



# Decision Report

**Works Approval Number** W6213/2019/1

**Works Approval Holder** A. Richards Pty Ltd

**ACN** 008 734 852

**File Number:** DER2018/001569

**Premises** Richgro Bannister Composting Facility  
Lot 68 on Deposited Plan 36563  
Certificate of Title Volume 2798 Folio 962  
BANNISTER WA 6390

**Date of Report** 26 June 2020

# 1. Definitions and interpretation

## Definitions

In this decision report, the terms in Table 1 have the meanings defined.

**Table 1: Definitions**

Term	Definition
Applicant	A. Richards Pty Ltd
ACN	Australian Company Number
Category/ Categories/ Cat.	categories of prescribed premises as set out in Schedule 1 of the EP Regulations
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 10, Joondalup DC JOONDALUP WA 6027 <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
decision report	refers to this document
Delegated Officer	an officer under section 20 of the EP Act
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation
EP Act	<i>Environmental Protection Act 1986</i> (WA)
EP Regulations	<i>Environmental Protection Regulations 1987</i> (WA)
HDPE	High density polyethylene
km/hr	Kilometres per hour
m <sup>3</sup>	cubic metres
Minister	the Minister responsible for the EP Act and associated regulations

Term	Definition
prescribed premises	has the same meaning given to that term under the EP Act.
premises	refers to the premises to which this decision report applies, as specified at the front of this decision report.
revised works approval	the amended works approval issued under Part V, Division 3 of the EP Act, with changes that correspond to the assessment outlined in this decision report.
risk event	as described in <i>Guidance Statement: Risk Assessment</i>
UDR	<i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> (WA)
works approval holder	A. Richards Pty Ltd

## 2. Purpose and scope of assessment

The purpose of this decision document is to detail the assessment of the application submitted by A. Richards Pty Ltd (works approval holder) to amend the existing works approval for the construction of the Richgro Bannister Composting Facility, Lot 68 on Plan 36563 (No. 6364) Albany Hwy, Bannister (W6213/2019/).

The following guidance statements have informed the assessment and decision outlined in this decision report:

- *Guidance Statement: Regulatory Principles (July 2015)*
- *Guidance Statement: Setting Conditions (October 2015)*
- *Guidance Statement: Decision Making (February 2017)*
- *Guidance Statement: Risk Assessment (February 2017)*
- *Guidance Statement: Environmental Siting (November 2016)*

### Amendment Description

The application was submitted by the works approval holder to facilitate a number of amendments to the original works approval issued 3 July 2019.

The proposed modifications to the original works approval include:

- Changing of premises name from 'Richgro Composting Facility' to 'Richgro Bannister Composting Facility';
- Correction of Registered Business Address details to reflect the suburb of Jandakot WA 6164, not Canning Vale WA 6155;
- Removal of Category 62 – Solid waste depot;
- Addition of Category 61A – Solid waste facility to facilitate the onsite processing of solid waste (green waste);
- Increase in depth and capacity of the approved leachate pond, and a reduction in the required freeboard;
- Correction of reference to location of the Leachate Sump, located on western boundary (not eastern) of the hardstand;
- Changes to the Infrastructure and equipment requirements table. Specifically changing "Screening Equipment" to "Operational Equipment for the purpose of processing, screening and storing of waste/feedstock";
- Increased and expanded liquid and solid waste acceptance capacity; and
- Permission to undertake time limited operation at the premises, including the receipt and processing of green waste for composting or mulch production, and the receipt and mixing of liquid waste (& biosolids) with green waste to form composting windrows prior to the granting of a prescribed premises licence under Part V of the *Environmental Protection Act 1986*.

The Delegated Officer considers that the proposed increase to the solid and liquid waste capacity and types, and the commencement of operations prior to the issue of an operating licence may alter emissions and discharges, and will be risk assessed in section 7.

The application for an amendment to works approval W6213/2019/1 was received by the Department on 16 December 2019. A request for additional information relating to the proposed containment infrastructure was subsequently issued to the works approval holder on 21 January 2020. The requested information was received by the Department via email on 14 February 2020.

Using the information provided, water balances for the premises were prepared for different freeboard limits. On the basis of these water balances, further information on the works approval holders proposed measures to prevent the overtopping of the leachate pond was requested on 11 March 2020. The works approval holder provided a response to this request, including a water balance prepared by consultant Bowman and Associates Pty Ltd, on 29 April 2020.

Table 2 lists the documents and information submitted to the Department in support of the application to amend the works approval.

**Table 2: Documents and information submitted during the assessment process**

Document/information description	Date received
Amendment application and attachments	16/12/2019
Response to request for information: •Additional information and dam survey	14/02/2020
Response to request for information: •Additional Information on leachate pond	18/02/2020
Response to request for information: •Additional information on leachate management •Water balance provided by Bowman & Associates Pty Ltd	29/04/2020

Table 3 below outlines the proposed changes to the works approval.

