



# Amendment Notice 1

**Licence Number** L8513/2010/2

**Licence Holder** Shire of Merredin

**File Number:** 2013/004002

**Premises** Merredin Chandler Road Landfill  
Merredin Chandler Road  
MERREDIN WA 6415

Legal description –  
Lot 500 on Plan 66111  
Certificate of Title Volume LR3159 Folio 164

**Prescribed Premises** Category 61: Liquid Waste Facility  
Category 62: Solid Waste Depot  
Category 64: Class II Putrescible Landfill

**Date of Amendment** 22/09/2017

## Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Licence in accordance with section 59 of the *Environmental Protection Act 1986*, as set out in this Amendment Notice. This Amendment Notice constitutes written notice of the amendment in accordance with section 59B(9) of the EP Act.

Date signed: 22 September 2017

**Alan Kietzmann**

**Manager Licensing (Waste)**

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA).

## Amendment Notice

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the Licence issued under the EP Act for a prescribed premises as set out below. This notice of amendment is given under section 59B(9) of the EP Act.

This notice is limited only to an amendment for Category 62. No changes to the aspects of the original licence relating to Category 61 or 64 have been requested by the Licence Holder.

The following guidance statements have informed the decision made on this amendment:

- *Guidance Statement: Regulatory Principles* (July 2015)
- *Guidance Statement: Setting Conditions* (October 2015)
- *Guidance Statement: Decision Making* (February 2017)
- *Guidance Statement: Risk Assessment* (February 2017)
- *Guidance Statement: Environmental Siting* (November 2016)

## Amendment description

The Shire of Merredin (the Licence Holder) operates the Merredin Chandler Road Landfill (the Premises) under Licence L8513/2010/2 which commenced on 8 February 2015. The Licence authorises the Premises to receive up to 200 tonnes of liquid waste (Category 61) and 2,000 tonnes of solid waste (Category 62) per annual period, and landfill up to 5,000 tonnes of Class II wastes (Category 64) per annual period.

This Amendment Notice is a Licence Holder initiated amendment. The Licence Holder submitted an amendment application to the Department of Water and Environmental Regulation (DWER) on 23 August 2017 requesting approval to allow the burning of green waste on the Premises.

Green waste is managed under Category 62 and was previously stockpiled, chipped and then taken away by the public for mulching. The Licence Holder cited the high cost of mulching the green waste to be the primary reason for the amendment request. This Amendment Notice only relates to the amendment of conditions to allow for the burning of green waste at the Premises.

The Licence Holder has proposed the following controls to support the amendment:

- Burning will only be conducted under authority of the Shire of Merredin's CEO.
- Notification will be given to the Chief Fire Control Officer of the Merredin volunteer fire brigade.
- Engagement of the Merredin volunteer fire brigade to monitor and control burn events.
- Burning will only be carried out during the permitted burning off period (roughly end March to start of September).
- 23,000 litres of water will be available in a trailer fitted with Department of Fire and Emergency Services standard fire-fighting equipment.
- Burning will occur outside the landfill opening hours.
- Burning will occur within a purpose made bunded pit.
- Consideration of weather conditions for suitability prior to a burning event.
- Notification to neighbouring farming properties of burning events times and to the wider community.

## Amendment history

Table 1 provides the amendment history for L8513/2010/2.

**Table 1: Licence amendments**

Instrument	Issued	Amendment
W4751/2010/1	21/10/2010	Works Approval to extend landfilling operations under previous registration R1399
L8513/2010/1	06/02/2011	New Licence
L8513/2010/2	08/02/2015	Licence re-issue
L8513/2010/2	12/11/2015	Licence amendment to increase capacity, remove groundwater monitoring and conversion to new format
L8513/2010/2	04/02/2015	Licence amendment to install and operate new animal burial pit
L8513/2010/2	22/09/2017	Amendment Notice 1 Allow the burning of green waste

## Location and receptors

The Premises is located approximately 3 km north of the town of Merredin. The Premises itself is situated on Chandler-Merredin Road, Lot 500 on Deposited Plan 66111. An updated Premises map is provided in Schedule 1.

The Premises has been identified as Possibly Contaminated – Further Investigation Required as a consequence on the landfilling activities.

The nearest resident is located approximately 2.3km WSW of the proposed burning area and 1.8km WSW from the Premises boundary.

## Wind direction and strength

The following wind roses (Figure 1) provide the annual wind direction and strength (km/h) for 9am and 3pm between the years 1966 and 2017, sourced from the Bureau of Meteorology. The prevailing winds in the region is predominantly north easterly to south easterly winds during the morning and a highly variable wind direction during the afternoon; winds from the south west, south east, north west and north east all accounting individually for over 15% of the wind direction recordings at 3pm.

It is important to note that these wind roses show historical wind speed and direction data for the Merredin (Site No: 010092) weather station and should not be used to predict future data.

