Licence

Licence number	L8889/2015/2
Licence holder	Eastern Metropolitan Regional Council
Registered business address	226 Great Eastern Highway BELMONT WA 6104
DWER file number	INS-0001916
Duration	19/05/2022 to 18/05/2032
Date of issue	17/05/2022
Date of amendment	6/03/2025
Premises details	Red Hill Waste Management Facility Toodyay Road, RED HILL Legal description - Lot 1 on Diagram 15239, Lot 2 on Diagram 68630, Lot 11 on Diagram 69105 and Lot 12 on Deposited Plan 26468

Prescribed premises category description (Schedule 1, ***Environmental Protection Regulations 1987***)	**Assessed production / design capacity**
Category 12: Screening, etc. of material: premises (other than premises within category 5 or 8) on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated.	200,000 tonnes per annual period
Category 61A: Solid waste facility: premises (other than premises within category 67A) on which solid waste produced on other premises is stored, reprocessed, treated, or discharged onto land.	13,000 tonnes per annual period

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	Assessed production / design capacity
Category 62: Solid waste depot: premises on which waste is stored or sorted, pending final disposal or re-use, other than in the course of operating – (a) a refund point (as defined in the *Waste Avoidance and Resource Recovery Act 2007* section 47C(1)) (a refund point); or (b) a facility or other place (an aggregation point) for the aggregation of containers that have been returned to refund points until those containers are accepted for processing or disposal.	10,000 tonnes per annual period
Category 64: Class II or III putrescible landfill site: premises (other than clean fill premises) on which waste of a type permitted for disposal for this category of prescribed premises, in accordance with the *Landfill Waste Classification and Waste Definitions 1996,* is accepted for burial.	350,000 tonnes per annual period
Category 65: Class IV secure landfill site: premises (other than clean fill premises) on which waste of a type permitted for disposal for this category of prescribed premises, in accordance with the *Landfill Waste Classification and Waste Definitions 1996,* is accepted for burial.	Not applicable
Category 67A: Compost manufacturing and soil blending: premises on which organic material (excluding silage) or waste is stored pending processing, mixing, drying or composting to produce commercial quantities of compost of blended soils.	58,000 tonnes per annual period

This licence is granted to the licence holder, subject to the attached conditions, on 6 March 2025, by:

Melissa Chamberlain

Digitally signed by Melissa Chamberlain
Date: 2025.03.06 10:06:18 +08'00'

Melissa Chamberlain
MANAGER WASTE INDUSTRIES
REGULATORY SERVICES

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

Licence history

Date	Reference number	Summary of changes
19/05/2015	L8889/2015/1	Licence granted
29/04/2016	L8889/2015/1	Notice of amendment and schedule of licences with amended expiry dates
06/09/2017	L8889/2015/1	Amendment Notice 1: Approval to accept and bury PFAS contaminated solid waste in existing Class III landfill cells (Farm Stage 1 and 2 and Stage 15).
01/05/2018	L8889/2015/1	Amendment Notice 2: Approval to accept and store paint wastes and updates to landfill acceptance criteria for PFAS impacted solid wastes (Special Waste Type 3).
09/07/2018	L8889/2015/1	Amendment Notice 3: Construction and operation of three leachate ponds (1 holding pond and 2 evaporation ponds) to manage excess leachate currently being stored in the decommissioned Class IV cell.
9/08/2018	L8889/2015/1	Amendment Notice 4: Construction of an eastern leachate storage pond for disposal of green waste leachate by evaporation.
01/11/2018	L8889/2015/1	Amendment Notice 5: Increase of the capacity of leachate holding pond 1 by deepening the pond by 3 m.
06/05/2019	L8889/2015/1	Amendment Notice 6: Extension to licence duration
30/03/2020	L8889/2015/1	Revised Licence including: • approval for operation of the mechanical evaporator at the Class III leachate ponds; • increased Category 12 production capacity; • approval for relocation of green waste processing activities to the new hardstand on Lot 12; • incorporation of changes made via Amendment Notice 1 to 6; • reformatting of conditions into the current licence structure.
27/05/2020	L8889/2015/1	DWER initiated amendment to correct minor omissions and errors in the March 2020 amended licence relating to contaminated solid waste processing, Class IV landfill cell and green waste windrows.
26/06/2020	L8889/2015/1	Revised Licence to approve: • installation of landfill gas flare system at power generation plant; and • operation of an interim FOGO processing facility on Lot 11 and 12.
04/11/2020	L8889/2015/1	Revised Licence to approve: • the addition of Category 61A; and • the shredding of power poles within the Class IV landfill cell.
17/05/2021	L8889/2015/1	Revised Licence to authorise the acceptance and disposal of asbestos contaminated soils and bulky asbestos containing materials.

Date	Reference number	Summary of changes
26/11/2021	L8889/2015/1	Revised Licence to give effect to the Minister of Environment's Appeal Determination on appeal number 055 of 2020 in accordance with section 110 of the EP Act.
17/05/2022	L8889/2015/2	Licence renewal extending the licence duration by ten years to 18/05/2032
17/07/2023	L8889/2015/2	Revised Licence to approve: • increase in acceptance of HHW materials; • operation of Interim FOGO Facility Hardstand constructed under W6613/2021/1; • acceptance of an additional 12,000 tpa of FOGO for a total of 22,000 tpa; • increase of timeframe for the storage and processing of FOGO waste at the Stage 1 FOGO hardstand; • changes to the type and location of the landfill gas flare; and • removal of the ambient air monitoring requirements.
6/03/2025	L8889/2015/2	Revised Licence to approve: • acceptance of an additional 8,000 tpa of FOGO for a total of 30,000 tpa; • increase in timeframe for the storage and processing of FOGO waste at the FOGO facility until 31 December 2030; • construction and operation of an expansion FOGO facility hardstand, leachate pond and associated infrastructure; • removal of partially processed FOGO waste to another premises for further processing

Interpretation

In this licence:

(a) the words 'including', 'includes' and 'include' in conditions mean "including but not limited to", and similar, as appropriate;

(b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;

(c) where tables are used in a condition, each row in a table constitutes a separate condition;

(d) any reference to an Australian or other standard, guideline, or code of practice in this licence:

(i) if dated, refers to that particular version; and

(ii) if not dated, refers to the latest version and therefore may be subject to change over time;

(e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and

(f) unless specified otherwise, all definitions are in accordance with the EP Act.

NOTE: This licence requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this licence.

Licence conditions

The Licence Holder must ensure that the following conditions are complied with:

Waste Acceptance

1. The licence holder must only accept onto the premises waste of a waste type, which for the corresponding category does not exceed the corresponding rate at which waste is received, and which meets the corresponding acceptance specification set out in Table 1.

Table 1: Waste acceptance

Waste type	Category	Rate at which waste is received	Acceptance specification[1]
Power pole waste	61A	13,000 tonnes per annual period	Must meet the acceptance specifications for contaminated solid waste as specified in this table.
Hazardous Waste	62	10,000 tonnes per annual period including a maximum of 500 tonnes of Hazardous Waste per annual period (of which includes maximum of 90 tonnes of waste oils and hydrocarbons per annual period)	Limited to: i). Household hazardous waste (HHW) as listed in Schedule 4 up to a maximum of 20 kg per package/item; ii). e-waste; and iii). vehicle batteries
Clean Fill			None specified
Uncontaminated Fill			
Inert Waste Type 1			
Inert Waste Type 2			
Putrescible Waste			
Green Waste			
Special Waste Type 1			Asbestos containing material (ACM) only. ACM is to be wrapped in heavy duty plastic.
Clean Fill	64	350,000 tonnes per annual period	None specified
Uncontaminated Fill			
Inert Waste Type 1			
Inert Waste Type 2			
Putrescible Waste			
Special Waste Type 1			ACM is to be wrapped in heavy duty plastic

Waste type	Category	Rate at which waste is received	Acceptance specification[1]
			where practicable. ACM and/or asbestos contaminated soil that cannot be practicably wrapped in heavy duty plastic must be contained[2] in a manner that prevents asbestos fibres entering the atmosphere. Note 2: for the purposes of waste acceptance, the containment of ACM and/or asbestos contaminated soil that cannot be practicably wrapped in heavy duty plastic must be achieved by at least one of the following methods: (i) within sealed and covered bins; and/or (ii) within sealed and covered trucks. The application of a surfactant to the material can also be used as an additional containment measure to prevent the release of asbestos fibres from the waste material.
Special Waste Type 2			Excludes wastes which require incineration as specified in Department of Health *Code of Practice for Clinical and Related Waste Management.* Low level radioactive waste must meet the requirements for landfill disposal specified in the Department of Health *Radioactive Waste Disposal Guidelines.*
Contaminated solid waste			Must meet the acceptance criteria for Class III landfills as specified in the Landfill Definitions.
Special Waste Type 3			Must meet the acceptance criteria for Class III landfills as specified in Schedule 3 and the acceptance criteria for Class III landfills as specified in the Landfill Definitions for contaminants other than PFAS.
Clean Fill	65	N/A	None specified
Uncontaminated Fill			
Contaminated solid waste			Must meet the acceptance criteria for Class IV landfills as specified in the Landfill Definitions. Leachable concentrations assessed according to the ASLP using a leaching solution of deionized water.
Special Waste Type 2			Excludes wastes which require incineration as specified in Department of Health *Code of Practice for Clinical and Related Waste*

Waste type	Category	Rate at which waste is received	Acceptance specification[1]
			Management. Low level radioactive waste must meet the requirements for landfill disposal specified in the Department of Health *Radioactive Waste Disposal Guidelines.*
Green Waste	67A	28,000 tonnes per annual period	None specified
Food organics and garden organics (FOGO) waste		30,000 tonnes per annual period	Sourced from kerbside municipal collections of designated FOGO bins

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.*

2. The licence holder must ensure the following procedures are in place for managing contaminated solid wastes:

(a) where such loads are identified, record the nature of the load, the delivery vehicle's registration number, driver's name and volume delivered; and

(b) any identified contaminated solid waste must be accompanied by documentary evidence that it meets the requirements of licence condition 1, from a NATA accredited laboratory.

3. The licence holder must ensure where waste does not meet the acceptance criteria set out in condition 1, 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 within 72 hrs.

Infrastructure and Equipment

4. The licence holder must ensure that the site infrastructure and equipment listed in Table 2 is maintained and operated in accordance with the corresponding operational requirement set out in Table 2.

Table 2: Infrastructure requirements

Infrastructure and equipment	Infrastructure requirement(s)	Infrastructure location
Landfill leachate ponds	Managed such that a freeboard equal to or greater than 500 mm is maintained.	'Class III and Class IV leachate ponds' in Figure 2.
Stormwater drains	Kept clear of any waste to allow effective draining.	N/A

Infrastructure and equipment	Infrastructure requirement(s)	Infrastructure location
Stage 1 FOGO hardstand	Areas used for the storage of FOGO waste must be: • bunded to divert stormwater run-off from entering the hardstand; • bunded and maintained to contain leachate and drain it to the Stage 1 FOGO leachate sump; and • graded and maintained to prevent pooling of leachate and achieve drainage to the Stage 1 FOGO leachate sump.	'Stage 1 FOGO hardstand' in Figure 2 and Figure 4b.
	Storage and processing of FOGO waste at this location is permitted until 31 December 2030.	
Stage 1 FOGO leachate sump	Managed such that a freeboard equal to or greater than 500 mm is maintained.	'Stage 1 FOGO leachate sump' in Figure 2 and Figure 4b.
	The following operational controls are implemented to maintain the specified minimum freeboard: • weekly inspection by site personnel to check compliance with the freeboard requirement in this table; • infrastructure in place to automatically pump excess leachate to landfill leachate ponds; and • excess leachate is managed by pumping to the landfill leachate ponds.	
Interim FOGO facility hardstand	Areas used for the storage of FOGO waste must be: • bunded to divert stormwater run-off from entering the hardstand; • bunded and maintained to contain leachate and drain it to the L9 leachate pond; and • graded and maintained to prevent pooling of leachate and achieve drainage to the L9 leachate pond.	'Interim FOGO Facility' in Figure 4a and Figure 4b and 'L9 leachate pond' in Figure 4a, Schedule 1
	Storage and processing of FOGO waste at this location is permitted until 31 December 2030.	

Infrastructure and equipment	Infrastructure requirement(s)	Infrastructure location
Expansion FOGO hardstand	Areas used for the storage of FOGO waste must be: • bunded to divert stormwater run-off from entering the hardstand; • bunded and maintained to contain leachate and drain it to the expansion leachate pond; and • graded and maintained to prevent pooling of leachate and achieve drainage to the expansion leachate pond. Storage and processing of FOGO waste at this location is permitted until 31 December 2030.	As depicted in Figure 4b
Expansion leachate pond	Managed such that a freeboard equal to or greater than 500 mm is maintained. The following operational controls are implemented to maintain the specified minimum freeboard: • weekly inspection by site personnel to check compliance with the freeboard requirement in this table; • infrastructure in place to automatically pump excess leachate to landfill leachate ponds; and excess leachate is managed by pumping to the landfill leachate ponds. HDPE geomembrane liner must be maintained to be free from leaks and defects.	As depicted in Figure 4b
Expansion leachate drain and pit	Must be maintained to direct runoff directly from the expansion FOGO hardstand to the expansion leachate pond. HDPE geomembrane liner must be maintained to be free from leaks and defects.	As depicted in Figure 6
Green waste leachate pond	Managed such that a freeboard equal to or greater than 500 mm is maintained. The following operational controls are implemented to maintain the specified minimum freeboard: • weekly inspection by site personnel to assess and record compliance with the freeboard requirement in this table; • infrastructure in place to pump excess leachate to the Class III leachate ponds (as shown in Figure 2); and • excess leachate is managed by pumping to the Class III leachate ponds (as shown in Figure 2).	'New green waste leachate pond' in Figure 2.