**Table 3: Proposed design changes**

Category	Current design capacity	Proposed design capacity	Description of proposed amendment
61 – Liquid waste facility	62,000 tonnes per annual period.	125,000 tonnes per annual period	Increased and expanded liquid waste acceptance capacity
61A – Solid waste facility	n/a	285,000 tonnes per annual period	Addition of Category code 61A, increased and expanded solid waste acceptance capacity
62 – Solid waste depot	155,000 tonnes per annual period.	n/a	Deletion of Category code 62 (waste accepted under Category 67A)
67A - Compost manufacturing	200,000 tonnes per annual period.	200,000 tonnes per annual period	Proposed increase in capacity of leachate collection pond and increase in solid waste (feedstock) capacity

The works approval holder has requested that the waste acceptance table which was presented in the original works approval decision document be modified to reflect the proposed increases to solid and liquid waste throughputs. The planned feedstock throughputs at the premises are detailed in Table 4 below.

**Table 4: Revised feedstock acceptance table**

Existing works approval		Revised works approval	
Waste Type	Throughput (tonnes per annual period)	Waste Type	Throughput (tonnes per annual period)
<b>Category 61 – Liquid waste facility</b>		<b>Category 61 – Liquid waste facility</b>	
Food & beverage processing wastes (other than digestate)	20,000	Food & beverage processing wastes (other than digestate)	25,000
Digestate	32,000	Digestate	40,000
Waste from grease traps	10,000	Waste from grease traps	20,000
		Animal effluent and residues	40,000
<b>Total</b>	<b>62,000</b>	<b>Total</b>	<b>125,000</b>
<b>Category 62 – Solid waste depot</b>		<b>Category 67A – Compost manufacturing and soil blending</b>	
Green waste	60,000	Green waste	100,000
Biosolids	20,000	Biosolids	50,000
Manures	20,000	Manures	30,000
Sawdust	40,000	Sawdust	40,000
Pine bark	15,000	Pine bark	15,000
		Acid sulfate soil/potential acid sulfate soil (peat material)	10,000
		Animal mortalities and animal processing waste	20,000
		<i>Other feedstock</i>	
		Sand	20,000
<b>Total</b>	<b>155,000</b>	<b>Total</b>	<b>285, 000</b>
		<b>Category 61A – Solid waste facility</b>	
		Green waste	20,000

## Composting process

The works approval holder proposes to compost blended feedstocks in windrows which will run east-west across the northern portion of the bituminised hardstand area. Each windrow will be approximately 100 m long, 8m wide and 4 m in height, with a capacity of approximately 1,600 m<sup>3</sup>. Liquid and solid feedstocks will be blended to achieve a carbon to nitrogen ratio of 20:1 to 25:1, and a moisture content of 50-60%. The works approval holder has advised that a FTS Mulch Master will be deployed at the premises to process unshredded green waste to

achieve suitable particle sizes prior to compost or mulch production.

It is proposed that a minimum 4 m buffer will be maintained between windrows and the perimeter of the hardstand, with a 0.5 m separation between each windrow. The works approval holder will utilise the Harvest Quest Method of compost production, which involves the addition of an inoculant to the feedstock whilst forming the windrow and the application of a 20-30 cm thick layer of capping material comprising matured compost screenings. The prepared windrows will remain in place, unturned, for approximately 45 days. Bore water may be applied as required to maintain optimum moisture content.

Temperature, oxygen levels and moisture shall be monitored twice weekly. The works approval holder aims to maintain moisture at 40-60% and maintain oxygen concentration to optimal level of 15% or above. The composting process aims to achieve a core temperature of 55 °C for three consecutive days in order to achieve compost pasteurisation. A composting windrow will not be released for screening and sale if it does not achieve this minimum temperature for the required period. After 45 days of composting, the material will be screened to separate coarse particles, which will be utilised as cover material or sold as mulch product. The screened compost is then sent offsite for sale or further aged in stockpiles on the Hardstand Composting Area, depending on product requirements. No bagging or pelletisation of compost at the premises is currently proposed by the works approval holder.

Prior to release for sale or movement offsite, the compost is tested for pH, electronic conductivity, solvita maturity index, toxicity (bioassay), plant pathogens (Phytophthora and Pythium) and human pathogens (thermotolerant Coliforms and Salmonella). Where a windrow does not meet the required standard (AS4454, AS3743, AS4419 or other internal standard) it is reworked into the composting process (typically blended with another windrow) for further processing.

### **3. Other approvals**

The works approval holder has provided the following information relating to other approvals as outlined below:

#### **3.1. Lease agreement**

The works approval holder has previously provided evidence from the landowner (AB No 2 Pty Ltd) that they have an agreement to enter into a lease for 20 years with options for extension, subject to issuing of a works approval. DWER has received additional correspondence from the landowner that confirms the works approval holder is in occupational control of the premises for the purposes of carrying out works under a works approval.

A copy of the final executed lease is required prior granting a licence for the premises.

#### **3.2. Department of Health**

The works approval holder is proposing to accept and compost biosolids, which requires approval from the Department of Health. The works approval holder has provided evidence of in principle approval from the Department of Health to compost using sewage sludge from the Water Corporation's Metropolitan Wastewater Treatment Plants. Final DOH approval is subject to provision of bacteriology and chemical testing results.

#### **3.3. Local Planning approval**

The works approval holder has provided planning approval from the Shire of Boddington, dated 21 February 2019. There is no expiry on the planning approval.

