



**Licence Number** L8887/2015/1

**Licence Holder** JD Organics Pty Ltd

**ACN** 154 081 651

**File Number:** DER2015/000261

**Premises** Garden Organics  
276 Aurisch Road  
BOONANARRING WA 6508

Part of Lot 12 on Diagram 92147 as defined by the Global Positioning System Coordinates:

Position No.	Latitude	Longitude
A	31° 12' 45.59" S	115° 49' 4.96" E
B	31° 12' 45.53" S	115° 49' 50.67" E
C	31° 13' 5.41" S	115° 50' 0.86" E
D	31° 13' 5.61" S	115° 49' 11.71" E

**Date of Amendment** 18 November 2019

## Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Licence in accordance with section 59 of the *Environmental Protection Act 1986* (EP Act) as set out in this Amendment Report.

**Tracey Hassell**

**A/MANAGER WASTE INDUSTRIES**

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

# Definitions and interpretation

## Definitions

In this Amendment Notice, the terms in Table 1 have the meanings defined.

**Table 1: Definitions**

Term	Definition
ACN	Australian Company Number
Amendment Report	refers to this document
AS4454	refers to Australian Standard Composts, soil conditioners and mulches AS4454-2012 Standards Australia
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 WA 6919 <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
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 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
Licence Holder	JD Organics Pty Ltd
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.
Risk Event	as described in <i>Guidance Statement: Risk Assessment</i>

## Amendment Notice

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the Licence issued under the EP Act for a prescribed premises as set out below. This notice of amendment is given under section 59B(9) of the EP Act.

The following guidance statements have informed the decision made on this amendment:

- *Guidance Statement: Regulatory Principles (July 2015)*
- *Guidance Statement: Setting Conditions (October 2015)*
- *Guidance Statement: Decision Making (June 2019)*
- *Guidance Statement: Risk Assessments (February 2017)*
- *Guidance Statement: Environmental Siting (November 2016)*

## Amendment description

The Licence Holder is proposing to accept and process up to 500 tonnes of food organics and garden organics (FOGO) waste over a trial period of up to 12 months (anticipated to be over 9 months). The Licence Holder is intending to conduct a trial to determine the optimal receipt, handling and processing of FOGO waste to produce a composted product that meets the required specifications. The trial will also provide an opportunity to assess potential environmental impacts to inform any future proposal for on-going FOGO acceptance.

### Current Operations

The Premises has been in operation since 2015 and is currently licenced to compost up to 27,000 tonnes per annual period of organic material including green waste, sawdust, pinebark, spent compost mushroom and manures. The Premises also accepts and composts up to 2,000 tonnes per annual period of grease trap waste.

Composting occurs within an enclosed composting shed with an odour extraction system, as well as outdoors on a concrete hardstand. Leachates are captured via a leachate collection and pond system. The licence currently requires monitoring of seven groundwater ponds and surface water monitoring of the leachate ponds.

### Trial Procedure

An initial 100 tonnes of FOGO will be accepted over two days and the material will be delivered directly to the enclosed forced aeration facility which consists of a 150 mm concrete hardstand. The material will be decontaminated and formed into one windrow inside the enclosed facility where pasteurisation will occur. The windrow will be left for 3 weeks to achieve a minimum of 15 consecutive days between 55 to 65 degrees before being turned and re-formed for another 3 weeks. Re-forming the windrow requires material to be briefly transported outside of the enclosed facility and into another entrance. Following completion of the second pasteurisation phase (6 weeks total) the material is then moved into outdoor windrows where it is blended with other feedstock and composted for a further 8 weeks minimum. The final product will be tested against *Australian Standard Composts, soil conditioners and mulches AS4454-2012 Standards Australia* (AS 4454) parameters. This process will be repeated four times in total for the trial, with a gap between batches two and three to allow for analysis of testing results.

The Licence Holder will implement all control measures required under the current licence in relation to potential emissions from the Premises. The Licence Holder has proposed implementation of a number of additional controls during the trial period to minimise potential impacts from emissions including;

- Grease trap waste will not be accepted on the same day that FOGO is received;
- Poultry bedding will not be processed in the enclosed forced aeration facility at the same time as FOGO;
- Acceptance of FOGO will occur in the mornings when winds are typically easterly (placing the nearest residential premises upwind);
- Absorbent carbon material (i.e. greenwaste) will be prepared inside the enclosed facility prior to acceptance of FOGO and in the event that FOGO contains high levels of food waste, carbon material will be layered over the FOGO;
- If south-westerly winds are experienced windrows will not be moved and/or during delivery of materials the roller doors will be closed after each truck delivery to reduce likelihood of odour emissions impacting the nearest residential premises;
- The final FOGO product will not be screed during periods of high winds; and
- Mesh will be installed at the sump to capture large particles being washed from the processing area and truck wash.

### **Trial monitoring**

Prior to and during the trial of FOGO the Licence Holder will carry out a number of tests and undertake monitoring to gather baseline data to assist in characterising potential emission sources and impacts from the composting of FOGO. This information can be used by the Licence Holder to make necessary improvements to the operation of the premises and can be used to inform any future application for full scale and on-going process of FOGO at the premises.

