

Amendment Notice 1

Licence Number L4297/1983/17

Licence Holder Derby Industries Pty Ltd

ACN 009 033 612

File Number: DER2017/00961

Premises Talloman Rendering Facility

115 Lakes Road

HAZELMERE WA 6056

Legal description -

Lot 5000 on Plan 67434, Certificate of Title Folio 2785 Volume 277; Part of Lot 20 on Plan 73040, Certificate of Title Folio 2814 Volume 696; Part of Lot 116 on Plan 4553, Certificate of Title Folio 1243 Volume 89; Part of Lot 117 on Plan 4553, Certificate of Title Folio 1244 Volume 987; & Part of Lot 50 on Plan 7475, Certificate

of Title Folio 1810 Volume 68.

Date of Amendment 30 November 2017

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.

Date signed: 30 November 2017

Caron Goodbourn

A/Manager Licensing (Process Industries)

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

Licence: L4297/1983/17

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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.

Derby Industries Pty Ltd (the Licence Holder) a subsidiary of the Craig Mostyn Group of companies, have applied to amend the prescribed boundary of the Talloman Rendering Facility in Hazelmere. No other changes have been requested by the Licence Holder.

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: Land Use Planning (February 2017)
- Guidance Statement: Decision Making (November 2016)
- Guidance Statement: Risk Assessment (November 2016)
- Guidance Statement: Environmental Siting (November 2016)

Amendment description

The Licence Holder has applied to amend Licence 4297/1983/17 and reduce the extent of the premises boundary. Part of the land is in the process of being acquired for an extension to Lloyd Street, a major arterial road that lies between Abernethy Road and Great Eastern Highway, Hazelmere. The Lloyd Street extension will divide the premises in two and land to the west of the road extension will be sold as it will be separated from the rending plant and associated activities.

The landholdings that are to be sold were historically used to irrigate treated wastewater generated from the rendering operations. Wastewater has not been irrigated onsite since 2008 when the site was connected to Water Corporation mains sewer, and the former irrigation area is now surplus to site operational requirements. DWER notes that some of the land that formed part of the original premises boundary has also been redescribed. Table 1 below illustrates the land as described under the previous Licence, the lots that are proposed for sale and the parcels of land that will be retained within the premises boundary, some of which have recently been redescribed.

Table 1: Amendments to premises boundary

Properties previously included in premises boundary	Properties proposed for sale by Craig Mostyn Group	Properties forming new premises boundary
Lot 113 on Plan 4553	Part of Lot 50 on Plan 7475	Lot 5000 on Plan 67434
Lot 114 on Plan 4553	Part of Lot 117 on Plan 4553	Part of Lot 20 on Plan 73040
Lot 115 on Plan 4553	Lot 118 on Plan 4553	Part of Lot 116 on Plan 4553
Lot 116 on Plan 4553	Lot 119 on Plan 4553	Part of Lot 117 on Plan 4553
Lot 117 on Plan 4553		Part of Lot 50 on Plan 7475
Lot 118 on Plan 4553		
Lot 119 on Plan 4553		
Portion of Helena Location 20A		
Part of the land of Plan 7475		

Figure 1 below demonstrates the extent of the land holding that will form the new premises boundary (in pink) and the area of land that will be excised from the premises boundary through this amendment notice (shown in yellow).