Infrastructure and equipment	Infrastructure requirement(s)	Infrastructure location
Green waste processing hardstand	Areas used for the storage of Green Waste, FOGO waste, materials undergoing composting and Composting Products must be: • bunded to divert stormwater run-off from entering the hardstand; • bunded and maintained to contain leachate, drain it to the green waste leachate pond and prevent leachate drainage to the temporary laydown area; and • graded and maintained to prevent pooling of leachate and achieve drainage to the green waste leachate pond.	'Green waste processing hardstand' in Figure 2.
	Located at least 25 m from the premises boundary and 25 m from any area being used for landfilling operations.	
	Storage and processing of FOGO waste at this location is permitted until 31 December 2022.	
Green waste grinder	Operated within the hours of 7:00 am and 6:00 pm Monday to Saturday.	Located on the 'Green waste processing hardstand' in Figure 2.
	Operated at the green waste processing hardstand area labelled in Figure 2.	
Compost trommel screeners	Operated within the hours of 7:00 am and 6:00 pm Monday to Saturday.	Located on the 'Green waste processing hardstand' in Figure 2, and at the FOGO facility in Figure 4b..
	FOGO and Green Waste are damp before screening.	
	Operated at the green waste processing hardstand area (for green waste) labelled in Figure 2, and the FOGO facility (for FOGO waste) as depicted in Figure 4b.	
Picking station	Material that has had contaminants picked out in the picking station must then be moved to the MAF systems. Any contaminants removed from material in the picking station that are not suitable for recovery/recycling must be disposed to a Class III landfill cell on the premises within 48 hours of being screened.	As depicted in Figure 4b
Mobile aerated floors (MAFs)	Maintained and serviced in accordance with the manufacturer's specifications.	Located at the FOGO facility as shown in Figure 4b.
	Each unit at the Stage 1 location, Interim FOGO facility, and expansion hardstand is operated in reverse aeration mode (extracting air) while FOGO waste is loaded onto it.	

Infrastructure and equipment	Infrastructure requirement(s)	Infrastructure location
	Air extracted during reverse aeration mode at the Stage 1 location, Interim FOGO facility, and expansion hardstand is pumped to the biofilter for treatment before emission to the atmosphere.	
Odour defense system	Maintained at the interim FOGO facility with outlet pipes surrounding the mobile aerated floors and area designated for windrows without forced aeration.	Located at the FOGO facility as shown in Figure 4b.
Biofilter	Intake air is monitored on a weekly basis for temperature (ºC), relative humidity (%) and back pressure (Pa) and results are recorded.	Located at the 'Stage 1 FOGO hardstand' area in Figure 2.
	Process settings are adjusted to maintain air intake temperature between 10ºC and 40ºC and relative humidity of at least 85%.	
	The treatment bed comprises at least 10 m^3 of woodchip, bark or Composting Products. Composting Products must comprise no more than 50% of the treatment bed volume.	
	The whole treatment bed is maintained in a damp state with moisture content between 45% and 65%.	
	Shade cover maintained over the biofilter.	
	The treatment bed is replaced with fresh material when: • visual observations identify undulation on the biofilter surface, significant bed height changes or significant breakdown of the treatment bed media; or • a significant reduction in back pressure is recorded.	
Temporary laydown area	Bunded to divert stormwater run-off or leachate from the green waste processing hardstand from entering the temporary laydown area.	'Temporary laydown area' in Figure 2.
Putrescible landfill cells	Capping system with the following requirements installed immediately after the final contours have been reached: • immediately cap the cell with a permeable layer contoured to allow gas migration to extraction ports; • cap with 300 mm of clay with a hydraulic conductivity (K) of $1x10^{-7}$ m/s or less; and • protective capping cover.	'Class III landfill cells' and 'Historical landfill cells' in Figure 2.
	Landfill gas collection system installed at each of the putrescible landfill cells.	

Infrastructure and equipment	Infrastructure requirement(s)	Infrastructure location
Class IV waste cells	As per Ministerial Statement 462	'Class IV landfill cells' in Figure 2.
Mechanical evaporator	Operated in a manner which prevents visible overspray of evaporation droplets beyond the exclusion zone (as shown in Figure 3).	'Mechanical leachate evaporator' in Figure 2.
	Operated using leachate stored in the southern Class III leachate holding pond (as shown in Figure 2).	
	Operated at the mechanical evaporator location labelled in Figure 2.	
	Operated during daylight hours only.	
	Not permitted to operate when the wind speed is greater than 7 m/s for a period of five minutes or more (as measured by the onboard weather station).	
	Maintained and serviced in accordance with the manufacturer's specifications.	
Screening and crushing equipment	Dust suppression from on-site water carts is used to prevent dust emissions from associated operational areas.	'Current crushing and screening area' and 'Additional current crushing and screening area' in Figure 2.
	The licence holder must ensure that no visible dust generated during the use of this equipment crosses the premises boundary.	
	Operated at the crushing and screening areas labelled in Figure 2.	
	Operated within the hours of 7:00 am and 6:00 pm Monday to Saturday.	
Shredder (Hammel Type 750 or equivalent)	Must be fitted with fine misting water jets and/or sprays at the following locations: • on top of the shredding shaft to capture dust exiting the feed hopper (infeed area); • underneath the shredding shaft to capture dust immediately after the shredding process; and • on the discharge (out feed) conveyor to capture any residual dust remaining. Must only be operated to shred power pole waste that meets acceptance specifications for contaminated solid waste in accordance with condition 1, Table 1.	Located within 'Stage 2 Class IV cell' in Figure 2a.

Infrastructure and equipment	Infrastructure requirement(s)	Infrastructure location
HHW compound	• Must be constructed as specified in Figure 4c of Schedule 1. • Must be surrounded by a lockable perimeter fence. • The HHW compound must contain a HHW Shed that is approximately 216m^2 in surface area. • The HHW Shed must contain a sump located in the centre of the HHW Shed to collect any spills within the building.	'HHW Storage Compound' in Figure 4.
Waste oil storage tank	• Must be inspected for containment issues and potential spills daily. • An oil and fuel spill kit must be available near the waste oil storage tank at all times.	'Transfer Station/Community Drop-Off in Figure 4.
Landfill gas flares	Maintained to ensure safe operation at all times and achieve a minimum combustion temperature of 760ºC when gas flow rates are at least 100 m^3/hour.	'Landfill gas flare proposed location' in Figure 4.
	Condensate collected and disposed to leachate ponds as shown in Figure 2.	
	Flow meter calibrated once per annual period.	
	Minimum separation distance of 10 metres maintained between landfill gas flares and surrounding vegetation.	
Vehicles	Where a vehicle has the potential to track waste or matter from the landfill off-site, it is washed down prior to departing the premises.	N/A
Fencing and security gate	Security fence around the perimeter of the premises or around the tipping face maintained to effectively control windblown waste and restrict access to the premises. The fence must be 1.8 metres high topped with three barbed wire strands.	N/A
	The premises must have one only public access point and this must be equipped with a lockable gate. The gate must be securely locked when the premises is unattended.	
	Weekly inspections of the fence and gates referred to above are undertaken and any damage to the fence is repaired within two working days of its discovery.	

Operations

Waste processing

5. The licence holder must ensure that wastes accepted onto the premises are only subjected to the process(es) set out in Table 3 and in accordance with any process limits or specifications described in that table.

Table 3: Waste processing

Waste type	Process(es)	Process limits or specifications[1, 2, 3]
Clean Fill and Uncontaminated Fill	Receipt, handling, storage and disposal or removal off-site	• Disposal is only permitted to Class III and Class IV landfill cells.
Putrescible Waste, Inert Waste Type 1 and Inert Waste Type 2	Receipt, handling, storage and disposal or removal off-site	• Disposal is only permitted to Class III landfill cells.
Up to Class III contaminated solid waste	Receipt, handling and disposal	• Disposal is only permitted to Class III and Class IV landfill cells.
Hazardous Waste	Receipt, handling and storage prior to removal off-site	• Paint and resins must be stored in dedicated impermeable and bunded storage containers ('Stillages') provided by the Paintback Scheme. • Flammable liquids, toxic substances, corrosive substances, oxidising agents and miscellaneous dangerous goods (household chemicals and unknown liquids) must be stored within impermeable dangerous goods containers located within the HHW shed. • All other wastes (other than fire extinguishers and gas bottles) must be stored within the HHW shed or within impermeable containers. • Fire extinguishers and gas bottles must be stored in metal cages. • All incompatible waste types must be stored separately. • No decanting of wastes is permitted outside of Dangerous Goods containers. • No decanting of wastes is permitted for the consolidation of chemicals. • Waste with compromised container integrity must be stored in a secondary containment area prior to recovery and decanting to a suitable impermeable container.
Special Waste Type 1	Receipt, handling, storage and	• Disposal is only permitted to Class III landfill cells. • Special Waste Type 1 must be disposed of in a manner

Waste type	Process(es)	Process limits or specifications[1, 2, 3]
	disposal	that prevents asbestos fibres entering the atmosphere. • The disposal area(s) for any more than one cubic metre of Special Waste Type 1 is defined by use of a satellite geographical positioning system or grid references on the premises plan. • A copy of the premises plan marked with the locations used for asbestos disposal as described above, should be kept as a permanent record. • ACM wrapped in heavy duty plastic must be covered with Clean Fill or Putrescible Waste to a depth of at least 150 mm as soon as practicable after deposit. • ACM and/or asbestos contaminated soil that is not wrapped in heavy duty plastic must be covered with Clean Fill, Inert Waste Type 1 or Putrescible Waste to a depth of at least 500 mm immediately after deposit. • A representative of the licence holder is available to witness the burial of the asbestos waste as soon as practical after placement in the landfill and sign a bound, numbered register, a numbered file register or record keeping equivalent within 2 hours of the burial to attest that it has been buried in accordance with these procedures.
Special Waste Type 2	Receipt, handling and disposal	• Disposal is only permitted to Class III or Class IV landfill cells. • Receipt, handling and disposal in accordance with the Department of Health *Radioactive Waste Disposal Guidelines.*
Special Waste Type 3	Receipt, handling and disposal	• Disposal is only permitted to Class III landfill cells.
Class IV contaminated solid waste	Receipt, handling and disposal	• Disposal is only permitted to Class IV landfill cells.
Power pole waste (Class III and IV contaminated solid waste)	Receipt, handling, shredding and disposal	• The licence holder must ensure that no visible dust generated during the use of the shredder crosses the premises boundary. • The licence holder must ensure that power poles are sufficiently wetted down prior to and during shredding to minimise dust emissions. • Wetting down of the power poles must be achieved by: – the use of water jets/sprays as specified in condition 4, Table 2 during shredder operation; and – the use of a water cart immediately prior to shredding. • Must shred no more than 13,000 tonnes of power pole waste per annual period. • Disposal of shredded waste is only permitted to the Stage

Waste type	Process(es)	Process limits or specifications[1, 2, 3]
		2 Class IV landfill cell. • Must only operate within the hours of 7:00 am and 6:00 pm Monday to Saturday. • The shredder must not operate when other heavy plant or heavy vehicles are operating within the Stage 2 Class IV landfill cell, with the exception of one excavator, one loader and one water cart. • On-site water carts must be used to mitigate dust emissions from associated operational areas as required. • Individual stockpiles of power poles stored prior to shredding must: – be located within the Stage 2 Class IV landfill cell; – be of a length not exceeding 50 m; – be of a height not exceeding 4 m; – be of a width not exceeding 20 m; and – be separated with at least 6 m of clear ground.
Green Waste	Receipt, handling, storage and mulching or composting for on-site use, removal off-site or disposal	• Green Waste is stored at the premises only for the purpose of mulching or composting for on-site use, or for removal from the premises. • Unprocessed Green Waste may be stored on the temporary laydown area for a maximum period of two weeks (14 days) or on the green waste processing hardstand. • All Green Waste being composted and all Composting Products are stored and processed on the green waste processing hardstand. • All Green Waste, materials undergoing composting and Composting Products stored on the green waste processing hardstand or temporary laydown area are stored in windrows. • Windrows of Green Waste are no more than 3 metres high and no more than 4 metres wide and separated by at least 4.5 metres of clear ground from any other row or from any other combustible waste. • Windrows of Green Waste and materials undergoing composting are maintained in an aerobic state. • Windrows of Green Waste and materials undergoing composting must be kept in a damp state and regularly inspected to check for any smoldering or smoke.
FOGO waste	Receipt, handling, storage and composting for on-site use, removal off-	• FOGO waste is stored at the premises only for the purpose of composting for on-site use, or for removal from the premises. • FOGO waste and Composting Products are stored and processed on the Stage 1 FOGO hardstand, Interim FOGO facility hardstand or the expansion hardstand[4].

Waste type	Process(es)	Process limits or specifications[1, 2, 3]
	site or disposal	• FOGO waste received at the premises is delivered directly to the Stage 1 FOGO hardstand, Interim FOGO facility hardstand or the expansion hardstand and immediately placed onto a mobile aerated floor. • FOGO undergoes aerobic composting by the following methods and minimum timeframes: – in windrows on a mobile aerated floor operating in forward mode for a minimum of six weeks; and – in windrows without mobile aerated floors for a minimum of eight weeks. • Windrows of FOGO on mobile aerated floors operating in forward mode are turned at least once between 14 and 28 days after being moved to this location (turning outer material to the inside of the windrow). • FOGO waste is maintained in an aerobic state by forward or reverse aeration from the mobile aerated floors or manual turning of windrows. • FOGO waste is kept in a damp state. • Windrows are no more than 5 metres high, 16 metres wide and 30 metres long. • Windrows within each mobile aerated floor are separated by at least 1 metre of clear ground and windrows are separated from other combustible materials by at least 5 metres of clear ground. • Irrigation water used at the FOGO facility is sourced from the Stage 1 FOGO leachate sump, expansion leachate pond or siltation/water ponds. • Irrigation water used on a mobile aerated floor operating in reverse aeration mode is sourced from the Stage 1 FOGO leachate sump, expansion leachate pond or siltation/water ponds as designated in Figure 4a and Figure 4b, Schedule 1. • Irrigation water used on mobile aerated floors operating in forward aeration mode and windrows without mobile aerated floors is sourced from the siltation/water ponds as designated in Figure 4a, Schedule 1. • Irrigation water used at the Stage 2 green waste processing hardstand is sourced from siltation/water ponds as designated in Figure 4a, Schedule 1. • FOGO Composting Products are not transferred to the green waste processing hardstand until they have: – undergone a minimum of 14 weeks aerobic composting; and – undergone two phases of screening in the trommel screener to remove physical contaminants. • Residual physical contaminants are removed from the green waste processing hardstand and disposed to the active Class III landfill cell within 48 hours of being

Waste type	Process(es)	Process limits or specifications[1, 2, 3]
		screened from the FOGO waste or compost. • Residual physical contaminants are removed from the Stage 1 FOGO hardstand and Interim FOGO facility and disposed to a Class III landfill cell on the premises within 48 hours of being screened from FOGO[5].

Note 1: Requirements for landfilling tyres are set out in Part 6 of the *Environmental Protection Regulations 1987.*
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*.
Note 3: References to infrastructure in the process limits or specifications refer to the infrastructure labelled accordingly in Schedule 1, Figure 2.
Note 4: Storage of mature and pastuerised FOGO products and final blending is authorised to occur at the Green waste processing hardstand until the expansion FOGO hardstand is complete.
Note 5: Residual physical contaminants cannot be used as cover material on landfill cells at the premises

Leachate and Water Management

6. The licence holder must ensure that wastewater emanating from, or water that has come into contact with, waste contaminated areas must be contained and managed in accordance with the corresponding requirements in Table 4.

