



## Application for Works Approval

### Division 3, Part V *Environmental Protection Act 1986*

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**Works Approval Number** W6748/2022/1

**Applicant** Veolia Recycling & Recovery (Perth) Pty Ltd

**ACN** 118 828 872

**File Number** DER2022/000533

**Premises** North Bannister Resource Recovery Park  
Lot 2 on Plan 2767 Albany Highway, North Bannister WA

**Date of Report** 28 March 2023

**Status of Report** Final

Abbie Crawford  
A/MANAGER, WASTE INDUSTRIES

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

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## 1. Decision summary

This decision report documents the assessment of potential risks to the environment and public health from emissions and discharges during the construction and operation of the premises. As a result of this assessment, works approval W6748/2022/1 has been granted.

## 2. Scope of assessment

### 2.1 Regulatory framework

In completing the assessment documented in this decision report, the Department of Water and Environmental Regulation (the department; DWER) 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 and overview of premises

On 7 October 2022, the applicant submitted an application for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act).

The application is for construction works relating to leachate management infrastructure. The premises is approximately 100 km southeast of Perth and 9 km northwest of the town of Boddington.

The premises relates to the categories and assessed production and design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in licence L8871/2014/2 and associated works approval W6748/2022/1. The infrastructure and equipment relating to the premises category and any associated activities which the department has considered in line with *Guideline: Risk Assessments* (DWER 2020) are outlined in works approval W6748/2022/1.

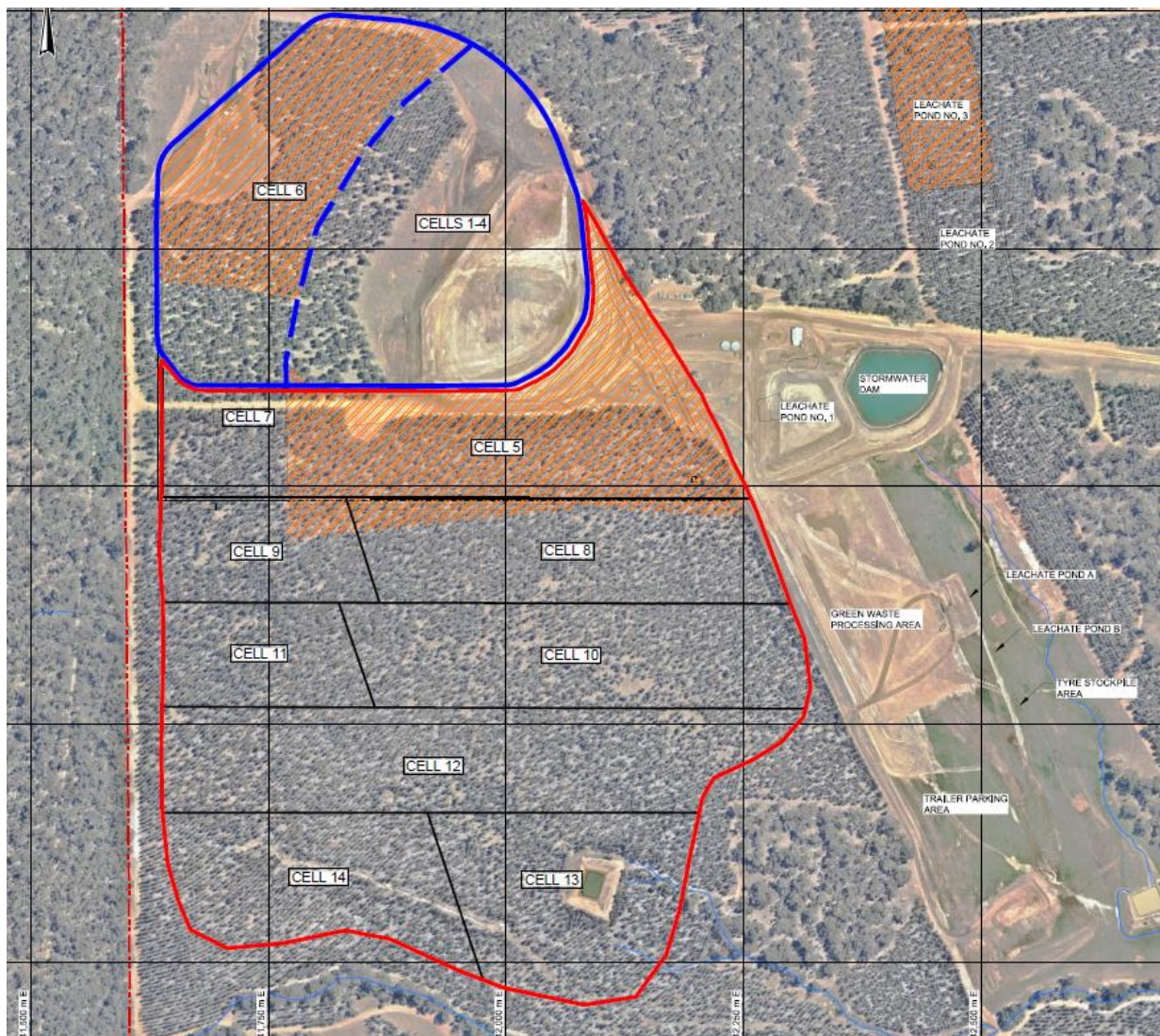
The North Bannister Resource Recovery Park (NBRRP) receives waste (see Table 1) for landfill, storage or composting depending on source, typically from the Perth metropolitan area. The current approved landfill area comprises Cells 1 to 6, with planned Cells 7 – 14 (Phase 2) yet to be approved (see Figure 1). Since its commissioning in 2014, additional approved waste streams have been added such as liquid waste for treatment, biosolids for composting as well as biosecurity and high-risk medical waste for landfill. Liquid waste is treated on site using wastewater treatment, evaporation, chemical fixation and solidification. Leachate from other landfill sources is disposed to the NBRRP leachate system which comprises 6 leachate ponds (ponds 1-4 and ponds A and B). Leachate ponds 1-4 service landfill leachate and ponds A and B service the organics recycling area.

