Decision Report

Application for Works Approval

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

Works Approval Number	W6745/2022/1
Applicant	Cleanaway Solid Waste Pty Ltd
ACN	120 175 635
File number	DER2015/001648-1
Premises	Banksia Road Putrescible Landfill Banksia Road Legal description Lot 2 on Deposited Plan 65861 Certificate of Title Volume 1670 Folio 568 As defined by the [premises maps] attached to the issued works approval
Date of report	19 April 2023
Proposed Decision	Intent to grant works approval

Marko Pasalich
Digitally signed by Marko Pasalich
Date: 2023.04.19 16:40:14 +08'00'

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

Table of Contents

1. Decision summary 1

2. Scope of assessment 1

2.1 Regulatory framework 1

2.2 Application summary and overview of Premises 1

2.3 Proposed works 1

2.4 Premises boundary changes 1

3. Risk assessment 1

3.1 Source-pathways and receptors 2

3.1.1 Emissions and controls 2

3.1.2 Receptors 3

3.2 Risk ratings 6

4. Consultation 8

5. Conclusion 8

References 8

Appendix 1: Application validation summary 9

Table 1: Proposed applicant controls 2

Table 2: Sensitive human and environmental receptors and distance from prescribed activity 3

Table 3: Risk assessment of potential emissions and discharges from the premises during construction and operation 7

Table 4: Consultation 8

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 W6745/2022/1 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 18 July 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 premises is approximately 3.8 km south-east of the town of Dardanup. The applicant operates an existing Class III Landfill Facility at the premises under Licence L8904/2015/1, where landfilling operations were first established in June 2000. The Licence contains conditions regulating stormwater management, infrastructure and usage. The applicant has advised that while the current stormwater management system at the premises is sufficient to comply with current regulatory obligations, there is an operational need to improve the stormwater management system to maximise the storage of clean stormwater for onsite use in the dryer seasons. This application is to undertake construction works relating to additional stormwater overflow basins at the premises to fulfil this requirement.

The premises relates to the categories and assessed design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W6745/2022/1. 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 W6745/2022/1.

2.3 Proposed works

The applicant engaged Golder Associates Pty Ltd (Golder) to assess and update the current stormwater management plan in place for the existing premises. In developing a new stormwater management plan, Golder has considered the impact of a 1% AEP storm event on site stormwater infrastructure and concluded that current site infrastructure is adequate to contain stormwater resulting from this storm event. The adequacy of existing site infrastructure is dependent on the maintenance of a 0.5m freeboard in Stormwater Pond 2. The current stormwater management system is outlined in Figure 1 below.

Due to site operational requirements, the applicant is now seeking to use Stormwater Pond 2 as a water storage dam and remove the requirement to retain a freeboard. As a result, there is a need for alternative stormwater retention elsewhere on the premises to accommodate for a potential 1% AEP storm event.

Figure 1: Existing stormwater management system

Golder have determined that a minimum stormwater storage area of 91,000 m3 must be maintained on site to contain a 1% AEP storm event. The applicant proposes to increase the dimensions of existing basins and construct one new basin, with these improvements providing a 95,650 m3 storage area for stormwater retention, or approximately 5% more storage area than required as determined by Golder's modelling. The intent of these works is that the additional storage areas will cumulatively capture overflow from Stormwater Pond 2, as the ponds will rely on gravity to progressively fill basins down the flow path from Stormwater Pond 2.

To facilitate this, the applicant proposes to undertake construction works in three stages over three consecutive years, with construction commencing immediately after regulatory approval is received. The works proposed are as follows:

Stage 1 – construction proposed summer 2024/2025

- Western Overflow Basin – Excavation of approximately 2 m of soil from the base of the existing basin;
- West Embankment Overflow Basin - Excavation of approximately 0.5 m of soil from the base of the existing basin, a new inlet structure from Stormwater Pond 2 and new outlet structure into the Southern Overflow Basin;
- Western Drain:
    - South – Raising the existing western site perimeter bund in some locations by an approximately 300 mm to form a consistent bund height along the site western boundary;
    - North - Excavation of approximately 2 m of soil from the base of the existing drain to ensure improved flow within the drain, raising the existing western site perimeter bund in some locations by approximately 800 mm to form a consistent bund height along the site western boundary.