Table 4: Leachate and wastewater management requirements

Source	Operational requirement(s)	Infrastructure location
Class III leachate collection system	Recirculated to the active Class III landfill cell or directed to the Class III leachate ponds for evaporation.	'Class III leachate ponds' in Figure 2
Class IV leachate collection system	Directed to the Class IV leachate ponds for evaporation. Mechanical evaporation of leachate from Class IV cells is not permitted.	'Class IV leachate ponds' in Figure 2
Leachate from the green waste processing hardstand	Directed to the green waste leachate pond for evaporation or transfer to the Class III leachate ponds for evaporation.	'New green waste leachate pond' and 'Class III leachate ponds' in Figure 2
Leachate from the Stage 1 FOGO hardstand	Directed to the Stage 1 FOGO leachate sump for reuse during composting at the FOGO facility or transfer to the landfill leachate ponds for evaporation.	'Stage 1 FOGO leachate sump' in Figure 4b and any leachate pond in Figure 2
Leachate from the Interim FOGO facility hardstand	Directed to the L9 leachate pond for evaporation.	'L9 Leachate pond' in Figure 4a, Schedule 1
Leachate from the expansion FOGO hardstand	Directed to the expansion FOGO leachate pond.	'Expansion FOGO leachate pond' in Figure 4b.

Source	Operational requirement(s)	Infrastructure location
Stormwater which has come into contact with waste contaminated areas or wash water from vehicle wash down areas	Directed to a leachate pond for evaporation. Stormwater from the temporary laydown area is permitted to discharge into stormwater drainage infrastructure for release to the environment, subject to compliance with condition 5.	'Temporary laydown area' and any leachate pond in Figure 2

7. The licence holder must ensure stormwater is diverted from the active landfill cells, leachate ponds and from previously filled areas of the premises to dedicated stormwater drains.

8. The licence holder must ensure that water used for dust suppression is sourced from siltation/water ponds and not leachate ponds as designated in Figure 2 in Schedule 1.

Deposition of Waste

9. The licence holder must ensure waste disposed to Class III landfill cells is spread and compacted at regular intervals to optimise compaction of the type of waste being landfilled.

10. The licence holder must ensure the Class III landfill cell tipping face is at no time greater than two metres in vertical height.

11. The licence holder must ensure waste disposed to Class III landfill cells is compacted to a minimum of 850 kg/m^3 with a purpose-built compactor.

12. The licence holder must ensure that all waste disposed to Class III landfill cells is covered, with cover material, at the end of each day.

13. The licence holder must ensure that all waste disposed to Class IV landfill cells, with the exception of waste that has undergone encapsulation, is covered with cover material at the end of each day.

14. The licence holder must ensure a stockpile containing sufficient cover material to allow waste to be covered in accordance with the conditions of this licence for a period of two weeks.

15. The licence holder must restrict the Class III landfill cell tipping area to a maximum linear length of 50 metres.

Fire Management

16. The licence holder must not permit the burning of waste.

17. The licence holder must ensure an adequate water supply and a means of distribution be provided at all times to extinguish a fire at any part of the premises.

18. In the event of a fire on the premises, the licence holder must advise the CEO within two hours of the fire being discovered.

Windblown Waste

19. The licence holder must contain windblown waste within the boundaries of the premises by maintaining fences, installing litter screens and regularly compacting waste.

20. The licence holder must ensure windblown waste is removed from fences, and access roads on a daily basis.

Composting product quality

21. The licence holder must ensure that composting products produced from FOGO waste are processed to achieve pasteurization as defined in AS 4454.

22. The licence holder must ensure that composting products produced from FOGO waste meet the maximum chemical, physical and biological contaminant concentrations set out in Table 5, Table 6 and Table 7.

23. The licence holder must ensure that composting products produced from FOGO waste remain on the premises until monitoring results required by condition 28 are received to verify that condition 22 is satisfied, unless the product is being taken to another facility licensed to accept FOGO waste.

Table 5: Maximum chemical contaminant concentrations

Contaminant	Maximum concentration dry weight basis (mg/kg)	Contaminant	Maximum concentration dry weight basis (mg/kg)
Arsenic	20	DDT/DDD /DDE	0.5
Cadmium	1	Aldrin	0.02
Boron	100	Dieldrin	0.02
Chromium	100	Chlordane	0.02
Copper	150	Heptachlor	0.02
Lead	150	HCB	0.02
Mercury	1	Lindane	0.02
Nickel	60	BHC	0.02
Selenium	5	PCBs	Not detectable (detection limit of 0.2 mg/kg)
Zinc	300		

Table 6: Maximum physical contaminant concentrations

Contaminant	Maximum concentration (% w/w dry matter)
Glass, metal and rigid plastics	0.5
Plastics – light, flexible or film	0.05

Table 7: Maximum pathogen indicator concentrations

Contaminant	Maximum concentration (dry weight equivalent)
Salmonella spp	Absent in 50 g
Faecal coliforms	1000 Most Probable Number (MPN)/g

Monitoring

Waste monitoring

24. The licence holder must undertake the monitoring of parameters specified in Table 8 according to the specification in that table.

Table 8: Monitoring of inputs and outputs

Input/Output	Parameter	Units	Frequency
Waste inputs	Waste types as specified in Table 1	tonnes	Each load arriving at the premises
Waste outputs	Waste types as defined in the Landfill Definitions		Each load leaving or rejected from the premises

Surface water and groundwater monitoring

25. The licence holder must undertake surface water monitoring in accordance with the requirements specified in Schedule 2.

26. The licence holder must undertake groundwater monitoring in accordance with the requirements specified in Schedule 2.

27. All surface water and groundwater samples must be analysed by laboratories with current NATA accreditation for the analysis specified unless otherwise specified in Schedule 2.

Composting product monitoring

28. The licence holder must undertake the monitoring of FOGO composting parameters

specified in Table 9 according to the specification in that table.

29. All FOGO composting products must be analysed by laboratories with current NATA accreditation for the analysis specified unless otherwise specified in Table 9.

Table 9: FOGO composting process monitoring

Monitoring point reference	Process description	Parameter	Units	Frequency	Method
Windrows of FOGO waste	During Stage 1 and Stage 2 composting	Temperature[1]	ºC	Twice daily[2]	None specified
Composting products	On completion of composting and before movement off the premises for sale or distribution	Quantity produced[1]	tonnes	Continuous	
		Arsenic	mg/kg	Each batch, at a minimum rate of one composite sample per 500 tonnes Each composite sample is made up of 12 subsamples	As specified in AS 4454
		Cadmium			
		Boron			
		Chromium			
		Copper			
		Lead			
		Mercury			
		Nickel			
		Selenium			
		Zinc			
		DDT/DDD/DDE			
		Aldrin			
		Dieldrin			
		Chlordane			
		Heptachlor			
		HCB			
		Lindane			
		BHC			
		PCBs			
		Glass, metal and rigid plastics	% w/w dry matter		
		Plastics – light, flexible or film			
		Salmonella spp	MPN/g		
		Faecal coliforms			

Note 1: In-field non-NATA accredited analysis permitted.
Note 2: Twice daily monitoring is to be undertaken at least five hours apart.

Landfill gas flare monitoring

30. The licence holder must undertake landfill gas flare monitoring for parameters specified in Table 10 according to the specification in that table.

Table 10: Monitoring of landfill gas inputs to flare

Emission point	Parameter	Units	Frequency	Method
Landfill gas flares	Cumulative duration of flaring	hours	Continuous	In line gas flow meter
	Cumulative flow volume of landfill gas input to flare	m^3	Continuous	

31. Within 60 days of the installation of the first landfill gas flare on the premises, the licence holder must retain the services of a person qualified and experienced in the area of emissions monitoring and assessment to:

(a) conduct verification monitoring of the emissions from the first landfill gas flare to be installed for parameters listed in Table 11 in accordance with the specifications in that table; and

(b) compile and submit to the licence holder within 60 days of being engaged by the licence holder a report which includes:

(i) a description of the methods used for monitoring emissions from the landfill gas flare; and

(ii) details the monitoring results collected under part (a) of this condition.

32. The licence holder must submit to the CEO the report prepared pursuant to condition 31(b) within 14 days of receiving it.

Table 11: Landfill gas flare emissions verification monitoring

Emission point	Parameter	Units	Averaging period	Method
First landfill gas flare installed at the premises	Oxides of nitrogen (NO_X as NO_2)	mg/m^3	30 mins	USEPA Method 7E
	Carbon monoxide			USEPA Method 10
	Sulfur dioxide			USEPA Method 6C
	Total volatile organic compounds			USEPA Method 18
	Stack temperature	ºC	Instantaneous	None specified

Noise validation

33. Within 60 days of the installation of the third landfill gas flare on the premises, the licence holder must retain the services of a person qualified and experienced in the area of environmental noise assessment and who by their qualifications and experience is eligible to hold membership of the Australian Acoustical Society or the Association of Australasian Acoustical Consultants to:

(a) investigate the nature and extent of noise emissions from the premises;

(b) assess in accordance with the methodology required in the *Environmental Protection (Noise) Regulations 1997*, the compliance of the noise emissions from the primary activities, power generation and landfill gas flaring, against the relevant assigned levels specified in those Regulations; and

(c) compile and submit to the licence holder within three months of the installation of the third landfill gas flare on the premises, a report in accordance with condition 34.

34. A report prepared pursuant to condition 33(c) is to include:

(a) a description of the methods used for monitoring and/or modelling of noise emissions from the premises;

(b) details the results of the investigation undertaken pursuant to condition 33(a);

(c) details and results of the assessment of the noise emissions from the premises, against the relevant assigned levels in the *Environmental Protection (Noise) Regulations 1997* undertaken pursuant to condition 33(b); and

(d) an assessment of noise levels against the most recent previous noise assessment.

35. The licence holder must submit to the CEO the report prepared pursuant to condition 33(c) within 14 days of receiving it.

36. Where an assessment pursuant to condition 33(b) indicates that noise emissions do not comply with the relevant assigned levels in the *Environmental Protection (Noise) Regulations 1997*, the licence holder must:

(a) within 60 days of receiving an assessment report pursuant to condition 33(c) prepare a plan to ensure the undertaking of the licensed activity will no longer lead to any contravention of the *Environmental Protection (Noise) Regulations 1997;* and

(b) provide to the CEO a copy of the plan prepared pursuant to condition 36(a) within 30 days of its preparation.

Records and Reporting

37. The licence holder must submit to the CEO by no later than 30 April after the end of each annual period, an Annual Environmental Report for that annual period for the conditions listed in Table 12, and which provides information in accordance with the corresponding requirement set out in Table 12.

Table 12: Annual Environmental Report

Condition	Requirement
N/A	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents (including fires) that have occurred during the annual period, and any action taken in response to the incident.
N/A	Any changes to on-site or off-site impacts or pollution
N/A	Final cell contours of any cells completed during the preceding annual period
11	Average compaction rates
24	Waste input and output monitoring data (including rejected loads)
25	Surface water monitoring summary (a) a clear statement of the scope of work carried out;

Condition	Requirement
	(b) a description of the field methodologies employed; (c) a diagram with aerial image overlay showing all monitoring locations. Relevant site features including discharge points and other potential sources of contamination must also be shown; (d) an interpretive summary and assessment of the results against relevant assessment levels for water, as published in the DWER *Guideline: Assessment and management of contaminated sites*; (e) an interpretive summary and assessment of results against previous monitoring results; and (f) trend graphs to provide a graphical representation of historical results and to support the interpretive summary.
26	Groundwater monitoring summary (a) a clear statement of the scope of work carried out; (b) a description of the field methodologies employed; (c) a diagram with aerial image overlay showing all monitoring locations and depicting groundwater level contours and flow direction. Relevant site features and other potential sources of contamination must also be shown; (d) an interpretive summary and assessment of the results against relevant assessment levels for water, as published in the DWER *Guideline: Assessment and management of contaminated sites*; (e) an interpretive summary and assessment of results against previous monitoring results; and (f) trend graphs to provide a graphical representation of historical results and to support the interpretive summary.
28	Composting product monitoring summary (a) tabulated summary of data; (b) range of recorded concentrations for each parameter specified in condition 28; (c) comparison of data to the maximum concentrations specified in condition 22; (d) identification of test results which did not comply with condition 22 and description of how the relevant batch of compost was remediated to achieve compliance or otherwise managed.
30	Landfill gas flare operation summary (a) frequency and duration of landfill gas flaring during the annual period; and (b) cumulative volume of landfill gas flared during the annual period.
38	The number and type of complaints received and action taken.

38. The licence holder must record the following information in relation to complaints received by the licence holder (whether received directly from a complainant or forwarded to them by the Department or another party) about any alleged emissions from the premises:

(a) the name and contact details of the complainant, (if provided);

(b) the time and date of the complaint;

(c) the complete details of the complaint and any other concerns or other issues raised;

(d) the complete details and dates of any action taken by the licence holder to investigate or respond to any complaint; and

(e) the likely source of the complaint.

39. The licence holder must:

(a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period; and

(b) prepare and submit to the CEO by no later than 30 April after the end of that annual period an Annual Audit Compliance Report in the approved form.

40. The licence holder must maintain accurate and auditable books including the following records, information, reports, and data required by this licence:

(a) the calculation of fees payable in respect of this licence;

(b) any maintenance of infrastructure that is owned and operated by the licence holder and performed in the course of complying with condition 4 of this licence;

(c) monitoring programmes undertaken in accordance with conditions 4 and 24 to 33 of this licence;

(d) process and monitoring records to provide evidence of compliance with conditions 21 and 22 of this licence; and

(e) complaints received under condition 38 of this licence.

41. The books specified under condition 40 must:

(a) be legible;

(b) if amended, be amended in such a way that the original version(s) and any subsequent amendments remain legible and are capable of retrieval;

(c) be retained by the licence holder for the duration of the licence; and

(d) be available to be produced to an inspector or the CEO as required.

Works

42. The licence holder must:

(a) construct and install the infrastructure and equipment;

(b) in accordance with corresponding design and construction/installation requirements; and

(c) at the corresponding infrastructure location, as set out in Table 13.

43. The licence holder must not depart from the requirements specified in Table 13 except:

(a) where such departure does not increase risks to public health, public amenity or the environment; and

(b) all other conditions in this licence are still satisfied.

