



Works Approval

Works approval number W3086/2025/1

Works approval holder City of Greater Geraldton

Registered business address 63 Cathedral Avenue
GERALDTON WA 6530

Instrument number INS-0003086

Duration 17/12/2025 to 16/12/2030

Date of issue 17/12/2025

Premises details Meru Waste Disposal Facility
Landfill Road
NARNGULU WA 6532

Legal description -
Lot 203 on Plan 403161;
Lot 204 on Plan 403161; and
Part of Lot 2268 on Plan 250829
As defined by the coordinates in Schedule 3

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed production capacity
Category 64 Class 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 <i>Landfill Waste Classification and Waste Definitions 1996</i> , is accepted for burial.	100,000 tonnes per annum

This works approval is granted to the works approval holder, subject to the attached conditions, on 17 December 2025, by:

Abbie Crawford

Manager, Waste Industries

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

Works approval history

Date	Reference number	Summary of changes
17/12/2025	W3086/2025/1	APP-0030173 - Works approval granted.

Interpretation

In this works approval:

- (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 works approval:
 - (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 works approval requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this works approval.

Works approval conditions

The works approval holder must ensure that the following conditions are complied with:

Construction phase

Infrastructure and equipment

1. The works approval holder must:
 - (a) construct or install the infrastructure or equipment;
 - (b) in accordance with the corresponding design, construction or installation requirements; and
 - (c) at the corresponding infrastructure location;
 as set out in Table 1.

Table 1: Infrastructure design, construction and installation requirements

Infrastructure	Design, construction and installation requirements	Infrastructure location
Stormwater infiltration pond and drainage system	<ul style="list-style-type: none"> • Must be constructed according to the details in Figure 5 and Figure 6. • Earthen perimeter swales to be excavated surrounding cell 6, tie-in to the existing swales surrounding cell 5 and direct stormwater to the stormwater pond. • Stormwater pond to be excavated to 60 m wide, 80 m long with a design capacity of 13,600 m³. • Construction with rock pitching at inlet and outlet. • Must be constructed with a 1.8m high chain-link fencing surrounding the infiltration basin with a 4m wide access gate. 	As shown in Schedule 1 Figure 2

2. The works approval holder must:
 - (a) construct the critical containment infrastructure;
 - (b) in accordance with the corresponding design, construction or installation requirements; and
 - (c) at the corresponding infrastructure location;
 as set out in Table 2.

Table 2: Critical containment infrastructure design and construction requirements

	Infrastructure	Design, construction or installation requirements	Infrastructure location
1.	Landfill cell 6	Must be constructed according to the details in Schedule 1, Figure 3, Figure 4, Figure 5, Figure 7, Figure 8, Figure 9, Figure 10 and Figure 11.	As shown in Schedule 1 Figure 2
Landfill cell 6			
2.	Site preparation / sub-base	<ul style="list-style-type: none"> • Must be constructed according to the details in Schedule 1, Figure 3 and Figure 7. • All general fill must meet the requirements for suitable material as per AS 3798. • All fill material to be compacted in accordance with AS 3798 to 95% of its MMDD in layers not exceeding 300 mm. • Must have a moisture content, during and after compaction, within the range of optimum moisture content -2% to +2% as determined by the methods test AS1289, to >95% MMDD. • Maximum deviation from a 3m straight edge placed in any position on the surface must not exceed 15mm. • The sub-base must be smooth, free of debris, roots, sticks and sharp rocks. 	As shown in Schedule 1 Figure 2
3.	Engineered fill layer	<ul style="list-style-type: none"> • Must be constructed according to the details in Schedule 1, Figure 4 and Figure 7. • Must have a minimum thickness of 500 mm. • No clay clods of greater than 300 mm across shall be placed. • Percentage passing a 19mm sieve $\geq 80\%$. • Percentage passing a 0.075mm sieve $\geq 10\%$ (in accordance with AS 1289.3.6.3). • Plasticity index $\geq 10\%$ (in accordance with AS 1289.3.3.1). • Must not comprise unsuitable material. • Must be compacted to >95% MMDD with a moisture content, during and after compaction, within the range of optimum moisture content - 2% to +2% as determined by the test methods of AS 1289. • Engineered attenuation layer must be protected from desiccation prior to placement of the GCL. 	As shown in Schedule 1 Figure 2

	Infrastructure	Design, construction or installation requirements	Infrastructure location
4.	Layer 1 – Geosynthetic Clay Liner (GCL)	<ul style="list-style-type: none"> • Must be constructed according to the details in Schedule 1, Figure 8, Figure 9, Figure 10 and Figure 11. • Must be installed in direct contact with the engineered fill layer. • Must be a 2 mm thick, needle punched multi-layered system comprising of two layers of geotextiles encapsulating a layer of dry bentonite. • The GCL must be free of defects. • No transverse jointing/overlapping of geosynthetic panels on side slopes. • GCL installed on the landfill side slopes must be fixed in anchor trenches and must be deployed down the slope in a manner as to keep the GCL panel in tension. • Bespoke roll lengths of GCL shall be manufactured to ensure that rolls are installed within the anchor trenches and extend down the slopes to a minimum of 2 m onto the cell base without the need for a mid-slope seam. • Where slope lengths are longer than manufactured roll lengths, the GCL is to be secured in intermediate anchor trenches. Upslope panels will rainlap (roof-tile) downslope panels with a minimum overlap of 1.0 m. • The GCL must be installed in a manner that prevents the entrapment of any stones, excessive dust or moisture or any other material that could damage the GCL. • Seams must be placed perpendicular to the line of slope. Horizontal seams shall only be permitted on the face of the slope where directed by the design drawings. • Seams must have a minimum overlap of 300 mm and must be joined by the addition of bentonite paste applied to a minimum width of 200 mm and a nominal thickness of 10 mm. • Must be installed in accordance with the manufacturer's specifications. • Must be installed in a manner that prevents wrinkles or folds in the liner layer. 	As shown in Schedule 1 Figure 2

	Infrastructure	Design, construction or installation requirements	Infrastructure location
5.	Layer 2 – HDPE Geomembrane	<ul style="list-style-type: none"> • Must be constructed according to the details in Schedule 1, Figure 8, Figure 9, Figure 10 and Figure 11. • Must consist of 2 mm thick textured High Density Polyethylene (HDPE). • The HDPE liner must be uniform and free of defects. • Must have a minimum overlap of 100 mm between panels. • Must be installed so that seams are aligned parallel to the line of maximum slope. • No cross tie-in seams present between the batter and base panels within 2.5m of toe of the batter. • Must be installed in accordance with the manufacturer’s specifications. • Must not be installed in the presence of water. • Must be installed in a manner that prevents wrinkles or folds in the liner layer. • Must be adequately weighed down with sandbags, tyres or other means approved by the Superintendent/CQA Consultant prior to seaming. 	As shown in Schedule 1 Figure 2
6.	Layer 3 – Cushion/protection geotextile	<ul style="list-style-type: none"> • Must be constructed according to the details in Schedule 1, Figure 8, Figure 9, Figure 10 and Figure 11. • Installed between the HDPE geomembrane layer and the leachate collection aggregate. • Must be woven or non-woven needle punched constructed from fibres of polypropylene or polyester, incorporating 1% by weight activated carbon or another UV stabiliser. • Geotextile to be certified needle free. • No transverse jointing/overlapping of geosynthetic panels on side slopes. • Must be installed in a manner that prevents damage to the geotextile and prevents wrinkles in the liner layer. • Seams on side slopes must be oriented with the slope and must have a minimum overlap of 300 mm. • End-of-roll seams to be offset 1 m between adjacent roll ends. • Bespoke roll lengths of geotextile shall be manufactured to ensure that rolls are installed within the anchor trenches and extend down the slopes to a minimum of 2 m onto the cell base without the need for a mid-slope seam. 	As shown in Schedule 1 Figure 2

	Infrastructure	Design, construction or installation requirements	Infrastructure location
		<ul style="list-style-type: none"> • Must not be installed during heavy rain or winds. • Must be free of defects. • No vehicles to be driven over this layer. • Must be installed in accordance with the manufacturer’s specifications. 	
7.	Layer 4 – Leachate collection system	<ul style="list-style-type: none"> • Must be constructed according to the details in Schedule 1, Figure 5, Figure 8, Figure 9, Figure 10 and Figure 11. <p>Leachate drainage aggregate:</p> <ul style="list-style-type: none"> • Must have a hydraulic conductivity of $>1 \times 10^{-3}$ m/s. • Aggregate must consist of a low calcareous aggregate with $<8.5\%$ wt calcium carbonate content. • Fines (<0.075 mm) content must be less than 1%. • Must be a minimum of 300 mm thick. <p>Leachate collection pipework:</p> <ul style="list-style-type: none"> • Must consist of perforated high density polyethylene (HDPE) pipes. • Must consist of a 225 mm primary collection pipe and a series of 160 mm secondary pipes. • All pipes to be laid upon 100 mm of drainage layer aggregate. • All pipes to be laid in accordance with manufacturers specifications. • All pipes to drain toward the leachate collection sumps. • Pipes to be free of defects. • Must be installed in a manner that prevents damage to the geotextile liner. <p>Two leachate collection sumps:</p> <ul style="list-style-type: none"> • Must be installed in a manner that prevents damage to the geotextile liner. • Must have a 150 mm (minimum) thick concrete slab. • Must contain a primary 450 mm side riser pipe and a secondary pipe for contingency. • Must contain a submersible pump inside the primary riser pipe. • Bottom of the leachate sump to be a minimum of 3 m above the highest natural recorded groundwater level. 	As shown in Schedule 1 Figure 2

	Infrastructure	Design, construction or installation requirements	Infrastructure location
8.	Layer 5 – Separation geotextile	<ul style="list-style-type: none"> • Must be constructed according to the details in Schedule 1, Figure 8, Figure 9, Figure 10 and Figure 11. • Must be woven or non-woven needle punched constructed from fibres of polypropylene or polyester, incorporating 1% by weight activated carbon or another UV stabiliser. • The separation geotextile must extend 1 m beyond the leachate collection layer. • Seams on side slopes must be oriented with the slope and must have a minimum overlap of 300 mm. • End-of-roll seams to be offset 1 m between adjacent roll ends. • No transverse jointing/overlapping of geosynthetic panels on side slopes. • Permanent sandbags must be placed at a minimum of 5 m along the seams and either side of the primary and secondary leachate collection pipe aggregate mound, change of grade between basal and side slopes and external perimeter of the separation geotextile to prevent uplift. • Must not be installed during heavy rain or winds. • Must be free of defects and needles. • Must be installed in accordance with the manufacturers specifications. • No vehicles to be driven over this layer. 	As shown in Schedule 1 Figure 2

Construction quality assurance requirements

3. The works approval holder must undertake construction quality assurance (CQA) testing for the geosynthetic clay liner installed within cell 6 in accordance with the specifications outlined in Table 3.