Stage 2 – preliminary construction proposed April – June 2023, major construction proposed September 2023 – March 2024

- Northern Overflow Basin - Excavation of approximately 3 m of soil from the base of the existing basin, construct a new stormwater inlet structure from Stormwater Pond 2, and a new stormwater outlet structure to control and manage discharge from the Northern Overflow Basin across an access road and into the Western Overflow Basin;

Stage 3 – construction proposed summer 2023/24

- Southern Overflow Basin (new infrastructure) – The development of a new 4 m deep stormwater retention basin, including inlet and outlet structures;

During the three-year staged construction period the applicant will ensure sufficient storage area and freeboard is retained within Stormwater Pond 2 to ensure that there is always adequate available storage to accommodate a 1% AEP storm event.

An overview of the proposed changes to the existing stormwater management system is outlined in Figure 2 below.

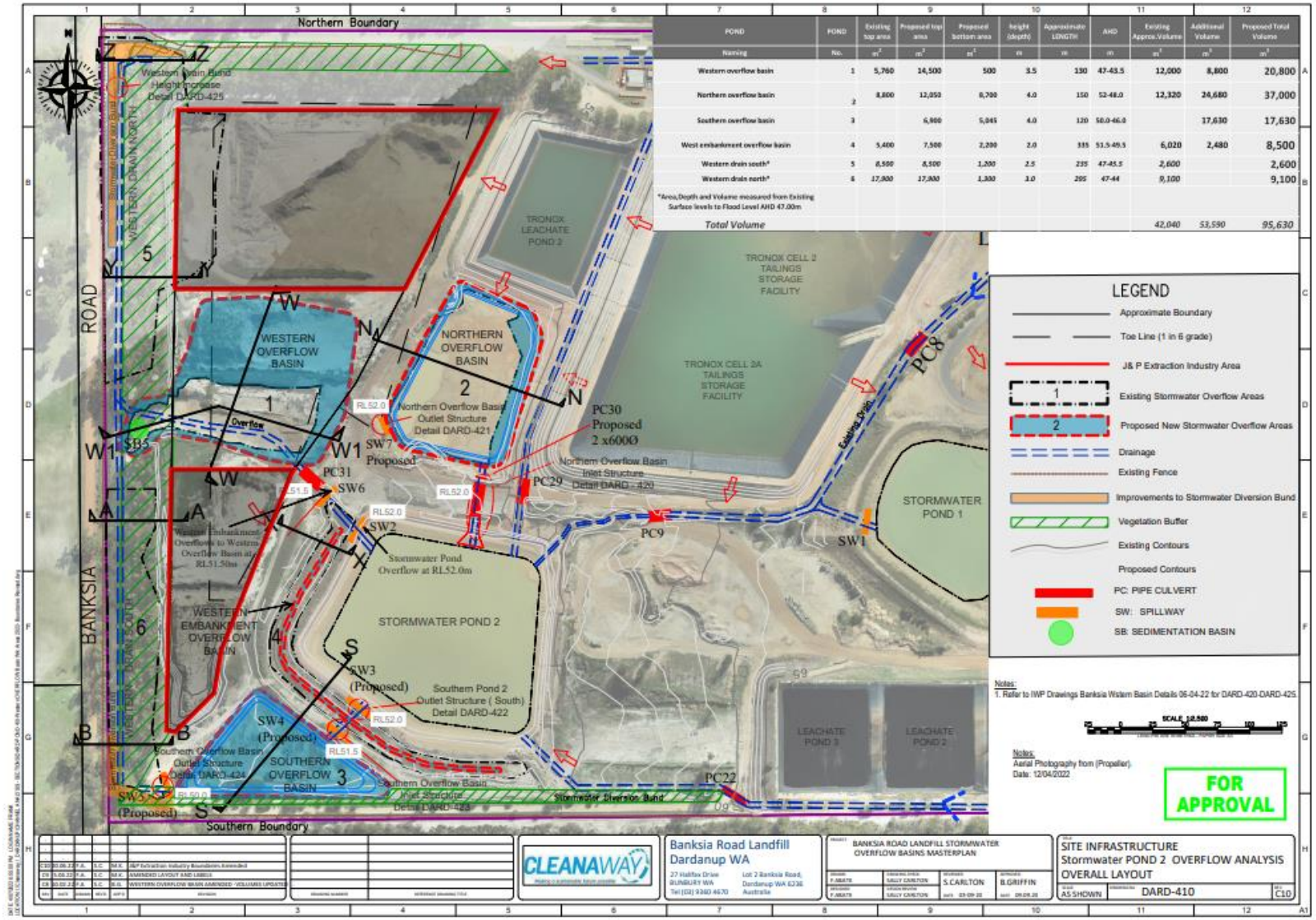

Figure 2: Proposed stormwater management system

2.4 Premises boundary changes

Lot 2 on Deposited Plan 65861, Certificate of Title Volume 1670 Folio 568 is currently owned by J & P Corporation Pty Ltd (J & P). Cleanaway hold the lease for the premises area until 1 September 2026 with four extension options remaining (each of a ten year period). J & P have retained the rights to the extraction of sand and gravel resource from the western portion of the site which is currently excised from the premises boundary. J & P have historically held an extractive industries approval through the Shire of Dardanup for this area and have recently been granted a new approval which covers areas within the site that still have valuable sand and gravel resources.

The construction works proposed by the applicant for additional stormwater retention area and a new basin will extend into the area of the premises currently controlled by J & P and excised from the prescribed premises boundary. The applicant is proposing that the Western Overflow Basin be developed within the existing J & P excavation pit and have developed the design of the Western Overflow Basin to suit the overall profile of the existing excavation pit.

As such, there is now a requirement to encompass the area gazetted for the Western Overflow Basin into the prescribed premises boundary. The applicant, in agreement with J & P, has proposed to amend the premises boundary to ensure that the area where the Western Overflow Basin will be located will be within the premises boundary, and the areas in which J & P will be undertaking extractive activities will remain outside of the premises boundary. The newly proposed premises boundary and excised areas are outlined in Figure 3 below.