## 4. Amendment history

There have been no previous amendments to works approval W6213/2019/1. The original works approval was issued on 3 July 2019.

## 5. Potential emissions and discharges

The potential emissions and discharges associated with the construction and operation of the premises, as well as the controls proposed by the works approval holder are outlined in Table 5 below.

**Table 5: Sources and Emissions**

Source	Potential emission	Proposed Controls
Construction		
Ground works, truck movements	Dust	See section 5.1
	Noise	See section 5.2
Operation		
Waste acceptance, processing and composting	Leachate	See section 5.3
	Odour	See section 5.4
	Dust	See section 5.1
	Noise	See section 5.2
Upset condition – compost fire	Compost fire (particulates and noxious gases)	Fire management plan in place for entire Culford Agri Industrial Site, which includes fire access gates and roads, a catchment dam and 160,000 L tank with DFES compatible fittings for water sources, a quick response fire truck on site during times of high fire risk, and portable fire extinguishers in the site office and on portable equipment.
Compost being removed from the premises	Pathogens	All compost produced on site is to meet Australian Standard - AS 4454, AS3743, AS4419 or other internal standard

### 5.1. Proposed dust controls

The works approval holder has not provided a final dust management plan as part of the application, but has proposed that the following controls will be implemented during both construction and operation:

- Watering down of all unsealed trafficable areas as required;
- Watering down of dust generating areas and dusty materials, and maintaining a water supply on site for this purpose, or covering dusty materials;
- Where possible, activities with high potential for dust generation will be stopped during adverse weather conditions;
- All complaints will be recorded and investigated;
- Limiting vehicle speeds to less than 40 km/hr and prohibiting traffic in non-active areas;



- Maintaining stockpile heights (excluding green waste) at less than 4 m;
- Maintain green waste stockpile heights at less than 6 m; and
- All trucks entering and leaving the premises will be covered.

The works approval holder is also proposing to carry out dust monitoring during operations, including trigger levels and reporting requirement. However, specific details have not been provided. Proposed dust monitoring during operation will be further examined during the assessment of the Licence application.

Guidance published by the Western Australian Department of Fire and Emergence Services recommends a maximum green waste stockpile height of 5m for fire management purposes. This limitation shall be reflected in the issued works approval.

## 5.2. Proposed noise controls

To minimise noise emissions during construction and operation, the works approval holder is proposing to:

- Record and investigate all complaints;
- Regularly service vehicles; and
- Limit vehicle speed within the premises to less than 40km/hr.

## 5.3. Proposed leachate controls

The primary leachate control measure proposed by the works approval holder is the installation of a 37,410 m<sup>2</sup> graded bitumen hardstand composting area topped with asphalt to achieve a permeability of less than  $1 \times 10^{-9}$  metres per second. This hardstand will be constructed in such a manner that runoff is directed into a dedicated HDPE lined leachate pond. The existing works approval incorporated construction of a leachate pond with a storage capacity of 14,366 kl with an additional 1 m freeboard. Any overtopping of the leachate pond was proposed to be captured within the onsite storm water pond.

As part of the amendment application, the works approval holder has requested that the depth of the pond be increased to 10 m, 5 m deeper than the originally proposed 5m deep pond, with no change to the pond surface area (Figure 1: Leachate dam specifications). This increase in size followed the discovery that deeper excavation was possible during the construction process. The works approval holder has also requested a reduction in the required 1000 mm freeboard to 300 mm. This request has been made on the basis that the pond now has a significantly increased leachate containment capacity. The works approval holder has provided advice to DWER that the capacity of the deepened pond has been calculated to be 23,400 KL.

As part of the original works approval application, the works approval holder provided a water balance graph to demonstrate that all rainfall and leachate run-off from the operational area could be adequately captured by the leachate pond. However, the works approval holder did not provide the specific water balance calculations. The information provided accounted for a number of inputs and outputs, although rainfall data was sourced from a Bureau of Meteorology (BOM) site which has been closed since 2003 (Wandering Comparison, Site ID 010648), and works approval holder's calculations did not appear to account for any potential run-off from liquid wastes applied to the compost.

DWER undertook additional calculations to determine the adequacy of the originally proposed leachate pond size, including using rainfall data from an active BOM site (Wandering, Site ID 010917), and accounting for potential run-off from applied liquid wastes. DWER determined that if there was limited run-off from liquid wastes applied to the composting windrows, then there would be sufficient capacity within the approved leachate pond to prevent overtopping.

In the event that large amounts of liquid wastes regularly run-off from windrows, then there was considered to be an increased risk of overtopping. The works approval holder previously proposed to address this issue by increasing the volumes of liquid from the leachate pond applied to the composting windrows, maintaining a 1000 mm freeboard on the leachate pond, spreading out the compost windrows over the hardstand to increase the absorption area and the temporary cessation of liquid waste acceptance at the premises. Should any overtopping of the leachate pond to the storm water pond occur, the water within the storm water pond was to be tested prior to discharge to surrounding timber plantations.