Table 3: Geosynthetic clay liner (GCL) CQA requirements

Item	Property	Standards	Frequency	Minimum value
Conformance Quality Assurance testing (sampled at the point of manufacture or on site, as determined by the Superintendent / CQA consultant)	Thickness (dry)	ASTM D1777	1 sample per 2,500 m ²	(a) Basal area ≥6 mm (b) Side slope ≥6 mm
	Mass per unit area of geotextile: (a) Cover layer; and (b) Carrier layer	ASTM D5993		(a) Basal area ≥200 g/m ² (MinARV); Side slope ≥200 g/m ² (MinARV) (b) Basal area ≥100 g/m ² (MinARV); Side slope ≥300 g/m ² (MinARV)
	Mass per unit area of bentonite	ASTM D5993		(a) ≥3,700 g/m ² (MinARV) (b) ≥4,250 g/m ² (typical)
	Mass per unit area of geosynthetic clay liner	ASTM D5993		(a) Basal area ≥4,000 g/m ² (b) Side slope ≥4,000 g/m ²
	Montmorillonite content (X-ray diffraction method)	N/A	1 sample per 10,000 m ²	>70% wt
	Cation exchange capacity of bentonite (methylene blue method)	N/A	1 sample per 20,000 m ²	≤70 meg/100 g (or cmol/kg)
	Mass/unit length of bentonite in overlaps (visual inspection and weighing)	ASTM D5993	1 sample per 2,500 m ²	N/A
	Moisture content of bentonite	AS 1289.2.1.1	Daily visual inspections	N/A
	Swell index/free swell of clay	ASTM D5890	1 sample per 2,500 m ²	≥24 ml/2g

Item	Property	Standards	Frequency	Minimum value
	Fluid loss	ASTM D5891	1 sample per 5,000 m ²	≤18 ml
	Peel strength (for needle-punched products only)	ASTM D6496	1 sample per 2,500 m ²	(a) Basal area >360 N/m (b) Side slope >360 N/m
	Permeability	ASTM D5887	1 sample per 2,500 m ²	(a) ≤ 3.0 x 10 ⁻¹¹ m/s (MaxARV) (b) ≤ 2.4 x 10 ⁻¹¹ m/s (typical)
	Tensile strength	ASTM D4595	1 sample per 25,000 m ²	(a) Basal area ≥8 kN/m (MinARV); ≥10 kN/m (typical) (b) Side slope ≥12 kN/m (MinARV) ≥15 kN/m (typical)
	CBR of geotextile	AS 3706.4	1 sample per 10,000 m ²	(a) Basal area ≥1,500 N (MinARV); ≥2,000 N (typical) (b) Side slope ≥3,000 N (MinARV) ≥4,000 N (typical)
	Puncture resistance of geotextile	AS 3706.5	1 sample per 25,000 m ²	
		Index flux	ASTM D5887	1 sample per 25,000 m ²
Visual inspection of GCL (i.e., uniformity of bentonite distribution) and apparent variations in the as-placed moisture distribution	Colour, thickness, needle punching, presence of needles or broken needles, and sewing density or other faults in the material	N/A	Every roll	N/A
	Thickness of GCL (i.e. uniformity of bentonite distribution) and apparent variations in the as placed moisture distribution	N/A	Each roll during placement. If thickness appears to be variable a check of the variability of the mass per unit area should be conducted	N/A

4. The works approval holder must undertake construction quality assurance (CQA) testing for the high density polyethylene geomembrane installed within cell 6 in accordance with the specifications outlined in Table 4.

Table 4: High density polyethylene (HDPE) geomembrane CQA requirements

Item	Property	Standards	Frequency	Minimum Value	
Conformance Quality Assurance testing (sampled at the point of manufacture or on site, as determined by the Superintendent / CQA consultant)	Thickness	ASTM D5199	Whichever is the greatest number of tests between: One sample every 5,000 m ² ; or Every five rolls delivered to site	Nom. (-5%) -10% (lowest individual for 8 out of 10 values) -15% (lowest individual for any of the 10 values)	
	Asperity height	ASTM D7466		0.4 mm	
	Density	ASTM D1505 ASTM D792		0.940 g/cc	
	Tensile properties (a) Yield strength (b) Break strength (c) Yield elongation (d) Break elongation	ASTM D6693 Type IV		(a) 29 kN/m (b) 21 kN/m (c) 12% (d) 100%	
	Tear resistance	ASTM D1004		249 N	
	Puncture resistance	ASTM D4833		534 N	
	Carbon black content	ASTM D4218		2.0 % – 3.0 %	
	Carbon black dispersion	ASTM D5596		Carbon black dispersion (only near spherical agglomerates) for 10 different views: 9 in categories 1 or 2 and 1 in category 3	
	Stress crack resistance	ASTM D4833		One sample every 10,000 m ² ; or	500 hr
	Oxidation induction time (OIT): (a) Standard OIT; or High pressure OIT.	ASTM D3895 ASTM D5885		Resin type; or Manufacturing run	(a) 100 min; or 400 min
	UV resistance – high pressure OIT % retained after 1,600 hrs	ASTM D5885		N/A	50%

Item	Property	Standards	Frequency	Minimum Value
Start-up test weld	Welding equipment	N/A	Checked daily at start of works and whenever the welding equipment is shut-off for more than one hour. Also, after significant changes in weather conditions	N/A
	Weld conditions	N/A	Test weld strips will be required whenever personnel or equipment are changed, after any period of machine shutdown, every four hours of operation and/or wide temperature fluctuations are experienced. Minimum 1.5 m continuous seam	N/A
Destructive weld testing	Onsite – hand tensiometer in peel mode	N/A	1 tab from start and finish of each weld for fusion welds	N/A
	Offsite – weld seam strength in peel and shear. A number of destructive samples will also be tested at a NATA accredited laboratory.	ASTM D6392	Every 300 m (if fusion weld) Every 150 m (if extrusion weld)	N/A
Non-destructive weld testing	N/A	Air pressure test: ASTM D5820 Vacuum box test: ASTM D5641	All seams over full length	N/A
Visual inspection of geomembrane	Tears, punctures, abrasions, cracks, indentations, thin spots, or other faults in the material	N/A	Every roll	Free of faults or defects

Item	Property	Standards	Frequency	Minimum Value
Leak detection survey	Leak detection survey across all geomembrane lined areas that have had leachate aggregate installed	ASTM D7007	Once the geomembrane has been installed and the drainage aggregate has been placed on top of the geomembrane, but before the separation layer has been installed	Identify and repair and test/resurvey all identified leaks in the lining system

5. The works approval holder must undertake construction quality assurance (CQA) testing for the cushion/protection and separation geotextiles installed within cell 6 in accordance with the specifications outlined in Table 5.

Table 5: Cushion/protection geotextile and separation geotextile CQA requirements

Item	Property	Standards	Frequency	Minimum value	
Conformance Quality Assurance testing (sampled at the point of manufacture or on site, as determined by the Superintendent / CQA consultant)	Thickness: (a) Cushion/protection (b) Separation	AS 3706.1	One sample per 2,500 m ²	TBC	
	Mass per unit area: (a) Cushion/protection (b) Separation	AS 3706.1			
	Tear strength – separation	ASTM D4833 AS 3706.3	One sample per 5,000 m ²	1,200 N	
	Tear strength – cushion/protection				
	Tensile strength: (a) Cushion/protection (b) Separation	AS 3706.2		(a) 50/50 kN/m (b) 14 kN/m	
	Burst strength: (a) Cushion/protection (b) Separation	ASTM D6241 AS 3706.4		N/A	
	CBR puncture resistance: (a) Cushion/protection (b) Separation	AS 3706.4		N/A	(a) 9,000 N (b) 2,500 N
Visual inspection of geotextile	Colour, thickness, tears, holes, punctures, needle - punching, presence of needles or broken needles, and other faults in the material	Visual only		Each roll during placement	Free of faults or defects

Compliance reporting

- 6.** The works approval holder must within 30 calendar days of an item of infrastructure or equipment required by condition 1 being constructed and/or installed:

 - (a) undertake an audit of their compliance with the requirements of condition 1; and
 - (b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.
- 7.** The Environmental Compliance Report required by condition 6, must include as a minimum the following:

 - (a) certification by a suitably qualified civil or geotechnical engineer that the items of infrastructure or components thereof, as specified in condition 1 have been constructed in accordance with the relevant requirements specified in condition 1;
 - (b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 1;
 - (c) the minimum values for thickness, mass per unit area and separation tear strength for the cushion/protection and separation geotextiles as required by condition 5 Table 5; and
 - (d) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.
- 8.** The works approval holder must within 30 calendar days of the Critical Containment Infrastructure identified by condition 2 being constructed:

 - (a) undertake an audit of their compliance with the requirements of condition 2; and
 - (b) prepare and submit to the CEO a Critical Containment Infrastructure Report on that compliance.
- 9.** The Critical Containment Infrastructure Report required by condition 8 must include as a minimum the following:

 - (a) a CQA Validation Report certified and written by the independent third party civil or structural engineer that completed the CQA that includes, but is not limited to;
 - (i) certification by a suitably qualified civil or geotechnical engineer that each item of critical containment infrastructure or components thereof, as specified in condition 2, has been built and installed in accordance with the requirements specified in condition 2;
 - (ii) documentation of the quality of the completed works;
 - (iii) certification that each item of critical containment infrastructure or component thereof, has complied with the relevant construction quality assurance requirements detailed in condition 0, condition 4 and condition 5;
 - (iv) an assessment of test results against minimum values detailed in condition 0, condition 4 and condition 5 as relevant; and
 - (v) documentation of all repairs conducted during the installation and testing of each item of infrastructure.
 - (b) as constructed plans and a detailed site plan showing the location and dimensions for each item of critical containment infrastructure or component thereof, as specified in condition 2;
 - (c) photographic evidence of the installation of the infrastructure; and
 - (d) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

Time limited operations phase

Commencement and duration

10. The works approval holder may only commence time limited operations for an item of infrastructure identified in condition 1 when the Environmental Compliance Report as required by condition 6 has been submitted by the works approval holder for that item of infrastructure.
11. The works approval holder may only commence time limited operations for an item of critical containment infrastructure identified in condition 2:
 - (a) where the CEO has notified the works approval holder that the Critical Containment Infrastructure Report for that item of infrastructure as required by condition 9 meets the requirements of that condition; or
 - (b) where at least 30 business days have passed after the Critical Containment Infrastructure Report for that item of infrastructure as required by condition 9 has been submitted to the CEO.
12. The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 13:
 - (a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 10 or condition 11 for that item of infrastructure; or
 - (b) until such time as a licence for that item of infrastructure is granted in accordance with Part V of the *Environmental Protection Act 1986*, if one is granted before the end of the period specified in condition 12(a).

Time limited operational requirements

13. The works approval holder must ensure that the site infrastructure and equipment listed in Table 6 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 6.

Table 6: Infrastructure and equipment requirements

	Infrastructure	Operational requirements	Infrastructure location
1	Class III waste cells	<ul style="list-style-type: none"> • Cell 6 – comprising geosynthetic clay liner and HDPE liner with a thickness of 2mm (includes burial areas for special waste types 1, 2 and 3) 	As shown in Schedule 1 Figure 2
2	Stormwater infiltration pond and drainage system	<ul style="list-style-type: none"> • Stormwater infiltration pond to be maintained at 60 m wide, 80 m long with a design capacity of 13,600 m³. • Swales, culverts and pipes are to be maintained clear of any waste or blockages. 	As shown in Schedule 1 Figure 2

Waste acceptance

14. The works approval holder must only accept onto the premises waste of a waste type, which does not exceed the corresponding rate at which waste is received, and which meets the corresponding acceptance specification set out in Table 7.

Table 7: Types of waste authorised to be accepted onto the premises

Category	Waste type	Rate at which waste is received	Acceptance specification
64	Clean fill	100,000 tonnes combined per annual period	None specified.
	Inert waste type 1		
	Inert waste type 2		
	Putrescible wastes		
	Class III contaminated solid waste		<p>Must meet the classification criteria as specified in the Landfill Waste Classification and Waste Definitions 1996 (as amended 2019).</p> <p>Must be supported by documentation that demonstrates compliance with the acceptance criteria for Class III landfills.</p>
	Special waste type 1		<p>Asbestos containing material (ACM) must be sealed in double-lined or double-bagged, heavy duty plastic sheeting of at least 0.2 mm thickness.</p> <p>ACM and/or asbestos contaminated soil that cannot be practicably wrapped in heavy duty plastic must be contained in a manner that prevents asbestos fibres entering the atmosphere.</p> <p>Accept only wrapped or otherwise contained asbestos waste or material containing asbestos, which is labelled or marked with the words 'CAUTION – ASBESTOS' in letters not less than 50 mm high.</p>
Special waste type 2	<p>The works approval holder, or their representative, must complete and sign the original waste transport certificate noting, in writing, any discrepancies between waste declared and waste received.</p> <p>Must keep a record of the waste transport certificate for at least three years.</p>		
Special waste type 3	<p>Must meet the acceptance criteria for Class III landfills as specified in Schedule 2 and the acceptance criteria for Class III landfills as specified in the Landfill Waste Classification and Waste Definitions 1996 (as amended 2019) for contaminants other than PFAS.</p>		

15. The works approval holder must ensure that the waste types specified in Table 8 are only subjected to the corresponding processes, subject to the corresponding process limits and/or specifications.

Table 8: Waste processing

Category	Waste type	Processes	Process limits and/or specification
64	Clean fill	Receipt, handling and disposal by landfilling onsite	Must only take place within Class III waste cell as specified in Table 6.
	Inert waste type 1		Wastes meeting the waste acceptance criteria specified for Class III landfills and Special Wastes Type 1, Type 2 and Type 3 must only be disposed of in Class III waste cells as defined in Table 6.
Inert waste type 2	Restrict the non-greenwaste tipping area to a maximum linear length of 30 metres.		
Putrescible wastes	Cover waste with at least 100 mm of cover material at least daily.		
Class III contaminated solid wastes	Cover municipal waste within 24 hours of delivery. Class III contaminated solid waste must be disposed of to an active Class III waste cell on the same day of acceptance. Stockpile sufficient cover material to allow waste to be covered in accordance with this condition and to cover waste in the event of a fire. Initially spread waste in layers not more than 500 mm thickness prior to being compacted with a minimum of five passes with the waste compacting machine. Manage the active landfill area such that at no time does landfilling result in an exposed face exceeding two metres in vertical height. Placement of waste within the landfill cell is undertaken using a 'bottom up' approach to ensure that the loading of the liner does not compromise liner integrity. The works approval holder must dispose of tyres at the premises in accordance with regulation 14 (2) of the Environmental Protection Regulations 1987.		
	Special waste type 1	Receipt, handling and disposal by landfilling onsite	As soon as practicable and before compaction, ACM wrapped in heavy duty plastic must be covered with a layer of soil at least 300 mm thick or with a layer of dense, inert and incombustible material at least 1 metre thick. ACM and/or asbestos contaminated soil that is not wrapped in heavy duty plastic must be covered with cover material to a depth of at

Category	Waste type	Processes	Process limits and/or specification
			<p>least 500 mm immediately after deposit.</p> <p>Record as grid references on a premises plan all locations used for the disposal of asbestos waste or material containing asbestos and keep this plan as a permanent record.</p> <p>Not deposit any asbestos waste or material containing asbestos within two metres of the final tipping surface of the landfill.</p> <p>Operate the landfill such that any existing asbestos waste or material containing asbestos deposited at the premises remains undisturbed.</p> <p>Make all records available for viewing by an inspector upon request.</p>
	Special waste type 2	Receipt, handling and disposal by landfilling onsite	<p>Must immediately unload and cover the waste with a minimum depth of one metre of soil or solid waste.</p> <p>Must define the disposal area(s) by grid references on the site plan.</p> <p>Must ensure the disposal areas are not excavated or uncovered during subsequent landfill operations.</p> <p>Must restrict access to the landfill site where the waste is buried to authorised personnel only.</p> <p>Must make the information recorded in accordance with this condition available for viewing or copying by the CEO during any inspection of the premises.</p>
	Special waste type 3	Receipt, handling and disposal by landfilling onsite	<p>Must only be disposed of into a designated area within cell 6.</p> <p>Waste to be covered with 200mm of soil at the end of the day.</p>

Compliance reporting

16. The works approval holder must submit to the CEO a report on the time limited operations within 30 calendar days of the completion date of time limited operations or 30 calendar days before the expiration date of the works approval, whichever is the sooner.
17. The works approval holder must ensure the report required by condition 16 includes the following:
 - (a) a summary of the time limited operations, including timeframes and amount of waste received, disposed of into cell 6 and the amount of waste taken off the premises;
 - (b) a review of performance and compliance against the conditions of the works approval; and
 - (c) where the manufacturer's design specifications and the conditions of this works approval have not been met, what measures will the works approval holder take to meet them, and what timeframes will be required to implement those measures.

Records and reporting (general)

18. The works approval holder must record the following information in relation to complaints received by the works approval 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; and
 - (d) the complete details and dates of any action taken by the works approval holder to investigate or respond to any complaint.
19. The works approval holder must maintain accurate and auditable books including the following records, information, reports, and data required by this works approval:
 - (a) the works conducted in accordance with condition 1 and condition 2;
 - (b) any maintenance of infrastructure that is performed in the course of complying with condition 13; and
 - (c) complaints received under condition 18.
20. The books specified under condition 19 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 works approval holder for the duration of the works approval; and
 - (d) be available to be produced to an inspector or the CEO as required.

Definitions

In this works approval, the terms in Table 9 have the meanings defined.

