



Licence number	L8904/2015/1
Licence holder	Cleanaway Solid Waste Pty Ltd
ACN	120 175 635
Registered business address	Level 4, 441 St Kilda Road MELBOURNE VIC 3004
DWER file number	DER2015/001648-1
Duration	03/08/2015 to 02/08/2035
Date of issue	03/08/2015
Premises details	Banksia Road Putrescible Landfill Banksia Road CROOKED BROOK WA 6236 Legal description - Part of Lot 2 on Deposited Plan 65861 As defined by the coordinates in Schedule 2

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed design capacity
Category 5: Processing or beneficiation of metallic or non-metallic ore: premises on which: (a) metallic or non-metallic ore is crushed, ground, milled or otherwise processed; (b) tailings from metallic or non-metallic ore are reprocessed; or (c) tailings or residue from metallic or non-metallic ore are discharged into a containment cell or dam.	350,000 tonnes per annual period
Category 61: Liquid waste facility - Premises on which liquid waste produced on other premises (other than sewerage waste) is stored, reprocessed, treated or irrigated.	3,000 tonnes per annual period
Category 64: Class II or III putrescible landfill site: premises on which waste (as determined by reference to the waste type set out in the document entitled "Landfill Waste Classification and Waste Definitions 1996" published by the Chief Executive Officer and as amended from time to time) is accepted for burial.	350,000 tonnes per annual period

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This licence is granted to the licence holder, subject to the attached conditions, on 3 February 2025 by:

MANAGER WASTE INDUSTRIES

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

Licence history

Date	Reference number	Summary of changes
13/11/1998	W2548/1998/1	First works approval issued for site construction. Issued to Kingscape Holdings Pty Ltd (J&P Metals). Approval was appealed and subsequently dismissed by the Minister for Environment.
29/11/1999	W2895/1999/1	Second works approval issued as the first approval expired prior to issue of development approval.
14/06/2000	L7439/1998/1	First licence issued to authorise landfilling operations as a Class II landfill.
6/06/2001	L7439/1998/2	Licence reissued.
1/07/2002	L7439/1998/3	Licence reissued.
23/06/2003	L7439/1998/4	Licence reissued.
8/06/2004	L7439/1998/4	Licence reissued.
23/05/2005	L7439/1998/5	Licence reissued, including upgrade of landfill classification to Class III. Decision was appealed and subsequently dismissed by the Minister for Environment. First non-annual licence (3 years).
19/10/2006	L7439/1998/5	Licence transferred to Transpacific Waste Management.
5/06/2008	L7439/1998/6	Licence reissued. Issued for 3 years.
23/03/2009	L7439/1998/7	Licence amendment regarding construction of cell 4 without a works approval. Licence version updated to reflect ILS.
8/10/2010	L7439/1998/7	Ministerial licence amendment regarding disposal of processes septage waste (Appeal 337 of 2009).
9/12/2010	W4760/2010/1	Works approval for construction of cell 5.
3/06/2011	L7439/1998/8	Licence reissued. Issued for 3 years.
9/02/2012	W5096/2012/1	Works approval for construction of TDS Cell 1.
1/03/2012	W5124/2012/1	Works approval for construction of new leachate ponds.
15/11/2012	L7439/1998/8	Licence amendment regarding perimeter fencing requirements.
15/11/2012	W5096/2012/1	Works approval amendment to allow staged completion of TDS cell 1.
1/02/2013	W5301/2012/1	Installation of landfill gas collection and flare

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22/02/2013	L7439/1998/8	Licence amendment to authorise use of TDS Cell 1.
23/01/2014	W5546/2013/1	Works approval for construction of cell #4B.
29/05/2014	L7439/1998/9	Licence reissued. Converted to REFIRE format.
29/01/2015	W5748/2014/1	Works approval for construction of cell 12 and leachate evaporation pond 3
3/08/2015	L8904/2015/1	Licence issued due to L7439/1998/9 ceasing to have effect.
22/10/2015	L8904/2015/1	Licence amendment to authorise operation of leachate evaporation pond 3, constructed under W5748
5/05/2016	L8904/2015/1	Licence amendment to: <ul style="list-style-type: none"> • change company name; • authorise operation of cell 12 constructed under W5748; and • address stormwater upgrades
21/07/2016	L8904/2015/1	Licence amendment to: <ul style="list-style-type: none"> • Accept approximately 3,000 tonnes per annual period of drill muds for blending and disposal to landfill; and • increase allowable volumes of Processed Septage to 3,000 tonnes per annual period.
13/04/2017	L8904/2015/1	Licence amendment for: <ul style="list-style-type: none"> • construction and operation of three composite HDPE liner Class III landfill cells (cells 6, 7 and 8); • construction and operation of a phytocapping trial on Class III landfill cell 5; and • review of Premises operations and regulatory controls.
2/02/2018	L8904/2015/1	Amendment Notice 1 to reflect the completion of cell 6 construction and authorise its use.
18/02/2019	L8904/2015/1	Amendment Notice 2 for a new TDS Cell 2 and leachate pond under Category 61
25/06/2019	L8904/2015/1	Amendment Notice 3 to authorise the use of TDS Cell 2 and leachate pond constructed under Amendment Notice 2.
17/12/2019	L8904/2015/1	Licence amendment to: <ul style="list-style-type: none"> • Increase in quantity limit for Category 64 waste acceptance to 350,000 tonnes per annual period; • Review of regulatory controls relating to dust and windblown waste; and • Consolidate Amendment Notices 1, 2 and 3 into this licence document.
12/05/2020	L8904/2015/1	Licence amendment to reflect the completion of Cell 7 construction and authorise its use.
28/05/2021	L8904/2015/1	Licence amendment to upgrade southern boundary stormwater infrastructure.
5/10/2021	L8904/2015/1	DWER initiated amendment for the addition of odour controls following the Cell 7 Appeal Determination.

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28/10/2021	L8904/2015/1	DWER initiated licence amendment to: <ul style="list-style-type: none"> Review of premises operations and regulatory controls. Incorporation of amendment application to reflect the completion of Cell 8 construction and authorise its use.
27/02/2023	L8904/2015/1	Licence amendment to commence capping of stage 1,2 and 5 and to allow for the construction and operation of a leachate recirculation system.
19/04/2023	W6745/2022/1	Works approval for the construction of additional stormwater management and storage infrastructure.
22/02/2024	L8904/2015/1	Licence amendment for the relocation of the landfill gas flare station and extension of landfill gas conveyance infrastructure.
23/02/2024	W6855/2023/1	Works approval for the construction of three additional landfill cells.
12/12/2024	L8904/2015/1	DWER initiated licence amendment to give effect to the Ministers appeal determination 048-21
03/02/2025	L8904/2015/1	Amendment to change how freeboard is monitored and calculated in TDS Cell 2.

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;
 - (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

Solid waste acceptance

- The Licence Holder must only accept onto the premises solid 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 1.

Table 1: Types of solid waste authorised to be accepted onto the premises

Waste type	Rate at which waste is received	Acceptance specification
All waste types	350,000 tonnes per annual period with no more than 20,000 tonnes of Special Waste Type 1 received in any annual period.	(a) All waste accepted at the Premises must be completely covered; (b) All waste loads accepted at the Premises must be visually inspected to confirm waste type/s; (c) Should a hot load be identified, the waste must not be disposed of at the tipping face; and (d) All waste suspected of containing ACM or asbestos must be treated as being Special Waste Type 1.
Contaminated Solid Waste Inert Waste Type 1 Inert Waste Type 2 Putrescible Waste Special Waste Type 2 Processed septage waste		(a) Contaminated Solid Waste must be supported by documentation that demonstrates compliance with the Acceptance Criteria for Class III landfills; and (b) No tyres are to be accepted.
Special Waste Type 1		(a) All Special Waste Type 1 accepted at the Premises must be completely contained; and (b) Acceptance of any waste must not result in the discharge of ACM or asbestos fibres.
Clean Fill		None specified

Industrial tailings waste acceptance

- The Licence Holder must only accept onto the premises industrial tailings of a tailings type, which does not exceed the corresponding rate at which tailings are received, and which meets the corresponding acceptance specification set out in Table 2.

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Table 2: Types of industrial tailings waste authorised to be accepted onto the premises

Tailings type	Rate at which tailings is received	Acceptance specification
Titanium Dioxide Tailings	350,000 tonnes per annual period	Tailings must be accepted in sealed vessels.

Liquid waste acceptance

- The Licence Holder must only accept onto the premises liquid 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 3.

Table 3: Types of liquid waste authorised to be accepted onto the premises

Waste type	Rate at which waste is received	Acceptance specification
Drill Muds	3,000 tonnes per annual period	Drill muds must be accepted in sealed vessels.

Waste acceptance general

- The Licence Holder must ensure that where a waste or tailings type does not meet the tailings type, waste type, Acceptance Criteria, or acceptance specification set out in Condition 1, Condition 2 or Condition 3, the waste is removed from the Premises by the delivery vehicle, or where that is not possible, stored in a quarantined storage area or container that prevents waste being discharged to the environment, and removed to an appropriately authorised facility within 21 days.

Waste processing

Solid waste processing

- The Licence Holder must ensure that the waste types specified in Table 4 are only subjected to the corresponding processes, subject to the corresponding process limits and/or specifications.

