

# Operational Management Plan

Chandler Road Waste Management Facility

Shire of Merredin

October 2024



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## Acknowledgements

ASK Waste Management acknowledges the Traditional Owners of the land in which we work and live, and pays respects to Elders past, present, and emerging.

ASK also gratefully acknowledges the cooperation of the Shire of Merredin staff that provided information and assistance in the development of this report.

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Document Control			
Version	Date	Description	Initials
0D	13/08/2024	Draft for internal review	SBG
1A	14/08/2024	Draft for client review	SBG
2A	7/10/2024	Final version	SBG

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# 1 INTRODUCTION

ASK was commissioned by the Shire of Merredin (the Shire) to develop an Operational Management Plan (OMP) for the Chandler Road Waste Management Facility (the Facility).

This OMP has been prepared considering the following documents:

- The Facility Environmental Protection Licence (EPL) (No. L8513/2010/2)
- Best Practice Environmental Management – Siting, design, operation and rehabilitation of landfills (EPA Victoria, 2015)<sup>1</sup>

The OMP has been prepared on the basis that the Shire of Merredin, which holds the Facility's EPL, is responsible for managing and operating the landfill in accordance with the EPL and thus the OMP commits the Shire to undertaking various activities to ensure the landfill is operated in an environmentally responsible manner.

## 1.1 SCOPE OF PLAN

This OMP has been developed to facilitate the safe and efficient operation of the landfill and to ensure that the environment and the surrounding community is safeguarded from pollution and off-site effects. It describes the level of performance expected and practices for managing, operating, monitoring and rehabilitating the Facility.

The Shire shall ensure that all staff and sub-contractors at the Facility are familiar with the relevant requirements described in this OMP.

A copy of the EPL for the Facility and this OMP shall be always kept at the Facility. Further, the Shire will ensure that the landfill and its associated facilities are operated in accordance with all regulatory requirements.

The OMP addresses the following:

- Approvals and licensing
- Facility siting and receptors
- Facility design and infrastructure
- Operational Management
- Special waste management
- Resource recovery management
- Environmental emissions management
- Emergency management
- Data recording and reporting
- Facility closure and rehabilitation
- Facility assessment checklists

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<sup>1</sup> **NOTE:** Guidance regarding the best practice operation of licensed landfills in Western Australia is provided by the Victorian EPA (*Best Practice Environmental Management (BPEM) – Siting, Design, Operation and Rehabilitation of Landfill, 2010*). DWER have advised that these guidelines should guide operations at landfills within Western Australia. For the remainder of this document the Victorian guidelines are referred to as BPEM.



## 1.2 FACILITY OBJECTIVES

The strategic objectives for the Facility are to:

- Provide appropriate waste disposal services for the local community and region;
- Minimise the environmental impact of waste management practices in the region;
- Encourage the reuse, recycling and recovery of waste materials; and
- Support the objectives and targets of the State Waste Strategy.

This OMP will assist the Shire in achieving these strategic objectives.

## 1.3 ENVIRONMENTAL PROTECTION LICENCE

The Facility is a prescribed premise as defined in Schedule 1 of the Environmental Protection Regulations 1987 (the EP Regulations), as activities that occur on site have the potential to cause emissions and discharges which may impact upon public health or the environment. As a prescribed premise, the Facility is required to hold an Environmental Protection Licence (EPL) under Part V of the Environmental Protection Act 1986. EPLs contain conditions to protect the environment or public health.

The Facility's EPL is licence number L8513/2010/2 and the Shire is responsible for complying with its conditions. The Facility is licenced as a Category 61, 62 and 64 prescribed premises and is allowed to receive up to 200 tonnes per annum (tpa) of liquid waste, store up to 2,000 tpa of solid waste, and landfill up to 10,000 tpa of solid waste (**Table 1.1**).

*Table 1.1: Prescribed premises categories*

Prescribed premises category description	Assessed design capacity
<b>Category 61:</b> Liquid waste facility: premises on which liquid waste produced on other premises (other than sewerage waste) is stored, reprocessed, treated or irrigated.	200 tonnes per annual period
<b>Category 62:</b> Solid waste depot: Premises on which waste is stored, or sorted, pending final disposal or re-use.	2,000 tonnes per annual period
<b>Category 64:</b> Class II or III putrescible landfill site: Premises on which waste (as determined by the reference to the waste type set out in the document entitled "Landfill Waste Classification and Waste Definitions 1996 (as amended 2019): published by the Chief Executive Officer and as amended from time to time) is accepted for burial.	10,000 tonnes per annual period

Compliance with the EPL is addressed by the OMP in the sections outlined in **Table 1.2**.



Table 1.2: Environmental Protection Licence (L8513/2010/2)

Licence Condition				Section
PREMISES OPERATION				4
<b>Condition 1</b> - The licence holder shall only accept waste on to the Premises if: (a) it is of a type listed in Table 1; and (b) the quantity accepted is below any quantity limit listed in Table 1; and (c) it meets any specification listed in Table 1				4.4
Table 1: Waste Acceptance				
Waste Type	Quantity limit / annual period			Specification
	Category 64	Category 62	Category 61	
Clean fill	NA	NA	NA	None
Hazardous waste	NA	Combined total of 2,000 tonnes	N/A	Limited to waste oil and batteries only
E-waste				None
Green waste				None
Putrescible waste				
Inert Waste Type 1				
Inert Waste Type 2				
Special Waste Type 1 (Asbestos waste)				
Special Waste Type 2 (Biomedical waste)	Combined total of 10,000 tonnes	Biomedical/ clinical waste which is radioactive must not be accepted 2		
Septage wastes (waste code K210)	NA	NA	Combined total of 200 tonnes	None
Waste from grease traps resulting from food preparation (waste code K110)				
Fire debris and washwater (waste code N140)				
Stormwater, pondwater and low strength wastewater				
<b>Condition 2</b> - The licence holder shall ensure that where waste does not meet the waste acceptance criteria set out in condition 1 it is removed from the premises by the delivery vehicle or, where that is not possible, stored in a quarantined storage area or container and removed to an appropriately authorised facility as soon as practicable.				4.4.4
<b>Condition 3</b> -The Licence holder shall ensure that wastes accepted onto the Premises are only subjected to the processes set out in Table 2 and in accordance with any process limits describes in that Table.				
Table 2: Waste storage and processing <sup>1</sup>				
Waste type(s)	Process	Process limits		

Licence Condition			Section
All solid waste (excluding hazardous waste)	Disposal of waste by landfilling	<ul style="list-style-type: none"> <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; and</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>	<b>4.6.1</b>
Green waste	Receipt, handling, storage, prior to removal offsite, or burning.	<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; and</li> <li>Windrows are to be maintained as parallel rows no more than 3 meters high or 4 metres wide and separated by at least 5 metres of clear ground from any other row.</li> </ul> <p>Where burning the is proposed, the following will apply:</p> <ul style="list-style-type: none"> <li>Green waste is to be dried and seasoned for at least two months prior to burning</li> <li>Burning to take place in the Designated Green Waste Burning Area</li> <li>Is undertaken in a manner to minimise the generation of smoke</li> <li>Ensure that from the time burning commences until the Fire Control Officer for the premises declares the area safe that; <ul style="list-style-type: none"> <li>i. 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 700 kPa through a nozzle capable of projecting water by spray or by jet; and</li> <li>ii. Persons are present who have such qualifications in fire fighting as are approved.</li> </ul> </li> </ul>	<b>6.2</b>
E-waste	Receipt, handling, associated storage prior to removal offsite.	<ul style="list-style-type: none"> <li>Stored on pallets or in cages with a waterproof covering; and</li> <li>Pallets and/or cages to be stored on an impermeable concrete hardstand</li> </ul>	<b>3.2.10 &amp; 6.6</b>
Hazardous Wastes		<ul style="list-style-type: none"> <li>Directed to a quarantined storage area or container.</li> <li>The licence holder shall immediately recover or remove and dispose of spills of hazardous wastes outside of a quarantined storage area or container.</li> </ul>	<b>3.2.10, 6.3 &amp; 6.5</b>
Special Waste Type 1 (Asbestos waste)	Receipt, handling, associated storage and	<ul style="list-style-type: none"> <li>Only to be disposed of into a designated asbestos disposal area within the landfill;</li> <li>Not to be deposited within 2m of the final tipping surface of the landfill; and</li> </ul>	<b>5.1</b>

Licence Condition				Section
	disposal of waste by landfilling	<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 1.</li></ul>		
Special Waste Type 2 (Biomedical waste)	Receipt, handling, associated storage and disposal of waste by landfilling	<ul style="list-style-type: none"><li>Buried in a designated Special Waste Type 2 area where access is restricted to authorised personnel only; and</li><li>No works shall be carried out on the landfill that could lead to a disturbance of Special Waste Type 2.</li></ul>	5.2	
Septage wastes (K210)	Receipt and storage	Liquid wastes shall be directed to an evaporation pond	5.4	
Waste from grease traps (K110)				
Fire debris and washwater (N140)				
Stormwater, pondwater and low strength wastewater				
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.				
Condition 4 - The licence holder shall ensure that waste material is only stored and/or treated within vessels or compounds provided with the infrastructure detailed in Table 4.				
Table 4: Containment infrastructure				
Vessel or Compound		Material	Requirements	
Evaporation pond		Liquid Waste	Lined with in situ clays	
Condition 5 - The licence holder shall ensure that cover is applied and maintained on landfilled wastes in accordance with Table 5 and that sufficient stockpiles of cover are maintained on site at all times.				
Table 5: Cover requirements <sup>2</sup>				
Waste Type	Material	Depth	Timescales	
Special Waste Type 1	Type 1 Inert waste or soil	300mm	As soon as practicable after deposit and prior to compaction	5.1
		1000mm	By the end of the working day in which the asbestos waste was deposited	5.1
Special Waste Type 2		1000mm	Immediately	5.2
Putrescible waste & Inert waste type 2		230mm	By the end of the working day in which municipal waste was deposited.	4.6.3.1
		1000mm	Within 3 months of achieving final waste contours	4.6.3.4
Animal carcasses		1000mm	Immediately	5.3
Note 2: Additional requirements for the covering of tyres are set out in Part 6 of the Environmental Protection Regulations 1987.				

Licence Condition				Section
<b>Condition 6</b> -The licence holder shall implement the following security measures at the site: a) erect and maintain suitable fencing to prevent unauthorised access to the site; and b) ensure that any entrance gates to the premises are securely locked when the premises are unattended; and c) undertake regular inspections of all security measures and repair damage as soon as practicable.				4.3
<b>Condition 7</b> - The licence holder shall take all reasonable and practical measures to ensure that no wind-blown waste escapes from the premises and that wind-blown waste is collected on at least a weekly basis and returned to the tipping area.				8.5
<b>Condition 8</b> - The licence holder shall ensure that no waste is burnt, other than green waste, on the premises.				9
<b>Condition 9</b> - The licence holder shall ensure that there are appropriate procedures in place at the premises so that any unauthorised fire is promptly extinguished.				9
<b>Condition 10</b> - The licence holder shall install and maintain a sign at the entrance to the premises which clearly displays a) Hours of operation; b) Contact telephone number for information and complaints or notification of fires; c) A list of materials accepted for recycling and the location of where they can be deposited on the premises; d) Types of wastes not accepted by the premises and a contact number for alternative disposal options; and e) A warning indicating penalties for people lighting fires.				3.2.2
<b>Condition 11</b> - The licence holder shall manage the evaporation pond such that: a) overtopping of the pond does not occur; b) stormwater runoff is prevented from entering the pond; c) there is no discernible seepage loss from the pond; and d) vegetation and floating debris (emergent or otherwise) is prevented from growing or accumulating in the pond.				5.4
<b>Condition 12</b> - The licence holder shall comply with the document titled 'Asbestos Management Plan Merredin-Chandler Road Landfill, Merredin Shire Council' dated October 2015.				5.1
<b>MONITORING</b>				
<b>Condition 13</b> - The licence holder shall undertake the monitoring in Table 6 according to the specifications in that table.				4.4.2
Table 6: Monitoring of inputs and outputs				
Input/Output	Parameter	Units	Frequency	
Waste Inputs	Putrescible waste, green waste, e-waste, hazardous waste, inert waste type 1 and 2, clean fill, special waste type 1 and 2, liquid wastes.	Cubic metres	Each load arriving at the premises	
Waste Outputs	Waste type as defined in the Landfill Definitions		Each load leaving or rejected from the premises	
<b>Condition 14</b> - The Licence holder shall undertake the monitoring in Table 7 according to the specifications in that table.				
Table 7: Process Monitoring				

Licence Condition						Section
Monitoring point reference	Process description	Parameter	Units	Frequency	Method	6.2
-	Mulched green waste	Temperature	oC	Weekly	None specified	
INFORMATION REPORTING						
<b>Condition 15</b> - The licence holder must: a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period; and b) prepare and submit to the CEO an Annual Audit Compliance Report in the approved form by the 30 August each year.						10.2
<b>Condition 16</b> - The licence holder shall maintain a register of Special Waste Type 1 and Type 2 disposed of at the premises which shall include a plan showing the position of Special Waste Type 1 and Type 2 disposed of at the premises.						5.2 & 5.1
<b>Condition 17</b> - The licence holder shall ensure that the parameters listed in Table 8 are notified to the CEO and in accordance with the notification requirements of the table.						10.2
Table 8: Notification requirements						
Condition or table (if relevant)	Parameter	Notification Requirement		Format or form		
1, 3 & 8	Scheduled green waste burning event	The CEO is required to be informed at least 24 hours prior to a scheduled green waste burning event.		None specified		
8	Unauthorised fire	Within 14 days of unauthorised fire		None specified		
-	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.				
<b>Condition 18</b> - The licence holder must record the following information in relation to complaints received by the licence holder (whether received directly from a complainant or forwarded to them by the Department or another party) about any alleged emissions from the premises: a) the name and contact details of the complainant, (if provided); b) the time and date of the complaint; c) the complete details of the complaint and any other concerns or other issues raised; and d) the complete details and dates of any action taken by the licence holder to investigate or respond to any complaint.						8.9
<b>Condition 19</b> - The licence holder must maintain accurate and auditable records that include the following records, information, reports, and data required by this licence: a) the calculation of fees payable in respect of this licence; b) monitoring programmes undertaken in accordance with conditions 13 and 14 of this licence; and c) complaints received under condition 18 of this licence.						10.1
<b>Condition 20</b> - The information and records specified under the licence must: 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;						10.1

Licence Condition	Section
c) be retained by the licence holder for the duration of the licence; and d) be available to be produced to an inspector or the CEO as required.	

## 1.4 REVISIONS AND UPDATES

The Shire will review and update the OMP (as necessary) after every review of the EPL or at least every three years. The purpose of the review is to:

- Evaluate the rate of landfilling and revise the staging/filling plans as required;
- Review site operations and identify areas where performance can be improved;
- Update the OMP to reflect any changes to Facility operations;
- Update the OMP to reflect regulatory changes;
- Update the OMP to reflect any changes to Best Practice guidelines (i.e. BPEM);
- Update the OMP to reflect changes to the Shire, state and federal strategic objectives; and
- Update the OMP to incorporate all changes arising from the review process.

## 2 FACILITY OVERVIEW

### 2.1 FACILITY LOCATION AND MAP

The Facility is located on Lot 500 on Plan 66111 Chandler Road (the Site) about six kilometres north of Merredin as shown in **Figure 2.1**. Merredin is the largest town in the eastern Wheatbelt region, located approximately 260km east of Perth on the Great Eastern Highway. The Site is crown land vested to the Shire for waste disposal purposes.

Figure 2.1: Facility location map



### 2.2 FACILITY HISTORY

It is understood that the site has been used for landfilling for many decades. Prior to 2010, the Facility was registered as a Category 89 landfill (R139) and landfilling occurred in the area to the west of the current Facility. Council minutes from 21 August 2007 mentioned the production of a post closure management plan for the historical disposal area, and that the CEO should meet with the adjacent landowner to discuss purchase of Avon Location 20462 to extend the landfill site. In October 2010 a Works Approval was granted by DWER to extend landfilling operations eastwards, the Facility was then issued its Category 64 licence in February 2011.

### 2.3 WASTE QUANTITIES ACCEPTED

Waste records for six months from February through to August 2024 were extrapolated to provide estimates of waste received at the Facility over 12 months as shown in **Table 2.1** below. A total of approximately 7,000 tonnes is estimated to be received at the Facility with the majority (5,000 tonnes) being inert materials from the C&D sector.



Table 2.1: Estimated annual waste acceptance (tonnes) by type and sector source

Waste Type	MSW	C&I	C&D	Total
C&D Waste	0.0	0.0	4,991.7	4,991.7
General Waste	740.6	371.1	0.0	1,111.7
Green Waste	433.4	27.6	0.0	461.0
Hazardous Waste	4.4	1.9	0.0	6.3
Kerbside General Waste	16.0	0.0	0.0	16.0
Liquid Waste	0.0	94.1	0.0	94.1
Recycling	13.1	3.0	0.0	16.0
Scrap Metal	280.0	66.5	0.0	346.5
Total	1,487.6	564.1	4,991.7	7,043.4

## 2.4 SURROUNDING LANDUSE

The Facility is surrounded by broadacre farmland on all sides with a large reserve of native vegetation located 450m east of the Facility perimeter. Hunts Dam Reserve and two heritage sites (Radar Station and Hunts Dam) are located about 500m south of the Facility. Holcim operate a concrete manufacturing plant 1.6km south.