This works approval application relates to the construction of additional Leachate Pond 5, located directly adjacent to the eastern edge of Leachate Pond 4. The catchment for the proposed pond is the composting area from which leachate will be transferred via pump and pipe. The premises has been subject to capacity issues in winters of high rainfall due to uncapped landfill areas where cells have reached final levels. Leachate Pond 5 is designed to provide contingency collection for landfill leachate under these conditions.

The applicant has advised they do not intend to increase the volume of waste accepted at the premises as part of this amendment, therefore there are no proposed changes to categories and capacities as outlined in Table 1:

**Table 1: Premises category description and production design capacity (as approved under Licence L8871/2014/2)**

Prescribed Premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i> )	Assessed production / design capacity
Category 57: Used tyre storage	1,000 tyres
Category 61: Liquid waste facility	16,000 tonnes per annual period
Category 61A: Solid waste facility	90,000 tonnes per annual period
Category 62: Solid waste depot	14,000 tonnes per annual period
Category 64: Class II putrescible landfill site	400,000 tonnes per annual period
Category 67A: Compost manufacturing and soil blending	100,000 tonnes per annual period



**Figure 1: Progressive cell layout**



### 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.

#### 3.1 Source-pathways and receptors

##### 3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises construction which have been considered in this decision report are detailed in Table below. Table also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

**Table 2: Proposed applicant controls**

Emission	Sources	Potential pathways	Proposed controls
<b>Construction</b>			
Dust	Excavation, vehicle movements, lift-off from stockpiles and/or stored product, general earthworks	Air / windborne pathway	Onsite speed limited to 8 km/hr on internal landfill roads  Water cart retained onsite with large capacity from fire water tanks and stormwater dams  Wetting down of roads and earthworks when required
Noise	Excavation, vehicle movements	Air / windborne pathway	All onsite machinery fitted with noise control devices  No site works to occur outside operating hours
Contaminated stormwater	Runoff from construction areas causing increased load of sediment to stormwater	overland flow	Use of designated stockpile areas away from stormwater flows  Diversion of stormwater around construction using berms and bunds
<b>Operation</b>			
Leachate	leachate collected in Leachate Pond 5 from organics recycling and active landfill cells	Pathway to groundwater through punctures and defects in the and HDPE and GCL geosynthetic barrier layers	Design including a multi layered geocomposite liner system incorporating coated GCL, HPDE and a depressurisation layer with separate collection system  QA/QC of geosynthetics including verification of manufacturer product specifications via conformance testing by an independent consultant at the place of

