



## Application for Works Approval Amendment

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

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<b>Works Approval Number</b>	W6855/2023/1
<b>Works Approval Holder</b>	Cleanaway Solid Waste Pty Ltd
<b>ACN</b>	120 175 635
<b>File Number</b>	DER2018/001042-5
<b>Premises</b>	<p>Banksia Road Putrescible Landfill Banksia Road CROOKED BROOK WA 6236</p> <p>Legal description –  Part of Lot 2 on Deposited Plan 65861 As defined by the coordinates in Schedule 2 of the Revised Works Approval</p>
<b>Date of Report</b>	16 October 2024
<b>Decision</b>	Revised works approval granted

Grace Heydon  
MANGER, WASTE INDUSTRIES  
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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# 1. Decision summary

Works Approval W6855/2023/1 is held by Cleanaway Solid Waste Pty Ltd (Works Approval Holder) for the Banksia Road Putrescible Landfill (the Premises), located at Lot 2 on Deposited Plan 65861, Crooked Brook within the Shire of Dardanup

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during construction and operation of the Premises. As a result of this assessment, Revised Works Approval W6855/2023/1 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 12 June 2024, the Works Approval Holder submitted an application to the department to amend Works Approval W6855/2023/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments were requested by the works approval holder:

- Authorise time-limited operations (TLO) on the works approval for the acceptance of waste into cell 12A;
- Extend the duration of the works approval to 22 February 2034;
- Amend the wording in condition 1 regarding Cell 9 and Cell 10 stormwater retention ponds; and
- Amend the wording in condition 2 regarding the Cell 12A cell liner overlay requirements to correct a typographical error.

The TLO phase is a period during which DWER permits the operation of the infrastructure and equipment identified in a works approval, to allow operations to comment as the premises will transition to regulation under a licence. The works approval holder had not sought approval for time-limited operations as a part of the original and revised work approval applications submitted on 2021 and 27 September 2023, respectively. The works approval holder is now requesting a time-limited operation phase for the acceptance of waste into Cell 12A through this amendment. By initiating time-limited operations to facilitate waste acceptance, the works approval holder intends to demonstrate continued compliance with construction specifications set out in the Works Approval.

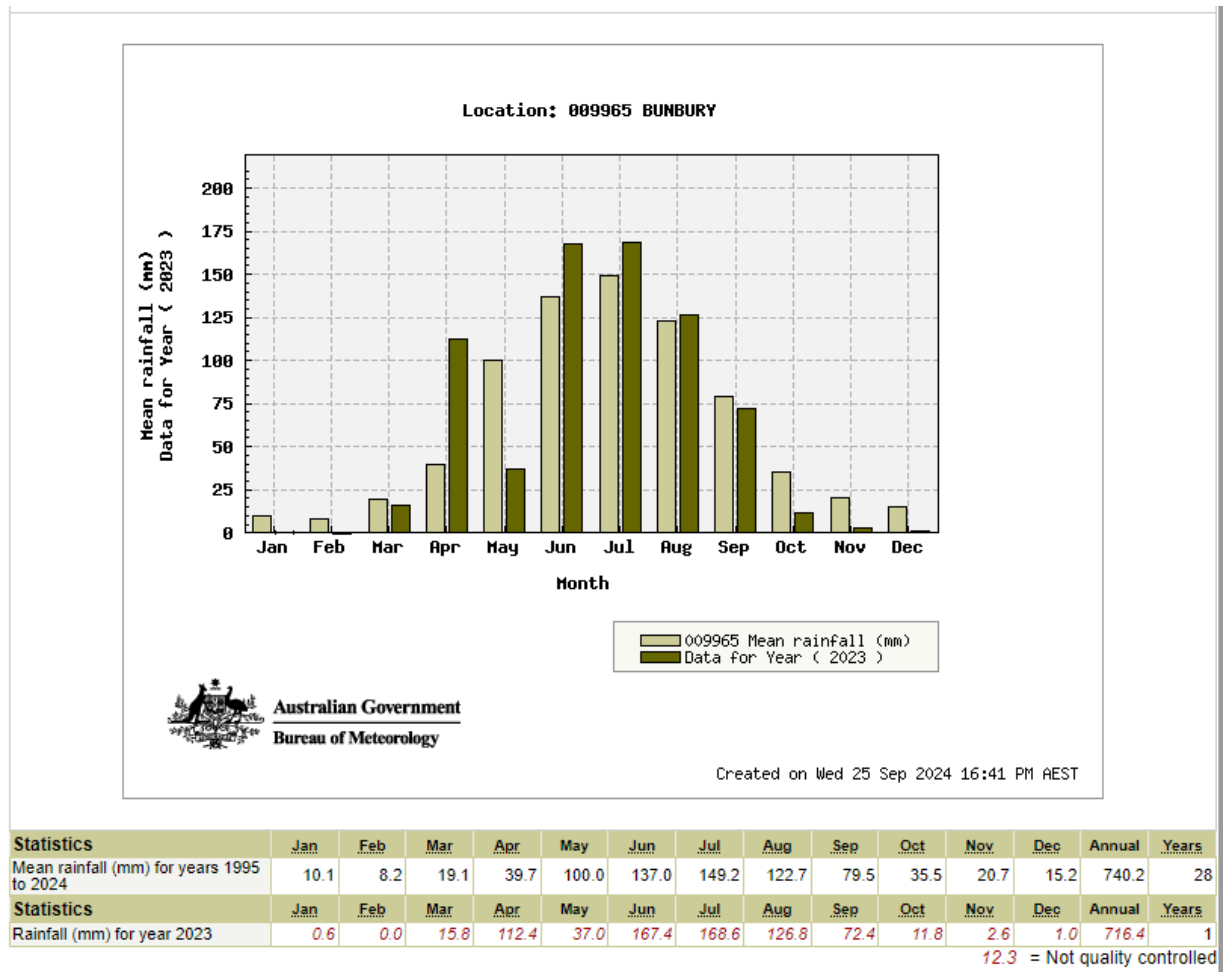
The current works approval was granted for a six-year period from 23 February 2024 to 22 February 2030 to allow an adequate time period for each cell to be constructed, with the intent to transition operations under the licence L8904/2015/1. However, the works approval holder is seeking another 4-year extension up to 22 February 2034 to allow sufficient time for construction, compliance, and time-limited operations activities for each cell to be completed under the works approval and for the licence to be amended to allow ongoing operation.

An appeal (Appeal number 14 of 2024) against Works Approval W6855/2023/1 was submitted to the Minister for Environment; Climate Action (the Minister) on 14 March 2024. One of the grounds of the appeal relates to a typographical error in the overlap specification of the piggyback liner for cell 12A. Therefore, the works approval holder is requesting that the

typographical error in the overlap specification of the piggyback liner in condition 2, Table 2 of the works approval W6855/2023/1 be corrected through this amendment.

## 2.3 Amendment of sizing specifications for new ponds

Condition 1, Table 1 of the Works Approval W6855/2023/1 stated that the cell 9 and cell 10 stormwater retention ponds must be sized to be able to contain water from a 1 in 100-year Annual Exceedance Probability (AEP) stormwater event of 24 hrs duration without overtopping. However, the ponds are designed to contain stormwater from a 1 in 100-year AEP event of up to 4-hour duration. After 4 hours, it is assumed that pumping of the water into the existing stormwater system has commenced. The existing stormwater system is designed to contain all water from a 1 in 100-year AEP event. Therefore, the works approval holder is requesting that the specification be amended to reflect the above-mentioned information.