Figure 2.2: Surrounding land use



## 2.5 SENSITIVE RECEPTORS AND DESIGNATED AREAS

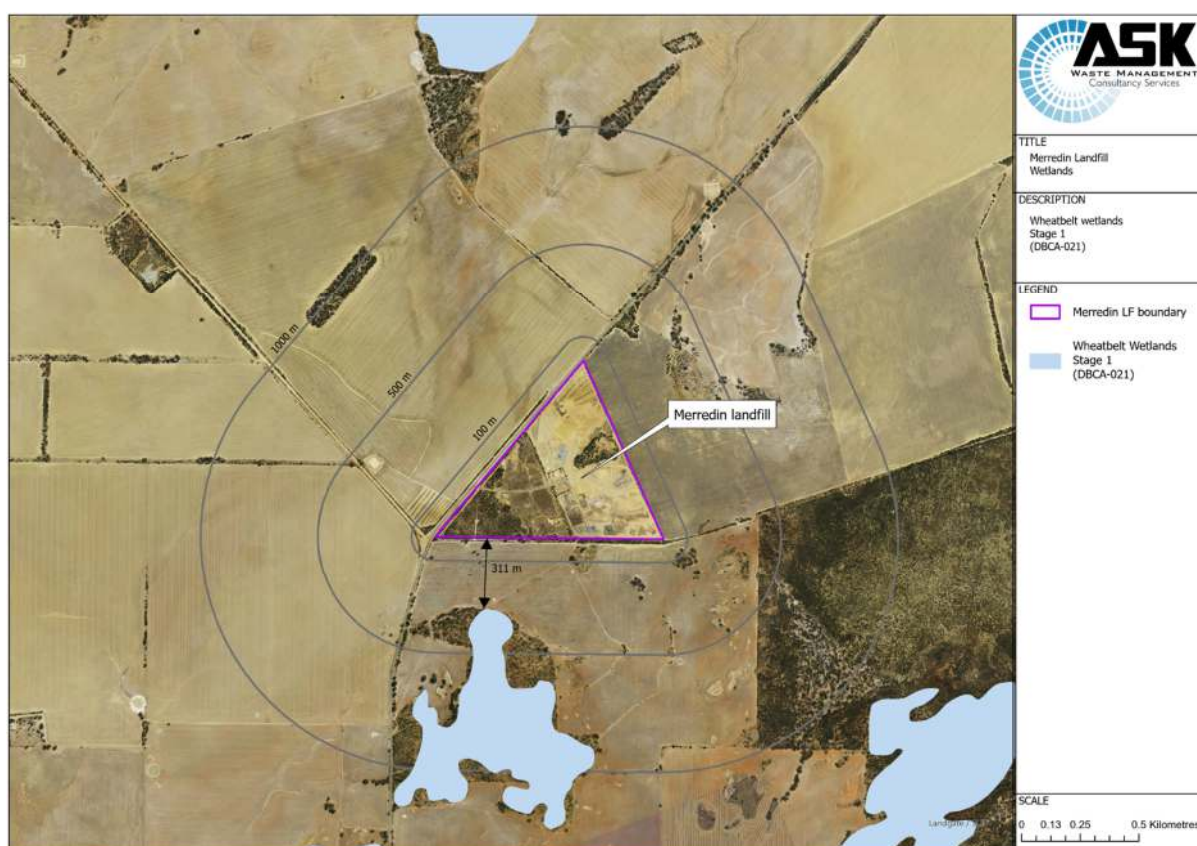
### 2.5.1 HUMAN RECEPTORS AND BUFFER DISTANCES

The closest residential buildings are located 2km southwest of the Facility, with the nearest residential subdivision located about 3km south of the Facility on the northeastern outskirts of the Merredin townsite. The Facility complies with the relevant buffer distances for sensitive land uses (500m for subdivisions, 150m for single houses) as specified within the WA EPA publication 'Guidance for the Assessment of Environmental Factors – Separation distances between industrial and sensitive land uses' (2005), and the 1000m separation distance as required under the DWER Odour Guideline 2019.

### 2.5.2 SURFACE WATERS

Surface water bodies identified in proximity to the Facility include wetlands within Hunts Dam reserve 311m south of the Facility and as depicted in **Figure 2.3**, and five small agricultural dams within 1000 metres of the site. There are also non perennial watercourses located 350 m to the south, 500 m to the north-east and 980 m to the west

Figure 2.3: Wetlands in proximity to the Facility



### 2.5.3 SENSITIVE FLORA AND FAUNA

The closest Threatened Ecological Communities and Priority Ecological Communities (DBCA-038) are located more than 4km from the Facility.

There are two specified ecosystems near the Facility; Reserve 21487 Public Recreation Class C and wetlands of wheatbelt (Hunts Dam Reserve) located 350m south, and Class A Reserve 12701 located 400m to the east of the Facility.

A threatened fauna species (Tree-Stem Trapdoor Spider) is reportedly located within a two-kilometre radius of the Facility (DWER, 2023).

## 2.5.4 DESIGNATED AREAS

Designated areas are defined by section 57 of the Environmental Protection Act 1986 and comprise water source areas proclaimed under the Rights in Water and Irrigation Act (RIWI) 1914, and Public Drinking Water Source Areas proclaimed under the Country Areas Water Supply Act 1947 and Metropolitan Water Supply, Sewerage, and Drainage Act 1909. Findings of assessment of the site location in relation to these documents includes:

- The Site is not located within or in proximity to a Public Drinking Water Source area.
- The Site is not located within a proclaimed groundwater area under the Rights in Water and Irrigation (RIWI) Act 1914.
- The Site is located within a proclaimed surface water area (Avon River System) under the Rights in Water and Irrigation (RIWI) Act 1914.

## 2.6 ENVIRONMENTAL SITING

### 2.6.1 CLIMATE

The local climate is characterised by hot dry summers, cold winters, and low rainfall with an average annual of 325mm between 1903 and 2024. The average monthly climate data has been summarised in **Table 2.2**.

Table 2.2: Monthly climate statistics for Merredin weather station (1903-2024)

Climate Statistic	January	February	March	April	May	June	July	August	September	October	November	December	Annual
TEMPERATURE <sup>2</sup>													
Mean maximum temperature (°C)	34.0	33.3	30.4	25.5	20.8	17.4	16.4	17.5	20.7	25.1	28.8	32.3	25.2
Mean minimum temperature (°C)	17.9	18.1	16.4	12.9	8.9	6.7	5.6	5.6	6.9	9.8	13.3	15.9	11.5
RAINFALL													
Mean rainfall (mm)	14.5	15.8	21.4	22.9	40.2	48.4	49.8	39.3	25.4	18.6	15.1	13.7	324.8
Decile 5 (median) monthly rainfall (mm)	5.4	6.3	11.5	15.5	36.9	43.4	47.4	38.5	23.1	14.0	11.4	5.8	316.2
Mean number of days of rain $\geq$ 1 mm	1.7	1.8	2.5	3.1	5.6	7.7	8.5	7.4	4.9	3.6	2.4	1.8	51.0
Mean number of days of rain $\geq$ 10 mm	0.4	0.4	0.6	0.6	1.1	1.3	1.3	0.9	0.5	0.4	0.3	0.4	8.2
Mean number of days of rain $\geq$ 25 mm	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.1	1.1
9AM CONDITIONS <sup>3</sup>													

<sup>2</sup> Data for temperature is only available from 1966 to 2024.

<sup>3</sup> Data for 9am and 3pm conditions is only available from 1966 to 2010.

Climate Statistic	January	February	March	April	May	June	July	August	September	October	November	December	Annual
Mean 9am temperature (°C)	24.2	23.7	21.5	18.2	14.3	11.2	10.1	11.1	13.9	17.4	20.6	23.0	17.4
Mean 9am relative humidity (%)	46	50	53	62	71	79	81	76	66	54	47	45	61
Mean 9am wind speed (km/h)	13.6	13.7	12.1	9.8	8.0	7.7	7.3	7.8	8.7	10.3	11.6	11.4	10.2
3PM CONDITIONS													
Mean 3pm temperature (°C)	32.6	32.0	29.1	24.4	19.7	16.3	15.3	16.3	19.4	23.7	27.3	30.8	23.9
Mean 3pm relative humidity (%)	26	29	32	41	50	59	60	54	45	34	28	25	40
Mean 3pm wind speed (km/h)	9.5	9.7	8.7	8.2	7.7	8.5	8.7	8.5	8.8	9.2	9.9	9.2	8.9

## 2.6.2 TOPOGRAPHY

The natural topography of the Site before landfilling operations commenced in current area are shown in **Figure 2.4**. The two metre contour intervals were produced by DPIRD from the Land Monitor project (1998-2000) DEM based on a 10-metre grid. The local landscape has a high point of 396mAHD in the eastern corner of the facility, sloping gradually downwards to 378mAHD at the western boundary of the Facility's current active area.

Figure 2.4: Topography map 2m contours (DPIRD-072)

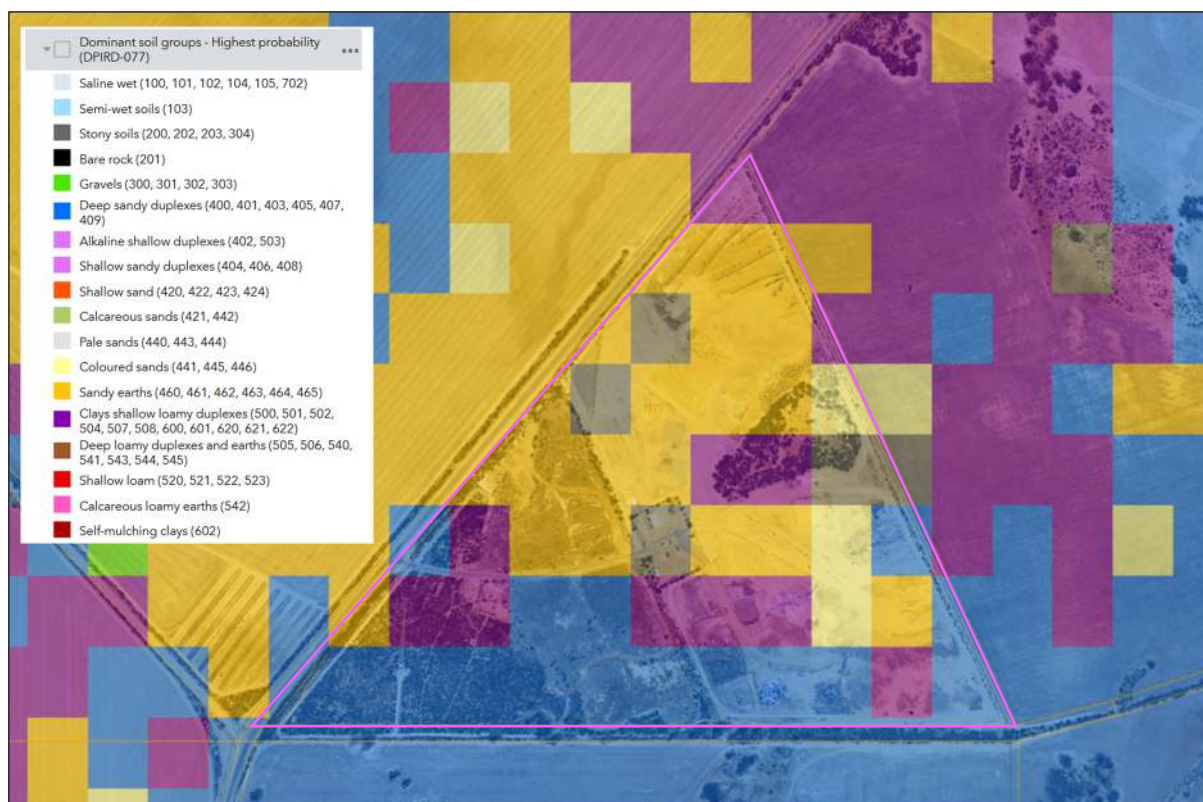




### 2.5.3 LOCAL GEOLOGY AND LITHOLOGY

The bedrock geology beneath the Facility is comprised of Yilgarn Craton granites. The DPIRD-077 dataset maps the highest probability soil class within 90m pixels, as shown in **Figure 2.5**; it is predicted that 'Deep sandy duplexes' are present along the Facility's southern boundary, with some 'Clays shallow loamy duplexes' towards the centre, and 'Sandy earths' in the northern portion. According to the DPIRD-027 Soil Landscape Mapping dataset the Facility is located within the 'Yellow sandplain and gravel plain of the eastern Wheatbelt'.

Figure 2.5: Highest probability soil groups (DPIRD-077)



### 2.6.4 GROUNDWATER

Based on data from the Water Information Reporting website, groundwater levels in the vicinity of the Facility are shallow with depths ranging from 1.6 metres to 4.1 metres below ground level (bgl), as shown in **Figure 2.6**. Fortunately, the Shire maintains two groundwater bores at the Facility (**Figure 3.1**) which indicate that groundwater is more than 10 metres below ground level. Bore 2 is located at the lowest point within the site had a depth to groundwater of 12.1m bgl on the 18<sup>th</sup> of April 2024, whilst Bore 1 remained dry with a construction depth of 13.3m bgl. Groundwater flow in the Merredin area has been modelled being in an east to west direction (Department of Agriculture and Food WA, 2010).

Figure 2.6: Map of water levels at bores in surrounding area





## 3 FACILITY DESIGN

### 3.1 FACILITY LAYOUT

The Facility is accessed from the western boundary of the Site from Chandler-Merredin Road through the main entrance gate **Figure 3.1**. Vehicles travel along a bituminised internal access road that passes through the historic waste disposal area before passing through the compound entrance gate and being required to stop at the gatehouse as shown in **Figure 3.2**.

Figure 3.1: Facility Layout Plan

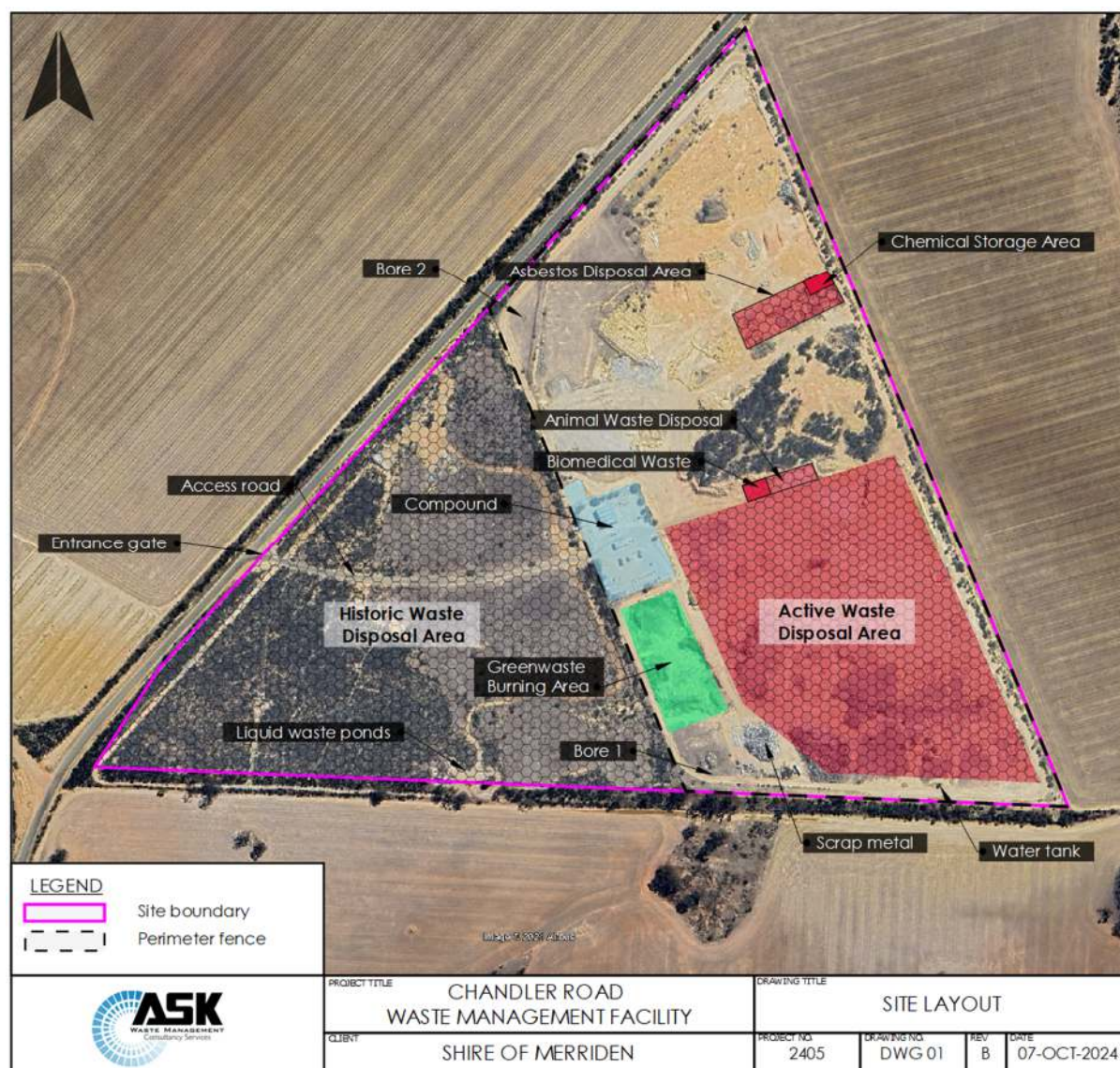




Figure 3.2: Facility Compound Layout Plan



### 3.2 FACILITIES & INFRASTRUCTURE

A list of all items of infrastructure and equipment within the Facility, is provided in **Table 3.1**. The table lists the relevant prescribed premises category that the infrastructure relates to, and provides a reference to the site plan layout which is provided in **Figure 3.1** and **Figure 3.2**.

Table 3.1: Facility infrastructure and equipment

Infrastructure and equipment	Prescribed Premises	Site plan reference
Entrance gate	All	<b>Figure 3.1:</b> Entrance gate
Facility access road	All	<b>Figure 3.1:</b> Facility access road
Facility compound	All	<b>Figure 3.1:</b> Facility compound
Compound entrance gate	All	<b>Figure 3.2:</b> Entrance gate
Groundwater monitoring bores	All	<b>Figure 3.1:</b> Groundwater monitoring bores
Perimeter fence	All	<b>Figure 3.1:</b> Perimeter fence
Water tank	All	<b>Figure 3.1:</b> Water tank
Car parking	All	<b>Figure 3.2:</b> Car parking
Fuel storage	All	<b>Figure 3.2:</b> Fuel storage
Gatehouse	All	<b>Figure 3.2:</b> Gatehouse
Active waste disposal area	64	<b>Figure 3.1:</b> Active waste disposal area
Animal waste burial cell	64	<b>Figure 3.1:</b> Animal waste burial cell
Asbestos burial cells	64	<b>Figure 3.1:</b> Asbestos burial cells
Historic waste disposal area	64	<b>Figure 3.1:</b> Historic waste disposal area
Chemical storage area	62	<b>Figure 3.1:</b> Chemical storage area
Scrap metal storage	62	<b>Figure 3.1:</b> Scrap metal storage
Drum Muster compound	62	<b>Figure 3.2:</b> Drum Muster compound
Reuse shed	62	<b>Figure 3.2:</b> Reuse shed
Used oil storage	62	<b>Figure 3.2:</b> Used oil storage
Vehicle battery storage	62	<b>Figure 3.2:</b> Vehicle battery storage
Liquid waste ponds	61	<b>Figure 3.1:</b> Liquid waste ponds
Liquid waste pond access road	61	<b>Figure 3.2:</b> Liquid waste pond access road

### 3.2.1 FENCING

Access to the Facility is controlled by a barbed wire topped ring lock perimeter fence.

