Government of Western Australia
Department of Water and Environmental Regulation

Licence

Environmental Protection Act 1986, Part V

Licensee: City of Busselton

Licence: L9167/2018/1

Registered office: 2 Southern Drive
BUSSELTON WA 6280

Premises address: Vidler Rd putrescibles landfill site
Lot 8 on Diagram 66799
Western Cape Drive
NATURALISTE WA 6281
as depicted in Schedule 1

Issue date: 2 November 2018

Expiry date: 1 November 2030

Prescribed Premises Category
Schedule 1 of the Environmental Protection Regulations 1987

Category number	Category description	Category production or design capacity	Premises production or design capacity
61	Liquid waste facility: premises on which liquid waste produced on other premises (other than sewerage waste) is stored, reprocessed, treated or irrigated.	100 tonnes or more per year	Up to 6 000 tonnes per year
62	Solid waste depot: premises on which waste is stored, or sorted, pending final disposal or re-use.	500 tonnes or more per year	10,000 tonnes per annual period
64	Class II or III putrescible landfill site: premises on which waste (as determined by reference to the waste type set out in the document entitled "Landfill Waste Classification and Waste Definitions 1996" published by the Chief Executive Officer, as amended from time to time) is accepted for burial.	20 tonnes or more per year	Up to 35 000 tonnes per year

Conditions of Licence
This licence is subject to the conditions set out in the attached pages.

Stephen Checker

Digitally signed by Stephen Checker
Date: 2018.11.02 12:28:21 +08'00'

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Stephen Checker
Manager - Waste Industries
Officer delegated under Section 20
of the *Environmental Protection Act 1986*

Contents

Introduction

This Introduction is not part of the Licence conditions.

DWER's industry licensing role
The Department of Water and Environment Regulation (DWER) is a government department for the state of Western Australia in the portfolio of the Minister for Environment. DWER's purpose is to advise on and implement strategies for a healthy environment on behalf of all current and future Western Australians.

DWER has responsibilities under Part V of the *Environmental Protection Act 1986*(the Act) for the licensing of prescribed premises. Through this process DWER regulates to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DWER also monitor and audit compliance with works approvals and licence conditions, take enforcement action as appropriate and develop and implement licensing and industry regulation policy.

Licence requirements
This licence is issued under Part V of the Act. Conditions contained with the licence relate to the prevention, reduction or control of emissions and discharges to the environment and to the monitoring and reporting of them.

Where other statutory instruments impose obligations on the Premises/Licensee the intention is not to replicate them in the licence conditions. You should therefore ensure that you are aware of all your statutory obligations under the Act and any other statutory instrument. Legislation can be accessed through the State Law Publisher website using the following link:
http://www.slp.wa.gov.au/legislation/statutes.nsf/default.html

For your Premises relevant statutory instruments include but are not limited to obligations under the:

- *Environmental Protection (Unauthorised Discharges) Regulations 2004* – these Regulations make it an offence to discharge certain materials such as contaminated stormwater into the environment other than in the circumstances set out in the Regulations.

- *Environmental Protection (Controlled Waste) Regulations 2004* - these Regulations place obligations on you if you produce, accept, transport or dispose of controlled waste.

- *Environmental Protection (Noise) Regulations 1997* – these Regulations require noise emissions from the Premises to comply with the assigned noise levels set out in the Regulations.

You must comply with your licence. Non-compliance with your licence is an offence and strict penalties exist for those who do not comply.

Proponents are also reminded of the requirements of section 53 of the Act which places restrictions on making certain changes to prescribed premises unless the changes are in accordance with a works approval, licence, closure notice or environmental protection notice.

Licence fees

If you have a licence that is issued for more than one year, you are required to pay an annual licence fee prior to the anniversary date of issue of your licence. Non payment of annual licence fees will result in your licence ceasing to have effect meaning that it will no longer be valid and you will need to apply for a new licence for your Premises. Operating without a licence is an offence under the Act.

Ministerial conditions

If your Premises has been assessed under Part IV of the Act you may have had conditions imposed by the Minister for the Environment. You are required to comply with any conditions imposed by the Minister.

Premises description and Licence summary

The City of Busselton's, Dunsborough Waste Management Facility is located west of the Whicher Scarp, in the locality of Naturaliste, approximately 260 km south-west of Perth in Vidler Rd, Busselton. The site was used as a sand pit since the 1970s prior to becoming the Shire's primary disposal site in 2002. In 2010 leachate leaking from the southern end of the landfill was detected and the site was classified under the Contaminated Sites Act as "Potentially contaminated – investigation required". In February 2011, the Shire engaged an environmental consultant to commence the required investigation. All previous and existing disposal areas on the site are unlined and remain uncapped.

The premise accepts the majority of municipal waste and liquid waste (low strength wastewater) generated within the City of Busselton. The predicted life of the landfill at the current throughput of 35,000 tonnes per year is 10 – 15 years.

There is an area set aside at the front of the premises in which the general public can drop off recyclable materials, prior to proceeding to the tipping area. Collected materials include green waste, cardboard, paper, scrap steel, plastics, glass, batteries, used tyres, used motor oil and other hydrocarbons, and used chemical containers.

Green waste is stockpiled and mulched every six months. The hydrocarbon facility is emptied upon request by Wren Oil (approx. three times per year), and all other recyclables are transported off-site to dedicated recycling facilities when sufficient quantities have been collected.

The proposed works associated with this licence amendment are as follows:

- Excavation and preparation of subgrade within the Cell 2 Landfill area;
- Installation of geocomposite liner including GCL and HDPE barrier layers and cushion geotextile protection layer; including anchor trench tie in with Cell 1 liner within the same area; and
- Construction of Cell 2 High Level Access Road as depicted in Schedule 1.

Potential emissions from the operation of this site are odour and fugitive emissions and leachate.

The licences and works approvals issued for the Premises since 20/06/2000 are:

Instrument log		
Instrument	**Issued**	**Description**
L7122/1997/3	20/06/2000	Licence Reissue
L7122/1997/4	05/06/2011	Licence Reissue
L7122/1997/5	04/06/2002	Licence Reissue
L7122/1997/6	09/06/2003	Licence Reissue
L7122/1997/7	08/06/2004	Licence Reissue
L7122/1997/8	20/06/2005	Licence Reissue
L7122/1997/9	08/06/2008	Licence Reissue
L7122/1997/10	08/06/2011	Licence Reissue
L7122/1997/11	08/06/2012	Licence Reissue
W5337/2012/1	25/02/2013	Works Approval- construction of new liquid waste ponds
L7122/1997/12	30/05/2013	Licence Reissue
L7122/1997/12	07/10/2013	Licence Amendment
W5621/2014/1	30/04/2015	Works Approval – construction of new Cell1 and leachate pond.
L7122/1997/12	25/02/2016	Licence Amendment to increase the Category 61 production and design capacity
L7122/1997/12	29/04/2016	Amendment Notice 1 to extend expiry date to 7 June 2030
L7122/1997/12	15/12/2016	Licence amendment – proponent initiated- for the addition of Cell 2 works and capping plan requirements. Category 62 added to authorise the existing solid waste facility.
L7122/1997/12	8/08/2017	Amendment Notice 2 to authorise hazardous waste acceptance and removal of limit on clean fill acceptance.
L7122/1997/12	2/05/2018	Amendment Notice 3 to extend the timeframe for waste disposal into the unlined cell until 30 April 2019.
L7122/1997/12	June 2018	This licence ceased to have effect
L9167/2018/1	2/11/2018	Replacement Licence granted

Severance

It is the intent of these Licence conditions that they shall operate so that, if a condition or a part of a condition is beyond the power of this Licence to impose, or is otherwise *ultra vires* or invalid, that condition or part of a condition shall be severed and the remainder of these conditions shall nevertheless be valid to the extent that they are within the power of this Licence to impose and are not otherwise *ultra vires* or invalid.

