point reference	Parameter	Units	Averaging Period	Frequency
L1	L1 (at discharge outlet)	Effluent flow rate	m <sup>3</sup> /day	Monthly	Continuous
		pH <sup>1</sup>	pH units		
		<i>E.coli</i> <sup>2</sup>	cfu/100 mL		
		Total Nitrogen	mg/L	Spot Sample	Quarterly
		Nitrate+Nitrite Nitrogen			
Ammonia Nitrogen					



**Table 3.2.1: Monitoring of emissions to land**

		Total Phosphorus			
		Total Dissolved Solids			
		Total Suspended Solids			
		Biochemical Oxygen Demand			

Note 1: infield non-NATA accredited analysis permitted.

Note 2: Actual units are to be reported except where the result is greater than the highest detectable level of 24,000 cfu/100mL. In this case the reporting of the highest detectable level is permitted.

### 3.3 Monitoring of inputs and outputs

3.3.1 Licensee shall undertake the monitoring in Table 3.3.1 according to the specifications in that table.

**Table 3.3.1: Monitoring of inputs and outputs**

Input/Output	Parameter	Units	Averaging period	Frequency
Waste Input	Clean Fill, Contaminated Solid Waste, Liquid Hazardous Waste, Solid Hazardous Wastes Inert Waste Type 1, Inert Waste Type 2, Putrescible Waste, Green Waste, Special Waste Type 1, Special Waste Type 2 and Liquid Waste	Tonnes	N/A	Each batch arriving at premises
Waste Output	Waste type as defined by the Landfill Waste Classification and Waste Definitions 1996 (As amended).			Each load rejected or removed from the Premises
Waste Output	TWW discharged from the LWF via pipe work to discharge location	m <sup>3</sup> /day	Monthly	Continuous

### 3.4 Ambient environmental quality monitoring

3.4.1 The Licensee shall undertake the monitoring in Table 3.4.1 according to the specifications in that table.

**Table 3.4.1: Monitoring of ambient groundwater quality**

Monitoring point reference and location	Parameter	Units	Averaging period	Frequency
MB1 – MB6	Standing water level <sup>1</sup>	m(AHD)	Spot sample	Six monthly
	pH <sup>1</sup>	pH Units		
	Electrical conductivity	µS/cm		
	Total Nitrogen	mg/L		
	Ammonium Nitrogen			
	Nitrate + Nitrite Nitrogen			
	Total Phosphorus			
	Filterable –Reactive Phosphorus			
Biochemical Oxygen Demand				

Note 1: infield non-NATA accredited analysis permitted.



## 4 Improvements

### 4.1 Improvement program

4.1.1 The Licensee shall complete the improvements in Table 4.1.1 by the date of completion in Table 4.1.1.

4.1.2 The Licensee, for improvements not specifically requiring a written submission, shall write to the CEO stating whether and how the Licensee is compliant with the improvement within one week of the completion date specified in Table 4.1.1.

<b>Table 4.1.1: Improvement program</b>		
<b>Improvement reference</b>	<b>Improvement</b>	<b>Date of completion</b>
IR1	The Licensee shall install a flow metre to measure cumulative volumes of TWW discharged from the Aerobic Pond to the unlined channel.	31/10/2016
IR2	The Licensee shall notify the CEO no later than 7 days upon the completion of IR1	05/11/2016
IR3	The Licensee shall submit to the CEO confirmation of the design of the Anaerobic Pond 1, Anaerobic Pond 2a, Facultative Pond and the Aerobic Pond used within the wastewater treatment plant process. This should include, but not limited to: <ul style="list-style-type: none"> <li>• Any currently available information identifying the liner type/ design and permeability for the ponds;</li> <li>• Date of last integrity testing carried out on each pond and results from the assessment; and</li> <li>• Identify avenues available (with indicative timeframes) to rectify any risks/ issues identified, including the potential risks associated with infiltration of treated and partially treated wastewater at the premises through pond infrastructure constructed with in-situ soils.</li> </ul>	05/12/2016

## 5 Information

### 5.1 Records

5.1.1 All information and records required by the Licence shall:

- (a) be legible;
- (b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
- (c) except for records listed in 5.1.1(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and
- (d) for those following records, be retained until the expiry of the Licence and any subsequent licence:
  - (i) off-site environmental effects; or
  - (ii) matters which affect the condition of the land or waters.

5.1.2 The Licensee shall ensure that:

- (a) any person left in charge of the Premises is aware of the conditions of the Licence and has access at all times to the Licence or copies thereof; and



- (b) any person who performs tasks on the Premises is informed of all of the conditions of the Licence that relate to the tasks which that person is performing.

5.1.3 The Licensee shall complete an Annual Audit Compliance Report indicating the extent to which the Licensee has complied with the conditions of the Licence, and any previous licence issued under Part V of the Act for the Premises for the previous annual period.

5.1.4 The Licensee shall implement a complaints management system that as a minimum records the number and details of complaints received concerning the environmental impact of the activities undertaken at the Premises and any action taken in response to the complaint.