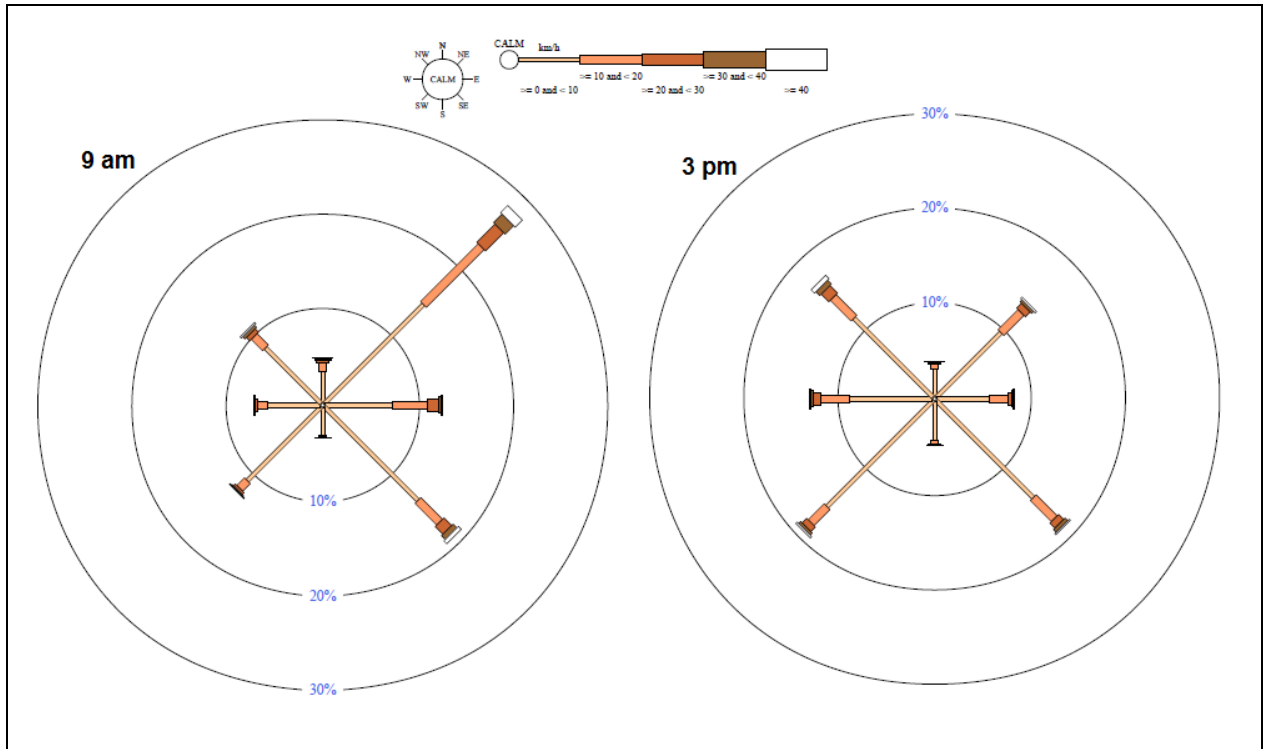


Figure 1: Wind roses for Merredin weather station (Site No: 010092).

### Soils type and depth to groundwater

The Premises is located on the Yilgarn Craton, which is characterised predominately by granite rock overlain by weathered clay soils. Soil testing on site has shown to be of low impermeability ( $1 \times 10^{-9} \text{m/s}$ ). The soils are largely clay pindan soils to a depth of approximately 18m, with hypersaline groundwater located at approximately 14 to 20m (electrical conductivity of approximately 2160mS/m) below ground level. The Licence Holder has estimated that groundwater flows from the north to the south west. The Licence Holder advised there are no domestic or industrial uses of groundwater within 2km of the premises, and the groundwater is highly saline in nature.

### Risk assessment

Table 2 below describes the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. The table identifies whether the emissions present a material risk to public health or the environment, requiring regulatory controls.

**Table 2: Risk assessment for proposed amendments during operation**

Risk Event					Consequence rating	Likelihood rating	Risk	Reasoning
Source/ Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts				
Cat 62 Solid Waste Depot	<b>Smoke and particulates:</b> Resulting from the burning of green waste	Residence 2.3km WSW of the Designated Green Waste Burning	Air – predominantly a NE to SE wind direction in the morning	Health and amenity impacts	Minor	Unlikely	Medium	Prevailing morning wind conditions are from a general easterly direction and will direct smoke and particulate emissions towards the nearest resident. Based on distance to the receptor, infrequent burning events (March to September), and controls proposed to be implemented by the Licence Holder.
	<b>Fire:</b> Spreading from containment area	Neighbouring rural properties and remnant bushland	Land and air	Public health, amenity and agriculture	Major	Rare	Medium	Based on premises siting, distance to receptors, and controls proposed to be implemented by the Licence Holder.
	<b>Leachate:</b> Resulting from fire water	Groundwater at depth of 14 – 20 metres below ground level	Seepage of leachate through largely clay pindan soils	Adverse impacts to the health and survival of vegetation dependent upon groundwater and/or water quality for extraction bores	Slight	Rare	Low	Based on premises siting, distance to receptors, low permeability soil characteristics, no domestic or industrial uses of groundwater within 2km of the premises, poor groundwater quality (highly saline), and controls proposed to be implemented by the Licence Holder.

