



Application for Licence Amendment

Part V Division 3 of the *Environmental Protection Act 1986*

Licence Number	L6964/1997/11
Licence Holder	City of Armadale
File Number	DER2016/001003-1
Premises	City of Armadale Landfill and Recycling Facility 145 – 147 Hopkinson Road HILBERT WA 6112 Legal description – Lot 600 on Deposited Plan 400460 Certificate of Title Volume 2828 Folio 800
Date of Report	07/01/2021
Decision	Revised licence granted

**MANAGER WASTE INDUSTRIES
REGULATORY SERVICES**

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

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1. Decision summary

Licence L6964/1997/11 is held by the City of Armadale (Licence Holder) for the City of Armadale Landfill and Recycling Facility (the Premises), located at 145 Hopkinson Road, Hilbert.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the operation of the Premises. As a result of this assessment, Revised Licence L6964/1997/11 has been granted.

The Revised Licence issued as a result of this amendment consolidates and supersedes the existing Licence previously granted in relation to the Premises. The Revised Licence has been granted in a new format with existing conditions being transferred, but not reassessed, to the new format.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the department has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at <https://dwer.wa.gov.au/regulatory-documents>.

2.2 Application summary

On 17 July 2020, the Licence Holder submitted an application to the department to amend Licence L6964/1997/11 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Modification to daily cover requirements to allow the use of alternative daily cover material; and
- Modification of existing licence conditions to allow for the on-site storage of up to 250 used tyres at one time.

The Licence Holder is seeking to change their daily cover requirements due to the procurement of an alternative daily cover (ADC) system which allows application of a clay and polymer fibre slurry mixture. The use of alternative daily cover saves landfill airspace, as a thinner layer of material can be applied (at a minimum of 5mm) compared with the 150mm cover required for standard clean fill. The Licence Holder will retain clean fill stockpiles on the premises for use in fire mitigation at the landfill.

The Licence Holder is currently accepting used tyres at the Premises to reduce illegal dumping within the City of Armadale. The application is being sought due to the licence in force prior to this amendment containing a condition preventing acceptance of used tyres. The Licence Holder has requested this amendment under Category 62, however the *Environmental Protection Regulations 1987* (EP Regulations) describes a specific category for the storage of used tyres. Accordingly, the licence will require the addition of Category 57: used tyre storage (general) as more than 100 used tyres will be stored at one time.

This amendment is limited only to changes to Category 64 activities and the addition of Category 57 to the Existing Licence. No changes to the aspects of the existing Licence relating to Category 61 and 62 have been requested by the Licence Holder. Table 1 below outlines the proposed changes to the existing Licence in terms of prescribed premises categories.

Table 1: Proposed amendments

Category	Current throughput capacity	Proposed throughput capacity	Description of proposed amendment
57	N/A – Proposed addition	Up to 250 used or unwanted tyres at any one time	Addition of the category and modification to existing conditions which prevent acceptance of used or unwanted tyres. The trigger for category 57 under Schedule 1 of the EP Regulations is 100 used tyres or more (stored at any one time)
61	99 tonnes per annual period	N/A	No change proposed in relation to this category.
62	100,000 tonnes per annual period	N/A	No change proposed in relation to this category.
64	100,000 tonnes per annual period	N/A – change is not related to throughput	Modification to the daily cover conditions to allow use of an alternative daily cover material.

2.3 Consolidation of Licence

As part of this amendment package the department has consolidated the licence by incorporating changes made under the Amendment Notices as summarised in Table 2.

Table 2: Licences consolidated in this amendment

Instrument	Issued	Summary of approval
L6964/1997/11	5/09/2013	Licence granted
L6964/1997/11	29/05/2016	Notice of Amendment of Licence Expiry Dates
L6964/1997/11	1/12/2016	Amendment Notice 1 to incorporate regulatory controls for the landfill gas extraction and flare system constructed under W5608/2014/1
L6964/1997/11	18/04/2018	Amendment Notice 2 to enable changes to waste acceptance requirements

The obligations of the Licence Holder have not changed in consolidating the licence. The department has not undertaken any additional risk assessment of the Premises related to previous Amendment Notices.

In consolidating the licence, the CEO has:

- updated the format and appearance of the Licence;
- deleted the redundant AACR form set out in schedule 1 of the previous licence and advise the Licensee to obtain the form from the department's website;
- revised licence condition's numbers, and removed any redundant conditions and realigned condition numbers for numerical consistency; and

- corrected clerical mistakes and unintentional errors.

The full consolidation of licence conditions as they relate to this Revised Licence are detailed in Section 5.1. Previously issued Amendment Notices will remain on the department's website for future reference and will act as a record of the department's decision making.

Key Findings:

1. The Delegated Officer notes that a review of licence L6964/1997/11 is currently being undertaken by the Department.
2. Further changes to the licence, such as the addition of an infrastructure and equipment table, will occur as a result of the licence review process.