**Figure 1: Bureau of Meteorology - Bunbury rainfall data**

According to Bureau of Meteorology data for the Bunbury region as outlined in Figure 1, mean annual rainfall is 732.8 mm and has varied from 484.4 mm in 2010 to 995.6 mm since 1999. On a monthly basis, mean rainfall is < 20 mm per month from December to March, increasing to over 115 mm/month in winter.

The Cell 9 and 10 stormwater ponds have a design volume of 3,870 m<sup>3</sup> and 5,600 m<sup>3</sup>, respectively.

The volume of cells 9 and 10 stormwater ponds allows for a 1 in 100 year/24-hour storm event if there will be 115 mm of rainfall. Cell 10 allows for 100% surface water runoff (conservative) to be captured if average is equivalent to 168 m<sup>3</sup>/hr rainfall (the maximum rainfall recorded in July 2023), as there will be 4,032 m<sup>3</sup> of stormwater generated within the 24-hour period in this

scenario. The cell 9 stormwater ponds design volume indicates a minimum of 162 m<sup>3</sup> must be pumped in the 24-hour event to prevent the pond overtopping, and based on the largest available site pump size, the pumping should commence after 23 hours of the commencement of any storm event and run between 1-2 hours to prevent over topping.

The requested word changes sought through this amendment do not alter the risk rating for the initial pond design capacity, as both cell 9 and 10 stormwater ponds will have the capacity to contain stormwater from a 1 in 100-year AEP event of up to 24-hour duration for most storm events, according to the historical Bureau of Meteorology data.

## 2.4 Critical Containment Infrastructure Report

A Critical Containment Infrastructure Report (CCIR) has been submitted by the works approval holder to demonstrate compliance with conditions 2, 4, 5, 6, 9 and 10 of Works Approval W6855/2023/1. The works being assessed are limited to stages 1, 2, and 3 of the construction of cell 12A at the premises. The stage 1 and 2 reports were submitted on 24 July 2024, and the stage 3 report was submitted on 7 August 2024.

DWER has reviewed the CCIR and has determined that the provided information meets the construction requirements of cell 12A and confirms compliance with conditions of the works approval W6855/2023/1.

## 2.5 Groundwater wells construction report

A Groundwater monitoring well construction report has been submitted by the works approval holder to demonstrate compliance with conditions 11 and 12 of Works Approval W6855/2023/1. DWER has reviewed this report and has determined that the provided information meets the construction requirements for the groundwater monitoring wells and confirms compliance with conditions of the works approval W6855/2023/1.

## 2.6 Ministers Determination on Appeal 48/2021

On 26 October 2023, the Minister made a determination on a third party appeal (Appeal number 48 of 2021) against the grant of a Licence amendment for the premises Licence L8904/2015/1 dated 28 October 2021 following a Licence review of the premises.

The Minister received five appeals objecting to the conditions within the amendment Licence. Broadly, the key concerns of the appellants were for the Licence to include additional controls, monitoring and reporting requirements in relation to the following matters:

- The acceptance and storage of titanium dioxide tailings at the landfill;
- Potential for impacts to groundwater from the putrescible waste landfill and tailings;
- Management of noise and dust emissions;
- Potential for impact to nearby conservation areas; and
- Management of fires, erosion and complaints.

In making the determination the Minister allowed in part the appeals to the extent that the Licence be amended as follows:

- The inclusion of additional monitoring for titanium dioxide tailings and groundwater to ensure that the Department of Water and Environmental Regulation (DWER) can fully assess the ongoing effectiveness of the existing infrastructure and landfill management, which will include monitoring key radionuclides concentrations in the tailings and monitoring of additional groundwater parameters; and
- The inclusion of an additional condition requiring the accepted leachate plan for the premises be implemented; and

- Conditions relating to monitoring, management and reporting of fires and feral animals/pests, compliance monitoring and addressing and responding to complaints should be improved.

DWER is seeking to implement the Ministers Determination to Licence L8904/2015/1 through a DWER initiated amendment to the Licence. However, DWER has needed to seek technical advice to inform the setting of risk-based threshold concentration levels for the titanium dioxide tailings accepted to the landfill facility, which is required by the Ministers Determination and for which no existing guidance is in effect. This has resulted in a delay in implementation amendments to the Licence as required by the Ministers Determination.

In light of this, the Delegated Officer has reviewed changes imposed by the Minister in terms of relevance to the scope of this works approval amendment, which is limited to the authorisation of TLO for landfill cell 12A.

The Delegated Officer has identified that the implementation of the Leachate Plan, as described in Condition 57 of the existing licence, is directly relevant to the TLO of an additional landfill cell at the premises, as the new landfill cell will generate additional leachate. As such, the Delegated Officer will incorporate a condition into the revised works approval requiring the leachate plan to be implemented, prior the Ministers Determination being implemented through a DWER initiated amendment.

### 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 time limited operation which have been considered in this Amendment Report are detailed in Table 1 below. Table 1 also details the proposed control measures the Works Approval Holder has proposed to assist in controlling these emissions, where necessary.

**Table 1: Works Approval Holder controls**

Emission	Sources	Potential pathways	Proposed controls
Dust	Acceptance and burial of all waste types  Vehicle movements	Air/windborne pathway	<p>Keep all roads used by vehicles greater than 2.5 tonnes damp at all times during operational hours by applying water via a water cart, collected from Stormwater Pond 1 and Stormwater Pond 2, as per condition 23 of the current Licence L8904/2015/1.</p> <p>As per condition 23 of the current Licence L8904/2015/1, the works approval holder will be restricted all vehicle speeds on the site to below 20 km per hour.</p> <p>Fugitive dust emissions from the active tipping area during operational hours will be managed as per condition 25 of the current Licence L8904/2015/1:</p> <ul style="list-style-type: none"> <li>• applying water collected from Stormwater Pond 1 and Stormwater Pond 2, via a water cart, to the active tipping area; or</li> <li>• applying leachate via the water cart to the active tipping area in accordance with Condition 13;</li> <li>• ensuring waste is levelled and compacted as soon as practicable after it is discharged and at a minimum by the end of the working day; and</li> <li>• ensuring waste is placed and compacted to ensure all faces are stable and capable of retaining further waste placement or placement of cover or rehabilitation material.</li> </ul> <p>As per condition 26 of the current licence L8904/2015/1, the works approval holder will undertake targeted wetting down of dusty wastes during disposal and burial at the active tipping area during operational hours.</p> <p>As per condition 27 of the current Licence L8904/2015/1, the works approval holder will apply dust suppressant material to non-vegetated landfill batters to mitigate fugitive dust emissions from these areas.</p> <p>As per condition 28 of the current Licence L8904/2015/1, the works approval holder will clean all operational vehicles through a wheel wash prior to exiting the site</p> <p>The premises dust management plan will be implemented.</p>
Noise		Air/windborne pathway	<p>All vehicles entering the site and within the Licence Holders control are fitted with broadband reversing alarms as per condition 31 of the current Licence L8904/2015/1.</p> <p>Noise emissions will also be subject to the requirements outlined in the <i>Environmental Protection (Noise) Regulations 1997</i>.</p>