END OF INTRODUCTION

Licence conditions

1 General

1.1 Interpretation

1.1.2 In the Licence, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.3 For the purposes of this Licence, unless the contrary intention appears:

'AACR' means Annual Audit Compliance Report, the template of which can be found on the DWER's website www.dwer.wa.gov.au

'Act' means the *Environmental Protection Act 1986;*

'AHD' means the Australian height datum;

'annual period' means the inclusive period from 1 January until 31 December in the same year;

'APHA-AWWA-WEF' means American Public Health Association (APHA), the American Water Works Association (AWWA) and the Water Environment Federation (WEF);

'Asbestos Waste' means waste as defined in the *Environmental Protection (Controlled Waste) Regulations 2004*;

'AS/NZS 4439' means the most recent version and the relevant parts of the Australian and New Zealand series of guidance standards on Sampling and Analysis of Wastewaters, Soils and Wastes;

'AS/NZS 5667.1' means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples;*

'AS/NZS 5667.10' means the Australian Standard AS/NZS 5667.10 *Water Quality – Sampling – Guidance on sampling of waste waters;*

'AS/NZS 5667.11' means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on sampling of groundwaters;*

'averaging period' means the time over which a limit or target is measured or a monitoring result is obtained;

'Cell 2 Works' means:

- Excavation and preparation of subgrade within the Cell 2 Landfill area as defined in Schedule 1;
- Installation of GCL barrier/attenuation layer within the Cell 2 landfill area;
- Installation of HDPE barrier membrane layer within the Cell 2 landfill area;
- Design and installation of cushion geotextile protection layer within the Cell 2 landfill area;
- Design and installation of Cell 2 liner anchor trench;
- Design and installation of tie in with Cell 1 liner within the Cell 2 landfill area; and
- Construction of Cell 2 High Level Access Road as depicted in Schedule 1.

'CBR' means California Bearing Ratio;

'CEO' means Chief Executive Officer of the Department of Water and Environmental Regulation*;*

'CEO' for the purpose of correspondence means;

Chief Executive Officer
Department of Water and Environmental Regulation
Locked Bag 33
CLOISTERS SQUARE WA 6850
Email: info@dwer.wa.gov.au

'clean fill' means material that will have no harmful effects on the environment and which consists of rock or soil arising from the excavation of undisturbed material. For material not from a clean excavation, it must be validated to have contaminants below relevant ecological investigation levels (as defined in the document *Assessment Levels for Soil, Sediment and Water, Department of Environment, 2003*);

'Compliance Report' means a report in a format approved by the CEO as presented by the Licensee or as specified by the CEO from time to time and published on the Department's website.

'contaminant threshold' means the threshold listed in the DER document titled 'Landfill Waste Classification and Waste Definitions' 1996 (as amended December 2009);

'cover material' means subsoil or other inert waste used for covering of waste;

'CQA' means construction quality assurance;

'Fire Control Officer' means a person who holds current and recognised qualifications in firefighting and fire control and that person is appointed to the position of Fire Control Officer by the licensee;

'**freeboard'** means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point;

'GCL' means Geosynthetic Clay Liner;

'Hazardous waste' means the waste stream as defined in the DWER document titled 'Landfill Waste Classification and Waste Definitions' 1996 (as amended December 2009).

'HDPE' means High Density Polyethylene;

'hardstand' means a surface with a permeability of 10^{-9} metres/second or less;

***'Landfill Waste Classification and Waste Definitions 1996* (As amended December 2009)'** means the DER document of that name published by the Director General, Department of Environment Regulation on 17 December 2009 pursuant to items 63, 64 65 and 66 in Schedule 1, Part 1 of the *Environmental Protection Regulations 1987*;

'leachate' means a liquid containing contaminants leached from the waste mass produced as water percolates through a landfill;

'Licence' means this Licence numbered L9167/2018/1 and issued under the Act for the replacement of previously ceased licence L7122/1997/12 (including all amendments)*;*

'Licensee' means the person or organisation named as Licensee on page 1 of the Licence;

'NATA' means the National Association of Testing Authorities, Australia;

'NATA accredited' means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;

'Premises' means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Licence;

'putrescible waste' means the organic component of the waste stream which can be decomposed by microbial action and become putrid and likely to cause obnoxious odours and attract (scavenging) birds or animals; putrescible waste includes food wastes or wastes of animal or vegetable origin;

'six monthly' means the 2 inclusive periods from 1 January to 30 June and 1 July to 31 December;

'Special Waste Type 1' and **'Special Waste Type 2'** means waste as defined in the document titled 'Landfill Waste Classification and Waste Definitions' 1996 (As amended December 2009);

'Standard Methods for Examination of Water and Wastewater' means the most recent edition of the "Standard Methods for Examination of Water and Wastewater" as published by the American Public Health Association (APHA), the American Water Works Association (AWWA) and the Water Environment Federation (WEF), generally abbreviated to APHA-AWWA-WEF;

'SWL' or **'standing water level'** means the water level of any surface water or in any piezometer measured prior to sampling and expressed in metres AHD;

'Type 1 Inert Waste' and **'Type 2 Inert Waste'** means waste as defined in the DER document titled 'Landfill Waste Classification and Waste Definitions' 1996 (as amended December 2009); and

'unsuitable material' has the same meaning as defined in the Australian Standard AS 3798, *Guidelines on earthworks for commercial and residential developments*

'waste' has the meaning defined in the Act.

1.1.4 Any reference to an Australian or other standard in the Licence means the relevant parts of the current version of that standard.

1.1.5 Any reference to a guideline or code of practice in the Licence means the current version of the guideline or code of practice.

1.2 General conditions

1.2.1 The Licensee shall manage stormwater on the site to ensure that:

(a) it does not pond on the surface of the landfill;
(b) it is diverted away from those portions of the premises which are or have been used for waste deposition; and
(c) stormwater that is or has been in contact with waste is diverted into a sump on the site or otherwise retained on the site.

1.2.2 The Licensee must ensure that the proposed Cell 2 works specified in Column 1 of Table 1.2.2 are undertaken in accordance with Schedule 1: Cell 2 Works Map, Schedule 3:

Landfill liner details; and meet or exceed the specifications in Column 2 for the infrastructure in each row of Table 1.2.2.