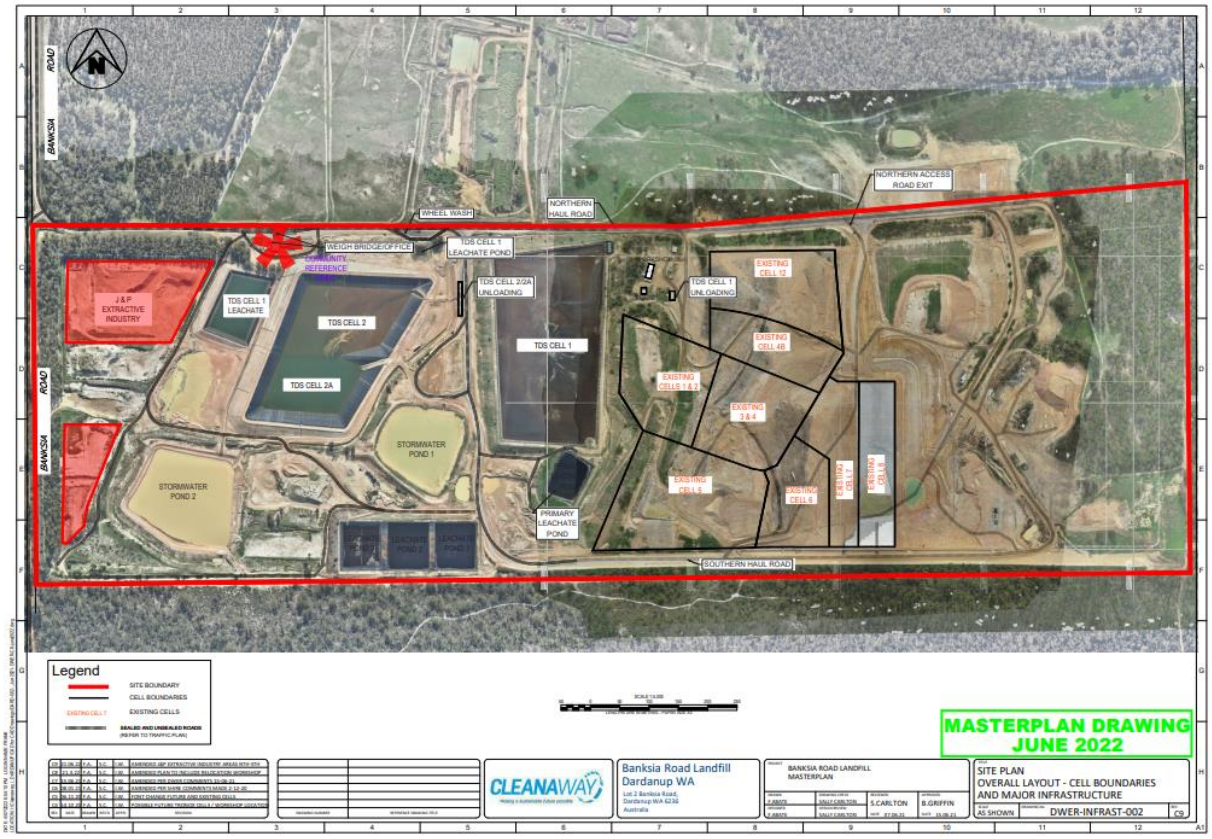

Figure 3: Proposed premises boundary - proposed excised areas shaded in red

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 and operation which have been considered in this decision report are detailed in Table 1 below. Table 1 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

Table 1: Proposed applicant controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Excavation works associated with stormwater basin construction	Air / windborne pathway causing impacts to health and amenity	Dust generating activities will be minimized in adverse weather conditions Vehicles will be kept to designated access roads and be operated at slow speeds Access roads will be wet down as required Dust suppressant chemicals will be applied as required
Noise			Equipment will be regularly maintained Broadband reversing alarms will be installed on vehicles used at site Heavy vehicles will be directed away from the southern portion of Banksia Road where residences are located where practicable Operating hours are restricted Creation and maintenance of buffer zones around the site boundary
Operation			
Potentially contaminated stormwater	Contamination of stormwater with environmentally hazardous material	Overland run off potentially resulting in ecosystem disturbance	Stormwater management infrastructure has been designed to contain 5% more than a 1% AEP storm event Stormwater management infrastructure acts to divert stormwater from areas of the premises containing environmentally hazardous materials Sedimentation basins will promote settlement of suspended solids

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 2 and Figure 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 *(Guideline: Environmental Siting* (DWER 2020)).

