



**Licence Number** L8889/2015/1

**Licence Holder** Eastern Metropolitan Regional Council

**File Number:** DER2015/000777

**Premises** Red Hill Waste Management Facility

Lot 11 on Diagram 69105, Lot 2 on Diagram 68630  
and Lot 1 on Diagram 15239 Toodyay Road, Red Hill  
and Lot 12 on Plan 26468 Toodyay Road,  
Gidgegannup.

**Date of Amendment** 1 May 2018

## Amendment

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

Date signed: 1 May 2018

**Rebecca Kelly**  
**MANAGER LICENSING (WASTE INDUSTRIES)**

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

## Definitions and interpretation

### Definitions

In this Amendment Notice, the terms in Table 1 have the meanings defined.

**Table 1: Definitions**

Term	Definition
ACN	Australian Company Number
Amendment Notice	refers to this document
Category/ Categories/ Cat.	categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CEO	means Chief Executive Officer. CEO for the purposes of notification means:  Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 33 Cloisters Square PERTH WA 6850 <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
Delegated Officer	an officer under section 20 of the EP Act
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
Licence Holder	Eastern Metropolitan Regional Council
Occupier	has the same meaning given to that term under the EP Act.
PFAS	Perfluoroalkyl and Polyfluoroalkyl Substances
PFAS NEMP	PFAS National Environment Management Plan
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctane sulfonate

PFHxS	Perfluorohexane sulfonate
Prescribed Premises	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report.
Risk Event	as described in <i>Guidance Statement: Risk Assessment</i>
Special waste type 3	has the same meaning given to that term in the <i>Landfill Waste Classification and Waste Definitions 1996 (as amended 2018)</i> .

## Amendment Notice

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

This notice is limited only to an amendment to permit the acceptance of paint materials. No changes to the aspects of the original Licence relating to Categories 12, 62, 65 or 67A have been requested by the Licence Holder.

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

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

## Amendment description

### Storage of waste paint

The Licence Holder has applied to accept and store up to 50 tonnes per annual period of waste paint at the Premises.

Paint has previously been accepted at the premises under the Household Hazardous Waste (HHW) Program. The HHW program provided Intermediate Bulk Containers (IBC's) for separate storage of water-based and solvent-based paint. Paint will be accepted under the Paintback scheme following this amendment. The Paintback scheme will provide self-bunded stillages for storage of water-based and solvent-based paint together. The self-bunded (fully contained and welded) metal stillages are 1.1m by 1.1m by 1.1m in external dimensions and are designed to capture spills and leaks. See Appendix 2 for a photo and schematic of the stillages.

Paint is to be delivered to the premises by both members of the public and commercial painters. Members of the public deliver it onto a bunded pallet (See Appendix 2, Photo 2) in the waste acceptance area which is located on a compact gravel road base. Staff from the Premises will transfer the paint into the self-bunded stillages. Commercial painters are permitted to deposit paint directly into the stillages.

The stillages will be progressively filled until there is sufficient volume to warrant removal to the Household Hazardous Waste storage compound (which includes a hardstand area with internal sumps), where it will await collection and removal off-site. The Licence Holder has estimated there to be a maximum of up to 8 tonnes of paint on the Premises at any one time. The paint is then removed from the Premises and transported for further processing and disposal.

### Updated landfill acceptance criteria for PFAS impacted solid wastes (Special Waste Type 3)

DWER has initiated a licence amendment to update the waste acceptance criteria specified in licence condition G1(a) to reflect the updated criteria published in the PFAS National Environmental Management Plan (NEMP) and include reference to 'special waste type 3' in accordance with a recent update to the *Landfill Waste Classification and Waste Definitions 1996 (as amended 2018)* (LWCWD).

Australia's Environment Ministers have endorsed the PFAS NEMP which was published in

January 2018 (HEPA, 2018). The PFAS NEMP provides governments with a consistent, practical, risk-based framework for the environmental regulation of PFAS-contaminated materials and sites. The PFAS NEMP has been developed as an adaptive plan, able to respond to emerging research and knowledge.