## Decision

### Smoke and particulate controls

The Delegated Officer considers that there is a medium risk of impacts resulting from smoke and particulate emissions from the proposed amendment. A relatively small amount of green waste is received at the Premises (approximately 400 tonnes annually) which will result in infrequent burning requirements (the Licence Holder has predicted biannual burning events). The nearest resident is located approximately 2.3km from the proposed burning area, however is located in the same direction as the prevailing morning wind conditions. It is possible that minor impacts to the resident's amenity may occur during burning events. Therefore this risk is considered acceptable subject to some regulatory controls to minimise the risk of smoke and particulate emissions impacting potential receptors. These controls align with the Licence Holder's proposed controls, including the drying of green waste, limiting the burn time and supervision of the burning event by a suitably qualified person. The Licensee will be required to manage the burn event such that smoke and particulate emissions are minimised.

The Licensee will also be subject to the general provisions of the EP Act.

### Fire controls

The Delegated Officer considers that there is a medium risk of impacts resulting from an uncontrolled fire. The likelihood for the fire to spread out of control is rare but could result in a high impact to amenity and impacts to both on-site and offsite environment.

The Delegated Officer has determined that additional controls will be required to further minimise the risk of fire impacting potential receptors. Regulatory controls have been added to reduce the risk of a burning event spreading out of control. Some of these controls align with the Licence Holder's proposed controls, including the presence of suitably qualified persons during a burn event; an adequate water supply; and availability of fire-fighting equipment.

Consideration has also been made to the Department of Fire and Emergency Services Information Note 'Bulk Green Waste Storage Fires' (September 2014) to include regulatory controls that limit the maximum size of green waste piles, distances between piles and the requirement to aerate the green waste pile if temperatures are above 70°C.

The Licence Holder will also be subject to the general provisions of the EP Act.

### Leachate controls

The Delegated Officer considers that there is a low risk of impacts from leachate emissions from the proposed amendment. Potentially contaminated fire-fighting water leaching to ground water is considered to be low risk due to ground water depth being 14 metres, the site consisting of high clay pindan soils and the being no ground water users near the landfill due to the groundwater's low quality (hyper saline).

Therefore this risk is considered acceptable and will generally not be subject to regulatory controls.

The Delegated Officer has determined that to minimise the likelihood of impacts, the Licence Holder's proposed controls will be added to the licence, requiring the burning area to be bunded and constructed with clay soils to reduce permeability and leachate runoff.

The Licence Holder will also be subject to the general provisions of the EP Act.

## Administrative amendments

The Delegated Officer has determined that a number of definitions and references are required to be updated due to the above amendments, and to reflect the change of Department name.

## Licence Holder's comments

The Licensee was provided with the draft Amendment Notice on 20 September 2017. The Licensee responded on 22 September 2017 waiving the consultation period without further comment.

## Amendment

1. Definitions of the Licence is amended by the insertion of the text shown in red underline below:

*'CEO' means Chief Executive Officer of the Department of ~~Environment Regulation~~ Water and Environmental Regulation.*

*'Fire Control Officer' means a person appointed under the Bush Fires Act 1954.*

*'Designated green waste burning area' means an area of the landfill site designated by the Licensee for the burning of green waste, which is at least 50m from the premises boundary and a 20m radius from any flammable material other than green waste or live trees, and is not positioned on an area of the site where waste (other than green waste) has been deposited.*

2. Condition 1.2.3 of the Licence is amended by the deletion of the text shown in strikethrough below and the insertion of the text shown in red underline below:

*1.2.3 ~~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.~~*

<b>Waste type</b>	<b>Process(es)</b>	<b>Process limits<sup>1,2</sup></b>
All solid waste (excluding hazardous waste)	Disposal of waste by landfilling	<ul style="list-style-type: none"><li><del>No</del></li><li>Wastes shall be disposed of in a defined trench and within an area enclosed by earthen bunds</li><li>No waste shall be temporarily stored or landfilled within 15 metres from the boundary of the premises.</li><li>The separation distance between the base of the landfill and the highest groundwater level shall not be less than 3m.</li><li>The separation distance between any existing or new tipping areas and any naturally occurring surface water body shall not be less than 100 metres.</li></ul>