Figure 3.3: Image of the perimeter fence





### 3.2.2 FACILITY ENTRANCE

The main entrance is located on Chandler -Merredin Road and is comprised of lockable entrance gates and entrance signage that displays the following information in accordance with Condition 10 of the EPL:

- Hours of operation;
- Contact telephone number for information and complaints or notification of fires;
- A list of materials accepted for recycling and the location of where they can be deposited on the premises;
- Types of wastes not accepted by the premises and a contact number for alternative disposal options; and
- A warning indicating penalties for people lighting fires.

Figure 3.4: Image of Facility entrance



### 3.2.3 ACCESS ROADS

The Facility's main internal access road is bituminised up to the gatehouse from the main entrance; all other internal access roads are unsealed.

### 3.2.4 INTERNAL TRAFFIC CONTROL

To facilitate the safe and efficient movement of vehicles, appropriate traffic control signage is installed, maintained, and updated as necessary. This includes the following:

- Facility speed limits
- Give way and stop signs
- Traffic directions
- Public access prohibited signs

### 3.2.5 HISTORIC WASTE DISPOSAL AREA

The area of the site to the west of the Facility compound was previously used for landfilling up until around 2010. The waste has been capped with soil and revegetation works have been undertaken. Public access to this area is prevented and no excavation works are to be undertaken as the area is likely contaminated and could pose health risks if waste materials are inadvertently exposed.

### 3.2.6 FACILITY COMPOUND

A fenced Facility compound is located on the main access road immediately east of the historic waste disposal area. The compound contains the gatehouse building, reuse shed, hazardous waste storage facilities, fuel storage, and a parking area. The compound has a lockable entrance gate that provides additional security to the main entrance gate.

### 3.2.7 GATEHOUSE BUILDING

The gatehouse building is located within the Facility compound and contains a raised inspection platform, office facilities, bathroom and staff amenities. Site users are directed to stop at the gatehouse so that the loads can be inspected, payment made, and details recorded by the attendant.

*Figure 3.5: Image of gatehouse area*



### 3.2.8 REUSE SHED

A shed is located to the north of the gatehouse for the storage and sale of reusable items.

*Figure 3.6: Image of reuse shed*





### 3.2.9 DRUMMUSTER COMPOUND

A fenced compound for eligible triple rinsed agricultural and veterinary containers accepted as part of the DrumMUSTER program is maintained on site. The DrumMUSTER program collects and recycles eligible, empty and clean agricultural and veterinary chemical containers.

### 3.2.10 HAZARDOUS WASTE STORAGE AREA

A hazardous waste storage area is located within the compound to the south of the gatehouse. It includes a used oil storage tank, and a covered and bunded area for the storage of vehicle batteries and electronic waste.

*Figure 3.7: Image of hazardous waste storage area*



### 3.2.11 GREENWASTE BURNING AREA

There is a dedicated area for the storage and burning of greenwaste located to the south of the compound. It is surrounded by earthen bunds to help prevent fire spreading and to contain water that has been in contact with the waste.

*Figure 3.8: Image of greenwaste burning area*



### 3.2.12 SCRAP METAL STORAGE

Scrap metal is diverted from landfill into stockpiles located near the southern perimeter fence. The metal is sold to scrap metal merchants for recovery once sufficient quantities have accumulated.



Figure 3.9: Image of scrap metal storage



### 3.2.13 LIQUID WASTE PONDS

Three liquid waste ponds are in the historic waste disposal area near the southern perimeter fence. They are used for the evaporative disposal of liquid wastes in accordance with the licence. The ponds are accessed by an unsealed road off the main access road at the compound entrance. Access is controlled by a lockable chain barrier with a key provided to authorised users by the attendant at the gatehouse. The ponds are below ground excavations and are lined with the clay rich in situ soil in accordance with the licence.

## 3.3 LANDFILL DESIGN

The Facility has been operational for many years. Landfill cells are developed on a cell-by-cell approach. Historical landfilling mostly occurred on an ad hoc basis in unlined below ground trenches and cells. Landfilling is currently occurring in the southeast corner of the site as shown in **Figure 3.1**. Above ground landfilling has been occurring in this area, but only to a limited extent with cell heights generally less than three metres above natural ground levels.

Figure 3.10: South facing image of active landfill cells



## 4 OPERATIONAL MANAGEMENT

The Shire shall manage and operate the Facility in accordance with the Facility's EPL, this OMP, and other relevant regulatory requirements.

### 4.1 MANAGEMENT AND SUPERVISION

The Shire provides personnel to manage, supervise, operate and maintain the Facility in accordance with the EPL and other relevant regulatory requirements. This includes the provision of staff and/or consultants to undertake the following activities:

- Provision of safe public access and work areas;
- Planning of the staging of the landfilling operation;
- Overall management, supervision, operation and maintenance of the Facility and its waste management operations.
- Design, construction and maintenance of all site roads;
- Managing cover material at the Facility, including separation from incoming waste materials, stockpiling, and transporting onsite using appropriate landfilling and earthworks equipment;
- Spreading, compaction and covering of the deposited waste using appropriate landfilling equipment/earthmoving equipment;
- Supervision of the waste drop off areas and the active tipping face;
- Management, supervision, operation and maintenance of the recycling facilities;
- Management, operation and maintenance of all environmental management measures at the Facility;
- Management, operation and maintenance of all other structures at the Facility;
- Recording of incoming vehicles including waste quantity and type;
- Securing the Facility so that unauthorised persons do not enter;
- Reporting, as required under the EPL; and
- When the landfill site is open, the gatehouse is manned, and the active tipping area and recycling storage areas are supervised.

The Shire shall provide regular training, via weekly 'toolbox' meetings and specific courses, to all operative and managerial staff on topics including:

- Waste categories recognition;
- Waste management/landfill practices;
- Waste management/landfilling regulations;
- Environmental requirements for landfilling, greenwaste processing and recycling operations;
- OH&S regulations and practices;
- Fire control and management; and
- First aid.

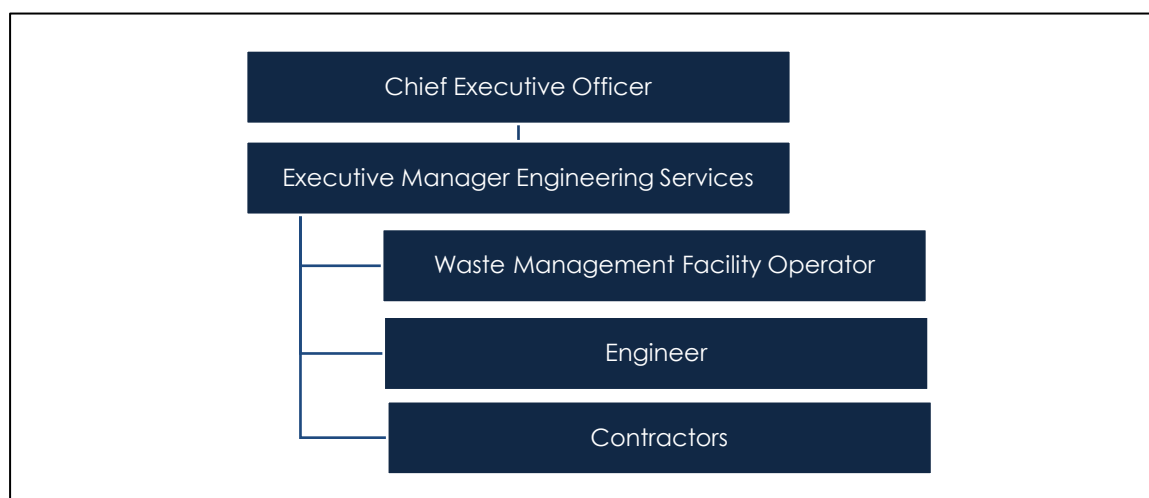


#### 4.1.1 CONTRACTORS

All contractors working at the Facility are required to adhere to the following measures:

- Undertake a Facility Induction that covers:
  - Occupational health and safety requirements and considerations;
  - Relevant sections of this OMP that must be complied with; and
  - Relevant conditions of the EPL that must be complied with.
- Only access the Facility under the supervision of Shire staff.
- Sign a visitor register at the gatehouse when accessing the Facility, which includes the following details:
  - Name/s of staff;
  - Name of company;
  - Date and time of arrival at the Facility; and
  - Time work was completed at the Facility
- Any potential risks or hazards identified by sub-contractors should be immediately reported to the Shire and work should cease until the situation is deemed safe.

Figure 4.1: Organisational Structure



#### 4.2 HOURS OF OPERATION

The Facility is staffed when open and locked outside of operating hours. The site is available for disposal of waste during the following times:

- Monday to Friday: 7:30am to 12:00pm, and 12:30pm to 3:30pm
- Saturday / Sunday and Public Holidays: 10:00am - 3:00pm.

#### 4.3 SECURITY

The Shire shall ensure that the Facility is secured against public access outside of the operating hours listed in **Section 4.2**. This shall include:

- Maintain suitable fencing to prevent unauthorised access to the site in accordance with Condition 6);

- Locking the entrance gate when the Facility is unattended (in accordance with Condition 6); and
- Regular inspection of the entrance gate and perimeter fencing for damage or evidence of forced entry, with any repairs actioned as soon as is practicable (in accordance with Condition 6).

*Recommendation 4.3 - Consider installation of automated sliding gates with swipe card or NFC access to enable authorised contractors and commercial operators to attend the Facility outside of usual operating hours, without the need to distribute keys or have Shire employees accompany them. If implemented, it is also recommended that a CCTV system be installed at the gate to monitor vehicles accessing the site out of hours.*

## 4.4 WASTE ACCEPTANCE

### 4.4.1 ACCEPTABLE WASTE TYPES

As is specified under Condition 1 of the EPL, the Facility is only licensed to accept certain waste types. **Table 4.1** provides the waste types as defined by the DWER Landfill Waste Classification and Waste Definitions 1996 (as amended 2019) that can be accepted at the Facility, the quantity limits and specification requirements.

Table 4.1: Waste acceptance requirements

Waste Type	Quantity limit / annual period			Specification
	Category 64	Category 62	Category 61	
Clean fill	NA	NA	NA	None
Hazardous waste	NA	Combined total of 2,000 tonnes	N/A	Limited to waste oil and batteries only
E-waste				None
Green waste				None
Putrescible waste	Combined total of 10,000 tonnes			
Inert Waste Type 1				
Inert Waste Type 2				
Special Waste Type 1 (Asbestos waste)	NA	NA	Combined total of 200 tonnes	Biomedical/ clinical waste which is radioactive must not be accepted 2
Special Waste Type 2 (Biomedical waste)				None
Septage wastes (waste code K210)				
Waste from grease traps resulting from food preparation (waste code K110)				
Fire debris and washwater (waste code N140)				
Stormwater, pondwater and low strength wastewater				

Definitions and examples of the waste types accepted under the Licence are as follows:

- Clean fill

- Material that will have no harmful effects on the environment and consists of rocks or soil arising from the excavation of undisturbed material.
- Type I inert waste
  - Building and demolition waste (bricks, concrete and associated small quantities of paper, plastics, glass, metal and timber);
  - Asphalt waste;
- Type II inert waste
  - Used, rejected or unwarranted tyres (including shredded tyres and tyre pieces).
- Putrescible wastes
  - Component of the waste stream likely to become putrid – including wastes that contain organic materials such as food wastes or wastes of animal or vegetable origin, which readily bio-degrade;
  - Food wastes;
  - Sewage treatment plant grits and screenings;
  - Animal manures and carcasses;
  - Office and packaging waste (paper, cardboard, plastics, wood);
  - Cleaned pesticide, biocide, herbicide or fungicide containers;
  - Disposable nappies;
  - Vegetative wastes; and
  - Non-chemical wastes generated from manufacturing and services.
- Type 1 Special Wastes (for registered sites as approved under the EPA Controlled Waste Regulations 2004)
  - Includes asbestos wastes that are regarded as hazardous but which, with special management techniques, may be disposed of safely within specified classes of landfill; and
  - Stabilised asbestos waste bonded in matrix (asbestos cement sheeting).
- Type 2 Special Waste:
  - Biomedical waste which does not require incineration and which is approved for supervised burial.
- Liquid wastes:
  - Waste from grease traps resulting from food preparation (waste code K110)
  - Fire debris and washwater (waste code N140)
  - Stormwater, pondwater and low strength wastewater

#### 4.4.2 WASTE ACCEPTANCE PROCEDURES

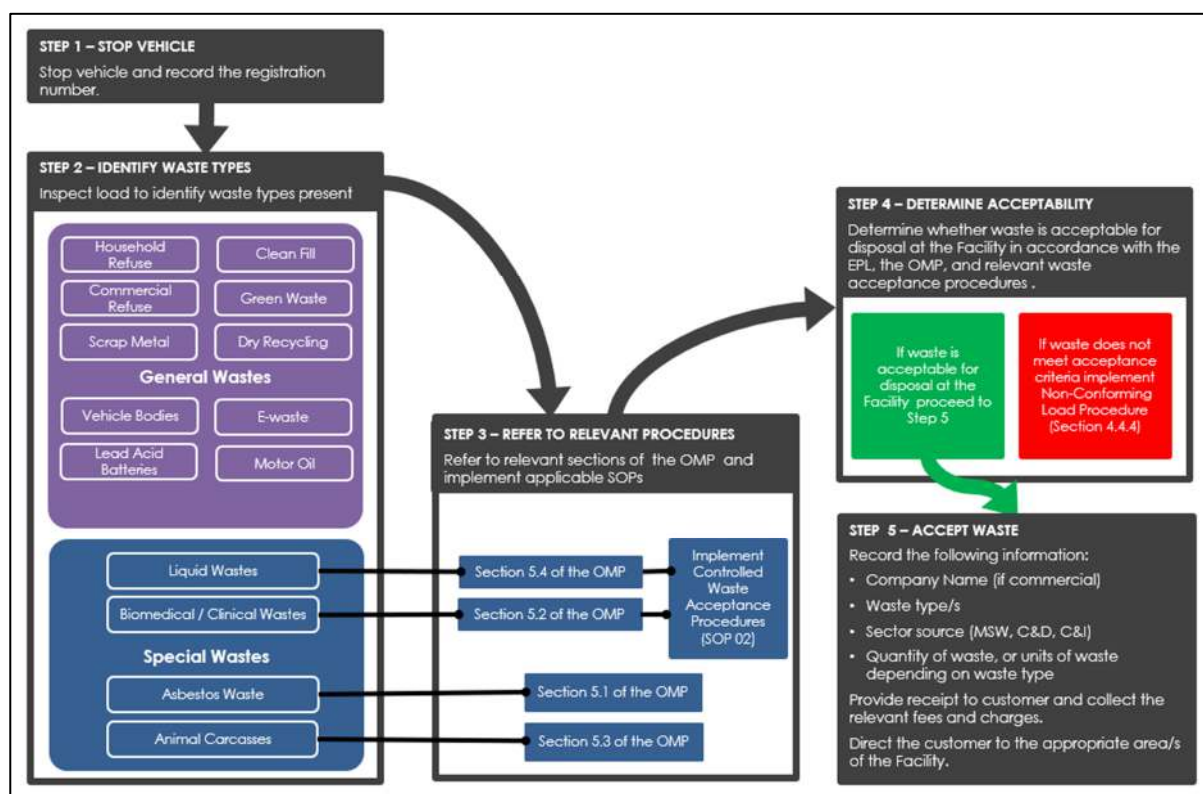
There is no weighbridge at the Facility. Waste loads are volumetrically assessed by Gatehouse staff. On arrival of a vehicle carrying a load of waste at the Facility gatehouse, waste acceptance procedures are to be undertaken as follows:

1. The vehicle is stopped and gatehouse staff verbally and visually inspect the load of waste to determine the waste types present.

2. The waste types identified are cross-checked against those acceptable under the Facility's EPL.
3. If a load of waste contains materials that cannot be accepted at the Facility, the load is refused and redirected to an appropriate Facility (Tamala Park or Red Hill).
4. If the waste load is deemed acceptable for disposal at the Facility, the Gatehouse Attendant records the following information with the gatehouse waste software system:
  - Vehicle registration number
  - Company Name (if commercial)
  - Waste type/s
  - Sector source (MSW, C&D, C&I)
  - Quantity of waste, or units of waste depending on waste type
5. The gatehouse attendant directs the vehicle to the appropriate disposal or recycling area/s within the Facility and provides instructions relevant to the material types to be disposed of.

Waste shall only be accepted in accordance with Conditions 1 and 2 of the EPL, and follow the procedures detailed in **Figure 4.2**.

Figure 4.2: Waste acceptance flow chart



#### 4.4.3 ASBESTOS CONTAINING MATERIAL

The Shire only accepts asbestos material for disposal at the Facility on Thursdays and requires that all deliveries are made by appointment only by contacting the Shire of Merredin office and completing a Disposal of Asbestos Form (**Appendix D**).

All asbestos material or material suspected of containing asbestos is to be handled and disposed of in the following manner:

- Asbestos material must be separated from other materials for disposal where reasonably practicable;
- Asbestos material must be wrapped in a manner that prevents asbestos fibres from entering the atmosphere during transportation. Asbestos waste or material containing asbestos must be contained and sealed (double-lined or double bagged) in heavy duty plastic (black) of at least 0.2mm in thickness;
- Wrapped and / or bagged asbestos material must be marked with the words "CAUTION ASBESTOS" in letters at least 50mm high

In accordance with the Shire's Asbestos Management Plan (2015) *all loads of waste entering the site* must be inspected by the site attendant to determine if asbestos is contained within the loads. If asbestos is either found or suspected in the load then the load must be disposed of into the asbestos pit which is specifically provided to bury asbestos and will be charged at the rate of disposal for asbestos.

If the customer is unsure of whether or not the material for disposal contains asbestos, the Council's EHO shall send a sample of the material to a NATA accredited laboratory to test for the presence of asbestos. The customer will be invoiced for the expense and contacted to advise them that they are to be charged accordingly for its correct disposal within the landfill.

If the customer disagrees with the EHO's advice that the material contains asbestos upon a visual inspection then a sample must be submitted for analysis. The customer will sign a private works order form and an agreement for the service. Should the result return positive for asbestos, the customer will be liable for the cost of analysis and any disposal cost incurred as a result.

A record of all rejected loads must be kept outlining the name of the waste carrier/producer, registration number of the vehicle, date of rejection, amount rejected and reason for rejection.

#### 4.4.4 NON-CONFORMING WASTE

Where waste does not meet the waste acceptance criteria set out in **Section 4.4.1**, it is to be removed from the Facility by the delivery vehicle or, where that is not possible, stored in a quarantined storage area or container and removed to an appropriately authorised facility as soon as practicable.

Repeat offenders may be excluded from utilising the Facility as a primary corrective action to prevent the continuance of unacceptable loads arriving onsite.