3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guidance Statement: Risk Assessments* (DER 2017).

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises operation which have been considered in this Amendment Report are detailed in Table 3 below. Table 3 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 3: Licence Holder controls

Emission	Sources	Potential pathways	Proposed controls
Dust	Landfill waste material	Air/windborne pathway	Daily covering of landfilled waste using alternative material.
Odour			The proposed ADC is a blend of clay and polymers mixed with cellulose fibre and water or leachate. The material is sprayed at a minimum depth of 5 mm to form a crust over the surface of exposed waste, in accordance with the manufacturer's specifications.
Windblown waste			
Disease vectors			
Smoke and particulates	Abnormal operations (tyre storage fire)	Air/windborne pathway	Used or unwanted tyres will be stored in the following arrangement; <ul style="list-style-type: none"> • Stacked on their side or in a laced storage format; • Individual tyre stacks will not exceed 3.7 m in height and 60 m² in area; • Tyre piles will contain a maximum of four

Emission	Sources	Potential pathways	Proposed controls
			tyre stacks with a minimum separation distance of 2.5 m between each tyre stack; <ul style="list-style-type: none"> • A minimum separation distance of 18 m will be maintained between each tyre pile; and • Tyre stacks and tyre piles will be located at least 18 m from any combustible material, wall, building or premises boundary.
Fire washwater		Overland runoff and subsurface infiltration	The tyre storage area will be relocated adjacent to the existing leachate pond.

3.1.2 Receptors

In accordance with the *Guidance Statement: Risk Assessment* (DER 2017), the Delegated Officer has excluded employees, visitors and contractors of the Licence Holder's from its assessment. Protection of these parties often involves different exposure risks and prevention strategies and is provided for under other state legislation. Table 4 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises (*Guidance Statement: Environmental Siting* (DER 2016)).

Table 4: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Rural residential property	Approximately 375m south of the waste storage and landfilling area
	Approximately 370m east of the waste storage and landfilling area
	Approximately 400m west of the waste storage and landfilling area
Urban residential development	Approximately 920m north of the waste storage and landfilling area
Environmental receptors	Distance from prescribed activity

<p>Groundwater –</p> <p>Groundwater monitoring undertaken by the Licence Holder indicates that a perched groundwater system is present during parts of the year, generally following winter rainfall.</p> <p>Regional and site-specific groundwater information indicates that flow is generally west to southwesterly.</p>	<p>The perched system is located between approximately 21 – 26 mAHD across the premises. Permanent groundwater is located between approximately 17.8 to 20.8 mAHD across the premises.</p> <p>Based on information submitted by the Licence Holder, permanent groundwater is located approximately 5 m below the base of the current leachate pond. Survey levels suggest that there may not be separation between the leachate pond and perched groundwater when present.</p>
<p>Major drain</p>	<p>Approximately 10 m north and south of the premises boundary. The drains connect to the Birriga Main Drain approximately 2.2 km west of the premises.</p>

Table 5: Soil information at the Premises

Factor	Details
<p>Soil type</p>	<p>Pinjarra System P3 Phase: flat to very gently undulating plain with deep, imperfect to poorly drained acidic, gradational, yellow or green-brown earths and mottled yellow duplex soils with loam to clay loam surface horizons.</p> <p>Pinjarra System P7 Phase: Seasonally inundated swamps and depressions with very poorly drained variable acidic mottled yellow and grey sandy duplex and effective duplex soils.</p> <p>Pinjarra System P8 Phase: Broad poorly drained flats and poorly defined stream channels with moderately deep to deep sands over mottled clays; acidic or less commonly alkaline grey and yellow duplex soils to uniform bleached or pale brown sands over clay.</p> <p>Pinjarra System B1 Phase: Extremely low to very low relief dunes, undulating sandplain and discrete sand rises with deep bleached grey sands sometimes with a pale yellow B horizon or a weak iron-organic hardpan at depths generally greater than 2 m.</p> <p>It is understood that the premises is located within a historical clay extraction pit and in-situ soils would likely have a low permeability.</p>