Figure 1: Map showing the Talloman Rendering Facility premises boundary

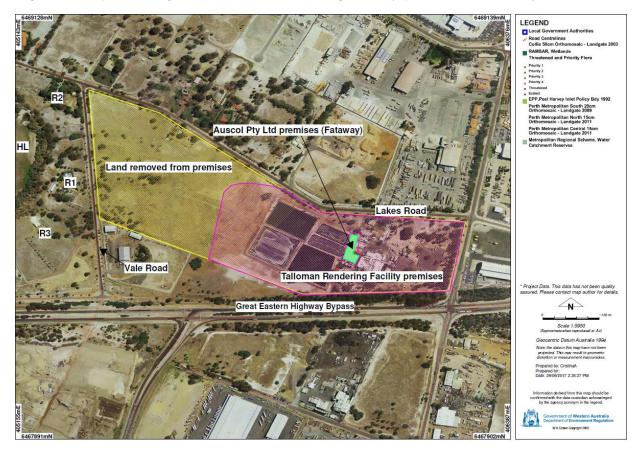


Figure 2 below shows that part of the former Talloman Rendering Facility premises boundary is covered by a primary regional road classification in accordance with the current Metropolitan Regional Scheme Map 16 (DoP, 2017).

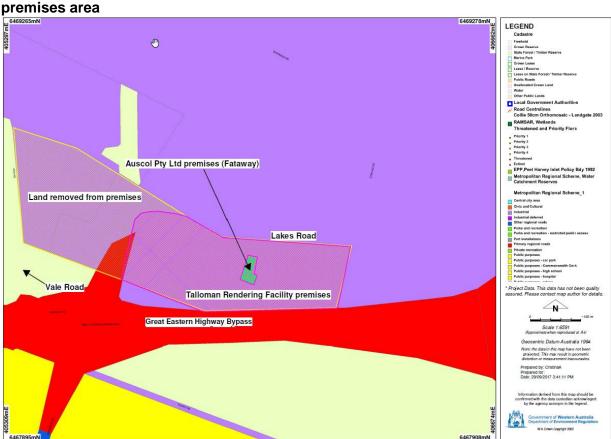


Figure 2: Extract from the Metropolitan Regional Scheme Map 16 over the prescribed

As part of this Amendment Notice DWER have reviewed the groundwater monitoring requirements in the Licence and removed monitoring locations that relate to impacts from the historical irrigation of wastewater. The amendment requires the Licence Holder to construct two new monitoring bores within the new premises boundary to detect leaks and seepage from the existing rendering plant infrastructure which still pose a risk to ambient groundwater quality.

The Delegated Officer's assessment of the application has had specific regard to:

- The presence of shallow groundwater in the area, and its role in providing base flow to the nearby Hazelmere Lakes;
- The role of the *Contaminated Sites Act 2003* in regulating the management and clean up of land and water that is suspected of being contaminated.

Contaminated sites classification

The premises has been used since the 1950's to render animal by-products since and each landholding that forms the historical premises is classified as "*Possibly contaminated – investigation required*" under the *Contaminated Site Act 2003* (CS Act). That is, the lands are subject to a memorial on the certificates of title which notifies any responsible authority not to approve the subdivision, amalgamation or development of the land without seeking advice and taking into account the suitability of the land for the proposed use. The memorial on the certificate of title will remain in place until further information is available and submitted to DWER to support the reclassification of the landholdings under the CS Act.

As the site has only been partially investigated, DWER is not able to make a comment on the

suitability of the land for particular uses at the time of this amendment. Providing the proposed future use of land sold use does not involve a change to a more sensitive use, such as residential use, the sale of land is not prevented from occurring. The new owner will become responsible for management of the contamination issues (such as remediation) as the prevailing classification is automatically transferred.

Consultation

The application was referred to the City of Swan for comment on 27 September 2017. A response was received on 18 October 2017 acknowledging the City of Swan Local Planning Scheme No.17 classification of the lots to be removed from the premises boundary as 'Restricted Use Zone 15' which restricts the use of the land to industrial purposes and restricts the sites ability to discharge wastewater to land. The City notes the properties to be removed from the premises boundary, include the lots acquired for the Lloyd Street extension are potentially contaminated.

Amendment history

Table 2 provides the amendment history for L4297/1983/17.