The tests and monitoring include;

- Prior to the acceptance of FOGO, the Licence Holder will carry out a smoke test on the enclosed shed when wind conditions are above 10 kms per hour. This test will be used to determine the negative pressure attributes, air exchange rates and the potential for odour release;
- Prior to the acceptance of FOGO, the Licence Holder will carry out five odour field assessments during different wind conditions and times of day to determine the off-site odour impacts from the existing operations;
- Testing of leachate dams 1 and 2 prior to receiving FOGO, after pasteurisation of FOGO within the shed, and after composting FOGO outdoors;
- On-going monitoring of the FOGO compost product for temperature, oxygen, pH and moisture content and testing for a number of parameters including C:N ratio, nutrients, heavy metals, salmonella and e-coli; and
- Periodic assessment of odour intensity by a person not permanently located at the facility.

### **Exclusions to the amendment**

The FOGO trial will be conducted within the existing infrastructure on-site, and therefore this amendment does not authorise any works or changes to site layout. The FOGO trial volume of 500 tonnes is to be included within the current approved production capacity of 27,000 tonnes per annual period and no changes to the throughput are included as part of this amendment.

The Licence Holder has indicated that a future application for the on-going acceptance and processing of FOGO is likely to consist of new infrastructure including a dedicated leachate pond. Operational procedures during on-going acceptance may also differ for example decontamination may occur off-site prior to acceptance, and grease trap and poultry waste

may be processed concurrent with FOGO. Any proposed works or on-going processing of FOGO will be assessed under a future application.

### Licence format changes

This licence amendment incorporates changes previously implemented under Amendment Notice 2 (issued 12 April 2019). These amendments have not been re-assessed and are not appealable under sections 102(2) or 102(3)(b) of the EP Act.

The existing licence contained a number of improvement conditions related to the installation of groundwater bores, hardstand resurfacing, pond seepage and product testing. The Licence Holder has demonstrated that these conditions have been met, and therefore conditions related to these actions have been removed from the licence as part of this amendment.

Other minor changes have been made to the licence in line with DWER's licence format. A summary of changes is included in Table 8.

## Planning Approval

Planning approval was granted by the Shire of Gingin (Shire) on 22 July 2014 for an 'Industry – Noxious (Composting Facility)' under the Shire's *Local Planning Scheme No. 9*. There are no time limitations associated with this approval.

## Location and receptors

Table 4 below lists the relevant sensitive land uses in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

**Table 2: Receptors and distance from activity boundary**

Residential and sensitive premises	Distance from Prescribed Premises
Residential Premises	Closest residence is located approximately 1000 m north-east of the prescribed activities.

Table 5 below lists the relevant environmental receptors in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment. This table does not include receptors considered to be down-gradient from the prescribed activity.

**Table 3: Environmental receptors and distance from activity boundary**

Environmental receptors	Distance from Prescribed Premises
Yurine Swamp Nature Reserve	2.9 km south-west of the Premises boundary

The distances to groundwater and water sources are shown in Table 6.

**Table 6: Groundwater and water sources**

Groundwater and water sources	Distance from Premises	Environmental value
Groundwater	<p>Based on the groundwater monitoring data, groundwater across the site within the superficial aquifer was encountered between 11 and 24 metres below ground level (mbgl). Site investigations undertaken on behalf of the Licence Holder identified that the confined aquifer (Leederville) is located approximately 60 mbgl. The inferred groundwater flow of the superficial aquifer is east to west towards the series of unnamed lakes, with the confined aquifer having an inferred flow direction towards the south-west.</p> <p>Five (5) groundwater monitoring bores are located within 1 km of the prescribed activities (based on available GIS dataset – DWER owned and registered WIN Groundwater Sites):</p> <ul style="list-style-type: none"> <li>• 720 m south-east (up gradient);</li> <li>• 770 m east, north-east (up gradient);</li> <li>• 1 km south, south-east (up-gradient); and</li> <li>• Two located 1.3 km south-east (up gradient).</li> </ul> <p>The closest down-gradient groundwater monitoring bore installed in the superficial aquifer is located 2.1 km west, south-west of the prescribed activities.</p>	Water is considered to be fresh (0-500 mg/L TDS) which may have a beneficial value for drinking water, non-potable use, irrigation and livestock use.
Unnamed lakes	Ranging from 1.3 km south and between 2.5 and 3.3 km west of the Premises boundary	Based on topography and regional groundwater flow is inferred that the lakes are groundwater fed. Provides habitat for aquatic and riparian flora and fauna.
White Lake	Located 1.5 km west of the Premises boundary	

## Risk assessment

Table 7 below describes the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. This table identifies whether the emissions present a material risk to public health or the environment, requiring regulatory controls.