1.2.3 The Licensee must not depart from the specifications in Table 1.2.2 except:

(a) where such departure is minor in nature and does not materially change or affect the infrastructure; or

(b) where such departure improves the functionality of the infrastructure and does not increase risks to public health, public amenity or the environment; and

(c) All other Conditions in this Licence are still satisfied.

Table 1.2.2: Works specifications

Column 1 Infrastructure[1]	Column 2 Specifications (design and construction)
1. Subgrade	The Licensee must design, excavate and construct Cell 2 subgrade to achieve the following: (i) Surface level at least 2 m above the highest seasonal groundwater level. (ii) Grades as depicted Schedule 1, Cell 2 works map and Schedule 3 Landfill liner details; (iii) Proof rolled with minimum 12 tonne roller using a minimum of six passes over the entire prepared surface; (iv) Removal of unsuitable material[2]; and (v) free from any sharp objects, stones, debris, water and desiccation cracks; and (vi) Excavations and low points filled to design levels with material meeting the following parameters on placement: a) Moisture content on placement between 3% dry and 2% wet of optimum moisture content under standard compaction b) A minimum standard compaction of 95%
2. GCL	The Cell 2 GCL must be designed and constructed to meet the following specifications: (i) Overlying; and in contact with subgrade; (ii) Comprised of woven and non-woven textiles and powdered bentonite clay; and (iii) Material properties meeting 'minimum values' as defined in Table 1.2.3.
3. HDPE	The Cell 2 HDPE membrane must be designed and constructed to meet the following specifications: (i) Overlying; and in contact with GCL; (iv) Manufacturer specified thickness of 2mm; (v) Textured on one side and installed with the textured surface in contact with GCL. (vi) Material properties meeting 'minimum values' as defined in Table 1.2.4.
4. Protection Geotextile	The Cell 2 protection geotextile must be designed and constructed to meet the following specifications: (i) Overlying; and in contact with HDPE; (ii) Non-woven and needle punched. (iii) Material properties meeting 'minimum values' as defined in Table 1.2.5.
5. Anchor trench and tie in with Cell 1 liner.	The Cell 2 anchor trench must be designed and constructed to meet the following specifications: (i) Depth of at least 750mm; (ii) Situated at least 1.5m back from the top of Cell 2 landfill batters; (iii) Backfilled with material meeting the following parameters on placement: a) Moisture content on placement between 3% dry and 2% wet of optimum moisture content under standard compaction b) A minimum standard compaction of 95%

Table 1.2.2: Works specifications		
Column 1 Infrastructure[1]		Column 2 Specifications (design and construction)
6.	Tie in with Cell 1 liner.	The Cell 2 tie in with must be designed and constructed to meet the following specifications: (i) The areas to be joined shall be clean and free of foreign matter; (ii) The joints shall be thermally bonded and continuous along the full join length; and (iii) bonding method must not pose any risks of damage to the underlying geomembrane

Note 1: The construction of Cell 2 High Level Access Road as depicted in Schedule 1 is authorised under this licence but is not subject to further specifications or regulatory controls.
Note 2: The suitability of material is defined in the Australian Standard AS 3798, Guidelines on earthworks for commercial and residential development.

1.2.4 If any departures outlined in Condition 1.2.2 apply, then the Licensee must provide the CEO with a list of departures which are certified as complying with Condition 1.2.2 at the same time as the certifications under Condition 1.2.7.

1.2.5 The Licensee must submit a construction compliance document to the CEO, for Column 1, Item 1 of Table 1.2.2 within one month following the completion of subgrade works for Cell 2.

1.2.6 The Licensee must ensure the construction compliance document:

(a) is certified by a suitably qualified professional engineer that each specification for Item 1 column 2 in Table 1.2.2 has been constructed in accordance with the Conditions of the Licence and any documentation submitted under condition 1.2.4;
(b) contains as constructed survey reporting actual subgrade levels against planned levels (Schedule 1 Cell 2 works map); and
(c) Is signed by a person authorised to represent the Licensee and contains the printed name and position of that person within the company.

1.2.7 The Licensee shall undertake quality assurance including visual inspection and materials testing for GCL membrane in accordance with Table 1.2.3.

Table 1.2.3 GCL CQA Item	Property	Standards	Frequency	Minimum Value
Conformance testing following shipment to site	Mass per unit area of bentonite component	ASTM D5993	4000m^2	3,700g/m^2
	Montmorillonite content	X-ray diffraction method	10,000m^2	70%
	Mass of GCL	ASTM D5993	4000m^2	4000g/m^2
	Moisture content	ASTM D5993	4000m^2	35% maximum (no minimum)
	Tensile strength	ASTM D6768	20,000m^2	4kN/m
	Swell index	ASTM D5890	20,000m^2	24 ml/2g
	Peel strength	ASTM D6496	4000m^2	360 N/m
	Index flux	ASTM D5887	10,000m^2	1 x 10^{-8}

Table 1.2.3 GCL CQA Item	Property	Standards	Frequency	Minimum Value
	Mass/unit length of bentonite in overlaps	On site visual inspection and weighing	1 per 5 panel overlap	0.4kg/linear metre
	Permeability	ASTM D5887	25,000m^2	5 x 10^{-11}
Visual inspection	Tears, punctures, abrasions, cracks, Indentations and thin spots		Every roll	N/A

1.2.8 The Licensee shall undertake quality assurance including visual inspection, materials testing and weld testing for HDPE membrane in accordance with Table 1.2.4.

Table 1.2.4 HDPE CQA Item	Property	Standards	Frequency	Minimum Value
Conformance testing upon shipment to site	Thickness	ASTM D5199	One sample per 10,000 m2	1.9mm
	Density	ASTM D1505 ASTM D792		0.94g/cm^3
	Tensile properties: Break Strength Break elongation	ASTM D6693		21 kN/m 100%
	Puncture resistance	ASTM D4833		534 N
	Tear resistance	ASTM D1004		249 N
	Carbon black content	ASTM D1603		2-3 %
	Stress crack resistance	ASTM D5397	As per GRI Guide GM10	500hr
	Oxidative induction time	ASTM D3895 or ASTM D5885	90,000 kg 90,000 kg	100 min 400 min
	Oven ageing and oxidative induction Time	ASTM D5721, ASTM D3895 or ASTM D5885	Per formulation	55% at 85^{o}C 80% at 85 ^{o}C
Start-up test weld	Welding equipment		Start of works daily and whenever the welding equipment is shut-off for more than 3 hours. Also after significant changes in weather conditions	
	Weld conditions		Test weld strips will be required whenever personnel or equipment are changed and/or wide	

Table 1.2.4 HDPE CQA Item	Property	Standards	Frequency	Minimum Value
			temperature fluctuations are experienced. Minimum 1.5 m continuous seam	
Destructive weld testing	Onsite, hand tensiometer in peel and shear	ASTM D6392	1 test per 150m of weld (minimum)	Peel: 450 N/25mm Shear: 690 N/25mm
Non-destructive weld testing	Air pressure test	ASTM D5820	All seams over full length	Observed, validated and recorded by the consultant
	Vacuum box test	ASTM D5641		Presence/absence of bubbles
Visual inspection	Tears, punctures, abrasions, cracks, Indentations and thin spots		Every roll	N/A

1.2.9 The Licensee shall undertake quality assurance including visual inspection and materials testing for geotextile cushion layer in accordance with Table 1.2.5.