Table 2: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	**Distance from prescribed activity**
Residential Premises	• 0.54 km south of the southwest corner of the Premises, separated by the Dardanup Conservation Park. • 0.92 km due west of the Premises. • 1 km west southwest of the southwest corner of the Premises • 1.2 km southwest of the southwest corner of the Premises • 1.5 km due south of the Premises, separated by the Dardanup Conservation Park and Boyanup State Forest • 1.5 km northwest of the northwest corner of the Premises. • 1.5 km northeast of the northeast corner of the Premises separated by the Dardanup Conservation Park and Boyanup State Forest. • 1.75 km east northeast from the eastern boundary of the Premises separated by the Dardanup Conservation Park and Boyanup State Forest.
Environmental receptors	**Distance from prescribed activity**
Dardanup Conservation Park	Adjacent to southern and eastern boundaries of the Premises
Boyanup State Forest	Approximately 0.7km south of the Premises and 1km east
Priority Ecological Community (PEC) – Dardanup Jarrah and Mountain Marri woodland on laterite (P1)	Three occurrences of this PEC occur within the Dardanup Conservation Park. The closest occurrence is mapped within 15 metres of the Premises eastern boundary.
Priority Ecological Community/Threatened Ecological Community (TEC) – Banksia Dominated Woodlands of the Swan Coastal Plain	An occurrence of this PEC/TEC is mapped adjacent to the southern boundary of the Premises and also to the west of the Premises on the opposite site of Banksia Road.
Geomorphic wetland: Multiple use Palusplain and Dampland (flat, seasonally waterlogged)	Approximately 400 metres southwest through to the northwest of the Premises boundary.
Crooked Brook (significant stream)	Located approximately 1100m south/ southwest of the Premises boundary flowing in a generally east/west direction. Flows into Preston River which is located approximately 5km downstream.
Preston River	Approx. 5km west of the Premises. Groundwater from the superficial aquifer discharges into the Preston River.

Groundwater	It is understood that the superficial aquifer is present within the Yoganup geological formation between 20m to 30m below ground level. It is also possible that further isolated perched aquifers occur under the Premises 15 – 20m below ground level. The permanent, confined Leederville aquifer has been encountered at the site between 35 mbgl and 40 mbgl Groundwater flows in a northwest direction
Proclaimed Groundwater area (RIWI Act)	The Bunbury groundwater area is located adjacent to the western boundary of the premises.
Beneficial users of groundwater	Approximately 41 bores are located within 3km of the Premises. Water abstracted from these bores are used for such purposes as: • Stock watering • Dairy purposes • Irrigation of pasture • Domestic use
Dardanup Water Reserve	The Priority 1 groundwater protection zone for Dardanup Water Reserve is located approximately 2.5 km northwest of the premises.
Priority Flora	• Priority 3 flora species – adjacent to the south east corner of the Premises and approximately 180m south of the Premises • Priority 4 flora species - approximately 160m east of the Premises
Fauna - Baudin's black cockatoo (Calyptorhynchus baudinii), Carnaby's black-cockatoo (Calyptorhynchus latirostris) and the forest red-tailed black-cockatoo (Calyptorhynchus banksii naso)	The remaining vegetation on the eastern side of the Premises contains areas of potential black cockatoo breeding habitat as well as foraging and roosting habitat.