Table 2: Licence amendments

Instrument	Issued	Amendment
L4297/1983/16	08/08/2013	Licence amended to remove category 61: liquid waste facility. The Fataway business operated by Auscol Pty Ltd was Licensed separately under L8750/2013/1.
L4297/1983/17	25/09/2015	Licence reissued in REFIRE format and included an increase to category 16: rendering operations throughput to a total of 160,000 tonnes per annum. The frequency of biofilter process monitoring was reduced.
L4297/1983/17	DRAFT	Licence amended to alter the premises boundary and alter ambient groundwater monitoring program

Location and receptors

Table 3 below lists the relevant sensitive land uses in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

Table 3: Receptors and distance from activity boundary

Residential and sensitive premises	Distance from Prescribed Premises
Rural residential dwellings on Vale Road: (as shown in Figure 1 as R1, R2 and R3)	There are three rural dwelling on Vale Road Hazelmere between 360m to 460m from the premises boundary (as shown in Figure 1 as R1, R2 and R3).
Hazelmere urban residential area	715m NW
South Guildford urban residential area	1000m NE

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

Table 4: Environmental receptors and distance from activity boundary

Environmental receptors	Distance from Prescribed Premises
Environmentally sensitive area	Lot 5000, Lot 20 and Part of Lot 116 are covered by an Environmentally Sensitive Area due to the presence of priority vegetation within proximity of the premises.
Bush forever site # 481	70m south east of premises and it contains threatened and priority flora and fauna listing within the site.
Aboriginal site of significance #S02148	The Helena River Site covers part of the premises

It should be noted that the premises is located on Bassendean soils which are highly weathered and consist of large quartz particles which drain well and have low phosphorus retention Index. These soils are naturally low organic matter and have a limited ability to support the uptake nutrients from infiltration or seepage before entering the groundwater table.

Table 5: Groundwater and water sources

Groundwater and water sources	Distance from Premises	Environmental value
Geomorphic Wetlands, Swan Coastal Plain: • Hazelmere Lakes – Resource Enhancement wetlands (shown in Figure 1 as HL)	The Hazelmere Lakes (South and North) are situated 450m and 790m west of the new premises boundary,	The Hazelmere Lakes are resource enhancement wetlands and support remnant native vegetation and are important to local wildlife.
Helena River – conservation category	1km north east of the premises boundary	The Helena River has a conservation category classification. It supports diverse habitat and priority mammals have and also has high cultural and aesthetic value.
Rights in Water and Irrigation Act 1914: • Perth Groundwater Area	No current depth to groundwater data exists for the site however historical data indicates the upper extent of superficial aquifer is between 0.5-3 mbgl across the site.	The superficial aquifer within the local area flows towards the Hazelmere Lakes. Contamination from the premises has been detected in monitoring bores off site. Groundwater within the area is used for the irrigation of public open spaces, industrial domestic purposes.

Risk assessment

Tables 5 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 5: Risk assessment for proposed amendments during operation

			sk Event	y ,					
Source	Activities	Potential emissions	Potential receptors	Potential		Consequence Likelihoo d rating		Risk	Reasoning
Cat 16 Rendering operations	Irrigation of treated waste water to land	Wastewater: from rendering operations. Wastewater high in TDS, BOD, nutrients, oil, grease, trace metals and pesticides	Hazelmere Lakes The superficial groundwater aquifer which is 6-30mbgl Downstream bore water users, including rural residential dwellings		ated to land cease and groundwater		e to adverse i	mpacts on	Groundwater contaminant levels for nitrogen, total Kjeldahl nitrogen, nitrate nitrogen, total phosophorus, orthophosphorous are above the ANZECC Guideline Trigger value for wetlands in the south west of Australia (ANZECC, 2000). Irrigation of wastewater ceased during 2008 and there is a trend of declining contaminant levels since this time. Residual contamination issues to be addressed through the Contaminated Sites Act 2000. No further assessment
	Seepage of wastewater through waste water treatment ponds. and the processing plant area		adjacent to irrigation area	Groundwater : Seepage, infiltration and migration of contaminants through HDPE liner, pipework and surface runoff to soil, groundwater and Hazelmere Lakes	Decline in environmental value of Hazelmere Lakes, including ecosystem function, structure and processes. Decline in beneficial use of bore water	Moderate	Possible	Medium	There is no change existing risk profile. Two new bore are proposed to monitor impacts from seepage or discharges to groundwater from existing infrastructure. Refer to the detailed risk assessment in the decision section below.