Table 1.2.5 Cushion CQA Item	Property	Standards	Frequency	Minimum Value
Non-woven needle punched geotextile	Mass per unit area	ASTM D5261	Minimum average roll value using frequency as prescribed in each standard.	500g/m2
	Trapezoidal tear shear strength	AS 3706.3		1000N
	Puncture strength (CBR)	AS 3706.4		6.8kN
	Grab tensile strength	AS 2001.2.3		2.8kN
	UV[1] Resistance	ASTM D4355 or AS3706.11		45%

Note 1: UV resistance test results for the geotextile shall be based on manufacturer batch results and results shall be less than 12 months old.

1.2.10 All laboratory tests must be performed in a NATA accredited geosynthetics laboratory.

1.2.11 The Proponent shall submit a CQA Report to the CEO within 30 days following the completion of Cell 2 works.

1.2.12 The report required by condition 1.2.11 shall:
(a) Document the quality of the completed Cell 2 works;
(b) Demonstrate that all requirements of the Cell 2 works specifications and quality assurance provisions in Tables 1.2.3, 1.2.4 and 1.2.5 have been complied with;
(c) Assess test results against minimum values in Tables 1.2.3, 1.2.4 and 1.2.5;
(d) Document all repairs to subgrade and resulting from non-destructive weld testing; and
(e) Be certified by a suitably qualified engineer.

1.2.13 No later than 3 months prior to the completion of waste disposal in each cell, the Licensee shall submit a capping plan to the CEO including detailed design, material specifications, gas collection, landfill gas management methods informed by a landfill gas risk assessment, current and finished surveyed levels and construction quality assurance planning.

1.2.14 No later than 30 January 2017, the Licensee shall submit a plan and details of the area/areas and infrastructure where solid waste is stored, or sorted, pending final disposal, re-use or removal offsite relating to the Category 62 solid waste depot. The information provided shall include but not be limited to:

(a) Infrastructure details including material properties, hard standing and bunding;
(b) Stormwater management including flow paths and discharge/collection point;
(c) Current and intended processes for the area/areas such as waste type, volumes, storage and/or sorting.

1.3 Premises operation

1.3.1 The Licensee shall ensure that prior to placement of each lift of waste; at least 300mm of drainage sand is placed atop the liner cushion geotextile.

1.3.2 The Licensee shall only accept waste on to the Premises if:
(a) It is of a waste type listed in Table 1.3.1; and
(b) The quantity of the waste type accepted is below any quantity limit listed in Table 1.3.1; and
(c) The waste type meets any specification listed in Table 1.3.1; and
(d) In the case of Contaminated Solid Waste, is supported by documentation that demonstrates compliance with the Acceptance Criteria for Class II landfills.

Table 1.3.1: Waste acceptance

Waste type	Quantity limit tonnes/ year	Specification[1]
Clean Fill	30,000	Non specified
Inert Waste Type 1	45,000 (combined total)	None specified.
Inert Waste Type 2		No more than 100 tyres to be stored onsite.
Special Waste Type 1		Cement bonded asbestos. No friable asbestos shall be accepted.
Hazardous waste		Paint, Waste Oil, Gas Cylinders, Small quantities of household chemicals (< 20 ltrs or kg), DrumMuster products, fire extinguishers, emergency beacons, batteries and electronic waste.
Contaminated Solid Waste		Must meet the Acceptance Criteria for Class II landfills, as specified in the Landfill Definitions.
Putrescible Waste		
Liquid Waste	6,000	a) putrescible and organic wastes (categories K210 and K110); and b) low strength wastewater (category N140).

Note 1: Additional requirements for the acceptance of controlled waste (including asbestos and tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

1.3.3 The Licensee shall ensure that where waste does not meet the waste acceptance criteria set out in condition 1.3.2 it is removed from the Premises by the delivery vehicle or, where that is not possible, stored in a quarantined storage area or container and removed to an appropriately authorised facility as soon as practicable.

1.3.4 The licensee shall maintain an accurate and up-to-date record of all contaminated waste accepted for burial at the premises, which includes the following information:

(a) the time and date the waste was received;
(b) the type of contaminated solid waste;
(c) the nature of the contaminated solid waste;
(d) the quantity of the contaminated solid waste;
(e) the source of the contaminated solid waste;
(f) the delivery vehicle's registration number; and
(g) the driver of the delivery vehicle's name.

1.3.5 The Licensee shall ensure that wastes accepted onto the Premises are only subjected to the processes set out in Table 1.3.2 and in accordance with any process limits described in that Table.

Table 1.3.2: Waste processing

Waste type(s)	Process	Process limits [1,2]
All	Disposal of waste by landfilling	(a) Shall only take place within the landfill areas shown on the active landfill area (green line) as depicted in Schedule 1. (b) Ensuring that at no time does landfilling result in an exposed tipping face exceeding two (2) metres in vertical height. (c) The Licensee shall ensure that waste disposal in the 'existing unlined landfill area' as defined in Schedule1; ceases no later than 30 April 2019. (d) All waste types are assessed in accordance with the '*Landfill Waste Classification and Waste Definitions 1996 (as amended December 2009)*'.
Clean Fill	Receipt, handling and disposal by landfilling	
Contaminated Solid Waste		
Inert Waste Type 1		(e) Crushing and screening of Inert Waste Type 1 is not permitted.
Inert Waste Type 2	Receipt, handling, storage prior to disposal or removal offsite	(f) Must be sorted and stored on an appropriately sized pad graded to drain stormwater away from waste.
Putrescible Waste		(g) Only to be stored and sorted on a hard standing area bunded to prevent run-off; (h) Shall not be stored on the site for longer than 24 hours; (i) Green waste shall not be burned.
Special Waste Type 1 (Asbestos Waste)	Receipt, handling and disposal by landfilling	(j) Only to be disposed of into a designated asbestos disposal area within the landfill; (k) No works shall be carried out on the landfill that could lead to a release of asbestos fibres. (l) accept only Asbestos Waste and Material containing asbestos which is sealed in double-lined or double-bagged, heavy duty plastic sheeting of at least 0.2 millimetres thickness; (m) accept only wrapped or otherwise contained Asbestos or Material containing asbestos, which is labeled or marked with the words "CAUTION – ASBESTOS" in letters not less than fifty (50) millimetres high; (n) record as grid references on a premises plan all locations used for the disposal of Asbestos or Material containing asbestos and keep this plan as a permanent record; (o) keep a permanent register of each load of Asbestos or Material containing asbestos deposited at the premises, including the date, the name of person that deposited the Asbestos or Material containing asbestos and the vehicle registration number;