Table 4: Solid waste processing

Waste type	Process(es)	Process limits/specification
Clean fill		None specified
Contaminated Solid Waste Drill muds (processed in accordance with Condition 8) Inert Waste Type 1 Inert Waste Type 2 Putrescible Waste Processed septage	Receipt, handling, and disposal by landfilling.	(a) Waste must only be disposed of by burial into the Active Landfill Area and must not be used for any other purpose; (b) All waste, except Special Waste Type 1, must be levelled in layers no greater than 0.5 m thick and compacted; and (c) Highly Odorous Waste must be disposed of by burial immediately following acceptance.

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Special Waste Type 1		<p>(d) Waste must only be disposed of by burial to the active Special Waste Disposal Area.</p> <p>(e) Disposal must not result in the discharge of ACM or asbestos fibres;</p> <p>(f) Bulk loads of soil containing ACM or asbestos must be wet down during disposal, levelling and immediate burial; and</p> <p>(g) Waste must not be compacted until covered in accordance with Condition 19.</p>
Special Waste Type 2		<p>(h) Waste must only be disposed of by burial to the active Special Waste Disposal Area.</p> <p>(i) Waste must be levelled in layers no greater than 0.5 m thick and compacted; and</p> <p>(j) Highly Odorous Waste must be disposed of by burial immediately following acceptance.</p>

6. The Licence Holder must not excavate or uncover any landfilled waste at the Premises except:
- (a) for the installation of landfill gas collection and management system infrastructure;
 - (b) for the installation of leachate sump access wells; and
 - (c) all waste that is uncovered or excavated must be landfilled in accordance with Condition 5 and Condition 19 of this Licence immediately following installation.

Industrial tailings waste processing

7. The Licence Holder must ensure that the tailings type specified in Table 5 is only subjected to the corresponding processes, subject to the corresponding process limits and/or specifications.

Table 5: Industrial tailings waste processing

Tailings type	Rate at which tailings are received	Process limits/specification
Titanium Dioxide Tailings	Receipt, handling and disposal	<p>(a) Tailings must only to be disposed of into the designated TDS Cells as depicted in Map 1 Schedule 1;</p> <p>(b) Tailings must be discharged into the designated TDS Cells directly from the sealed vessels in which they are accepted;</p> <p>(c) Vehicles unloading in accordance with b) must do so from the dedicated impervious hardstand TDS Unloading Areas as depicted in Figure 1, Schedule 1; and</p> <p>(d) Tailings must be maintained in a damp state.</p>

Liquid waste processing

8. The Licence Holder must ensure that the waste types specified in Table 6 are only subjected to the corresponding processes, subject to the corresponding process limits and/or specifications.

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Table 6: Liquid waste processing

Waste type	Rate at which waste is received	Process limits/specification
Drill Muds	Receipt, handling, storage, solidification and disposal of waste.	<p>(a) Must be processed to a solid waste prior to landfilling by the following process:</p> <ul style="list-style-type: none"> ○ temporarily stored in sealed vessels on a dedicated and cordoned off 200mm sacrificial sand layer within an active Class III landfill cell; ○ unloaded and treated on a Hardstand with bund walls that prevent the discharge of leachate from the Hardstand; and ○ by mixing with shredded timber, compost, or Clean Fill to ensure a spadeable consistency. <p>(b) Must achieve contaminant levels that comply with the Acceptance Criteria for Class III landfills, as demonstrated by the analysis of samples required by Condition 48; and</p> <p>(c) Disposed of by landfilling in accordance with Condition 5.</p>

9. The Licence Holder must ensure that waste is not burnt at the Premises.

Containment Infrastructure

Solid waste containment infrastructure

10. The Licence Holder must ensure that the solid waste containment infrastructure specified in Table 7 meets or exceeds the specifications in Table 7 for the corresponding infrastructure.

Table 7: Solid waste containment infrastructure

Infrastructure	Specifications
All landfill cells (Cell 1, 2, 3, 4A, 4B, 5, 12 and 6, 7 and 8)	<p>(a) The landfill profile must be maintained in a stable condition and free of any cracking, slumping or failure;</p> <p>(b) All leachate pipes, gravity feeds and pumps must be free of blockage, leak and defect;</p> <p>(c) All leachate sumps must be maintained free of leaks and defects;</p> <p>(d) All leachate removed from the leachate sumps must be directed to a leachate pond; and</p> <p>(e) Landfill cells must be filled to ensure that the maximum height of waste placed within the amalgamated cells will be no greater than 128 m AHD while ensuring that all landfill cell faces are stable.</p>
Cells 3, 4A, 4B, 5 and 12 (Class III) Lining System	<p>(a) Engineered geosynthetic/ 1.5mm HDPE composite cell floor liner to achieve a permeability of at least $<1 \times 10^{-9}$ m/s or equivalent; and</p> <p>(b) Leachate Collection System consisting of a 300mm layer of permeable gravel with a network of perforated collection pipes that direct leachate to the collection sump.</p>

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Infrastructure	Specifications
Cells 6, 7 and 8 (Class III) Lining System	(a) Engineered geosynthetic/ 2.0mm HDPE composite cell floor liner to achieve a permeability of at least $<1 \times 10^{-9}$ m/s or equivalent; and (b) Leachate Collection System consisting of a 300mm layer of permeable gravel with a network of perforated collection pipes that direct leachate to the collection sump.

Industrial waste containment infrastructure

11. The Licence Holder must ensure that the industrial tailings containment infrastructure specified in Table 8 meets or exceed the specifications in Table 8 for the corresponding infrastructure.

Table 8: Industrial tailings containment infrastructure

Infrastructure	Specifications
TDS Cell 1 TDS Cell 2	(a) Lined with an engineered geosynthetic/ HDPE composite liner free of leaks and defects; (b) Maintain an under-liner pressure relief system and an over-liner drainage collection system for TDS Cell 2; (c) Contain a 5% AEP rainfall event in TDS Cell 1 while maintaining an additional 0.5m freeboard (total freeboard of at least 1.0m above the maximum operating level); (d) Contain a 1% AEP rainfall event in TDS Cell 2 while maintaining freeboard of at least 1.7m at all times; (e) Contingency volume for liquid storage within TDS Cell 2 must be calculated using Propellor™ software on a monthly basis. (f) All leachate must be directed to the TDS Cell 1 leachate pond or the TDS Cell 2 leachate pond; and (g) All leachate pipes, gravity feeds and pumps must be free of blockage, leaks and defects.

Leachate containment infrastructure

12. The Licence Holder must ensure that the leachate containment infrastructure specified in Table 9 meets or exceed the specifications in Table 9 for the corresponding infrastructure.

Table 9: Leachate containment infrastructure

Infrastructure	Specification
All	(a) Pond liners must be maintained free of leaks and defects; (b) Overtopping of the ponds and tanks must not occur; (c) Stormwater runoff must not enter the ponds or tanks or cause erosion of embankments; and (d) Daily inspections, of the TDS Cells and TDS Leachate ponds to assess compliance with condition must be undertaken and recorded.
TDS Cell 1 leachate pond	(e) 1.5mm HDPE lined to achieve a permeability of at least $<1 \times 10^{-9}$ m/s or equivalent; (f) Maintain a water recovery system which allows for the transfer of leachate from the TDS leachate ponds to the leachate storage tank; and (g) Maintenance of at least 1.0m freeboard at all times.

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TDS Cell 2 leachate pond	<ul style="list-style-type: none"> (h) 2.0mm HDPE lined to achieve a permeability of at least $<1 \times 10^{-9}$ m/s or equivalent; (i) Maintenance of at least 1.0m freeboard at all times; (j) Maintain a water recovery system which allows for the transfer of leachate from the TDS leachate ponds to the leachate storage tank; and (k) All pipelines associated with the return water system and the water recovery system are able to be isolated with shut-off valves which are banded.
TDS leachate storage tanks	<ul style="list-style-type: none"> (l) Four impervious storage tanks each with a minimum storage capacity of 85 kL; (m) The four impervious storage tanks must be located on a hardstand that directs any leachate back to the TDS Cells. (n) Maintain an indicator float on the leachate tanks that allows operators to inspect leachate levels in the storage tanks; and (o) The indicator float must be clearly visible from the TDS unloading position. (p) Leachate must be sent for reuse at the Kemerton Titanium Dioxide Processing Plant.
Primary Landfill Leachate Pond	<ul style="list-style-type: none"> (q) 1.5mm HDPE lined to achieve a permeability of at least $<1 \times 10^{-9}$ m/s or equivalent; (r) Designed to contain leachate and stormwater produced as a result of a 1% AEP rainfall event;
Landfill Leachate Evaporation Ponds 1, 2 and 3	<ul style="list-style-type: none"> (s) Leachate ponds 1, 2 and 3 must have a total storage capacity of at least 8,500 kL; and (t) A freeboard of 500 mm must be maintained on all ponds at all times.

13. The Licence Holder must manage leachate in accordance with the following physical controls and limits:
- (a) Re-use of TDS leachate at the Premises must not occur;
 - (b) Recirculation of TDS leachate must only occur to prevent overflow of TDS leachate storage tanks, and must be recirculated within TDS Cells only;
 - (c) the recirculation of landfill leachate via spray over the internal walls of the leachate ponds must not result in discharge beyond the leachate pond embankment liners;
 - (d) the recirculation of landfill leachate for dust suppression must only occur to the active tipping area within the Active Landfill Area; and
 - (e) direct reinjection of landfill leachate into landfill cells must not occur.

Landfill gas management infrastructure

14. The Licence Holder must install, operate and maintain an active landfill gas collection and management system infrastructure that meets or exceeds the specifications in Table 10 according to the specifications in that table for each of the corresponding infrastructure.