Decision

Irrigation of wastewater ceased on the premises in 2008 and there are no point source emissions to land or groundwater associated with the current operation of the premises.

This amendment will remove land containing a number historical groundwater monitoring locations from the premises boundary. The Delegated officer has determined that as the site has not irrigated waste water for nearly nine years, monitoring and management of residual site contamination is suitable for ongoing management under the CS Act.

The Delegated Officer determined over the life of the wastewater treatment ponds, the integrity of high density polyethylene (HDPE) pond liner has the potential to become compromised and to leak contaminated wastewater to ground. Of particular concern are the covered anaerobic lagoons which receive untreated wastewater from the cooking process. Seepage may also occur from other parts of the processing plant area such as leaks from infrastructure and from stormwater flow from hardcourt areas overland to soil. Based on the Assessment and Management of Contaminated Sites, contaminants of potential concern for animal processing industries are nutrients, heavy metals, biological oxygen demand (BOD), total suspended soilds(TSS), organochlorine pesticides, oil and grease (DER, 2014).

The Bassendean Sands on which the premises is situated are well draining and have a very low nutrient adsorption capacity. The standing water as inferred from the contours in the Perth Groundwater Atlas (DoE, 2004) is between 1-4mbgl across the site and historical groundwater monitoring indicates that standing water levels seasonally lie between 0.5-3mbgl (URS, 2013).

Groundwater in the area has a beneficial use to rural residential and nearby commercial properties for irrigation purposes. The groundwater beneath the premises also has an ecological beneficial use as it forms base flow into the Hazelmere Lakes. These lakes situated between 450 and 790m of the new premises boundary, have a resource enhancement category with a management objective is to "restore and enhance the functions and attributes of the wetlands" (Hill *et al*, 1996).

Ambient groundwater monitoring indicates that while contaminant levels have reduced since irrigation has ceased, in some bores the levels have tested above the ANZECC Guideline Trigger value for wetlands in the south west of Australia (ANZECC, 2000) for nitrogen, total Kjeldahl nitrogen, nitrate nitrogen, total phosophorus and orthophosphorous during 2017. As such, ambient groundwater poses a risk to the Hazlemere Lakes as inflow has the potential to alter the lake environment to it determent or degradation.

As the superficial aquifer is relatively shallow beneath the premises, any and contamination that seeps through containment infrastructure is likely to enter the groundwater directly due to the short distance to groundwater. The high nutrient levels in the ambient groundwater will also favour an anaerobic soil environment, which will have the effect of mobilising metals and other contaminants.

The Delegated Officer has considered the consequence of contamination of groundwater from the existing rendering operations will likely result in low level offsite impacts on a local scale and considers that seepage from existing operations to be **moderate**. Due to the age of infrastructure at the site, the depth to groundwater and the porous nature of the soil, the Delegated Officer Considers likelihood of the seepage occurring at some time to be **possible**. The overall risk rating of contaminated seepage impacting on groundwater has been determined to be **medium** and suitable for regulatory control and two new monitoring bores are required to be constructed downstream from the rendering plant. Monitoring from the previous monitoring bores outside the premises boundary will no longer be required.

Condition 1.3.6 requires the bores to be located in areas between the direction of the inferred groundwater flow and the Hazelmere Lakes so that early detection of contamination can be detected (URS, 2013) as shown in Schedule 1. This condition also requires established bore

construction methodologies, quality assurance and reporting practices to be undertaken to ensure the data obtained from them is scientifically defensible.