As part of the assessment of the amendment application, the Department prepared additional water balance calculations for the revised leachate pond volume and liquid waste throughput under several minimum freeboard scenarios. On the basis of these calculations, the works approval holder was requested to provide further details on what measures will be implemented at the premises to ensure that the freeboard of the leachate pond is maintained, and no overtopping will occur. In response, the works approval holder has provided a water balance prepared by consultant Bowman & Associates Pty Ltd. The maximum volume of runoff associated with a 72-hour storm event was calculated to be approximately 9,000 KL. Given the increased capacity of the pond, it was determined by the consultant that the pond, with reduced freeboard, has a sufficient volume to contain stormwater runoff without overtopping. On this basis, the delegated officer has deemed that the requested reduction in required freeboard is justified.

The works approval holder has also proposed the installation of a mechanical evaporation system atop the leachate pond to increase the rates of evaporation to assist in the maintenance of required freeboard. The works approval holder has elected to install 2 Aqua Control Evolution™ Series: 1/2 HP Floating Fountains which will spray leachate into the air above the pond surface, increasing the surface area from which evaporation can occur.

The original works approval set out the requirement for the installation of four groundwater monitoring bores as proposed in the original works approval application, and the commencement of a six-monthly groundwater monitoring regime within one month of the bores being installed. The Department considered that the proposed bore locations are generally suitable to detect any groundwater contamination and therefore any breach of containment infrastructure. Final bore siting is to be determined by the consultant overseeing the drilling to ensure the objectives outlined in the Works Approval are met.

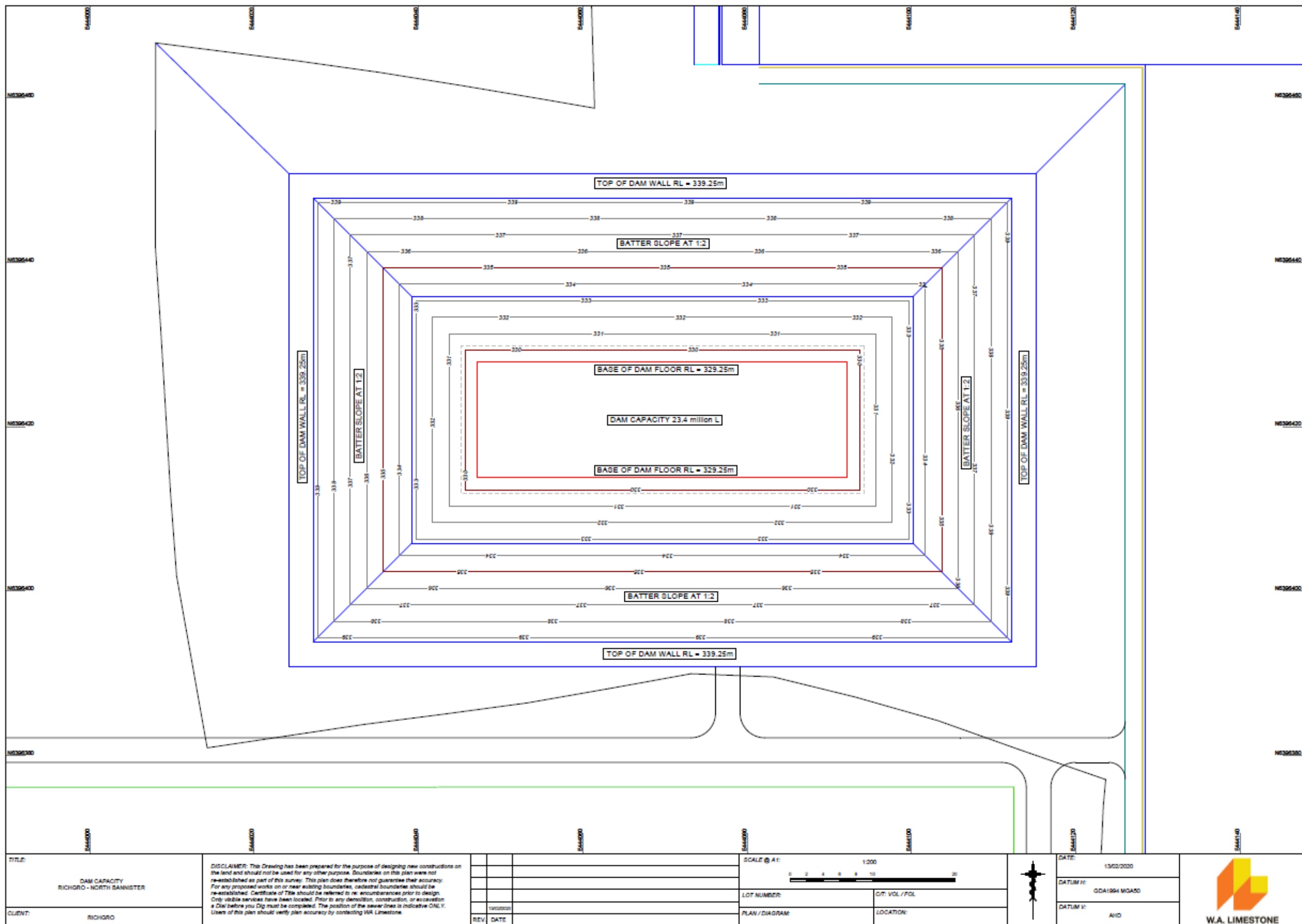


Figure 1: Leachate dam specifications

## 5.4. Proposed odour controls

No odour emissions are anticipated during construction. To minimise odour emissions during premises operation, the works approval holder is proposing to:

- Continuously process feedstocks as quickly as possible, limiting the time which the material is exposed to the atmosphere;
- Process material in a first-in, first-out basis to limit uncovered material decomposition times;
- Clean processing areas and feedstock storage areas at the end of each day;
- Ensure all deliveries of feedstock are contained in covered trucks;
- Process odorous feedstocks immediately, or covering with carbon material (shredded green waste) for blending the following day;
- Use the Harvest Quest compost inoculant combined with the application of a capping layer of coarse compost screenings over the compost windrows;
- Maintain optimum temperature and moisture content conditions in the composting windrows to ensure rapid decomposition of organics; and
- Store liquid waste feedstocks in pre-fabricated stand-alone Fibre Furn Tanks situated on hardstand area. Precast cement curbing will be installed around these tanks to prevent vehicle damage.

There was limited information available at the time of original application assessment regarding the effectiveness of the Harvest Quest inoculant in the composting process. The works approval holder has not provided data on the effectiveness of the inoculant from existing facilities utilising this product. However, providing that the inoculant works as described, then the Department accepts that this may be a sufficient odour control method. Any additional information provided to the Department as part of an application for a licence will further inform the risk assessment of potential odour emissions from the premises.

The Department has also noted that the prescribed premises (landfill and composting facility) adjacent to the premises has not yet received any odour complaints. Should the Department receive any odour complaints from the Culford Agricultural precinct during operations, this will be taken into consideration and may inform future risk assessments.

## 6. Environmental siting, potential pathways and receptors

Table 6 below lists the relevant sensitive land uses in the vicinity of the prescribed premises which may be receptors relevant to the proposed amendment.

**Table 6: Receptors and distance from activity boundary**

Residential and sensitive premises	Distance from prescribed premises
<i>Industrial premises – Landfill and composting facility</i>	<i>Immediately adjacent to the premises boundary</i>
<i>Commercial premises - Shell Service Station and Three-ways Tavern</i>	<i>Approximately 3.8 km South South-East of the premises boundary</i>
<i>Private residences – Plantation Road, Bannister</i>	<i>Approximately 7.9 km south of the premises boundary</i>
<i>Users of Bibbulmun Track – North Bannister Spur Trail (Transient receptor)</i>	<i>Immediately north of the premises boundary</i>

A caretaker residence is located within the Culford Agricultural precinct. The Department has received correspondence that this residence acknowledges that they will not be considered a receptor for the purposes of this assessment.

Table 7 below lists the relevant environmental receptors in the vicinity of the prescribed premises which may be receptors relevant to the proposed amendment.

**Table 7: Environmental receptors and distance from activity boundary**

Environmental receptors	Distance from prescribed premises
<i>Groundwater - Typically fresh to brackish (712 to 2734 mg/L total dissolved solids), predominately influenced by rainfall recharge. (There are currently no registered groundwater abstraction bores within 10 km of the premises)</i>	<i>Generally considered to be 5 to 28 m below ground level across the premises due to variations in topography.</i>
<i>Serpentine Dam Catchment Area (Priority 2 Public Drinking Water Source Area)</i>	<i>Immediately north of the premises boundary, considered to be up hydraulic gradient.</i>
<i>Beelaring Class C Nature Reserve - Remnant native vegetation</i>	<i>Immediately north of the premises boundary</i>
<i>Murray River System RIWI Act area.</i>	<i>The premises are situated within this area.</i>
<i>Tributary of the Serpentine River</i>	<i>Tributary located immediately north of the premises, draining to the Serpentine River approximately 4 km north. Considered to be up hydraulic gradient.</i>

## 7. Risk assessment

Table 8 and

**Table 9** below describe the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. Both tables identify whether the emissions present a material risk to public health or the environment, requiring regulatory controls.

**Table 8: Risk assessment for proposed amendments during construction and commissioning**

Risk Event					Consequence rating <sup>1</sup>	Likelihood rating <sup>1</sup>	Risk <sup>1</sup>	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities	Potential emissions	Potential receptors	pathway and impact	Applicant controls					
Ground works, truck movements, installation and placement of equipment and infrastructure	Dust	Serpentine and Hotham Rivers	Air/windborne pathway causing the deposition of sediment to river channel and riparian vegetation	As discussed in section 3	Slight	Unlikely	Low	The construction works are not expected to generate significant dust or noise emissions.	The Delegated Officer considers that the general provisions of the EP Act are sufficient in regulating dust emissions.
		Human receptors (adjacent industrial premises and roadhouse 2.5 km east)	Air/windborne pathway causing amenity impacts through the deposition of dust						
	Noise	Human receptors (adjacent industrial premises and roadhouse 2.5 km east)	Air/windborne pathway causing amenity impacts to sensitive receptors	As discussed in section 3	Slight	Unlikely	Low	The proposed controls are expected to be sufficient at mitigating dust and noise emissions.	The Delegated Officer considers that the general provisions of the EP Act, and the Environmental Protection (Noise) Regulations 1997 are sufficient in regulating noise emissions.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the Department's Guidance Statement: Risk Assessments (February 2017)