Table 1.3.2: Waste processing		
Waste type(s)	**Process**	**Process limits [1,2]**
		(p) witness the covering of Asbestos or Material containing asbestos and sign the register referred to in Item (g) of this table, within two (2) hours of the covering taking place; (q) not deposit any Asbestos or Material containing asbestos within two (2) metres of the final tipping surface of the landfill; (r) operate the landfill such that any existing Asbestos or Material containing asbestos deposited on the premises remains undisturbed; and (s) make all records available for viewing by an Inspector upon request.
Hazardous waste	Receipt, handling and disposal by reuse, recycling or burial.	(t) To be collected in bunded pallets and enclosed containers; (u) All hazardous liquid wastes or chemicals to be removed by a licenced contractor and disposed of to an appropriate facility on a monthly basis; (v) Stored within enclosed, bunded low permeability hardstand areas.
Liquid Waste	Receipt, handling and disposal by evaporation	(w) Maintain minimum freeboard of five-hundred (500) millimetres; (x) minimum depth of anaerobic treatment ponds of three (3) metres; (y) trapped overflows shall be maintained on the discharge from the ponds to prevent carry over of surface floating matter to subsequent ponds;

Note 1: Requirements for landfilling tyres are set out in Part 6 of the *Environmental Protection Regulations1987*.
Note 2: Additional requirements for the acceptance and landfilling of controlled waste (including asbestos and tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

1.3.6 The Licensee shall ensure that waste material is only stored and/or treated within vessels or compounds provided within the infrastructure detailed in Table 1.3.3.

Table 1.3.3: Containment Infrastructure		
Reference and location on Site map	**Material**	**Infrastructure requirements**
Liquid Waste treatment ponds and drying bed	Biological waste and low strength wastewater	(a) Minimum design freeboard of five-hundred (500) millimetres; (b) store all removed sludge on a drying bed which is adequately bunded to prevent surface runoff of leachate and returns leachate from the drying bed back into the septage ponds or (c) dispose of all removed sludge to a licensed landfill or composting site capable of accepting that material.
Leachate Pond	Landfill leachate from active and/or closed cells	(d) Composite lining system to achieve a permeability of less than $1x10^{-9}$ metres per second or equivalent; and (e) Designed to contain leachate and stormwater produced as a result of a 1:100 year storm event. (f) Designed to maintain a freeboard of no less than 500mm

1.3.7 The Licensee shall manage the landfilling activities to ensure:
(a) waste is levelled and compacted as soon as practicable after it is discharged; and
(b) waste is placed and compacted to ensure all faces are stable and capable of retaining rehabilitation material.

1.3.8 The Licensee shall ensure that cover is applied and maintained on landfilled wastes in accordance with Table 1.3.4 and that sufficient stockpiles of cover are maintained on site at all times.

Table 1.3.4: Cover requirements

Waste Type	Material	Depth	Timescales
Special Waste Type 1	Type 1 Inert waste or soil	300 mm (1000mm for final cover)	(a) As soon as practicable after deposit and prior to compaction.
		1 000 mm	(b) By the end of the working day in which the asbestos waste was disposed.
Inert Waste Type 2			(c) By the end of the working day in which the waste was deposited. (d) Plastic with the potential to become windblown shall be covered as soon as practicable after deposit.
Putrescible Waste		150 mm (1000mm for final cover)	(e) By the end of the working day in which the waste was deposited.
Inert Waste Type 1	No cover required		

1.3.9 The licensee shall maintain a chain-link fence of at least eighteen-hundred (1,800) millimetres high around the whole of the perimeter of the premises, except where there is a lockable gate that prevents access to the premises by persons not employed by the licensee.

1.3.10 The licensee shall ensure that any entrance to the premises is securely locked when the premises are unattended.

1.3.11 The licensee shall maintain a sign at the entrance to the premises which clearly displays the following:

(a) contact telephone number for information and complaints or notification of fires;
(b) a list of materials that are accepted;
(c) the types of waste that must not be deposited on the premises and a contact telephone number for alternative disposal options; and
(d) a warning, indicating the penalties for people lighting fires.

1.3.12 The licensee shall take all practicable measures to prevent and remove the accumulation of windblown waste from fences, gates and roads at the premises.

1.3.13 The licensee shall ensure that no waste, including litter, is discharged beyond the premises boundary.

1.3.14 The licensee shall not burn, or allow the burning of, any waste on the premises.

1.3.15 The licensee shall ensure that there are appropriate procedures in place at the premises so that any unauthorised fire is promptly extinguished.

2 Monitoring

2.1 General monitoring

2.1.1 The licensee shall ensure that:

(a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;
(b) all wastewater samples are collected in accordance with AS/NZS 5667.10;
(c) all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and
(d) all laboratory samples are submitted to a laboratory with current NATA accreditation for the parameters to be measured [unless indicated otherwise in relevant table].

2.1.2 The Licensee shall ensure that:

(a) six monthly monitoring is undertaken at least 5 months apart; and
(b) annual monitoring is undertaken at least 9 months apart.

2.2 Ambient environmental quality monitoring

2.2.1 The Licensee shall undertake the monitoring specified in Table 2.2.1.

Table 2.2.1: Ambient groundwater quality monitoring

Column 1	Column 2	Column 3	Column 4
Monitoring site	**Frequency**	**Parameter[2]**	**Units**
Boreholes A, B, C, D, E, F, G, and H.	Biannually (April – May, September – October)	Ammonia-Nitrogen (NH3-N); COD (Chemical Oxygen Demand); Nitrate-Nitrogen (NO3-N); Nitrite-Nitrogen (NO2-N); Phosphorus (total); Nitrogen (total); TDS (Total Dissolved Solids); TOC (Total Organic Carbon); <u>Major cations and anions:</u> Calcium; Magnesium; Potassium; Sodium; Chloride; Bicarbonate; and Sulphate. <u>Metals:</u> Aluminium; Arsenic; Cadmium; Chromium; Copper; Iron (total); Lead; Manganese; Mercury; Nickel; Selenium; and Zinc.	mg/L

Table 2.2.1: Ambient groundwater quality monitoring			
Column 1	**Column 2**	**Column 3**	**Column 4**
Monitoring site	**Frequency**	**Parameter[2]**	**Units**
		pH[1]	pH units
		Electrical Conductivity[1]	µS/cm
		Standing Water Level[1]	m AHD
		Eh (redox potential)[1]	mV
		Dissolved Oxygen (DO)[1]	mg/L
	Annually (April – May)	Organics: Benzene; Ethyl benzene; Toluene; Xylenes; Total Petroleum Hydrocarbons (TPH); Organochlorines; Organophosphates; Phenols; Polycyclic Aromatic Hydrocarbons (PAHs); Polychlorinated Biphenyls (PCBs)	mg/L

Note 1: infield measurement
Note 2: Standing water level (in metres AHD) shall be determined prior to collecting groundwater samples.

3 Information

3.1 Records

3.1.1 All information and records required by the Licence shall:
- (a) be legible;
- (b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
- (c) except for records listed in 3.1.1(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and
- (d) for those following records, be retained until the expiry of the Licence and any subsequent licence:
  - (i) off-site environmental effects; or
  - (ii) matters which affect the condition of the land or waters.