Emission	Sources	Potential pathways	Proposed controls
			The premises Noise Management Plan will be implemented.
Odour	Acceptance and burial of all waste types	Air/windborne pathway	<p>As per condition 32 of the current Licence L8904/2015/1, the works approval holder will ensure odour from the site does not unreasonably interfere with the health or amenity of persons not on the site.</p> <p>As per condition 33 of the current Licence L8904/2015/1, the works approval holder will ensure the active tipping area is limited to an area no greater than 1,800 m<sup>2</sup> or to two areas no greater than 1,800 m<sup>2</sup> each for periods of up to three months when transitioning between cells</p> <p>As per condition 34 of the current Licence L8904/2015/1, the works approval holder will ensure the disposal of highly odorous waste by burial immediately following acceptance</p>
Windblown waste/litter	Acceptance and burial of all waste types	Air/windborne pathway	<p>As per condition 37 of the current Licence L8904/2015/1, the works approval holder will maintain a minimum of 10 portable litter control screens with a minimum height of 4 m and a minimum length of 4 m each, located within 15 m, where practicable, downwind of the working face of the landfill</p> <p>As per condition 38 of the current Licence L8904/2015/1, the works approval holder will maintain at least 500 m of litter control nets with a minimum height of 6 m around the active landfill faces, positioned to best capture windblown waste based on prevailing wind direction.</p> <p>As per condition 39 of the current Licence L8904/2015/1, the works approval holder will ensure windblown waste is collected from the landfill area and control screens on a daily basis and from the greater site, including perimeter fencing, roads and vegetated areas on at least a weekly basis and returned to the tipping area or appropriately contained.</p> <p>As per condition 40 of the current Licence L8904/2015/1, the works approval holder will maintain chain wire fencing of a minimum 1.8 m in height around the site boundary designed to effectively capture windblown waste not captured by the portable litter screens and litter nets.</p>
Vermin, pests and pathogens	Acceptance and burial of all waste types	Biological pathway	<p>As per condition 42 of the current Licence L8904/2015/1, the works approval holder will implement the following feral animal, vermin and weed management measures</p> <ul style="list-style-type: none"> <li>• Maintain a 400 mm wire mesh skirt/apron along the eastern and southern site boundary fence.</li> <li>• Ensure that the base of the site entrance gates will, when closed, not allow cat or fox access by having a maximum 50 mm clearance at the base of the gate to the ground.</li> <li>• Ensure that the road surface at the entrance gate consists of bitumised or concrete hardstand material.</li> </ul>



Emission	Sources	Potential pathways	Proposed controls
			<ul style="list-style-type: none"> <li>Check and record the integrity of the site boundary fence on a weekly basis and undertake repairs within one week of any damage being identified.</li> <li>Undertake vermin prevention measures including baiting and trapping.</li> <li>Inspect the site monthly for the presence of weeds, record observations of the inspections and take and record measures to prevent the growth and spread of weeds.</li> </ul> <p>The works approval holder will be implemented visual checks for signs of feral cats and foxes within the landfill area and record presence/visitation within the feral animal register</p>
Leachate	Acceptance and burial of all waste types	Overland run-off and infiltration to land	<p>The works approval holder will be implemented leachate management plan.</p> <p>The works approval holder will extract leachate from landfill cells:</p> <ul style="list-style-type: none"> <li>Landfill cells constructed with a leachate aggregate drainage layer containing a network of perforated collection pipes that direct leachate to the leachate collection sump.</li> <li>Leachate is extracted from the collection sump and transported (pumped or gravity fed) to the leachate ponds for evaporation.</li> <li>Stormwater diverted away from the tipping face</li> <li>Timely handling and covering of wastes</li> </ul> <p>The works approval holder will continue forced evaporation:</p> <ul style="list-style-type: none"> <li>Spray irrigation over the surface of the leachate ponds.</li> <li>Reticulation of leachate onto the lined side slopes of the landfill prior to waste placement.</li> <li>Dust suppression onto the active tipping face.</li> </ul> <p>As per conditions 16 and 17 of the current Licence L8904/2015/1, the works approval holder will update leachate balance for the site.</p> <p>As per conditions 11 - 15 of the current Licence L8904/2015/1, the works approval holder will expand groundwater monitoring network and determine baseline ambient environmental conditions in groundwater.</p>
Potentially contaminated	Acceptance and burial of	Overland run-off and	The works approval holder will maintain stormwater retention ponds (Cells 9 and 10) with the ability to contain water from a 1 in 100-year annual exceedance probability (AEP) stormwater event of 4 hours

Emission	Sources	Potential pathways	Proposed controls
stormwater	all waste types	infiltration to land	<p>duration without overtopping.</p> <p>The works approval holder will maintain stormwater retention ponds with a pumped connection to the existing stormwater management infrastructure.</p> <p>The works approval holder will maintain stormwater retention ponds (Cells 9 and 10) with a 500 mm freeboard.</p> <p>The works approval holder will install, operate and maintain stormwater infrastructure, including ponds and spillways, diversion channels, bunds, culverts and drains as per Condition 16, 17 and 18 of the current Licence L8904/2015/1.</p>
Fire	Acceptance and burial of all waste types	Air/windborne pathway	<p>The works approval holder will apply following controls as per the current licence L8904/2015/1;</p> <ul style="list-style-type: none"> <li>• Screen for hot loads (as per Condition 1).</li> <li>• No burning of waste (as per Condition 9).</li> <li>• Construct and maintain fire breaks (as per Conditions 17 and 18).</li> <li>• Maintain an operational and full water cart with a storage capacity of at least 15 kL on the site (as per Condition 41(a)).</li> <li>• Maintain a minimum of 50 kL of water within Stormwater Pond 1 and Stormwater Pond 2 (combined) which can be used for firefighting (as per Condition 41(b)).</li> <li>• Maintain a supply of cover material and apply that cover to the active tipping area to a minimum depth of 150 mm if a fire within the Dardanup Conservation Park and/or Boyanup State Forest presents a material risk to the site (as per Condition 41(c)).</li> <li>• Monitor landfill gas (as per Conditions 53 and 54).</li> <li>• Report fires as soon as practicable but no later than 24 hours of the fire being identified (as per Condition 68).</li> </ul> <p>The works approval holder will implement a Fire Management Plan (Emergency Management Plan and Fire Control Procedure) and review it by a suitably qualified fire safety engineer.</p>
Firewater		Overland run-off and infiltration to land	
Landfill gas	Acceptance and burial of all waste types	Air/wind dispersion Lateral	<p>The works approval holder will expand landfill gas extraction wells and collection infrastructure into new cells and connect into existing active landfill gas management system (including flare).</p> <p>The works approval holder will instal, operate and maintain active landfill gas collection and</p>

Emission	Sources	Potential pathways	Proposed controls
		migration of landfill gas through the soil profile  Passive venting to air	management system infrastructure as per Conditions 14 and 15. of the current Licence L8904/2015/1.
Asbestos fibres	Acceptance and burial of asbestos and ACM	Air/windborne pathway	All Special Waste Type 1 accepted at the site is received and landfilled immediately as per Condition 5 and 29 of the current licence L8904/2015/1.  All Special Waste Type 1 and bulk loads of soil containing ACM or asbestos are not deposited within 2 m of the final waste profile as per Condition 30 of the current licence L8904/2015/1.