#### 4.4.5 DRUMMUSTER CONTAINERS

DrumMUSTER collects eligible non-returnable metal or plastic containers where the capacity of the container is at least 1L/Kg but not greater than 205L/Kg of declared content in the packaging of crop production and animal health products used for:

- agricultural and livestock production
- industrial and recreational pest and weed control
- forestry
- household pest control operations
- similar activities conducted by government authorities.

Participating manufacturers are identified by the inclusion of the eligible DrumMUSTER container logo on their eligible containers. The logo can be displayed on the chemical label, embossed into the container wall or applied as a sticker to the container. Containers not displaying this logo may be from non-participating manufacturers and will not be accepted into the program. The logos below indicate that the product is eligible under the DrumMUSTER program.

Inspection of containers at collection points is necessary to ensure that containers can be safely recycled. DrumMUSTER requires the following cleanliness standards:

- There must be no chemical residue on the inside or the outside of the container, including the thread and cap. If there is any chemical residue visible the containers are to be rejected.
- The threads of the container opening must be free of residue and although the cap should not be replaced on the container, it may be brought separately to the collection if clean.
- The container should have the labels on to provide inspectors with identification of the container being handled.
- A signed statement by the farmer or chemical user at the point of the collection provides DrumMUSTER with evidence that the container has been rinsed.

Information on container numbers received at the Facility must be loaded into the DrumMUSTER App (AgSafe) by the gatehouse operator. Shire administration will periodically review, confirm and create an invoice for reimbursement from DrumMUSTER.

## 4.5 WASTE DATA RECORDING

In accordance with Condition 13 of the EPL, details of each load arriving at the Facility must be recorded. Each load leaving the Facility, including quantities (in tonnes) of materials recovered for recycling by contractors, or loads rejected from the Facility must also be recorded.

The Shire recently introduced a waste facility data software management and reporting system (Cooee) at the Facility to ensure accurate and complete records are kept of waste received to meet licence and Department of Water and Environmental Regulation (DWER) mandatory reporting requirements (see **Section 10.4**).

Cooee has been created to incorporate DWER approved default bulk densities for various reportable waste material categories to ensure the consistent and accurate reporting of weights of waste streams received at the Facility.

Data that must be recorded for each load presenting to the Facility for disposal and/or recycling is as follows:

- Vehicle registration number
- Company Name (if commercial)
- Waste type/s
- Sector source (MSW, C&D, C&I)
- Quantity of waste, or units of waste depending on waste type.

*Recommendation 4.5 - Consider installation of a weighbridge to enable the recording and charging of waste loads on a per tonne basis. This could assist the Facility's future use as a regional waste site as it will provide more accurate and transparent recording and reporting of waste loads compared to volumetric estimates.*

## 4.6 LANDFILLING PRACTICES

Once the waste has been accepted at the gatehouse, Facility users are directed to the active tipping face to deposit the waste. Waste is pushed up, compacted, and covered in line with the requirements of this section.

SOP 01 (**Appendix A**) details procedures for achieving best practice waste placement, compaction, cover, and cell development.

#### 4.6.1 WASTE HANDLING AND DEPOSITION

Effective management of the working face is essential for achieving a good overall standard of landfill operation. Conversely, poor working-face management has the potential to result in windblown litter and debris, greater potential for accidents, inefficient use of airspace, aesthetic problems, traffic movement problems, uneven or increased long-term waste settlement and vector problems.

Once the waste has been accepted at the gatehouse, users are directed to the active tipping face to deposit the waste. The Shire is to manage the active tipping face in accordance with the following:

- Wastes shall be disposed of in a defined trench or within an area enclosed by earthen bunds;
- No waste shall be temporarily stored or landfilled within 15 metres from the boundary of the premises;
- The separation distance between the base of the landfill and the highest groundwater level shall not be less than 3m; and
- The separation distance between any existing or new tipping areas and any naturally occurring surface water body shall not be less than 100 metres

In addition to the prescribed measures above, the Shire will ensure that working face management adheres to best practice guidelines wherever practicable. The International Solid Waste Association's (ISWA) Landfill Operational Guidelines (2010) document outlines best practice, working-face management procedures.

The optimum area of the working face depends on the number of vehicles and equipment that needs to be managed. An unnecessarily large working face is difficult to control, expensive to operate, aesthetically unattractive and conducive to windblown litter. A larger face area also requires more cover soil per tonne of waste and greater use of plant (ISWA, 2010). Efforts should be taken to ensure that the working face is optimised to the number of vehicles utilising the Facility.

It is also important to ensure orderly truck movement and unloading to maximise the efficiency of the working face and maintain a safe working environment. ISWA (2010) recommends the following measures:

- Traffic patterns should be established and must be obvious to drivers. This may require flags or other markers as well as a 'spotter' giving traffic directions, if required
- Drivers should wait for instructions from Facility staff before discharging their waste
- There should be a safe distance between each vehicle of 2–3m and each truck should stop at least 2–3m away from the working face
- There should be sufficient space to allow trucks to unload at the foot or top of the working face as appropriate, and drivers should be encouraged to spend as little time as possible at the working face
- After the waste is deposited, the crew of the truck should ensure that no bins, covers or other equipment is left at the working face before exiting the area.

ISWA (2010) recommends that in general it is best to mix the incoming waste and then spread and compact it upon receipt at the working face to achieve a homogeneous waste mass that results in more uniform decomposition, liquid and gas flow, and settlement. One exception is waste that can be used for cover or roads, which can be segregated and stockpiled near the face for that use.

**SOP 01 (Appendix A)** details procedures for achieving best practice waste placement, compaction, cover, and cell development.



*Recommendation 4.6.1 - It is recommended that the practice of operating separate cells for C&D waste, timber, and skip bin waste be ceased, with these waste stream instead disposed of to the main cell to improve compaction rates and cover use efficiency.*

#### 4.6.2 COMPACTION

The benefits of appropriate compaction of waste include:

- Extended operational life
- Reduction in windblown litter
- Reduced daily cover requirements
- Reduced water infiltration into the waste
- Fewer insects and rodents
- More stable surface for machine and vehicular traffic.

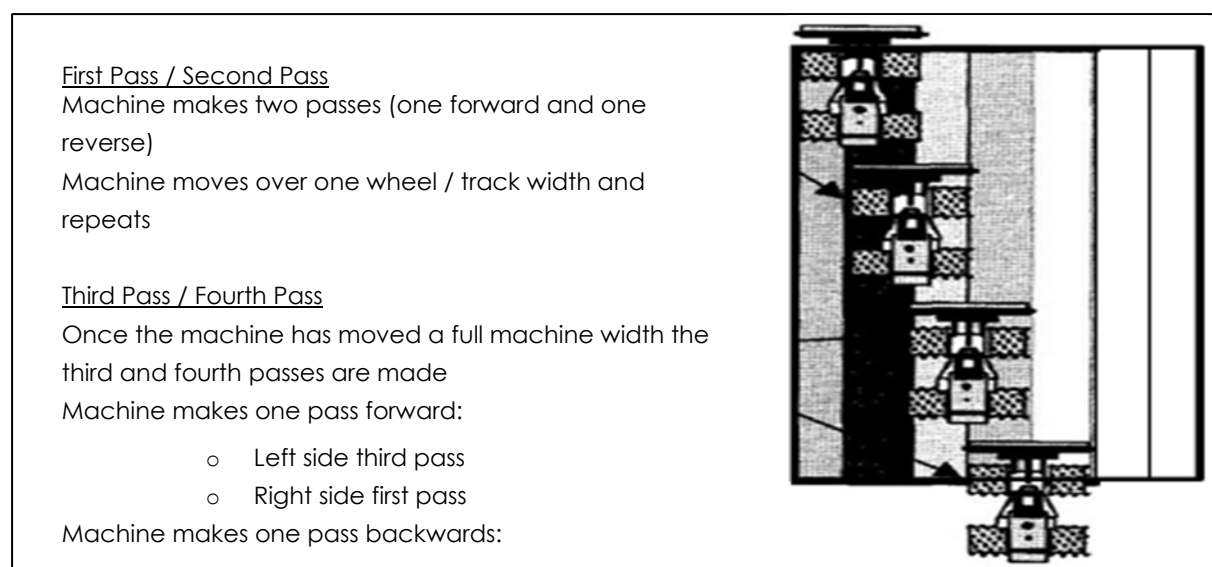
Factors affecting compaction include compaction equipment (and operational use), moisture content and waste type. Combining different waste streams in a single cell (e.g. C&D, bulk waste and MSW) will provide improved compaction and surface stability due to the variation in sizes and material types.

The correct use of compaction machinery is critical for maximising compaction. The waste surface should ultimately be kept level to minimise the load on the machine. However, when cells are progressively filled from one end, a gentle uphill slope (i.e. pushing the waste up hill) will result in good compaction, while minimising the area of exposed waste. Layering of waste is important for ensuring optimal compaction rates; thin layers should be maintained (500mm or less). Thick layers are 'spongy', compacting only the top of the layer of waste and decreasing the productivity of the compaction machine due to increased rolling resistance.

Three to five passes over each layer of waste should be performed, depending upon the waste composition. A set pattern of passes should be used over the entire cell as each layer of waste is applied. Compaction passes are defined as one trip over the waste in one direction. To achieve a four-pass coverage, operators must make one pass forwards and the second backwards along the same tracks, then move over one wheel/track width and repeat the process. As the machine moves gradually across the cell, all the waste will receive four passes of the machine, as shown in **Figure 4.3**.

Note that the waste compaction process detailed above should only be undertaken by tracked or solid wheeled machinery that has been armoured for waste operations to minimise the risk of damage to the machinery.

Figure 4.3: Compaction machine tracking pattern for four passes



#### 4.6.3 WASTE COVER

Waste cover is an essential component of landfilling operations as it helps mitigate many environmental and health impacts by:

- Minimising windblown litter
- Minimising visual impact
- Minimising emission of landfill gas
- Controlling odours
- Reducing the risk of fire
- Shedding surface water and minimising contamination of runoff
- Controlling disease vectors such as birds, flies, and vermin.

**In accordance with Condition 5, landfill cover activities at the Facility are to be managed to ensure:**

- Waste received for landfilling is levelled, compacted, and covered every working day.
- Putrescible waste is covered with at least 230 millimetres of cover material as soon as practicable and not later than the end of the working day that the waste was deposited.
- A stockpile of sufficient cover material is maintained to ensure waste can be covered for in line with these requirements and to cover waste in the event of a fire.
- A final soil cover of at least one metre is applied to landfill cells at final height.

*Recommendation 4.6.3 - It is recommended that the Shire consider making a licence amendment application to allow waste to be covered with 150mm of cover material daily, rather than the 230mm currently stipulated. ASK is unaware of other landfills being required to apply this much daily cover for putrescible waste.*

##### 4.6.3.1 Daily cover

Soil extracted from on-site reserves is used as cover material, as well as clean fill accepted on-site or Type 1 inert waste. Daily cover needs to be applied as specified in **Table 4.2** to ensure compliance with Condition 5.

Table 4.2: Daily cover requirements (Condition 5)

Waste Type	Material	Depth	Timescales
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Special Waste Type 1 (asbestos)	Type 1 Inert waste or soil	300mm	As soon as practicable after deposit and prior to compaction
		1000mm	By the end of the working day in which the asbestos waste was deposited
Special Waste Type 2		1000mm	Immediately
Putrescible waste & Inert waste type 2		230mm	By the end of the working day in which municipal waste was deposited.
Animal carcasses		1000mm	Immediately

#### 4.6.3.2 Cover budget

As the incorrect use of cover material can result in poor waste coverage, or if too much is used, excessive loss of voidspace, a cover material budget should be produced for the Facility. The cover material budget is based on the area of the typical working face and the depth of cover material required by the EPL. Based on 150mm of cover material and a working face of 5m x 20m, the daily requirement would be  $[5 \times 20 \times (150/1000)] = 15$  cubic metres (m<sup>3</sup>) of cover, (or assuming the Facility loader has a 2.5m<sup>3</sup> bucket), approximately 6 bucket loads per day.

The amount of cover material used is highly dependent on the condition of the waste surface onto which it is being applied. The Shire is to ensure that the compacted waste surface is relatively smooth and firm. An irregular waste surface with excessive voidspace will result in significant quantities of cover material being consumed to achieve adequate coverage.

Care is to be taken to optimise the amount of cover material utilised. Insufficient cover will result in excessive litter generation, limited control of vermin and an increase in the potential for landfill fires. Over-application of cover material wastes valuable landfill airspace, cover material and personnel effort.

#### 4.6.3.3 Intermediate Cover

An intermediate cover that is at least 300mm thick should be applied to those areas of waste placement that will not be worked on for a minimum of three months. The depth of the intermediate cover should be periodically checked, particularly after strong winds; if the depth is found to be less than 300mm, additional cover material must be added.

#### 4.6.3.4 Final Capping Layer

The landfill will be progressively capped and rehabilitated in accordance with Condition 5 which requires that one metre of cover be applied within 3 months of achieving final waste contours. This will involve placing a final cover layer over each landfilled area as it is completed and revegetating the final cover. Details of the final capping layer design are provided in the Landfill Closure Management Plan.

## 4.7 EQUIPMENT

Appropriate machinery, plant and equipment is required to operate the Facility in accordance with the requirements of the EPL and this OMP. This will include equipment for:

- Spreading, compaction and covering of deposited waste
- Managing stockpiles of greenwaste
- Managing stockpiles of scrap metal, inert waste, and other selected recyclables
- Compacting, trimming, shaping, grading and levelling the cover layers
- Construction of the final cover system

- Any other operation required for the proper and efficient operation of the landfill.

At present, the Facility has a wheeled loader permanently onsite and hires a tracked excavator for waste compaction purposes.

*Recommendation 4.7 - It is recommended that for a landfill of this size, a tracked loader with waste armouring be available for waste compaction purposes as it allows for superior compaction than what can be achieved by wheeled loaders or tracked excavators without the risk of damage or punctures. A tracked loader is also significantly less expensive than landfill compactors that are used at larger landfill sites.*

All machinery, plant and equipment need to be maintained in a proper and efficient working condition, in accordance with the manufacturer's requirements. In the event of equipment or plant failure, replacement plant or equipment is required as soon as practicable to ensure the requirements of the OMP and EPL are always complied with.

## 5 SPECIAL WASTE MANAGEMENT

### 5.1 ASBESTOS DISPOSAL

Asbestos material (Special Waste Type 1) that has been accepted at the Facility in accordance with **Section 4.4.3** must be handled and disposed of in compliance with Condition 3 of the EPL which states it is:

- Only to be disposed of into a designated asbestos disposal area within the landfill;
- Not to be deposited within 2m of the final tipping surface of the landfill; and
- No works shall be carried out on the landfill that could lead to a disturbance of Special Waste Type 1.

Condition 16 is relevant to asbestos disposal as it requires the Shire to maintain a register of Special Waste Type 1 and Type 2 (biomedical waste) disposed of at the premises which shall include a plan showing the position of Special Waste Type 1 and Type 2 disposed of at the premises.

Condition 12 requires that the Shire complies with the 'Asbestos Management Plan Merredin-Chandler Road Landfill' (Merredin Shire Council, 2015). A copy the Asbestos Management Plan (AMP) is contained in **Appendix C** and relevant requirements to asbestos handling and disposal are detailed below:

*Once the material has been accepted at the site the site operator is responsible for taking the following actions.*

1. *Direct the customer to the designated asbestos disposal area and instruct the customer as to where the material must be unloaded;*
2. *Supervise the unloading to ensure that the black plastic is kept intact;*
3. *If the material becomes exposed then it should be wetted down immediately and rewrapped by the customer;*
4. *The site operator must then cover the waste as soon as practicable.*

*The wrapped asbestos material must be covered with dense inert and incombustible material to a depth of at least one (1) metre as soon as practicable after its disposal.*

#### 5.1.1 DESIGNATED ASBESTOS DISPOSAL AREA

Designated asbestos disposal cells at the facility, have historically been excavated into virgin soil outside of the main waste disposal cell. Whilst this practice complies with the licence requirements and AMP, it results in the inefficient use of space and soil on the site. ASK proposes that the Shire establish a Designated Asbestos Disposal Area (DADA) on the main above ground landfill cell to make more efficient use of the Facility's available space and soil reserves.

To comply with the licence requirements and not present unnecessary risk to staff and site users, the following measures should be adhered to:

- Choose a location for the DADA that will not result in asbestos being deposited within 2m of the final tipping surface of the landfill (i.e. deeper than 2m from the final landform surface, prior to capping). This can be accurately established once a final landform for the site is defined in a Landfill Closure Management Plan (LCMP). Care should be taken to avoid the edges of the main landfill cell where the final landform will have 1(v): 5(h) batters.
- The most suitable location for a DADA will likely be towards the centre of the main landfill cell as it will provide the maximum distance from the final tipping surface.

- The DADA should be around 8m wide to allow a heavy vehicle to reverse and unload in the area with the support of a forklift or loader.
- Construct 2m high bunds around the two long sides and one end of the DADA. The bunds should be constructed largely from Inert Waste Type 1, with clean fill used to finish the bunds to ensure safe and trafficable surfaces for a wheeled loader to operate.
- The bunded end of the DADA shall be created with a gradient that allows the wheeled loader to safely access the top of the bund to apply cover material from above if required.
- The location of the DADA should be accurately surveyed with its GPS coordinates and elevations recorded and maintained by the Shire for at least the operational life of the Facility.
- The DADA should be signposted with asbestos warning signs and 'no unauthorised entry' signs. The unbunded end of the DADA could be secured by a lock and chain to further reduce the risk of unauthorised access.
- Customers are to be directed to unload in the base of the DADA by reversing in through the unbunded end. Loads shall be deposited by hand or forklift and under no circumstances is any load to be tipped / scraped off onto the ground.
- Asbestos to be stacked/deposited no more than 1m high in the DADA (to allow for 1m of cover material to be applied without exceeding the height of the bunds)
- Facility operator to cover the asbestos with 1m of inert waste type 1 as soon as practicable.
- No compaction of asbestos is to occur; however, compaction of the cover material fill is acceptable.

*Recommendation 5.1.1 - ASK recommends that the Shire establish a designated asbestos disposal area on the main waste cell to limit the consumption of virgin ground for asbestos disposal.*

## 5.2 BIOMEDICAL WASTE DISPOSAL

The licence requirements for biomedical waste (Special Waste Type 2) disposal are like that for asbestos with Condition 3 of the EPL requiring that it be:

- Buried in a designated Special Waste Type 2 area where access is restricted to authorised personnel only; and
- No works shall be carried out on the landfill that could lead to a disturbance of Special Waste Type 2.

Condition 5 requires that biomedical waste be covered with one metre of soil or Inert Waste Type 1 immediately after disposal.

Condition 16 also applies in that the Shire must maintain a register of Special Waste Type 1 and Type 2 disposed of at the premises which shall include a plan showing the position of Special Waste Type 1 and Type 2 disposed of at the premises.