Condition 3.3.1 is replaced with the previous Condition 3.3.1 to require an analysis of all contaminants of concern that have been identified for rendering operations (DER, 2014).

Condition 5.2.2 provides an update to reporting requirements for the new conditions.

Previous reporting Condition 5.2.3 has been amended to apply to odour monitoring only and a new condition 5.2.4 has been created and applies to ambient groundwater monitoring only.

The Delegated Officer requires the Licence Holder to assess the results against assessment criteria and to provide an interpretive summary of results. Groundwater contour mapping, contaminant trend analysis, groundwater flow, raw data and a description of monitoring methods is also required.

An update to the definitions section of the Licence is also included.

The Delegated Officer has concluded that the amendment should be granted subject to the conditions contained in this amendment.

Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 8 November 2017. No comments where received from the Licence Holder during the 21 day comment period.

Amendment

1. Definitions of the Licence is amended by the insertion of the text shown below:

'AS1726' means the Australian Standard AS1762 Geotechnical site investigations, as amended from time to time;

'ASTM D5092/D5092M-16' means the ASTM International Standard for Standard practice for design and installation of groundwater monitoring wells, as amended from time to time;

- 2. The Licence is amended by the insertion of the following Condition 1.3.6:
 - 1.3.6 The Licensee is to undertake the installation of groundwater monitoring bores in accordance with the requirements of Column 1 of Table 1.3.3, in accordance with the construction requirements listed in column 2 of Table 1.3.3, and within the timeframe specified in column 3 of Table 1.3.3.

Table 1.3.3: Infrastructure construction requirements

	Column 1	Column 2	Column 3
	Infrastructure	Requirements (Design and Construction)	Timeframe
1	Construction of two groundwater monitoring bores NMB1 and NMB2 at the locations depicted in Schedule 1: Map of Groundwater Monitoring Locations	Constructed according to: ASTM D5092/D5092M-16; Well construction details shall be documented to demonstrate compliance with ASTM D5092/D5092M-16; and Logged as per AS1726 for the unified classification system for soils Top of casing elevations surveyed to millimeter accuracy	Must be constructed and operational within three months from the date of this licence being amended. The results from the construction activity shall be reported in accordance with the requirements of this Licence and ASTM D5092/D5092M-16 within 60 calendar days of the bore being constructed.

- 3. Condition 3.3.1 from the Licence is replaced by Condition 3.3.1 as shown below:
 - 3.3.1 The Licensee must undertake groundwater monitoring:
 - (a) for the parameters specified in Column 1 of Table 3.3.1;
 - (b) at the locations specified in Column 2 of Table 3.3.1;
 - (c) at the frequency specified in Column 4 of Table 3.3.1;
 - (d) using the methods specified in Column 5 and Column 6 of Table 3.3.1.

Table 3.3.1: Ambient groundwater monitoring table

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Location	Parameter	Units	Averaging period	Quarterly Frequency	Method
4/91, TMB2, TMB3, TMB4 and new	Standing water level ^{1,2}	m(AHD) and m(BGL)			
monitoring	pH ¹	pH units μS / cm			
bores NMB and NMB2	Electrical conductivity ¹				
and Mivib2	Redox ¹				
As depicted in Schedule	Biological oxygen demand (BOD)				
1: Map of Groundwater	Total dissolved solids (TDS)	-	Spot sample	Quarterly (at least forty five days apart)	AS/NZS 5667.11
Monitoring	Nitrate + nitrite (as nitrogen)				
Locations	Ammonia nitrogen				
	Total nitrogen				
	Total phosphorus	mg/L			
	Major ions: sodium, potassium, calcium, magnesium, chloride, sulphate, bicarbonate Metals and metalloids: arsenic, barium, beryllium, boron, cadmium, chromium, cobalt, copper, lead, manganese, mercury, nickel, selenium, vanadium and zinc Pesticides ³				

Note 1: In-field non-NATA accredited analysis permitted.