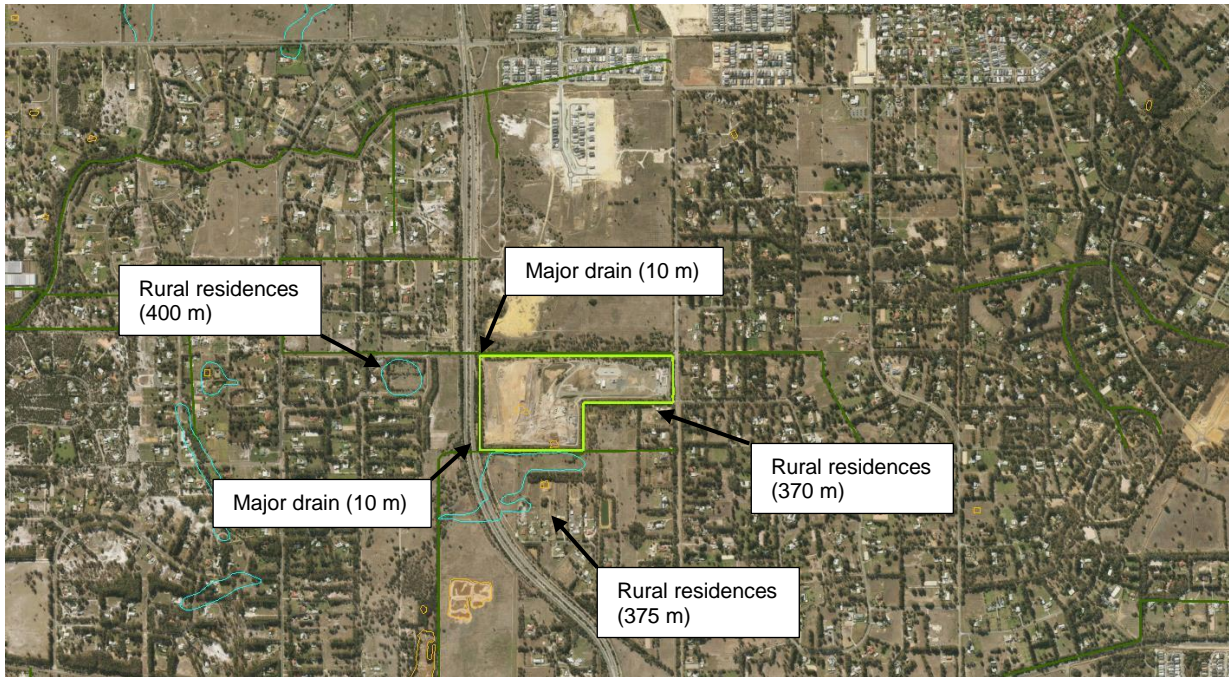


Figure 1: Distance to sensitive receptors

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guidance Statement: Risk Assessments* (DER 2017) for those emission sources which are proposed to change and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the Licence Holder has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the Delegated Officer considers the Licence Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence as regulatory controls.

Additional regulatory controls may be imposed where the Licence Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 6.

The Revised Licence L6964/1997/11 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e. waste storage and landfilling activities (Category 57, 61, 62 and 64).

The conditions in the Revised Licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 6. Risk assessment of potential emissions and discharges from the Premises during operation

Risk Event					Risk rating ¹ C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
Operation								
Daily covering of landfill waste material	Dust	Air/windborne pathway causing impacts to amenity	Residences (370 m east, 375 m south, 400 m west, 920 m north)	Refer to Section 3.1.1	C = Minor L = Rare Low Risk	Y	<u>18, 19, 20, 21, 22, 23</u>	The Delegated Officer considers that the licence holder's proposed and existing controls at the premises are sufficient to mitigate potential emissions to surrounding receptors. However, due to current regulatory requirements, there are further notification and reporting requirements that need to be specified in the licence (refer to condition 7 and 18-23)
	Odour	Air/windborne pathway causing impacts to amenity			C = Moderate L = Unlikely Medium Risk	Y		
	Windblown waste	Air/windborne pathway causing impacts to amenity			C = Minor L = Unlikely Medium Risk	Y		
	Disease vectors	Air/windborne pathway causing impacts to health and amenity			C = Minor L = Unlikely Medium Risk	Y		
Abnormal operations (tyre storage fire)	Smoke and particulates	Air/windborne pathway causing impacts to health and amenity	Residences (370 m east, 375 m south, 400 m west, 920 m north)	Refer to Section 3.1.1	C = Major L = Unlikely Medium Risk	Y	<u>1, 3, 7, 18, 19, 22, 23</u>	
	Fire washwater	Overland runoff causing ecosystem disturbance and impacting surface water quality	Surrounding vegetation Offsite stormwater drains and Birriga Main Drain	Refer to Section 3.1.1	C = Moderate L = Rare Medium Risk	Y	<u>1, 3, 7, 18, 19, 21, 22, 23</u>	

Risk Event					Risk rating ¹	Licence Holder's controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls	C = consequence L = likelihood			
		Sub-surface infiltration causing deterioration of groundwater quality	Perched groundwater Permanent groundwater		C = Moderate L = Possible Medium Risk	Y		

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guidance Statement: Risk Assessments* (DER 2017).

Note 2: Proposed Licence Holder's controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

4. Consultation

Table 7 provides a summary of the consultation undertaken by the department.