**Table 9: Risk assessment for proposed amendments during operation (including time limited operations under a works approval)**

Risk Event					Consequence rating <sup>1</sup>	Likelihood rating <sup>1</sup>	Risk <sup>1</sup>	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities*	Potential emissions	Potential receptors	Potential pathway and impact	Applicant controls					
Waste acceptance, greenwaste shredding and composting Vehicle movement	Dust	Serpentine and Hotham Rivers	Air/windborne pathway causing impacts to surface water quality through deposition of sediment and organic material	As discussed in section 3	Slight	Unlikely	Low	Any dust generated during operations may cause minimal impacts to surface waters and would probably not occur in most circumstances	Condition 18 requires that The works approval holder must ensure that dust emitted from the premises does not unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person who is not on the premises
		Adjacent Industrial and nearby Commercial receptors (3.8 km east of the premises).	Air/windborne pathway causing amenity impacts through the deposition of dust	As discussed in section 3	Slight	Unlikely	Low	Any dust generated during operations may cause minimal impacts to amenity and would probably not occur in most circumstances	Condition 18 requires that The works approval holder must ensure that dust emitted from the premises does not unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person who is not on the premises

Risk Event					Consequence rating <sup>1</sup>	Likelihood rating <sup>1</sup>	Risk <sup>1</sup>	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities*	Potential emissions	Potential receptors	Potential pathway and impact	Applicant controls					
<p>Waste acceptance and composting activity</p> <p>Vehicle movement Including operations before 7am and on weekends</p>	Noise	Adjacent Industrial and nearby Commercial receptors (3.8 km east of the premises).	Air/windborne pathway causing amenity impacts to sensitive receptors	As discussed in section 3	Slight	Unlikely	Low	Any noise generated during operations may cause minimal impacts to receptors and would probably not occur in most circumstances.	The Delegated Officer considers that the general provisions of the EP Act, and the Environmental Protection (Noise) Regulations 1997 are sufficient in regulating noise emissions. No additional controls deemed necessary
<p>Waste acceptance and composting</p> <p>Application of liquid Wastes to greenwaste stockpiles</p>	Leachate	Groundwater users	Overland flow, seepage and groundwater discharge impacting water quality	As discussed in section 3	Moderate	Unlikely	Medium	In the event of leachate emissions specific consequence criteria (for	



Risk Event					Consequence rating <sup>1</sup>	Likelihood rating <sup>1</sup>	Risk <sup>1</sup>	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities*	Potential emissions	Potential receptors	Potential pathway and impact	Applicant controls					
<i>Storage of leachate in a leachate pond</i>		<i>Tributary of the Hotham River</i>	<i>Overland flow, seepage and groundwater discharge impacting surface water quality</i>					<i>environment) are at risk of not being met, however these impacts would probably not occur in most circumstances due to the works approval holders proposed controls</i>	
		<i>premises lot and adjoining land</i>	<i>Overland flow, seepage and groundwater flow impacting soil quality</i>						
		<i>Serpentine Dam Catchment Area</i> <i>Tributary of the Serpentine River</i>	<i>Overland flow, seepage and groundwater flow, causing impacts to water quality</i>						
		<i>Dwellingup State Forest</i> <i>Beelaring Class C Nature Reserve</i> <i>Youraling State Forest</i>	<i>Overland flow, seepage and groundwater flow, causing nutrient enrichment and degradation of forest areas</i>		N/A	N/A	N/A	<i>As discussed in section 4 the groundwater and surface water flow does not provide a pathway for leachate movement to these receptors</i>	N/A

Risk Event					Consequence rating <sup>1</sup>	Likelihood rating <sup>1</sup>	Risk <sup>1</sup>	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities*	Potential emissions	Potential receptors	Potential pathway and impact	Applicant controls					
Waste acceptance and composting Application of liquid wastes Storage of leachate in a leachate pond	Odour	Commercial receptors (3.8 km east of the premises).  The Delegated Officer considers that the distance to the nearest sensitive receptors (residences) of 7.9 km is sufficient to discount any potential for impacts.	Air/windborne pathway causing amenity impacts for sensitive receptors	As discussed in section 3	Moderate	Possible	Medium	Due to the acceptance of highly odorous feedstocks in large quantities, there is potential for high level impacts to amenity. While the works approval holder has implemented a number of odour control measures impacts to amenity could still occur at some time.	Condition 19 requires that The works approval holder shall ensure that odour emitted from the premises does not unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person who is not on the premises.