5.1.5 The Licensee shall maintain a register of Special Waste Type 1 (asbestos waste) and Special Waste Type 2 (biomedical and clinical waste) disposed of at the Premises which shall include a plan showing the position of Special Waste Type 1 (asbestos waste) and Special Waste Type 2 (biomedical and clinical waste) disposed of at the Premises.

## 5.2 Reporting

5.2.1 The Licensee shall submit to the CEO an Annual Environmental Report for the previous annual period by 31 March each year. The report shall contain the information listed in Table 5.2.1 in the format or form specified in that table.

Condition or table (if relevant)	Parameter	Format or form <sup>1</sup>
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
Table 3.2.1	Monitoring of emissions to land	None specified
Table 3.3.1	Monitoring of inputs and outputs	None specified
Table 3.4.1	Monitoring of ambient groundwater quality	None specified
5.1.3	Compliance	Annual Audit Compliance Report (AACR)
5.1.4	Complaints summary	None specified

Note 1: Forms are in Schedule 2

5.2.2 The Licensee shall ensure that the Annual Environmental Report also contains: an assessment of the information contained within the report against previous monitoring results.

5.2.3 The Licensee shall submit the information in Table 5.2.2 to the CEO according to the specifications in that table.

Condition or table (if relevant)	Parameter	Reporting period	Reporting date (after end of the reporting period)	Format or form
1.2.2	Documentation that demonstrates acceptance criteria for Class II landfills	Not Applicable	Within 14 days of the CEO's request	None specified
-	Copies of original monitoring reports submitted to the Licensee by third parties	Not Applicable	Within 14 days of the CEO's request	As received by the Licensee from third parties



-	Copies of original monitoring reports submitted to the Licensee by third parties	Not Applicable	Within 14 days of the CEO's request	As received by the Licensee from third parties.
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### 5.3 Notification

5.3.1 The Licensee shall ensure that the parameters listed in Table 5.3.1 are notified to the CEO in accordance with the notification requirements of the table.

<b>Table 5.3.1: Notification requirements</b>			
<b>Condition or table (if relevant)</b>	<b>Parameter</b>	<b>Notification requirement<sup>1</sup></b>	<b>Format or form<sup>2</sup></b>
1.2.13	Unauthorised fire	Within 14 days of unauthorised fire: <ul style="list-style-type: none"> <li>• details of the date, time and location of the fire;</li> <li>• the time the fire was declared safe by the Fire Control Officer for the premises; and</li> <li>• the cause, or suspected cause, of the fire.</li> </ul>	ET1
-	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5pm of the next usual working day.  Part B: As soon as practicable	N1
-	Taking process equipment offline for maintenance works that may result in increased odour emissions	No less than 72 hours in advance of works	-
-	Removal of sewage sludge from a treatment pond or sewage sludge storage pond	No less than 14 days in advance of works	-

Note 1: Notification requirements in the Licence shall not negate the requirement to comply with s72 of the Act