The PFAS NEMP establishes a practical basis for nationally consistent environmental guidance and standards for managing PFAS contamination as well as providing guidance on landfill acceptance criteria. The plan has been developed by all jurisdictions and recognises the need for implementation of best practice regulation through individual jurisdictional mechanisms.

Following the publication of the PFAS NEMP, DWER is currently reviewing the *Interim Guideline on the Assessment and Management of Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)* (DER, January 2017). Practitioners have been advised, through information published on the DWER website, that the interim screening levels for soil, surface water and groundwater and interim concentrations for waste classification have been superseded by updated information as presented in the PFAS NEMP.

The criteria reflected in the PFAS NEMP has been determined based on existing jurisdiction approaches to the derivation of landfill acceptance criteria for a number of standard landfill designs and consistent with the approach adopted in the LWCWD. The exception being that landfill acceptance criteria for total concentration have been capped at 50 mg/kg. This is based on the PFOS requirements of the Stockholm Convention on Persistent Organic Pollutants.

As per the PFAS NEMP, waste concentrations must be less than both the relevant total and leachable concentration in the Australian Standard Leaching Procedure (ASLP) conducted at both pH 5 and un-buffered reagent water – approximating “worst case” for leaching conditions. Table 3 provides a summary of how landfill acceptance criteria in the PFAS NEMP correlates to landfill classes specified in Schedule 1 of the EP Regulations and the LWCWD.

**Table 4: PFAS NEMP landfill acceptance criteria and equivalence to Landfill Class in Western Australia**

PFAS NEMP Landfill Type	Equivalent Landfill Class as per Schedule 1 of the EP Regulations	Notes
Unlined	Class I/II landfill	Multiplication factors for ASLP leachable concentration (µg/L) and Total concentration (mg/kg) in the PFAS NEMP are consistent with the derivation of criteria for Class I and II landfills; equivalent to Leachable Concentration criteria for ASLP1 and ASLP2, and to Concentration Limit CL1 and CL2 (refer to Table 4 of the LWCWD).  Note: Total concentration for PFOA is limited to 50 mg/ kg (based on the low content limit) as per Stockholm Convention.
Clay/single composite lined	Class III landfill	Multiplication factor for ASLP leachable concentration (µg/L) in the PFAS NEMP is consistent with the derivation of criteria for Class III landfills; equivalent to Leachable Concentration criteria for ASLP3 (refer to Table 4 of the LWCWD).  Total concentration for PFOS + PFHxS and PFOA limited to 50 mg/kg (low content limit) as per Stockholm Convention.
Double composite lined	Class IV landfill	Multiplication factor for ASLP leachable concentration (µg/L) in the PFAS NEMP is consistent with the derivation of criteria for Class IV landfills; equivalent to Leachable Concentration criteria for ASLP4.  Total concentration for PFOS + PFHxS and PFOA limited to 50

PFAS NEMP Landfill Type	Equivalent Landfill Class as per Schedule 1 of the EP Regulations	Notes
		mg/kg (low content limit) as per Stockholm Convention.

## Amendment history

Table 4 provides the amendment history for L8889/2015/1

**Table 4: Licence amendments**

Instrument	Issued	Amendment
L8889/2015/1	17/03/2016	Construction of a green-waste processing hardstand pad and associated relocation of existing green-waste processing operations.
L8889/2015/1	06/09/2017	Amendment Notice 1 – approval to accept and bury PFAS contaminated solid waste in existing Class III landfill cells (Farm Stage 1 and 2 and Stage 15)
L8889/2015/1	01/05/2017	Amendment Notice 2 – approval to accept waste paint and updates to the landfill acceptance criteria for PFAS impacted solid wastes.

## Location and receptors

Table 5 below lists the relevant sensitive land uses in the vicinity of the Prescribed Premises.