### 3.1.2 Receptors

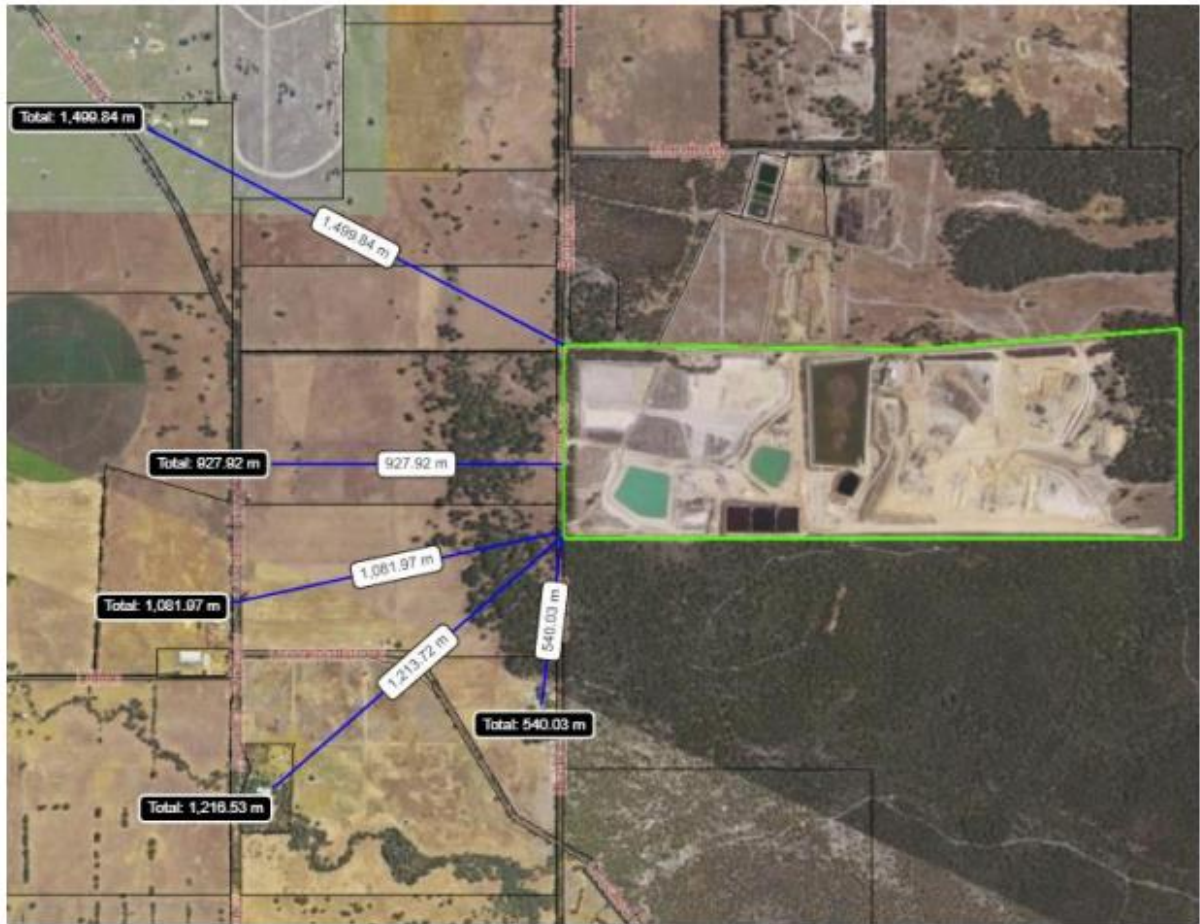
In accordance with the *Guideline: Risk assessments* (DWER 2020), the Delegated Officer has excluded employees, visitors and contractors of the Works Approval Holder's from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 2 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 activity / prescribed premises
Residential Premises	<ul style="list-style-type: none"> <li>• 0.5 km south of the southwest corner of the site boundary, separated by the Dardanup Conservation Park and Boyanup State Forest.</li> <li>• 0.9 km due west of the site boundary.</li> <li>• 1 km west southwest of the southwest corner of the site boundary.</li> <li>• 1.5 km due south of the site boundary, separated by the Dardanup Conservation Park and Boyanup State Forest.</li> <li>• 1.5 km northwest of the northwest corner of the site boundary.</li> <li>• 1.5 km northeast of the northeast corner of the site boundary separated by the Dardanup Conservation Park and Boyanup State Forest.</li> <li>• 1.75 km east northeast from the eastern boundary of the site boundary separated by the Dardanup Conservation Park and Boyanup State Forest.</li> </ul>
Environmental receptors	Distance from activity / prescribed premises
Dardanup Conservation Park	Adjacent to southern and eastern boundaries of the Premises
Boyanup State Forest	Approximately 0.7 km south of the Premises and 1 km 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	Approximately 400 metres southwest through to the northwest of the Premises boundary.

Dampland (flat, seasonally waterlogged)	
Crooked Brook (significant stream)	Located approximately 1100 m south/ southwest of the Premises boundary flowing in a generally east/west direction. Flows into Preston River which is located approximately 5 km downstream.
Preston River	Approx. 5 km 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 20 m to 30 m below ground level. It is also possible that further isolated perched aquifers occur under the Premises 15 – 20 m 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.
Beneficial users of groundwater	Approximately 41 bores are located within 3 km of the Premises. Water abstracted from these bores are used for such purposes as: <ul style="list-style-type: none"> <li>• Stock watering</li> <li>• Dairy purposes</li> <li>• Irrigation of pasture</li> <li>• Domestic use</li> </ul>
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	<ul style="list-style-type: none"> <li>• Priority 3 flora species – adjacent to the southeast corner of the Premises and approximately 180m south of the Premises</li> <li>• Priority 4 flora species - approximately 160m east of the Premises</li> </ul>
Fauna - Baudin's black cockatoo ( <i>Calyptorhynchus baudinii</i> ), Carnaby's black-cockatoo ( <i>Calyptorhynchus latirostris</i> ) and the forest red-tailed black-cockatoo ( <i>Calyptorhynchus banksii naso</i> )	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 2: Distance to closest residential receptors**

## 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 3.1. 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 3.1), 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 3.