As all Special Waste Type 2 is classified as a Controlled Waste under Schedule 1 of the Environmental Protection (Controlled Waste) Regulations 2004, the Facility Staff must also ensure that the Controlled Waste Acceptance Procedures detailed in SOP 02 (**Appendix B**) are adhered to.

*Recommendation 5.2A - As the quantities of biomedical waste received at the Facility are so low, it is likely that provision of the disposal service is not economically feasible for the Shire and that if the full cost was passed on to customers, they would dispose of it at metropolitan waste*

*facilities. It is recommended that the Shire should consider no longer accepting biomedical waste at the Facility.*

*Recommendation 5.2B - As disposal requirements for Special Waste Type 1 and Type 2 are so similar, ASK recommends that if biomedical waste is to continue being received at the Facility, it should be disposed of in the DADA proposed in Section 5.1.1. This would limit the consumption of virgin ground for biomedical waste disposal and save time spent maintaining separate disposal areas.*

### 5.3 ANIMAL WASTE DISPOSAL

Condition 5 of the EPL requires that animal carcasses be covered with one metre of soil or Inert Waste Type 1 immediately after disposal to minimise odour.

*Recommendation 5.3 - As animal carcasses need to be covered immediately with one metre of soil or Inert Waste Type 1, like what is required for asbestos waste, ASK recommends that the Shire dispose of animal carcasses within the DADA proposed in Section 5.1.1. This would limit the consumption of virgin ground for animal carcass disposal and save time spent maintaining separate disposal areas*

### 5.4 LIQUID WASTE DISPOSAL

The Facility is also licensed as a Category 61 Liquid Waste Facility which enables it to accept grease trap waste, septage wastes, fire and debris washwater for disposal in an evaporation pond (**Section 3.2.13**) in accordance with Condition 3.

To comply with Condition 11 of the EPL, the Shire shall manage the evaporation pond such that:

- overtopping of the pond does not occur;
- stormwater runoff is prevented from entering the pond;
- there is no discernible seepage loss from the pond; and
- vegetation and floating debris (emergent or otherwise) is prevented from growing or accumulating in the pond.

To prevent unauthorised access the Shire shall keep the access track to the evaporation ponds locked and only provide access keys to approved customers at the gatehouse.

As all liquid wastes are classified as a Controlled Waste under Schedule 1 of the Environmental Protection (Controlled Waste) Regulations 2004, the Facility Staff must also ensure that the Controlled Waste Acceptance Procedures detailed in SOP 02 (**Appendix B**) are adhered to.



## 6 RECYCLING & RESOURCE RECOVERY

The Facility provides options for recycling and resource recovery of various waste streams. The requirements for managing these areas are provided in the following sub-sections.

### 6.1 SCRAP METAL & WHITEGOODS

An area is provided for receipt and storage of scrap metal and whitegoods. These waste streams are stockpiled prior to being removed for recycling by a private contractor.

Scrap metal and white goods stockpiles must be maintained at all times in a neat and presentable fashion and made readily accessible to the scrap metal recycler. The public must be prohibited from scavenging directly from these areas due to the health and safety risks posed.

A separate area within the vicinity of the scrap metal pile is provided for whitegoods. This is to allow sufficient space for the units to be degassed as required before collection by metal recyclers. Once these units have been degassed, they can be pushed up into the scrap metal storage area.

#### 6.1.1 DEGASSING OF WHITEGOODS

Fridges, freezers and air conditioners must be degassed before they are recycled and/ or disposed to landfill. This is due to the release of ozone gas that can occur whilst compacting of the material within landfill or at a recycling facility. Under the Ozone Protection and Synthetic Greenhouse Gas Management Act 1989 it is an offence to discharge gases that deplete the ozone layer and contribute to global warming with potential penalties of up to \$63,000 for individuals and \$315,000 for corporations.

Fridges, freezers and air conditioners should be degassed by licenced technicians prior to being transported to a recycling facility for processing or disposed to landfill where it will be compacted by machinery. Most whitegoods for recycling will be processed by metal recyclers, who may also provide a degassing service.

### 6.2 GREENWASTE

Condition 3 of the EPL allows greenwaste that is received at the Facility to be managed by mulching or burning.

Mulched greenwaste can be used for progressive rehabilitation of the landfill and can also prove useful for other purposes such as erosion management and dust suppression. If there is a need for mulched greenwaste identified in the coming months or years, the Facility Staff should seek to identify loads of uncontaminated greenwaste comprised of native vegetation and have them stockpiled in a separate area of the Facility in accordance with **Section 6.2.1**. Once a significant quantity has been received, the Shire should engage a contractor to mulch the stockpile for use in onsite landscaping and rehabilitation.

Care should be taken to avoid the mulching of greenwaste material that contains noxious weeds. Such greenwaste should instead be burnt in accordance with Section 6.2.2

#### 6.2.1 STOCKPILE MANAGEMENT

Condition 3 requires that greenwaste (and mulch) storage be managed so that:

- No more than 1000m<sup>3</sup> stored at any one time;
- Stored in piles of up to 4m in height with a 6m fire break between piles;
- All mulched green waste shall be stored in windrows;

- Windrows with an internal temperature exceeding 80 degrees Celsius shall be turned/mixed, or otherwise treated to reduce the temperature; and
- Windrows are to be maintained as parallel rows no more than 3 meters high or 4 metres wide and separated by at least 5 metres of clear ground from any other row.

### 6.2.2 BURNING OF GREENWASTE

Where greenwaste is to be burnt it must be done so in accordance with Condition 3 which states:

- Green waste is to be dried and seasoned for at least two months prior to burning
- Burning to take place in the Designated Green Waste Burning Area
- Is undertaken in a manner to minimise the generation of smoke
- Ensure that from the time burning commences until the Fire Control Officer for the premises declares the area safe that;
  - 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 700 kPA through a nozzle capable of projecting water by spray or by jet; and
  - Persons are present who have such qualifications in fire fighting as are approved.

The temperature of mulch stockpiles must be taken at least on a weekly basis in accordance with Condition 13.

## 6.3 LEAD ACID BATTERIES

Batteries contain many materials that can pose hazards to public health and the environment. For example, each car battery contains around two to three litres of sulfuric acid, as well as lead and lead compounds, all of which are toxic (Sustainability Victoria, 2019). Used lead acid batteries must be diverted from landfill.

Facility staff should direct users to offload used batteries at the designated storage area. Batteries must be stored within bunded containment and protected by a weatherproof covering. The stored batteries will be periodically collected for reprocessing. As such adequate vehicle access to the storage area is essential as the storage pallets are usually extracted by forklift to be placed on the collection vehicle.

Better practice recommends the storage of used lead acid car batteries on pallets, up to two tiers high, and then shrink wrap in clear plastic wrap ready for transport. No more than two pallets of lead acid batteries (approximately 56 batteries) should be stored at the Facility before collecting for recycling (Sustainability Victoria, 2019). The Executive Manager Engineering Services is to be notified to organise collection.

## 6.4 DRUMMUSTER

A DrumMUSTER compound is provided for the collection of eligible, cleaned chemical containers. Containers must be triple rinsed, inspected and recorded by gate staff in the AgSafe App. Shire administration will periodically review, confirm and create an invoice for reimbursement from DrumMUSTER.

Container numbers are to be monitored by staff and once the compound is  $\frac{3}{4}$  full the Executive Manager Engineering Services is to be notified to organise collection

## 6.5 WASTE OIL COLLECTION

A waste oil collection station is currently provided. The collection facility must contain a self bunded tank and be covered to prevent the ingress of stormwater.

The following best practice considerations should be incorporated into the collection area:

- Waste oil units should be as far as possible away from stormwater drains, battery stores or potential sources of acid leaks or sparks
- Protection by bollards or similar structures if the storage tank is located near vehicular traffic
- Safe and adequate access for tankers emptying the storage tank
- 'No Smoking' signage
- A spill kit should be available in the immediate vicinity, and staff should be aware of and be trained in appropriate spill response and clean-up.

Waste oil volumes must be routinely monitored, and the Executive Manager Engineering Services notified to organise the collection.

## 6.6 ELECTRONIC WASTE

E-waste is defined as electronic, electrical and battery powered items that have been discarded or no longer working. E-waste is banned from landfills under the *Waste Avoidance and Resource Recovery (e-waste) Regulations 2023*. A list of regulated e-waste is provided in **Table 6.1**.

Table 6.1: List of regulated e-waste

Category of regulated e-waste	Type of waste
Screens, information technology and telecommunications	<p><u>Television screens and monitor screens</u>, including —</p> <ul style="list-style-type: none"> <li>(a) cathode ray tube televisions and monitors;</li> <li>(b) flat display panel televisions;</li> <li>(c) flat display panel monitors</li> </ul> <p><u>Computers</u>, including —</p> <ul style="list-style-type: none"> <li>(a) desktop computers;</li> <li>(b) laptops and tablets</li> </ul> <p>Machines that perform the <u>functions of printing, copying, facsimile</u> transmission or projection Information technology equipment, including —</p> <ul style="list-style-type: none"> <li>(a) networking equipment such as servers, routers, signal amplifiers and duplicators;</li> <li>(b) web cameras;</li> <li>(c) accounting machines;</li> <li>(d) cash registers;</li> <li>(e) postage franking machines, ticket issuing machines and other similar machines</li> </ul> <p><u>Computer peripherals</u>, including —</p> <ul style="list-style-type: none"> <li>(a) internal and external devices, and cables and cords, that support or perform the functions of — <ul style="list-style-type: none"> <li>(i) data input, output or transfer;</li> <li>(ii) data storage;</li> <li>(iii) processing (including central and graphics processing units;</li> </ul> </li> <li>(b) devices that allow input to control computers such as — <ul style="list-style-type: none"> <li>(i) keyboards;</li> <li>(ii) mice;</li> <li>(iii) joysticks and gamepads;</li> </ul> </li> </ul>

	<p>(iv) controllers;</p> <p>(c) devices, cables and cords that provide power to, or charge, computers;</p> <p>(d) typewriters, word-processing machines, electronic calculators and other devices that perform functions typically able to be performed by computers</p> <p><u>Telecommunications</u> equipment, including —</p> <p>(a) mobile telephones and related batteries, chargers and accessories;</p> <p>(b) pagers;</p> <p>(c) base stations for the transmission or reception of voice, images or other data;</p> <p>(d) transmission-receive apparatus for televisions and radios;</p> <p>(e) cordless telephones and telephone sets;</p> <p>(f) telephone answering machines;</p> <p>(g) telephonic or telegraphic switching apparatus</p>
Lighting and lamps	<p>Compact fluorescent lamps</p> <p>Straight tube fluorescent lamps</p> <p>The following lamps commonly known as Special Lamps —</p> <p>(a) mercury or sodium vapour lamps;</p> <p>(b) high and low pressure sodium lamps;</p> <p>(c) hot cathode fluorescent lamps;</p> <p>(d) other lamps used by professionals or specialists, or in similar work</p> <p>Light emitting diode (LED) lighting products</p> <p>Portable lights and lamps</p> <p>Household luminaires, including —</p> <p>(a) ceiling lights (including chandeliers), wall lights and floor lights;</p> <p>(b) electric table, desk, bedside and floor lamps;</p> <p>(c) household incandescent light globes;</p> <p>(d) lighting sets of Christmas trees and displays;</p> <p>(e) bicycle lighting and signalling equipment</p>
Large appliances when used in a home, office or professional environment	<p>Dishwashing machines</p> <p>Ovens, furnaces, extraction equipment, rangehoods and other similar cooking equipment</p> <p>Washing machines and driers, or a combination of both</p> <p>Large dispensers such as non-cooled vending machines, commercial coffee machines, coffee vending machines, ticket vending machines and other similar machines</p>
Batteries	All batteries
Temperature exchange equipment when used in a home, office or professional environment	<p>Compression-type refrigerators</p> <p>Absorption-type refrigerators</p> <p>Freezers (chest type or upright type)</p> <p>Air conditioners (installed or portable)</p> <p>Other cooling systems or equipment (including dehumidifiers and heat pump driers)</p> <p>Cooled dispensers for food or drinks</p> <p>Heating and ventilation equipment</p>
Medical devices	Medical devices that would not, because of their shape or size, fit into a container measuring 50 cm x 50 cm x 50 cm

Under the regulations, all reasonable steps must be taken to ensure e-waste that is received that is mixed with other waste is separated. This places the onus of responsibility on the gatehouse operator to ensure that waste is inspected as far as practicable, to ensure that no undeclared e-waste is mixed in the waste load.



E-waste must be categorised by gatehouse staff in accordance with the DWER requirements. The gatehouse waste data collection system (Cooeee) will prompt staff for this information and contains the relevant categories for this information to be collected.

Separated e-waste (excluding 'large appliances') must be stored in a container that is within bunded containment and protected from the weather to help control dust particles and run-off being released that could contaminate land, surface water and groundwater.

The e-waste regulations require that e-waste must not be stored for more than 12 months after the month it is received. E-waste volumes must be routinely monitored, and the Executive Manager Engineering Services notified to organise collection.

## 6.7 REUSE SHOP

The Facility has a shed for the sale of reusable items which is large enough to cater for the delivery of bulky items and be easily monitored by the gatehouse operator. Drop off items need to be sorted and checked by staff members to ensure it meets product acceptance standards and is suitable for resale.

The reuse area needs to be properly managed and ensure that unsold items are disposed to landfill regularly. There is a risk that this area can become a dumping area for things 'that seem like someone should fix up', rather than an area of items of value. Stock rotation practices are important to minimise the build-up of unsold items.

### 6.7.1 RECORDING OF IN-TAKE AND SALES

Accurate records of intake and sales are to be undertaken. The gatehouse data recording system (Cooeee) must be used to record sales and the quantity of materials recovered. This is to provide records of the value and amount of material diverted from landfills for mandatory reporting purposes to DWER.

### 6.7.2 LEGAL REQUIREMENTS

There are important legal factors that must be adhered to for the operation of the resale area. These include:

- mandatory safety standards and product resale bans administered by the Australian Competition and Consumer Commission (ACCC); and
- compliance with the Western Australian Electricity Act 1945 for sale of electrical appliances and equipment.

#### 6.7.2.1 *Mandatory safety standards and product resale bans*

Reusable items may be unsafe if they are broken or damaged, have been repaired incorrectly or are missing safety instructions. Reusable items could also pose a hazard if they are so antiquated they fail to meet the requirements of current product safety standards and bans for similar products.

As such, the sale of reusable items at Reuse shops must comply with mandatory safety standards and product bans. Australian Mandatory Safety Standards set the requirements for appropriate safety or information features on a product. There are also a number of products that cannot be sold or passed on in Australia and the sale of these products is banned. A list of products with mandatory standards regulated by the Competition and Consumer Act 2010 is contained on the Australian Competition and Consumer Commission (ACCC) website (WALGA, 2016).

To limit legal liability upon Local Government managing or operating a Reuse shop, any items for resale must be assessed in relation to these requirements prior to sale.

#### 6.7.2.2 *Sale of electronic waste – testing and tagging*

Organisations supplying or offering to supply second-hand electrical equipment must make certain information available to prospective buyers and be aware of the legal obligations imposed on them under electricity safety legislation. If the equipment is not safe and causes an accident, the Local Government may be liable.

The Electricity Act 1945 prohibits the sale of household electrical appliances unless 'approved' by an Australian Regulatory Authority. Such approval may be issued if the person who intends to sell the appliance satisfactorily demonstrates that he or she has accepted the responsibility of ensuring that the appliance is safe for use. The most common way to achieve this is to provide proof that the appliance complies with standard specifications and tests for electrical safety (WALGA, 2016)

The Australian/New Zealand Standard AS/NZS 3760 covers the requirements for in-service inspection and testing of electrical equipment. This includes the safety inspection for the test and tag of single and polyphase (240v - 415v) portable electrical equipment, and machinery connected to supply by a flexible cord which is currently in-service, returning to service, available for re-sale or hire. These obligations are in place to ensure the safety of the new operator of the second-hand electrical equipment.

## 7 HEALTH & SAFETY PROCEDURES

The Shire shall take all necessary precautions to ensure the safety of all personnel engaged at the Facility and all members of the public visiting the Facility. It shall also be responsible for ensuring that all employees are advised concerning any potential hazards at the site, hazard avoidance, mitigation measures and observation of safe working practices.

All new Facility personnel shall undergo a full induction prior to commencing work at the Facility. The inducted Site Supervisor can conduct inductions for operational staff or subcontractors conducting site works.

The Shire shall provide, equipment and maintain an adequate first-aid kit at the site and ensure that a person trained in first aid is on site during all operating times. The Shire shall also ensure that there are adequate communications established on the Facility at all times.

It is the Shire's responsibility to be familiar with the requirements of the Work Health and Safety Act 2020 and the associated regulations. The Shire and its sub-contractors shall properly discharge the duties and all other obligations that the Act places on an employer, so that all employees are aware of their responsibilities under the Act.

All necessary hazard assessments shall be completed, and risk controls implemented and documented. All necessary protective clothing and safety equipment shall also be available and/or issued by the Shire to its employees of the Facility, maintained in good order and used as necessary. The Shire will ensure that the Facility's infrastructure is suitable to meet the WH&S requirements of all personnel and site users.

All contracts and tenders relating to operations at the Facility will ensure that contracting companies comply with applicable insurance and health and safety requirements. These companies include (but are not limited to) waste collection contractors, revegetation and landscaping companies, recycling contractors and environmental consultants.

## 8 EMISSIONS MANAGEMENT & MONITORING

### 8.1 STORMWATER

Poor control of stormwater can have impacts not only on receiving waters downstream of the site (e.g. due to entrained litter, sediment and chemical contaminants), but also on the practicality and cost of site operations. Providing adequate surface water drainage is therefore a critical component of any landfill facility design.

Operationally the following must be implemented to manage surface water flows:

- Surface water is to be diverted away from the landfill cell and waste stockpile areas through the use of bunds constructed from insitu material to limit the ingress of surface water flows
- Waste must only be placed within a defined trench or an area enclosed by earthen or other bunds
- Direction of uncontaminated stormwater run-off, such as water from roofs and site drainage, away from the filled and peripheral areas and associated leachate and/or contaminated water drainage systems, into dedicated stormwater drains.
- Ensure stormwater drains on the premises are kept clear of waste to allow for their effective use
- Development of a perimeter drainage system along the toe of the landfill to collect stormwater.

### 8.2 LEACHATE

Leachate has the potential to negatively impact groundwater aquifers in the vicinity of a landfill. Given the absence of an engineered liner there is no leachate collected below the landfill. To minimise the risk of this occurring, **Condition 3** of the licence requires that the Shire maintain a separation distance of at least three metres between the base of the current and future waste disposal areas and the highest level of the groundwater.