Table 9: Definitions

Term	Definition
ARV	means the average roll value.
AS 1289	means the Australian Standard AS 1289 <i>Methods of testing soils for engineering purposes</i> .
AS 1289.2.1.1	means the Australian Standard AS 1289.2.1.1 <i>Methods of testing soils for engineering purposes: Soil moisture content tests – Determination of the moisture content of a soil – Oven drying method (standard method)</i> .
AS 1289.3.1.1	means the Australian Standard AS 1289.3.1.1 <i>Methods of testing soils for engineering purposes: Soil classification tests – Determination of the liquid limit of a soil</i> .
AS 1289.3.3.1	means the Australian Standard 12893.3.1 <i>Methods of testing soils for engineering purposes: Soil classification tests— Calculation of the plasticity index of a soil</i> .
AS 1289.3.6.3	means the Australian Standard AS 1289.3.6.3 <i>Methods of testing soils for engineering purposes: Soil classification tests - Determination of the particle size distribution of a soil - Standard method of fine analysis using an hydrometer</i> .
AS 1726	means the Australian Standard AS 1726 <i>Geotechnical site investigations</i> .
AS 3706.1	means the Australian Standard AS 3706.1 <i>Geotextiles – Methods of test General Requirements, sampling, conditioning, basic physical properties and statistical analysis</i> .
AS 3706.2	means the Australian Standard AS 3706.2 <i>Geotextiles – Methods of test Determination of tensile properties – wide strip method</i> .
AS 3706.3	means the Australian Standard AS 3706.3 <i>Geotextiles – Methods of test Determination of tearing strength – Trapezoidal method</i> .
AS 3706.4	means the Australian Standard AS 3706.4 <i>Geotextiles – Methods of test Determination of burst strength – California bearing ratio (CBR) – Plunger method</i> .
AS 3706.5	means the Australian Standard AS 3706.5 <i>Geotextiles – Methods of test Determination of puncture resistance – Drop cone method</i> .
AS 3798	means the Australian Standard AS 3798 <i>Guidelines on earthworks for commercial and residential development</i> .
asbestos	means the asbestiform variety of mineral silicates belonging to the serpentine or amphibole groups of rock-forming minerals and includes actinolite, amosite, anthophyllite, chrysotile, crocidolite, tremolite and any mixture containing 2 or more of those.
asbestos waste	means Special Waste Type 1 – asbestos and asbestos cement products waste as defined in the current version of the <i>Landfill Waste Classification and Waste Definitions 1996 (as amended 2009)</i> .
Asbestos Containing Material (ACM)	has the meaning defined in the <i>Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites, Western Australia, (Department of Health, 2009)</i> .

Term	Definition
ASTM D792	means the ASTM International D792 <i>Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement</i> .
ASTM D1004	means the ASTM International D1004 <i>Standard Test Methods for Tear Resistance (Graves Tear) of Plastic Film and Sheeting</i> .
ASTM D1505	means the ASTM International D1505 <i>Standard Test Method for Density of Plastics by the Density-Gradient Technique</i> .
ASTM D1777	means the ASTM International D1777 <i>Standard Test Method for Thickness of Textile Materials</i> .
ASTM D3895	means the ASTM International D3895 <i>Standard Test Method for Oxidative-Induction Time of Polyolefins by Differential Scanning Calorimetry</i> .
ASTM D4218	means the ASTM International D4218 <i>Standard Test Method for Determination of Carbon Black Content in Polyethylene Compounds by the Muffle-Furnace Technique</i> .
ASTM D4595	means the ASTM International D4595 <i>Standard Test Method for Tensile Properties of Geotextiles by the Wide-Width Strip Method</i> .
ASTM D4833	means the ASTM International D4833 <i>Standard Test Method for Index Puncture Resistance of Geomembranes and Related Products</i> .
ASTM D5199	means the ASTM International D5199 <i>Standard Test Method for Measuring the Nominal Thickness of Geosynthetics</i> .
ASTM D5596	means the ASTM International D5596 <i>Standard Test Method for Microscopic Evaluation of the Dispersion of Carbon Black in Polyolefin Geosynthetics</i> .
ASTM D5641	means the ASTM International D5641 <i>Standard Practice for Geomembrane Seam Evaluation by Vacuum Chamber</i> .
ASTM D5820	means the ASTM International D5820 <i>Standard Practice for Pressurized Air Channel Evaluation of Dual-Seamed Geomembranes</i> .
ASTM D5885	means the ASTM International D5885 <i>Standard Test Method for Oxidative Induction Time of Polyolefin Geosynthetics by High-Pressure Differential Scanning Calorimetry</i> .
ASTM D5887	means the ASTM International D5887 <i>Standard Test Method for Measurement of Index Flux Through Saturated Geosynthetic Clay Liner Specimens Using a Flexible Wall Permeameter</i> .
ASTM D5890	means the ASTM International D5890 <i>Standard Test Method for Swell Index of Clay Mineral Component of Geosynthetic Clay Liners</i> .
ASTM D5891	means the ASTM International D5891 <i>Standard Test Method for Fluid Loss of Clay Component of Geosynthetic Clay Liners</i> .
ASTM D5993	means the ASTM International D5993 <i>Standard Test Method for Measuring Mass per Unit Area of Geosynthetic Clay Liners</i> .
ASTM D6241	means the ASTM International D6241 <i>Standard Test Method for Measuring Static Puncture Strength of Geotextiles and Geosynthetic-Related Products Using a 50 mm Probe</i> .
ASTM D6392	means the ASTM International D6392 <i>Standard Test Method for Determining the Integrity of Nonreinforced Geomembrane Seams Produced Using Thermo-Fusion Methods</i> .

Term	Definition
ASTM D6496	means the ASTM International D6496 <i>Standard Test Method for Determining Average Bonding Peel Strength Between Top and Bottom Layers of Needle-Punched Geosynthetic Clay Liners</i> .
ASTM D6693 Type IV	means the ASTM International D6693 <i>Standard Test Method for Determining Tensile Properties of Nonreinforced Polyethylene and Nonreinforced Flexible Polypropylene Geomembranes</i> .
ASTM D7007	means the ASTM International D7007 <i>Standard Practices for Electrical Methods for Locating Leaks in Geomembranes Covered with Water or Earthen Materials</i> .
ASTM D7466	means the ASTM International D7466 <i>Standard Test Method for Measuring Asperity Height of Textured Geomembranes</i> .
books	has the same meaning given to that term under the EP Act.
bottom-up	means waste is placed in horizontal lifts evenly across the complete cell floor of the landfill working upwards, and not from one side of the landfill to the other.
CBR	means the California Bearing Ratio.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 Joondalup DC WA 6919 info@dwer.wa.gov.au
Class III contaminated solid waste	has the meaning defined in the <i>Landfill Waste Classification and Waste Definitions 1996 (as amended December 2009)</i> .
clean fill	has the meaning defined in the <i>Landfill Waste Classification and Waste Definitions 1996 (as amended December 2009)</i> .
condition	a condition to which the works approval is subject under section 62 of the <i>Environmental Protection Act 1986</i> .
cover material	means subsoil or other approved inert waste used for covering of waste.
critical containment infrastructure	means the items of infrastructure listed in condition 2.
Critical Containment Infrastructure Report	means a report to satisfy the CEO that works of critical containment infrastructure have been constructed in accordance with the works approval.
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V Division 3 of the EP Act.
discharge	has the same meaning given to that term under the EP Act.
emission	has the same meaning given to that term under the EP Act.
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure and/or equipment has been constructed and/or installed in accordance with the works approval.

Term	Definition
EP Act	<i>Environmental Protection Act 1986 (WA).</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA).</i>
Greenwaste	means waste that originates from trees or plants.
Inert waste type 1	has the meaning defined in the <i>Landfill Waste Classification and Waste Definitions 1996 (as amended December 2009)</i> .
Inert waste type 2	has the meaning defined in the <i>Landfill Waste Classification and Waste Definitions 1996 (as amended December 2009)</i> .
MMDD	Modified Maximum Dry Density
municipal waste	means waste collected at the kerbside by the local authority collection vehicle or its contractor.
premises	the premises to which this works approval applies, as specified at the front of this works approval and as shown on the premises map (Figure 1) in Schedule 1 to this works approval.
prescribed premises	has the same meaning given to that term under the EP Act.
putrescible waste	has the meaning defined in the <i>Landfill Waste Classification and Waste Definitions 1996 (as amended December 2009)</i> .
Special waste type 1	has the meaning defined in the <i>Landfill Waste Classification and Waste Definitions 1996 (as amended December 2009)</i> .
Special waste type 2	has the meaning defined in the <i>Landfill Waste Classification and Waste Definitions 1996 (as amended December 2009)</i> .
Special waste type 3	has the meaning defined in the <i>Landfill Waste Classification and Waste Definitions 1996 (as amended December 2009)</i> .
Suitably qualified civil or geotechnical engineer	means a person who: <ul style="list-style-type: none"> (a) holds a Bachelor of Civil or Geotechnical Engineering recognised by the Institute of Engineers; and (b) has a minimum of five years of experience working in a supervisory area of geotechnical engineering; and (c) is employed by an independent third party external to the works approval holder's business.
time limited operations	refers to the operation of the infrastructure and equipment identified under this works approval that is authorised for that purpose, subject to the relevant conditions.
unsuitable material	as defined in Australian Standard AS 3798 <i>Guidelines on earthworks for commercial and residential development</i> .
waste	has the same meaning given to that term under the EP Act.
works approval	refers to this document, which evidences the grant of the works approval by the CEO under section 54 of the EP Act, subject to the conditions.
works approval holder	refers to the occupier of the premises being the person to whom this works approval has been granted, as specified at the front of this works approval.

END OF CONDITIONS

Schedule 1: Maps

Premises map

The boundary of the prescribed premises is shown in the map below (Figure 1).