Table 10: Landfill gas collection and management systems

Infrastructure	Specifications
Active landfill gas collection and management system	<ul style="list-style-type: none"> (a) Designed, installed and operated to prevent landfill gas migration, minimise landfill gas emissions and optimise utilisation (where possible).

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Infrastructure	Specifications
Gas extraction wells	(b) Vertical and horizontal HDPE extraction wells completely sealed to prevent air draw down in accordance with the specifications in Plans 3 – 5F of Schedule 3.
Collection infrastructure - gas transfer pipelines, laterals and headers	(c) HDPE, impervious and free of leaks and defects.
Condensate system	(d) All captured condensate is returned to the Primary Leachate Pond or Leachate Evaporation Pond.
Landfill gas flare	(e) 2,000 m ³ / hour capacity enclosed flare with a ≥850°C chamber temperature with gas residence time of >0.6 seconds.

15. The Licence Holder must:

- (a) install landfill gas extraction wells and collection infrastructure in Cell 3, 4, 4B, 12 and the southern and eastern areas of Cell 5 and connect this infrastructure to the active landfill gas management system (flare) by 30 June 2022;
- (b) connect the installed horizontal landfill gas extraction wells in Cell 6 and Cell 7 to the active landfill gas management system (flare) by 31 March 2022;
- (c) install vertical landfill gas extraction wells and collection infrastructure in Cell 6 and Cell 7, and connect this infrastructure to the active landfill gas management system (flare) by 31 December 2022;
- (d) install landfill gas extraction wells and collection infrastructure in Cell 8 and connect this infrastructure to the active landfill gas management system (flare) within 12 months of reaching final waste contours in these Cells.

Stormwater management infrastructure

16. The Licence Holder must ensure that:

- (a) the infrastructure depicted in Plans 1, 1A, 1B and 2 of Schedule 3 and specified in Table 11 must meet or exceed the corresponding specifications; and
- (b) Any departure from the specifications in Table 11 and Plans 1, 1A, 1B and 2 of Schedule 3 must not increase the risk to public health, public amenity or the environment.

Table 11: Stormwater infrastructure requirements

Site infrastructure and equipment	Specification
Stormwater ponds and spillways	(a) Sized to accommodate a 1% AEP rainfall event. (b) A freeboard of 0.5 m is maintained in stormwater pond 2.
Eastern area stormwater diversion	(c) Sized to accommodate a 1% AEP rainfall event. (d) Minimum 0.5m high bund with adjacent channel 1 m wide and 0.5 m deep.
Western stormwater bund	(e) Minimum height of 1 m.
Northern boundary drains	(f) None specified.
Southern boundary drains	(g) Sized to accommodate a 1% AEP rainfall event.

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Site infrastructure and equipment	Specification
Sediment traps, drains, bunds and culverts	(h) Sized to accommodate a 5% AEP rainfall event.

- 17. The Licence Holder must submit an Environmental Compliance Report, within 60 calendar days of the southern boundary drain and firebreak being constructed.
- 18. The Environmental Compliance Report required by Condition 17 must:
 - (a) include certification by a Suitably Qualified Engineer that the southern boundary drain and firebreak have been constructed in accordance with the specifications in Table 11 and Plans 1, 1A, 1B and 2 of Schedule 3;
 - (b) contain as constructed plans of the southern boundary drain and firebreak; and
 - (c) assess the ability of the upgraded stormwater infrastructure to manage a 1% AEP rainfall event, taking into account normal operating water levels in stormwater ponds 1 and 2; and
 - (d) be signed by a person authorised to represent the Licence Holder and contain the printed name and position of that person within the company.

Cover and capping requirements

Daily and Interim cover

- 19. The Licence Holder must ensure that daily and interim cover is applied and maintained on landfilled waste types in accordance with the corresponding cover requirements in Table 12 and Table 13 and that sufficient stockpiles of cover are maintained on the premises at all times to meet the requirements of this condition.

Table 12: Daily cover requirements

Waste type	Material	Depth	Timescales
Clean Fill	No cover requirement		
Special Waste Type 1 Special Waste Type 2	Either: (a) 300 mm of Inert Waste Type 1 or Clean fill; or (b) 1,000 mm of Solid waste		As soon as practicable after acceptance and no later than the end of the working day that the waste was accepted, and before being compacted to prevent the release of asbestos fibres and further disturbance as a result of compaction and other landfilling activities.
Contaminated Solid Waste Drill muds Inert Waste Type 1 Inert Waste Type 2 Putrescible Waste	Inert Waste Type I or Clean Fill	150 mm	As soon as practicable and not later than the end of the working day that the waste was deposited.
Processed Septage waste	Inert Waste Type 1 or Clean Fill	300 mm	As soon as practicable and not later than the end of the working day that the waste was deposited.

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Waste type	Material	Depth	Timescales
All waste types (excludes Titanium Dioxide Tailings)	Inert Waste Type 1 or Clean Fill	300 mm	Immediately following disposal for any wastes meeting the definition of Highly Odorous Wastes ¹ or Dusty Wastes ¹ .
	Putrescible Waste	1000 mm	Immediately following disposal for any wastes meeting the definition of Highly Odorous Wastes ¹ or Dusty Wastes ¹ .

Note 1: Where waste meets the definition of Highly Odorous Wastes and/or Dusty Wastes, the cover requirements for Highly Odorous Wastes and Dusty Wastes take precedence over any other cover requirements.

Table 13: Interim cover requirements

Waste type	Material	Depth	Timescales
All waste types (excludes Titanium Dioxide Tailings)	Clean Fill	1000 mm	Progressively applied and within 3 months of achieving Interim Waste Contours

Final capping

20. The Licence Holder must prepare and submit to the CEO by 31 March 2022, an updated Rehabilitation and Closure Plan for all Landfill Cells. The updated Rehabilitation and Closure Plan must include as a minimum:
 - (a) Details of the design and operation of the phytocap performance trial on Cell 5;
 - (b) Results and recommendations from the phytocap performance trial on Cell 5;
 - (c) A proposed filling schedule and timeframes to achieve final waste contours for all landfill Cells in accordance with Plan 6, Schedule 3 which prioritises the completion of landfill Cells containing waste over the construction and filling of new landfill Cells and justifies where such prioritisation is not possible;
 - (d) The proposed construction specification for final capping for all landfill Cells;
 - (e) Existing surveyed levels of all landfill Cells relative to the proposed final waste contours;
 - (f) Construction quality assurance plans for capping works for all landfill Cells; and
 - (g) A capping schedule that ensures that:
 - (i) All portions of landfill Cells that have achieved final waste contours are capped within 18 months;
 - (ii) Cells 7 and 8 are capped within 18 months of reaching final waste contours in each cell.

21. The Licence Holder must prepare and submit to the CEO by 30 June 2022, a Rehabilitation and Closure Plan for the TDS Cells. The Rehabilitation and Closure Plan must include as a minimum:
 - (a) A geotechnical assessment of the Titanium Dioxide Tailings in all TDS Cells;

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- (b) A proposed schedule, timeframe and methodology to achieve consolidation of Titanium Dioxide Tailings to ensure sufficient strength to allow capping of all TDS Cells;
- (c) A proposed schedule and timeframes to achieve final waste contours for all TDS Cells;
- (d) A proposed schedule and timeframes for capping all TDS Cells;
- (e) The proposed capping construction specification for all TDS Cells; and
- (f) Construction quality assurance plans for capping works for all TDS-Cells.

Emissions and discharges

Dust emissions

- 22. The Licence Holder must, prior to using the southern haul road for access to/from Cell 8, extend the bitumised southern haul route to the eastern extent of Cell 8.
- 23. The Licence Holder must keep all roads used by vehicles greater than 2.5 tonnes damp at all times during operational hours by applying water via a water cart, collected from Stormwater Pond 1 and Stormwater Pond 2;
- 24. The Licence Holder must restrict vehicle speeds on the premises to below 20 km per hour.
- 25. The Licence Holder must manage fugitive dust emissions from the active tipping area during operational hours by:
 - (a) applying water collected from Stormwater Pond 1 and Stormwater Pond 2, via a water cart, to the active tipping area; or
 - (b) applying leachate via the water cart to the active tipping area in accordance with Condition 13;
 - (c) ensuring waste is levelled and compacted as soon as practicable after it is discharged and at a minimum by the end of the working day; and
 - (d) ensuring waste is placed and compacted to ensure all faces are stable and capable of retaining further waste placement or placement of cover or rehabilitation material.
- 26. The Licence Holder must, during operational hours, undertake targeted wetting down of Dusty Wastes during disposal and burial at the active tipping area.
- 27. The Licence Holder must, by 31 December 2021 apply dust suppressant material to non-vegetated landfill batters to mitigate fugitive dust emissions from these areas.
- 28. All operational vehicles must pass through an operational wheel wash prior to exiting the Premises.

Asbestos emissions

- 29. All Special Waste Type 1 accepted at the Premises must be received and landfilled immediately in accordance with Condition 5.
- 30. All Special Waste Type 1 and bulk loads of soil containing ACM or asbestos must not be deposited within 2m of the final waste profile.

Noise emissions

- 31. All vehicles entering the premises and within the Licence Holders control must be fitted with broadband reversing alarms.