Leachate generation is to be managed through effective operational site practices including:

- Only operating one active landfill tipping area with a maximum linear length of 30 meters and vertical height of 2 meters
- Regularly covering waste
- Directing clean stormwater run-off away from the active landfill area
- Regular compaction and covering of the landfilled waste
- Keeping any 'contaminated' stormwater run-off generated within the active tipping area separate from clean stormwater run-off
- Intermediate covering of landfilled areas that will be inactive for a period of 90 days or more
- Progressively constructing the final capping across the site as the final landform is reached.

### 8.3 LANDFILL GAS

Landfill gas (LFG) is a natural by-product of the anaerobic biological decomposition of the organic fraction of solid waste disposed of in putrescible landfills. LFG consists primarily of Methane (CH<sub>4</sub>) and Carbon Dioxide (CO<sub>2</sub>) but may contain many other constituents in small quantities. Once the LFG has been generated it often moves through and out of the landfill via the path of least resistance.

LFG is a potential health and safety risk as:



- It can cause explosions when the concentration of Methane (CH<sub>4</sub>) is between 5% and 15% by volume in air and the gases are contained in an enclosed space
- It can cause fire when the concentration of Methane (CH<sub>4</sub>) is above 15% by volume in air
- Both of the major components of LFG, CH<sub>4</sub> and CO<sub>2</sub>, are asphyxiates; in closed structures or areas where LFG could potentially accumulate, LFG may present an asphyxiation hazard
- It may contain toxic or carcinogenic compounds that can pose a threat to human health if released into the atmosphere.

Depending upon the location and construction of a structure, the risk for accumulation of LFG within it needs to be considered and may vary considerably. Structures on a landfill site, or near a landfill, particularly those involving enclosed spaces, should be evaluated for exposure to LFG migration. For any structure where migrating LFG poses a risk, whether an active control system is in place or not, a permanent or portable CH<sub>4</sub> monitoring system should be employed.

Considering the low annual volumes of waste received at the Facility, the LFG generated is expected to be in small volumes and present a low risk. However, the following operational measures will be implemented to reduce the risk associated with LFG generation; and minimise emissions:

- Facility staff will be trained on the health and safety risks posed by LFG emission and migration
- Where possible, organic matter should be included with soil used for daily cover to facilitate oxidising conditions for the breakdown of methane
- Greenwaste will be burned on-site to eliminate any additional LFG production from the biodegradation of this waste stream in landfill
- Surface water will be managed to reduce the generation of leachate within the waste mass, which in turn will limit LFG generation
- A risk evaluation for LFG accumulation will be undertaken for all existing and new structures located at the Facility
- Buffers will be maintained from buildings and structures to minimise the risk of off-site migration of LFG.

## 8.4 ODOUR

The biodegradation of wastes in landfill can result in the formation of offensive odours that have the potential to impact the amenity of surrounding land users. Odour may also be associated with load transport, the tipping face, leachate and LFG. The Shire shall ensure that odour emitted from the Premises does not unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person who is not on the Premises.

The location of the Facility is favourable in regard to odour control as it provides a significant buffer from sensitive surrounding land uses. In accordance with BPEM guidelines, the following management practices and mitigation measures should be implemented to further minimise odour emissions during the operation of the Facility:

- All odour generating wastes delivered to the Facility must be contained in a covered vehicle to minimise potential odour emissions;
- The waste types accepted at the Facility must be controlled in accordance with the waste acceptance procedure;
- The size of the working face must be kept as small as possible;
- Not depositing waste in standing water;
- Depositing wastes in thin layers to optimise compaction;

- Waste must be covered on a daily basis;
- Odorous waste must be covered as soon as practicable upon receipt; and
- Minimising disturbance of previously filled areas.

## 8.5 LITTER

Litter control is a major issue for landfill management as it can result in water pollution and is highly visible to site users, regulators and surrounding land users. The Facility is surrounded by a buffer of native vegetation in all directions. The nearest sensitive receptor is approximately 650m to the southeast. To reduce the risk of impacts on surrounding receptors, effective litter control is an essential site management tool.

Condition 7 of the EPL requires the Shire to take all reasonable and practical measures to ensure that no wind-blown waste escapes from the premises and that wind-blown waste is collected on at least a weekly basis and returned to the tipping area.

A hierarchy of litter control measures is implemented at the Facility as discussed in the sections below.

### 8.5.1 LOAD CONTROL

The following load control procedures are to be implemented to help prevent the generation of litter from incoming loads of waste:

- Facility users are required to have loads secured with nets and tarpaulins to prevent the accumulation of litter along principal site access routes
- Regular inspections of incoming vehicles are undertaken to ensure loads are covered, secure, and not contributing to litter
- Regular inspections of primary access routes are undertaken with active litter clean up implemented as required.

### 8.5.2 WASTE HANDLING

Most of the litter arising from landfill operations results from wind acting on the waste at the point of tipping and during the initial compaction practices. Litter loss at the point of tipping will be minimised where practicable by:

- Only operating a single open tip face
- Keeping the working area as tight as practicable
- Levelling and compacting waste regularly
- Regularly applying cover material to the required depths.

### 8.5.3 PORTABLE LITTER SCREENS

- Portable litter screens can be utilised down-wind and as close to the tipping face as possible;
- Screens should be cleared frequently to prevent them from becoming overloaded and potentially being blown over; and
- Screens should be relocated with changes in the wind direction and tipping face.

### 8.5.4 PERIMETER FENCING

- Ring lock fencing shall be maintained around the Facility perimeter.

- Weekly litter collections shall be undertaken around the perimeter fence in accordance with Condition 7.

### 8.5.5 LITTER COLLECTION

As it is practically impossible to totally prevent litter escaping from the Premises, litter collections are to be regularly undertaken along access roads and buffer zones surrounding the Facility. The volumes of litter collected should be recorded to assess the effectiveness of the prevention measures outlined above.

## 8.6 VECTORS

Potential disease vectors at a landfill can include rats and other rodents, foxes, feral cats and dogs, insects, birds and other animals, each of which can carry disease and be a threat to public health. Each type of vector can live and multiply at a landfill and are potentially of concern to site operators, regulators, public health professionals, and the general public.

The Shire will implement control measures to prevent infestations of pests, flies, and vermin at the Facility. Vector control at the Facility is achieved via the following mechanisms:

- Maintenance of a pest management program and treatments undertaken where required.
- Regular pushing up and compaction of the waste in accordance with **Section 4.6.2**.
- Application of adequate cover material in accordance with **Section 4.6.3**.
- Adequate perimeter fencing and gates.
- Elimination of ponding water where practicable.
- Frequent removal of litter and contaminants and regular cleaning and maintenance of tipping areas will be undertaken.
- Application of adequate cover material with putrescible waste covered daily.

Facility staff are expected to monitor the levels of key vectors as part of daily management. Should the presence of any key vectors occur at higher than baseline levels the Facility staff will:

- Inform the Executive Manager Engineering Services of the issue.
- Increase monitoring intensity (either internally or via the contracting of pest control experts).
- Refine operational practices to reduce populations where possible.

## 8.7 NOISE

The Shire will take all reasonable and practical measures to prevent or minimise noise emissions from all operations at the Facility including:

- Ensure machinery operation and transport movements occur during standard business hours
- Operations emissions and operating times will comply with the Environmental Protection (Noise) Regulations 1997 (predicted noise emissions are not expected to exceed the regulations)
- All mobile plant used on-site is regularly maintained
- Speed limits enforced on all site access roads
- A Complaints Register is maintained on-site to record any complaints received; this register should include the date, nature, and resolution action of any complaints received.

## 8.8 DUST

The Shire will take all reasonable and practical measures to prevent and minimise dust emissions from the Facility. These measures include:

- Operations are undertaken to ensure that minimal visible dust is generated
- Enforcing speed limits on-site to minimise wheel generated dust
- A Complaints Register is maintained on-site to record any complaints received; this register includes the date, nature, and resolution action of any complaints received.

## 8.9 COMPLAINTS MANAGEMENT

The Shire maintains a complaints management system. Any complaints made to the Facility staff concerning operations at the Facility are to be directed to the Executive Manager Engineering Services for follow-up.

**Condition 18** requires the following details to be kept on each complaint made regarding the Facility operations:

- the name and contact details of the complainant, (if provided);
- the time and date of the complaint;
- the complete details of the complaint and any other concerns or other issues raised; and
- the complete details and dates of any action taken by the licence holder to investigate or respond to any complaint.



## 9 EMERGENCY MANAGEMENT

### 9.1 BUSHFIRE

A bushfire that occurs in the bush may also threaten structures and dwellings. Some of the waste in a landfill and landfill gas are flammable and can be readily ignited. Bushfire risk is minimised by the use of firebreaks around the boundaries with neighbouring properties and a buffer of cleared ground between the landfill face and most vegetation. Litter control can help prevent the spread of fire on the site.

In the event of a bushfire near the Facility, staff are to:

- Contact the Executive Manager Engineering Services
- Alert firefighting crews
- Evacuate all public, customers and non-essential staff away from the area
- Try to prevent the spread of the fire to the landfill waste
- Attempt to extinguish the fire or contain the fire until further assistance arrives
- Evacuate if necessary, or if ordered by the Coordinator Waste Services.

### 9.2 LANDFILL FIRE

Landfills contain many flammable materials including paper, plastics, fabric, wood and chemicals. Landfills may also contain highly flammable methane gas. Landfill fires can be started by purposeful ignition, by accident from staff or customers, or by spontaneous ignition (for example, from incompatible chemicals coming together and reacting).

In the event of a landfill fire, Facility staff are to:

- Alert firefighting crews
- Contact the Executive Manager Engineering Services
- Evacuate all public, customers and non-essential staff away from the area
- Try to prevent the spread of the fire within the landfill waste if safe and practicable
- Evacuate if necessary, or if ordered by the Executive Manager Engineering Services.

### 9.3 LOADS ON FIRE PROCEDURE

Loads on fire are to be treated as an emergency so a quick response is essential. Loads on fire are wastes that are either on fire or that are smouldering or smoking. Loads thought to be on fire while in transit to the landfill should be reported in advance to the Facility staff. The early advice allows Facility staff to prepare to tackle the fire upon the vehicle's arrival.

In the event of a load on fire, Facility staff are to:

- Alert firefighting crews
- Contact the Executive Manager Engineering Services
- Provide clear passage through the gatehouse area without bringing the vehicle to rest. The stoppage of the vehicle can facilitate oxygen take up by the fire and aggravate the fire.
- Escort the vehicle away from the active landfill cell and to an area with a sufficient buffer from vegetation, waste or other combustible material
- If safe to do so, empty a load of waste onto a hardstand

- Attempt to extinguish the fire or contain the fire until further assistance arrives.

## 9.4 FUEL AND CHEMICAL SPILL

Fuel and chemicals such as used oil or other polluting chemicals are hazardous to human health and any spills have the potential to pollute the soil and groundwater. All spills are therefore to be treated immediately and a very large spill or a spill of a dangerous chemical will constitute an emergency.

In the event of a hazardous fuel or chemical spill, Facility staff are to:

- Cease all activities in the area and advise the Executive Manager Engineering Services
- Move all staff and visitors away from the impacted area and remain upwind and uphill of the area
- If anyone has been contaminated, provide first aid (using appropriate PPE to avoid additional exposure), remove contaminated clothing and wash skin with soap and water
- If there are any health impacts, or if there is a risk to health, safety or the environment, call DFES on 000 and report a hazardous materials spill and request attendance
- Nominate a staff member to wait at the front gate to meet emergency services and guide them to the correct area
- Demarcate the impacted area and an exclusion area if safe to do so (e.g. with traffic cones or danger tape)
- If the spill is not hazardous (e.g. engine oil or similar) and it is safe to do so, carry out clean up using correct safety procedures
- Try and obtain records or other information to help identify the substance and its source
- Dispose of contaminated soils and materials in accordance with the DWER Landfill Waste Classification and Waste Definitions (1996).

## 9.5 ASBESTOS EXPOSURE MANAGEMENT

Asbestos is a potentially hazardous material to human health. It is a significant work health and safety hazard if an event occurs that results in exposed asbestos material at the Facility. Such events require immediate action and are treated as an emergency.

Whilst friable asbestos should not be accepted at the Facility, it may sometimes be 'hidden' in loads. In the event of friable asbestos exposure during handling or unloading, Facility staff must:

- Contact the Executive Manager Engineering Services
- Evacuate all public, customers and non-essential staff away from the area
- Issue responding staff with appropriate masks and protective disposable clothing
- Manoeuvre vehicles and staff responding to the incident upwind of the exposed asbestos
- Wrap or contain in a manner that prevents asbestos fibres from entering the atmosphere
- Prevent entry to the area until further assistance arrives and site evacuation and clearance is complete.

The Facility AMP provides further detail on asbestos protection and exposure management.

## 9.6 INJURIES AND ACCIDENTS

Landfills have many hazards that can cause serious injury to a person. The Shire minimises these hazards by taking actions in accordance with the Facility's Health and Safety Procedures. In the event of a serious injury to a person, Facility staff should:

- Request ambulance and/or medical assistance
- Contact the Executive Manager Engineering Services
- Make the area safe or move the injured person to a safe area
- Administer first aid until further assistance arrives.

## 10 DATA RECORDING & REPORTING

### 10.1 GENERAL RECORD KEEPING

**Condition 19** of the EPL requires the Shire to maintain accurate and auditable records that include the following records, information, reports, and data:

- the calculation of fees payable in respect of this licence;
- monitoring programmes undertaken in accordance with conditions 13 and 14 of this licence; and
- complaints received under condition 18 of this licence.

In accordance with **Condition 20**, all information and records must:

- be legible;
- if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
- be retained by the licence holder for the duration of the licence; and
- be available to be produced to an inspector or the CEO as required.

### 10.2 INCIDENT REPORTING

The Shire shall report any incident that represents a threat to the environment, or which may lead to a breach of licence conditions to DWER in accordance with Condition 17. To comply with Condition 17 the Shire shall ensure that the parameters listed in Table 8 of the EPL (**Table 10.1** below) are notified to the DWER in accordance with the notification requirements detailed within it.

*Table 10.1: Notification requirements*

Parameter	Notification Requirement	Format or form
Scheduled green waste burning event	The CEO is required to be informed at least 24 hours prior to a scheduled green waste burning event.	None specified
Unauthorised fire	Within 14 days of unauthorised fire	None specified
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.	

Examples of such incidents that require reporting include, but are not limited to:

- Identification of non-domestic quantities of hazardous waste mixed among solid waste;
- Entry of leachate or waste into the stormwater management system;
- Identification of any failure of an environmental protection system; and
- Any other incident or observation that could potentially pose an immediate environmental hazard outside normal operating conditions.

A written incident report will be provided to DWER if requested by an authorised officer. The report will include, but not be limited to, the following details:

- The cause, time and duration of the event;
- The type, volume and concentration of each pollutant discharged as a result of the event;
- The name, address and business hours telephone number of employees of the Shire or other witnesses;

- Actions taken by the Shire in response to the event; and
- Details of any measure taken or proposed to prevent or militate against a recurrence of such an event.

### 10.3 ANNUAL AUDIT COMPLIANCE REPORT

Condition 15 requires the Shire to undertake an audit of the Facility's compliance with the conditions of the licence during the preceding annual period (1 July to 30 June); and prepare and submit to the CEO by 30 August each year an Annual Audit Compliance Report in the approved form.

The approved form is available on the Department of Water and Environmental Regulation (DWER) website.

### 10.4 DWER MANDATORY REPORTING

The *Waste Avoidance and Resource Recovery Regulations 2008* (WARR Regulations) require local governments who provide waste services to lodge annual returns with the DWER CEO on or before 1 October in each year. The annual returns must contain information for the most recently completed financial year. Liable local governments must categorise and report waste information using categories and methods approved by DWER.

Waste Data Online is the approved form to be used to lodge annual returns under the WARR Regulations.

The gatehouse waste data system (Cooee) has been set up to capture the waste information in the required categories and approved methods for each load presented at the gatehouse. The Shires Waste Coordinator will undertake the reporting based on the information contained within Cooee.



## 11 FACILITY CLOSURE & REHABILITATION

The operation of a landfill, no matter how well managed, will result in land being contaminated with a range of pollutants that have the potential to cause impacts such as the pollution of surface and groundwater, contamination of soils, and the migration of landfill gas (LFG).

Landfill sites therefore require some form of post-closure management to ensure that the level of impact is maintained within acceptable limits. Failure to do so can result in serious pollution of water, which may damage ecosystems or prevent surrounding landowners from using the water for irrigation or other purposes.

To minimise environmental impacts after the closure of the Facility a Landfill Closure Management Plan (LCMP) has been developed for the Facility that includes:

- Final landform and surface contours
- Proposed filling schedule and timeframes to achieve final waste contours
- Stormwater and gas management systems
- Landfill capping design
- Progressive rehabilitation recommendations
- Post-closure management and monitoring requirements
- Revegetation requirements.

## 12 FACILITY ASSESSMENTS

Regular and formalised internal assessments or inspections of the Facility are important to ensure compliance with the EPL and this OMP. It is recommended that inspections be undertaken on a daily, weekly, monthly and annual basis as detailed in the following sub sections.

### 12.1 DAILY FACILITY CHECKLIST

The Waste Management Facility Operator shall inspect the Facility and complete a checklist on a daily basis to ensure it complies with the EPL and this OMP.

Observations should be made throughout the day and be used to complete a 'daily site checklist' before the close of business each day.

The checklist should include, but not be limited to, the following observations and actions:

- Facility security (was the gate securely locked in the morning when staff arrived?);
- Damage to the perimeter fence;
- Illegal dumping near perimeter fence;
- Visible emission of dust or windblown litter from the Premises;
- Fire incidents;
- Emission of dirty stormwater from the Premises;
- Waste placement and cover in accordance with the EPL;
- Oil or chemical spill incidents;
- Tyres stored and disposed of appropriately; and
- Compliance with waste acceptance procedures.

### 12.2 WEEKLY

The Waste Management Facility Operator shall assess the Facility on a weekly basis to ensure that it complies with the EPL and this OMP. The assessment should be recorded on a standardised assessment form/checklist.

The weekly assessments should include, but not be limited to, the following:

- Inspection of firefighting equipment and facilities for damage;
- Inspection of the volumes of recyclable materials stored onsite (waste oil, batteries, greenwaste etc.), and whether actions need to be taken to have them processed and/or removed from the site;
- Checking that policies and procedures are clearly displayed in the office, and that the appropriate records and documentation are stored on the Premises as required by the EPL;
- Checking that first-aid kits are fully stocked;
- Checking that actions have been taken to repair any damage to the perimeter fence identified during the week;
- Checking that any waste that has been washed or blown away from the tipping area is collected and returned to the tipping area;
- Inspection of the site access roads and areas surrounding the Facility for the presence of any windblown litter; and

- Checking that waste placement and burial has been occurring in accordance with the filling plan and the EPL.