**Table 5: Receptors and distance from activity area**

Residential and sensitive premises	Distance from prescribed premises
Semi-rural residential areas and farms	<p><u>Distance from transfer station and HHW storage compound:</u></p> <p>The closest residences are located approximately 900m-1.1km to the north-east, 1km to the southeast and 1.8km to the west.</p> <p><u>Distance from active landfills:</u></p> <p>Immediately to the north and north-east of the Premises; multiple lots ranging from approximately 350m to 1.5km from Farm Stage 1 and 2 landfill operations and 750m from the Stage15 landfill operation.</p> <p>Immediately to the east of the Premises (Lot 12); Barbarich Estate comprising of multiple lots ranging from approximately 800m from Farm Stage 1 and 2 and 1 km from Stage 15.</p> <p>To the south and south-east of the of the Premises; multiple lots ranging from approximately 750m from stage 15 and 1.3km from Farm Stage 1 and 2. Lots are separated from the Premises by a vegetation buffer (approximately 260m to 400m wide) located on Lot 82 on Diagram 18309 and Lot 501 on Plan 40105, Parkerville (owned by EMRC), followed by a drainage/public recreation reserve (approximately 50m to 125m wide) on Lot 62 on Plan 23731 and Lot 15403 on Plan 40033, Parkerville (vested in the Shire of Mundaring).</p>

Table 6 below lists the relevant environmental receptors in the vicinity of the Prescribed

Premises which may be receptors relevant to the proposed amendment.

**Table 6: Environmental receptors and distance from activity area**

Environmental receptors	Distance from prescribed premises
Groundwater	<p>There are two distinct water bearing layers underlying the site:</p> <ul style="list-style-type: none"> <li>• The upper layer comprises of a perched water table associated with shallow lateritic sediments mainly on low lying areas which had developed above pallid zone clays (impermeable layer of kaolinitic clays). Perched aquifers are reported to limited in there lateral extent and ephemeral over/post winter.</li> <li>• The lower layer comprises the regional groundwater table within granite bedrock (fracture systems) or within extensive saprolite grits (porous, weathered bedrock) often semi confined by pallid zone clays.</li> </ul> <p>Based on the inferred regional groundwater contours in the bedrock (granite) aquifer the site exhibits a groundwater divide that extends across the northern part of the site (following topography); north of the divide groundwater flows north-west to west-northwest, and to the south of the divide flows are to the south-west to southerly with moderate hydraulic gradients.</p> <p>The depth to groundwater varies across the site.</p> <p>The base of Farm Stage 1/2 and Stage 15 have been constructed to maintain a three metre separation distance between the base of the landfill and the underlying regional groundwater table.</p>
John Forrest National Park Lot 11664 on Plan 217947, Red Hill – Crown Reserve 7537	Located immediately to the south of the Lot 11 and 2 of the Premises and to the south-west from the remainder of the Premises.
Threatened / Priority Fauna – Mammals and Birds	<p>Priority Fauna P4 (mammals) – mapped as being observed within Lot 1 of the Premises in previously landfilled areas currently subject to rehabilitation. Fauna Survey date 29/10/2014</p> <p>Priority Fauna P4 (mammals) – mapped as being observed within Lot 1 of the Premises in previously landfilled areas currently subject to rehabilitation. Fauna Survey date 18/05/2012</p> <p>Birds (Schedule 5 – Migratory birds protected under an international agreement); mapped as being observed within Lot 2 of the Premises in previously landfilled areas currently subject to rehabilitation. Fauna Survey dates 29/10/2014 and 04/11/2015</p> <p>Birds (Schedule 3 – Fauna that is rare or is likely to become extinct as vulnerable fauna); mapped as being observed within Lot 2 of the Premises in previously landfilled areas currently subject to rehabilitation. Fauna Survey dates 29/10/2014 and 04/11/2015.</p>
Designated Area – Surface Water Area	The entire Premises and surrounding land is mapped as proclaimed surface water area under the <i>Rights in Water Irrigation Act 1914</i> named the “Swan River

	System".
Susannah Brook (Significant Stream)	Approximately 1km to the north of the Premises, 1.2km from Stage 1/2 operations and  Multiple related drainage lines (classed as minor, perennial watercourses) also run north-south of Susannah Brook; the closest is located approximately 250m north of Farm Stage 1/2 with Lot 51 (1157) Toodyay Road, Gidgegannup.
Christmas Tree Creek (Watercourse - minor, perennial)	Approximately 370m to the south of the Premises and 680m from the Stage 15 site. Christmas Creek eventually discharges to Jane Brook.