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Odour emissions

32. The Licence Holder must ensure that odour from the premises does not unreasonably interfere with the health or amenity of persons not on the premises.
33. The Licence Holder must ensure the active tipping area is limited to an area no greater than 1,800 m², or to two areas no greater than 1,800 m² each for periods of up to three months when transitioning between cells.
34. The Licence Holder must dispose of highly odorous waste by burial immediately following acceptance in accordance with cover requirements specified in Condition 19.

Stormwater emissions

35. The Licence Holder must operate and maintain a stormwater management system in accordance with the following physical controls and limits:
 - (a) Stormwater arising within the excavations for landfill cell 8 is directed to temporary stormwater ponds, sized to accommodate a 1% AEP, 24-hour storm event;
 - (b) Stormwater must not be directed into the Active Landfill Area, TDS Cells, TDS leachate ponds or any leachate containment infrastructure; and
 - (c) Stormwater arising within, or which has had contact with, the Active Landfill Area and the areas of the Premises where landfilling, waste acceptance and processing and leachate containment occurs must not discharge beyond the Premises boundary.
36. The Licence Holder must ensure that the southern boundary drain:
 - (a) is inspected monthly for signs of erosion;
 - (b) monthly inspections are recorded; and
 - (c) Report to the CEO, within 2 weeks of erosion being identified:
 - (i) The location, description and cause of erosion; and
 - (ii) Measures taken to rectify any damage.

Windblown waste

37. The Licence Holder must operate and maintain a minimum of 10 portable litter control screens with a minimum height of 4 metres and a minimum length of 4 metres each, located within 15 metres, where practicable, downwind of the working face of the landfill.
38. The Licence Holder must by 31 August 2022, install and operate at least 500m of litter control nets with a minimum height of 6 metres around the active landfill faces, positioned to best capture windblown waste based on prevailing wind direction.
39. The Licence Holder must ensure windblown waste is collected from the landfill area and control screens on a daily basis and from the greater Premises including, perimeter fencing, roads and vegetated areas on at least a weekly basis and returned to the tipping area or appropriately contained.
40. The Licence Holder must, by 31 March 2022, install and maintain chain wire fencing of a minimum 1.8 metres in height around the prescribed premises boundary, and designed so as to effectively capture windblown waste not captured by the portable litter screens and litter nets as specified in Condition 37 and 38.

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Fire/smoke

- 41.** The Licence Holder must implement the following fire control measures:
- (a) Maintain an operational and full water cart with a storage capacity of at least 15 kL on the Premises;
 - (b) Maintain a minimum of 50 kL of water within Stormwater pond 1 and Stormwater pond 2 (combined) which can be used for firefighting;
 - (c) Maintain a supply of cover material and apply that cover to the active tipping area to a minimum depth of 150 mm, in the event that a fire within the Dardanup Conservation Park and/or Boyanup State Forest presents a material risk to the Premises.
- 42.** The Licence Holder must prepare and submit to the CEO a Fire Management Plan for the premises by 31 July 2025. The Fire Management Plan must:
- (a) Be reviewed and endorsed by a suitably qualified fire safety engineer;
 - (b) Include the relevant and current emergency contact details for site personnel and emergency service operators;
 - (c) Outline credible emergency scenarios and clear procedures to manage them, including initial intervention measures, personnel responsibilities, notification and escalation procedures;
 - (d) Identify all required fire prevention and management infrastructure and equipment to be maintained on-site for the scenarios identified, including details on the distribution and operation of installed fire safety systems and water access requirements for fire-fighting purposes;
 - (e) Include written details and a corresponding site plan of all fire prevention and management infrastructure and equipment maintained on site;
 - (f) Include procedures for managing and disposing recoverable fire wash waters from waste management areas;
 - (g) Outline the intended disposal facility or mechanism for fire wash water generated on the premises during a fire event. The turnaround time for disposal must also be listed and considered in response procedures requiring the removal of fire wash water;
 - (h) Include a list of contingency actions to be undertaken in the event that fire wash water discharges off site;
 - (i) Outline post fire management procedures for smouldering waste;
 - (j) Outline training requirements and the schedule of delivery of training to operational staff on emergency response procedures and the requirements of the Fire Management Plan; and
 - (k) Address the risk from bush fire in the Dardanup Conservation Park.
- 43.** The Licence Holder must maintain and implement the Fire Management Plan once submitted to the CEO.
- 44.** The Licence Holder must test the Fire Management Plan annually.

Vermin/Pest

- 45.** The Licence Holder must implement the following feral animal, vermin and weed management measures:
- (a) Install a 400 mm wire mesh skirt/apron by 31 March 2022 along the eastern

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and southern prescribed premises boundary fence;

- (b) Ensure that the base of the premises entrance gates will, when closed, not allow cat or fox access by having a maximum 50 mm clearance at the base of the gate to the ground;
 - (c) Ensure that the road surface at the entrance gate consists of bitumised or concrete hardstand material;
 - (d) Check and record the integrity of the premises boundary fence on a weekly basis and undertake repairs within 1 week of any damage being identified;
 - (e) Undertake vermin prevention measures including baiting and trapping; and
 - (f) Inspect the premises monthly for the presence of weeds, record observations of the inspections and take and record measures to prevent the growth and spread of weeds.
- 46.** The Licence Holder must maintain a register of visual signs, presence and visitation of feral cats and foxes within the landfill area.

Monitoring

General monitoring

- 47.** The Licence Holder must ensure that:
- (g) All liquid samples are collected and preserved in accordance with AS/NZS 5667.1;
 - (a) All surface water sampling is conducted in accordance with AS/NZS 5667.4;
 - (b) All groundwater sampling is conducted in accordance with AS/NZS 5667.11;
 - (h) All laboratory samples are submitted to and tested by a laboratory with NATA accreditation for the parameters being measured unless indicated otherwise within the relevant table.
- 48.** The Licence Holder must ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is maintained and calibrated in accordance with the manufacturer's specifications.
- 49.** The Licence Holder must, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.
- 50.** The Licence Holder must ensure that:
- (a) monthly monitoring is undertaken at least 15 days apart;
 - (b) six monthly monitoring is undertaken at least 5 months apart; and
 - (c) annual monitoring is undertaken at least 9 months apart.

Input and output monitoring

- 51.** The Licence Holder must record the total amount of waste accepted onto, and removed from the premises, for each waste type listed in Condition 1, Condition 2 and Condition 3, in the corresponding unit, and for each corresponding time period, as set out in Table 14.

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Table 14: Monitoring of inputs and outputs

Input/Output	Unit	Time period	Frequency
Waste Inputs	Tonnes	Annual period	Each load arriving at the Premises
Waste Outputs			Each load leaving or rejected from the premises

Process monitoring

52. The Licence Holder must undertake the process monitoring in Table 15 according to the corresponding specifications in Table 15.

Table 15: Process monitoring requirements

Process description	Parameter	Frequency	Method
Verification of contaminant levels in Drill Muds treated in accordance with Condition 8, prior to landfilling	All relevant parameters to the Acceptance Criteria for Class III landfills	In line with the Landfill Definitions	In line with the Landfill Definitions
Verification of contaminant levels in titanium dioxide tailings.	All relevant parameters to the Acceptance Criteria for Class III landfills	Six monthly	In line with the Landfill Definitions
Verification of the percentage of solids in the titanium dioxide tailings slurry stream	Percentage of solids	Six monthly	N/A

Leachate monitoring

53. The Licence Holder shall inspect and monitor the leachate management system at in accordance with Condition 12 and Condition 13. The Licence Holder shall monitor and record, at a minimum, the parameters specified in Table 16 at the locations, levels and recording frequency specified in the Table.

Table 16: Leachate Management System monitoring requirements

Parameter	Location	Operational levels	Recording period
Depth of leachate	TDS Cell 1 Leachate Pond	Less than minimum freeboard as specified in Condition 12	Daily
	TDS Cell 2 Leachate Pond		
	Primary Leachate Pond		Daily

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Parameter	Location	Operational levels	Recording period
	Leachate Evaporation Ponds 1	Less than minimum freeboard as specified in Condition 12	
	Leachate Evaporation Ponds 2		
	Leachate Evaporation Ponds 3		
Volume of leachate	Pumped out of leachate ponds	N/A	Weekly

54. The Licence Holder shall undertake the process monitoring at the monitoring point reference locations specified in Table 17 according to the corresponding specifications.