Emission	Sources	Potential pathways	Proposed controls
			manufacture prior to delivery to site
	Overtopping of leachate from Leachate Pond 5		Modelled and designed leachate capacities and 500mm freeboard Transfer via permanent pump and pipe infrastructure to other leachate lagoons and landfill cells via recirculation to assist in management of freeboard

### 3.1.2 Receptors

In accordance with the *Guideline: Risk Assessment* (DWER 2020), the Delegated Officer has excluded the applicant's employees, visitors, and contractors 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 2: Sensitive human and environmental receptors and distance from prescribed activity**

Human receptors	Distance from prescribed activity
Culford Agricultural Precinct Caretakers Residence	4.4km east of Premises boundary
Private residences – Plantation Road, Bannister	7km south-east of Premises boundary
Commercial premises - Sixty-four Mile Road, Bannister	8.9km south-east of premises boundary
Commercial premises - Shell Service Station and Three-ways Tavern	5.5km east- south-east of Premises boundary
Users of Bibbulmun Track – North Bannister Spur Trail (Transient receptor)	Directly adjacent to northern Premises boundary.
Richgro composting facility	Directly adjacent to the eastern Premises boundary. Groundwater abstraction for composting process.
Environmental receptors	Distance from prescribed activity
Serpentine Dam Catchment Area - Priority 2 Public Drinking Water Source Area	Within Prescribed Premises boundary. N.B. Landfill footprint situated outside Serpentine Dam Catchment Area.
Serpentine Dam Catchment Area – Priority 1 Public Drinking Water Source Area	Directly adjacent to northern Premises boundary.
Bannister River	Within Prescribed Premises boundary. Non-perennial watercourse flowing south-east through the Premises. Constructed dams have been established along its

	<p>course to hold water onsite.</p> <p>Flows to the Murray River, which discharges to Peel-Harvey Estuary.</p>
Gringer Creek	<p>Minor river, tributary to Bannister River</p> <p>Approximately 6km to the south-east of the Premises boundary.</p> <p>Flows to the Bannister Rive, which ultimately discharges to the Peel-Harvey Estuary via the Murray River.</p> <p>Closest RAMSAR listed wetland is the Peel-Yalgorup system, located 57 km west of the Premises.</p>
Serpentine River	<p>Non-perennial tributary located adjacent to northern Premises boundary. A constructed dam has been built to retain surface water onsite. Prescribed premises is situated outside catchment area</p> <p>Main river channel located 3.4km north-west of prescribed premises boundary</p> <p>Ultimately discharges to Peel-Harvey Estuary via the Serpentine River.</p>
Groundwater	<p>Premises is situated atop groundwater resource area – Karri, Karri, Combined – Fractured Rock West - Alluvium</p> <p>The depth to groundwater varies across the site ranging from 1.5 to 20.5 meters below ground level (mbgl) (319 to 345 mAHD).</p> <p>Well and borehole drilling indicates the presence of an unsaturated zone between the landfill liner and groundwater.</p>
Dwellingup State Forrest - C42	<p>Remnant native vegetation</p> <p>Directly adjacent to northern and western Premises boundaries</p>
Beelaring Class C Nature Reserve	<p>Remnant native vegetation</p> <p>Immediately to the north and west of premises boundary</p>
Threatened fauna	<p>Scattered records as close as 700m east-northeast of Premises boundary</p>

## 3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source 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 applicant 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 applicant'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 applicant's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 3.

Works approval W6748/2022/1 that accompanies this decision report authorises construction only. The conditions in the issued works approval, as outlined in Table 3 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence amendment is required to authorise emissions associated with the ongoing operation of the premises i.e., collection and treatment of leachate in Leachate Pond 5. A risk assessment for the operational phase has been included in this decision report, however licence conditions will not be finalised until the department assesses the licence amendment application.