**Table 1.2.2: Waste processing**

Waste type	Process(es)	Process limits <sup>1,2</sup>
Green waste	Receipt, handling, associated storage prior to removal offsite	<ul style="list-style-type: none"> <li>• No more than 1000m<sup>3</sup> stored at any one time</li> <li>• Stored in piles of up to 4m in height with a 6m fire break between piles</li> <li>• All mulched green waste shall be stored in windrows</li> <li>• Windrows with an internal temperature exceeding 80 degrees Celsius shall be turned/mixed, or otherwise treated to reduce the temperature.</li> <li>• Windrows are to be maintained as parallel rows no more than 3 metres high or 4 metres wide and separated by at least 5 metres of clear ground from any other row.</li> </ul> <p><u>Where burning is proposed, the following will apply:</u></p> <ul style="list-style-type: none"> <li>• <u>Green waste is to be dried and seasoned for at least two months prior to burning</u></li> <li>• <u>Burning to take place in the Designated Green Waste Burning Area</u></li> <li>• <u>Is undertaken in a manner to minimise the generation of smoke</u></li> <li>• <u>Ensure that from the time burning commences until the Fire Control Officer for the Premises declares the area safe, that:</u> <ol style="list-style-type: none"> <li>i. <u>A fire fighting vehicle is present carrying an adequate amount of water to control the fire and fitted with appropriate fire fighting equipment capable of delivering a minimum of 250 litres of water per minute at a minimum of 700kPA through a nozzle capable of projecting water by spray or by jet; and</u></li> <li>ii. <u>Persons are present who have such qualifications in fire fighting as are approved</u></li> </ol> </li> </ul>
Hazardous Wastes		<ul style="list-style-type: none"> <li>• Directed to a quarantined storage area or container</li> <li>• The licensee shall immediately recover or remove and dispose of spills of hazardous wastes outside of a quarantined storage area or container.</li> </ul>
Special Waste Type 1 (Asbestos waste)	Receipt, handling, associated storage and disposal of waste by landfilling	<ul style="list-style-type: none"> <li>• Only to be disposed of into a designated asbestos disposal area within the landfill; and</li> <li>• Not to be deposited within 2m of the final tipping surface of the landfill.</li> <li>• No works shall be carried out on the landfill that could lead to a disturbance of Special Waste Type 1.</li> </ul>
Special Waste Type 2 (Biomedical waste)	Receipt, handling, associated storage and	<ul style="list-style-type: none"> <li>• Buried in a designated Special Waste Type 2 area where access is restricted to authorised personnel only.</li> </ul>



**Table 1.2.2: Waste processing**

<b>Waste type</b>	<b>Process(es)</b>	<b>Process limits<sup>1,2</sup></b>
	<i>disposal of waste by landfilling</i>	<ul style="list-style-type: none"> <li>No works shall be carried out on the landfill that could lead to a disturbance of Special Waste Type 2.</li> </ul>
Septage wastes (waste code K210)	<i>Receipt and storage / evaporation</i>	<i>Liquid wastes shall be directed to an evaporation pond.</i>
Waste from grease traps (waste code K110)		
Fire debris and washwater (waste code N140)		
Stormwater, pond water and low strength wastewater		

Note 2: 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*.

3. Condition 1.2.4 of the Licence is amended by the insertion of text in bold underline below:

1.2.4 *The Licensee shall ensure that waste material is only stored and/or treated within vessels or compounds provided with the infrastructure detailed in Table 1.3.3 1.2.3.*

**Table 1.2.3: Containment infrastructure**

<b>Vessel or compound</b>	<b>Material</b>	<b>Requirements</b>
<i>Evaporation pond</i>	<i>Liquid waste</i>	<i>In situ clays.</i>

4. Condition 1.2.8 of the Licence is amended by the deletion of the text shown in strikethrough below and the insertion of text in red underline below:

1.2.8 *The Licensee shall ~~ensure that no waste is burnt~~ not burn or allow the burning of non-green waste on the Premises.*

5. Condition 3.3.1 of the Licence is amended by the insertion of text in red underline below:

3.3.1 The Licensee shall ensure that the parameters listed in Table 3.3.1 are notified to the CEO and in accordance with the notification requirements of the table.

<b>Table 3.3.1: 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>
<u>1.2.3</u>	<u>Scheduled green waste burning event</u>	<u>To the Director is required at least 24 hours prior to a scheduled green waste burning event.</u>	<u>None specified</u>
1.2.8	Unauthorised fire	Within 14 days of unauthorised fire	None specified
2.1.1	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

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

Note 2: Forms are in Schedule 2

## Schedule 1: Premises Map and Layout



Licence: L8513/2010/2

IR-T07 Amendment Notice (Minor) v2.0 (July 2017)