



**Licence Number** L7308/1998/13

**Licence Holder** A. Richards Pty Ltd (ACN 008 734 852)

**File Number:** 2010/008321

**Premises**

Richgro Garden Products  
203 Acourt Road  
JANDAKOT WA 6164

Part of Lot 186 on Plan 109038  
Certificate of Title Volume 1645 Folio 965  
Bound by the coordinates –

<b><u>Position No.</u></b>	<b><u>Latitude</u></b>	<b><u>Longitude</u></b>
A	32° 06' 12.07" S	115° 53' 59.81" E
B	32° 06' 15.66" S	115° 53' 56.27" E
C	32° 06' 14.98" S	115° 53' 55.29" E
D	32° 06' 17.19" S	115° 53' 51.21" E
E	32° 06' 17.99" S	115° 53' 54.52" E
F	32° 06' 25.10" S	115° 53' 48.82" E
G	32° 06' 15.78" S	115° 53' 32.81" E
H	32° 06' 03.71" S	115° 53' 43.14" E

**Date of Amendment** 18 September 2018

**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 Notice. This Amendment Notice constitutes written notice of the amendment in accordance with section 59B(9) of the EP Act.

Rebecca Kelly

MANAGER WASTE INDUSTRIES

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

## 1. Definitions

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

**Table 1: Definitions**

Term	Definition
AD	means Anaerobic Digestion
Amendment Notice	means an amendment granted under s.59 of the EP Act in accordance with the procedure set out in s.59B of the EP Act.
AS 5667.1	means the Australian Standard AS 5667.1: <i>Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples.</i>
AS 5667.11	means the Australian Standard AS 5667.11: <i>Water Quality – Sampling – Guidance on sampling of groundwaters.</i>
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 33 Cloisters Square PERTH WA 6850 <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
Condition	means a condition to which this Licence is subject under section 62 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.
Emission	has the same meaning given to that term under the EP Act.
EP Act	means the <i>Environmental Protection Act 1986</i> (WA).
Licence	refers to the document L7308/2018/1, which evidences the grant of a Licence by the CEO under s.57 of the EP Act, subject to the Conditions.
Licence Holder	refers to the occupier of the premises being the person to whom this Licence has been granted, as specified at the front of this Licence.
Quarterly	means the four inclusive periods from 1 January to 31 March, 1 April to 30 June, 1 July to 30 September, and 1 October to 31 December in each year.
Spot sample	means a discrete sample representative at the time and place at which the sample is taken

## 2. Amendment description

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* (February 2017)
- *Guidance Statement: Risk Assessment* (February 2017)
- *Guidance Statement: Environmental Siting* (November 2016)

In May 2018 the Licence Holder contacted DWER seeking clarification on the requirement to sample for isotopes in groundwater. Table 6 of condition 21 in the Licence required the Licence Holder to undertake sampling and analysis for Delta nitrogen 15 and Delta carbon 13 on a six monthly basis (in April and October each year).

This requirement had been included in conditions of the Licence as part of a whole-of-site review and risk assessment of all emissions and discharges from the Premises, and had been incorporated based on the risk assessment's identification of leachate emissions posing a high risk to public drinking water source areas. The associated risk assessment and licence conditions considered the Licence Holder's controls, information provided in Technical Expert Reports and further consultation with DWER's Principal Hydrogeologist. The aforementioned risk assessment and technical advice is included in DWER's Decision Report dated February 2018.

The main considerations and findings of the leachate emissions risk assessment, which are summarised below, remain valid and relevant to this Amendment Notice.

- The Premises is located within a Priority 2 Public Drinking Water Source Area (PDWSA) and up-gradient of a Priority 1 PDWSA and is up-gradient of a production bore.
- Groundwater has been identified at 3m below ground level and the soil profile at the Premises is considered to be readily permeable, providing a direct pathway to groundwater.
- Groundwater monitoring at the Premises to date indicates an increasing trend in ammonium and sulfate ions.
- Although the elevations of nutrients in groundwater is likely to be from natural occurring events through over-abstraction activities, the information available to date is insufficient to confirm this.
- Additional regulatory controls such as the installation of new groundwater monitoring bores and changes to the suit of analytes and frequency of monitoring rounds were included on the licence to assist in providing a more holistic and reliable set of groundwater data.
- Isotope monitoring was recommended by DWER's Principal Hydrogeologist to fingerprint whether groundwater is being impacted by composting activities or naturally occurring events.
- Based on the results of the monitoring data, regulatory controls may be reassessed and modified in accordance with any reassessment.