Table 7: Consultation

Consultation method	Comments received	Department response
Department of Fire and Emergency Services (DFES) advised of proposal (9 October 2020)	DFES stated on 9 November 2020 that they had no additional comments on the application as the Licence Holder was intending to follow <i>Guidance Note GN02: bulk storage of rubber tyres including shredded and crumbed tyres.</i>	N/A
Licence Holder was provided with draft amendment on (11 November 2020)	Refer to Appendix 1	Refer to Appendix 1

5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

5.1 Summary of amendments

Table 8 provides a summary of the proposed amendments and will act as a record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

Table 8: Summary of licence amendments

Revised licence condition no.	Proposed amendments
1 (Table 1)	Tyres have been added to the waste acceptance table with a 100 tonnes per annual period acceptance limit.
3 (Table 2)	Tyres have been added to the waste processing table. Licence Holder proposed controls have been added as process limits relating to the storage of tyres.
4 (Table 3)	The use of alternative daily cover has been added to the cover requirements table. The cover is required to be applied in accordance with the manufacturer's specifications. A definition for Alternative Daily Cover has also been included in the 'Definitions' section of the licence.
7	The Licence Holder is required to report to DWER all fires and fire washwater discharges at the premises.
18	A requirement to monitor the rate of wastes received and removed from the premises have been added in accordance with current regulatory requirements for waste facilities.
19	A requirement to record complaints received in relation to the premises has been added. This condition is a standard administrative requirement of current Part V EP Act licences. The Licence Holder is already required to report this information through Annual Environmental Reports.

Revised licence condition no.	Proposed amendments
21	A requirement to record the estimated volume of fire-fighting washwater generated when extinguishing a fire has been added to the requirements of the Annual Environmental Report. Requirements to provide details on discharge areas and likely receptors are also embedded in the reporting condition.
22 and 23	A requirement to maintain accurate and auditable books in relation to the premises has been added. This condition is a standard administrative requirement of current Part V EP Act licences.
Definitions	The following definition for Alternative Daily Cover has been added; <i>refers to a proprietary mixture of clays and polymers mixed with cellulose fibres and water or leachate, applied to waste material by a mechanical spray unit.</i> The following definition for Tyre Pile has been added; <i>means a group of four tyre stacks.</i>
Schedule 1	Figure 1 has been updated to recent imagery. Figure 2 has been added to show the premises layout and for referential purposes. Figure 3 has been added to show the location of emission and monitoring points at the premises and for referential purposes.
Schedule 2	Figures 4 – 7 have been added to show the arrangement of tyre storage stacks and piles at the premises. The figures have been derived from DFES <i>Guidance Note GN02: Bulk storage of rubber tyres including shredded and crumbed tyres.</i>

Table 9 provides a summary of the consolidation of licence conditions into the current licence format and will act as a record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

Table 9: Consolidation of licence conditions in this amendment

Existing condition	Condition summary	Revised licence condition	Conversion notes
1(a)	Waste acceptance.	1	Changed to waste acceptance criteria table in accordance with current licence format.
1(b)	Separation and storage of non-conforming waste.	2	The two conditions have been combined with wording adjusted to the current licence condition format for contemporary Part V EP Act licences.
1(c)	Removal of non-conforming waste.		
1(d)	Specification that wastes, excluding paints and resins may be buried at the premises.	3	Changed to waste processing table in accordance current licence condition format for contemporary Part V EP Act licences. Process for non-hazardous waste types includes landfilling on the premises. Hazardous waste process and process specification (a) does not allow landfilling at the premises.
1(e)	Storage requirement for paints and resins.	3 - Table 2: Hazardous Waste (b)	Added to waste processing table as process specifications.

Existing condition	Condition summary	Revised licence condition	Conversion notes
1(f)	No decanting of paint at the premises.	3 - Table 2: Hazardous Waste (c)	
2(a)	Wrapping of Special Waste Type 1.	1 - Table 1: Special Waste Type 1 (a)	Added as acceptance specifications in Table 1 for Special Waste Type 1.
2(b)	Labelling requirement for Special Waste Type 1.	1 - Table 1: Special Waste Type 1 (b)	
3(i)	Covering of asbestos waste.	4 – Table 3: Special Waste Type 1	Changed to cover requirements table in accordance with current licence condition format.
3(ii)	Grid referencing and recording of asbestos waste disposal locations.	3 - Table 2: Special Waste Type 1 (c)	Added to waste processing table as a process specification.
3(iii)	Register of details for asbestos waste acceptance at the premises.	1 - Table 1: Special Waste Type 1 (c)	Added as an acceptance specification in Table 1 for Special Waste Type 1.
3(iv)	Witnessing of asbestos waste covering.	3 - Table 2: Special Waste Type 1 (d)	Added to waste processing table as process specifications.
3(v)	No depositing of asbestos waste within 2 metres of final tipping surface.	3 - Table 2: Special Waste Type 1 (b)	
3(vi)	Operations to not expose asbestos fibres.	3 - Table 2: Special Waste Type 1 (e)	
3(vii)	Records relating to asbestos to be made available on request.	3 - Table 2: Special Waste Type 1 (f)	
4(i)	Landfill boundary separation.	3 - Table 2: Clean fill, Inert Waste Type 1 and 2 and Putrescible Waste (a)	
4(ii)	Bunding of landfill area.	3 - Table 2: Clean fill, Inert Waste Type 1 and 2 and Putrescible Waste (b)	Added to waste processing table as process specifications.
4(iii)	Landfill tipping area limit.	3 - Table 2: Clean fill, Inert Waste Type 1 and 2 and Putrescible Waste (c)	
4(iv)	Daily cover requirements.	4 – Table 3: Inert Waste Type 1 and 2 and Putrescible Waste	
4(v)			Added as daily cover requirements within the cover requirements table.