Table 17: Leachate quality monitoring

Monitoring point reference	Process description	Parameter	Units	Frequency	Method
Primary leachate pond	Leachate extracted from Landfill Cells	pH ¹	pH units	6 monthly	Spot sample in accordance with Condition 47
		Electrical conductivity ¹	µS/cm		
		Total soluble solids	mg/L		
		Cations and anions – Potassium, chloride and sulfate			
		Total metals – arsenic (total) cadmium, chromium, copper, iron (total), lead manganese, mercury, molybdenum, nickel, selenium, zinc			
Nutrients – Ammoniacal nitrogen, nitrate-nitrogen, total nitrogen, total phosphorus, total organic carbon, chemical oxygen demand					
	Leachate extracted from Landfill Cells	Total recoverable hydrocarbons Monocyclic aromatic hydrocarbons – benzene, toluene, methylbenzene, xylene (total) Polycyclic aromatic hydrocarbons – acenaphthene, anthracene, ben(a)pyrene, fluoranthene, naphthalene, pyrene	µg/L	6 monthly	Spot sample in accordance with Condition 47

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Monitoring point reference	Process description	Parameter	Units	Frequency	Method
		<p>Organochlorine pesticides – Aldrin, chlordane (and metabolites), DDT (and metabolites), dieldrin, chlorpyrifos, HCB, heptachlor (and its epoxide), lindane</p> <p>Organophosphates – parathion, demeton-S-methyl, maldison, diazinon, dimethoate, fenamiphos, fenthion</p> <p>Other – atrazine, TCE, PCE and polychlorinated biphenyls (total)</p>			
	Leachate extracted from Landfill Cells	<p>PFAS:</p> <ul style="list-style-type: none"> • Perfluorooctane sulfonate; • Perfluorooctanoic acid; • 6:2 Fluorotelomer sulfonate; • 8:2 Fluorotelomer sulfonate, • Perfluoroheptanoic acid; • Perfluorobutane sulfonate; • Perfluorobutanoic acid; • Perfluorohexanoic acid; • Perfluorohexane sulfonate; • Perfluoropentanoic acid; • Perfluorooctane sulfanamide; • Perfluorodecane sulfonate; • Perfluorononanoic acid; • Perfluorodecanoic acid; • Perfluoroundecanoic acid; • Perfluorododecanoic acid; • Perfluorotridecanoic acid; • Perfluorotetradecanoic acid; • N-Methyl-heptadecafluorooctane sulfanamide; • N-Eethyl-heptadecafluorooctane sulfanamide; • N-Methyl-heptadecafluorooctane sulfanomidoethanol; and • N-Eethyl-heptadecafluorooctane sulfanomidoethanol 	µg/L	6 monthly	Spot sample in accordance with Condition 47
TDS Leachate Pond	Leachate extracted from TDS Cells	pH ¹	pH units	6 monthly	Spot sample in accordance with Condition
		Electrical conductivity ¹	µS/cm		
		Total soluble solids			

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Monitoring point reference	Process description	Parameter	Units	Frequency	Method
		Cations and anions – Potassium, chloride, bicarbonate and sulfate	mg/L		47
		Total metals – Aluminum, arsenic (total), barium, beryllium, boron, cadmium, calcium, chromium (III), chromium (VI), cobalt, copper, iron (total), lead, manganese, magnesium, mercury, molybdenum, nickel, selenium, silver, sodium, titanium, thorium, uranium, vanadium and zinc			
		Radium-226, Radium-228	Bq/L	Yearly	

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

55. The Licence Holder must undertake leachate head monitoring at the monitoring point reference locations specified in Table 18 according to the corresponding specifications.

Table 18: Leachate head monitoring requirements

Parameter	Location	Units	Recording period	Method
Leachate head recovery period for leachate levels to return to rest levels after cessation of pumping	All active and closed cells containing leachate sumps	Minutes	One off for all leachate sumps	None specified
Leachate head within the leachate sumps	All active and closed cells containing leachate sumps	mm	Monthly	Depth to be measured after the relevant recovery period, determined in accordance with this Condition, for that sump has passed following the temporary cessation of pumping

56. The Licence Holder must commence monitoring of leachate flows from landfill cells 1, 2 and 5 by 1 January 2025 in accordance with Table 19.

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Table 19: Leachate flow monitoring requirements

Parameter	Location	Units	Recording period	Method
Leachate	Exit location from landfill cell to flow channel feeding leachate pond 1	mm	Weekly	Visual inspection of leachate flow from cells to leachate ponds

57. The Licence Holder must prepare and submit to the CEO a Leachate Plan for the premises by 31 March 2022. The Leachate Plan must:
- (a) Include a map with aerial image overlay showing the leachate sump locations in all active and closed landfill cells;
 - (b) Detail the leachate head recovery period for all leachate sumps in all active and closed landfill cells and a description of the methodology employed to determine the leachate head recovery periods;
 - (c) Detail the findings of the monthly leachate head monitoring undertaken in accordance with Condition 55;
 - (d) Include an interpretive assessment of the current leachate heads across each active and closed landfill cells;
 - (e) Propose leachate head management levels for each active and closed landfill cells;
 - (f) Detail how the results of the leachate head monitoring required by Condition 55 and the findings of the detailed quantitative hydrogeological risk assessment required by Condition 64 have been considered in the development of the leachate head management levels;
 - (g) Where leachate head monitoring required by Condition 55 identifies that leachate heads exceed the proposed leachate management level in any active or closed landfill or TDS cells, include an action plan, including timescales, for reducing leachate heads to below the leachate head management levels;
 - (h) Includes an action plan for maintaining leachate heads below the proposed leachate head management levels in all active and closed landfill cells; and
 - (i) Include investigation options, timeframes and monitoring methodologies proposed to monitor leachate levels in all TDS Cells and all landfill Cells that do not contain leachate sumps.
58. The Licence Holder must implement the Leachate Plan required by condition 57 by no later than 1 January 2025.

Landfill gas monitoring

59. The Licence Holder must undertake the landfill gas monitoring in Table 20 according to the corresponding specifications in Table 20.

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Table 20: Landfill gas monitoring requirements

Monitoring Point	Parameter	Units	Averaging period	Frequency	Method
Each well, as depicted in Schedule 3, Plan 3 Flare, as depicted in Schedule 3, Plan 3	Volumetric flow rate	m ³ /hr	Spot sample	Monthly	Landtec GEM2000, GEM5000 (or superior field test methods)
	Methane	volume%			
	Carbon dioxide	volume%			
	Oxygen	volume%			
	Nitrogen	volume%			
	Carbon monoxide	Ppm			
	Gas temperature	°C			
	Pressure	Pa			

60. The Licence Holder must take the specified actions in Table 21 when the corresponding specified parameters fall outside of the corresponding trigger levels.

Table 21: Landfill gas collection trigger levels

Parameter	Trigger levels	Specified actions														
Gas temperature	> 55 °C	<p>(a) The Licence Holder must, within one week of the becoming aware of a parameter value falling outside of the corresponding trigger level:</p> <ul style="list-style-type: none"> ○ Visually check the integrity of the landfill cover and landfill gas infrastructure such as wellheads and piping, for signs of melting, smoke and residue. ○ Resample all monitoring points for the parameters in Condition 59. ○ Adjust the landfill gas well flow rate control valves if required. ○ Review the monitoring results against the parameters and investigation levels in the below table. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Parameter</th> <th>Investigation level</th> </tr> </thead> <tbody> <tr> <td>Carbon dioxide</td> <td>25 – 50 % by volume</td> </tr> <tr> <td>Carbon monoxide¹</td> <td>< 25 parts per million (ppm)</td> </tr> <tr> <td>Methane</td> <td>30 – 60 % by volume</td> </tr> <tr> <td>Nitrogen</td> <td>2 – 25 % by volume</td> </tr> <tr> <td>Oxygen</td> <td>< 2 % by volume</td> </tr> <tr> <td>Temperature</td> <td>< 55°C</td> </tr> </tbody> </table> <ul style="list-style-type: none"> ○ Continue monitoring as described in Condition 59 weekly until the parameters fall within the corresponding investigation level. <p>(b) Submit a notification to the CEO within 2 weeks that details:</p>	Parameter	Investigation level	Carbon dioxide	25 – 50 % by volume	Carbon monoxide ¹	< 25 parts per million (ppm)	Methane	30 – 60 % by volume	Nitrogen	2 – 25 % by volume	Oxygen	< 2 % by volume	Temperature	< 55°C
Parameter	Investigation level															
Carbon dioxide	25 – 50 % by volume															
Carbon monoxide ¹	< 25 parts per million (ppm)															
Methane	30 – 60 % by volume															
Nitrogen	2 – 25 % by volume															
Oxygen	< 2 % by volume															
Temperature	< 55°C															

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		<ul style="list-style-type: none"> ○ the parameters that were found outside of the investigation levels; ○ the records of the visual assessment of the landfill cover and landfill gas infrastructure; ○ the cause of the investigation level exceedance; and ○ the specified actions taken and any further action that is being or when the action will be taken to mitigate a reoccurrence of the exceedance.
Volume	400 – 2000 m ³ /hr	<p>(c) Adjust the gas flare flow rate control valves if required.</p> <p>(d) Submit a notification to the CEO within 2 weeks that details:</p> <ul style="list-style-type: none"> ○ the parameter found outside the trigger level; ○ the cause of the trigger level exceedance; and ○ the specified actions taken and any further action that is being or when the action will be taken to mitigate a reoccurrence of the exceedance.

Note 1: Conformation laboratory analysis should be undertaken for Carbon Monoxide should the initial field tests be outside the trigger level.

Dust monitoring

61. The Licence Holder must;

- (a) Develop and submit a Sampling and Analysis Plan by 31 January 2022, prepared by an Air Quality Professional for dust composition sampling that includes:
 - (i) sampling regime;
 - (ii) averaging period that must not be less than one 24 hour sample collected every 6 days for a period of at least six months;
 - (iii) sampling methodology;
 - (iv) siting requirements;
 - (v) contaminants of concern;
 - (vi) appropriate target levels; and
 - (vii) quality assurance / quality control (QA/QC) program.
- (b) Install monitors that are capable of collecting bulk dust for quantitative analysis as specified in the Plan required by Condition 61(a) by 28 February 2022, placed in proximity to identified receptors, and collect dust that is emitted from the Premises.
- (c) undertake monitoring as specified in the sampling and analysis plan specified by Condition 61(a), commencing within 14 days of installation of the monitoring equipment specified in Condition 61(b).