3.1.2 The Licensee must submit to the CEO within 90 days after the annual period, an Annual Compliance Report indicating the extent to which the Licensee has complied with the Conditions in the this Licence for the Annual Period.

3.1.3 The Licensee shall implement a complaints management system that as a minimum records the number and details of complaints received concerning the environmental impact of the activities undertaken at the Premises and any action taken in response to the complaint.

3.2 Reporting

3.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 90 calendar days after of the end of the annual period. The report shall contain the information listed in Table 3.2.1 in the format or form specified in that table.

Table 3.2.1: Annual Environmental Report		
Condition or table (if relevant)	**Parameter**	**Format or form**
1.3.2	Summary of inputs and outputs data	None specified
1.3.14 1.3.15	The number and severity of any fires onsite	None specified
1.3.13	The effectiveness of measures taken to control windblown waste on the premises.	None specified
-	Any proposed changes to premises boundaries, active disposal areas, internal buffer zones, location of groundwater monitoring bores, surface drainage channels and on-site or off-site impacts or pollution.	
2.2.1	An assessment and analysis of groundwater monitoring results against previous monitoring results; and	
Table 2.2.1	Ambient groundwater monitoring	None specified
3.1.2	Compliance	Annual Audit Compliance Report (AACR). A template is available on DWER website.
3.1.3	Complaints summary	None specified

3.3 Notification

3.3.1 The Licensee shall ensure that the parameters listed in Table 3.3.1 are notified to the CEO in accordance with the notification requirements of the table.

Table 3.3.1: Notification requirements			
Condition or table (if relevant)	**Parameter**	**Notification requirement[1]**	**Format or form[1]**
	Prior to taking a septage pond off-line for maintenance	At least 14 days prior to removal of the sludge	None specified
	After becoming aware of a fire at the premises	Within 14 days of becoming aware of the fire the licensee shall submit a report outlining: (a) the date and time that the fire was first discovered; (b) the date and time that the fire was extinguished; (c) the location of the fire; (d) the time the fire was declared safe by the Fire Control Officer for the premises; (e) confirmation of attendance of any emergency services personnel; (f) any known or suspected damage to the landfill or landfill infrastructure as a result of the fire; (g) actions undertaken by the licensee to replace or repair any damage to the landfill or landfill infrastructure; and (h) actions undertaken by the licensee to prevent another fire occurring at the premises from the same known or suspected cause.	None specified

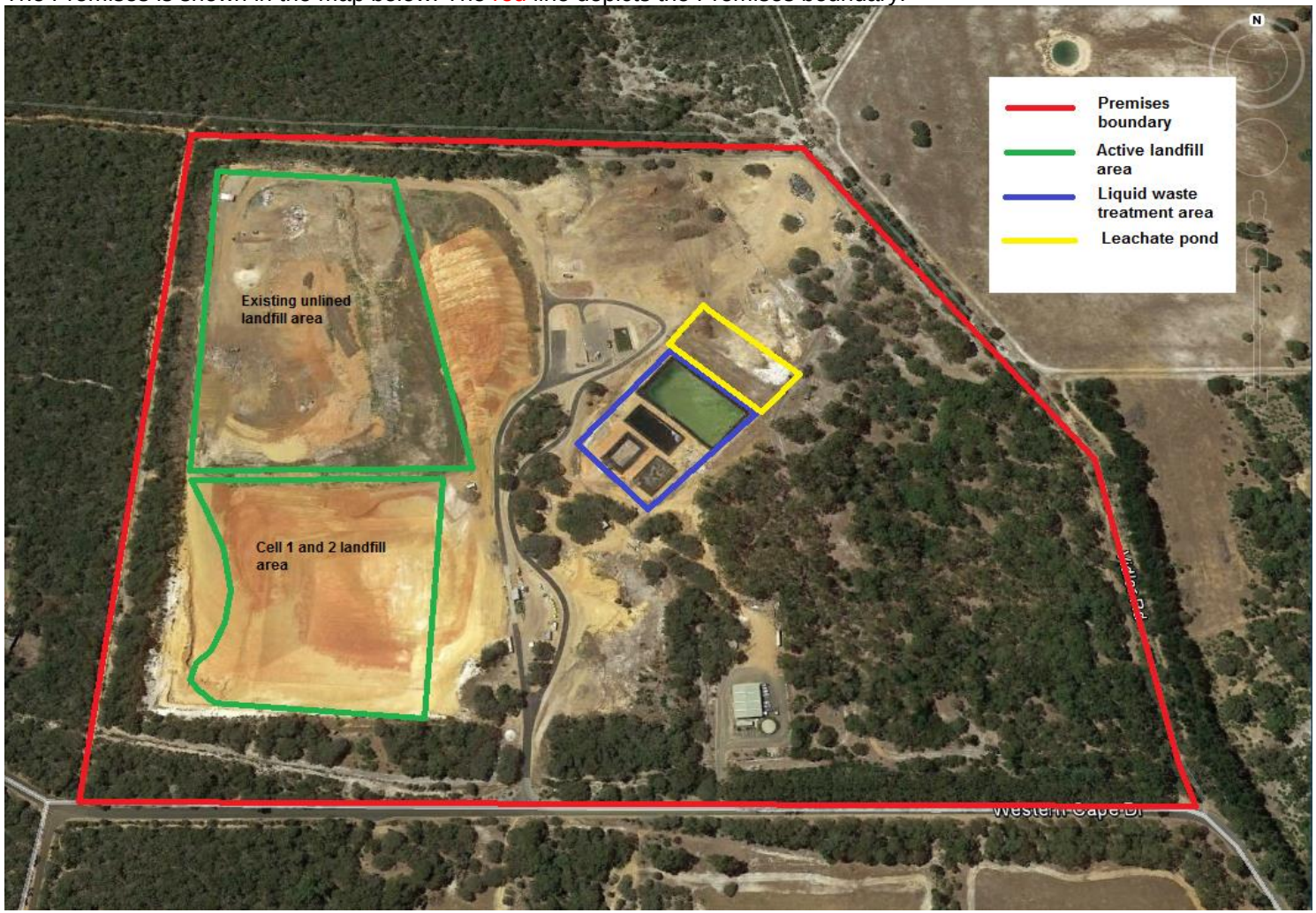
1.3.5 1.3.6	Breach of any limit specified in the Licence.	Part A: As soon as practicable but no later than 5 pm of the next usual working day. Part B: As soon as practicable.	N1