Note 2: During each monitoring event, depth to groundwater gauges to millimeter accuracy

Note 3: Organochlorine pesticide suite

- 4. Condition 5.2.2 of the Licence is amended by the insertion of the red text shown in underline below:
 - 5.2.2 The Licensee shall submit the information in Table 5.2.2 to the CEO according to the specifications in that table.

Condition or table (if relevant)	Parameter	Reporting period	Reporting date (after end of the reporting period)	Format or form ¹
-	Copies of original monitoring reports submitted to the Licensee by third parties	Not Applicable	Within 14 days of the CEOs request	As received by the Licensee from third parties
1.3.6	Monitoring well construction report	Not Applicable	Within 60 calendar days of bore construction	In accordance with the condition 1.3.6 ²
NA	Submit an updated aerial map showing monitoring bore locations.	Not Applicable	Within 60 calendar days of construction of	Aerial map
<u>NA</u>	Submit geocoordinates of groundwater monitoring wells 4/91, TMB2, TMB3, TMB4, NMB5 and NMB6	Not Applicable	bores as required by condition 1.3.6	Eastings; Northings
3.2.1	Results of quarterly monitoring for the main biofilter surface	Quarterly	28 calendar days	Not specified
	Results of six monthly monitoring for the WWTP biofilter surface	Six monthly		
	Results of quarterly monitoring for the main odour control equipment	Quarterly	28 calendar days	One graphical chart per one month for each per parameter
	Results of continuous monitoring for the main odour control equipment	Quarterly		por parameter
	Results of six monthly monitoring for the WWTP odour control equipment	Six monthly		
Table 3.3.1	Results of groundwater monitoring	Six monthly	28 calendar days	None specified ³
5.1.4	Complaints summary	Six monthly	28 calendar days	None specified

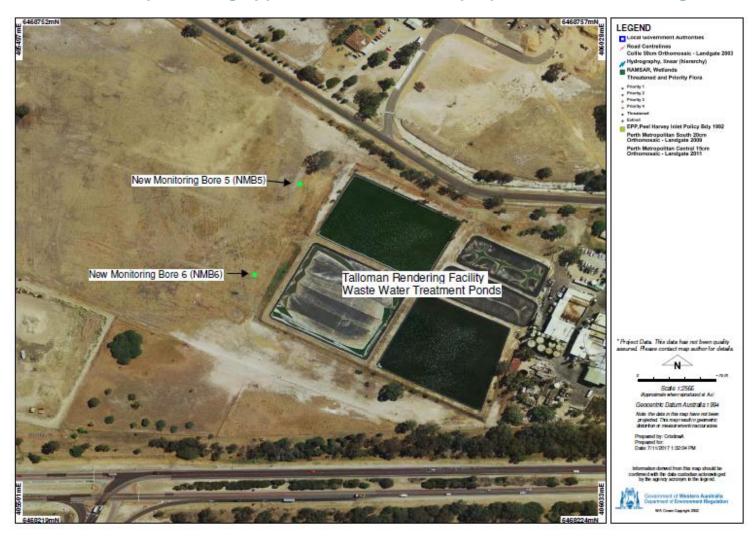
Note 1: Forms are in Schedule 2

Reporting requirements are specified in ASTM D5092/D5092M Section 14.5 of Schedule 2B of the National Environment Note 2: Note 3: (Assessment of Site Contamination) Protection Measure 1999

may be used as a guide for the presentation of data (NEPC, 1999).