Table 13: Design and construction / installation requirements

	Infrastructure/ equipment	Design and construction/ installation requirements	Infrastructure location
1.	Landfill gas flares	• Up to three HOFGAS-IFL4c Enclosed High Temperature Flares (or similar) installed in accordance with manufacturer specifications; • Minimum separation distance of 10 metres achieved between landfill gas flares and surrounding vegetation; and • Installed by a suitably qualified person.	'Landfill gas flare proposed location' in Figure 4.
2.	Expansion FOGO hardstand	• Any landfill gas infrastructure that will be potentially impacted by hardstand construction works must be altered by a landfill gas contractor prior to hardstand construction works commencing; • Must be constructed according to the specifications in Figure 5, Figure 6 and Figure 7; • Subgrade must be proof rolled and prepared to be smooth and free of debris, roots, sticks and sharp rocks. Any identified soft spots must be reworked, and proof rolled; • Subbase must be compacted to a minimum 95% of maximum dry density (MDD) when tested in accordance with AS 1289.5; • Engineered Clay Attenuation Layer must be installed in accordance with AS 3798-2007, constructed with clay placed in layers not exceeding 300 mm and then compacted to achieve a thickness of at least 500 mm; • Engineered Clay Attenuation Layer must achieve a coefficient of permeability equal to or less than $1x10^{-8}$ m/s and be compacted to at least 95% maximum dry density. • Engineered Clay Attenuation Layer must be covered by a protective cover layer of ferricrete (crushed lateritic gravels) at least 500 mm thick • Ferricrete layer must be compacted to a minimum of 95% maximum dry density when tested in accordance with AS 1289.5; • Finished hardstand must be in uniformly bound condition with no evidence of layering or disintegration, with a dense texture and tightly bound; • Must be graded with a fall of approximately 2% towards the expansion leachate pond; and • Must be surrounded by a perimeter ferricrete bund at least 500 mm high and 1000 mm wide. • A water cart is used for dust suppression during	As depicted in Figure 4b.

	Infrastructure/ equipment	Design and construction/ installation requirements	Infrastructure location
		construction of the new hardstand.	
3.	Expansion leachate pond	• Any landfill gas infrastructure that will be potentially impacted by leachate pond construction works must be altered by a landfill gas contractor prior to hardstand construction works commencing; • Must be constructed according to the specifications in Figure 5, Figure 6 and Figure 7; • Subgrade must be proof rolled and prepared to be smooth and free of debris, roots, sticks and sharp rocks. Any identified soft spots must be reworked, and proof rolled; • Subbase must be compacted to a minimum 95% of maximum dry density (MDD) when tested in accordance with AS 1289.5; • Engineered Clay Attenuation Layer must be installed in accordance with AS 3798-2007, constructed with clay placed in layers not exceeding 300 mm and then compacted to achieve a thickness of at least 500 mm; • Engineered Clay Attenuation Layer must achieve a coefficient of permeability equal to or less than $1x10^{-8}$ m/s and be compacted to at least 95% maximum dry density. • Engineered Clay Attenuation Layer must be overlain by a 2 mm HDPE geomembrane liner that is free from leaks and defects; • All seams and joins in the HDPE geomembrane liner must be tested to ensure they are free from leaks and defects; • Must have a minimum capacity of 1,100 m^3; • Construction of the expansion leachate pond must not disturb historically landfilled waste in this area.	As depicted in Figure 4b.
4.	Automatic leachate pump	• An automatic pump system must be installed in the expansion leachate pond to pump leachate to alternative leachate ponds if maximum capacity is reached.	At the Expansion leachate pond as depicted in Figure 4b.
5.	Expansion leachate drain and pit	• Must be constructed to direct run off directly from the expansion FOGO hardstand to the expansion leachate pond; • Subgrade must be prepared to be smooth and free of soft spots, debris, roots, sticks and sharp rocks; • Must be lined with a 2 mm HDPE geomembrane liner that is free from leaks	As depicted in Figure 6.

	Infrastructure/ equipment	Design and construction/ installation requirements	Infrastructure location
		and defects; • All seams and joins in the HDPE geomembrane liner must be tested to ensure they are free from leaks and defects; • HDPE geomembrane liner must be overlain by a cushion geotextile; • Cushion geotextile must be overlain by stone pitching comprising 200-300 mm spalls which is placed in a manner that does not cause damage to the underlying cushion geotextile and HDPE geomembrane.	
6.	Picking station	• Must be installed according to the general arrangement as depicted in Figure 8.	As depicted in Figure 4b.
7.	Mobile aerated floors (MAFs)	• Additional MAF systems must be installed at the FOGO facility	As depicted in Figure 4b.

44. The licence holder must undertake quality assurance including visual inspection and materials testing requirements as specified in Table 14, at the corresponding frequency specified in that table.

Table 14: Construction quality assurance requirements

Infrastructure	Item	Property	Requirement	Frequency
Expansion FOGO hardstand	Subgrade	Smooth and free of soft spots, debris, roots, sticks and sharp rocks	Documented visual inspection	Across entire surface prior to placement of clay layer
	Subbase	Compaction and density (as % maximum dry density)	In situ dry density/ moisture tests in accordance with AS 1289.5	1 per 500 m3 or 1 per 2,500 m2 per clay lift or 3 tests per lot, whichever requires the most tests
	Engineered Clay Attenuation Layer	Coefficient of permeability	Laboratory test in accordance with AS 1289.6.7.1 or AS 1289.6.7.2	2 samples
		Compaction and density (as % maximum dry density)	In situ dry density/ moisture tests in accordance with AS 1289.5	11 samples (in-situ dry density/ moisture) 3 samples (MMDD compaction)
		Compaction	In situ dry	10 samples (in-situ dry

	Ferricrete cover	and density (as % maximum dry density)	density/ moisture tests in accordance with AS 1289.5	density/ moisture) 2 samples (MMDD compaction)
		Uniformly bound, no evidence of layering or disintegration, dense texture and tightly bound	Documented visual inspection	Across entire surface on completion of surface
Expansion leachate pond	Subgrade	Smooth and free of soft spots, debris, roots, sticks and sharp rocks	Documented visual inspection	Across entire surface prior to placement of clay layer
	Subbase	Compaction and density (as % maximum dry density)	In situ dry density/ moisture tests in accordance with AS 1289.5	1 per 500 m3 or 1 per 2,500 m2 per clay lift or 3 tests per lot, whichever requires the most tests
	Engineered Clay Attenuation Layer	Coefficient of permeability	Laboratory test in accordance with AS 1289.6.7.1 or AS 1289.6.7.2	1 sample
		Compaction and density (as % maximum dry density)	In situ dry density/ moisture tests in accordance with AS 1289.5	2 samples (in-situ dry density/ moisture) 1 sample (MMDD compaction)
	HDPE geomembrane liner	Tears, punctures, abrasions, cracks, indentations, thin spots, or other faults	Documented visual inspection	Across entire surface prior to placement of cushion geotextile
		Seams	Non-destructive testing along the entire length	All seams, including patches and repairs
Expansion leachate drain and pit	Subgrade	Smooth and free of soft spots, debris, roots, sticks and sharp rocks	Documented visual inspection	Across entire surface prior to placement of HDPE geomembrane
	HDPE	Tears,	Documented	Across entire surface prior

	geomembrane liner	punctures, abrasions, cracks, indentations, thin spots, or other faults	visual inspection	to placement of cushion geotextile
		Seams	Non-destructive testing along the entire length	All seams, including patches and repairs

45. The licence holder must within 30 calendar days of an item of infrastructure or equipment required by condition 42 being constructed or installed:

(a) undertake an audit of their compliance with the requirements of conditions 42, and 43 and 44; and

(b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.

46. The Environmental Compliance Report required by condition 45, must include as a minimum the following:

(a) certification by a suitably qualified person (as defined in Table 15) that the items of infrastructure and equipment or component(s) thereof, as specified in condition 42, have been constructed in accordance with the relevant requirements specified in conditions 42 and 43;

(b) records of construction quality assurance inspections and test results in accordance with the relevant requirements specified in condition 44 and including a labelled map of test locations

(c) as constructed plans (including survey heights for the new hardstand) and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 42;

(d) photographs of each item of infrastructure or equipment specified in condition 42;

(e) be signed by a person authorised to represent the licence holder and contains the printed name and position of that person; and

(f) where a departure from the requirements in condition 42 occurs and is of a type allowed by condition 43, the licence holder must provide a description of, and explanation for, the departure.

Definitions

In this licence, the terms in Table 15 have the meanings defined.

Table 15: Definitions

Term	Definition
AACR	Annual Audit Compliance Report and means a report submitted in a format approved by the CEO (relevant guidelines and templates may be available on the Department's website).
ACM	means asbestos containing material and has the meaning defined for bonded asbestos-containing material in the document titled 'Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites in Western Australia' published by the Department of Health
AHD	means Australian Height Datum
annual period	means the inclusive period from 1 January until 31 December in the same year.
Approved and approval	means approved and approval in writing, respectively
Asbestos	means the asbestiform variety of mineral silicates belonging to the serpentine or amphibole groups of rock-forming minerals and includes actinolite, amosite, anthophyllite, chrysolite, crocidolite, tremolite and any mixture containing 2 or more of those
Asbestos fibres	has the meaning defined for asbestos fines in the document titled 'Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites in Western Australia' published by the Department of Health
ASLP	Australian Standard Leaching Procedure
AS 1289.5	means the Australian Standard AS 1289.5 Methods of testing soils for engineering purposes, Soil compaction and density test series
AS 1289.6.7.1	means the Australian Standard AS 1289.6.7.1 Methods of testing soils for engineering purposes - Soil strength and consolidation tests—Determination of permeability of a soil— Constant head method for a remoulded specimen
AS 1289.6.7.2	means the Australian Standard AS 1289.6.7.2 Methods of testing soils for engineering purposes - Soil strength and consolidation tests – Determination of permeability of a soil – Falling head method for a remoulded specimen

Term	Definition
AS/NZS 3580.9.3	means the Australian Standard AS/NZS 3580.9.3 Methods for sampling and analysis of ambient air - Determination of suspended particulate matter – Total suspended particulate matter (TSP) – High volume sampler gravimetric method.
AS/NZS 3580.9.6	means the Australian Standard AS/NZS 3580.9.6:2015 Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM10 high volume sampler with size selective inlet - Gravimetric method
AS/NZS 3580.9.15	means the Australian Standard AS/NZS 3580.9.15 Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - Particulate metals high or low volume sampler gravimetric collection - Inductively coupled plasma (ICP) spectrometric method
AS 3798-2007	means the Australian Standard Guidelines on earthworks for commercial and residential developments
AS 4454	means the Australian Standard AS 4454 Composts, soil conditioners and mulches
AS/NZS 5667.6	means the Australian Standard AS/NZS 5667.6 Water Quality – Sampling – Guidance on sampling of rivers and streams
AS/NZS 5667.11	means the Australian Standard AS/NZS 5667.11 Water Quality – Sampling – Guidance on sampling of groundwaters
BGL	means below ground level
books	has the same meaning given to that term under the EP Act.
Category/Categories Cat.	Categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CEO	means Chief Executive Officer of the Department- "submit to / notify the CEO" (or similar), means either: Director General Department administering the *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 or: info@dwer.wa.gov.au
Clean Fill	means waste as defined in the Landfill Definitions

Term	Definition
Code of Practice for Clinical and Related Waste Management	means the document titled 'Code of Practice for Clinical and Related Waste Management' published by the Department of Health
Composting Products	means final compost or soil improver produced by composting of Green Waste or FOGO waste
condition	means a condition to which this licence is subject under s.62 of the EP Act.
Contaminated solid waste	means solid waste that has a substance in it at above background concentrations that presents, or has the potential to present, a risk of harm to human health, the environment or any environmental value
Cover material	means clean fill, uncontaminated fill, other approved inert waste or proprietary alternative daily cover (ADC) treatments or other materials that satisfies the requirement to mitigate against any environmental health impacts from landfilled waste.
Damp	means moist to the touch
daylight hours	means the hours between sunrise and sunset.
Department	means the department established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the EP Act.
Discharge	has the same meaning given to that term under the EP Act.
DWER	Department of Water and Environmental Regulation.
Emission	has the same meaning given to that term under the EP Act.
encapsulation	has the same meaning given to that term in the Landfill Definitions
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure and equipment has been installed in accordance with the licence.
EP Act	means the *Environmental Protection Act 1986* (WA).
EP Regulations	means the *Environmental Protection Regulations 1987* (WA).
e-waste	means electronic and electrical waste including, but not limited to, televisions, computers, mobile phones, kitchen appliances and white goods.
FOGO	means food organics and garden organics collected from kerbside municipal collections of designated FOGO bins

Term	Definition
Freeboard	means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point
Green Waste	means waste that originates from flora and which does not contain or has not been treated or coated with, preserving agents, biocides, fire retardants, paint, adhesives or binders
Guideline: Assessment and management of contaminated sites	means the document titled 'Guideline: Assessment and management of contaminated sites' published by the department
hardstand	means the material or a layer or a barrier with a permeability of hydraulic conductivity of 10^{-9} metres per second or less at unity hydraulic gradient
household hazardous waste	means the products used in and around the home that are flammable, toxic, explosive or corrosive.
Inert Waste Type 1	has the same meaning given to that term in the Landfill Definitions
Inert Waste Type 2	has the same meaning given to that term in the Landfill Definitions
Landfill Definitions	means the document titled 'Landfill Waste Classification and Waste Definitions 1996' published by the CEO as amended from time to time
leachate	means liquid that has percolated through and/or been generated by the decomposition of waste material including water that has interacted with waste, material undergoing composting or Composting Products
licence	refers to this document, 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.
Mobile aerated floors (MAFs)	refers to the mobile aerated floors operating in forward aeration mode or reverse aeration (drawdown) mode and designated for the receipt and initial storage of FOGO feedstocks on their arrival at the premises, and the composting of FOGO.
Minister	the Minister responsible for the EP Act and associated regulations
Ministerial Statement 462	refers to Ministerial Statement 462 issued on 20 November 1997 by the Minister under s.45 of the EP Act, and including any changes made under s.45C and s.46 of the EP Act.