Risk Event					Consequence rating <sup>1</sup>	Likelihood rating <sup>1</sup>	Risk <sup>1</sup>	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities*	Potential emissions	Potential receptors	Potential pathway and impact	Applicant controls					
Upset conditions – compost fire	Particulates, noxious gases and smoke	Human receptors (adjacent industrial premises and roadhouse 2.5 km east).	Air/windborne pathway causing health and amenity impacts	As discussed in section 3	Major	Rare	Medium	A fire at the premises may cause high level impacts to amenity and short-term impacts to the nature reserves.	Conditions 13 and 14 requirements for firefighting and reporting
		Adjacent State forest and nature reserves	Direct contact with fire causing destruction of flora and fauna and natural habitats.	As discussed in section 3	Major	Rare	Medium	These impacts would only occur in exceptional circumstances.	Conditions 13 and 14 requirements for firefighting and reporting

Risk Event					Consequence rating <sup>1</sup>	Likelihood rating <sup>1</sup>	Risk <sup>1</sup>	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities*	Potential emissions	Potential receptors	Potential pathway and impact	Applicant controls					
Compost removed from the premises	Pathogens	Human receptors and vegetation communities exposed to pathogens in compost product	Direct contact with product	As discussed in section 3	Major	Unlikely	Moderate	Exposure to untreated wastes could result in an exceedance of specific consequence criteria for public health or the dispersal of plant pathogens. This would only occur in exceptional circumstances where compost not meeting the relevant standard is taken off-site for sale.	Conditions 23 and 24 impose requirement for quality testing in accordance with Australian Standards

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the Department's Guidance Statement: Risk Assessments (February 2017)

## 8. Consultation

**Table 10: Summary of consultation**

Method	Comments received	DWER response
Shire of Boddington - – Direct referral via email (12/05/2020)	None received	N/A
Department of Health – Direct referral via email (12/05/2020)	<i>“The DOH has no objection to the proposed amendments provided the appropriate management plans are in place to address any additional hazards that may occur”</i>	Noted
Applicant referred draft documents (05/06/2020)	Refer to Appendix 2	Refer to Appendix 2

## 9. Conclusion

Based on the assessment in this decision 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.

### 9.1. Summary of amendments

Table 11 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 11: Works approval amendments**

Condition No.	Proposed amendments
4	<i>Requirement to justify bore locations removed. Bore locations are prescribed in works approval.</i> <i>Requirement to submit final GPS coordinates of infrastructure inserted.</i>
5, Table 1, Leachate pond	<i>Requirements (design and construction) for leachate pond amended</i>
5, Table 1, Leachate sump	<i>Requirements (design and construction) for leachate sump amended</i>
5, Table 1, monitoring wells	<i>Requirements (design and construction) for four groundwater monitoring wells amended</i>
5, Table 1, Screening equipment	<i>Requirements (design and construction) for operational equipment amended</i>
5, Table 1, Free standing liquid waste storage tanks	<i>Requirements (design and construction) for storage tanks inserted</i>
5, Table 1, Feedstock bays	<i>Requirements (design and construction) for feedstock bays inserted</i>

<i>5, Table 1, Mechanical evaporator</i>	<i>Requirements (design and construction) for floating fountains inserted</i>
<i>Previous condition 7</i>	<i>Removed. Condition relating to emissions deemed unenforceable as it duplicates regulatory requirements.</i>
<i>Previous condition 8</i>	<i>Removed. This condition was deemed unenforceable as it duplicates the reporting requirements of the Act.</i>
<i>9-17</i>	<i>New conditions relating to time limited operations</i>
<i>18 &amp; 19</i>	<i>New conditions related to dust and odour management</i>
<i>20 &amp; 21</i>	<i>New conditions in relation to feedstock controls</i>
<i>23-24</i>	<i>New monitoring conditions</i>
<i>25-27</i>	<i>New records and reporting conditions</i>
<i>Definitions, Table 6</i>	<i>New definitions inserted</i>
<i>Schedule 2, Table 8</i>	<i>Works specifications updated</i>

**Stephen Checker**

**MANAGER WASTE INDUSTRIES**

**REGULATORY SERVICES**

*An officer delegated by the CEO under section 20 of the EP Act*

## Appendix 1: Key documents

Document title	Availability
Works approval (W6213/2019/1) - A. Richards Pty Ltd - Richgro Composting Facility	Accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
Amendment to works approval (W6213/2019/1) application form and supporting documentation (November 2019)	DWER records, DWER2018/001569
DER, July 2015. <i>Guidance Statement: Regulatory principles</i> . Department of Environment Regulation, Perth.	Accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
DER, October 2015. <i>Guidance Statement: Setting conditions</i> . Department of Environment Regulation, Perth.	
DER, August 2016. <i>Guidance Statement: Licence duration</i> . Department of Environment Regulation, Perth.	
DER, February 2017. <i>Guidance Statement: Land Use Planning</i> . Department of Environment Regulation, Perth.	
DER, February 2017 <i>Guidance Statement: Risk Assessments</i> . Department of Environment Regulation, Perth.	
DWER, June 2019. <i>Guideline: Decision Making</i> . Department of Water and Environmental Regulation, Perth.	
DWER, June 2019. <i>Guideline: Industry Regulation Guide to Licensing</i> . Department of Water and Environmental Regulation, Perth.	

## Appendix 2: Summary of works approval holder comments

The works approval holder was provided with the draft decision report on 5 June 2020 for review and comment. The works approval holder responded on 16 June 2020. The following comments were received on the draft decision report.