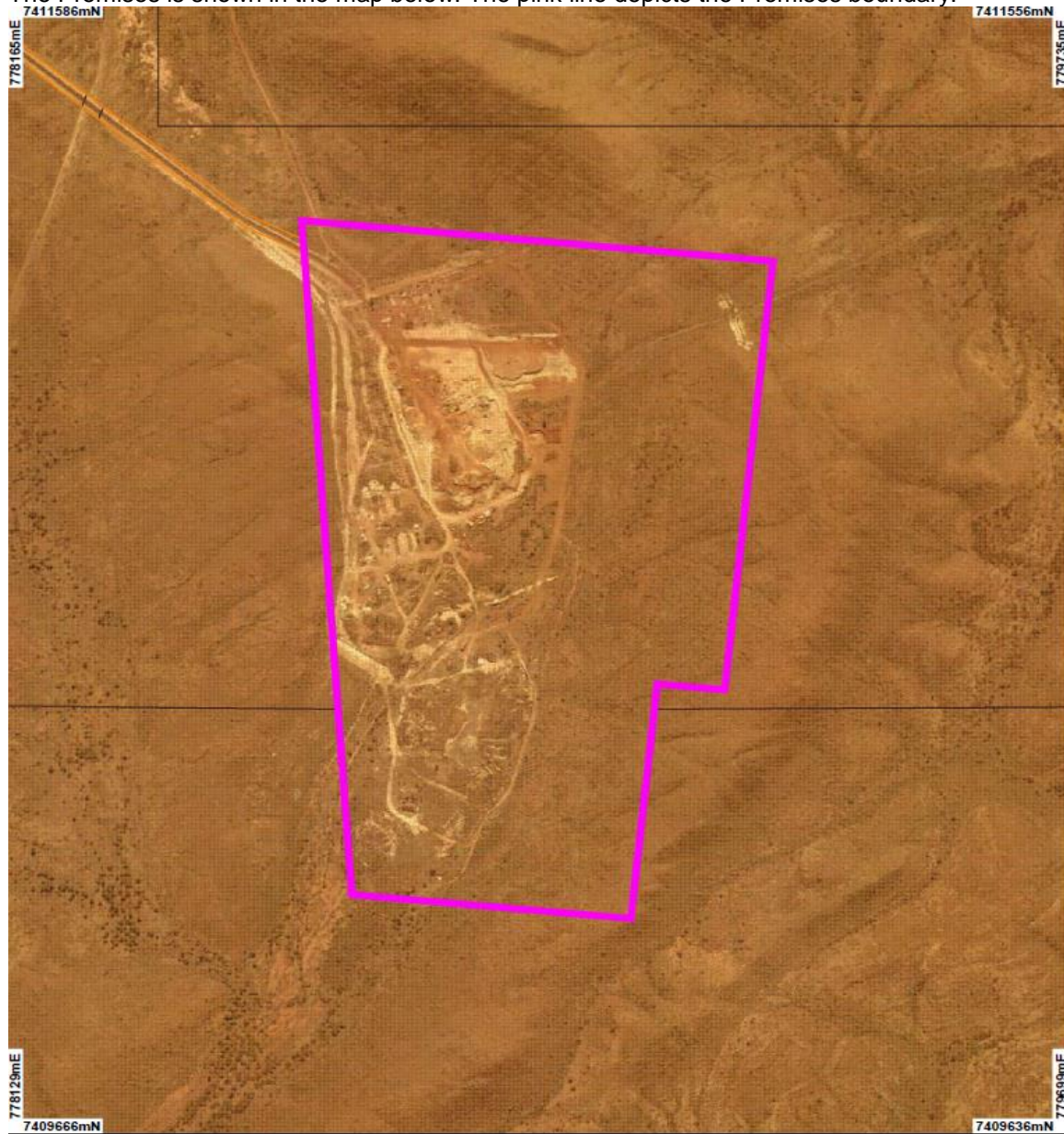
Note 2: Forms are in Schedule 2



# Schedule 1: Maps

## Premises map

The Premises is shown in the map below. The pink line depicts the Premises boundary.



<p><b>LEGEND</b></p> <ul style="list-style-type: none"> <li>□ Cadastre</li> <li>■ Local Government Authorities</li> </ul> <p><b>Hydrography, linear (hierarchy)</b></p> <ul style="list-style-type: none"> <li>Coastal Waterline</li> <li>Estuaries</li> <li>Infrastructure (cont)</li> </ul>	<ul style="list-style-type: none"> <li>Insignificant Trib</li> <li>Inundation Area</li> <li>Mainstream</li> <li>Major River</li> <li>Major Trib</li> <li>Minor River</li> <li>Minor Trib</li> <li>Paleo-Drainage Line</li> <li>Significant Stream</li> </ul>	<ul style="list-style-type: none"> <li>■ Town Planning scheme Zones</li> </ul> <p><b>Towns</b></p> <ul style="list-style-type: none"> <li>● A</li> <li>○ B</li> <li>• C</li> </ul> <p>Newman 1.4m Orthomosaic - Landgate 2003</p>	<p>Scale 1:8749 (Approximate when reproduced at A4)</p> <p>Geocentric Datum Australia 1994</p> <p>Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.</p> <p>Prepared by: Christophers Prepared for: Date: 29/05/2015 1:31:36 PM</p> <p>Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.</p> <p>Government of Western Australia Department of Environment Regulation WA Crown Copyright 2002</p>
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\* Project Data. This data has not been quality assured. Please contact map author for details.



### Map of emission points

The locations of the emission point defined in Table 2.1.1 is shown below. The locations of the monitoring points defined in Tables 3.2.1 and 3.4.1 is shown below.