### 12.3 MONTHLY

The Executive Manager Engineering Services should undertake a monthly assessment of the Facility to ensure that it is being managed in accordance with this OMP and maintaining compliance with the relevant conditions of the Facility EPL. The assessment should be recorded on a standardised assessment form/checklist.

The monthly assessment program should include, but not be limited to, issues such as operational practices; stormwater; the presence of odour, dust, litter, disease vectors and noxious weeds; signage condition; OH&S; fence integrity; fire and safety equipment and vegetation health in rehabilitated areas. The name of the individual undertaking the inspection and the date of the inspection shall also be recorded.

### 12.4 ANNUAL

The Shire (or a qualified third party) shall undertake a comprehensive assessment of the Facility against the Facility EPL, this OMP, and best practice guidelines on an annual basis. The assessment will be used to monitor compliance with the OMP and EPL, and track improvements towards best practice environmental management.

## 13 RECOMMENDATIONS

*Recommendation 4.3 - Consider installation of automated sliding gates with swipe card or NFC access to enable authorised contractors and commercial operators to attend the Facility outside of usual operating hours, without the need to distribute keys or have Shire employees accompany them. If implemented, it is also recommended that a CCTV system be installed at the gate to monitor vehicles accessing the site out of hours.*

*Recommendation 4.5 - Consider installation of a weighbridge to enable the recording and charging of waste loads on a per tonne basis. This could assist the Facility's future use as a regional waste site as it will provide more accurate and transparent recording and reporting of waste loads compared to volumetric estimates.*

*Recommendation 4.6.1 - It is recommended that the practice of operating separate cells for C&D waste, timber, and skip bin waste be ceased, with these waste stream instead disposed of to the main cell to improve compaction rates and cover use efficiency.*

*Recommendation 4.6.3 - It is recommended that the Shire consider making a licence amendment application to allow waste to be covered with 150mm of cover material daily, rather than the 230mm currently stipulated. ASK is unaware of other landfills being required to apply this much daily cover for putrescible waste.*

*Recommendation 4.7 - It is recommended that for a landfill of this size, a tracked loader with waste armouring be available for waste compaction purposes as it allows for superior compaction than what can be achieved by wheeled loaders or tracked excavators without the risk of damage or punctures. A tracked loader is also significantly less expensive than landfill compactors that are used at larger landfill sites.*

*Recommendation 5.1.1 - ASK recommends that the Shire establish a designated asbestos disposal area on the main waste cell to limit the consumption of virgin ground for asbestos disposal.*

*Recommendation 5.2A - As the quantities of biomedical waste received at the Facility are so low, it is likely that provision of the disposal service is not economically feasible for the Shire and that if the full cost was passed on to customers, they would dispose of it at metropolitan waste facilities. It is recommended that the Shire should consider no longer accepting biomedical waste at the Facility.*

*Recommendation 5.2B - As disposal requirements for Special Waste Type 1 and Type 2 are so similar, ASK recommends that if biomedical waste is to continue being received at the Facility, it should be disposed of in the DADA proposed in Section 5.1.1. This would limit the consumption of virgin ground for biomedical waste disposal and save time spent maintaining separate disposal areas.*

*Recommendation 5.3 - As animal carcasses need to be covered immediately with one metre of soil or Inert Waste Type 1, like what is required for asbestos waste, ASK recommends that the Shire dispose of animal carcasses within the DADA proposed in Section 5.1.1. This would limit the consumption of virgin ground for animal carcass disposal and save time spent maintaining separate disposal areas*

## REFERENCES

- Bureau of Meteorology (2024). Climate Data Online. Australian Government. Available at <http://www.bom.gov.au/climate/data/index.shtml>
- Environmental Protection Authority (EPA)(2005). **Guidance for the Assessment of Environmental Factors - Separation Distances between Industrial and Sensitive Land Uses. No. 3.** Available online at <https://www.epa.wa.gov.au/>
- EPA Victoria (2010). **Best Practice Environmental Management: Siting, design, operation and rehabilitation of landfills.** Melbourne, VIC.
- Department of Water and Environmental Regulation (DWER) (2019). **Guideline - Odour emissions.** Available online at <https://www.wa.gov.au/government/publications/guideline-odour-emissions>
- DWER (2023). **Amendment Report – L8513/2010/2 – 02 May 2023.** Available online at <https://www.der.wa.gov.au/our-work/licences-and-works-approvals/current-licences>
- Department of Agriculture and Food WA (2010). **Water Management Plan for the Town of Merredin.** Available online at <https://www.wheatbelt.nrm.org.au/knowledge/water-management-plan-town-merredin>
- ISWA (2010). **Landfill Operational Guidelines.** International Solid Waste Association.
- Shire of Merredin (2015). **Asbestos Management Plan – Chandler Road Landfill.**
- Sustainability Victoria (July 2019). **Managing batteries at resource recovery centres fact sheet.** Available online at [www.sustainability.vic.gov.au](http://www.sustainability.vic.gov.au)
- WALGA (2016). **Better Practice Guidelines Reuse Shops.** Available online at [better-practice-reuse-shops \(wastenet.net.au\)](http://better-practice-reuse-shops(wastenet.net.au))



## APPENDIX A - SOP 01: CELL DEVELOPMENT & WASTE HANDLING



Chandler Road Waste Management Facility  
**STANDARD OPERATING PROCEDURE**  
**SOP 01: Cell development and waste handling**  
Shire of Merredin

Revision History Log			
Version #	Revision Date	Author	Changes
1A	12/08/2024	SBG	Original version

**APPROVALS**

Version 1.A

Approved by: \_\_\_\_\_

Date: \_\_\_\_\_



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**STANDARD OPERATING PROCEDURE**  
**SOP 01: CELL DEVELOPMENT AND WASTE HANDLING**

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## 1 PURPOSE

The purpose of this Standard Operating Procedure is to ensure that waste disposal areas (cells) are established in a progressive manner and appropriately filled, compacted, and covered in accordance with the Facility's Environmental Protection Licence and industry best practice.

The appropriate establishment of waste disposal areas (cells), waste placing, compacting and covering the waste in line with best practice standards is important as it:

1. Establishes waste disposal areas (cells) in a logical order, ensuring progressive capping and rehabilitation is promptly achieved; thus minimising environmental impacts from uncapped active areas of the landfill
2. Maximises landfill airspace use and increases the lifespan of the landfill
3. Minimises soil covering costs and allows for the use of any cover and capping materials that become available during the operational life of the landfill.

## 2 SCOPE

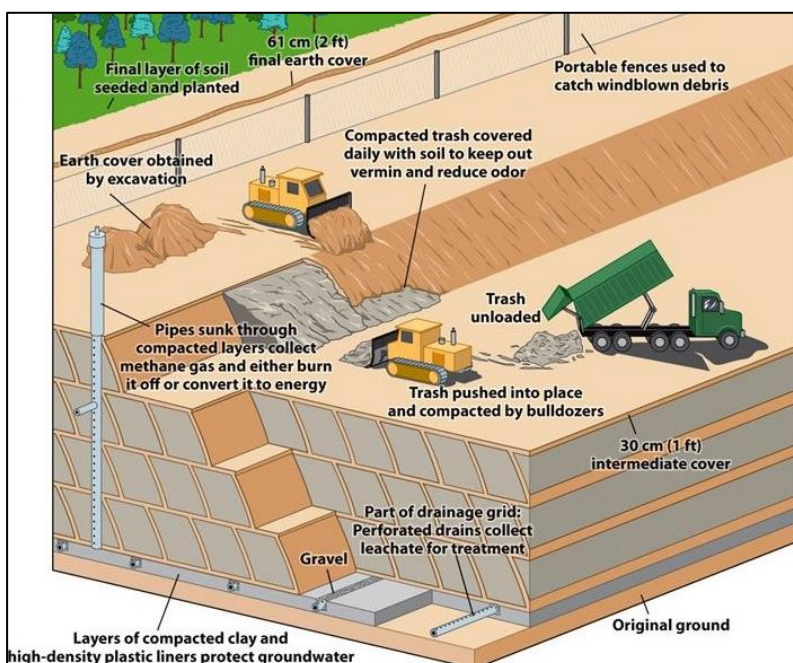
This Standard Operating Procedure applies to the establishment of cells, waste placement and compaction, and covering of waste at the Chandler Road Waste Management Facility.

## 3 PROCEDURE OUTLINE

### 3.1 PLANNING AND BUILDING CELLS

The basic idea is to build a mountain made of waste. Once a layer of cells is finished, it is intermediately capped, and the next cell is started alongside. Once all the cells at that level in the stage area are completed, a cell is established above and waste begins to be placed on top of it. An intermediate cap is typically placed over any area that will not receive additional waste for more than 3 months and comprises of approximately 300mm of soil. **Figure 3.1** shows what this would look like in a working environment.

*Figure 3.1 – Example of a working Landfill*



## 3.2 FILLING AND COMPACTING PROCEDURE

### 3.2.1 Designate an operating face

The optimal size of the operating face for a small rural landfill should be no bigger than 100m<sup>2</sup>. The facility EPL allows for a wider operating face, but for rural landfills the additional area is generally not required and would result in excessive use of daily cover.

### 3.2.2 Remove temporary soil cap from previous day

At the beginning of each day, remove as much of the daily cover layer of soil that was used to cover the section overnight. Put this soil aside to be used again as daily cover at the end of the day. This practice allows for more efficient use of onsite covering soil and ensures that the landfill airspace isn't taken up with unnecessary amounts of soil.

### 3.2.3 Dumping in a logical order

Make sure that the place for vehicles to tip their waste is obvious and close to the working face. This is to reduce the distance required to push the waste.

### 3.2.4 Consolidate the waste

If the waste is not tipped close to the working face, or waste is being tipped in multiple locations across the working face, consolidate this waste with the tracked loader/compactor and bring it together in a large pile as close to the working face as possible.

It is best practice to try to crush heavier, sturdier waste (like C&D waste, if not being recycled) and place it on the bottom while keeping lighter, more compactable waste (like household waste and C&I) for the top to fill in the gaps.

This is not always achievable, especially for small landfills, however the concept is still useful to consider when directing loads for tipping and achieving the most efficient compaction.

### 3.2.5 Create a 5:1 slope

The waste should be pushed up the slanted wall in as thin a layer as possible – this will make for more efficient compaction as shown in **Figure 3.2**.

The thin layer of waste is called a "lift" and should be no deeper than 500mm. Each "lift" layer should aim to create a final slope that is 5:1. A lift should never be more than 2 metres high.

Figure 3.2 – Placement and Compaction Procedure

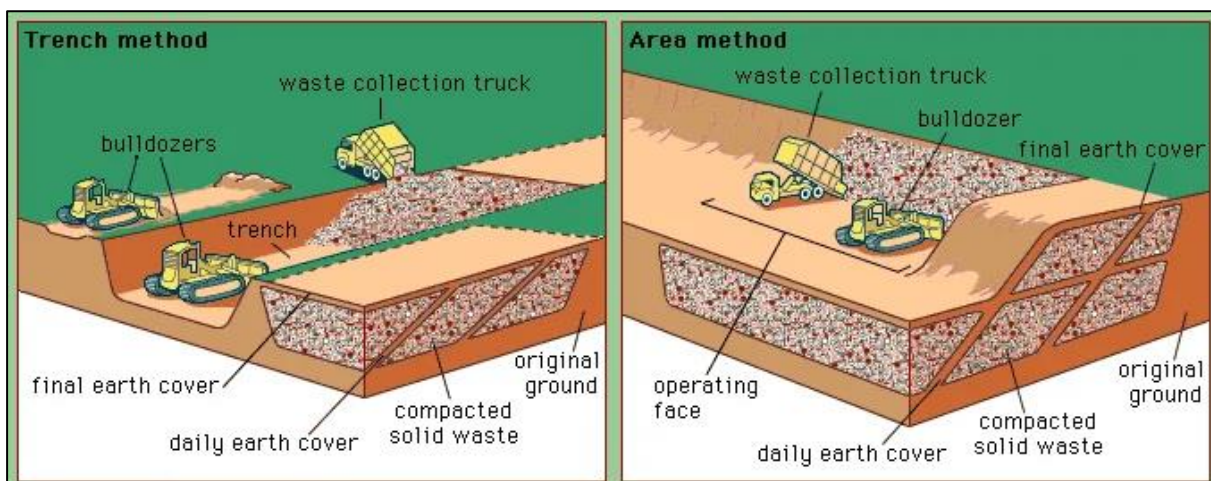
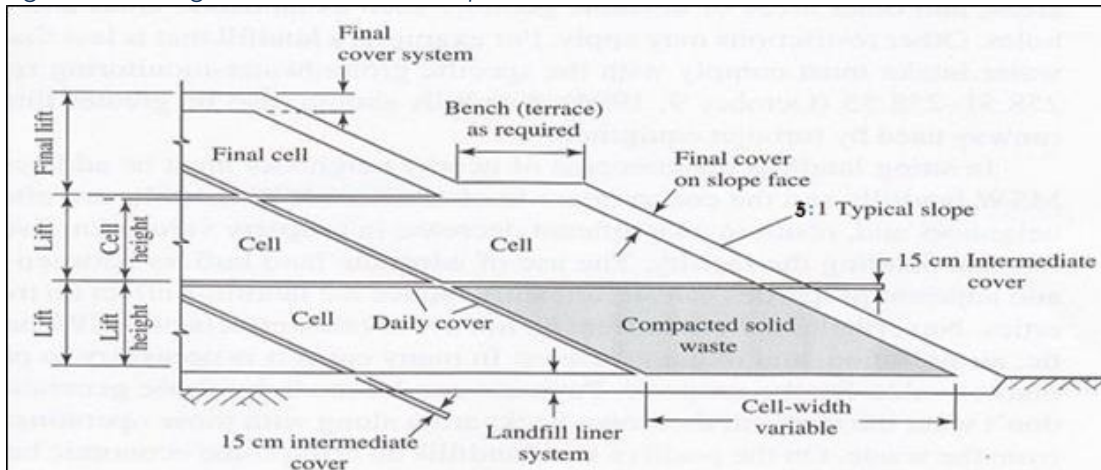




Figure 3.3 – Diagram of lifts and 5:1 slope

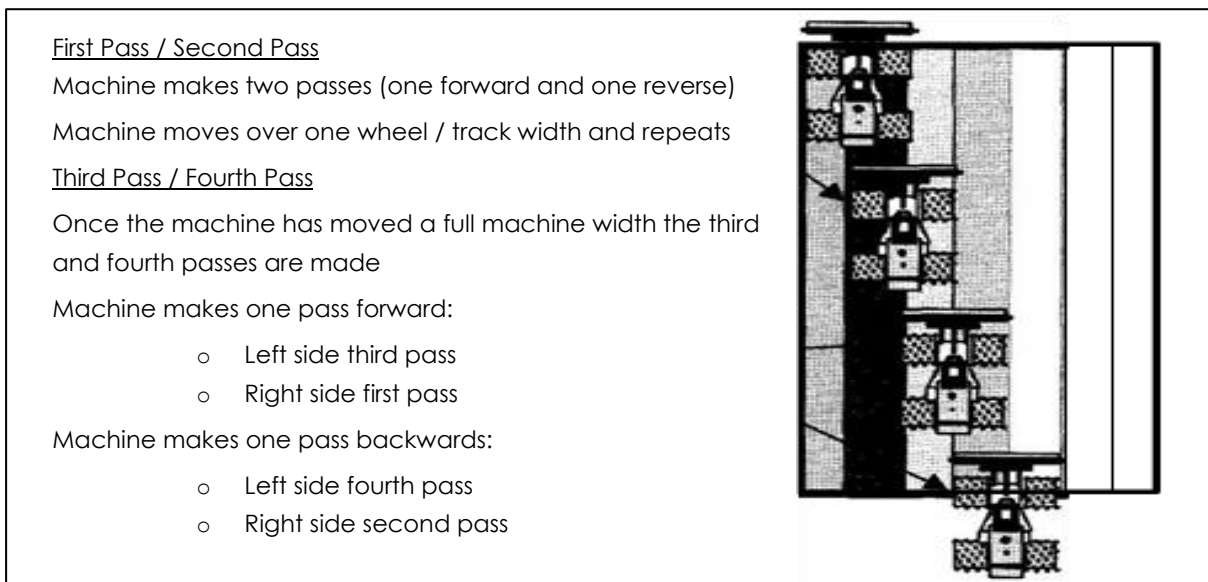


### 3.2.6 Compact the lift

Run the tracked loader/compactor over the waste to compact it. This process is important as efficient compaction can significantly increase the life and airspace of the landfill. It is best practice to perform four passes over the waste.

Compaction passes are defined as one trip over the waste in one direction. To achieve four passes, compactor operators must make one pass forwards and the second backwards along the same tracks, then move over one wheel/track width and repeat the process. As the machine moves gradually across the tipping area, all the waste will receive four passes of the machine as shown in **Figure 3.4**. It is necessary to keep lifts (layers of waste) thin in order to achieve the best compaction.

Figure 3.4 - Compaction machine tracking pattern for four passes



## 3.3 COVERING PROCEDURE

### 3.3.1 End of day cover (daily cover)

At the end of day, cover the exposed working face with a layer of soil, to create a layer 150mm thick as this will reduce the risk of odours and vermin. Alternative daily covers (ADCs), such as landfill lids (see **Figure 3.5**), tarpaulins and sprayed applications can be used to minimise soil use and preserve airspace. However, regulatory approval will be required before an ADC can be used.

Figure 3.5 – Example of ADC (Landfill lids)



### 3.3.2 Intermediate cover

If the cell has reached its capacity and is in line with the final contour shape, the waste is covered with an intermediate cover of at least 300mm of soil. This layer will become the floor of the working pit for the next layer.

### 3.4 COVER BUDGET

As the incorrect use of cover material can result in poor waste coverage, or if too much is used, excessive loss of voidspace, a cover material budget should be produced for the Facility. The cover material budget is based on the area of the typical working face and the depth of cover material required by the EPL. Based on 150mm of cover material and a working face of 20m x 5m, the daily requirement would be  $[20 \times 5 \times (150/1000)] = 15$  cubic metres (15 m<sup>3</sup>) of cover, (or assuming the Facility loader has a 2.5m<sup>3</sup> bucket), approximately 6 bucket loads per day. The reuse of cover material 'scraped back' from the previous workday, will ensure optimal use of cover material supplies. This practice also ensures that the landfill airspace isn't taken up with unnecessary amounts of soil.

The amount of cover material used is highly dependent on the condition of the waste surface onto which it is being applied. The compacted waste surface should be relatively smooth and firm. An irregular waste surface with excessive voidspace will result in significant quantities of cover material being consumed in order to achieve adequate coverage.