## Risk assessment

Table 7 below describes the Risk Events associated with the amendment for waste paint storage consistent with the *Guidance Statement: Risk Assessments*. The table identifies whether the emissions present a material risk to public health or the environment, requiring regulatory controls.

The changes to landfill acceptance criteria for PFAS impacted solid wastes do not require a detailed risk assessment as the fundamental risks of the activity will not increase the risk of emissions from the premises and/or all risks are adequately controlled through the existing instrument (Amendment Notice 1).



**Table 7: Risk assessment for proposed amendments during operation**

Risk Event					Consequence rating	Likelihood rating	Risk	Reasoning	
Source/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts					
Liquid Waste Storage	Acceptance and storage of paint	<b>Odour:</b> Storage of open containers within bunded area	Residential Receptors	Air/ Wind dispersion	Amenity impacts	Minor	Rare	Low	The Delegated Officer considers odour may cause low level impacts to amenity (minor consequence) and this would only happen in exceptional circumstances (rare likelihood) due to the proposed storage infrastructure controls. Any odour generation is expected to be limited to the immediate storage areas.
		<b>Discharge of paints to land:</b> Spillages and failure of containment infrastructure	Groundwater	Infiltration through underlying soils	Impacts to groundwater quality	Moderate	Rare	Medium	The Delegated Officer considers paint spills may cause low level onsite or offsite impacts to these potential receptors (overall moderate consequence), and this would only happen in exceptional circumstances (rare likelihood) due to the proposed storage infrastructure controls.
			John Forrest National Park (Crown Reserve 7537)	Overland flow	Impacts to native vegetation including priority flora				
			Threatened Priority Fauna	Direct emission	Impacts to Fauna habitat and resources				
			Designated Surface Water Area (Swan River System), Susannah Brook and Christmas Tree Creek	Overland flow	Impacts to surface water quality				
On-site and neighbouring soils	Direct emission, overland flow	Contamination of soil							

## Decision

The Delegated Officer has determined that the Licence will be amended as requested to permit the acceptance and storage of up to 50 tonnes per year of paint materials. Therefore hazardous liquid wastes (limited to paints and resins) will be included in the licence as permitted waste types.

Due to the current wording of the waste acceptance conditions on the Licence, reference to waste burial will be removed from Condition G1(a) and the intent of this condition will be replicated as a stand-alone Condition G1(d). This amendment does not alter any operational activities or change any obligations of the Licence Holder.

The Licence Holder's proposed controls will also be conditioned to maintain the risk rating of 'low' for odour and 'medium' for discharge of paints to land, and therefore conditions will be added specifying that paint may only be received and stored (not decanted or otherwise treated) in a dedicated and bunded paint storage container provided by the Paintback Scheme.

In relation to the acceptance of PFAS impacted solid waste the Delegated Officer has determined to remove reference to *Interim Guideline on the Assessment and Management of Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)* (DER, January 2017) and replace this with Class III landfill waste acceptance criteria, consistent with that reflected in the PFAS NEMP. Reference will also be made to 'special waste type 3' as per the updated LWCWD.

## Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 16 April 2018. On 26 April 2018 the Licence Holder wrote to DWER requesting the consultation period to be waived and indicated the EMRC were supportive of the proposed amendments.

## Amendment

1. Definitions of the Licence are amended by the deletion of text in strikethrough and the insertion of the red text shown in underline below:

*'clean fill', 'type 1 inert wastes', type 1 special wastes', 'type 2 special wastes', 'special waste type 3', 'type 2 inert wastes', 'putrescible wastes', 'clinical waste' and 'hazardous waste' ~~'other wastes that comply with Class III and Class IV landfill'~~ means waste as defined in the document titled 'Landfill Waste Classification and Waste Definitions 1996 (as amended 2018 December 2009)';*