Existing condition	Condition summary	Revised licence condition	Conversion notes
4(vi)	Requirement to stockpile cover material.	4 – for maintaining cover stockpiles 6(b) – for the fire management component	Changed to be part of the cover requirements condition in line with current wording and format. The fire management aspect of the condition was moved to a specific sub-condition relating to fire management.
4(vii)	Thickness of waste layers.	3 - Table 2: Clean fill, Inert Waste Type 1 and 2 and Putrescible Waste (d)	Added to waste processing table as process specifications.
4(viii)	Compaction and stability.	3 - Table 2: Clean fill, Inert Waste Type 1 and 2 and Putrescible Waste (e)	
4(ix)	Landfill face height limit.	3 - Table 2: Clean fill, Inert Waste Type 1 and 2 and Putrescible Waste (f)	
4(x)	Final cover requirement.	4 – Table 3: Inert Waste Type 1 and 2 and Putrescible Waste	Added as a final cover requirement within the cover requirements table.
5(a)	Security fencing.	9(a)	Changed to current wording and format.
		9(b)	
5(b)	Security fence inspections.	9(c)	
6(a)	Containment of windblown waste.	12(a)	Changed to current wording and format.
6(b)	Inspection of litter screens.	12(c)	
6(c)	Collection of windblown waste.	12(b)	
7(a)	Dust suppression.	14	Changed to current wording and format.
7(b)	No discharge of visible dust.	13	
8(a)	No burning of non-greenwaste	Removed.	Not required. Burning green waste is not authorised by the licence therefore there is no need to include a requirement that explicitly state this. <i>The Environmental Protection (Unauthorised Discharge) Regulations</i> also limit this activity to some extent.
8(b)		6	

Existing condition	Condition summary	Revised licence condition	Conversion notes
	Management of fires in accordance with a Fire Management Plan.	9	DWER no longer directly refers to management plans within condition sets. Key controls within an updated version of the management plan have been included as specific licence conditions.
8(c)	Conditions relating to the burning of greenwaste.	Removed	Removed as the Licence Holder no longer burns greenwaste at the premises.

9(a)	Groundwater monitoring requirements.	16	Changed to current wording and format. Added a footnote to allow in-field non-NATA analysis for pH, SWL and EC.
		17	
9(b)	Groundwater monitoring to following AS/NZS 5667.1.	16 - Table 6	Added as a method requirement within the Groundwater monitoring table. The standard referenced was changed to AS/NZS 5667.11, as this is the standard specifically relating to groundwater.
9(c)	NATA accreditation analysis requirement.	16(b)	Changed to current wording and format.
10(a)	Stormwater management.	10(a)	Changed to current wording and format.
10(b)	Stormwater drainage maintenance.	10(b)	
11	Groundwater separation distance.	11	Changed to current wording.
12(a)	Annual environmental report (AER) due date.	21	Changed to current wording and format.
12(b)	AER comparative assessment.	21 – Table 8	Added as a reporting requirement within Table 8 for groundwater monitoring and landfill gas monitoring.
12(c)	Summary of monitoring methods in AER.	21 – Table 8	
12(d)	AER requirements.	21 – Table 8	<p>Changed to current wording and format.</p> <p>Additional groundwater monitoring reporting requirements have been added in-line with current DWER reporting expectations. Excluding the submission of raw data within an excel format, the Licence Holder has already been reporting groundwater monitoring in accordance with these specifications for a number of years.</p>