Term	Definition
MPN	most probable number
NATA	National Association of Testing Authorities
Hazardous Waste	means waste as defined in the Landfill Definitions
PFAS	perfluoralkyl and polyfluoralkyl substances
power pole waste	means wastes derived from a treated timber pole used to support an overhead electricity service cable or other electricity transmission infrastructure. The treatment method for power pole waste varies and may include the use of preservatives containing copper, chromium and arsenic and/or other insecticide, fungicide or preservative chemicals.
premises	refers to the premises to which this licence applies, as specified at the front of this licence and as shown on the map in Schedule 1 to this licence
PM_{10}	means particulate matter 10 micrometers or less in diameter.
prescribed premises	has the same meaning given to that term under the EP Act.
Putrescible Waste	means the component of the waste stream likely to become putrid – including wastes that contain organic materials such as food wastes or wastes of animal or vegetable origin, which readily bio-degrade within the environment of a landfill
Radioactive Waste Disposal Guidelines	Department of Health *Radioactive Waste Disposal: Limits and Procedures for the Disposal of Medical and Research Wastes at Landfill Sites Licensed by the Department of Environmental Protection,* June 1996, updated 2007
Residual physical contaminants	means physical contaminants such as plastics, glass and metals which have been screened or otherwise removed from composting feedstocks.
Special Waste Type 1	means waste as defined in the Landfill Definitions
Special Waste Type 2	means waste as defined in the Landfill Definitions
Special Waste Type 3	means waste as defined in the Landfill Definitions

Term	Definition
Suitably qualified person	in relation to: - installation of the landfill gas flares, means a mechanical engineer and qualified gas fitter with at least three years' experience undertaking or supervising the installation of landfill gas flares. - installation of the expansion hardstand, expansion leachate pond, and associated infrastructure, means a civil engineer with at least three years' experience supervising the construction of waste containment infrastructure.
TSP	means Total Suspended Particulate matter; all particles entrained/suspended in the atmosphere and includes the fine, respirable particles (PM_{10} and $PM_{2.5}$) and larger size particles that may settle out of the air causing nuisance impacts, usually measured as those particles having an equivalent aerodynamic diameter of 50 micrometres or less.
Uncontaminated Fill	means waste as defined in the Landfill Definitions
USEPA Method 6C	means the United States Environmental Protection Agency Method 6C Determination of sulfur dioxide emissions from stationary sources (Instrumental Analyzer Procedure)
USEPA Method 7E	means the United States Environmental Protection Agency Method 7E Determination of nitrogen oxides emissions from stationary sources (Instrumental Analyzer Procedure)
USEPA Method 10	means the United States Environmental Protection Agency Method 10 Determination of carbon monoxide emissions from stationary sources (Instrumental Analyzer Procedure)
USEPA Method 18	means the United States Environmental Protection Agency Method 18 Measurement of gaseous organic compound emissions by gas chromatography
Waste	has the same meaning given to that term under the EP Act.

END OF CONDITIONS

Schedule 1: Maps

Premises map

The boundary of the prescribed premises is shown by the red line in the map below (Figure 1). Cadastral boundaries within the Premises are shown in yellow.

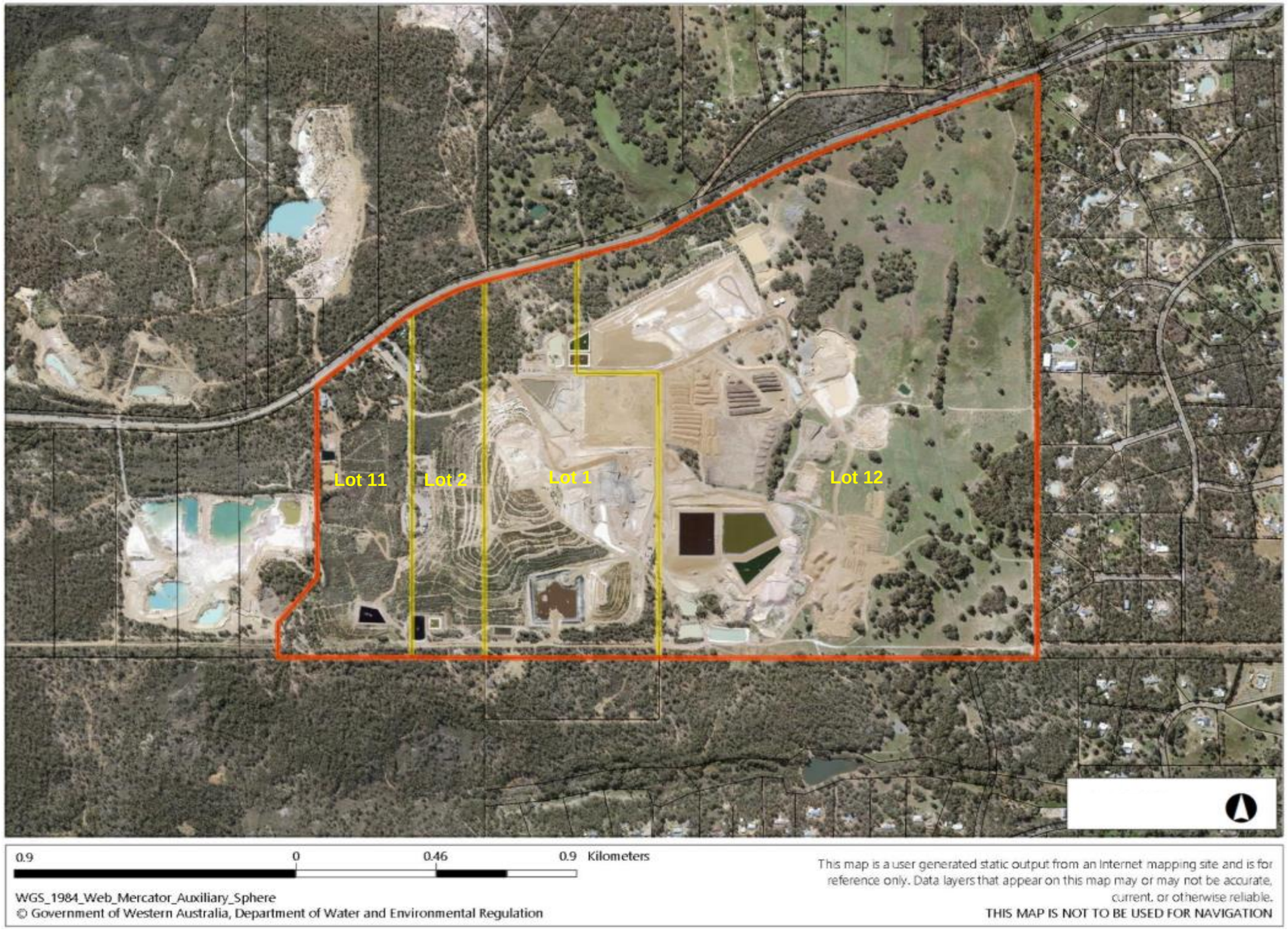


Figure 1: Map of the boundary of the prescribed premises

Premises layout

The layout of the prescribed premises is shown in the map below (Figure 2).