The Revised Works Approval W6855/2023/1 that accompanies this Amendment Report authorises construction 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 3. Risk assessment of potential emissions and discharges from the Premises during time limited operations**

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				
Acceptance and burial of all waste types  Vehicle movements	Dust	Air/windborne pathway causing impacts to health and amenity	Closest residential receptors 500 m south and 900 m west. Users of the Dardanup Conservation Park adjacent to southern and eastern boundary	Refer to Section 3.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Y	Condition 3, 22 and 28	Conditions within Licence L8904/2015/1, which Cell 12A will ultimately operate under, are adequate to ensure the ongoing management of dust emissions. Dust emissions are also regulated through the general provisions of the EP Act.
	Noise		Dardanup Conservation Park adjacent to southern and eastern boundary Priority Ecological Community within 15 m	Refer to Section 3.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	Condition 28	Conditions within Licence L8904/2015/1, which Cell 12A will ultimately operate under, are adequate to ensure the ongoing management of noise emissions. Noise emissions are also subject to the requirements outlined in the Environmental Protection (Noise) Regulations 1997.
	Windblown waste		Threatened Ecological Community adjacent to southern boundary	Refer to Section 3.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Y	Condition 20, 21, 22 and 28	Conditions within Licence L8904/2015/1, which Cell 12A will ultimately operate under, are adequate to ensure the ongoing management of windblown waste and litter.
Acceptance and burial of all waste types	Odour	Air/windborne pathway causing impacts to health and amenity	Closest residential receptors 500 m south and 900 m west. Users of the Dardanup Conservation Park adjacent to southern and eastern boundary Township of Dardanup located 3.8 km northwest	Refer to Section 3.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	Condition 22, 23 and 28	Conditions within Licence L8904/2015/1, which Cell 12A will ultimately operate under, are adequate to ensure the ongoing management of odour.
	Vermin, pests and pathogens	Biological pathway causing impacts to health and amenity	Closest residential receptors 500 m south and 900 m west. Dardanup Conservation Park adjacent to southern	Refer to Section 3.1	C = Minor L = Rare <b>Low Risk</b>	Y	Condition 21 and 28	Conditions within Licence L8904/2015/1, which Cell 12A will ultimately operate under, are adequate to ensure the ongoing management of vermin and pests.

Works Approval: W6855/2023/1 (16 October 2024)

IR-T15 Amendment report template v3.0 (May 2021)

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				
			and eastern boundary Users of the Dardanup Conservation Park adjacent to southern and eastern boundary					
Fire within the waste mass	Fire/smoke	Air/windborne pathway causing impacts to health and amenity	Closest residential receptors 500 m south and 900 m west. Township of Dardanup located 3.8 km northwest Users of the Dardanup Conservation Park adjacent to southern and eastern boundary Dardanup Conservation Park adjacent to southern and eastern boundary	Refer to Section 3.1	C = Severe L = Unlikely <b>High Risk</b>	Y	Condition 20 and 28	Conditions within Licence L8904/2015/1, which Cell 12A will ultimately operate under, are adequate to ensure that unauthorised fires at the premises are sufficiently mitigated.
	Firewater	Infiltration through soil profile to groundwater Movement through groundwater Abstraction of groundwater	Dardanup Conservation Park adjacent to southern and eastern boundary Priority Ecological Community within 15 m Threatened Ecological Community adjacent to southern boundary	Refer to Section 3.1	C = Major L = Unlikely <b>Medium Risk</b>	Y	Condition 11, 12, 13, 14, 15, 25 and 28	Conditions within Licence L8904/2015/1, which Cell 12A will ultimately operate under, are adequate to ensure that unauthorised fires and wash waters arising from firefighting at the premises are sufficiently mitigated.
Interaction between the waste mass and stormwater	Potentially Contaminated stormwater	Stormwater overflow causing erosion and deposition of sediment Infiltration through soil profile to groundwater Movement through	Geomorphic wetland approximately 400 m southwest through to the northwest of the Premises boundary. Beneficial users of groundwater (including	Refer to Section 3.1	C = Major L = Unlikely <b>Medium Risk</b>	Y	Condition1, 11, 12, 13, 14, 15, 20, 24 and 28	The Delegated Officer considers that current stormwater management network, and the upgrades to current infrastructure authorised under works approval W6745/2022/1, have ensured adequate capacity is in place at the premises for the retention of stormwater to prevent emissions. Licence L8904/2015/1 will ultimately be amended by the applicant to authorise the use of the new

Works Approval: W6855/2023/1 (16 October 2024)

IR-T15 Amendment report template v3.0 (May 2021)

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				
		groundwater	future users)					stormwater management infrastructure. Until then existing stormwater management controls on the licence are adequate to prevent adverse impacts.
Decomposition of putrescible wastes Failure in stability of cells Operation of leachate collection infrastructure	Leachate	Infiltration through soil profile to groundwater Movement through groundwater Abstraction of groundwater Direct exposure via irrigation and/or spraying		Refer to Section 3.1	C = Moderate L = Possible <b>Medium Risk</b>	Y	Condition 2, 4, 5, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 24 and 28 <b><u>Condition 27</u></b>	A detailed risk assessment for leachate was undertaken for works approval W6855/2023/1 granted on 23/02/2024, which can be found on the department website. As a result of that detailed risk assessment, the delegated officer added the requirement of groundwater monitoring, a water balance assessment, and expansion of the groundwater monitoring network into the original Works Approval.  The Delegated Officer has also incorporated a requirement for the maintenance and implementation of the premises Leachate Plan in lieu of the Ministers Determination being implemented on the premises licence (refer to Section 2.6).
Failure in stability of cell 12A	Decomposed wastes	Direct discharge of decomposing wastes to land due to failure in cell wall stability Infiltration through soil profile to groundwater Movement through groundwater	Underlying soils Groundwater and beneficial users of groundwater (including future users)		C = Minor L = Rare <b>Low Risk</b>		Condition 2, 4, 5, 6, 9, 10, 23 and 28	The Delegated Officer considers that the applicant's stability assessment has sufficiently demonstrated that the landfill cells design is stable, noting that the applicant has also incorporated design modifications as recommended in the WSP peer review on landfill construction specifications and stability (as outlined in the original works approval assessment on the Departments website).
Decomposition of putrescible wastes	Landfill gas	Air/wind Dispersion Lateral migration of landfill gas through the soil profile	Closest residential receptors 500 m south and 900 m west. Users of the Dardanup Conservation Park adjacent to southern	Refer to Section 3.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	Condition 28	The Delegated Officer considers that the landfill gas generation rate modelling submitted by the applicant demonstrates that current landfill gas management infrastructure is sufficient to process additional landfill gas generated from the operations of the new landfill cells.

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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				
		Passive venting to air	and eastern boundary Dardanup Conservation Park adjacent to southern and eastern boundary Priority Ecological Community within 15 m Threatened Ecological Community adjacent to southern boundary					Additionally, conditions within Licence L8904/2015/1, which Cell 12A will ultimately operate under, are adequate to ensure the ongoing management of landfill gas.
Acceptance and burial of asbestos and ACM	Asbestos fibres	Air/windborne pathway causing impacts to health and amenity	Closest residential receptors 500 m south and 900 m west. Township of Dardanup located 3.8 km northwest Users of the Dardanup Conservation Park adjacent to southern and eastern boundary	Refer to Section 3.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Y	Condition 20, 21, 22 and 28	Conditions within Licence L8904/2015/1, which Cell 12A will ultimately operate under, are adequate to ensure the ongoing management of asbestos and ACM.

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.

## 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 (12/08/2024)	None received	N/A
Local Government Authority advised of proposal (8/08/2024)	On 20 August 2024, the Shire of Dardanup advised that the proposed amendments by Cleanaway Solid Waste Pty Ltd to Works Approval W6855/2023/1 align with the approval conditions stated on the 'Determination on the Development Assessment Panel Application for Planning Approval' dated 19 February 2024 (Ref: DAP/21/02063).	Noted
Stakeholder's comments	Refer to Appendix 1	Refer to Appendix 1
Works Approval Holder was provided with draft amendment (4/10/2024)	On 11 October 2024, the works approval holder requested that the revised works approval be issued, waiving the consultation period.  The works approval holder requested a time extension until 7 December 2024 to submit the revised water balance in accordance with condition 16 of the Works Approval W6855/2023/1. This time extension is being sought due to delays in the report being prepared by the works approval holder's consultant, and to prevent a non-compliance with the date specifications in licence conditions.	The Delegated officer considers that a three month extension to the submission date for the water balance will not ultimately alter the risk profile relating to leachate emissions, as this data is required to validate assumptions made in the original works approval assessment. As such, the time extension is granted.