**Table 3: Risk assessment of potential emissions and discharges from the premises during construction**

Risk events					Risk rating <sup>1</sup> C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
<b>Construction</b>								
Excavation, vehicle movements, lift-off from stockpiles and general earthworks	Dust	Air / windborne pathway causing impacts to health and amenity	Closest sensitive receptor 4.4 km east from the premises	Refer to Section 3.1	C = Minor L = Rare <b>Low Risk</b>	Y	None specified	N/A
	Noise			Refer to Section 3.1	C = Slight L = Unlikely <b>Low Risk</b>	Y	None specified	N/A
Excavation, run-off from stockpiles and general earthworks	Stormwater	Runoff from construction areas causing increased load of sediment to stormwater	Bannister River and remnant native vegetation	Refer to Section 3.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	Condition 1	Row 8 in Table 1 builds on applicant controls to include storm events during construction, in line with licence conditions under L8871/2014/1
<b>Operation</b>								
Receipt, testing and installation of geosynthetic liner materials	Leachate	Compromised liner materials and installation causing seepage (infiltration) impacting underlying groundwater through loss of designed liner integrity  Potential for impacting the public drinking water catchment	Groundwater	Refer to Section 3.1	C = Moderate L = Possible <b>Medium Risk</b>	N	Condition 1	Schedule 2 and 3 under Condition 1 include onsite conformance testing for the HDPE and GCL to improve the standard for the required level of construction quality assurance. Testing onsite following delivery rather than the proposed testing at the place of manufacture better captures any material loss or damage during transit as well as reducing the timeframe to installation from production

Risk events					Risk rating <sup>1</sup> C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
Collection and treatment of leachate in Leachate Pond 5	Overtopping of leachate	Overland flow	Serpentine Dam Catchment Area - Priority 2 Public Drinking Water Source Area	Refer to Section 3.1	C = Moderate L = Possible <b>Medium Risk</b>	Y	Condition 1	Licence amendment to add Leachate Pond 5 to condition 16 for leachate system monitoring, process controls and management actions will be required prior to operation  The Delegated Officer applies Condition 1 regarding demonstration of pond surveyed construction levels to achieve approved capacity

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

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

## 4. Consultation

Table 4 provides a summary of the consultation undertaken by the department.

**Table 4: Consultation**

Consultation method	Comments received	Department response
Local Government Authority advised of proposal on 11 November 2022	No response received	N/A
Application advertised on the department's website on 24 November 2023	No submissions received	N/A
Application advertised in the West Australian on 28 November 2023	No submissions received	N/A
Applicant was provided with draft documents on 7 March 2023	Applicant responded on 27 March 2023 confirming that they had no comments on the draft documents and requested the works approval be granted.	N/A

## 5. Conclusion

Based on the assessment in this decision report, the delegated officer has determined that a works approval will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

## 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: Application validation summary

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 type="checkbox"/>	Current licence number:			
		Relevant works approval number:		N/A	<input type="checkbox"/>
Registration	<input type="checkbox"/>	Current works approval number:		None	<input type="checkbox"/>
Date application received		10 October 2022			
<b>Applicant and Premises details</b>					
Applicant name/s (full legal name/s)		SUEZ Recycling & Recovery (Perth) Pty Ltd			
Premises name		North Bannister Resource Recovery Park			
Premises location		Lot 2 on Plan 2767 Albany Highway 6364 Albany Highway, North Bannister WA 6390			
Local Government Authority		Shire of Boddington			
<b>Application documents</b>					
HPCM file reference number:		DWERDT669031			
<b>Scope of application/assessment</b>					
Summary of proposed activities or changes to existing operations.		Construction and operation of new Leachate Pond 5 at NBRRP.			

**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
Category 64: Class II or III putrescible landfill site	400,000 tonnes per annual period

**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 checked="" type="checkbox"/> No <input type="checkbox"/>	Certificate of title <input type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input type="checkbox"/> Expiry: Other evidence <input type="checkbox"/> Expiry:
Has the applicant obtained all relevant planning approvals?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Approval: Expiry date: If N/A explain why?
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 type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: Licence/permit No: Licence / permit not required.



<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>Type: Proclaimed Groundwater Area</p> <p>Has Regulatory Services (Water) been consulted?</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/></p>
<p>Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Name: Serpentine Dam Catchment Area</p> <p>Priority: 1 and 2</p> <p>Are the proposed activities/landuse compatible with the PDWSA (refer to WQPN 25)?</p> <p>Yes <input checked="" 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. Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx)</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>The landfill and composting operations include receipt of controlled waste and dangerous goods. See licence: L8871/2014/1</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>N/A</p>
<p>Is the Premises subject to any EPP requirements?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>N/A</p>
<p>Is the Premises a known or suspected contaminated site under the Contaminated Sites Act 2003?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Classification: listed in DWERS Geocortex viewer as</p> <p>OBJECTID 57276</p> <p>CSS_ID 64381</p> <p>CSS_SITE_ID 8993</p> <p>Date of classification: Incomplete Report</p> <p>Trim ID- DER2014/2437</p>