Note 1: Forms are in Schedule 2

Schedule 1: Maps

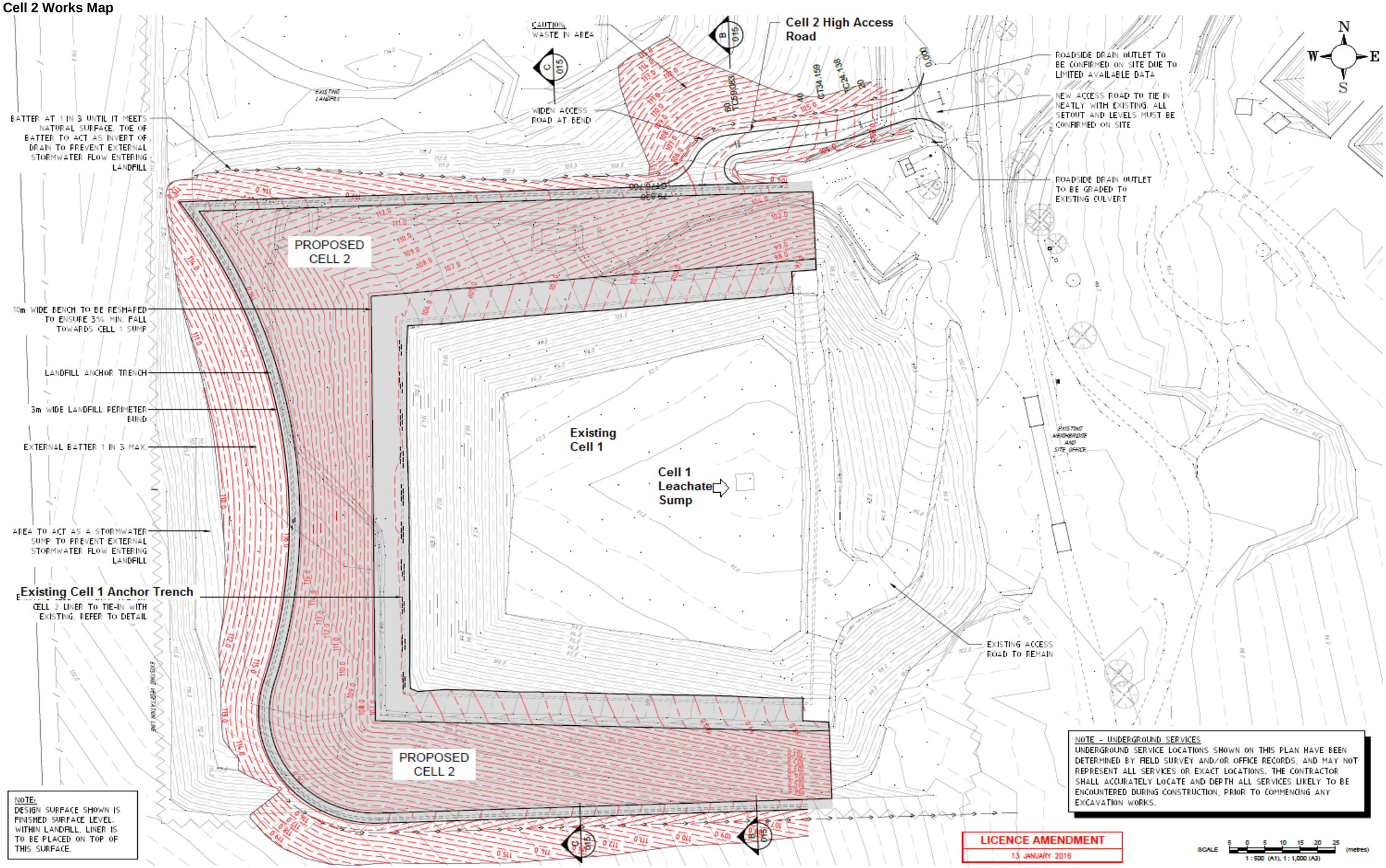
Premises map

The Premises is shown in the map below. The red line depicts the Premises boundary.

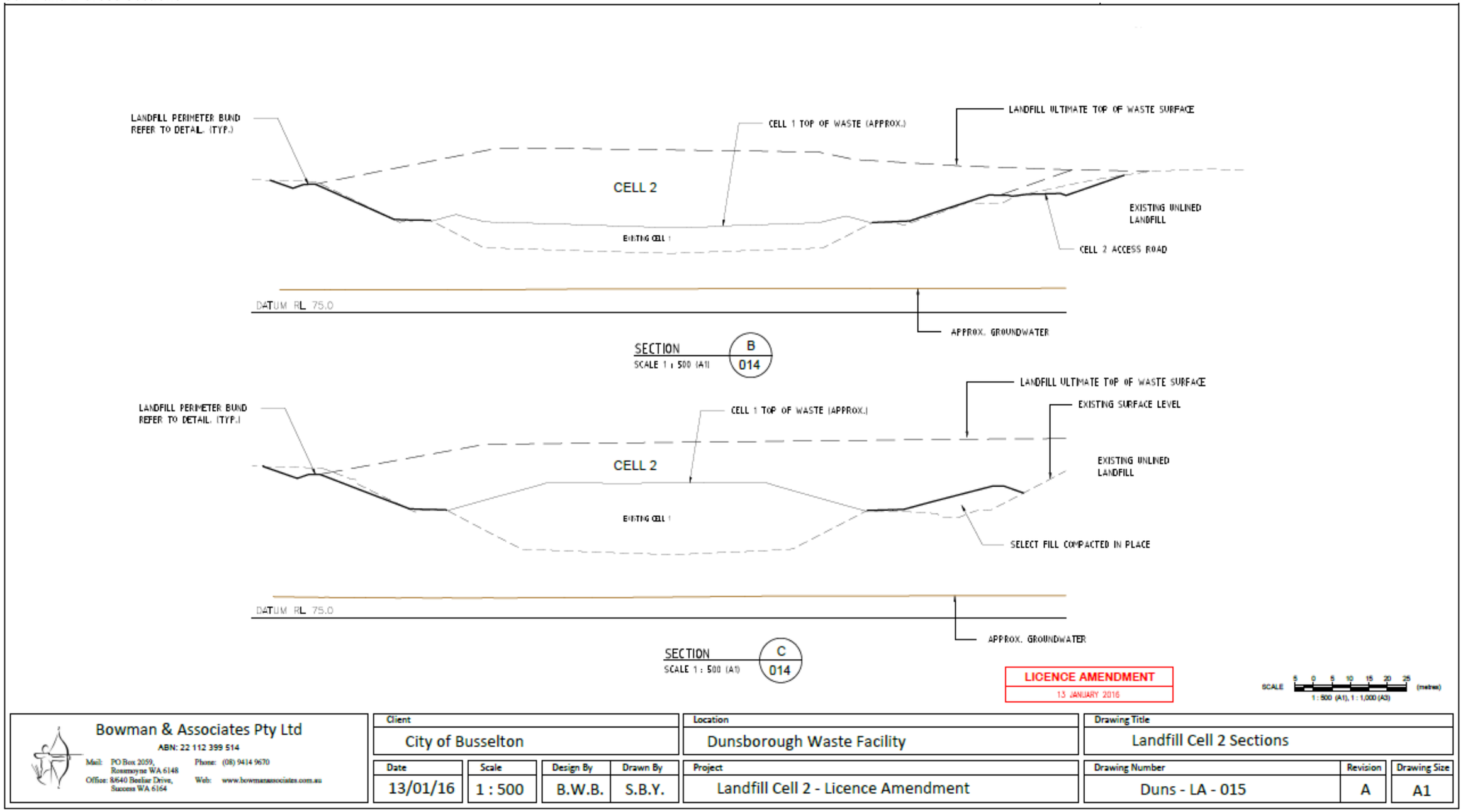


Map of groundwater monitoring points

Cell 2 Works Map



Cell 1 and 2 Cross Sections



Bowman & Associates Pty Ltd ABN: 22 112 399 514 Mail: PO Box 2059, Rossmoyne WA 6148 Office: 8/640 Beeliar Drive, Success WA 6164 Phone: (08) 9414 9670 Web: www.bowmanassociates.com.au	Client: City of Busselton	Location: Dunsborough Waste Facility	Drawing Title: Landfill Cell 2 Sections				
	Date: 13/01/16	Scale: 1 : 500	Design By: B.W.B.	Drawn By: S.B.Y.	Project: Landfill Cell 2 - Licence Amendment	Drawing Number: Duns - LA - 015	Revision: A	Drawing Size: A1