*~~'PFAS' means perfluoroalkyl and polyfluoroalkyl substances; PFAS are a family of manufactured chemicals which do not occur naturally in the environment. Perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) are two of the most well-known PFAS and are contaminants of emerging concern in Australia and internationally;~~*

2. Condition G1(a) of the Licence is amended by the deletion of text in strikethrough and insertion of the red text shown in underline below

*G1(a) The licensee shall accept ~~and bury~~ only the following types of waste at the premises:*

- (i) clean fill;*
- (ii) type 1 inert wastes;*
- (iii) type 2 inert wastes;*
- (iv) putrescible wastes;*
- (v) type 1 special wastes;*
- (vi) type 2 special wastes; biomedical wastes which do not require incineration and general ward wastes;*
- (vii) other wastes that comply with the Class III and Class IV criteria in the document titled 'Landfill Waste Classification and Waste Definitions' 1996 (as amended 2018 December 2009); ~~and~~*
- (viii) special waste type 3 that comply with the Class III landfill acceptance criteria as specified in Schedule 4; and ~~PFAS contaminated solid wastes that comply with the Class III waste disposal criteria<sup>4</sup> in the document titled 'Interim Guideline on the Assessment and Management of Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)' (Department of Environment Regulation, January 2017), as amended from time to time.~~*
- (ix) hazardous waste (no more than 50 tonnes; limited to paints and resins only)*

3. The Licence is amended by the insertion of the following conditions G1 (d) to (f)

*G1(d) The licensee is permitted to bury all waste types specified in Condition 1(a) with the exclusion of hazardous waste (paints and resins)*

*G1(e) Paint and resins shall be stored in dedicated impermeable and bunded storage containers ('stillages') provide by the Paintback Scheme*

*G1(f) Paint shall not be decanted or treated on the Premises*

4. The Licence is amended by the insertion of the following Schedule:

## **SCHEDULE 4**

### **Landfill acceptance criteria for Special Waste Type 3**

<b>Landfill Class</b>		<b>Landfill Acceptance Criteria<sup>1</sup></b>	
		PFOS + PFHxS	PFOA
Class III landfill	ASLP leachable concentration (µg/L) (ASLP 3)	0.7 µg/L	5.6 µg/L
	Concentration Limit (CL3) (mg/kg)	50 mg/kg	50 mg/kg

<sup>1</sup> Concentrations must be less than both the relevant leachable concentration and the concentration limit.

## Appendix 1: Key documents

	Document title	Availability
1	Licence L8889/2015/1 – Red Hill Waste Management Facility	accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
2	Amendment Notice 1 L8889/2015/1 - Red Hill Waste Management Facility (Granted 6 September 2017).	
3	Eastern Metropolitan Regional Council, December 2017, Application for Amendment.	DWER records (A1584415)
4	DER, July 2015. <i>Guidance Statement: Regulatory principles</i> . Department of Environment Regulation, Perth.	accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
5	DER, October 2015. <i>Guidance Statement: Setting conditions</i> . Department of Environment Regulation, Perth.	
6	DER, February 2017. <i>Guidance Statement: Land Use Planning</i> . Department of Environment Regulation, Perth.	
7	DER, February 2017. <i>Guidance Statement: Risk Assessments</i> . Department of Environment Regulation, Perth.	
8	DER, November 2016. <i>Guidance Statement: Decision Making</i> . Department of Environment Regulation, Perth.	
9	DER, November 2016. <i>Guidance Statement: Environmental Siting</i> . Department of Environment Regulation, Perth.	
10	DWER, February 2018. Email waiving fees for Paintback applications.	DWER records (A1607136)
11	DER, January 2017. <i>Interim Guideline on the Assessment and Management of Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)</i> . Department of Environment Regulation, Perth.	accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
12	HEPA, January 2018. PFAS National Environmental Management Plan. Heads of EPAs Australia and New Zealand (HEPA).	accessed at <a href="http://www.epa.vic.gov.au/your-environment/land-and-groundwater/pfas-in-victoria/pfas-national-environmental-management-plan">http://www.epa.vic.gov.au/your-environment/land-and-groundwater/pfas-in-victoria/pfas-national-environmental-management-plan</a>