Condition	Summary of works approval holder comment	DWER response
Front page	Administration error – the table on the front cover has the incorrect description in relation the premises code 61A Text should read 'Solid Waste Facility' for Category 61A (not Solid Waste Depot)	Noted and corrected
Table 1	Administration error – Table 8 referenced twice	Noted and corrected
Condition 6	Richgro seek confirmation from DWER on the timeframe in submission of the construction report of the Groundwater monitoring wells as Condition #3 requires the infrastructure report within 30 days of completion of the Infrastructure Works. Whereas Condition 6 indicates a period of 60 days to submit the construction report to the CEO.	Text error, condition corrupted in formatting. Wording corrected.
Condition 7	Richgro seek confirmation from DWER that the time limited operations are able to commence once a specific infrastructure is constructed and the report has been submitted to DWER. ie: Hardstand composting area / Drainage and Leachate pond / sump - construction completed, therefore composting can commence.	Report to be submitted prior to commencement, no report has been received at the time of amendment.
Condition 8 (a)	Richgro acknowledge this condition and seek confirmation from DWER whether the prescribed premises licence can be issued prior to the completion of all the listed infrastructure construction completion. Richgro plan to install 6 Fibre Furn Tanks and the Feedstock bays, however the delivery of these tanks and completion of base works for the tanks and construction of bays may require additional time. Installation of the 6 tanks is envisaged to be a staged approach over the coming financial years.	Table 1 separated into separate Infrastructure and equipment tables. Infrastructure to be installed prior to commencement of time limited operations. Equipment to be installed as works approval holder 's discretion.

Condition 14	<p>Richgro seek an amendment to the minimum distances referenced within this condition.</p> <p>The overall proposed operating hardstand area is 114.55m (W) x 199.70m (L) and 75.5m (W) x 112.50m (L) with a cleared area to the fence line (Attachment A).</p> <p>These minimum distances are not physically possible given the designated operational area as shown within Attachment B.</p> <p>Richgro have cleared the premises with the intent of maintaining the required fire break around the operational area - as depicted in the Schedule 1 – Figure 1 Premises Layout (Attachment C).</p> <p>The remaining plantation is set to be harvested in future years and until such time this area is not useable by Richgro.</p>	<p>Works approval holder has nominated reduced separation distances considered acceptable for commencement of time-limited operations and have been incorporated into amended Works Approval.</p> <p>A Fire Management Plan prepared for the premises (and which refers to onsite activities) will be required to support the future licence application. This will be referred to DFES for comment.</p>
Condition 16	Administration error – typing error – word nay, should read any.	Noted and corrected
Condition 20	<p>Richgro seek an amendment to this monitoring frequency as the need to monitor on a daily basis is not required. Weekly testing is arranged and the frequency within the week varies dependent on the stage of the compost or mulch maturity.</p> <p>Richgro seek the amendment of the frequency to weekly. Richgro request that the stated Method be amended to read:</p> <p>“In accordance with AS 4454 or Internal Standard” as per the revised works approval decision report (p.7).</p> <p>Extract below of Page 7 DRAFT Decision Report</p> <p>Prior to release for sale or movement offsite, the compost is tested for pH, electronic conductivity, solvita maturity index, toxicity (bioassay), plant pathogens (Phytophthora and Pythium) and human pathogens (thermotolerant Coliforms and Salmonella). Where a windrow does not meet the required standard (AS4454, AS3743, AS4419 or other internal standard) it is reworked into the composting process (typically blended with another windrow) for further processing.</p>	Noted, frequency reduced to at least two times per week as per condition 15

Condition 21	Richgro request that the stated Method be amended to read: "In accordance with AS 4454, AS3743, AS4419 or Internal Standard" as per the revised works approval decision report (p.7) Refer to Condition 20 above for extract of Page 7 DRAFT Decision Report	Erroneous standard duplication. Correct standard AS3743 inserted.
Condition 22	Richgro request that the stated Method be amended to read: "In accordance with AS 4454, AS3743, AS4419 or Internal Standard" as per the revised works approval decision report (p.7) Refer to Condition 20 above for extract of Page 7 DRAFT Decision Report	Erroneous standard duplication. Correct standard AS3743 inserted.  Wording amended from "required by AS4454, AS3743 or AS4419" to "set out in AS4454, AS3743 or AS4419" as agreed by applicant's representative.
Table 5 – Definitions	Richgro seek confirmation of the source of the definition for Digestate. Richgro suggest the following definition for digestate "Decomposed feedstock generated as a product of anaerobic digestion comprising slow degradable, stable organic components in various forms and some degree of inorganic salts"	Definition taken from DWER's draft composting guidelines
Schedule 2, Table 7	Administration error – the summary at the top of this table has the words Table 7 duplicated.	Noted and corrected
Schedule 2, Table 7	Richgro seek an amendment to Table 7 in respect to the Specifications / Drawings in relation to Leachate Pond Construction. Removal of the words: Constructed of reinforced concrete to achieve a permeability of less than 1 x 10 <sup>-9</sup> m/s. The concrete is in relation to the Leachate Sump only.	Noted, wording amended to reflect approved construction methods
Draft decision report	Richgro seek amendments to the following. Page 5 & Page 6 - Category 61A is not correctly referenced. Should read 'Solid Waste Facility' (not Solid Waste Depot)	Noted and corrected

Draft decision report	Page 7(Para-2) Amendments to wording to reflect "maintain oxygen concentration to optimal level of 15% or above".	Wording amended
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