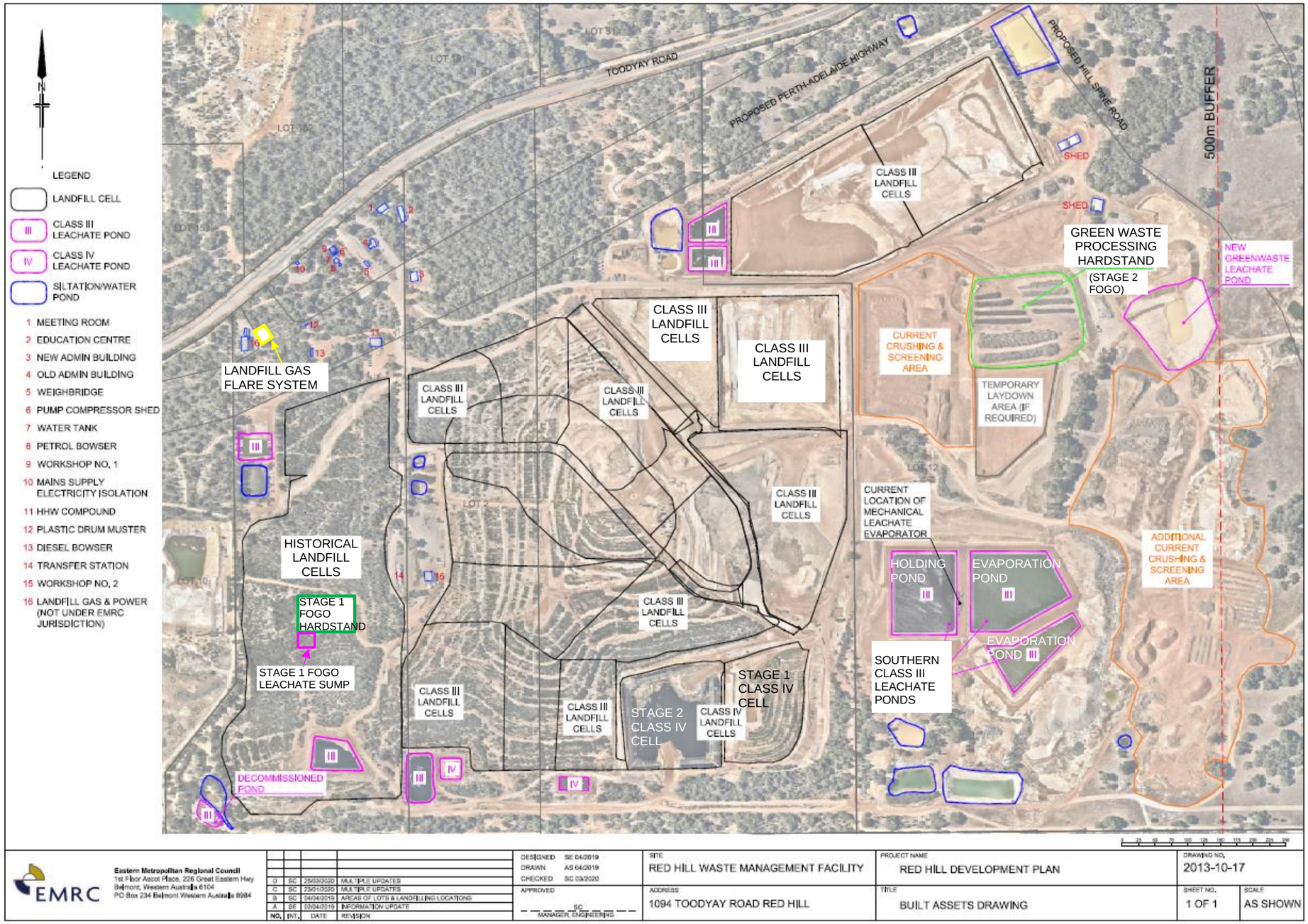


Figure 2: Map of the premises layout

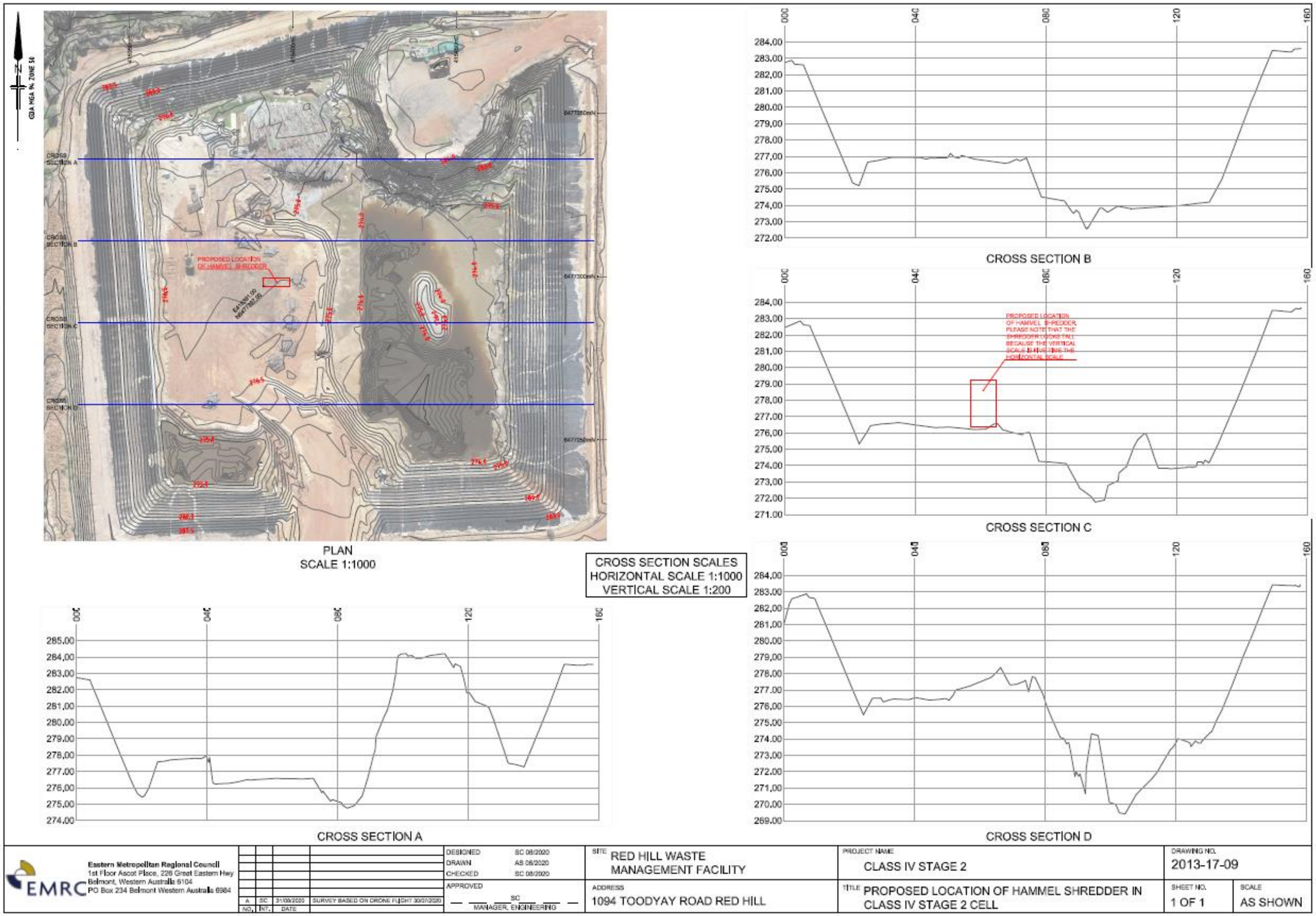


Figure 2a: Location of shredder within the Stage 2 Class IV cell

Mechanical evaporator exclusion zone

Figure 3: Map of the mechanical evaporator exclusion zone

Landfill gas flare and HHW compound locations

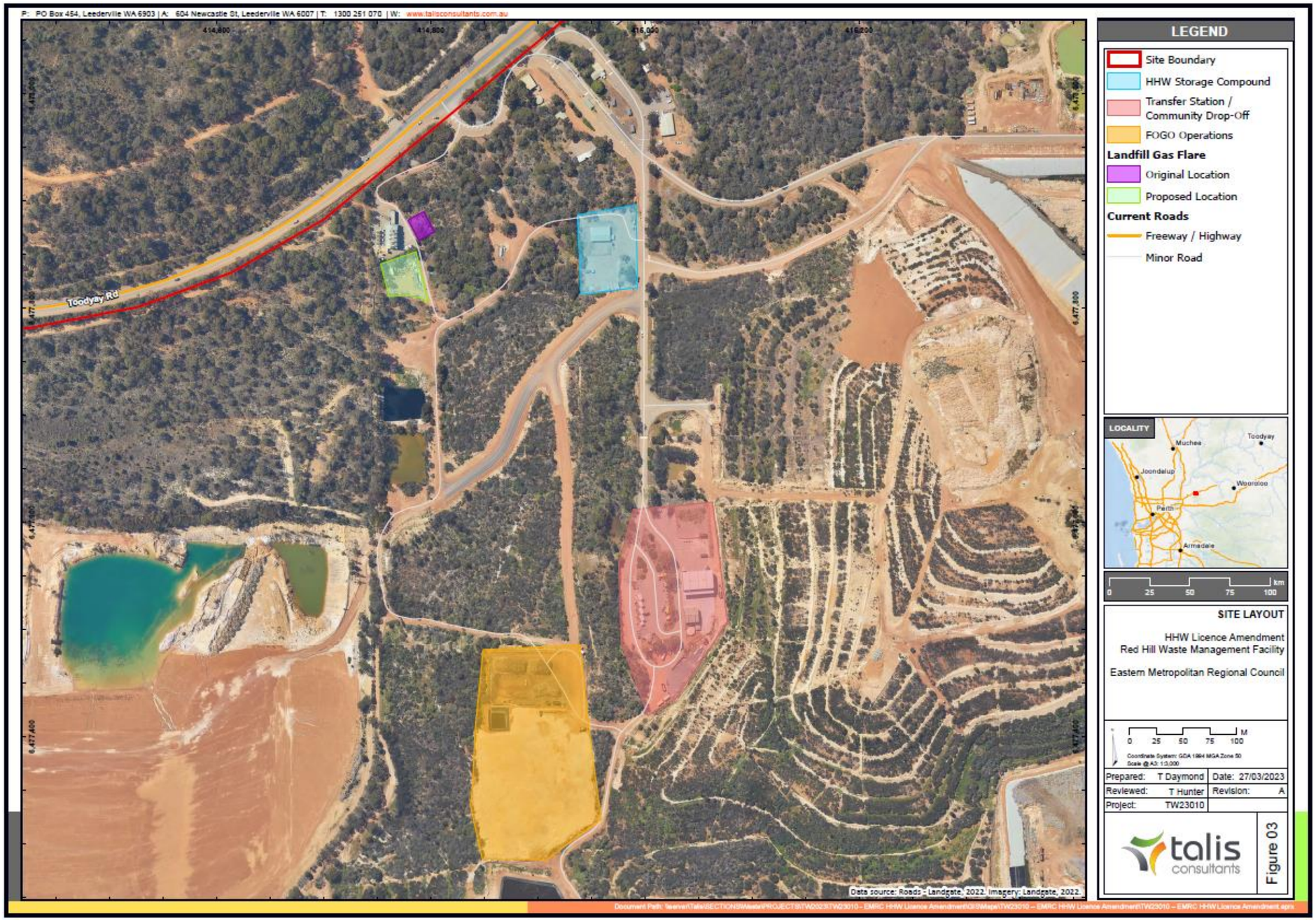


Figure 4: Overview of the landfill gas flare and HHW compound locations

Siltation/water ponds map

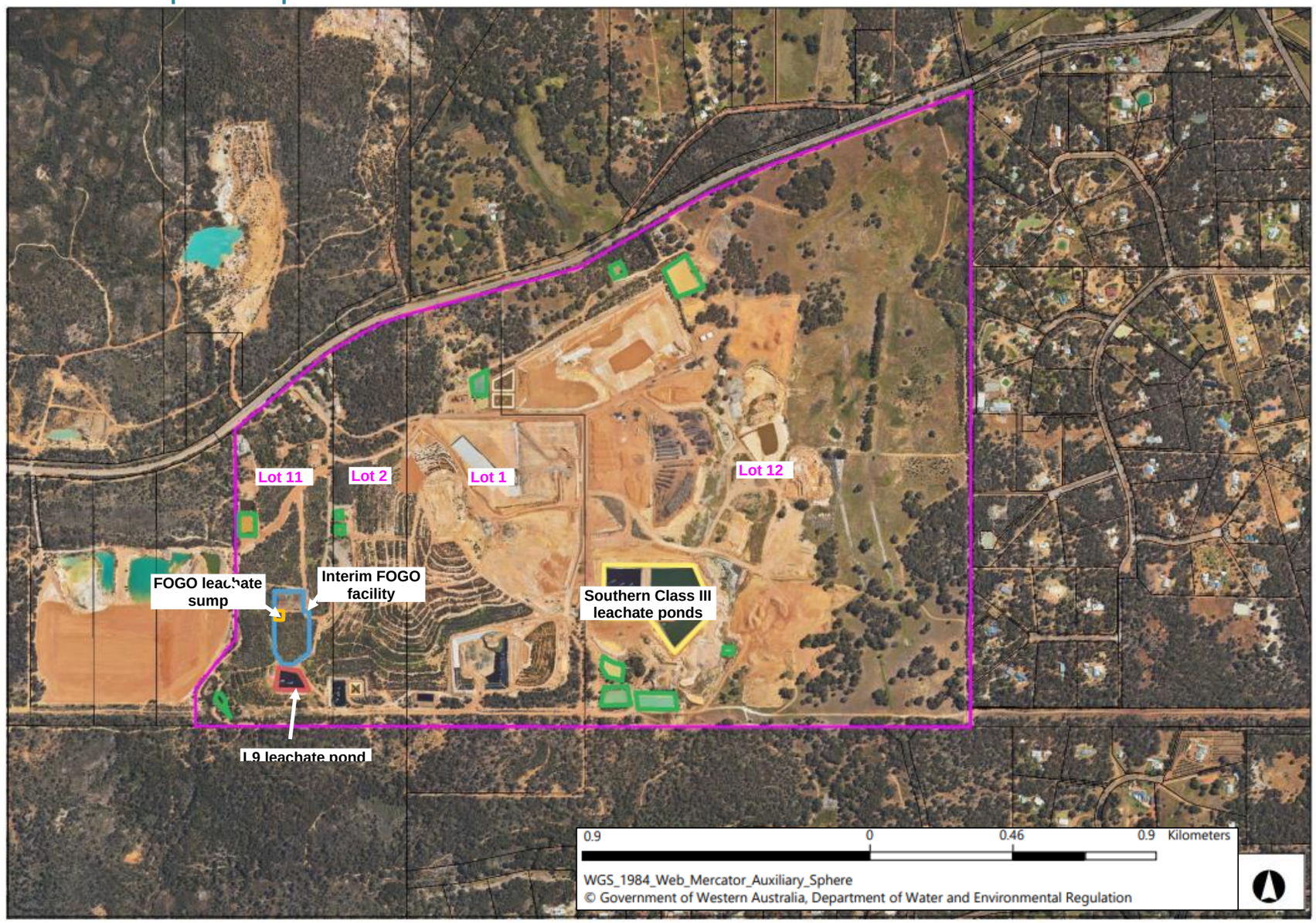


Figure 4a: Overview of the siltation/water ponds – green polygons show the location of siltation/water ponds.

Interim FOGO facility map

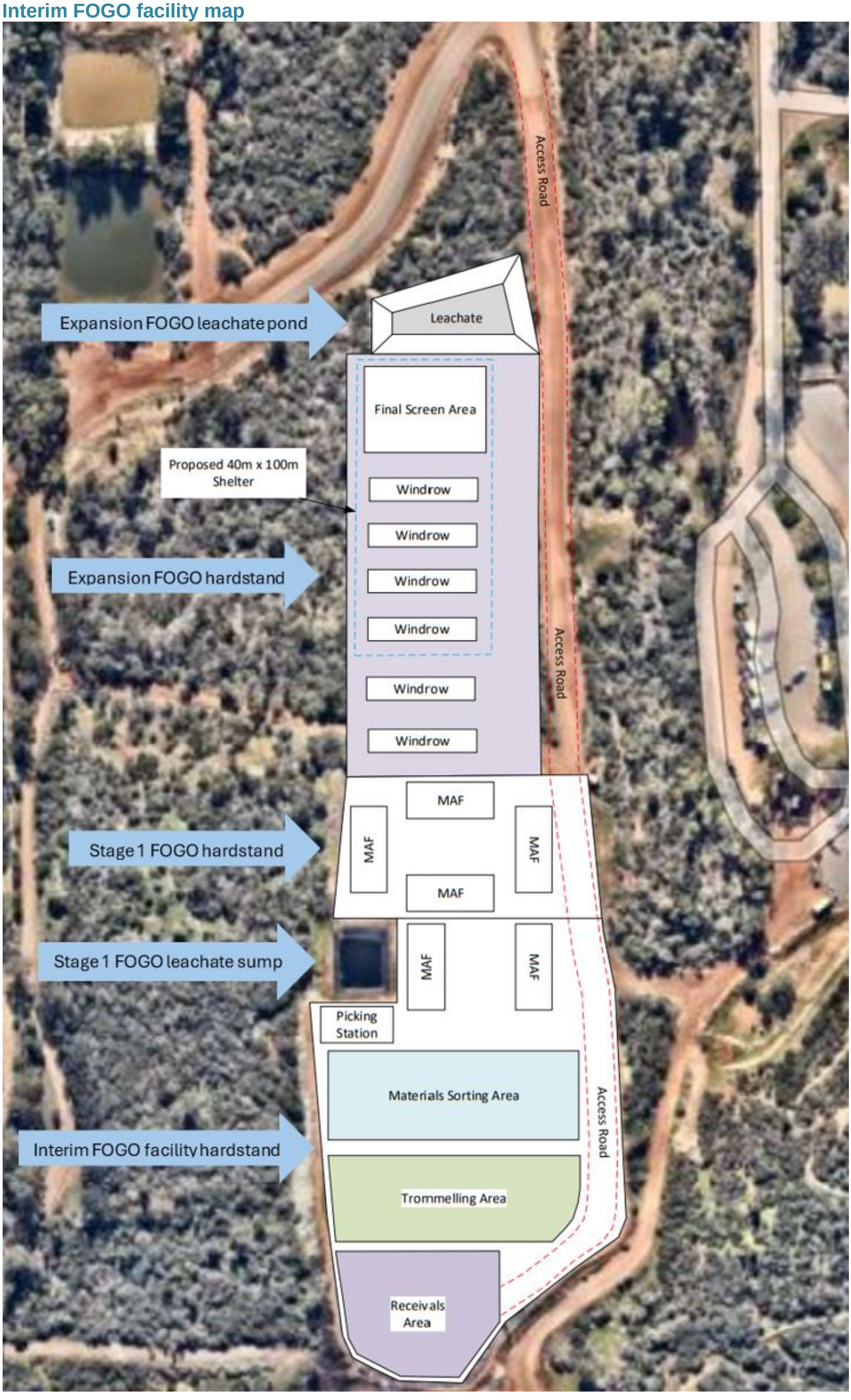


Figure 4b: Overview of the FOGO facility including the Stage 1 FOGO hardstand, interim FOGO facility hardstand, and expansion FOGO hardstand