- 5. Condition 5.2.3 of the Licence is amended by the deletion of the text shown in strikethrough below and the insertion of the red text shown in underline below:
 - 5.2.3 The Licensee shall ensure that the quarterly and six monthly reports also contains reporting of any quarterly and six monthly monitoring required by Condition 3.2.1, includes:
 - (a) any relevant process, production or operational data recorded under Condition 3.1.3;
 - (b) pan assessment of the information contained within the report against previous monitoring results and Licence limits and/or targets;
 - (c) a layout with the sampling and measurement locations;
 - (d) Depth to groundwater reported on a site plan with contoured groundwater elevations and inferred groundwater flow direction and
 - (e) a description of any monitoring methods used to collect and analyse data required to demonstrate that the methods used comply with the methods specified in this licence.
- 6. The Licence is amended by the insertion of the following Condition 5.2.4:
 - 5.2.4 The Licensee shall ensure that the reporting¹ of any quarterly and six monthly monitoring required by Condition 3.3.1 includes:
 - (f) a tabulated summary of results as well as all raw data provided in an excel document:
 - (g) an interpretive summary and comparison of all results against relevant assessment levels for water as published in the Guideline: Assessment and management of contaminated sites (DER, 2014);
 - (h) an interpretive summary and assessment of results against previous monitoring results;
 - (i) trend graphs to support the interpretive summary;
 - (j) depth to groundwater reported on a site plan with contoured groundwater elevations and inferred groundwater flow direction; and
 - (k) a description of any monitoring methods used to collect and analyse data required to demonstrate that the methods used comply with the methods specified in this licence.

Schedule 1- Map showing approximate location of proposed new monitoring bores



Appendix 1: Key documents

	Document title	In text ref	Availability
1	Licence L4297/1983/17	L4297/1983/17	accessed at www.dwer.wa.gov.au
2	Licence Amendment Application Supporting Document: Talloman Rendering Facility Lakes Road, Hazelmere	MDW Environmental, 2017	DWER records: A1501550; A1501552 and A1501555
3	Water Register	(DWER, 2017)	Accessed: https://maps.water.wa.gov.au/#/webmap/register
4	Metropolitan Regional Scheme Map 16, Department of Planning, Lands and Heritage	DoP, 2017	Accessed at: https://www.planning.wa.gov.au/do p_pub_pdf/MRS_Map16_25000_P erth_Airport.pdf
5	Australia and New Zealand Guidelines for Fresh and Marine Water Quality: The Guidelines, October 2000	ANZECC, 2000	Accessed: http://www.agriculture.gov.au/SiteC ollectionDocuments/water/nwqms- guidelines-4-vol1.pdf
6	Hill, A., Semeniuk, C. & V., Del Marco, A., 1996, Wetlands of the Swan Coastal Plain, Volumes 2A and 2B, Wetland Mapping, Classification and Evaluation, Water and Rivers Commission and Department of Environmental Protection, Perth, Western Australia.	Hill et al, 1996	
7	National Environment Protection (Assessment of Site Contamination) Measure 1999, National Environment Protection Council, 1999.	NEPC, 1999	accessed at www.epa.wa.gov.au/
8	Perth Groundwater Atlas, Second Edition, Department of Environment (2004)	DoE, 2004	
9	Report: Talloman Rendering Plant Water Pollution Control July to December 2012 (URS, 2013)	URS, 2013.	DWER record: A607209
10	Designation 5092/D5092M – 16 Standard Practice for Design and Installation of Groundwater Monitoring Wells	D5092/D6092 M – 16	accessed at www.astm.org/

11	Contaminated sites guideline: Assessment and management of	DER, 2014	
	contaminated sites. Department of Environment Regulation, 2014.	, -	
11	DER, July 2015. Guidance Statement: Regulatory principles. Department of Environment Regulation, Perth.	DER 2015a	accessed at www.dwer.wa.gov.au
12	DER, October 2015. Guidance Statement: Setting conditions. Department of Environment Regulation, Perth.	DER 2015b	
13	DER, August 2016. Guidance Statement: Licence duration. Department of Environment Regulation, Perth.	DER 2016a	
14	DER, November 2016. Guidance Statement: Risk Assessments. Department of Environment Regulation, Perth.	DER 2016b	
15	DER, November 2016. Guidance Statement: Decision Making. Department of Environment Regulation, Perth.	DER 2016c	