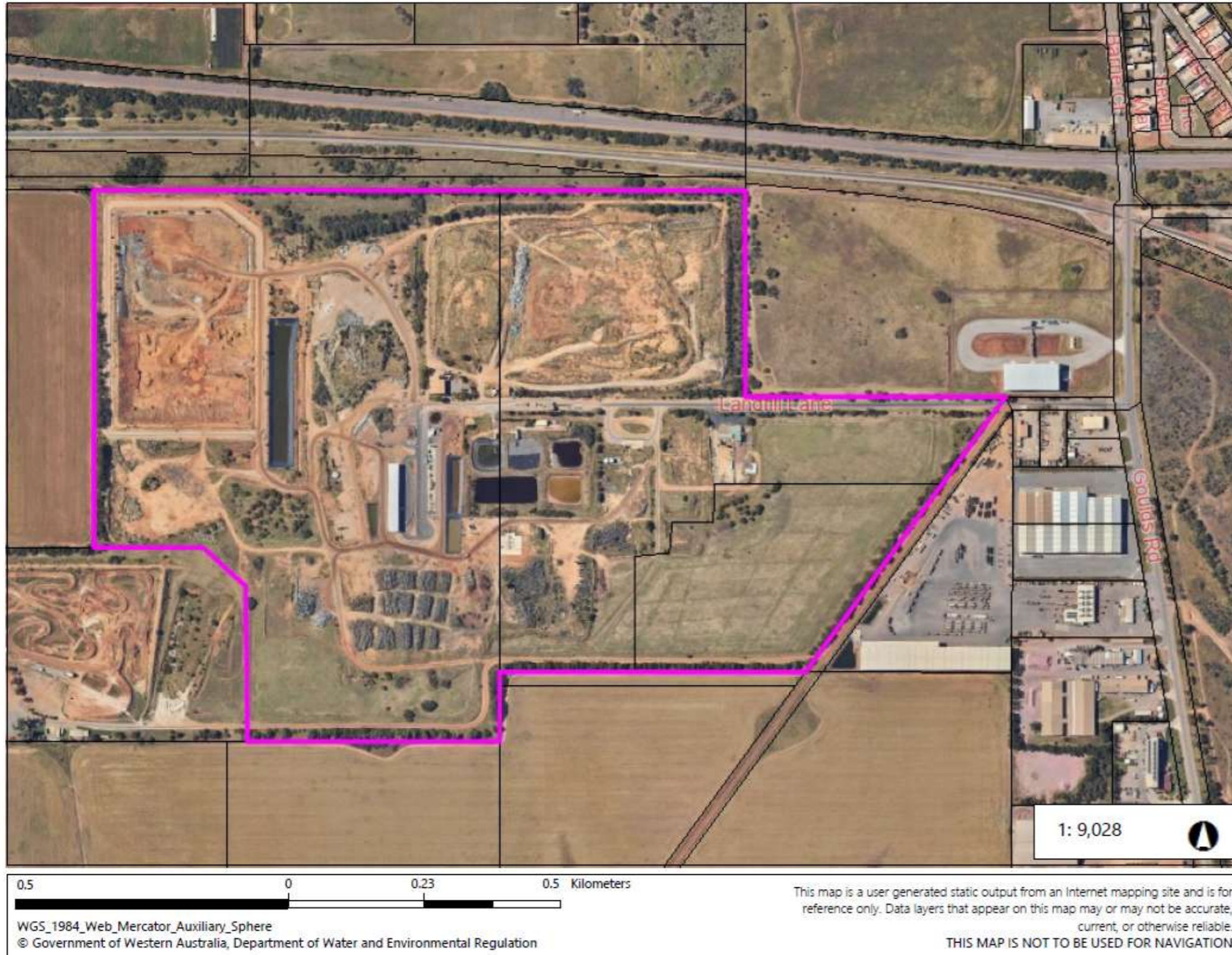


Figure 1: Map of the boundary of the prescribed premises

Infrastructure maps

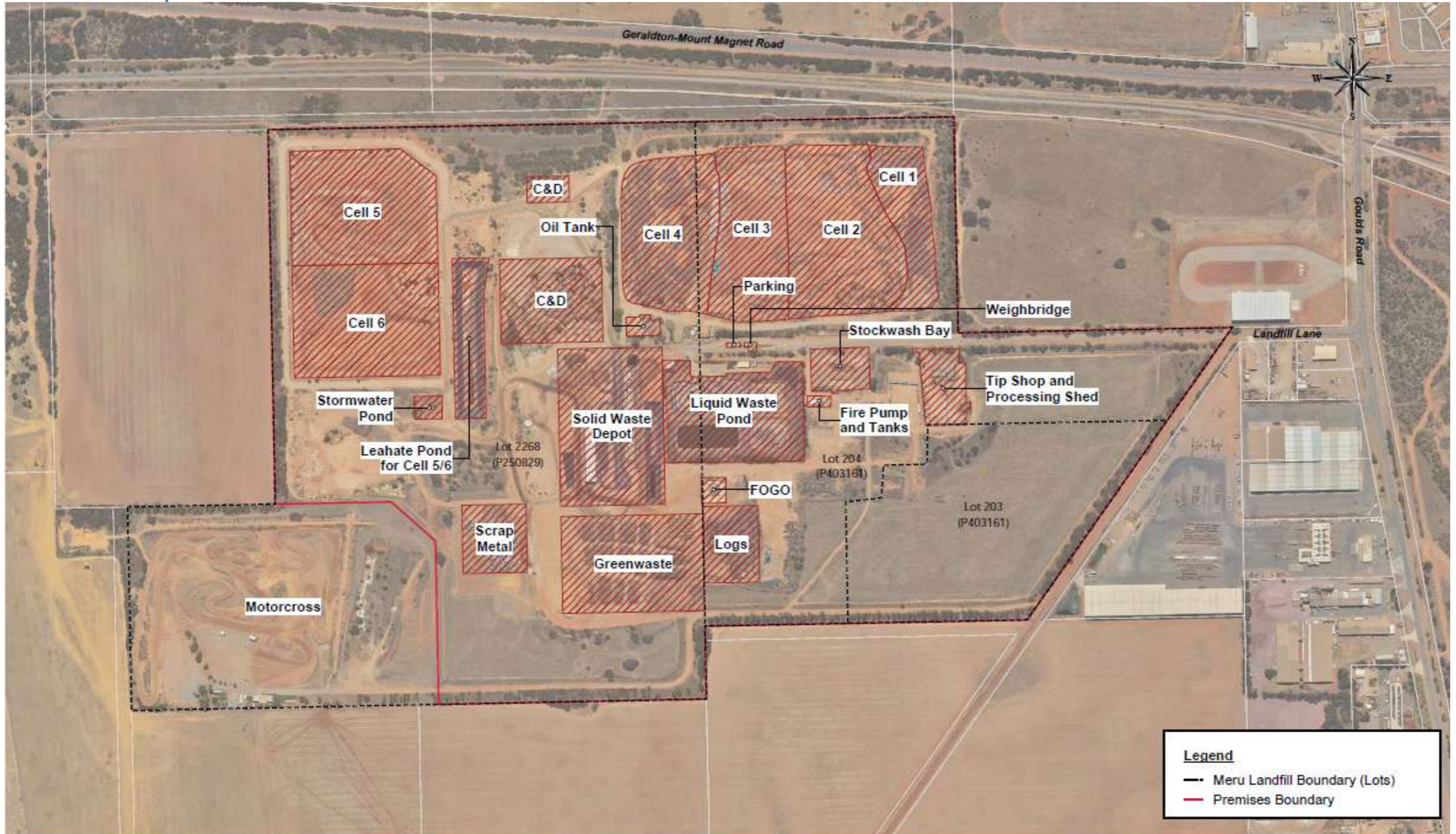


Figure 2: Premises infrastructure layout

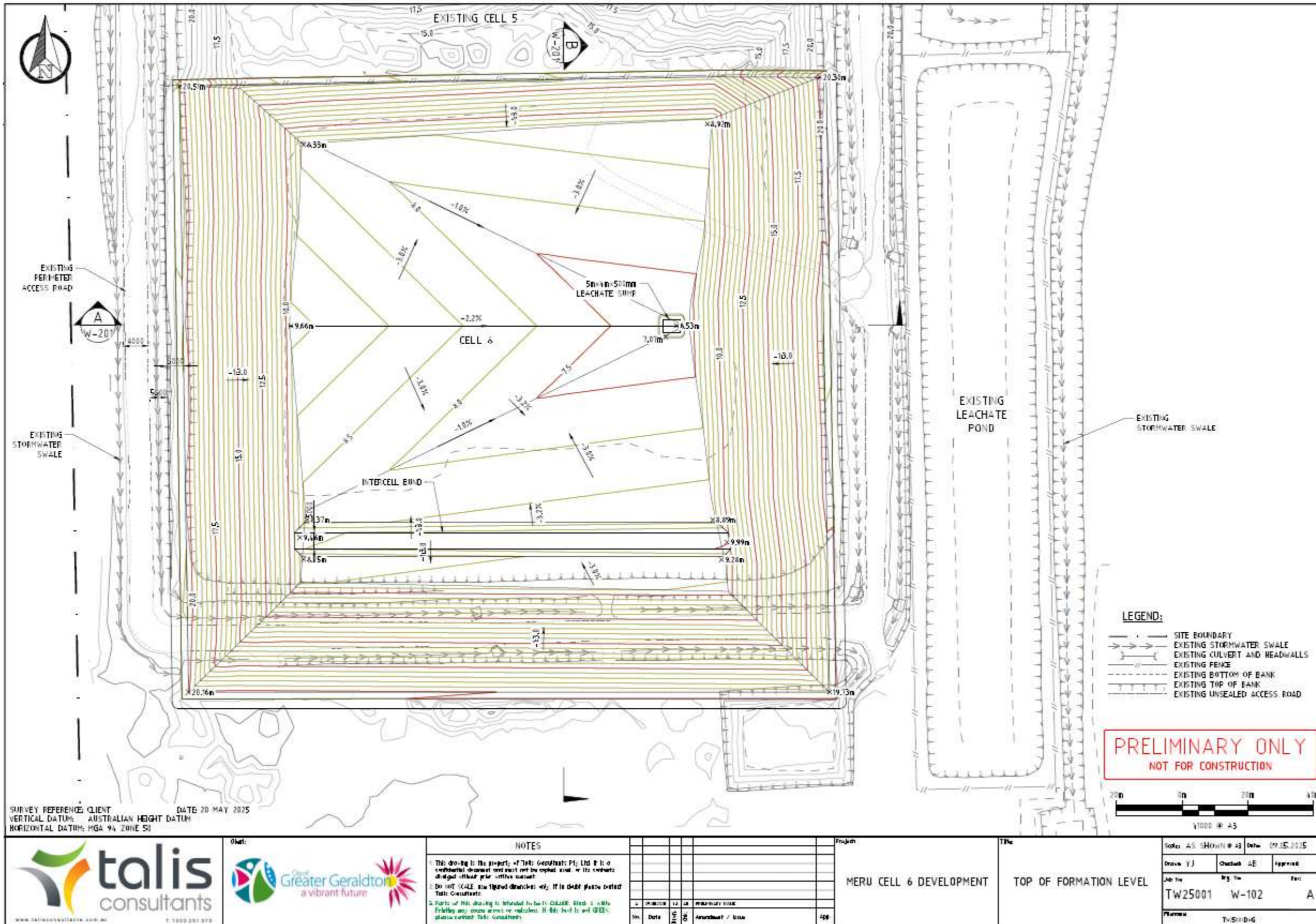