HHW compound layout

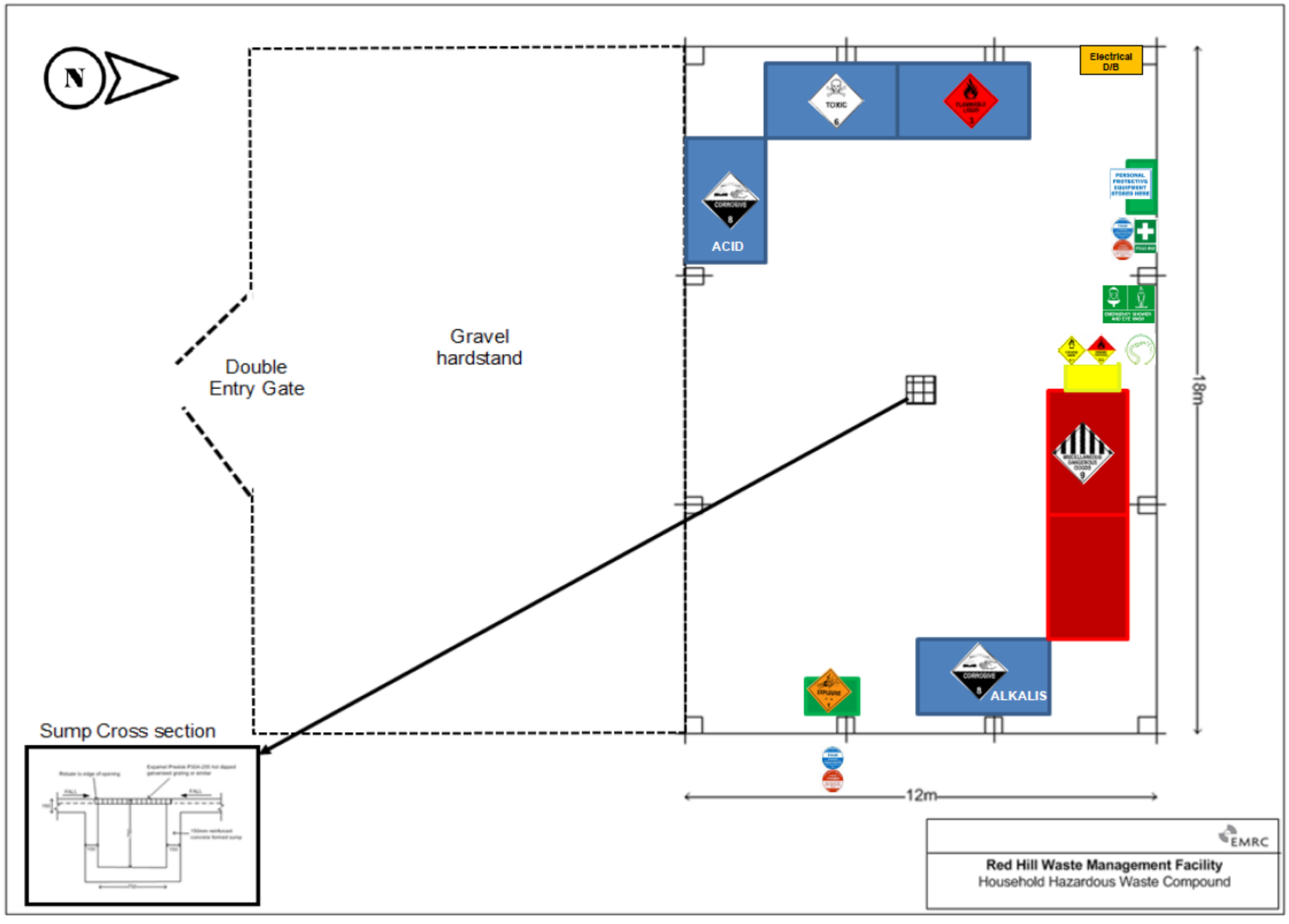
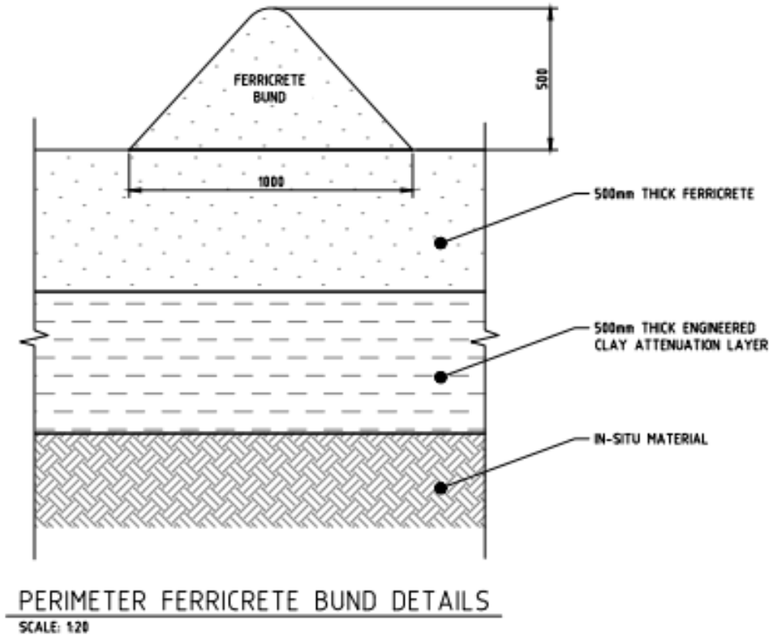
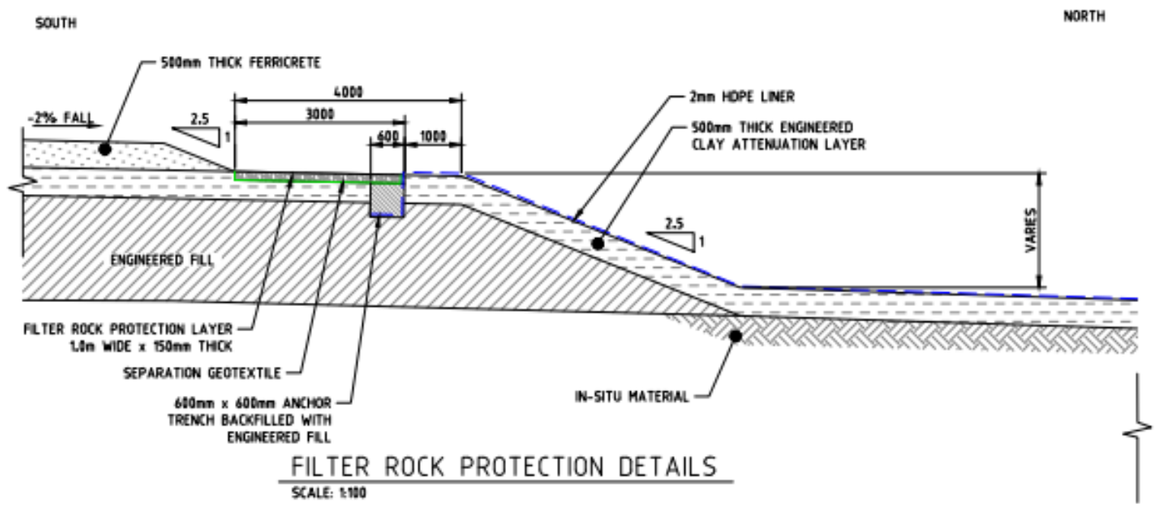
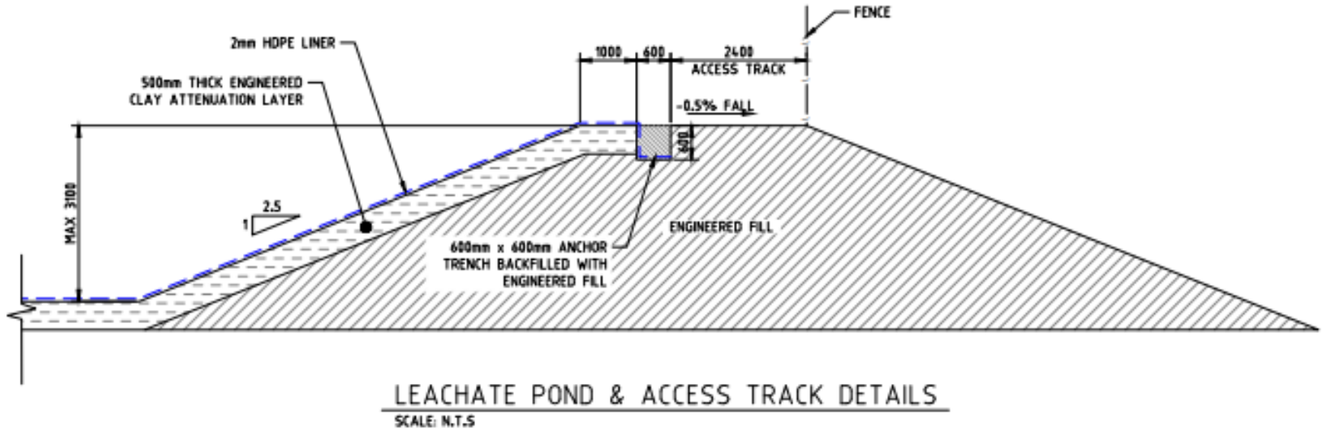


Figure 4c: Overview of the HHW compound layout

FOGO facility expansion

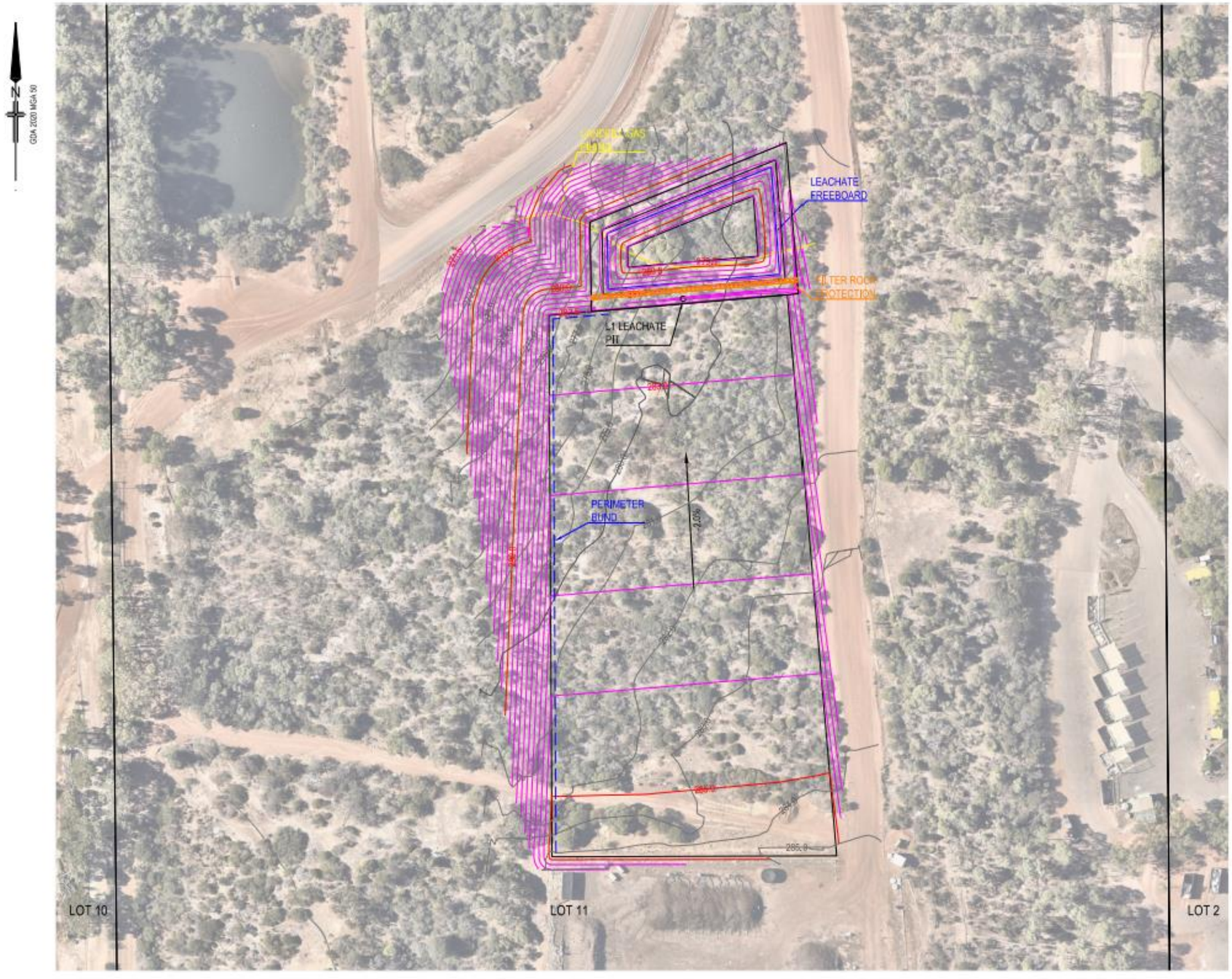






FOR CONSTRUCTION

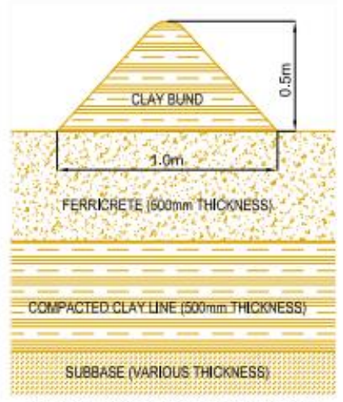
Figure 5: FOGO expansion hardstand and leachate pond construction specifications



PLAN
SCALE 1:1,000

VOLUME CALCULATIONS		
DESCRIPTION	VOLUME (m^3)	CALCULATION METHOD
EARTHWORKS - FILL	33,600	CIVIL 3D
LEACHATE VOLUME REQUIRED	1,100	1 IN 100 YEAR STORM FORMULAE

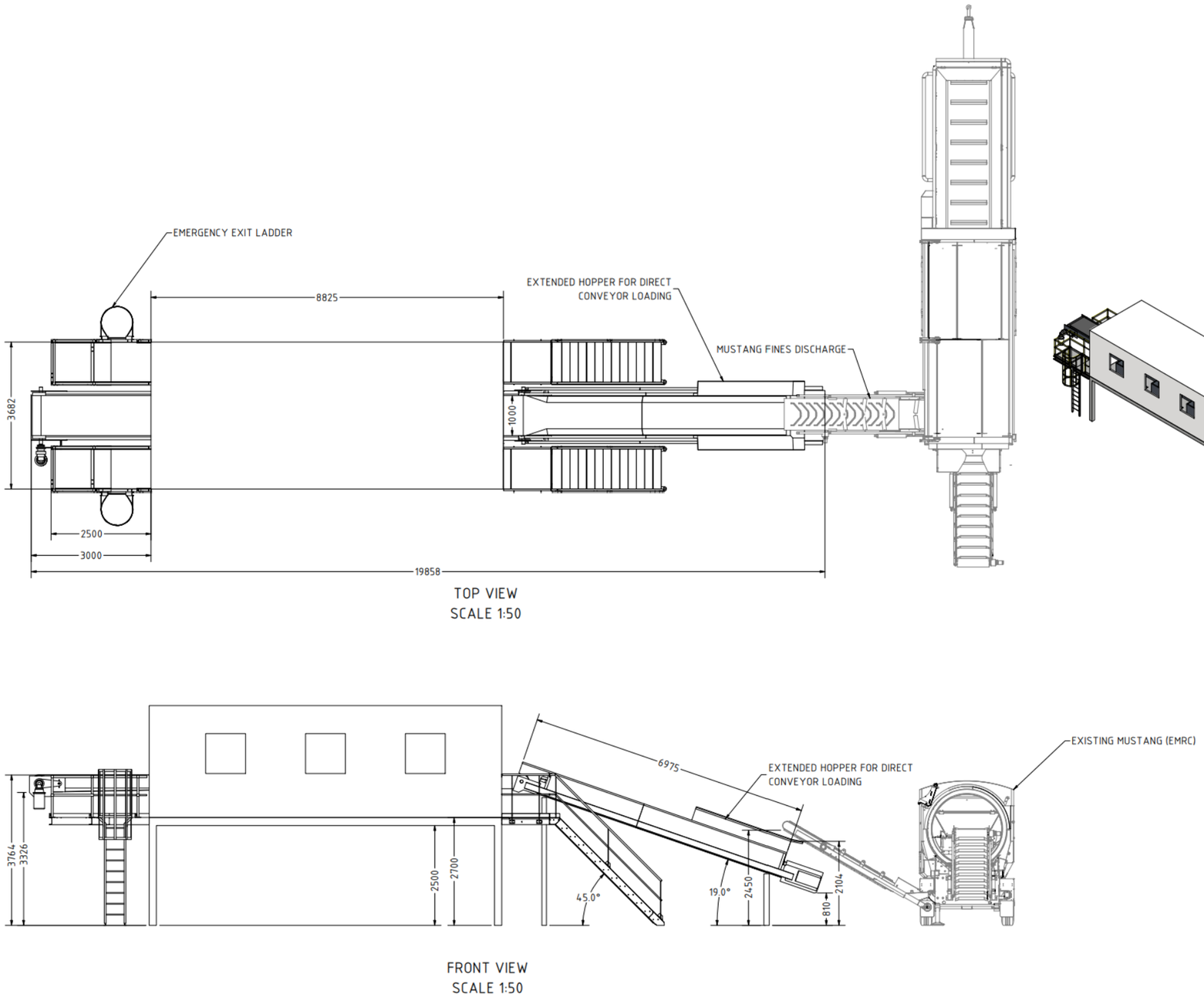
LEGEND - CONTOURS
FINAL LEVELS
EXISTING LEVELS

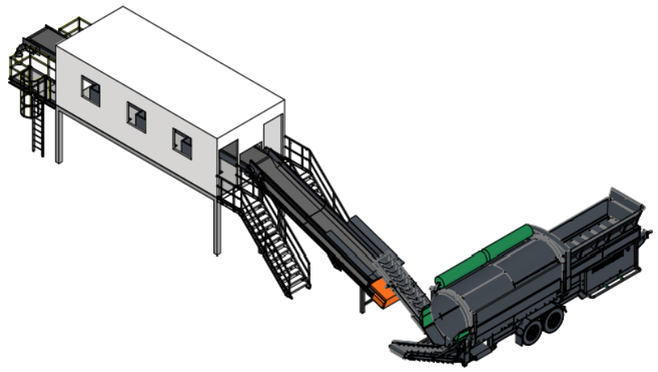


HARDSTAND FILL & BUND DETAILS - OPTION 1
SCALE 1:25

Figure 6: FOGO expansion hardstand and leachate pond construction specifications

Figure 7: FOGO expansion hardstand and leachate pond construction specifications





ISOMETRIC VIEW
SCALE 1:100

Figure 8: Picking station general arrangement

Schedule 2: Monitoring

Surface water monitoring – PFAS waste disposal

The licence holder must monitor surface water at the locations listed in Table 16:

(a) for the corresponding parameters;

(b) in the corresponding units;

(c) for the corresponding averaging period;

(d) at no less than the corresponding frequency; and

(e) using the corresponding method,

as set out in Table 16.