Schedule 2: Notification

Licence: L9167/2018/1 Licensee: City of Busselton
Form: N1 Date of breach:

Notification of detection of the breach of a limit

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission.

Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

Part A

Licence Number	
Name of operator	
Location of Premises	
Time and date of the detection	

Notification requirements for the breach of a limit	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

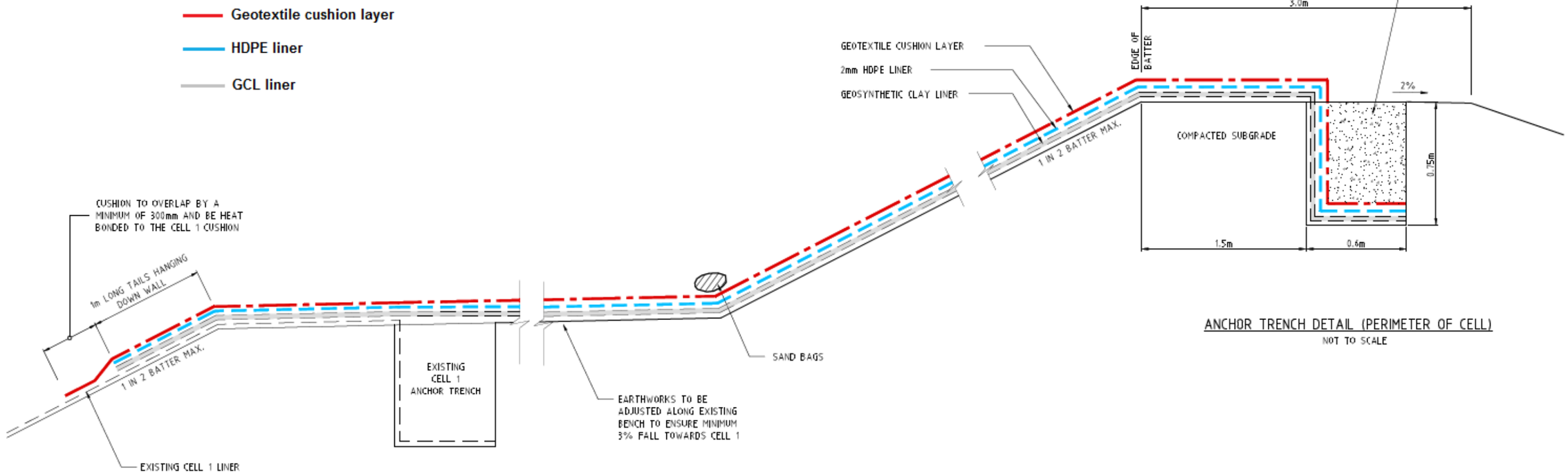
Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	

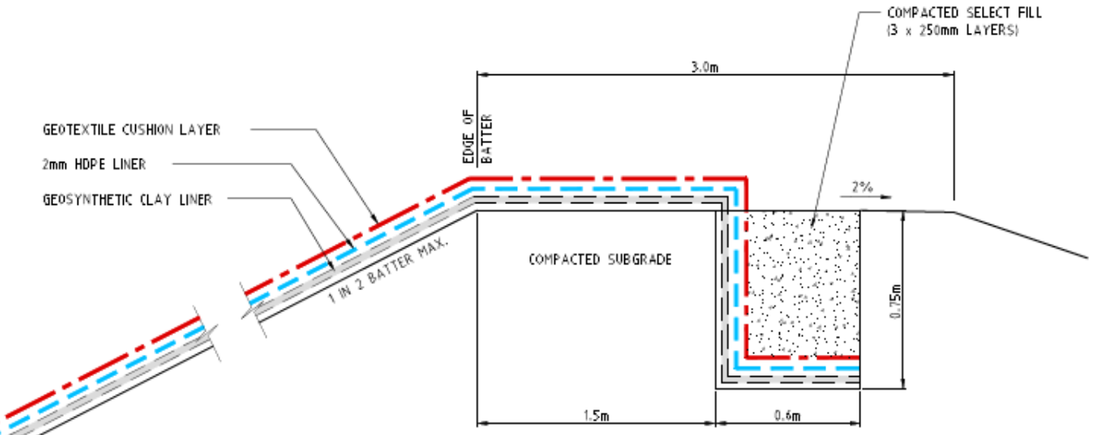
The dates of any previous N1 notifications for the Premises in the preceding 24 months.	

Name*	
Post	
Signature on behalf of City of Busselton	
Date	

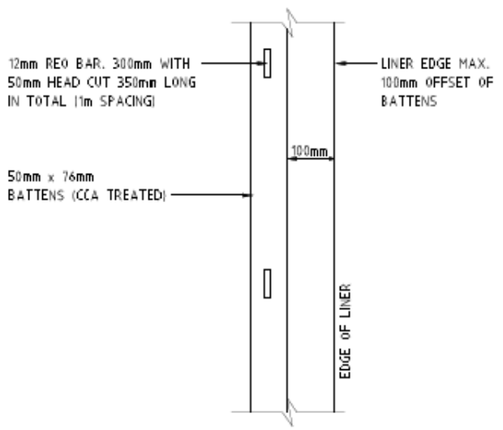
Schedule 3: Landfill liner details



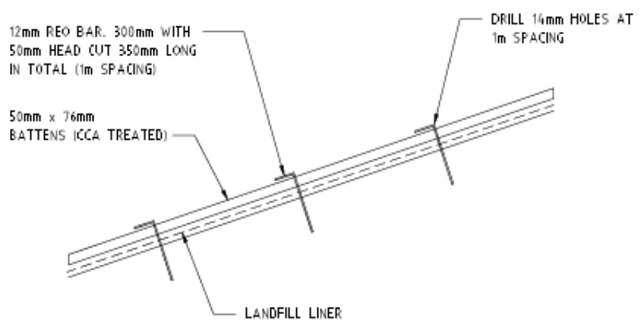
CELL 1 AND 2 LINER TIE-IN DETAIL
NOT TO SCALE



ANCHOR TRENCH DETAIL (PERIMETER OF CELL)
NOT TO SCALE



PLAN VIEW



SECTION