**Table 7: Risk assessment for proposed amendments during operation**

Risk Event					Consequence rating	Likelihood rating	Risk	Reasoning	
Source/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts					
Cat 67A Composting	Acceptance and processing of new waste types (FOGO) for a trial period	Odour	Nearest residential area located approximately 1 km north-east of prescribed activities	Air/wind dispersion	Impacts to amenity and wellbeing	Minor	Unlikely	Medium	<p>The Delegated Officer considers given the distance to receptors and the profile of the new waste type there is a potential for low-level impact to amenity.</p> <p>Considering the Licence Holder's proposed controls including acceptance indoors and the time limited trial this risk event will not occur in most circumstances.</p> <p>Regulatory controls are considered to enforce applicant's proposed controls</p>
		Leachate: Spillage waste to soil Seepage through hardstand area. Run-off from hardstand area	Groundwater – superficial aquifer	Seepage through soil	Contamination of groundwater supply for nearby users	Minor	Rare	Low	<p>The Delegated Officer considers that impacts to potential future uses of groundwater and aquatic and riparian habitat would be low-level impacts.</p> <p>Considering the Licence Holder's proposed controls this risk event would only occur in exceptional circumstances during the trial period (failure of infrastructure). The current licence controls are considered adequate for management of potential risks.</p>
			White Lake located 1.5 km west of Premises boundary		Contamination of surface waters at the point of groundwater expression				
			Unnamed lakes ranging between 1.3 km south and 2.5 to 3.3k m west of the Premises boundary	Transport through groundwater					
Yurine Swamp Nature Reserve	Overland migration	Impacts to vegetation from excessive nutrients or other contaminants in leachate Contamination of land (soil)							

## Decision

The Delegated Officer has determined that potential risk events from the composting of the new waste type is acceptable, subject to regulatory controls. DWER acknowledges that any on-going processing of FOGO will be subject to re-assessment, and additional controls may be implemented at such time.

The current licence contains a number of conditions in relation to odour and leachate management which will apply to the composting of the new waste type. The licence will be amended to permit the new waste type, and to specify storage and processing requirements of the new waste type generally consistent with the Licence Holder's proposed controls including:

- Infrastructure controls for the pond sumps; and
- Operational controls for storage and processing of FOGO materials.

Table 8 provides a summary of the proposed amendments and will act as record of implemented changes.

**Table 8: Summary of licence conversion**

Existing licence condition	Condition summary	Proposed licence condition	Conversion notes
N/A	Premises categories	N/A	Category table now placed on front page.
N/A	Explanatory notes	N/A	Removed from licence format.
N/A	Definitions and interpretation	N/A	Moved to end of conditions set. Removal of un-used definitions and minor wording changes.
N/A	Interpretation	N/A	Minor wording changes.
1	Environmental compliance	N/A	Condition removed as it replicates provisions under the EP Act.
2	Feedstock controls	1	Inclusion of FOGO waste type for limited period.
3	Monitoring of inputs and outputs	2	No changes.
4	Monitoring report	3	No changes.
5	Infrastructure construction specifications	N/A	Removed as the requirements of this condition have been addressed.
6	Quality assurance testing	N/A	Removed as the requirements of this condition have been addressed.
7	Engineering certification	N/A	Removed as the requirements of this condition have been addressed.

Existing licence condition	Condition summary	Proposed licence condition	Conversion notes
8	Engineering certification	N/A	Removed as the requirements of this condition have been addressed.
9	Infrastructure and equipment	4	Add requirement to install a mesh screen. No other changes.
10	Grinder operation	5	No changes.
11	Storage and processing requirements	6	Additional specifications for FOGO waste and poultry manure.
12	Freeboard	7	Reference to schedule 3 removed. No other changes.
13	Leachate pooling	8	No changes.
14	Outdoor compost management	9	No changes.
15	Indoor compost management	10	No changes.
16	Product assessment	N/A	Removed as the requirements of this condition have been addressed.
17	Groundwater monitoring	11	Removal of reference to first four sampling rounds as this requirement is now redundant. No other changes.
18	Groundwater reporting	12	No changes.
19	Pond monitoring	13	No changes.
20	Pond desludging	14	No changes.
21	Pond desludging management plan	15	No changes.
22	Pond monitoring report	16	No changes.
23	Mosquito larvae	17	No changes.
24	Leachate pond seepage test	N/A	Removed as the requirements of this condition have been addressed.
25	Leachate pond seepage test report	N/A	Removed as the requirements of this condition have been addressed.
26	Authorised emissions	N/A	Redundant condition, removed from licence.
27	NATA accreditation	18	No changes.

Existing licence condition	Condition summary	Proposed licence condition	Conversion notes
28	Maintenance of accurate and auditable books	19	Condition expanded to include specific types of books that must be maintained.
N/A	Books must be legible	20	Condition to specify books must be legible, retained, and available to be produced on request.
29	Investigate emissions that are not general emissions	N/A	Redundant condition, removed from licence.
30	Complaints	21	Minor wording changes
31	Annual Audit Compliance Report	22	Minor wording changes.
32	CEO request	N/A	Redundant condition removed from licence. Intent is covered by new condition 20.
Schedule 1	Premises maps	Schedule 1	No changes
Schedule 2	Design drawings	N/A	Removed as the relevant conditions have now been removed.
Schedule 3	Primary activities	N/A	Removed, relevant information now located on front page.

## Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 25 October 2019. Comments were received on 6 November 2019 relating to minor wording changes.