Existing condition	Condition summary	Revised licence condition	Conversion notes
13	Annual audit compliance report (AACR).		Changed to current wording and format. The associated AACR form has been removed from the licence, as updated versions of the form are available on the DWER website.
14	Landfill gas emission point	5	Changed to current wording and format.
15	Landfill gas emissions monitoring	15	
16	Landfill gas flare verification sampling.	Removed	The condition has previously been satisfied and is no longer relevant to the licence.
17	Verification sampling analysis to be NATA accredited.		
Definitions	Definitions	Definitions	Changed to current format. Definitions updated to current wording and redundant definitions have been removed.
Attachment 1	AACR form.	Removed	The AACR form has been removed from the licence, as updated versions of the form are available on the DWER website.
Attachments 1 - 4	Summaries of <i>Landfill Waste Classification and Waste Definitions 1999</i> .	Removed	Reference to the <i>Landfill Waste Classification and Waste Definitions 1999</i> is not required within a licence. The document applies inherently due to the classification of the premises and an up to date version can be accessed at https://www.slp.wa.gov.au
Attachment 5	Premises location map.	Schedule 1	Changed to current format.
Attachment 6	Fire Management Plan.	6	Key controls within an updated version of the management plan have been included as specific licence conditions.
		9	

References

1. Department of Environment Regulation (DER) 2015. *Guidance Statement: Setting Conditions*. Perth, Western Australia.
2. DER 2016. *Guidance Statement: Environmental Siting*. Perth, Western Australia.
3. DER 2017. *Guidance Statement: Risk Assessments*. Perth, Western Australia.
4. Department of Fire and Emergency Services (DFES) 2020a. *Guidance Note GN02: Bulk storage of rubber tyres including shredded and crumbed tyres*. Perth, Western Australia.
5. DFES 2020b. *Guidance Note GN03: Fire safety considerations for open yard storage*. Perth, Western Australia.
6. *Landfill Waste Classification and Waste Definitions 1996 (as amended 2019)*.
7. Shire of Broome 2013. *Trial report posi-shell cover system*. Unpublished report.

Appendix 1: Summary of Licence Holder’s comments on risk assessment and draft conditions

Condition	Summary of Licence Holder’s comment	Department’s response
1 (Table 3: Used tyres)	<p>Can the term “Used tyres” be changed just “Tyres”</p> <p>Reason: What if someone wants to dispose of an unused tyre that is damaged and unsafe to use?</p>	<p>The Delegated Officer notes that if material is unwanted or excess to requirements, viewed from the perspective of its source/producer, the material is waste. Accordingly, tyres would not need to be used to be considered waste. This is reflected in the <i>Landfill Waste Classification and Waste Definitions 1996</i> where ‘used, rejected or unwanted tyres’ are specified as an example of Inert Waste Type 2.</p> <p>All references to <i>used tyres</i> within the licence will be changed to <i>tyres</i></p>
4 (Table 3: Inert Waste Type 2 and Putrescible Waste daily cover requirements)	<p>Can the words “or 5 mm of Alternative Daily Cover” please be replaced with “Alternative Daily Cover as per manufacturers recommendations.”</p> <p>Locking in 5 mm does not allow for possible changes by the manufacturers.</p>	<p>The Delegated Officer acknowledges that various proprietary ADC products may have differing application rates based on their manufacturer’s recommendations. The wording of the condition was based on the manufacturer’s current specification supplied with the application.</p> <p>It is not the Delegated Officer’s intent to limit the Licence Holder to the use of one specific product. This is why <i>Alternative Daily Cover</i> has been generically defined in the Licence, with specific reference only to the properties and means of application for the material. The intent of the requirement was for ADC material to be applied at the appropriate thickness to be effective.</p> <p>The requirement will be modified to the following:</p> <p><i>At least 150 mm of Clean fill or Alternative Daily Cover applied in accordance with the manufacturer’s specifications.</i></p>
6 (a)	<p>The City is not equipped to deal with major landfill fires. That is why, in the past, we have called fire services when we experienced a fire on site. It is tried and tested procedure that works well and they have access to more resources than the City. Please insert the word minor so that the condition reads:</p> <p><i>ensure that at all times, fire-fighting equipment and systems are in good working order and capable of controlling a minor waste fire</i></p>	<p>The Delegated Officer acknowledges that a major waste fire would require intervention by DFES. The intent of the condition is to require equipment to be maintained in good working order so that site operators can take measures to prevent a minor fire from becoming a major fire that requires DFES intervention.</p> <p>The condition will be modified to the following:</p> <p><i>ensure that at all times, fire-fighting equipment and systems are in good working order and capable of preventing the spread of a minor waste fire.</i></p>