Figure 3: Top of formation level

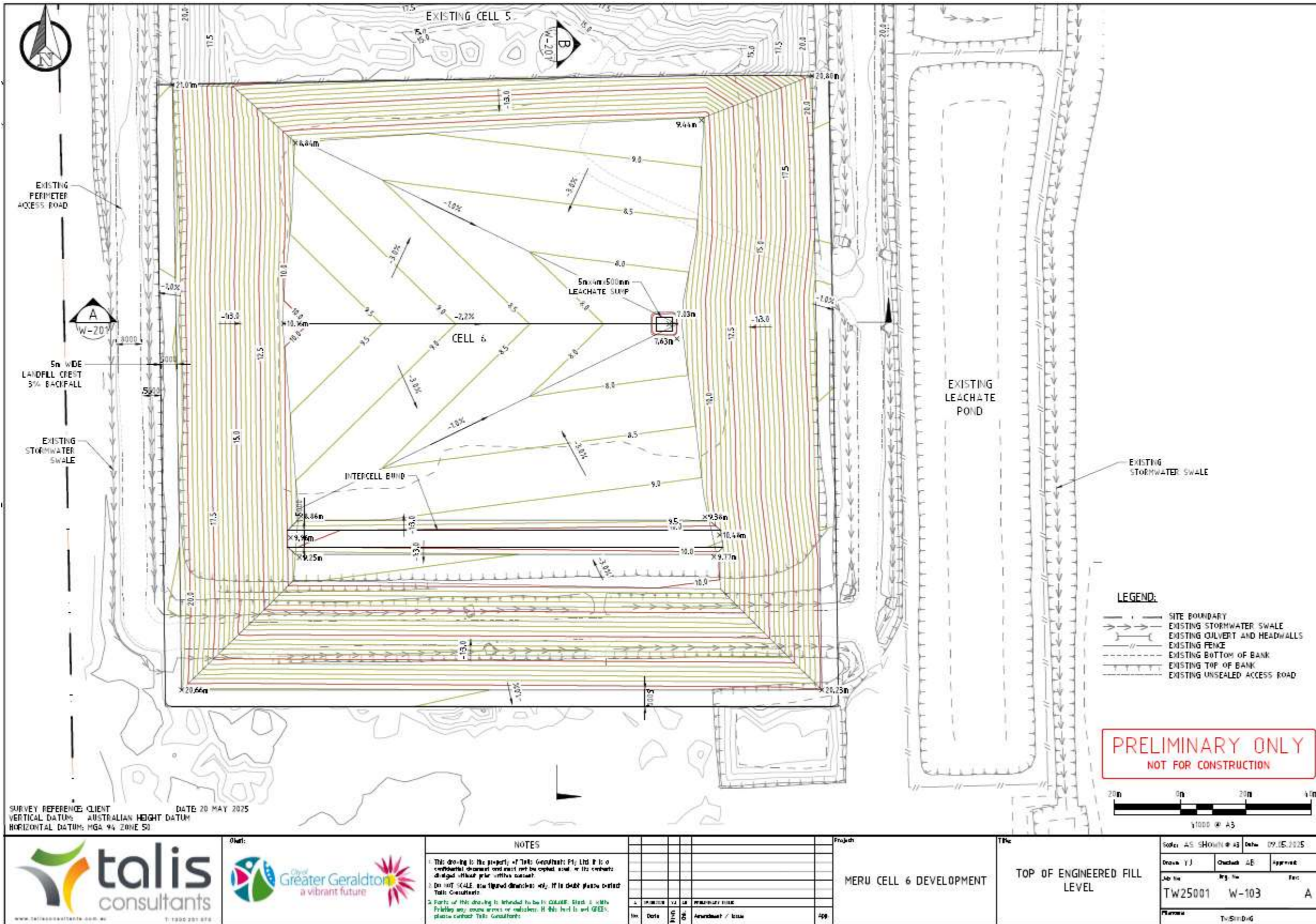


Figure 4: Top of engineered fill level

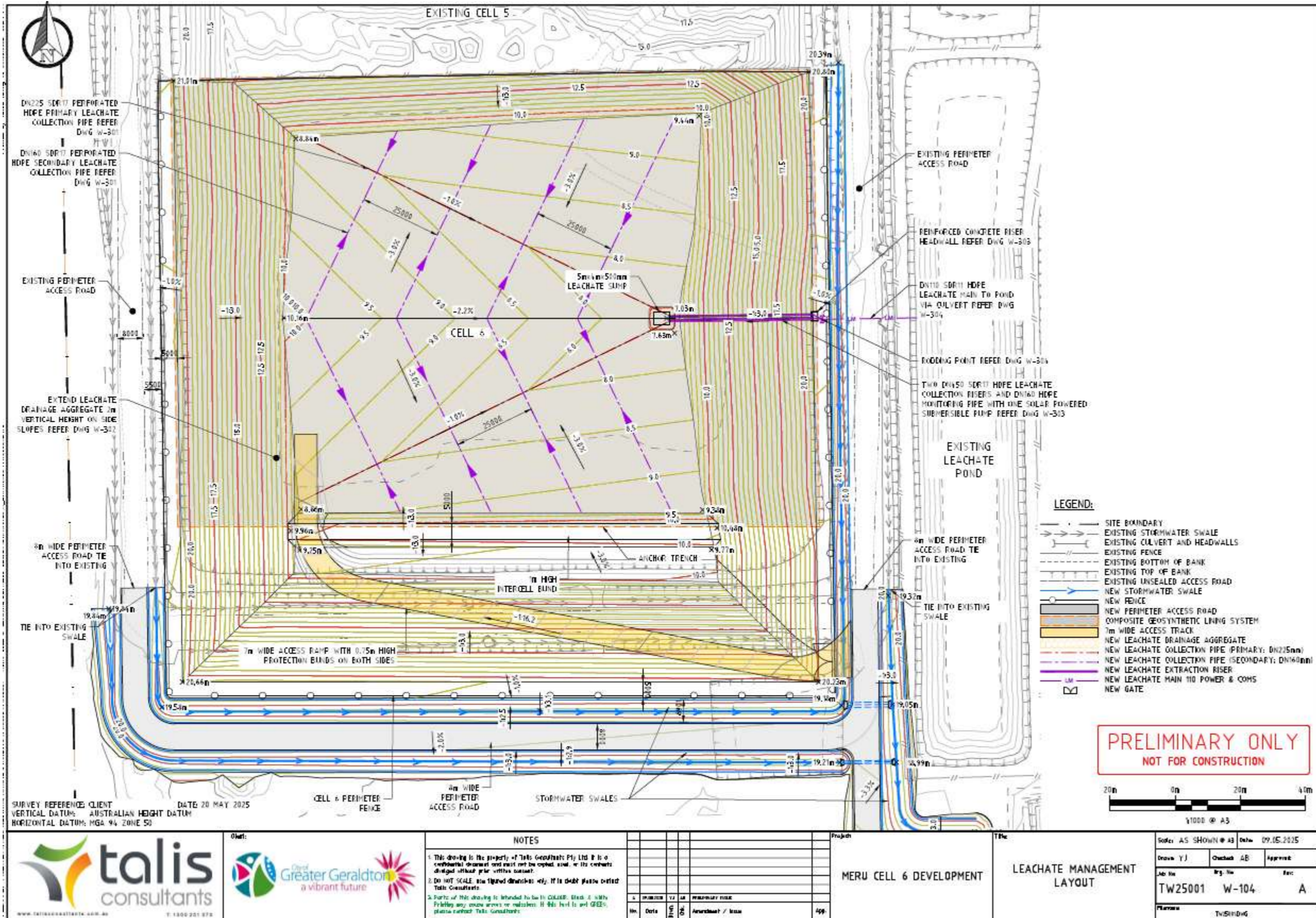


Figure 5: Leachate drainage infrastructure (purple) and stormwater drainage infrastructure (blue)