## 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.

### 5.1 Summary of amendments

Table 5 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 5: Summary of works approval amendments**

Condition no.	Proposed amendments
Cover	Added date of amendment into the cover page
Works approval duration	Extended to 22/02/2034
Works approval history	Added works approval history table into the works approval
Condition 1, Table1	<p>Row 2 of item 1 has been updated to ensure the correct specification of cell 9 stormwater retention pond and pipework</p> <p>Row 3 of item 1 has been added to ensure the correct specification of cell 9 stormwater retention pond and pipework</p> <p>Row 2 of item 2 has been updated to ensure the correct specification of cell 10 stormwater retention pond and pipework</p> <p>Row 3 of item 2 has been added to ensure the correct specification of cell 10 stormwater retention pond and pipework</p>
Condition 2, Table 2	Row 2 and row 4 of item 3 have been updated to correct the typographic errors.
Condition 18	Added new standard conditions for commencement of time limited operation
Condition 19	Added new standard conditions for operational requirement of time limited operation
Condition 20	Added new standard conditions for waste acceptance
Condition 21	Added new standard conditions for waste processing
Condition 22	Added new standard conditions for waste cover requirement
Condition 23	Added new standard conditions for waste monitoring
Condition 24	Added new standard conditions for groundwater monitoring
Condition 25	Added new standard conditions for submission of time limited operation report and its components
Condition 26	
Condition 27	Added new standard conditions for leachate management during time limited operation.
Condition 28	New numbering.
Condition 29	New numbering.
Condition 30	New numbering.
Definition: Table 16	Added a definition for “time limited operation”

## 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 stakeholder comments on risk assessment and draft conditions

Summary of Works Approval Holder's comment	Department's response
<b>Ministers Determination amendments</b>	
<p>9 stakeholders are concerned regarding the current licence, which is yet to be updated with the Minister's recommendations from October 2023. They believe that current conditions are inadequate without those updates, and those inadequate controls could cause irreversible damage to the environment (and underground water resources).</p> <p>2 out of 9 stakeholders mentioned that they are aware DWER has been awaiting technical advice from other government agencies to amend the licence to include threshold concentrations for radionuclides in the tailings. They also believe that DWER has sufficient information to progress the other amendments required by the appeal determination relating to fire management, pests, feral animals, and monitoring. They believe that awaiting technical advice should not be used as justification to allow both the existing and the new cells to operate at a standard lower than that required by the minister's directive. Moreover, they suggest doing the amendment in two stages, avoiding the need for an amendment to the works approval.</p> <p>2 out of 9 stakeholders concern that time-limited operation is to be allowed the following conditions must be included in the amended works approval (which specifically include those from the Ministers Directive)</p> <ul style="list-style-type: none"> <li>• Leachate Plan to be implemented, (Condition 52 from the Licence needs to be amended to implement the Leachate management plan and included in the amended Works Approval)</li> <li>• The Fire Management Plan to be reviewed</li> <li>• Reporting requirements for fire events, erosion events and complaints to be improved</li> </ul>	<p>The Delegated Officer acknowledges that the Ministers Determination has not yet been implemented to Licence L8904/2015/1 through a DWER initiated amendment to the Licence, and that the delay in implementing the Ministers Determination has been brought about by DWER needing to seek technical advice to inform the setting of risk based threshold concentration levels for the titanium dioxide tailings accepted to the landfill facility.</p> <p>In light of revisions to Licence conditions resulting from the Ministers Determination not yet being incorporated into the Licence, the Delegated Officer has reviewed changes imposed by the Minister in terms of relevance to the scope of the works approval amendment for the authorisation of TLO for a landfill cell.</p> <p>The Delegated Officer has identified that the implementation of the Leachate Plan, as described in Condition 57 of the existing licence, is directly relevant to the time limited operations of an additional landfill cell at the premises, as the new landfill cell will generate additional leachate. As such, the Delegated Officer will incorporate a condition into the revised works approval requiring the leachate plan to be implemented, prior the Ministers Determination being implemented through a DWER initiated amendment.</p> <p>This was raised with members of the Dardanup Environmental Action Group in a community meeting with DWER on 24 September 2024.</p>

Summary of Works Approval Holder's comment	Department's response
<b>Sizing specifications for new ponds (condition 1)</b>	
<p>2 out of 9 stakeholders are concern about the proposed amendment to reduce the capacity of new ponds and this is justified by an assumption that after 4 hours pumping of the water into the existing stormwater system will have commenced.</p> <p>Also, concerns were raised about any potentially contaminated stormwater overflow.</p>	<p>The following further additional information was received from the works approval holder during the assessment of the amendment application regarding the ponds capacities;</p> <p>Cell 9:</p> <ul style="list-style-type: none"> <li>• Allowing for a 1 in 100 year/24-hour storm event, there will be 132 mm of rainfall.</li> <li>• Allowing for 100% surface water runoff (conservative), there will be 4,362 m3 of stormwater generated within the 24hr period, average 182m3/hr.</li> <li>• The stormwater pond has a design volume of 3,870 m3.</li> <li>• A minimum of 492 m3 must be pumped in the 24hr event to prevent the pond over topping and based on largest available site pump size, commencing 21 hours (at the latest) after commencement of any event and run between 2-3hrs to prevent over topping.</li> </ul> <p>Cell 10:</p> <ul style="list-style-type: none"> <li>• Allowing for 100% surface water runoff (conservative), there will be 5,320 m3 of stormwater generated within the 24hr period, average 223m3/hr.</li> <li>• The stormwater pond has a design volume of 5,600 m3.</li> </ul> <p>In addition, there are multiple pumps that will be available as a contingency in the event there is any risk of overflow.</p> <p>The stormwater generated in these ponds will be as a result of the additional landfill cells construction process and would not be contaminated through coming into contact with waste or leachate.</p> <p>After considering the above information, the Delegated Officer identified that the requested amendment does not alter the initial risk assessment, and the risk of stormwater contamination remains low.</p>
<p>2 out of 9 stakeholders are concern that there is no provision for permanent pumps in the ponds, or no detail of the capacity of the pumps planned to be used and pipe sizing</p>	<p>The following further additional information was received from the works approval holder during the assessment of the amendment application regarding the pumps.</p> <ul style="list-style-type: none"> <li>• 3 x site pump/s are available <ul style="list-style-type: none"> <li>- 2 x Sykes HH80-325-SR Perkins 404D-22T (max flow 29.7L/sec @105m head) and</li> <li>- 1 x Sykes CP100-243-BR Perkins 403D-15 (max flow 66L/sec @53m head). All sized to cater for much higher volumes than anticipated.</li> </ul> </li> <li>• Pumps are fuelled automated float valve actuated.</li> <li>• Pipe sizing - HH80 is 75mm/ 3" and CP100 is 100mm/ 4" suction and delivery.</li> </ul> <p>The Delegated Officer considers that the presence of pumps is adequate to mitigate the risk of overtopping.</p>