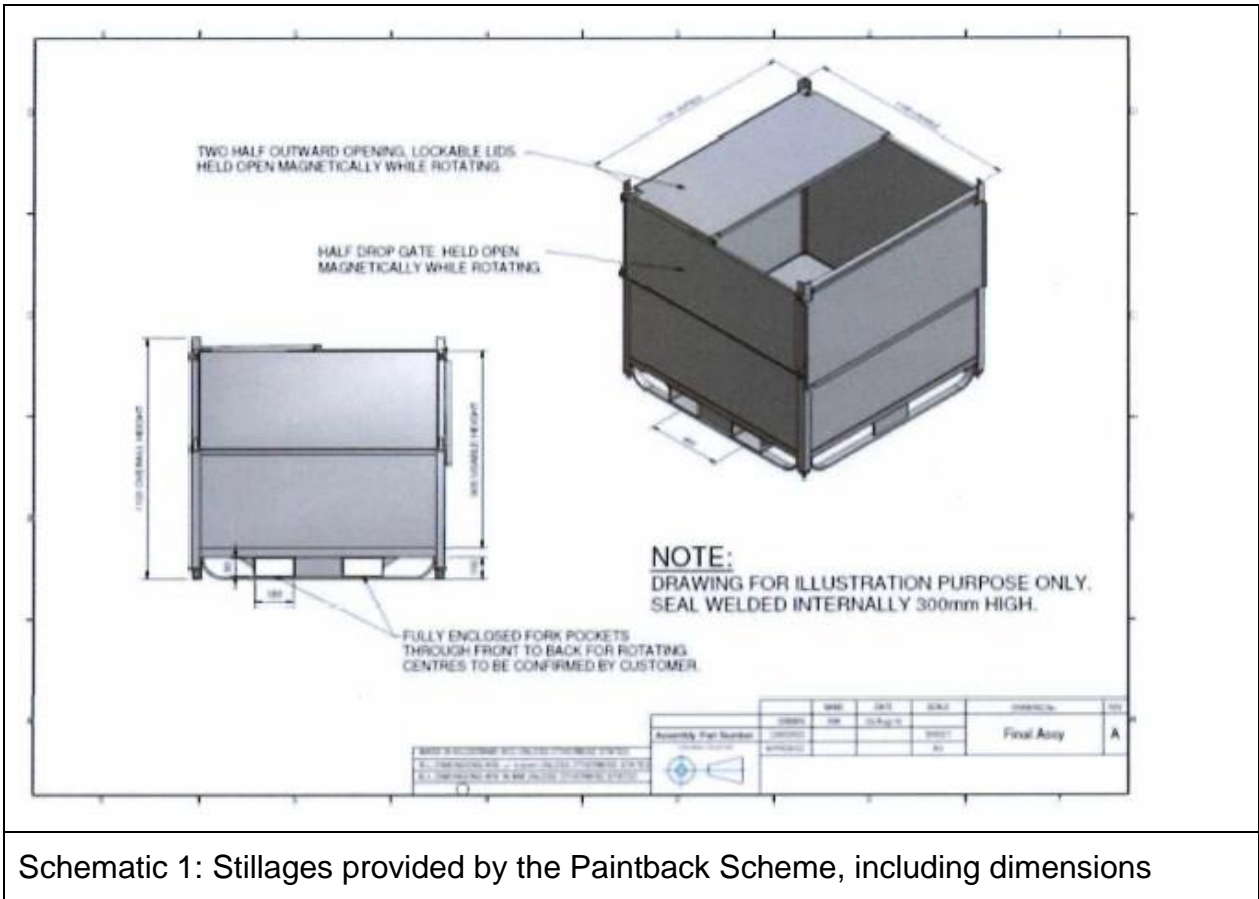
## Appendix 2: Paintback photos and schematic



Photo 1: Stillages provided by the Paintback Scheme



Photo 2: Example of Hazardous Liquids, including Paint, Stored on a Bunded Pallet



Schematic 1: Stillages provided by the Paintback Scheme, including dimensions