



## Application for Works Approval Amendment

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

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<b>Works Approval Number</b>	W6537/2021/1
<b>Works Approval Holder</b>	City of Stirling
<b>File Number</b>	DER2021/000210
<b>Premises</b>	Recycling Centre Balcatta 238 Balcatta Road, Balcatta BALCATTWA WA 6021  Legal description – Lot 45 on Plan 194142  As defined by the coordinates in Schedule 1 of the Revised Works Approval
<b>Date of Report</b>	16 January 2025
<b>Decision</b>	Revised works approval granted

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A/MANAGER, WASTE INDUSTRIES  
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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## 1. Decision summary

Works Approval W6537/2021/1 is held by the City of Stirling (Works Approval Holder) for the Recycling Centre Balcatta (the Premises), located at 238 Balcatta Road, Balcatta WA.

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 construction and operation of the Premises. As a result of this assessment, Revised Works Approval W6537/2021/1 has been granted.

## 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 26 September 2024, the Works Approval Holder submitted an application to the department to amend Works Approval W6537/2021/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act).

Works Approval W6537/2021/1 was granted in 2022 and allowed for the establishment of the following infrastructure at the Premises:

- A Waste Transfer Station (WTS);
- A Community Recycling Centre (CRC) including :
  - Container Deposit Scheme (CDS) Facility;
  - Recycle shop and forecourt;
  - Hazardous Household Waste (HHW) Facility;
  - Material recovery drop off;
  - Fridge, mattress and tyre laydown;
  - Inert waste laydown;
  - Green waste shed; and
  - Mixed waste shed.
- Waste transfer station leachate collection infrastructure;
- Noise barriers; and
- Fire risk prevention and management infrastructure and equipment.

The City is seeking to remove the aspects within the current Works Approval W6537/2021/1 that are related to the Community Recycling Centre (CRC) and noise bunds, and also amend the existing wording to reflect the new design for the WTS (refer to Table 1 below). The city is intending to submit a separate Works Approval application for the other aspect at a later stage once its future waste management requirements have been confirmed.

**Table 1: Proposed changes to the waste transfer station**

Infrastructure Aspect	Original Proposal	Revised Proposal
WTS Area	50m x 54m (2,700m <sup>2</sup> )	47.1m x 49.1m (2,313m <sup>2</sup> )
Entry point	Northeast Site entrance, Balcatta Road Building accessed via 6 fast-acting insulated high speed doors	Western Site entrance, Natalie Way Building accessed via 4 fast-acting insulated high speed doors
Waste Bunkers	Four bunkers with a total area of 48m x 24m (1,152m <sup>2</sup> )	One large concrete U bunker of 35.1m wide x 23.225m deep. The U bunker may be subdivided using a steel partition wall to provide two bunkers of approximately 17.5m x 23.225m.
WTS Floor	Reinforced concrete: <ul style="list-style-type: none"> <li>• 250mm thickness; and</li> <li>• 1° slope directing leachate towards drains and a sump</li> </ul>	180 thick, Class N40 reinforced concrete slab-on-ground with a leachate collection and storage system

### 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 *Guideline: Risk assessments* (DWER 2020).

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.

The proposed changes to remove the community recycling centre from the works approval does not change the risk assessment undertaken for Works Approval W6537/2021/1 granted on 17 May 2022, which can be found on the department website. The proposed modifications to the waste transfer station and other associated infrastructure may alter the risk of leachate, noise, and odour emissions during time-limited operations. As a result, the risk assessment below (section 3.2) is limited to an assessment of odour, noise, and leachate emissions from the new transfer station and associated infrastructure during time-limited operations.

#### 3.1 Source-pathways and receptors

##### 3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises construction and operation which have been considered in this Amendment Report are detailed in Table 2 below. Table 2 also details the proposed control measures the Works Approval Holder has proposed to assist in controlling these emissions, where necessary.