Summary of Works Approval Holder's comment	Department's response
Concerns raised about how stormwater pumping starts on unoccupied premises.	<p>The works approval holder confirmed through the assessment process that pumps are fuelled and automated float valve actuated i.e. can be turned on at the end of a shift "if required" and will automatically commence pumping based on float actuation. Based on pond and one pump capacity, Cell 9 pump would need to be started at the latest 21 hrs after a rain event commences.</p> <p>The Delegated Officer considers this is appropriate in relation to the risk profile of pond overtopping.</p>
<p>8 out of 9 stakeholders raised concerned that;</p> <ul style="list-style-type: none"> <li>Pumps may fail and backup pumps</li> <li>Pumps may not be turned on soon enough (it is unrealistic that pumps would be turned on at night for example)</li> <li>And what would be the consequences of a prolonged power outage (30hrs)</li> </ul>	<p>The following further additional information was received from the works approval holder during the assessment of the amendment application was received from the works approval holder;</p> <ul style="list-style-type: none"> <li>3 x site pump/s are available. The site is manned daily 06:00-18:00 Mon-Fri, 06:00-16:00 Sat &amp; 06:00-14:00 Sun. After hours manning contingency can be planned for "as/if required".</li> <li>Pumps are fuelled and automated float valve actuated i.e. can be turned on at the end of a shift "if required" and will automatically commence pumping based on float actuation. Based on pond and one pump capacity, Cell 9 pump would need to be started at the latest 21 hrs after a rain event commences.</li> <li>the pumping process is not affected by a prolonged power outage, as the pumps are powered by fuel.</li> </ul> <p>The Delegated Officer considers this is appropriate in relation to the risk profile of pond overtopping.</p>
<p>8 stakeholders submitted beliefs that detailed water balance modelling is necessary to confirm if the existing ponds have sufficient surplus capacity to accept water from new ponds during intense winter rainfall events, with a number of variables to be considered (i.e., ponds being typically full in winter, low evaporation during winter, all sources of water surplus that would need to be diverted to these points in a 1 in 100 AEP event).</p>	<p>DWER has included the requirement to provide a water balance assessment for primary leachate pond and leachate ponds 1, 2, and 3 (leachate evaporation ponds) within the works approval conditions 16 and 17.</p> <p>Condition 16 of the existing works approval requires the works approval holder to submit the water balance assessment within 60 calendar days of the submission of the Critical Containment Infrastructure Report (CCIR) required by Condition 9 of the works approval, The CCIR was submitted on 7 August 2024, meaning the submission of the water balance assessment is imminent.</p> <p>DWER will review the water balance when submitted by the works approval holder. Upon review, the Delegated Officer will make further determinations based on:</p> <ul style="list-style-type: none"> <li>Whether or not it has been demonstrated that there is adequate capacity within current premises infrastructure to contain current and future volumes of leachate generated from the landfill cells at the premises,</li> <li>Whether leachate management measures currently being undertaken by the applicant are sufficient in reducing the volumes of leachate within the leachate ponds, and</li> <li>Whether leachate generation from Cells 1, 2, and 5 can be accurately determined without the use of flow meters in place at the discharge points from these cells, and how leachate generation rates calculated from these cells impact the outcome of the water balance.</li> </ul>
<b>Design and construction requirements for Cell 12A (condition 2)</b>	
6 of 8 stakeholders noted that the infiltration of leachate through the geocomposite clay and geomembranes must be anticipated;	DWER have considered construction specifications, the stability assessment, and the peer review of construction specifications and stability prepared by WSP in conducting the risk assessment for the

Summary of Works Approval Holder's comment	Department's response
<p>otherwise, the works approval holder would not be proposing to refrain from putting Class III waste into areas of cell 12A to mitigate the risk of this leachate reaching the historic clay liner of cells 1 and 2.</p> <p>Concerns were raised as to how any leachate that infiltrates through to the clay liner of cells 1&amp;2 will be detected, recovered and managed.</p> <p>Objections were also raised around depositing Class III waste (including drill muds and waste oil contaminants) into Cell 12A at all.</p>	<p>construction of Cell 12A under the original works approval assessment. Controls in place for the management of leachate have also been considered.</p> <p>A Critical Containment Infrastructure Report (CCIR) for Cell 12A has been submitted by the works approval holder to demonstrate compliance with conditions 2, 4, 5, 6, 9, and 10 of Works Approval W6855/2023/1.</p> <p>The Delegated Officer has reviewed the CCIR and determined that the provided information meets the construction requirements of cell 12A of the works approval W6855/2023/1 and as such, cell 12A is suitable for Class III waste acceptance. Cell 12A was built to the same design specifications as the existing Class III landfill cells (Cells 6, 7, and 8) at the premises, which have been designed with consideration to the specifications of the <i>EPA Victoria BPEM: Siting, Design, Operation, and Rehabilitation of Landfills</i> (Vic BEPM).</p> <p>The Cell 12A was designed with a piggyback liner that will provide a preferred flow path for leachate generated from the deposition waste in Cell 12A. In this regard, leachate will drain to the north and enter the lined Cell 12A leachate collection system and will be prevented from percolating through Cells 1 and 2.</p> <p>As an additional control, the works approval holder is proposing to refrain from putting Class III waste into cell 12A over the piggyback liner area, to ensure leachate generated from Class III waste does not enter the clay-lined cells.</p> <p>For additional details, refer to Section 3.1 of the original decision report to works approval W6855/2023/1, which can be found on the department's website.</p> <p>The Delegated Officer has no objection to permitting Class III waste disposal into Cell 12A and controls in place are adequate to manage leachate emissions from Cell 12A during the time limited operations.</p>
<p>There would need to be multiple shallow groundwater monitoring bores down hydraulic gradient of cell 12A to adequately detect contamination.</p>	<p>Groundwater monitoring well construction conditions are included in the original Works Approval W6855/2023/1, which was issued on 23 February 2024 to build 9 wells (including 5 shallow groundwater monitoring bores and 4 deeper groundwater monitoring bores) to address data gaps in the spatial data coverage of the monitoring network associated with the proposed Cells 12A, 9, and 10 towards the eastern portion of the site.</p> <p>On 29 August 2024, a groundwater monitoring well construction report has been submitted by Cleanaway Solid Waste Pty Ltd to demonstrate compliance with conditions 11 and 12 of works approval W6855/2023/1.</p> <p>The Delegated officer has reviewed the groundwater monitoring well construction report and determined that the provided information meets the bore construction requirements of the works approval W6855/2023/1.</p> <p>The works approval holder is also required to undertake one groundwater monitoring even to determine baseline ambient conditions immediately after the construction of the additional wells (conditions 13 and 14 of the works approval) and submit a groundwater monitoring report on this groundwater monitoring event within 60 calendar days of this monitoring event occurring (condition 15).</p>