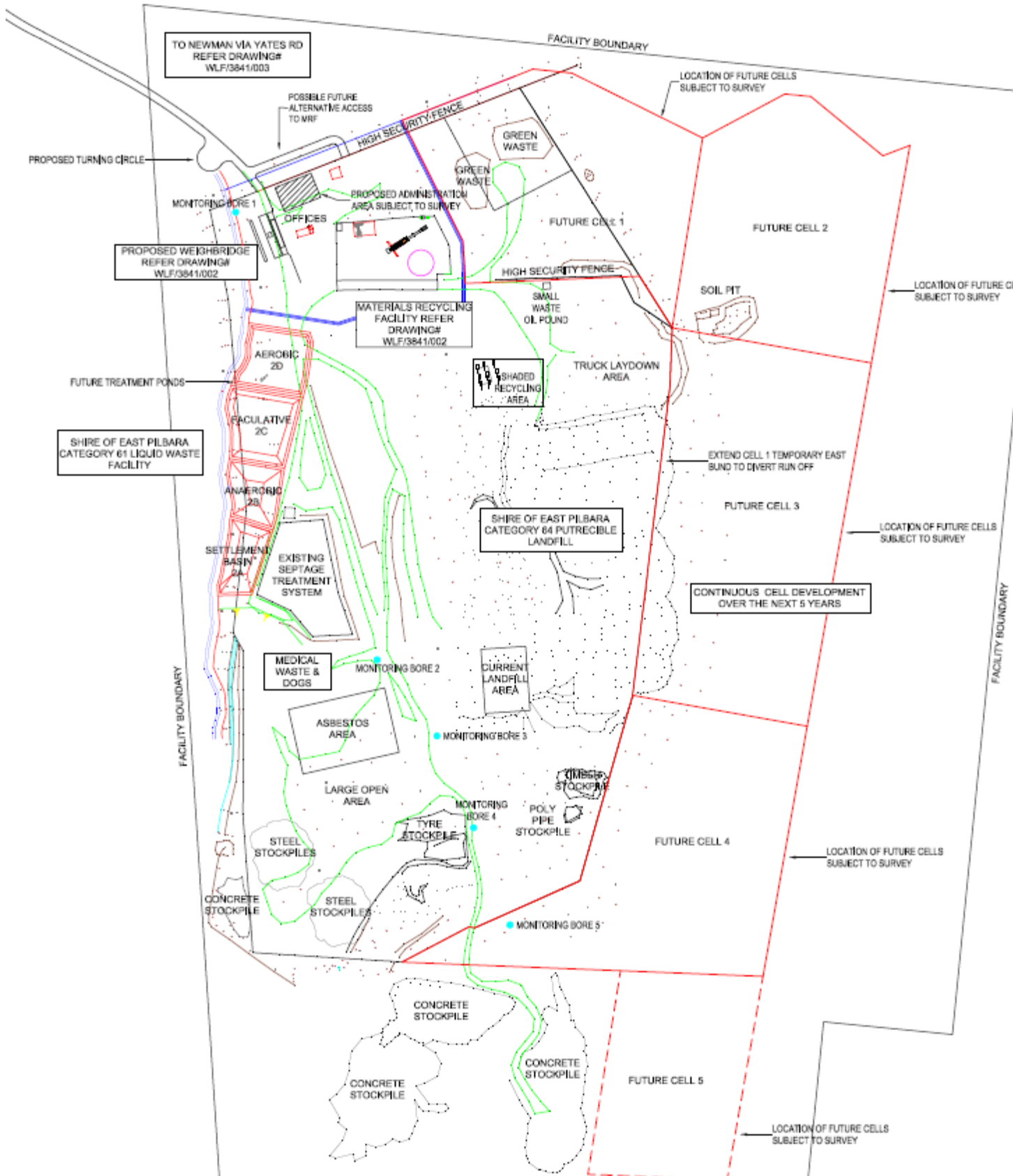


### Map of Material Recycling Facility





Map of Storage Locations





## Schedule 2: Reporting & notification forms

These forms are provided for the proponent to report monitoring and other data required by the Licence. They can be requested in an electronic format.

### ANNUAL AUDIT COMPLIANCE REPORT PROFORMA

#### SECTION A LICENCE DETAILS

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

#### STATEMENT OF COMPLIANCE WITH LICENCE CONDITIONS

1. Were all conditions of the 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 initialled by the person(s) who signs Section C of this Annual Audit Compliance Report (AACR).

Initial:





## SECTION C

### SIGNATURE AND CERTIFICATION

This Annual Audit Compliance Report (AACR) may only be signed by a person(s) with legal authority to sign it. The ways in which the AACR 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 AACR 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	<input type="checkbox"/> <input type="checkbox"/>	by the individual licence holder, or by a person approved in writing by the Chief Executive Officer of the Department of Environment Regulation to sign on the licensee's behalf.
A firm or other unincorporated company	<input type="checkbox"/> <input type="checkbox"/>	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 Regulation.
A corporation	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	by affixing the common seal of the licensee in accordance with the <i>Corporations Act 2001</i> ; 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 Regulation.
A public authority (other than a local government)	<input type="checkbox"/> <input type="checkbox"/>	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 Regulation.
a local government	<input type="checkbox"/> <input type="checkbox"/>	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)



Licence: L7059/1997/12  
 Form: N1

Licensee: Shire of East Pilbara  
 Date of breach:

**Notification of detection of the breach of a limit.**

These pages outline the information that the operator must provide.  
 Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

**Part A**

Licence Number	
Name of operator	
Location of Premises	
Time and date of the detection	

<b>Notification requirements for the breach of a limit</b>	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	



## Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	
The dates of any previous N1 notifications for the Premises in the preceding 24 months.	

Name	
Post	
Signature on behalf of Shire of East Pilbara	
Date	



# Decision Document

## *Environmental Protection Act 1986, Part V*

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**Proponent:** Shire of East Pilbara

**Licence:** L7059/1997/13

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**Registered office:** Corner Kalgan & Newman Drives,  
NEWMAN WA 6753

**Premises address:** Newman Refuse Site  
Reserve 44274, Lot 129,  
NEWMAN, WA, 6753  
Being Lot 129 on Plan 218264 as depicted in Schedule 1.

**Issue date:** Friday 25 June 2010

**Commencement date:** Monday, 28 June 2010

**Expiry date:** Monday, 27 June 2031

### **Decision**

Based on the assessment detailed in this document, a decision has been made to issue an amended Licence. It is considered that in reaching this decision, all relevant considerations have been taken into account.