Through various correspondence with the Licence Holder and DWER's Principal Hydrogeologist, the Department initiated an amendment to Table 6 of condition 21 to modify the sampling requirements for isotopes as a means of assisting DWER to differentiate any impacts to groundwater from site operations or naturally occurring events.

The Delegated Officer considers that a new risk assessment for leachate emissions is not required as the considerations and findings in the licence review Decision Report are still applicable and support the proposed change in this Amendment Notice, and on the basis that the proposed changes are consistent with section 62(1) of the EP Act.

The Licence Holder was provided a copy of the proposed amendment on 15 June 2018 and comments were received on 20 July 2018. A full summary of the comments and DWER's response is provided in Appendix 2.

Following a review of the Licence Holder's comments, the Department undertook further investigation into isotopes sampling in consultation with the Department's Principal Hydrogeologist. The Delegated Officer understands that a laboratory which is equipped to undertake the required analysis of the isotopes has not been identified in proximity to Western Australia and that further site specific considerations are required to confirm the suitability of using this type of analysis at the Premises. As such, it does not appear to be feasible to undertake the isotope analysis at this time.

The decision to remove the requirement for isotope analysis has been weighed against the potential benefits other more available analysis may provide in furthering the understanding of leachate quality and potential sources. Manganese has been identified as a leachate quality indicator which is currently absence from the groundwater monitoring requirements on the licence and which may further the understanding of the leachate impacted groundwater plume and potential source/s. Manganese analysis is readily available in Perth laboratories and complements the existing groundwater monitoring suite.

A second draft was sent to the Licence Holder on 24 August 2018 to incorporate the updated technical expert advice, Licence Holder's comments on the first proposed draft, and additional amendments. No comments were received during the second consultation period.

### 3. Amendment history

Table 2 provides the licence history for L7308/1998/13 since 2014. The works approval history has not been included in this table.

**Table 2: Licence amendments**

Instrument	Issued	Amendment
L7308/1998/13	17/10/2014	Licence reissue
L7308/1998/13	29/04/2016	Department initiated licence amendment to extend licence duration.
L7308/1998/13	12/02/2018	Licence review including occupier initiated licence amendment to include AD plant onto licence.
L7308/1998/13	20/03/2018	Department initiated amendment to correct administrative errors and minor changes follow granting of licence reissue
L7308/1998/13	18/09/2018	Amendment Notice 1: Department initiated amendment to modify groundwater monitoring requirements

## 4. Decision

In consideration of the information provided by the Licence Holder and by the Department's Principal Hydrogeologist, the Delegated Officer has determined that until there are increased studies into the feasibility of using this type of monitoring at the Premises, and a suitable laboratory available to undertake this analysis, isotope monitoring should be removed from the Licence. The Delegated Officer also considers that manganese, given its use as a leachate indicator in groundwater, should be included on the licence in addition to the existing parameters in the monitoring suite.

Therefore, the Delegated Officer has determined that an amendment is to be made to remove the requirement to sample and analyse delta nitrogen 15 and delta carbon 15 from Table 6 of condition 21 in the Licence, and include the requirement to sample and analyse manganese.

## 5. Amendment

- Table 6 (condition 21) of the Licence is amended by the deletion of the text shown in strikethrough and the insertion of the red text shown in underline below:

Column 1 Parameter	Column 2 Location as shown on Site Plan	Column 3 Groundwater Action Criteria	Column 4 Frequency	Column 5 Sample	Column 6 Method
Standing water level <sup>1</sup>	MB1 to MB11	N/A	<i>Bores MB1, MB2, MB4, MB6, MB7 and MB11: Quarterly (January, April, July and October) for the first four sampling rounds and then bi-annually.</i>	In-field measurement	AS 5667.1 AS 5667.11
Temperature <sup>1</sup>					
Electrical conductivity <sup>1</sup>					
pH <sup>1</sup>					
Redox potential <sup>1</sup>					
Biological oxygen demand (BOD)		5 mg/L	<i>Bores MB3, MB5, MB8, MB9 and MB10: Following construction and installation of the requirements in condition 36, Quarterly (January, April, July and October), for the first four sampling rounds and then bi-annually.</i>	Spot Sample	
Chemical oxygen demand (COD)					
Total dissolved solids (TDS)		5 mg/L	N/A		
Nitrate + nitrite (as nitrogen)					
Ammonia nitrogen		5 mg/L	N/A		
Total nitrogen					
Total phosphorus		5 mg/L	N/A		
Total organic carbon					
Bicarbonate + Carbonate		5 mg/L	N/A		
Arsenic					
Calcium	5 mg/L	N/A			
Chloride					

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Parameter	Location as shown on Site Plan	Groundwater Action Criteria	Frequency	Sample	Method
Iron	MB1 to MB11	N/A	Bores MB1, MB2, MB4, MB6, MB7 and MB11: Quarterly (January, April, July and October) for the first four sampling rounds and then bi-annually.	In-field measurement	AS 5667.1 AS 5667.11
Magnesium					
Potassium					
Sodium					
Sulfate					
<u>Manganese</u>					
<del>Delta nitrogen 15</del>					
<del>Delta carbon 13</del>	<del>Six monthly (April and October) for the first two sampling rounds</del>				

## Appendix 1: Key documents

	Document title	Availability
1	Licence L7391/1998/13 – Richgro Garden Products	accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
2	DER, July 2015. <i>Guidance Statement: Regulatory Principles</i> . Department of Environment Regulation, Perth.	
3	DER, October 2015. <i>Guidance Statement: Setting Conditions</i> . Department of Environment Regulation, Perth.	
4	DER, November 2016. <i>Guidance Statement: Risk Assessments</i> . Department of Environment Regulation, Perth.	
5	DER, November 2016. <i>Guidance Statement: Decision Making</i> . Department of Environment Regulation, Perth.	

## Appendix 2: Summary of Licence Holder comments

The Licence Holder was provided with the draft Amendment Notice on 15 June 2018 for review and comment. The Licence Holder responded on 20 July 2018. A second draft was sent to the Licence Holder on 24 August 2018 with the comment period ceasing on 14 September 2018. No comments were received on the second draft. The following comments were received on the first draft Amendment Notice.

Condition	Summary of Licence Holder comment	DWER response
Condition 21 (Table 6) – groundwater monitoring	<p>An overview of the Licence Holder’s comments and rationale are provided below:</p> <ul style="list-style-type: none"> <li>• Additional clarification is sought on the parameters listed in column 1 of Table 6.</li> <li>• The Licence granted prior to 20 March 2018 only required spot sampling and analysis for a limited suite of parameters. The licence granted 20 March 2018 now requires infield and spot sampling and analysis for a larger suite of parameters, including isotopes delta nitrogen 15 and delta carbon 13. Amendment Notice 1 now also proposes sampling and analysis of delta oxygen 18.</li> <li>• The isotope parameters proposed in Amendment Notice 1 “are not relevant to groundwater monitoring parameters”.</li> <li>• There is no precedence in WA to use isotopes sampling as a ground water monitoring tool and additional research needs to be undertaken.</li> <li>• Richgro should not bear the sole cost of this sampling.</li> <li>• Isotopes sampling “can be used as a forensic analysis as to identify point source pollution events” but should not be used as an ongoing monitoring tool.</li> <li>• The academic reference provided to date by DWER for justification of this requirement is not relevant to Richgro operations.</li> <li>• The proposed isotopes have no connection to the elevated sulfate and ammonium ions identified in groundwater.</li> <li>• There are no laboratories within Australia able to analyse these isotopes which means samples are required to be sent overseas which has significant costs.</li> <li>• “The proposed amendment to table 6 represent little value to the DWER and Richgro.”</li> </ul>	<p>Given the Delegated Officer’s decision to remove isotope monitoring from the Licence, each of the key matters raised by the Licence Holder have not been specifically addressed as the responses no longer applicable to the Delegated Officer’s decision in this Amendment Notice.</p>