62. The Licence Holder must submit to the CEO by no later than 60 days after completion of the sampling and receipt of laboratory data, a report prepared by an Air Quality Professional, of the sampling conducted in accordance with the requirements of Condition 61(c), including but not limited to:

- (a) a clear statement of the sampling and analysis undertaken;
- (b) a description of the methodologies employed;

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- (c) a summary of the field and laboratory quality assurance / quality control (QA/QC) program;
- (d) copies of the monitoring records and QA/QC documentation;
- (e) an assessment of reliability of field procedures and laboratory results;
- (f) a tabulated summary of results, as well as all raw data provided in an accompanying Microsoft Excel spreadsheet digital document/file (or a compatible equivalent digital document/file), with all results being clearly referenced to laboratory certificates of analysis;
- (g) an interpretive summary and assessment of the results against relevant assessment levels, as per the Sampling and Analysis Plan required in Condition 61(a); and
- (h) an interpretive summary and assessment of any future monitoring requirements.

Groundwater monitoring

- 63.** The Licence Holder must monitor groundwater for concentrations of the identified parameter(s) in accordance with Table 22.

Table 22: Groundwater monitoring of ambient concentrations

Monitoring well location	Parameter	Unit	Frequency	Averaging period
Monitoring wells as shown in Figure 2, Schedule 1 of the Licence	Standing water level ¹	m(AHD)	Quarterly	Spot sample, in accordance with AS/NZS 5667.11
	pH ¹	pH unit		
	Electrical conductivity ¹	µS/cm		
	Redox potential ¹	Eh		
	Chemical oxygen demand	mg/L		
	Nitrate-nitrogen			
	Ammonia-nitrogen			
	Total nitrogen			
	Total phosphorus			
	Total dissolved solids			
	Total organic carbon			
	Dissolved oxygen ¹			
	Major cations and anions: calcium, magnesium, potassium, sodium, chloride, bicarbonate and sulphate			
	Heavy Metals: Aluminium, Arsenic, Cadmium, Chromium, Copper, Iron (total) Lead, Manganese, Mercury, Nickel, Selenium and Zinc			
PFAS:	µg/L	Six monthly	Spot sample, in accordance with AS/NZS 5667.11	
<ul style="list-style-type: none"> • Perfluorooctane sulfonate; • Perfluorooctanoic acid; • 6:2 Fluorotelomer sulfonate; • 8:2 Fluorotelomer sulfonate, • Perfluoroheptanoic acid; 				

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	<ul style="list-style-type: none"> • Perfluorobutane sulfonate; • Perfluorobutanoic acid; • Perfluorohexanoic acid; • Perfluorohexane sulfonate; • Perfluoropentanoic acid; • Perfluorooctane sulfanamide; • Perfluorodecane sulfonate; • Perfluorononanoic acid; • Perfluorodecanoic acid; • Perfluoroundecanoic acid; • Perfluorododecanoic acid; • Perfluorotridecanoic acid; • Perfluorotetradecanoic acid; • N-Methyl-heptadecafluorooctane sulfanamide; • N-Eethyl-heptadecafluorooctane sulfanamide; • N-Methyl-heptadecafluorooctane sulfanomidoethanol; and <p>N-Eethyl-heptadecafluorooctane sulfanomidoethanol.</p>			
	<p>Organics: Phenols, Polyaromatic hydrocarbons (PAH), Organochlorine pesticides, Organophosphate pesticides (Demeton-S-Methyl, Diazinon, Dimethoate, Fenamiphos, Fenthion, Malathion and Parathion), Polychlorinated biphenyls (PCB), Atrazine, BTEX (benzene, toluene, ethylbenzene, xylens), Total Petroleum Hydrocarbons and Trichloroethylene/ Perchloroethylene</p>	mg/L	Six monthly	Spot sample, in accordance with AS/NZS 5667.11
	Uranium, Thorium	mg/L	Six monthly	Spot sample, in accordance with AS/NZS 5667.11
	Radium-226, Radium-228	Bq/L	Yearly	Spot sample, in accordance with AS/NZS 5667.11

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

64. The Licence Holder must provide to the CEO a detailed quantitative hydrogeological risk assessment for the Premises, prepared by a Hydrogeological Professional by 31 March 2022 that:

- (a) Includes a detailed conceptual site model;
- (b) Ensures that the conceptual site model:
 - (i) considers the presence and significance of perched aquifers in the superficial formations,
 - (ii) considers the relationship between the aquifers present beneath the premises;
- (c) Includes bore logs for any additional groundwater monitoring wells which are installed (if required) to accurately define the conceptual site model;

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- (d) Assesses the potential concentration of contaminants, arising from leachate emissions from the landfilling and tailings disposal activities at the Premises, at receptors over time, including both the operational and closure phases of the Premises;
- (e) Compares predicted contaminant concentrations at receptors with relevant environmental quality criteria and assesses potential impacts to receptors from leachate emissions from the landfilling and tailings disposal activities at the Premises, during both the operational and closure phases of the Premises;
- (f) considers the degradation of engineering lining and management systems over time;
- (g) considers the current and proposed specification of interim cover and capping for each Cell;
- (h) includes a sensitivity analysis, including for leachate heads across landfill cell liners and TDS cell liners;
- (i) includes the use of site-specific data where available in any modelling or calculations and specifies and justifies any assumptions made and any subsequent uncertainties in the assessment.

Quality assurance and quality control requirements

- 65.** The Licence Holder must adhere to the following field quality assurance and quality control procedures, as specified in Schedule B2 of the Assessment of Site Contamination NEPM, and must include as a minimum:
- (a) decontamination procedures for the cleaning of tools and sampling equipment before sampling and between samples;
 - (b) field instrument calibration for instruments used on site;
 - (c) blind replicate samples and rinsate blanks must be collected in the field and sent to the primary laboratory to determine the precision of the field sampling and laboratory analytical program;
 - (d) completed field monitoring sheets / sampling logs for each sample collected, showing:
 - (i) time of collection;
 - (ii) location of collection;
 - (iii) initials of sampler;
 - (iv) sampling method;
 - (v) field analysis results;
 - (vi) duplicate type / location (if relevant); and
 - (vii) site observations and weather conditions, and
 - (e) chain-of-custody documentation must be completed which details the following information:
 - (i) site identification;
 - (ii) the sampler;
 - (iii) nature of the sample;
 - (iv) collection time and date;

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- (v) analyses to be performed;
- (vi) sample preservation method;
- (vii) departure time from site;
- (viii) dispatch courier(s); and
- (ix) arrival time at the laboratory.

Records and reporting

Waste acceptance reporting

66. The Licence Holder must:

- (a) maintain a waste acceptance register which ensures that a record is made of:
 - (i) the time and date of each waste delivery;
 - (ii) the name and licence number of the carrier;
 - (iii) the weight of the waste;
 - (iv) a detailed description of the type of waste;
 - (v) the determination of the waste type as defined in Condition 1, Condition 2 and Condition 3;
 - (vi) all supporting documentation related to waste acceptance and classification;
 - (vii) any loads of waste rejected from the premises; and
 - (viii) the amount of landfill levy payable in respect of the waste.
- (b) maintain a register of Special Waste Type 1 (Asbestos waste), Special Waste Type 2 (Biomedical and clinical waste) and Processed Septage disposed of at the Premises which must include:
 - (i) a plan showing the position of Special Waste Type 1 (Asbestos waste) and Special Waste Type 2 (Biomedical and Clinical waste) disposed of at the Premises;
 - (ii) the date of the deposit;
 - (iii) the name of the person that deposited the waste; and
 - (iv) for the Annual Period and make these registers available on request.

Complaints reporting

67. 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;

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- (e) the location about which the complaint was made;
- (f) the wind direction, wind speed and air temperature at the time of the complaint;
- (g) the likely source(s) of the cause of the complaint; and
- (h) the time taken to respond to the complainant.

Compliance reporting

- 68.** 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 90 days after the end of that annual period an Annual Audit Compliance Report in the approved form.
- 69.** 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) the works conducted in accordance with this licence;
 - (c) any maintenance of infrastructure that is performed in the course of complying with this licence;
 - (d) monitoring programmes undertaken in accordance with this licence;
 - (e) records and documents for the waste acceptance register system required under Condition 66 of this licence: and
 - (f) complaints received under Condition 67 of this licence.
- 70.** The books specified under Condition 69 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 or any subsequent licence; and
 - (d) be available to be produced to an inspector or the CEO as required.
- 71.** The Licence Holder must submit to the CEO by no later than 90 days after the end of each annual period, an Annual Environmental Report for that annual period for the conditions listed in Table 23, and which provides information in accordance with the corresponding requirement set out in Table 23.