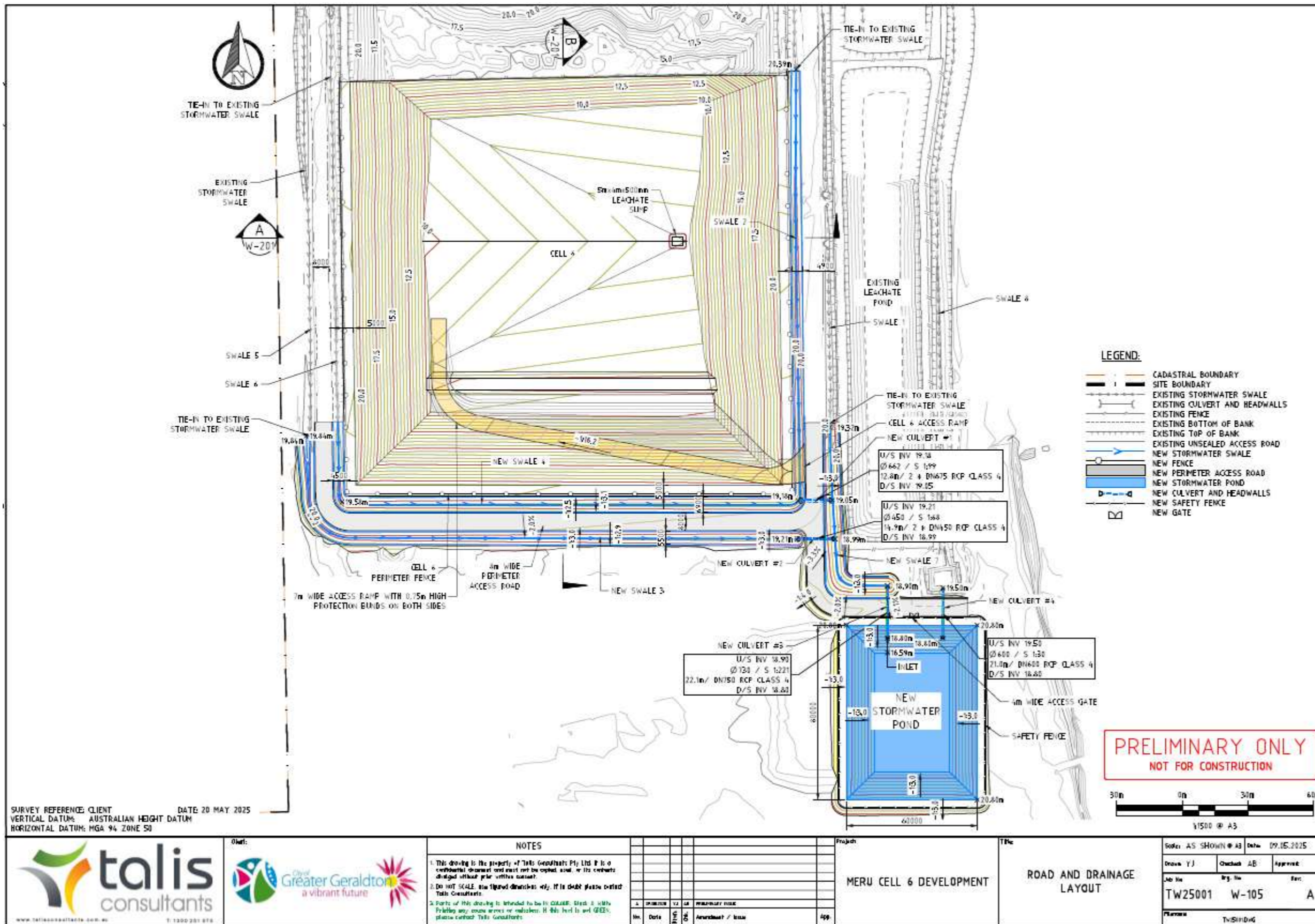


Figure 6: Stormwater drainage system and stormwater pond

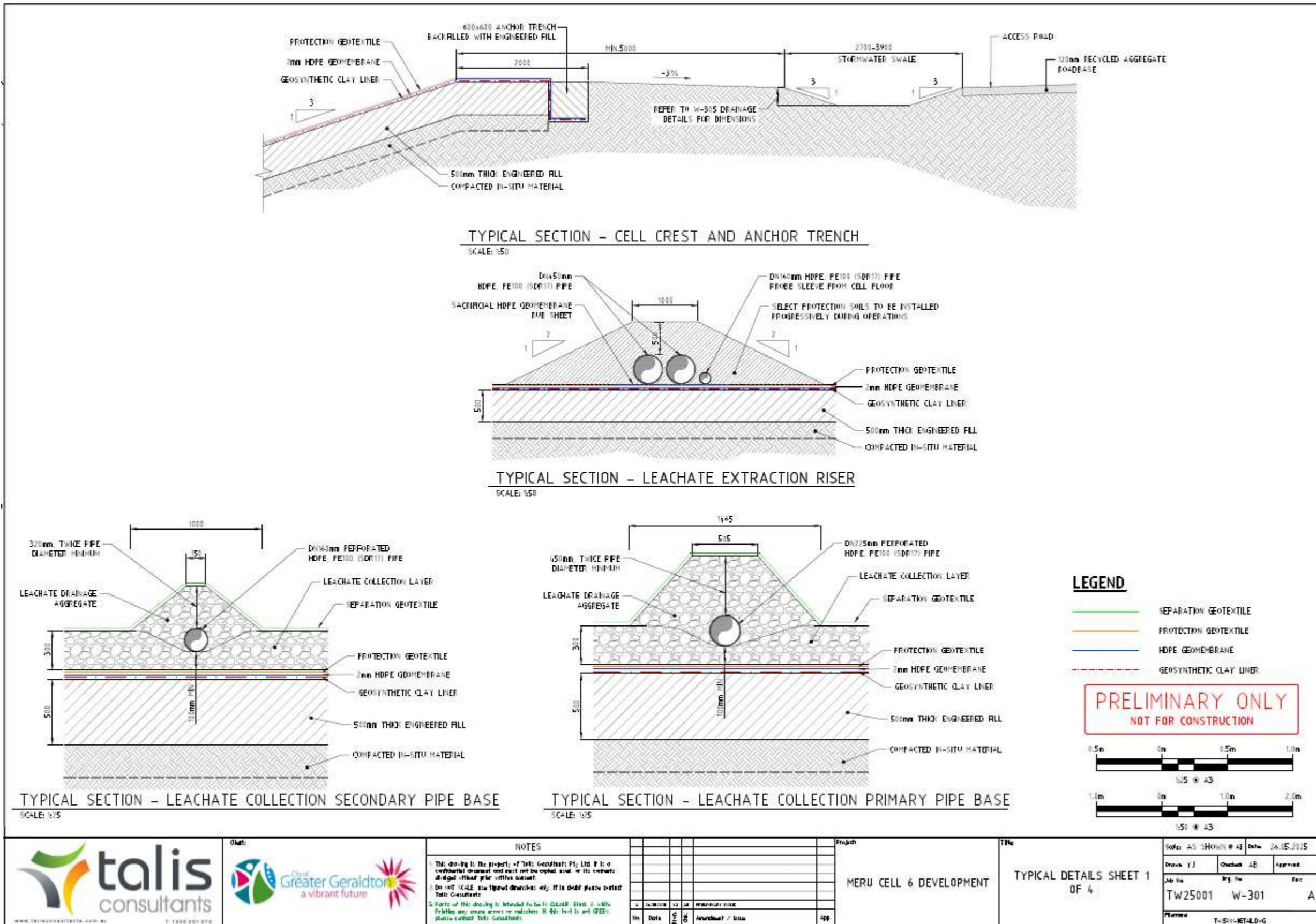


Figure 8: Leachate pipework construction plans

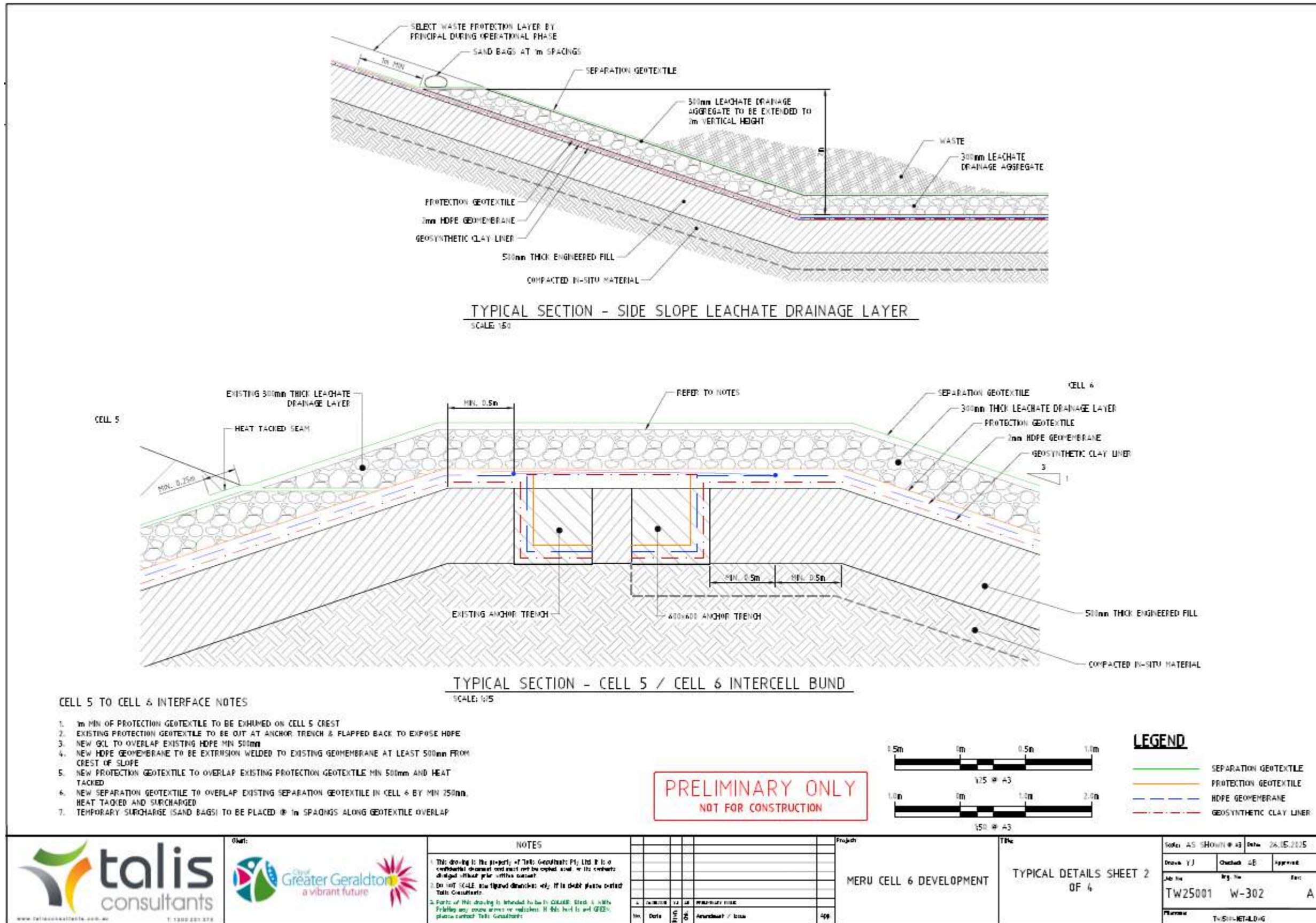


Figure 9: Side slope leachate drainage layer and cell 5 and cell 6 intercell bund