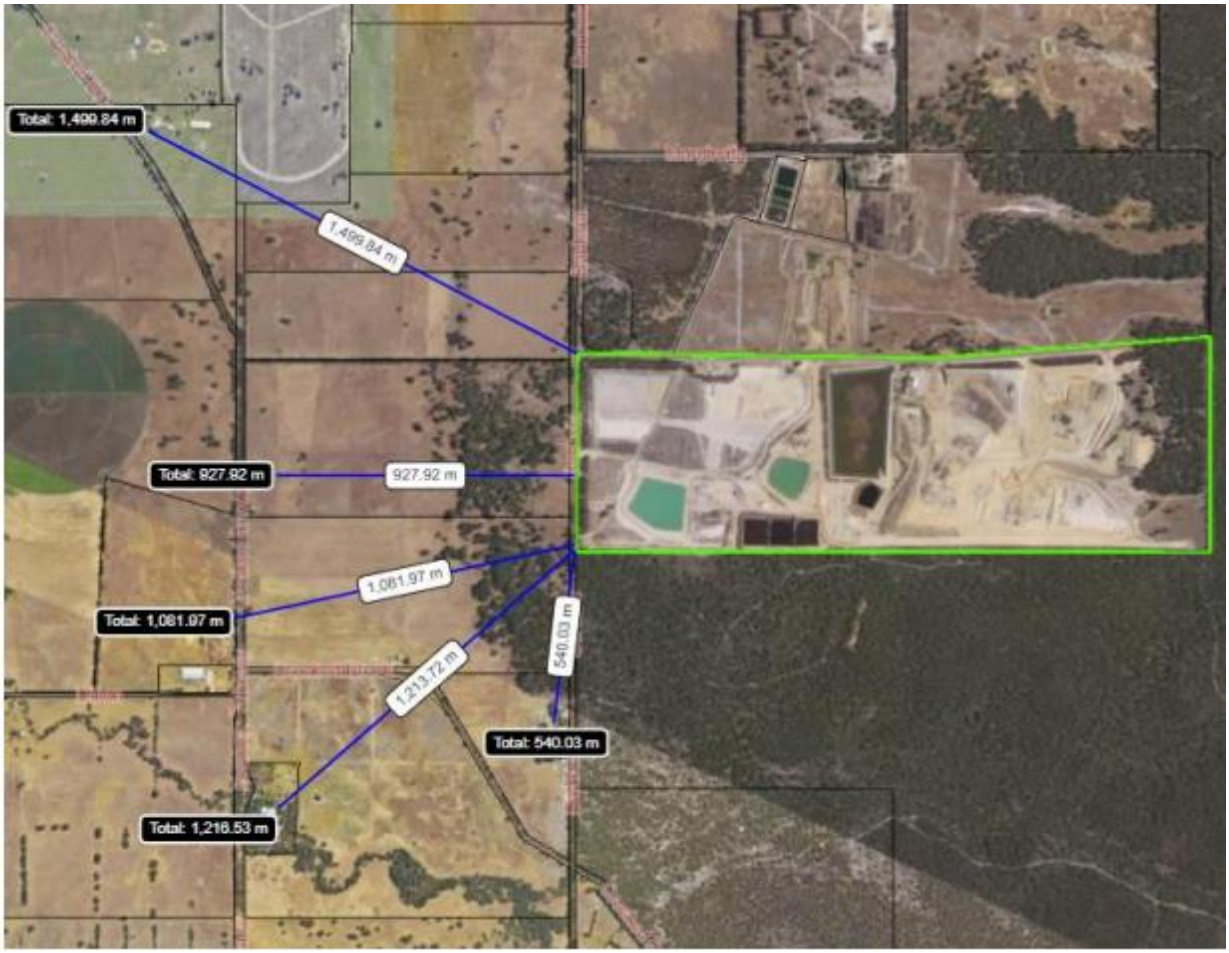

Figure 4: Distance to closest residential receptors

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 W6745/2022/1 that accompanies this decision report authorises construction and time-limited operations. 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 is required following the time-limited operational phase authorised under the works approval to authorise emissions associated with the ongoing use of the new stormwater overflow basins. 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 application.

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

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of works approval	Justification for additional regulatory controls
Sources / activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
Construction								
Excavation works associated with stormwater basin construction	Dust	Air / windborne pathway causing impacts to health and amenity	Residences within 1.75 km of the premises	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	Condition 2	N/A
	Noise			Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	Condition 3	N/A
Operation (including time-limited-operations operations)								
Overflow of stormwater from retention basins to the environment	Potentially contaminated stormwater	Overland run off potentially resulting in ecosystem disturbance	Dardanup Conservation Park Surrounding PECs and TECs Priority flora	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	Conditions 1, 4, and 9	N/A