Care is to be taken to optimise the amount of cover material utilised. Insufficient cover will result in excessive litter generation, limited control of vermin and an increase in the potential for landfill fires. Over-application of cover material wastes valuable landfill airspace, cover material and personnel effort.

A soil budget will assist with monitoring if too much soil is being applied and can assist in knowing how long soil stockpiles will last.

## 4 OCCUPATIONAL HEALTH AND SAFETY

The Shire should undertake a JSA for the procedures outlined in this SOP and include risk mitigation strategies in this section if necessary.

## APPENDIX B - SOP 02: CONTROLLED WASTE ACCEPTANCE



Chandler Road Waste Management Facility  
**STANDARD OPERATING PROCEDURE**  
**SOP 02: Controlled Waste Acceptance**  
Shire of Merredin

Revision History Log			
Version #	Revision Date	Author	Changes
1A	12/08/2024	SBG	Original version

**APPROVALS**

Version 1.A

Approved by: \_\_\_\_\_

Date: \_\_\_\_\_



**STANDARD OPERATING PROCEDURE**  
**SOP 02: CONTROLLED WASTE ACCEPTANCE**

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## 1 PURPOSE

The purpose of this Standard Operating Procedure is to ensure that Controlled Waste is received at the Chandler Road Waste Management Facility in accordance with the Facility's Environmental Protection Licence.

## 2 SCOPE

This Standard Operating Procedure applies to the acceptance of Controlled Waste received at the Chandler Road Waste Management Facility.

## 3 DEFINITIONS

Term	Definition
Controlled Waste	Waste types listed in Schedule 1 of the <i>Environmental Protection (Controlled Waste) Regulations 2004</i> .
Controlled Waste Tracking	Controlled Waste Tracking provides the DWER with comprehensive information on the movement of controlled wastes throughout Western Australia. This information helps to ensure that controlled wastes are transported to WDER approved locations.
Controlled Waste Tracking Form	The Tracking Form is used by Carriers and Drivers to record the collection, transportation and treatment or disposal of controlled waste. The Tracking Form must accompany the consignment(s) of controlled waste from point-of-generation to point-of disposal. A unique Tracking Number is issued with each Tracking Form
Controlled Waste Tracking Number	A unique number designed to allow controlled waste to be identified and tracked from point-of-generation to point-of-disposal. The Tracking Number must accompany the consignment(s) of controlled waste throughout the collection, transportation and treatment or disposal stages.
DWER	Department of Water and Environmental Regulation (formerly Department of Environment Regulation).
Driver	Driver of the Waste Carrier vehicle accessing the Facility.
Driver Identification Card	Driver Identification Card issued by DWER.
Environmental Protection Licence (EPL)	The DWER issued Licence which places legally binding conditions on the operation of the Facility
Facility	Chandler Road Waste Management Facility
Facility Staff	Staff employed at the Facility
Shire	Shire of Merredin
SOP	Standard Operating Procedure
Waste Carrier	A Controlled Waste Carrier (Carrier) is licensed by the DWER to transport controlled waste on public roads for gain or reward. It is the responsibility of the Carrier to collect and transport controlled waste from the premises of a Controlled Waste Generator for treatment or disposal at a DER approved location.

## 4 PROCEDURE OUTLINE

On arrival of a load of controlled waste at the Facility's gatehouse, Facility Staff must:

1. Confirm the identity of the Driver by checking their DWER issued Driver Identification Card.
2. Confirm the identity of the Vehicle.
3. Request from the Driver the Tracking Number(s) of the controlled waste to be unloaded, and a copy of the Tracking Form.
4. Verify that the waste category documented in the Controlled Waste Tracking Form is compliant with the categories accepted under the Facility's EPL.
5. Once verified that the waste is acceptable for disposal, record the details of the controlled waste on the Controlled Waste Acceptance Form including the:
  - Controlled Waste Tracking Number;
  - Date of receipt;
  - Quantity of waste received; and the
  - Category of waste received.
6. Complete and sign the relevant section of the Controlled Waste Tracking Form.
7. Allow the Waste Carrier to enter the Facility, direct the Vehicle to the appropriate disposal point.
8. Supervise the disposal of the waste load and handle/bury it in accordance with the relevant conditions of the Facility's EPL.
9. Forward the Controlled Waste Acceptance Form to the Shires Executive Manager Engineering Services to enter the load details into the Electronic Tracking System.

## 5 COMPETENCIES AND APPROVALS

Personnel undertaking the procedures outlined in this document must meet the competency requirements outlined in **Table 5.1** below.

Table 5.1 Competency requirements for Controlled Waste Acceptance

Competency Category	Competency Requirement	Competency Assessment
Controlled Waste Acceptance	Familiar with Controlled Waste Acceptance Procedures	Completion of Controlled Waste Acceptance Training

## 6 REFERENCES

DEC (2006). *Guideline for Controlled Waste Treatment or Disposal Sites*. Prepared for Controlled Waste Section of Environmental Regulation Division, DEC. Available online at [www.dec.wa.gov.au/.../1310-guideline-for-controlled-waste-carriers.html](http://www.dec.wa.gov.au/.../1310-guideline-for-controlled-waste-carriers.html).

## APPENDIX C – ASBESTOS MANAGEMENT PLAN



## **Asbestos Management Plan Merredin-Chandler Road Landfill**

The following are procedures developed for the management of asbestos products at the Shire of Merredin's Merredin-Chandler Road Class 2 waste facility.

Asbestos Containing Material (ACM) is not accepted at the Muntadgin Transfer Station.

### **Locations of Asbestos**

ACM that has been disposed of at the Chandler Road Landfill waste management facilities is mapped so that its location can be easily identified. A GPS-ed aerial site plan has been drawn and is amended as new asbestos disposal pits are excavated and used. These site plans are stored in the central filing system of the local government. These plans show any known locations of asbestos.

**\*\*Please note that there are no records of ACM burial and control prior to 2010, so it can be assumed that there is a likelihood of older asbestos pits or areas where ACM was deposited and buried within the old landfilled areas.**

### **Non Acceptance of Asbestos Containing Material**

The Muntadgin waste transfer station doesn't accept ACM and as such have undertaken the following measures to inform customers:

- The website stipulates that no asbestos will be accepted at this transfer station;
- All related pamphlets and calendars highlight the fact that asbestos is only accepted at the Shire's Chandler Road landfill site;
- The site has signage that clearly explains that 'No Asbestos' is accepted; and
- All telephone enquiries about asbestos disposal are advised that asbestos is not accepted.

## **Acceptance of ACM**

The Shire of Merredin's Chandler Road Landfill site accepts ACM waste.

All loads of waste entering the site must be inspected by the site attendant to determine if asbestos is contained within the loads. If asbestos is either found or suspected in the load then the load must be disposed of into the asbestos pit which is specifically provided to bury asbestos and will be charged at the rate of disposal for asbestos. The site operator must inspect the load to identify the following:

- That the material is wrapped in heavy duty black plastic;
- It is labelled "Caution: ASBESTOS"; and
- That the wrapping is intact.

If the customer is unsure of whether or not the material for disposal contains asbestos, Council's EHO shall send a sample of the material to a NATA accredited laboratory to test for presence of asbestos. The customer will be invoiced for the expense and contacted to advise them that they are to be charged accordingly for its correct disposal within the landfill.

If the customer disagrees with the EHO's advice that the material contains asbestos upon a visual inspection then a sample must be submitted for analysis. The customer will sign a private works order form and an agreement for the service. Should the result return positive for asbestos, the customer will be liable for the cost of analysis and for any disposal cost incurred as a result.

A record of all rejected loads must be kept outlining the name of the waste carrier/producer, registration number of vehicle, date of rejection, amount rejected and reason for rejection.

## **Onsite Management**

Once the material has been accepted at the site the site operator is responsible for taking the following actions.

1. Direct the customer to the designated asbestos disposal area and instruct the customer as to where the material must be unloaded;
2. Supervise the unloading to ensure that the black plastic is kept intact;
3. If the material becomes exposed then it should be wetted down immediately and rewrapped by the customer;
5. The site operator must then cover the waste as soon as practicable.

The wrapped asbestos material must be covered with dense inert and incombustible material to a depth of at least one (1) metre as soon as practicable after its disposal.

### **Staff Training/Competency**

All site operators at the waste sites must receive appropriate training (including refresher training on a 2 yearly basis) to ensure they clearly understand:

- The health hazards associated with asbestos.
- The controls used to minimise exposure to asbestos dust and how to use personal protective equipment.
- How to visually inspect waste.
- How to recognise different types of asbestos and asbestos-containing materials.
- Site based procedures relevant to their role such as processes for rejecting loads, classifying loads, unloading and inspecting low and high risk loads, segregating and storing asbestos and asbestos containing materials, record keeping.
- Awareness of environmental and asbestos related legislation relevant to the premises and the conditions of the license that relate to the tasks that the person performs on the site.

(Requirements taken directly from Department Environment Regulation Guidelines for managing asbestos at construction and demolition waste recycling facilities)

The minimum training which will be undertaken by site operators is the Cancer Council's "Know asbestos in your home" online course.

A record is to be kept on individual's personnel files outlining what training has been done.

\*P2 face masks and disposable gloves are located at each site so that in the event of a suspicious load entering the facility, the site operator can use this personal protective equipment.

### **Roles and Responsibilities**

#### **Site Operator**

All loads of waste entering the site must be inspected on arrival to determine if there is material containing asbestos.

Where the inspection identifies that the wastes are not permitted by the licence and/or asbestos is visually identified in the load it shall be rejected for acceptance. An Asbestos Declaration form is filled out by both the customer and site staff

Note: A record of all rejected loads must be maintained on the premises and be



available for inspection.

If suspect asbestos are detected:

- The load must be isolated
- Kept wet
- Wrapped or contained in a manner that prevents asbestos fibres entering the atmosphere during transportation by road;
- Labelled or marked with the words “CAUTION ASBESTOS” in letters no less than 50 millimetres high.

Where a small number of isolated suspected ACM fragments are identified in a load, the suspect ACM must be removed from the load and:

- Appropriately isolated and covered for asbestos testing.

OR

- Assumed to be ACM and redirected appropriately within the landfill facility

Where the inspection identifies that the wastes are permitted then the site operator is to follow the procedure outlined in the section ‘Onsite Management’ of this procedure.

#### Works Manager

The site operator will contact the Works Manager once the material is disposed of. The Works Manager for each local government is responsible for ensuring that the material is covered with dense inert and incombustible material to a depth of at least one (1) metre as soon as practicable after its disposal.

#### Environmental Health Officer

The Environmental Health Officer is responsible for inspecting the site every 3 months to ensure that the asbestos disposal is being undertaken in accordance with this procedure and rectify should it be necessary.

### **Dust Management**

All materials containing asbestos disposed of at the sites are to be wrapped in accordance with legislation and covered as soon as practicable after its disposal. Equipment to dampen the waste is on hand within the Works Department if required. This will mitigate any risk associated with dust being emitted.

### **Declaration Forms**

All asbestos declaration forms are to be kept at each site, they outline the relevant information

obtained during asbestos acceptance or rejection at sites.

The declaration forms remain at the waste site for 1 week and are then taken to the Shire's central filing system for electronic input and processing into the central electronic register. All records are made available for inspection by relevant authorities upon request. A copy of the register is attached to this procedure as Appendix 1.

### **Reporting and procedure for incidents**

All incidents that involve asbestos being illegally or potentially illegally disposed of must be reported to the Environmental Health Officer within 48 hours. The Environmental Health Officer will then investigate the incident to determine what action will be taken against the waste producer and how to minimise the risk of it occurring again. In these instances the operator is to isolate the waste from the public and employees and arrange for equipment to be mobilised to the site for dampening the waste until it can be cleaned up within acceptable guidelines as directed by the Environmental Health Officer.

Any correspondence and action taken for pollution responses coordinated by the Shire EHO shall be recorded in the appropriate file on the server and retained for use in producing the Annual Environmental Report to be submitted to the Director of Department of Environment Regulation every year.

### **Complaints**

All complaints will be dealt with in accordance with the Shire of Merredin's Customer Services Charter Procedures

See Appendix 2 for sample copy of complaints form.

### **Review of document**

This document is to be reviewed annually to determine its suitability.

<b>Date</b>	<b>Review details</b>
October 2015	Document initially drafted
	Updated document in accordance with the DER recommendations

SHIRE OF MERREDIN CHANDLER ROAD LANDFILL- ASBESTOS DISPOSAL REGISTER	
2010-ONWARDS	

SHIRE OF MERREDIN CHANDLER ROAD LANDFILL- ASBESTOS DISPOSAL REGISTER	
2010-ONWARDS	

[illegible]

APPENDIX 2

SHIRE OF MERREDIN CHANDLER ROAD WASTE DISPOSAL FACILITY

COMPLAINT FORM

Date:

NAME & CONTACT DETAILS	SUMMARY OF COMPLAINT
<p><b>Name:</b></p> <p><b>Address:</b></p> <p><b>Phone:</b> (h) (mob)</p>	

OFFICE USE ONLY
Date received by EHO:
Summary of complaint resolution:

EHO initial:

## APPENDIX D – DISPOSAL OF ASBESTOS RECORD

## **DISPOSAL OF ASBESTOS RECORD**

Asbestos material can be legally disposed of within the designated area at the Shire of Merredin's Chandler Road Landfill Site.

### **FEES FOR DISPOSAL - Refer to Fees & Charges**

**All Asbestos Landfill Deliveries are to be made by appointment only (Contact Shire of Merredin office 9041 1611 or by email: [admin@merredin.wa.gov.au](mailto:admin@merredin.wa.gov.au))**

**NOTE: ASBESTOS WILL NOT BE ACCEPTED AT THE LANDFILL FACILITY UNLESS IT COMPLIES WITH THE BELOW REQUIREMENTS**

**ALL ASBESTOS MATERIAL OR MATERIAL SUSPECTED OF CONTAINING ASBESTOS IS TO BE HANDLED AND DISPOSED OF IN THE FOLLOWING MANNER:**

- Asbestos material must be separated from other material for disposal where reasonably practicable;
- Asbestos material must be wrapped in a manner that prevents asbestos fibres entering the atmosphere during transportation. Asbestos waste or material containing asbestos must be contained and sealed (double-lined or double bagged) in heavy duty plastic (black) of at least 0.2mm in thickness;
- Wrapped and / or bagged asbestos material must be marked with the words "CAUTION ASBESTOS" in letters at least 50mm high.

### **SMALL LOADS OR LOADS THAT CAN BE HAND-PLACED AT THE DISPOSAL SITE:-**

- Fill out the "Disposal of Asbestos Record" and submit to the Shire Office or via email;
- Photos are required to identify type of asbestos, two options:
  - Photos to be submitted via email as attachments to this document,
  - Photos shown in person to the appropriate office administration staff accompanied by this document.
- Bundles to be properly wrapped, sealed and labelled;
- Appropriate office staff to confirm and approve the bundled waste;
- The person/s disposing of the asbestos material is to physically handle and place the bundles as directed by the operator of the landfill;
- Under no circumstances is any load to be tipped / scraped off onto the ground;
- Landfill operators are not available to assist in the unloading of any material.\_

### **LARGE LOADS THAT CANNOT BE HAND-PLACED AT THE DISPOSAL SITE:-**

Persons wishing to dispose of large loads or bundles that cannot be placed by hand onto the disposal area are required to:-

- Fill out the "Disposal of Asbestos Record" and submit to the Shire Office or via email;
- Photos are required to identify type of asbestos, two options:
  - Photos to be submitted via email as attachments to this document,
  - Photos shown in person to the appropriate office administration staff accompanied by this document.
- Bundles to be properly wrapped, sealed and labelled;
- All loads are to be carefully placed by hand or forklift into position at the disposal site;
- Bulk asbestos contaminated soil must be wetted down, transported, and delivered within a fully lined and sealed truck/trailer;
- Person responsible for disposal of bulk asbestos contaminated soil must ensure provision of adequate supply of water for decontamination of truck/trailer on-site.



Shire of Merredin  
 ABN 87 065 676 484  
 Cnr King & Barrack Street,  
 MERREDIN  
 PO Box 42, MERREDIN 6415  
 Enquiries: 9041 1611  
 Fax Number : 9041 2379



**DISPOSAL OF ASBESTOS RECORD  
 MERREDIN LANDFILL SITE CHANDLER ROAD, MERREDIN**

Proposed Delivery Date and Time	Delivery Description (eg. fencing, tiles, cladding etc.)	Location Asbestos was removed from	Volume/ Weight per delivery	Vehicle Registration number	Photos Attached Y/N

**Asbestos Removal Licence #:** \_\_\_\_\_ (Where exceeding 10m<sup>2</sup>)

I, \_\_\_\_\_ (full name) of / on behalf of \_\_\_\_\_ (company name)

At \_\_\_\_\_ (company / private (for individuals) postal address)

hereby certify that the asbestos waste described above has been handled in accordance with the *Health (Asbestos) Regulations 1992* and will be disposed of within the designated asbestos receival area at the Shire of Merredin Landfill Site.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_ Contact phone number: \_\_\_\_\_

<b>OFFICE USE ONLY</b> <b>For Executive Manager of Development Services (or representative) to complete.</b>		
<b>Photos Cited:</b>	<input type="checkbox"/> Y <input type="checkbox"/> N	<b>Identify:</b> <input type="checkbox"/> Friable <input type="checkbox"/> Nonfriable
<b>Asbestos License Required:</b>	<input type="checkbox"/> Y <input type="checkbox"/> N	<b>If so, Asbestos License Provided:</b> <input type="checkbox"/> Y <input type="checkbox"/> N
<b>Approved for Acceptance:</b> <input type="checkbox"/> Y <input type="checkbox"/> N		
<b>Name:</b>	<b>Date:</b>	<b>Signature:</b>
<b>For Manager Projects (or representative) to complete.</b>		
<b>Delivery Date and Time Approved:</b>	<input type="checkbox"/> Y <input type="checkbox"/> N	<b>Paid:</b> <input type="checkbox"/> Y <input type="checkbox"/> N
<b>Receipt Attached:</b> Y / N / not applicable		
<b>Name:</b>	<b>Date:</b>	<b>Signature:</b>
<b>For Landfill Operator to complete.</b>		
<b>Delivery Matches Photos:</b>	<input type="checkbox"/> Y <input type="checkbox"/> N	<b>Designated Area Prepared:</b> <input type="checkbox"/> Y <input type="checkbox"/> N
<b>Proper Procedure Followed:</b>	<input type="checkbox"/> Y <input type="checkbox"/> N	<b>Paid:</b> <input type="checkbox"/> Y <input type="checkbox"/> N
<b>Receipt Attached:</b> <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A		
<b>Name:</b>	<b>Date:</b>	<b>Signature:</b>