Decision Document prepared by:

Chris Slavin  
Licensing Officer

Decision Document authorised by:

Steve Checker  
Manager Licensing



## Contents

Decision Document	1
Contents	2
1 Purpose of this Document	2
2 Administrative summary	3
3 Executive summary of proposal and assessment	4
4 Decision table	6
5 Advertisement and consultation table	16
6 Risk Assessment	17

### 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 <input type="checkbox"/> New Licence <input type="checkbox"/> Licence amendment <input checked="" type="checkbox"/> Works Approval amendment <input type="checkbox"/>								
Activities that cause the premises to become prescribed premises	<table border="1"> <thead> <tr> <th>Category number(s)</th> <th>Assessed design capacity</th> </tr> </thead> <tbody> <tr> <td>61</td> <td>32,000 tonnes per annual period</td> </tr> <tr> <td>62</td> <td>12,000 tonnes per annual period</td> </tr> <tr> <td>64</td> <td>50,000 tonnes per annual period</td> </tr> </tbody> </table>	Category number(s)	Assessed design capacity	61	32,000 tonnes per annual period	62	12,000 tonnes per annual period	64	50,000 tonnes per annual period
	Category number(s)	Assessed design capacity							
	61	32,000 tonnes per annual period							
	62	12,000 tonnes per annual period							
64	50,000 tonnes per annual period								
Application verified	Date: N/A								
Application fee paid	Date: N/A								
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	N/A								
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> ?	<table border="1"> <tr> <td>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></td> <td>           Referral decision No:            Managed under Part V <input type="checkbox"/>            Assessed under Part IV <input type="checkbox"/> </td> </tr> </table>	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"/>						
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?	<table border="1"> <tr> <td>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></td> <td>           Ministerial statement No:            EPA Report No:         </td> </tr> </table>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:						
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 checked="" 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 <sub>2</sub> requirements of Kwinana EPP.									



### 3 Executive summary of proposal and assessment

The Shire of East Pilbara (the Shire) operate the unlined (Class II) Newman Landfill (the Landfill) located on Crown Reserve 44274, Newman. Newman is approximately 1186km north-east of Perth. The landfill is approximately 1.3km south of the Town of Newman (the nearest residential receptor). The Shire has operated the landfill since 1979 and contracts East Pilbara Recycling for the day to day management of the site. The landfill services the town population and surrounding mining camps; most of the waste received is construction and demolition (C&D) waste, municipal kerbside collected waste, and commercial & industrial wastes.

The site accepts:

- Inert Wastes Type 1;
- Inert Wastes Type 2;
- Putrescible Waste (including green waste);
- Special Wastes Type 1 (requires disposal by appointment to the Landfill)
- Special Wastes Type 2.
- Contaminated solid waste (requires meeting Class II landfill definitions and classification criteria)
- Liquid hazardous waste
- Liquid putrescible and organic wastes

Landfilling is undertaken in both trenches and above ground. Green waste is cured and burned under the direction of a Bushfire Control Officer. Some materials such as metals are stockpiled and removed on a campaign basis. Greater recycling will be undertaken in future with the proposed installation of a MRF on site.

A Liquid Waste Facility (LWF) also exists at the Landfill. The LWF accepts sewage, septage waste and grease trap waste from mining camps in the local area. Wastewater is treated in two anaerobic ponds, a facultative pond and a final aerobic pond, which has two aerators and lime dosed to assist in ammonia digestion which also assists with odour reduction. Treated Wastewater (TWW) is discharged via a pipeline to an unlined area of the landfill which is then left to evaporate and infiltrate.

The Shire have also constructed a Materials Recycling Facility (MRF). The MRF is a prefabricated mechanical model where waste materials for separation are firstly deposited in concrete bays 2m high where the sides of the containment structure act as push walls for the loader to deliver waste to the MRF feed conveyor which is followed by screening and placement on a manual picking conveyor with recyclables being deposited below the conveyor in designated recycle bins. Once enough recovered recyclables have collected in the recycle receival bays below the materials will be collected by front end loader and placed on the feed conveyor located in the baler shed which feeds the baler. The bales are then stored in an adjacent recyclables shed prior to removal from the landfill site.

Topography of the site is generally flat, surrounded by rocky hills on the east and west. Geological survey mapping indicates that the area forms part of the Hamersley Basin with medium to coarse grained metal-dolerite intruded into the Fortescue Group. The underlying geology as being part of the Jeerinah Formation: interbedded mudstone, siltstone and chert with minor-felsic tuff, dolomite and sandstone. The soil landscape zone for this area is described as having stony soils with red shallow loams and some red/brown non-cracking clays. Local soils at the landfill are described as Pindan.

The MRF will operate separately from the landfill and initially will process the yellow bin recycle pick up from Newman residents. Future plans include additional separated recyclables to be accepted from mine sites and reprocessed and baled. The initial yellow bin supply is around 10 tonnes per week. Once all Newman residents are serviced by the recycle pick up this throughput will rise to 30 tonnes per week. Once this throughput has been achieved then other recyclable feed stock will be



sourced from the waste carriers up to a maximum around 40 tonnes per day. The MRF can operate at 4 tonnes per hour with a maximum output capacity of 12,000 tonnes per annual period. The Shire have outlined that the maximum capacity of the MRF is unlikely to be reached at the present time.

There are no water courses in the area and any drainage would flow south. The landfill is surrounded by a Public Drinking Water Area to the north (P1 and P3) and east (P1). Depth to groundwater, as measured from monitoring bores on the Premises, varies between 11.5 to 6.1m below ground level (mbgl) (February 2015 results). Newman experiences an arid climate with a mean annual rainfall of 323 mm and a mean annual pan evaporation rate of approximately 3733mm.