Table 16: Surface water monitoring

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Location	**Parameter**	**Units**	**Averaging period**	**Frequency**	**Method**
CTC1, CTC2, S7 and FSP1 As depicted in the 'Map of surface water monitoring locations' in this schedule	pH[1]	pH units	Spot sample	Annually	AS/NZS 5667.6
	Temperature[1]	Degrees C			
	Electrical conductivity[1]	µS / cm			
	Perfluorooctane sulfonate (PFOS)	µg/L			
	Perfluorooctanoic acid (PFOA)				
	6:2 Fluorotelomer sulfonate (6:2 FtS)				
	8:2 Fluorotelomer sulfonate (8:2 FtS)				
	Perfluoroheptanoic acid (PFHpA)				
	Perfluorobutane sulfonate (PFBS)				
	Perfluorobutanoic acid (PFBA)				
	Perfluorohexanoic acid (PFHxA)				
	Perfluorohexane sulfonate (PFHxs)				
	Perfluoropentanoic acid (PFPeA)				

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

Groundwater monitoring – PFAS waste disposal

The licence holder must monitor groundwater at the locations listed in Table 17:

(a) for the corresponding parameters;

(b) in the corresponding units;

(c) for the corresponding averaging period;

(d) at no less than the corresponding frequency; and

(e) using the corresponding method,

as set out in Table 17.

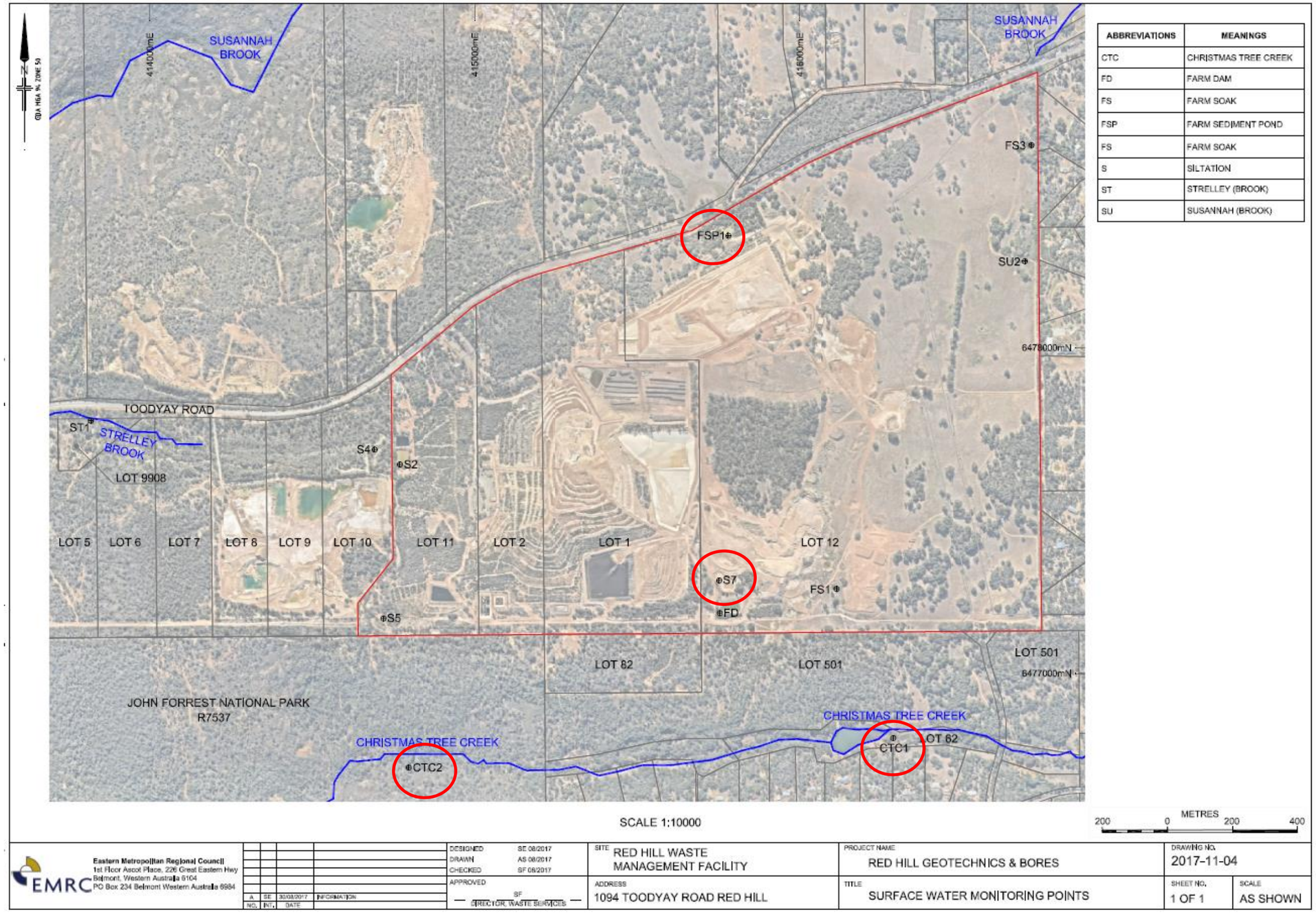
Table 17: Groundwater monitoring

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Location	**Parameter**	**Units**	**Averaging period**	**Frequency**	**Method**
Farm Stage 1 and 2: FMB5, FMB6, FMB7, and FMB8 **Stage 15:** P1, SP36D, SP37D, SP5D and SP46D **Stage 14 and 16:** SP47D As depicted in the 'Map of groundwater monitoring locations' in this schedule	Standing water level[1]	m(AHD) and m(BGL)	Spot sample	Six monthly; (at least five months apart)	AS/NZS 5667.11
	pH[1]	pH units			
	Electrical conductivity[1]	µS / cm			
	Perfluorooctane sulfonate (PFOS)	µg/L			
	Perfluorooctanoic acid (PFOA)				
	6:2 Fluorotelomer sulfonate (6:2 FtS)				
	8:2 Fluorotelomer sulfonate (8:2 FtS)				
	Perfluoroheptanoic acid (PFHpA)				
	Perfluorobutane sulfonate (PFBS)				
	Perfluorobutanoic acid (PFBA)				
	Perfluorohexanoic acid (PFHxA)				
	Perfluorohexane sulfonate (PFHxs)				
	Perfluoropentanoic acid (PFPeA)				

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

Surface water monitoring locations map

Map of surface water monitoring locations (PFAS Waste Disposal). Locations required for monitoring in Schedule 2 are circled in red.



ABBREVIATIONS	MEANINGS
CTC	CHRISTMAS TREE CREEK
FD	FARM DAM
FS	FARM SOAK
FSP	FARM SEDIMENT POND
FS	FARM SOAK
S	SILTATION
ST	STRELLEY (BROOK)
SU	SUSANNAH (BROOK)

Eastern Metropolitan Regional Council
1st Floor Ascot Place, 226 Great Eastern Hwy
Belmont, Western Australia 6104
PO Box 234 Belmont Western Australia 6984

NO.	INT.	DATE	INFORMATION
A	SE	30/08/2017	

DESIGNED SE 08/2017
DRAWN AS 08/2017
CHECKED SF 08/2017
APPROVED SF — DIRECTOR, WASTE SERVICES —

SITE: RED HILL WASTE MANAGEMENT FACILITY
ADDRESS: 1094 TOODYAY ROAD RED HILL
PROJECT NAME: RED HILL GEOTECHNICS & BORES
TITLE: SURFACE WATER MONITORING POINTS
DRAWING NO.: 2017-11-04
SHEET NO.: 1 OF 1
SCALE: AS SHOWN

Figure 9: Map of the surface water monitoring locations

Groundwater monitoring locations map

Map of groundwater monitoring locations (PFAS Waste Disposal). Locations required for monitoring in Schedule 2 are circled in blue.

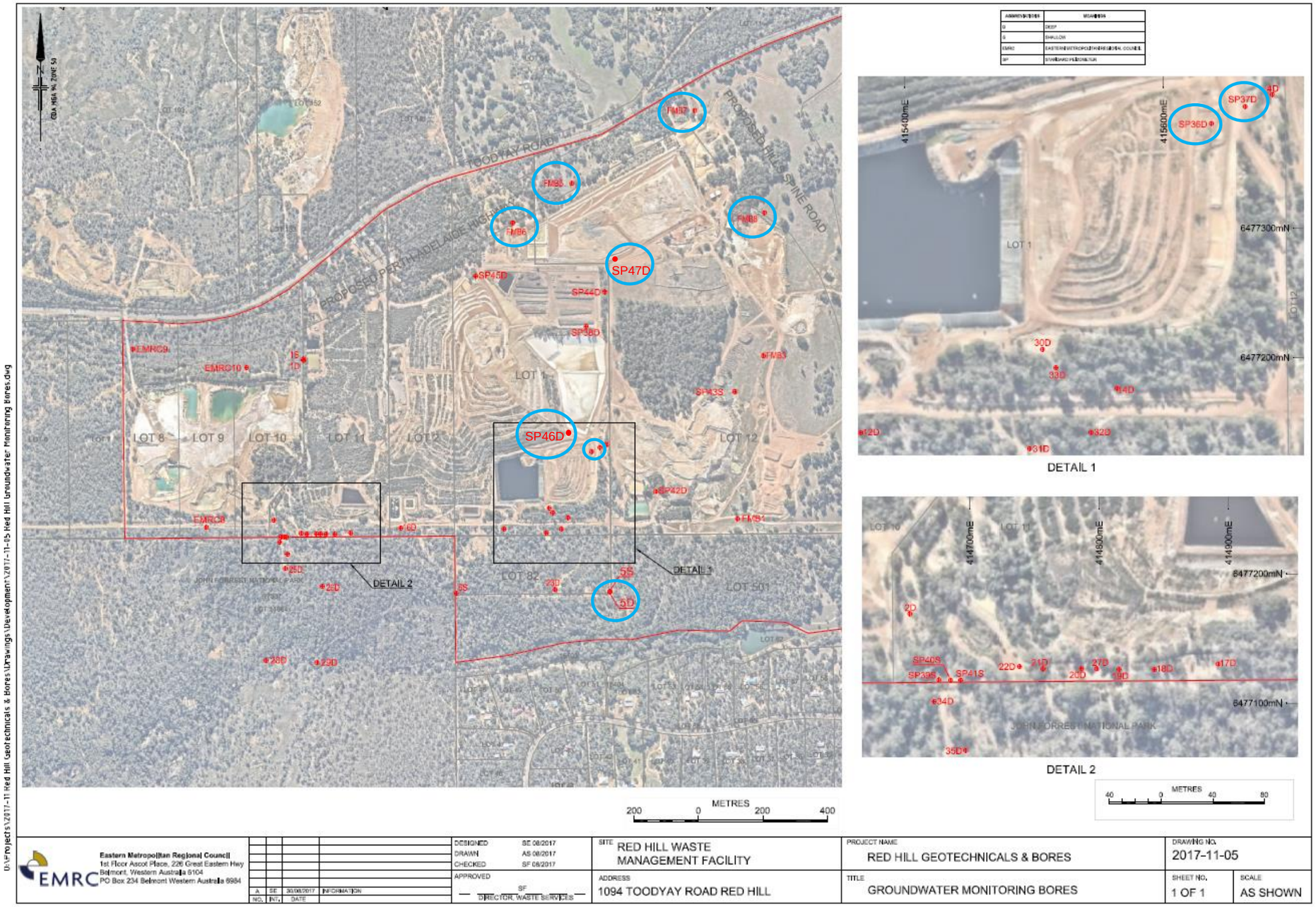


Figure 10: Map of the groundwater monitoring locations

Schedule 3

Landfill acceptance criteria for Special Waste Type 3

Landfill Class		**Landfill Acceptance Criteria**[1]	
		PFOS + PFHxS	PFOA
Class III landfill	ASLP leachable concentration (µg/L) (ASLP 3)	0.7 µg/L	5.6 µg/L
	Concentration Limit (CL3) (mg/kg)	50 mg/kg	50 mg/kg

Note 1: Concentrations must be less than both the relevant leachable concentration and the concentration limit.

Schedule 4

Household hazardous waste material categories

The following waste materials are covered under the HHW Program[1]:

Acids
Aerosols – CFC based
Aerosols, flammable – paint and lacquers
Aerosols, flammable - pesticide
Alkali
Arsenic based products
Batteries - household, dry cell
Cyanides
Engine coolants and glycols
Fire extinguishers – non-Halon
Flammable liquids – hydrocarbons and fuels
Flammable solids
Flares
Fluorescent tubes, CFL and light fittings
Gas cylinders – other
Gas cylinders – propane
General household chemicals eg cleaners
Heavy metal compounds
Inorganic oxidising agents – eg pool chlorine
Low level radioactive substances eg smoke detectors
Mercury – elemental
Organic peroxides
Paint – metal based
Paint – other, including isocyanates and amines
Paint – recyclable
Paint – solvent based, including resins and adhesives
Paint – water based
PCB materials
Pesticides – non Schedule X
Pesticides – Schedule X
Solvents – halogenated
Toxics
'unknown chemicals' if they are in a secure, sealed, chemical-resistant container.

[1] https://www.wasteauthority.wa.gov.au/programs/view/household-hazardous-waste