Condition	Summary of Licence Holder's comment	Department's response
6 (c)(i)	<p>This has never been in place since I started with the City in 2014. I spoke with the previous Supervisor and he informed me that they trialed it in my predecessor's time (about 8 years ago), but it was not successful. There is no water supply (bore or tank) close to the litter fence. Can this requirement please be removed? 6(c)(ii) and 6(c)(iii) can remain.</p>	<p>The Delegated Officer notes that the litter screen sprinkler system referenced in the condition has been sourced from the Armadale Landfill & Recycling Facility Fire Management Plan. The Licence Holder should update this plan accordingly.</p> <p>The Fire Management Plan states that the intent of the litter screen sprinkler system was to assist in stopping a fire from spreading by extinguishing embers and ignited windblown litter. This would still be achieved through operation of the sprinkler system in other areas of the premises and through use of the water cart proposed in the Fire Management Plan. The Delegated Officer considers that removal of Condition 6(c)(i) would not materially change the potential risk of fire emissions at the premises due to the remaining outcome and management based sub-conditions within Condition 6.</p> <p>The condition will be modified to the following:</p> <p><i>(c) maintain and operate a sprinkler system for controlling waste fires that;</i></p> <p><i>(i) has suitable connections available for water trucks and the on-site bore system; and</i></p> <p><i>(ii) is tested in November of each annual period.</i></p>
6 (d)	<p>Can the words "where possible" be inserted so that the condition reads:</p> <p><i>ensure that water and other waste that may result from firefighting activities on the premises is captured and contained within the premises, where possible</i></p>	<p>The Delegated Officer notes that depending on the scale and location of a fire at the premises, it may not be possible to contain all fire washwater. However, the current wording of the condition is clear and precise in both the outcome to be achieved and the requirements for compliance. The severity of any non-compliance with the condition would be determined on a case-by-case basis, should it occur.</p> <p>The current wording of the condition will remain.</p>

Condition	Summary of Licence Holder's comment	Department's response
8	<p>Can condition 8(a) & 8(b) be combined and reworded to the following:</p> <p><i>The licence holder must ensure that all reasonable and practicable measures are taken to maintain safe separation distances between stockpiles and the active landfilling area.</i></p> <p>20 metre separation distances will inhibit the transfer station from operating efficiently. We are currently clearing out our plastic stockpile. PVC piping is cleared already. My direction to staff is to keep volumes as low as possible. If we have 2-3 m³ stockpile of plastic a 20 metre separation distance is quite excessive and may even prevent the City from recycling certain streams if the proposed fixed separation distance is not achievable. The proposed wording is aimed at a safe separation distance suitable depending on the stockpile at the time.</p>	<p>The Delegated Officer notes that the 20 metre separation distance between material stockpiles referenced in the condition has been sourced from the Armadale Landfill & Recycling Facility Fire Management Plan. The Licence Holder should update this plan accordingly.</p> <p>The Delegated Officer has reviewed requirements for similar landfill facilities and notes that 20 metre stockpile separation distances have not been specified. Based on the DFES document <i>Guidance Note: GN03 Fire Safety Considerations for Open Yard Storage (2020)</i>, these separation distances may be excessive. However, the Delegated Officer does not consider the condition proposed by the Licence Holder to be suitable, as due to the non-descript wording the condition would be difficult to enforce or monitor for compliance. The proposed condition also does not account for the additional risk posed from the stockpiling of tyres or access requirements for fire service vehicles.</p> <p>The condition will be modified to the following:</p> <p><i>8. The licence holder must;</i></p> <p><i>(a) maintain a separation distance of at least 18 metres between stockpiles of tyres and all other waste material;</i></p> <p><i>(b) maintain a separation distance of at least 6 metres between waste stockpiles; and</i></p> <p><i>(c) maintain a separation distance of at least 6 metres between waste stockpiles and the active landfilling area.</i></p> <p>This has been developed in consideration of the high burning and radiant heat of tyres and the difficulty to extinguish a tyre fire. The 18 metre separation distance has been derived from <i>Guidance Note GN02: bulk storage of rubber tyres including shredded and crumbed tyres</i>. The 6 metre separation distance for other waste materials is to allow fire service vehicle access between stockpiles.</p>

Condition	Summary of Licence Holder's comment	Department's response
18 (Table 7: Waste Inputs)	<p>Please be aware of practical constraints. For example: You cannot weigh just one tyre that comes in with other waste on a trailer. An average weight is applied and recorded on the weighbridge system. Same goes with the 1000's of small loads received on Utes and trailers. The City applies the average recommended weigh by DWER on these and they are recorded in the weighbridge system as individual loads entering the site. I can confirm that all waste entering the facility goes over the weighbridge and is recorded. All vehicles entering the site have to cross over the weighbridge.</p>	<p>The Delegated Officer acknowledges the practical constraints that are present when accepting a load of mixed waste. The condition does not specify the method for determining the input and output weights so that the Licence Holder may use the method most suitable for their premises or the relevant load. For example, deriving tonnages through a standard conversion factor applied to the number of tyres received would be an acceptable manner to demonstrate compliance against the condition.</p> <p>The intent of the condition is for waste inputs and outputs to be monitored for eventual reporting to the department in units which are the same as the relevant prescribed premises categories listed in Schedule 1 of the EP Regulations. In order to make this intent clearer in the licence the following changes will be made:</p> <p>The corresponding units for waste tyre inputs and outputs listed in Table 7 will be changed to:</p> <p><i>number of individual tyres and tonnes</i></p> <p>The corresponding unit for all other waste type inputs and outputs in Table 7 will be changed to:</p> <p><i>tonnes</i></p> <p>Additionally the Annual Environmental Report requirements listed in Table 8 for condition 18 will be changed to:</p> <p><i>A summary of waste inputs and outputs monitoring conducted at the premises during the annual period. The summary must also include the methodology used for determining the reported tonnages and any standard weights or conversion factors that have been used.</i></p>
18 (Table 7: Waste Outputs)	<p>When a load is rejected at the weighbridge (before it is entered on the weighbridge system) it is not recorded. Only loads that are rejected once they get to the tip face (after being recorded at the weighbridge) will be recorded as rejected loads. This will keep the material balance sound.</p>	<p>The Delegated Officer acknowledges that loads rejected at the gate would not have their weights recorded, as the load has not been accepted onto the premises.</p> <p>The corresponding time period for waste outputs listed in Table 7 will be changed to:</p> <p><i>Each load leaving or rejected from the premises following acceptance at the weighbridge</i></p>