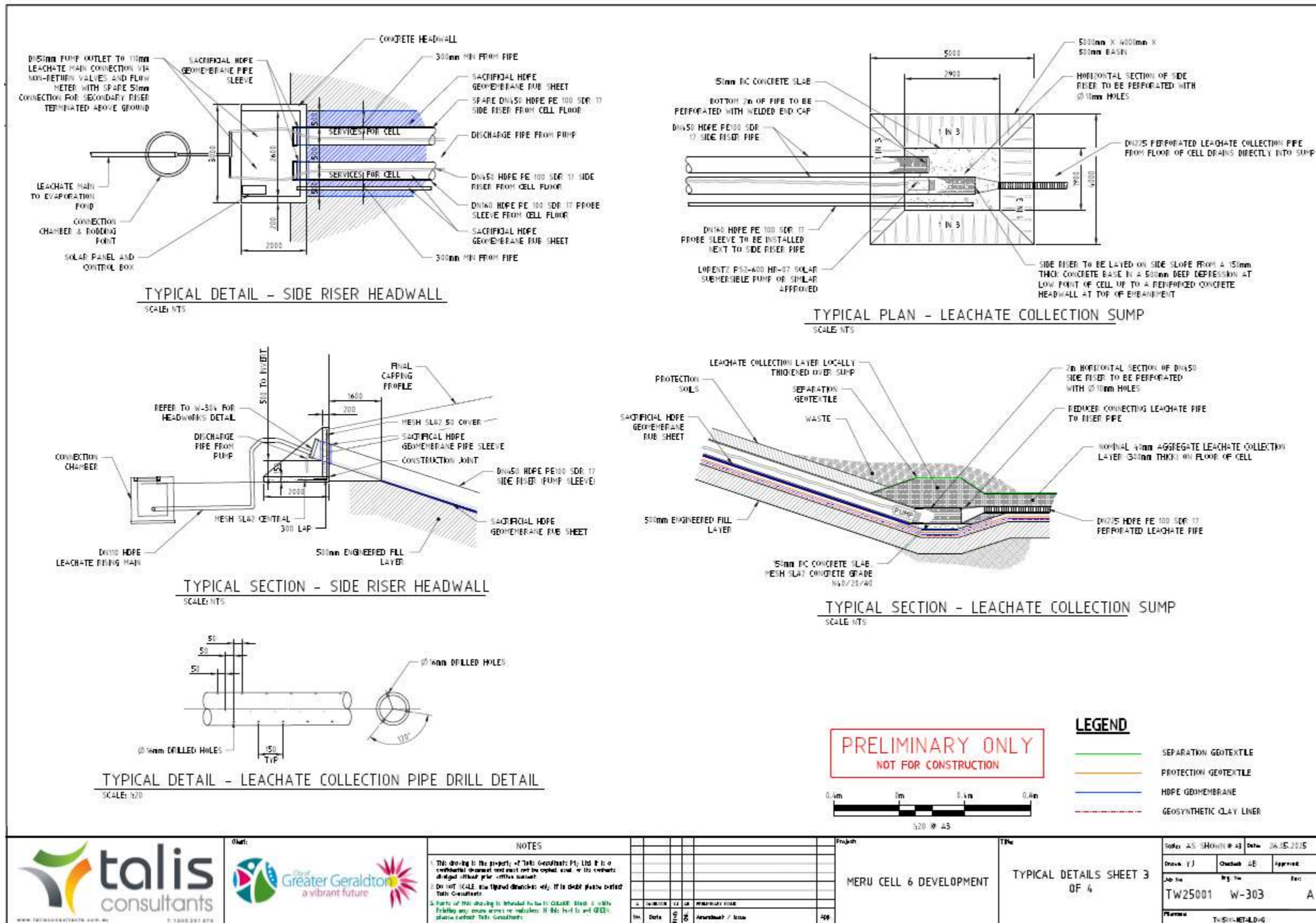


Figure 10: Side riser headwalls, leachate collection sumps and pipes

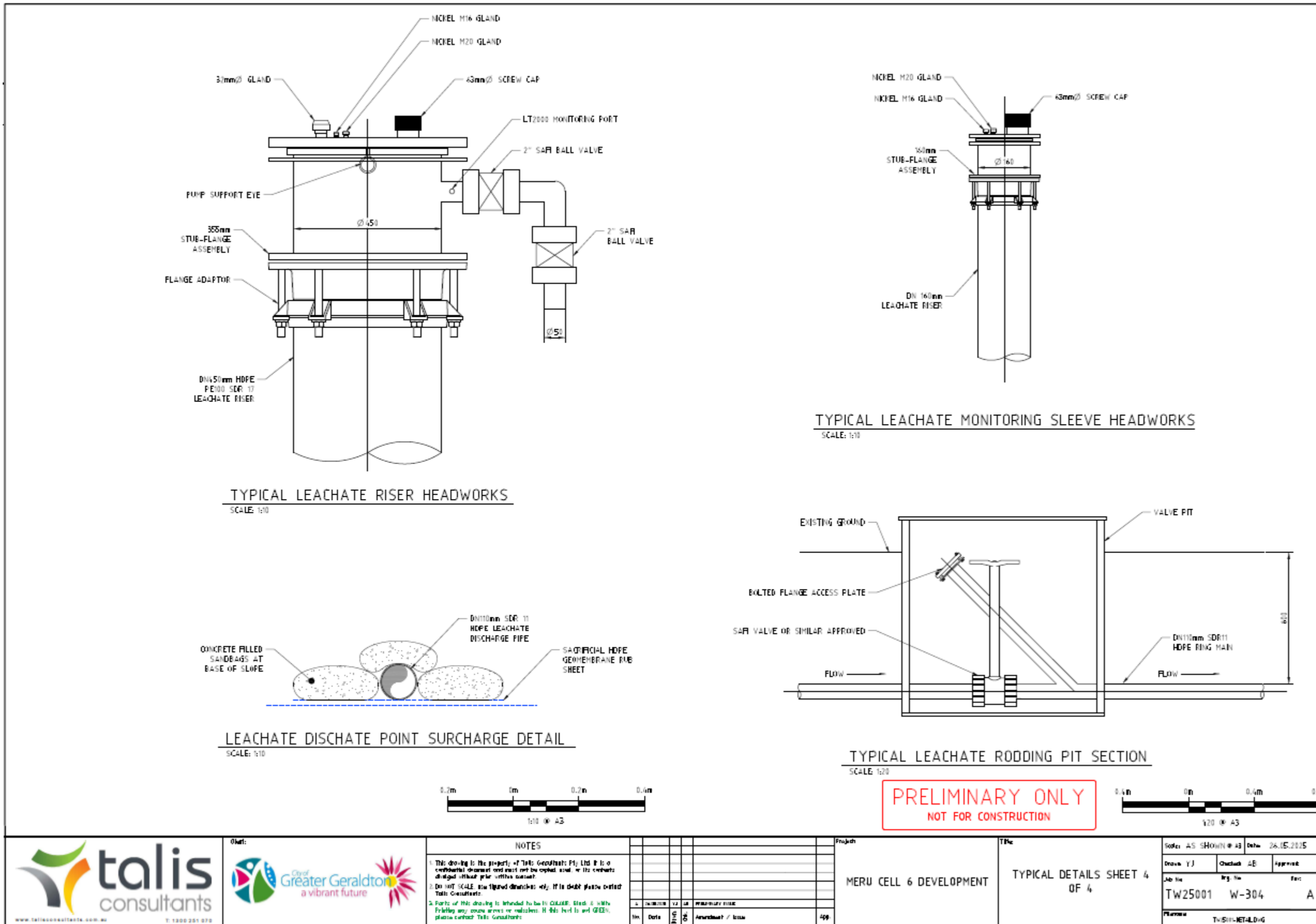


Figure 11: Leachate riser headworks, monitoring sleeve headworks, discharge point surcharge and rodding pit

Schedule 2: Landfill acceptance criteria for Special Waste Type 3

The leachable concentration and concentration limit for PFOS + PFHxS and PFOA for special waste type 3 are shown in Table 10.

Table 10: Class III landfill concentration limits

Landfill class		Landfill acceptance criteria ¹	
		PFOS + PFHxS	PFOA
Class III Landfill	ASLP leachable concentration (SLP 3)	0.7 µg/L	5.6 µg/L
	Concentration Limit (CL 3)	50 mg/kg	50 mg/kg

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

Schedule 3: Premises boundary

The corners of the premises boundary are the coordinates listed in Table 11.

Table 11: Premises boundary coordinates (GDA2020)

	Easting	Northing	Zone
1.	271238.82	6811289.19	50
2.	271400.55	6811291.73	50
3.	271464.19	6811236.63	50
4.	271471.50	6811008.65	50
5.	271843.00	6811016.86	50
6.	271841.55	6811118.97	50
7.	272292.16	6811127.01	50
8.	272579.65	6811537.05	50
9.	272196.00	6811529.41	50
10.	272189.58	6811831.85	50
11.	271228.87	6811813.89	50