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
Application advertised on the department's website on 16 December 2016	One comment received on 13 January 2023 from a community member highlighting the following concerns: • Contaminations of the underlying aquifers by the landfill • Odour and dust arising from the tipping face of the landfill • Impacts to human health resulting from the operation of landfill	Emissions resulting from the existing landfill operation at the premises and their potential impacts to surrounding receptors are outside of the scope of this assessment, which considers emissions resulting from the construction and operation of stormwater basins.
Shire of Dardanup advised of proposal on 5 January 2023	The Shire of Dardanup replied on 9 January 2023 advising that the Shire has no comments to make other than the works must be in accordance with the development approval as issued by the Shire (development approval provided to DWER).	The Delegated Officer has reviewed the conditions within the Shire of Dardanup's development approval and considers these conditions to align with conditions imposed on the Works Approval.
Applicant was provided with draft documents 1 March 2023	Applicant responded on 14 April 2023 to provide new construction timeframes.	New construction timeframes reflected in Decision Report text.

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

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)		
Application type		
Works approval	☒	
Date application received		18 July 2022
Applicant and premises details		
Applicant name/s (full legal name/s)		Cleanaway Solid Waste Pty Ltd
Premises name		Banksia Road Putrescible Landfill
Premises location		Lot 2 on Deposited Plan 65861 Banksia Road CROOKED BROOK WA 6236
Local Government Authority		Shire of Dardanup
Application documents		
HPCM file reference number:		DER2015/001648-1
Key application documents (additional to application form):		Banksia Road Landfill Dardanup – Stormwater overflow basins – works approval application supporting documentation
Scope of application/assessment		
Summary of proposed activities or changes to existing operations.		Use of existing stormwater pond 2 as a water storage dam, as opposed to retaining a significant flood containment freeboard in this pond. Construction of additional stormwater retention infrastructure (overflow basins) to cater for a possible 1% AEP storm event.

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

Table 1: Prescribed premises categories

Prescribed premises category and description	Proposed production or design capacity	Proposed changes to the production or design capacity (amendments only)
Category 5: Processing or beneficiation of metallic or non-metallic ore	350,000 tonnes per annual period	
Category 61: Liquid waste facility	3,000 tonnes per annual period	
Category 64: Class II or III putrescible landfill site	350,000 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 ☐ No ☒	Referral decision No: Managed under Part V ☒ Assessed under Part IV ☐

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)		
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes ☐ No ☒	EPA currently assessing Part IV application for expansion of landfill facility
Has the proposal been referred and/or assessed under the EPBC Act?	Yes ☐ No ☒	Reference No:
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes ☐ No ☒	From Licence review (issued 28 October 2021) - Lot 2 on Deposited Plan 65861, Certificate of Title Volume 1670 Folio 568 is currently owned by J & P Corporation Pty Ltd. Cleanaway hold the lease for the premises until 1 September 2026 with four extension options remaining (each of a ten year period). DWER considers Cleanaway to be the occupier of the premises for the purposes of Part V of the EP Act.
Has the applicant obtained all relevant planning approvals?	Yes ☒ No ☐ N/A ☐	Development approval was issued by the Shire of Dardanup on 26 October 2022.
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes ☐ No ☒	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 ☐ No ☒	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 ☐ No ☒	Application reference No: Licence/permit No: Licence / permit not required.
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes ☐ No ☒	Name: N/A Type: N/A Has Regulatory Services (Water) been consulted? Yes ☐ No ☐ N/A ☒ Regional office: N/A

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)		
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes ☐ No ☒	Name: N/A Priority: N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes ☐ No ☐ N/A ☒
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*)	Yes ☒ No ☐	*Environmental Protection (Unauthorised discharges) Regulations 2004* *Dangerous Goods Safety Act 2004* *Environmental Protection (Controlled Waste) Regulations 2004* *Radiation Safety Act 1975*
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes ☐ No ☒	
Is the Premises subject to any EPP requirements?	Yes ☐ No ☒	
Is the Premises a known or suspected contaminated site under the *Contaminated Sites Act 2003*?	Yes ☒ No ☐	Classification: possibly contaminated – investigation required (PC–IR) Date of classification: 28 May 2014