Table 23: Annual Environmental Report

Condition	Requirement
Condition 5 & Condition 7	Summary of the Active Landfill Area, Special Waste Disposal Area and TDS Cells that includes: <ul style="list-style-type: none"> (a) Areas that have been subject to waste deposition for the Annual Period; (b) Remaining void capacity for waste deposition in each cell at the end of the Annual Period; and (c) Summary of any alterations to cell rehabilitation sequencing & timing

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11, Table 8, specification (d)	Monthly Propellor™ software calculations demonstrating the remaining capacity to the top of wall (TOW), or the contingency volume available for TDS Cell 2.
Condition 12	Summary of leachate containment and collection infrastructure performance including: (a) Inputs; (b) Outputs; (c) Calculations; and (d) explanation of any changes that may indicate an issue with the leachate collection or management system or a failure of the landfill or leachate pond liner.
Condition 14	Summary of landfill gas collection and management system that includes: (a) Infrastructure installed during the Annual Period; (b) A map of the spatial coverage of the landfill gas collection and management system; (c) A summary of landfill gas infrastructure operational performance including an annual review of flare rate against landfill gas generation rate; (d) A review of gas generation rates to determine if sustained generation rates warrant gas utilisation; and (e) A description of changes to operational performance that may indicate an issue with the landfill gas management system and actions taken to investigation and mitigate issues.
Condition 45 Condition 46	Summary of actions undertaken to control pests and vermin, and a summary of fox and feral cat observations recorded at the premises.
Condition 51	Volume of wastes arriving, leaving or rejected from the premises, for each waste type during the annual period in a table format.
Condition 52	Process monitoring: data in a table format for the annual period.
Condition 53 Condition 54 Condition 55 Condition 56	Leachate Monitoring: data in a table format for the annual period. A summary of action taken within the Annual Period to address leachate head levels which exceeded the leachate head management levels
Condition 59 Condition 60	Landfill gas monitoring: a summary of the landfill gas monitoring results. A summary of notifications provided to the CEO following landfill gas trigger level exceedances, causes of trigger level exceedances and actions taken to mitigate a reoccurrence of the exceedances.
Condition 61 Condition 62	A summary of all dust monitoring undertaken as part of this licence that includes: (a) data in a table format for the annual period; and (b) data in table format for trend analysis to include at least the last five years data where available.
Condition 63 Condition 72	Groundwater Monitoring Report
Condition 66	Plan of disposal locations for Special Waste Type 1 and Special Waste Type 2 and for the Annual Period

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Condition 67	Complaints summary for the annual period must include: (a) number and type of complaints received; (b) nature of complaint and complainant details; (c) ambient environmental conditions at the time of complaint; and (d) actions and time taken to address complaint.
Condition 74	Summary of landfill and unauthorised fires at the premises.

- 72.** The Licence Holder must submit with the Annual Environmental Report required by Condition 71, a groundwater monitoring report demonstrating their compliance with Conditions 63 for the preceding annual period, and must include:
- (a) a clear statement of the scope of work carried out;
 - (b) a description of the field methodologies employed;
 - (c) a summary of the field and laboratory quality assurance / quality control (QA/QC) program;
 - (d) copies of the field monitoring records and field QA/QC documentation;
 - (e) an assessment of reliability of field procedures and laboratory results;
 - (f) a tabulated summary of results, as well as all raw data provided in an accompanying Microsoft Excel spreadsheet digital document/file (or a compatible equivalent digital document/file), with all results being clearly referenced to laboratory certificates of analysis;
 - (g) a diagram with aerial image overlay showing all monitoring locations and depicting groundwater level contours, flow direction and hydraulic gradient (relevant site features including discharge points and other potential sources of contamination must also be shown);
 - (h) an interpretive summary and assessment of the results against relevant assessment levels for water, as published in the Guideline Assessment and management of contaminated sites;
 - (i) an interpretive summary and assessment of results against previous monitoring results;
 - (j) an interpretive summary and assessment of the results against relevant assessment levels for water, as published in the Guideline Assessment and management of contaminated sites;
 - (k) trend graphs to provide a graphical representation of historical results for at least the last 10 years where available and comparison against relevant assessment levels for water to support the interpretive summary; and
 - (l) A comparison of the inputs used in the hydrogeological modelling required under condition 64 with data collected under conditions 52 and 54, which identifies any differences.

Note 1: General guidance on report presentation can be found in the Department's Guideline: Assessment and management of contaminated sites.

Notifications

- 73.** The Licence Holder must, within 7 days of becoming aware of any non-compliance with conditions of this licence not otherwise controlled through a management action, notify the CEO in writing of that non-compliance and include in that notification the

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following information:

- (a) which condition was not complied with;
- (b) the time and date when the non-compliance occurred;
- (c) if any environmental impact occurred as a result of the non-compliance and if so what that impact is and where the impact occurred;
- (d) the details and result of any investigation undertaken into the cause of the non-compliance;
- (e) what action has been taken and the date on which it was taken to prevent the non-compliance occurring again; and
- (f) what action will be taken and the date by which it will be taken to prevent the non-compliance occurring again.

74. The Licence Holder must notify the CEO in writing accordance with the notification requirements of Table 24.

Table 24: Notification requirements

Condition or Table (if relevant)	Information required	Notification requirement ¹	Format or form
Condition 12 Condition 54	Failure or malfunction of the leachate collection and management system	As soon as practicable, but no later than 1700 hrs of the next usual working day	None specified
Condition 15 Condition 16	Landfill gas management system	Details of any works proposed for the expansion of the landfill gas collection and management system as depicted in Plan 3 of Schedule 3 in the Licence, at least 6 months prior to any expansion occurring.	
Condition 35	Southern stormwater drain and fire track	The location, description and cause of erosion, and measures taken to rectify any damage, and to ensure against a recurrence, within 1 month of the erosion being identified.	
N/A	Landfill fire	As soon as practicable but no later than 24 hours of the fire being identified.	

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Condition or Table (if relevant)	Information required	Notification requirement ¹	Format or form
N/A	Unauthorised fire	<p>Within 14 days of the fire occurring.</p> <p>Notification should include:</p> <ul style="list-style-type: none"> • Date, time and location of the fire; • Measures used to control the fire; • Cause or suspected cause of the fire; • Any residual issues or impacts related to the fire, including details of any discharge of fire-fighting wash water or other wastes from the premises • Any damage to landfill liners or other landfill infrastructure resulting from the fire; and • Proposed rectification of any damage or impacts if required. 	
Condition 75	Final waste profile achieved for each rehabilitation stage as depicted in Plan 6 in Schedule 3, and details of when capping works will commence and conclude for that stage	No later than 60 days after final landform is achieved	

Note 1: Notification requirements in the Licence shall not negate the requirement to comply with s72 of the EP Act

Construction works – Landfill cell capping

75. The Licence Holder must:

- (a) construct and/or install the infrastructure and/or equipment;
 - (b) in accordance with the corresponding design and construction / installation requirements; and
 - (c) at the corresponding infrastructure location; and
 - (d) within the corresponding timeframe,
- as set out in Table 25.

Table 25: Capping design and construction / installation requirements

	Infrastructure	Design and construction / installation requirements	Infrastructure location	Timeframe
1.	Capping of Stage 1, 2 and 5	<p>To be constructed with a maximum slope profile of 1V:35H and maximum length of 255 meters, and consist of:</p> <ul style="list-style-type: none"> • Minimum 500 mm cover 	Each stage as depicted in Plan 7 in Schedule 3	As soon as practicable, but no later than 12 months after final waste profile is

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	Infrastructure	Design and construction / installation requirements	Infrastructure location	Timeframe
		<p>material over waste</p> <ul style="list-style-type: none"> • Geosynthetic Clay Liner (GCL) • 1.5mm double textured LLDPE liner • Geocomposite Drainage Material with A34 geotextile heat bonded to the top and bottom surface • 1.3 m to 1.5 m of uncompacted soil growing medium • Rehabilitation with grasses and shallow rooted shrubs that have no potential to reach the base of the soil growing medium • Stormwater control drains (contour, primary and stormwater control bunds) <p>Specific direct shear testing in accordance with ASTM D5341 is to be undertaken on each of the material interfaces used in the final cap to validate the parameters used for the stability assessment.</p>		achieved for each stage
2.	Leachate reticulation system	<p>Up to 4 systems, each consisting of</p> <ul style="list-style-type: none"> • A 22,500 litre storage tank • 63mm to 90mm HDPE pipework from the storage tank installed within a drainage channel in the waste mass • Pipework is to be installed at a slope of 2 degrees or greater 	Within the footprint of cells 1, 2, 3, 4, 4B, 5 and/or 12 as depicted in Plan 3 in Schedule 3	None specified

76. The Licence Holder must within 60 calendar days of an item of infrastructure or equipment required by condition 75 being constructed and/or installed:

- (a) undertake an audit of their compliance with the requirements of condition 75 and
- (b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.

77. The Environmental Compliance Report required by condition 76, must include as a minimum the following:

- (a) certification by a suitably qualified engineer (as defined in Table 25) confirming that the items of infrastructure or component(s) thereof, as specified in condition 75, have been constructed in accordance with the relevant requirements specified in condition 75;

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- (b) details of the direct shear testing carried out in accordance with condition 75, including comparison of updated parameters to parameters used in the stability assessment;
- (c) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 75; and
- (d) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

Construction works – Landfill gas flare station

78. The Licence Holder must:

- (a) construct and/or install the infrastructure and/or equipment;
- (b) in accordance with the corresponding design and construction / installation requirements; and
- (c) at the corresponding infrastructure location as set out in Table 26.

Table 26: Landfill flare design and construction / installation requirements

	Infrastructure	Design and construction / installation requirements	Infrastructure location
1.	Landfill gas flare station	<p>Must be composed of the infrastructure outlined in Schedule 3, Plan 5.</p> <p>Lateral and header systems must be connected to the landfill gas flare station so that no leakage of gas occurs.</p> <p>Enclosed flare must be installed to achieve a 2,000 m³/ hour capacity with a ≥850°C chamber temperature with gas residence time of >0.6 seconds.</p> <p>All infrastructure must be installed on a concrete hardstand.</p>	As depicted in Schedule 3, Plan 4
2.	Collection infrastructure - gas transfer pipelines, laterals and headers	<p>Additional collection infrastructure to facilitate the transfer of captured landfill gas from landfill cells to the landfill gas flare station must be located as depicted in Schedule 3, Plan 4</p> <p>Must be constructed using HDPE so as to be impervious and free of leaks and defects.</p>	As depicted in Schedule 3, Plan 4

79. The Licence Holder must within 60 calendar days of an item of infrastructure or equipment required by condition 78 being constructed and/or installed:

- (a) undertake an audit of their compliance with the requirements of condition 78 and
- (b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.