**Table 2: Works Approval Holder controls**

Emission	Sources	Potential pathways	Proposed controls
Noise	Acceptance of waste includes municipal solid waste, food organics and garden organics (FOGO), and commercial and industrial (C&I) waste into modified waste transfer stations.	Air/windborne pathway	<ul style="list-style-type: none"> <li>• All waste materials will be loaded and unloaded inside the completely enclosed waste transfer station.</li> <li>• Vehicle movements will only occur during daytime hours, 7am to 7pm;</li> <li>• Speed limits will be limited to 20 km/h;</li> <li>• B-double trucks will be certified to ADR 83/00 or European Regulation ECE R51</li> <li>• As the maximum speed on site will be set up 10km/h, the sound power for the B-Doubles is expected to be 103 A weighted decibels (dB(A));</li> <li>• B-Doubles enter the site and park in the loading chutes or loading areas, where they shut off their engine, rather than idling</li> <li>• Loaders to shut off their engines between loading operations</li> <li>• The WTS will include a number of specific noise control measures, including:                             <ul style="list-style-type: none"> <li>– Fast acting, insulated, high-speed roller doors;</li> <li>– Ventilation systems will be designed with a low noise mechanical system;</li> <li>– Any fans, cowlings and louvres associated with the active and passive ventilation of the WTS are to be orientated in such a way not to affect the nearby receivers; and</li> <li>– Noise absorptive cladding on the inside wall and ceilings</li> </ul> </li> <li>• An Environmental Noise Management Plan (ENMP) will be developed to help manage environmental noise emissions from the WTS and will include:                             <ul style="list-style-type: none"> <li>– Procedures to ensure noise emissions are appropriately managed;</li> <li>– Maximum noise levels for trucks entering the site;</li> <li>– Actions to minimize and manage noise complaints effectively and efficiently; and</li> </ul> </li> <li>• Annual verification noise measurements to be undertaken once the WTS is operational</li> </ul>
Odour		Air/windborne pathway	<ul style="list-style-type: none"> <li>• All waste materials will be loaded and unloaded inside the completely enclosed waste transfer station, automatic fast acting roller doors to minimize odour emissions escaping;</li> </ul>

Emission	Sources	Potential pathways	Proposed controls
			<ul style="list-style-type: none"> <li>• Mechanical extraction and exhaust stacks that allows for minimum four changes of air per hour to reduce odour impacts within the building;</li> <li>• FOGO will be removed on a daily basis (within 24hrs);</li> <li>• Daily washdown of the tipping floor to remove any residue; and</li> <li>• Leachate collection system and regular removal of leachate from the Site.</li> </ul>
Leachate		<p>Overland runoff</p> <p>Seepage to soils and groundwater</p>	<ul style="list-style-type: none"> <li>• The WTS floor will be sloped to direct leachate to collection points and then piped to a below ground leachate collection tank located outside the eastern side of the building. Leachate will then be pumped out as required and removed from the Site for appropriate treatment.</li> <li>• Maintain a clear separation between stormwater outside the building and the minimal leachate generated within the building, all vehicle access points will include a small bund that must be driven over to contain any water with the WTS;</li> <li>• The WTS will be fully enclosed to stop rainfall infiltration; and</li> <li>• A Surface Water Management System will be implemented to collect and manage clean surface water.</li> </ul>

### 3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), the Delegated Officer has excluded employees, visitors and contractors of the Works Approval 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 3 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 (*Guideline: Environmental siting* (DWER 2020)).

**Table 3: Sensitive human and environmental receptors and distance from prescribed activity**

<b>Human receptors</b>	<b>Distance from activity / prescribed premises</b>
Residential Premises	170 m south of the premises boundary.
Industrial premises	Immediately adjacent to the WA premises boundary
<b>Environmental receptors</b>	<b>Distance from activity / prescribed premises</b>
Priority ecological communities	P3 - Banksia Woodlands of the Swan Coastal Plain ecological community – located within southwest corner of the of the premises boundary and surrounding
Geomorphic wetland - sumpland	Careniup Swamp – located 1.6 km west of the premises boundary
Public Drinking Water Source Area	Premises located within P3 - Perth Coastal and Gwelup Underground Water Pollution Control Area

## 3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for those emission sources which are proposed to change and takes into account potential source-pathway and receptor linkages as identified in Section 0. Where linkages are incomplete they have not been considered further in the risk assessment.

Where the Works Approval Holder has proposed mitigation measures/controls (as detailed in Section 0), these have been considered when determining the final risk rating. Where the Delegated Officer considers the Works Approval Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the works approval as regulatory controls.

Additional regulatory controls may be imposed where the Works Approval Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 4.

The Revised Works Approval W6537/2021/1 that accompanies this Amendment Report authorises construction only and time-limited operations. The conditions in the Revised Works Approval have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence is required following the time-limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the Premises. A risk assessment for the operational phase has been included in this Amendment Report, however licence conditions will not be finalised until the department assesses the licence application.