The main emissions from the landfill is potential odour from landfilling putrescible waste, processing of wastewater at the LWF and potentially landfill leachate coming into contact with stormwater and affecting local groundwater. There are no point source emissions to air, groundwater or surface water.

This licence amendment relates to consideration of findings from the May 2015 compliance audit, review of 2015 annual reporting, and updating the licence to the latest template format. A risk assessment has been undertaken with the licence conversion for discharges to land, odour and fugitive emissions.



## 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	Justification (including risk description & decision methodology where relevant)	Reference documents
Premises operation	L1.2.1 - L1.2.15	<p><u>Emission Description</u>  <i>Emission:</i> Stormwater contaminated with leachate from landfilling operations and stormwater contaminated with effluent from treatment ponds.  <i>Impact:</i> Contamination of surrounding land and surface water drainage systems. Potential impacts on ecology of surface water from addition nutrients and heavy metals. Groundwater at the landfill is between 6 -11.5 metres below ground level (mbgl).  <i>Controls:</i> The Shire directs stormwater away from active landfilling operations and the LWF by the use of drainage swales. The drainage swales are diverted to the centre of the Landfill and allowed to evaporate.</p> <p><u>Risk Assessment</u>  <i>Consequence:</i> Minor  <i>Likelihood:</i> Unlikely  <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u>            L1.2.1 has been added to the Licence, which replaces condition 11 of the previous Licence, to ensure all stormwater is prevented from being contaminated by activities onsite and that contaminated or potentially contaminated stormwater is retained onsite, or treated as necessary prior to being discharged from the Premises.</p> <p><u>Residual Risk</u></p>	<p>General provisions of the <i>Environmental Protection Act 1986</i></p> <p>Environmental Protection (Controlled waste) Regulations 2004</p> <p>Application supporting documentation</p> <p><i>Environmental Protection (Unauthorised Discharges) 2004</i></p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><i>Consequence:</i> Minor <i>Likelihood:</i> Rare <i>Risk Rating:</i> Low</p> <p><u>Emission Description</u> <i>Emission:</i> Operation of the landfill could impact surrounding soils surface water and groundwater from leaching of contaminants due to the decomposition of wastes accepted for disposal. There are also risks associated with fires, pests and vermin, unacceptable odours and windblown waste should waste types not be managed appropriately once accepted at the WMF. Hazardous wastes such as asbestos and biomedical waste will be accepted at the Landfill <i>Impact:</i> Contamination of surrounding land, surface water and groundwater drainage systems. Potential impacts on ecology of surface water from the addition of nutrients and heavy metals. Groundwater is located between 6 -11.5 (mbgl). While the landfill is outside the PDWA, groundwater is extracted at BHP's Mt Whaleback mine for potable water to service the Town of Newman from upstream of the landfill. <i>Controls:</i> These waste types require a range of management techniques to ensure risks to the public and the environment are adequately mitigated and will include management of the landfill to best practice standards. Contaminated solid waste accepted for disposal must comply with the "Landfill Waste Classification and Waste Definitions 1996 (As amended)" guideline.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Possible <i>Risk Rating:</i> Moderate</p> <p><u>Regulatory Controls</u></p>	



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>L1.2.2 has been added to the Licence, which replaces condition 1 of the previous Licence to ensure only specified waste is accepted at the Landfill. Special Waste Type 2 wastes have been better defined to exclude radioactive wastes (which need Department of Health approval).</p> <p>L1.2.3 has been added to the Licence to ensure that non confirming waste is stored appropriately and removed to an appropriately authorised facility as soon as practicable.</p> <p>L1.2.4 outlines the waste processing requirements, which replaces condition 2 (iv) and (vii), 3 (4 (i), (ii), (iii), and (vii), 10 (b), 12 and 13 (a) of the previous Licence to ensure only accepted waste is processed to reduce potential health impacts such as objectionable odour generation to persons not onsite and environmental impacts such as leachate. Requirements have also been included limiting the storage of tyres and disposal of tyres. Conditions of the previous licence that duplicated other legislative requirements have largely been removed. This includes the conveyance, supervision of burial and completion of registers for Special Waste Type 1 and 2; burning requirement of green waste, and landfilling of tyres. Construction and Demolition waste is not be processed at the MRF, due to potential asbestos fibres released into the atmosphere.</p> <p>L1.2.5 has been added to the Licence to ensure the tipping face of the landfill is kept to a manageable size to ensure its integrity for rehabilitation and ability to store waste in an acceptable manner.</p> <p>L1.2.6 has been added to the Licence, which replaces condition 2 (iii), 3 (iv), 4 (iv), (v), (vi) and (viii) of the previous Licence to ensure each waste type is appropriately covered to the depth required and within the timeframes specified to reduce potential health impacts such as release of asbestos fibres, odour generation, litter, vermin and feral control.</p> <p>L1.2.7 has been added to the Licence, which replaces condition 13 (b) and (c) of the</p>	