Summary of Works Approval Holder's comment	Department's response
	DWER will await the submission of this report, which is imminent given the groundwater monitoring wells have been constructed.
<p>Concerns were raised relating to regulator confidence that the proposed liner of cell 12A will stay intact if placed over existing fresh waste stored in cells 1&amp;2, taking into regard the risk of pockets developing over time which would compromise the liner integrity.</p>	<p>In the areas of Cell 12A, which are constructed over Cells 1 and 2, and where the liner system was built to extend over Cell 4B, there is potential for minor settlement in the existing waste masses of these cells. The existing waste in Cells 1 and 2 is between 17 and 23 years old, and, as such, it is assumed that the vast majority (estimated 95%) of waste settlement has already occurred. The future settlement within these cells below the Cell 12A liner is therefore anticipated to be extremely low, ranging from zero on the northern edge of Cell 1 and Cell 2 to between 100 mm and 200 mm on the southern edge of the Cell 12A liner, with this dependent on the depth of the existing waste mass. Differential settlement in this manner is likely to result in a slight southerly rotation of the cell liner. However, high shear forces within the liner resulting in strain are not expected as a result of this rotation.</p> <p>Additionally, the Cell 12A liner system in the vicinity of the anticipated area that will undergo waste settlement has been designed with a minimum slope of 1V:5H, falling to the north to accommodate for the slight liner rotation whilst maintaining drainage into the Cell 12A sump.</p> <p>A Critical Containment Infrastructure Report (CCIR) for Cell 12A has been submitted by Cleanaway Solid Waste Pty Ltd to demonstrate compliance with conditions 2, 4, 5, 6, 9, and 10 of Works Approval W6855/2023/1.</p> <p>The Delegated officer has reviewed the CCIR and determined that the provided information meets the construction requirements of cell 12A of the works approval W6855/2023/1.</p> <p>For additional details, refer to Section 3.1.3 of the original decision report, which can be found on the department website</p>
<p>2 out of 8 stakeholders are concerned that the works approval receives drilling mud that doesn't meet Class III waste criteria (i.e. is Class IV or higher waste).</p>	<p>The acceptance and treatment of drill mud is outside of the scope of this works approval amendment, which is to authorise time limited operation of Cell 12A.</p> <p>The Delegated Officer encourages all potential or perceived non-compliances to be reported to DWER's Environmental Watch branch.</p>
<p>The application does not include recent fines for accepting waste oils. We believe this omission is critical when assessing (along with other fines for non-compliance at this site) the ability &amp; willingness of the operator to separate waste streams.</p>	<p>Fines issued to the works approval holder are not relevant to the assessment of the operation of a new landfill cell, and hence are outside of the scope of this works approval amendment, which is to authorise time limited operation of Cell 12A.</p> <p>The Delegated Officer encourages all potential or perceived non-compliances to be reported to DWER's Environmental Watch branch.</p>
<p>Concern about Cleanaway's extra precaution to deposit only class I and II waste in the 12A cell part that is above the two clay lined cells and that they are confident that this is a practical and safe practice given that all the leachate travels to the same outlets?</p> <p>Suggestion to include a condition restricting Cell 12A to Class II material and specify a means or criteria on how this is to be achieved</p>	<p>The Delegated officer has reviewed the CCIR and determined that the provided information meets the construction requirements of cell 12A with the associated leachate collection infrastructure of the works approval W6855/2023/1.</p> <p>As an additional control, the works approval holder is proposing to refrain from putting Class III waste into cell 12A over the piggyback liner area, to ensure leachate generated from Class III waste does not enter the clay-lined cells. However, as DWER has assessed the landfill as a Class III cell which can accept Class III waste, there is no risk based reason why one area of the cell should only be</p>

Summary of Works Approval Holder's comment	Department's response
	<p>able to accept a lesser class of waste. As the works approval holder has selected to undertake this activity as an operational control, DWER have reflected this activity in works approval conditions.</p> <p>DWER is confident that the cell 12A liners and associated leachate collection infrastructures are suitable for Class III waste acceptance.</p>
<p>In 2022, Cleanaway was fined for accepting 20,450.73 tonnes of hydrocarbon-contaminated waste without relevant documentation. Concern about If they were unable to manage and record where the hydrocarbon-contaminated waste was being deposited, what confidence can public have that Class III waste will not be deposited above the two clay-lined cells?</p>	<p>Fines issued to the works approval holder are not relevant to the assessment of the operation of a new landfill cell, and hence are outside of the scope of this works approval amendment, which is to authorise time limited operation of Cell 12A.</p> <p>The Delegated Officer encourages all potential or perceived non-compliances to be reported to DWER's Environmental Watch branch.</p> <p>The works approval holder is proposing to refrain from putting Class III waste into cell 12A over the piggyback liner area, to ensure leachate generated from Class III waste does not enter the clay-lined cells, as an additional control only. As DWER has assessed the landfill as a Class III cell which can accept Class III waste, there is no risk based reason why one area of the cell should only be able to accept a lesser class of waste. As the works approval holder has selected to undertake this activity as an operational control, DWER have reflected this activity in works approval conditions.</p>
<p>2 out of 9 stakeholders are concerned about Cleanaway's wording of "preferred flow path." They doubted that most leachate would find its way to Cell 12A but not all leachate, with the likelihood the rest will end up in the unlined Cells 1 &amp; 2.</p>	<p>The delegated officer has reviewed the CCIR and determined that the provided information meets the construction requirements of cell 12A of the works approval W6855/2023/1. This includes the construction of the leachate management system within the Cell.</p> <p>The leachate management system has been designed so that leachate generated within the cell will be directed to a leachate sump for removal from the cell. This is a gravity fed system, which is the 'preferred pathway' the works approval holder mentions. This design is the industry standard for landfill cells and has been designed with consideration to the specifications of the <i>EPA Victoria BPEM: Siting, Design, Operation, and Rehabilitation of Landfills</i> (Vic BPEM).</p> <p>In this regard, the works approval holder has demonstrated that the leachate will drain to the north and enter the lined Cell 12A leachate collection system, and it will prevent leachate percolating through Cells 1 and 2.</p>
<p>2 out of 9 stakeholders suggest that if time-limited operation is allowed, then conditions relating to depositing of waste in Cell 12A will need to be included in the amended Works Approval.</p>	<p>The delegated officer incorporated condition 22, Table 11, and the waste processing limits and specifications into the Works Approval W6855/2023/1 to ensure that class II waste is deposited above the two clay-lined cells and is supported by documentation.</p> <p>General landfilling operations and controls surrounding this will default to regulation under Licence L8904/2015/1 which is in place across the whole premises.</p>
<p>Until monitoring of leachate flows from Cells 1 &amp; 2 has commenced, 2 out of 10 stakeholders recommended that the deposition of waste above these cells should not be allowed to commence. This concern is reflected by the fact that the Minister has directed that the leachate plan be implemented and leachate flow from Cells 1, 2, and 5 be monitored and flows recorded weekly.</p>	<p>Monitoring of leachate flows from cells 1, 2 and 5 is outside of the scope of this works approval amendment, which is to authorise time limited operation of Cell 12A.</p>

Summary of Works Approval Holder's comment	Department's response
<b>Extending the Works Approval duration</b>	
3 out of 10 stakeholders have no objection to extending the duration of the Works Approval by four years.	This comment was acknowledged by the delegated officer.
1 out of 10 stakeholders have concern that they see and hear the large number of trucks passing some as early at 2. 30am.The residents have been ignored in both the movement of vehicles and the contamination of waste, which is taking waste from all over the state, this is also not acceptable.	Truck movements are outside of DWER's regulatory scope and are managed by the Local Government Authority.