Table 4. Risk assessment of potential emissions and discharges from the Premises during time limited operation

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
<b>Operation (including time-limited-operations operations)</b>								
Acceptance of waste includes municipal solid waste, food organics and garden organics (FOGO), and commercial and industrial (C&I) waste into modified waste transfer stations.	Odour	Air/windborne pathway causing impacts to health and amenity	Residences 170 m south of the premises boundary  Industrial premises immediately adjacent to the premises boundary	Refer to Section 5.1	C = Major L = Possible <b>High Risk</b>	Y	Condition 1, 2, 3, 7, 11, 12, 13 and 16	The applicant's requests to remove the reference to the height of the exhaust stacks from the works approval and move the fact-acting doors from the north to the west of the transfer station were acknowledged by the delegated officer. The delegated officer considers that these factors may alter the odour risk profile of the premises.  Given the proximity to the receptors (residential at 170 m) and the ongoing acceptance of FOGO wastes up to 25,000 tonnes yearly the delegated officer has retained the requirement for an odour field assessment to be undertaken (conditions 12 and 13). Stack height has also been retained as it was a factor that was considered in the original Odour Impact Assessment.

Risk Event					Risk rating <sup>1</sup>	Works Approval Holder's controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls	C = consequence L = likelihood			
	Noise	Air/windborne pathway causing impacts to health and amenity		Refer to Section 5.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	Condition 1, 2, 3, 7, 11 and 16	<p>The original Works Approval W6537/2021/1 granted on 17 May 2022, included the requirement of building noise barriers on the north of the storage area, the south boundary of the premises, and the north-east boundary of the premises. This was done in accordance with the findings and suggestions of the environmental noise impact assessment.</p> <p>According to the noise impact assessment, the primary sources of noise on the premises are wheel loaders, b-double trucks, hook-lift bin trucks, cardboard compactors, timber grinders/shredders, and idling customer or residential cars. The majority of these noise sources are related to the community recycling centre's operations, therefore the delegated officer has agreed to remove the requirement for the construction of noise barriers. The delegated officer considers that the</p>

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
								provisions of the <i>Environmental Protection (Noise) Regulations 1997</i> are sufficient to regulate noise emissions from construction and time limited operations.
	Leachate	Overland runoff potentially causing ecosystem disturbance or impacting surface water quality  Seepage to soils and groundwater	Priority ecological communities  Careniup Swamp ~1.6 km west of the premises boundary  Perth Coastal and Gwelup Underground Water Pollution Control Area  Gwelup Groundwater Area  Groundwater users	Refer to Section 5.1	C = Moderate L = Unlikely <b>Medium</b>	Y	Condition 1, 2, 3, 7, 11 and 16	The delegated officer acknowledged the applicant's request to amend the thickness of the concrete floor from 250 mm to 180 mm. The delegated officer determined that the above modification to the thickness does not alter the permeability of the floor.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2020).

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

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## 4. Consultation

Table 5 provides a summary of the consultation undertaken by the department.

**Table 5: Consultation**

Consultation method	Comments received	Department response
Works Approval Holder was provided with draft amendment on 18/12/2024	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 Works Approval will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

The City of Stirling will require a licence amendment to authorise emissions associated with the ongoing operation of the new waste transfer station. Additional noise controls and/or monitoring requirements may be added to a licence if the premises receive complaints from residential or industrial receptors against noise emissions. Additionally, when the applicant reapplies for construction of community recycling centre, the department is likely to impose the requirement of constructing noise barriers on the premises.

### 5.1 Summary of amendments

Table 6 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Works Approval as part of the amendment process.

**Table 6: Summary of works approval amendments**

Condition no.	Proposed amendments
Cover page	Inclusion of date of amendment to the cover page Amend the assessed production capacity up to 107,000 tonnes per annual period
Works approval history	Inclusion of works approval history table to the works approval
Condition 1; Table 1	Updated construction/installation requirements related to waste transfer station. Deleted construction/installation requirements related to community recycling centre and noise bunds.
Condition 7; Table 2	Updated operational requirements related to waste transfer station. Deleted operational requirements related to community recycling centre and noise bunds.
Condition 8; Table 3	Removed the green waste and household hazardous waste from the waste acceptance table.
Condition 9; Table 4	Removed the green waste and household hazardous waste from the waste monitoring table.
Schedule 1; Figure 2	Added an updated site layout plan.

## References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.

## Appendix 1: Summary of Works Approval Holder's comments on risk assessment and draft conditions

Condition	Summary of Works Approval Holder's comment	Department's response
Condition 1 Table 1; Item 1	The works approval holder was informed that there will be 8 fast-action doors in the whole new WTS building, including 4 doors servicing the tipping floor and 4 doors for the loadout lanes.	The condition 1 has been updated to reflect the provided information.
Condition 8 Table 3; Item 1 and 2	The works approval holder requested to update the waste acceptance rate to 30,000 tonnes of FOGO and 77,000 tonnes for other waste types annually.	The condition has been updated as requested.