Condition	Summary of Licence Holder's comment	Department's response
19 (c)	<p>I'm in the process of procuring a weather station with history records for the facility, but if we get a complaint referring to an incident or dates in the past it could be difficult to source accurate meteorological conditions at the time. Please insert the words "if possible/available" so that the condition reads:</p> <p><i>the meteorological conditions at the time of the complaint, if possible/available</i></p>	<p>The Delegated Officer notes that the nearest Bureau of Meteorology weather station is located at Jandakot Airport, approximately 15 km from the premises. This station collects daily weather observations at 9 am and 3 pm daily. If site specific information is not available when recording a complaint, the Licence Holder should source information from the nearest weather station recording the relevant meteorological parameter.</p> <p>The current wording of the condition will remain.</p>

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)				
Application type				
Works approval	<input checked="" type="checkbox"/>			
Licence	<input type="checkbox"/>	Relevant works approval number:		None <input type="checkbox"/>
		Has the works approval been complied with?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Has time limited operations under the works approval demonstrated acceptable operations?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Date Report received:		
Renewal	<input type="checkbox"/>	Current licence number:		
Amendment to works approval	<input type="checkbox"/>	Current works approval number:		
Amendment to licence	<input checked="" type="checkbox"/>	Current licence number:	L6964/1997/11	
		Relevant works approval number:		N/A <input type="checkbox"/>
Registration	<input type="checkbox"/>	Current works approval number:		None <input type="checkbox"/>
Date application received	16 July 2020			
Applicant and Premises details				
Applicant name/s (full legal name/s)	City of Armadale			
Premises name	Armadale Landfill and Recycling Facility			
Premises location	145 and 147 Hopkinson Road Hilbert. Lot 600 on Deposited Plan 400460 2828/800			
Local Government Authority	City of Armadale			
Application documents				
HPCM file reference number:	DWERDT309072			
Key application documents (additional to application form):	Letter – ADC Material			
Scope of application/assessment				
Summary of proposed activities or changes to existing operations.	<p>Amendment to include temporary storage of used or unwanted tyres (250) prior to offsite removal and use of alternative daily cover (ADC) on landfilled waste.</p> <p>Not requested in the application, but storage of 250 used or unwanted tyres will require the addition of Category 57.</p> <p>Use of ADC will require amendment to condition 4(iv) at least.</p>			

Category number/s (activities that cause the premises to become prescribed premises)

Table 1: Prescribed premises categories

Prescribed premises category and description	Assessed production or design capacity	Proposed changes to the production or design capacity (amendments only)
Category 62: solid waste depot	100,000 tonnes per annual period	N/A
Category 64: Class II or III putrescible landfill	100,000 tonnes per annual period	N/A
Category 57: Used tyre storage general	Not currently on licence	Up to 250 at one time. Up to 100 tonnes annual throughput

Legislative context and other approvals

Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Reference No:
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	LGA landowner.
Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Approval: Expiry date: If N/A explain why? Public authority
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	CPS No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: N/A Licence/permit No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Application reference No: N/A Licence/permit No: GWL178204

<p>Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Name: Perth Groundwater Area Type: Proclaimed Groundwater Area Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Regional office: Swan Avon Not required as no discharge</p>
<p>Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Name: N/A Priority: P1 / P2 / P3 / N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to <u>WQPN 25</u>)? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/></p>
<p>Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx</i>)</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	
<p>Is the Premises within an Environmental Protection Policy (EPP) Area?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	
<p>Is the Premises subject to any EPP requirements?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	
<p>Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i>?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Classification: possibly contaminated – investigation required (PC–IR) Date of classification: 22/10/2013</p>

Direct interest stakeholders

None. Applicant is also the LGA.