<b>DECISION TABLE</b>			
<b>Works Approval / Licence section</b>	<b>Condition number W = Works Approval L = Licence</b>	<b>Justification (including risk description &amp; decision methodology where relevant)</b>	<b>Reference documents</b>
		<p>previous Licence to ensure that wastewater is contained in infrastructure suitable to hold and treat wastewater, so to not cause unacceptable discharges or emissions to land.</p> <p>L1.2.8 has been added to the Licence to ensure all treatment ponds are maintained to reduce the risk of a discharge to the environment and the integrity of the ponds are maintained.</p> <p>L1.2.9 has been added to the Licence, which replaces condition 5 of the previous Licence to ensure appropriate security measures are in place at the Landfill to prevent unauthorised access to the Landfill.</p> <p>L1.2.10 has been added to the Licence to ensure measures are in place to prevent vermin and pests from entering at the Landfill. This condition now is standard for all putrescible landfills. Annual reporting previously required reporting on measures undertaken to control pests and vermin.</p> <p>L1.2.11 has been added to the Licence, which replaces condition 6 (a) of the previous Licence to ensure windblown waste does not leave the premises boundary.</p> <p>L1.2.12 has been added to the Licence, which replaces condition 6 (b) and (c) of the previous Licence to ensure all windblown waste is returned to the tipping face on a regular basis to prevent unnecessary littering.</p> <p>L1.2.13 and L1.2.14 have been added to the Licence, which replaces condition 10 (d) and 10 (c) respectively of the previous Licence to ensure unauthorised fires are managed so that they are extinguished and appropriate procedures are in place.</p> <p>L1.2.15 has been added to the Licence, which replaces condition 7 of the previous Licence to ensure there is signage at the entrance of the Landfill that clearly outlines hours of operation and the types of waste accepted, including alternative options and penalties for</p>	



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>illegal behaviour.</p> <p><u>Residual Risk</u>  <i>Consequence:</i> Minor  <i>Likelihood:</i> Unlikely  <i>Risk Rating:</i> Moderate</p>	
<b>Emissions to land including monitoring</b>	L2.1.1 L3.2.1	<p><u>Emission Description</u>  <i>Emission:</i> Discharge of treated waste water (TWW) from aerobic pond via pipeline to an unlined trench / channel within the Premises for evaporation/infiltration. No information is available on the volumes or quality of the TWW. The identification of the discharge was identified during the May 2015 compliance inspection.  <i>Impact:</i> Contamination of surrounding land, surface water and groundwater from excessive nutrients; this TWW will potentially impact landfill leachate generation and quality. Groundwater is located between 6-11.5 mbgl. While the landfill is outside the PDWA, groundwater is extracted at BHP's Mt Whaleback mine for potable water to service the Town of Newman from upstream of the landfill. Existing ambient groundwater monitoring bore testing has identified some elevations in nitrates suggesting some leachate migration in the vicinity of the discharge area.  <i>Controls:</i> The Shire will ensure that only TWW is discharged to the unlined area of the Landfill. TWW will only be discharged if freeboard on the ponds become compromised. All treatment ponds are clay lined to achieve a permeability of less than 10<sup>-9</sup> m/s. The Shire also undertake ambient groundwater monitoring, even though it has not previously been required as a Licence condition.</p> <p><u>Risk Assessment</u>  <i>Consequence:</i> Minor  <i>Likelihood:</i> Possible  <i>Risk Rating:</i> Moderate</p>	Proponent commitments



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><u>Regulatory Controls</u> L 2.1.1 has been added to the Licence to identify the discharge point of TWW into the infiltration / evaporation channel within the Premises.</p> <p>L 3.2.1 has been added to the Licence to ensure TWW is monitored on a quarterly basis</p> <p>L 3.3.1 has been added to the Licence to ensure the Shire monitors cumulative volumes of TWW discharged from the Aerobic Pond.</p> <p>Additional controls have been incorporated under 'Improvements' and 'Ambient Quality Monitoring' as detailed in the relevant sections below.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Minor <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Moderate</p>	
<b>Fugitive emissions</b>	L2.6.1	<p><u>Emission description</u></p> <p><i>Emission:</i> Fugitive dust may be generated by the vehicles and plant equipment on site as the roads are unsealed and the operation requires the regular covering of waste.</p> <p><i>Impact:</i> Impacts are expected to be insignificant given the remoteness of the operation. The landfill is located 1.2 km south of the Newman town site with no identified sensitive areas in the vicinity of the landfill</p> <p><i>Controls:</i> The Licensee controls dust by regularly wetting down trafficable areas.</p> <p><u>Risk Assessment</u></p>	<i>S.49 of the Environmental Protection Act 1986</i>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> Fugitive dust emissions are sufficiently regulated under section 49 of the <i>Environmental Protection Act 1986</i>. The Licensee has a statutory responsibility to comply with the Act during the operation of the premises.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Rare <i>Risk Rating:</i> Low</p>	
<b>Odour</b>	L2.7.1	<p><u>Emission description</u> <i>Emission:</i> Odour generated from handling and landfilling putrescible waste at the Landfill. Odour generated at LWF from processing raw wastewater.</p> <p><i>Impact:</i> Offensive odours emitted offsite. Nuisance for person's offsite. Limited impacts expected as the nearest sensitive receptor is a local residence is greater than 1.5 km away.</p> <p><i>Controls:</i> The Shire will ensure a daily cover of putrescible waste, which will reduce odour emissions. Two aerators are also placed in the Aerobic pond to reduce ammonia, which in turn also reduces odour.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p>	S.49 of the <i>Environmental Protection Act 1986</i>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><u>Regulatory Controls</u> Fugitive odour emissions are sufficiently regulated under section 49 of the Environmental Protection Act 1986. The Licensee has a statutory responsibility to comply with the Act during the operation of the premises.</p> <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p>	
<b>Noise</b>	N/A	<p>There will be no significant noise emissions during the operation of the Landfill. The Shire is required to comply with the <i>Environmental Protection (Noise) Regulations 1997</i>.</p> <p>No specified conditions relating to noise are required to be added to the Licence.</p>	<i>Environmental Protection (Noise) Regulations 1997</i>
<b>Monitoring general</b>	L3.1.1 – L3.1.5	<p>L3.1.1 has been added to the Licence for wastewater and groundwater sampling in accordance with AS/NZS standards and analysis by a NATA accredited laboratory.</p> <p>L3.1.2 has been added to the Licence so there is adequate time between sampling events.</p> <p>L3.1.3 has been added to the Licence as a requirement to record process parameters relevant to non-continuous monitoring.</p> <p>L3.1.4 and L3.1.5 have been added to the Licence to ensure monitoring equipment to be correctly calibrated.</p>	N/A
<b>Monitoring of inputs and outputs</b>	L3.3.1	L3.3.1 has been added to the Licence to ensure all waste coming into the Landfill is recorded and all waste leaving or is rejected from the Landfill is also recorded. This condition also requires the Shire to record all waste being discharged from the LWF to the unlined area of the Landfill.	N/A
<b>Ambient</b>	L3.4.1	See risk assessment under 'Emissions to Land' above.	



<b>DECISION TABLE</b>			
<b>Works Approval / Licence section</b>	<b>Condition number W = Works Approval L = Licence</b>	<b>Justification (including risk description &amp; decision methodology where relevant)</b>	<b>Reference documents</b>
<b>quality monitoring</b>		L3.4.1 has been added to the Licence to ensure the Shire monitors groundwater on a biannual basis. There are six groundwater monitoring bores at the Landfill. Previous Licences did not require groundwater monitoring. The Shire have conducted groundwater monitoring in the past.	N/A
<b>Improvements</b>	L4.1.1	See risk assessment under 'Emissions to Land' above.  Improvement condition IR1 has been included requiring the installation and testing of the TWW being discharged. Subsequently, IR2 has been added to the Licence to ensure DER is notified when the installation is completed.  Improvement condition IR3 has been added to the Licence to ensure the Shire can provide further information relating to the pond liner integrity and permeability of the treatment ponds at the LWF. The Shire will also need to identify any environmental issues with the current systems in place at the LWF and to outline what measures will be put in place to prevent partially treated wastewater leaking to groundwater.	N/A
<b>Information</b>	L5.1.5 L5.2.2 – L5.2.3 L5.3.1	L5.1.3 has been added to the Licence, which replaces condition 8 (c) of the previous Licence to ensure the Shire submits the Annual Audit Compliance Report (AACR) each year outlining compliance with the Licence during the reporting period.  L5.1.5 has been added to the Licence, which replaces part of conditions 2 and 3 of the previous Licence to ensure the Shire maintains a register of landfilled asbestos and biomedical waste. The register also contains an updated map of the burial locations.  L5.2.1 has been added to the Licence, which replaces condition 8 (b) of the previous Licence to ensure the Shire submits an Annual Environmental Report (AER) each year.  L5.2.2 has been added to the Licence to ensure the Annual Environmental Report contains an assessment of the information within the report against previous monitoring results such	N/A



<b>DECISION TABLE</b>			
<b>Works Approval / Licence section</b>	<b>Condition number W = Works Approval L = Licence</b>	<b>Justification (including risk description &amp; decision methodology where relevant)</b>	<b>Reference documents</b>
		<p>as groundwater monitoring.</p> <p>L5.2.3 has been added to the Licence, which requires the Shire to be able to provide DER documentation of accepting waste which meets the requirements of a Class II landfill and copies of original monitoring reports submitted to the Shire from third parties within 14 days of notification.</p> <p>L5.3.1 has been added to the Licence to ensure the Shire notifies DER of:</p> <ul style="list-style-type: none"><li>• An unauthorised fire (condition 10 (e) of the previous Licence);</li><li>• Breach of a limit in the Licence;</li><li>• Failure or malfunction of pollution control equipment which may or is causing pollution;</li><li>• Calibration report;</li><li>• Taking process equipment offline that may result in an emission; and</li><li>• Removal of sewage sludge from the LWF.</li></ul>	
<b>Licence Duration</b>	N/A	The duration of the licence was extended by amendment on 29/4/2016. No further amendment of this date proposed as part of this Licence amendment.	N/A



## 5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
27/05/2016	Proponent sent a copy of draft instrument	1. Shire outlined that the maximum capacity of the MRF is 12,000 tonnes per year	1. Licence and Decision Document updated with correct assessed capacity as requested.



## 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