80. The Environmental Compliance Report required by condition 79, must include as a minimum the following:

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- (a) certification by a suitably qualified engineer (as defined in Table 26) confirming that the items of infrastructure or component(s) thereof, as specified in condition 78, have been constructed in accordance with the relevant requirements specified in condition 78;
 - (b) as constructed plans for each item of infrastructure or component of infrastructure specified in condition 78;
 - (c) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person; and
 - (d) confirmation that the existing landfill gas collection and management systems have been successfully connected to the landfill gas flare station with no material faults or defects.
- 81.** The Licence Holder must not commission or operate the infrastructure or equipment required by condition 78 until the Environmental Compliance Report specified in condition 79 has been submitted.

Definitions

In this licence, the terms in Table 27 have the meanings defined.

Table 27: Definitions

Term	Definition
Acceptance Criteria	Has the same meaning given to that term under the <i>Landfill Waste Classification and Waste Definitions 1996</i>
ACM	means asbestos containing material as defined in the Department of Health 2009, <i>Guidelines for Assessment, Remediation and Management of Asbestos Contaminated Sites, Western Australia</i> .
ACN	Australian Company Number.
Active Landfill Area	An area defined as an active Special Waste Type 1 and 2 disposal areas, Cell 7, Cell 8 and any part of adjoining cells (excluding Cell 1 and Cell 2) where waste is required to be deposited to achieve final waste contours.
Special Waste Disposal Areas	means the designated disposal areas within an approved landfill cell for the disposal of Special Waste Type 1 and Special Waste Type 2.
AEP	Annual Exceedance Probability
AHD	means the Australian Height Datum.
Air Quality Professional	means a person who: <ul style="list-style-type: none"> a) Holds a Bachelor of Science qualification, or an Air Quality Science-related tertiary level qualification; and b) Has a minimum of at least 3 years experience working in the field of air quality monitoring and assessment; or is otherwise approved by the CEO to act in this capacity.
anniversary date	means 31 December of each year.
Annual Audit Compliance Report (AACR)	means a report submitted in a format approved by the CEO (relevant guidelines and templates may be available on the Department's website).
annual period	a 12 month period commencing from 1 January until 31 December of the immediately following year.
AS1289.5.1.1	means the Australian Standard AS 1289.5.1.1, <i>Methods of testing soils for engineering purposes - Soil compaction and density tests - Determination of the dry density/moisture content relation of a soil using standard compactive effort</i> .
AS3798	means the Australian Standard AS 3798-2007, <i>Guidelines on Earthworks for Commercial and Residential Development</i> .

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Term	Definition
AS1726	means the Australian Standard AS1762 <i>Geotechnical site investigations</i> , as amended from time to time.
ASTM D5092/D5092M-16	means the ASTM international standard for <i>Standard practice for design and installation of groundwater monitoring wells (Designation: ASTM D5092/D5092M-16)</i> , as amended from time to time.
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.
AS/NZS5667.1	means the Australian Standard AS/NZS 5667.1 <i>Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples</i> .
AS/NZS5667.11	means the Australian Standard AS/NZS 5667.11 <i>Water Quality – Sampling – Guidance on sampling of groundwaters</i> .
Assessment of Site Contamination NEPM	means the <i>National Environment Protection (Assessment of Site Contamination) Measure 1999</i> , as amended from time to time.
Averaging Period	means the time over which a limit is measured or a monitoring result is obtained.
books	has the same meaning given to that term under the EP Act.
Cell 7	means the cell marked as ‘Cell 7’ in Figure 1, Schedule 1.
Cell 8	means the cell marked as ‘Cell 8’ in Figure 1, Schedule 1.
CEO	<p>means Chief Executive Officer of the Department.</p> <p>“submit to / notify the CEO” (or similar), means either:</p> <p style="padding-left: 40px;">Director General Department administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 Joondalup DC WA 6919</p> <p>or:</p> <p style="padding-left: 40px;">info@dwer.wa.gov.au</p>
CEO Request	<p>means a request made by the CEO to the Licence Holder in writing sent to the Licence Holder’s address for notifications, as described at the front of this Licence, in relation to:</p> <p style="padding-left: 40px;">(a) information, records or reports in relation to specific matters in connection with this Licence including in relation to compliance with any Conditions and the calculation of fees (whether or not a breach of Condition or the EP Act is suspected); or</p>

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Term	Definition
	(b) reporting, records or administrative matters: <ul style="list-style-type: none"> (i) which apply to all Licences granted under the EP Act; or (ii) which apply to specified categories of Licences within which this Licence falls.
Conceptual site model	Defines the nature of the Premises and its hydrogeological setting. It should describe the design, construction and operation of the activities on the Premises and the nature of baseline environmental conditions. It should identify possible sources, pathways and receptors, and the processes that are likely to occur along each of those source-pathway-receptor linkages.
Contaminant	Has the same meaning given to that term under the <i>Landfill Waste Classification and Waste Definitions 1996</i>
Contaminated Solid Waste	Means a solid waste that contains contaminants that meets the solid waste acceptance requirements of Table 1, Condition 1.
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994 (WA)</i> and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
discharge	has the same meaning given to that term under the EP Act.
Drill Muds	means the liquid or sludge residue generated during directional drilling of boreholes or non-destructive hydro-excavation of soil, consisting of a mixture of naturally occurring rock, soil, organic matter and water and/or oil based drilling fluid.\
Dusty Wastes	means solid waste approved for acceptance under the Licence which has the potential to generate dust emissions during handling and disposal that can be carried beyond the premises boundary if left uncovered.
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 has been constructed in accordance with the licence.
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
freeboard	means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point.
Highly Odorous Waste	means solid waste approved for acceptance under the Licence which has the potential to produce odour emissions that can be detected beyond the premises boundary if left uncovered.

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Term	Definition
Hydrogeological Professional	Means a person who: a) Holds a Bachelor of Science qualification, or a hydrology related tertiary level qualification; and b) Has a minimum of at least 6 years experience working in the field of hydrogeological assessment, modelling and reporting; or is otherwise approved by the CEO to act in this capacity.
Inert Waste Type 1	Has the same meaning given to that term under the <i>Landfill Waste Classification and Waste Definitions 1996</i> .
Inert Waste Type 2	Has the same meaning given to that term under the <i>Landfill Waste Classification and Waste Definitions 1996</i> .
Interim Waste Contour	The waste height achieved, in advance of achieving final waste contours, when waste disposal operations temporarily cease in the cell due to the lack of a suitably sized platform for operational vehicles.
Landfill Definitions	means the document titled " <i>Landfill Waste Classification and Waste Definitions 1996</i> ".
leachate head management level	A leachate level within a cell that: (a) Is demonstrative of the engineering and management measures for that cell performing as designed; (b) Does not represent an unacceptable risk to the environment and public health; and (c) Is set at a level which provides an early warning system for potential engineering or management control failure and to enable appropriate investigation or corrective management measures to be implemented to mitigate potential impacts to the environment and public health.
licence	refers to this document, which evidences the grant of a licence by the CEO under section 57 of the EP Act, subject to the specified conditions contained within.
licence holder	refers to the occupier of the premises, being the person specified on the front of the licence as the person to whom this licence has been granted.
monthly period	means a one-month period commencing from the 2nd of a month until the first day of the immediately following month.
NATA	means the National Association of Testing Authorities, Australia.
NATA accredited	means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis.
premises	refers to the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map (Figure 1,

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Term	Definition
	Schedule 1 to this licence.
prescribed premises	has the same meaning given to that term under the EP Act.
Prevailing wind direction	The wind direction most frequently observed during each season.
Processed Septage	means the semi-dry fibrous residue produced from dewatering septage waste
Putrescible waste	Has the same meaning given to that term under the <i>Landfill Waste Classification and Waste Definitions 1996</i> .
Six monthly	means the 2 inclusive periods from 1 April to 30 September and 1 October to 31 March in the following year.
solid	Has the same meaning given to that term under the <i>Landfill Waste Classification and Waste Definitions 1996</i> .
spadeable	Has the same meaning given to that term under the <i>Landfill Waste Classification and Waste Definitions 1996</i> .
Special Waste Type 1	Has the same meaning given to that term under the <i>Landfill Waste Classification and Waste Definitions 1996</i> .
Special Waste Type 2	Has the same meaning given to that term under the <i>Landfill Waste Classification and Waste Definitions 1996</i> .
spot sample	means a discrete sample representative at the time and place at which the sample is taken;
Suitably qualified engineer	<p>means a person who:</p> <ul style="list-style-type: none"> (a) demonstrates competency in the area of civil or structural engineering; and (b) has a minimum of at least three years working in the area of civil or structural engineering; and (c) is employed by an independent third party external to the Licence Holder's business. <p>or is otherwise approved in writing by the CEO to act in this capacity.</p>
Suitably qualified fire safety engineer	<p>means a person who:</p> <ul style="list-style-type: none"> (a) demonstrates competency in the area of fire safety engineering; and (b) has a minimum of at least three years working in the area of fire safety engineering; and (c) is employed by an independent third party external to the Licence Holder's business.

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Term	Definition
	or is otherwise approved in writing by the CEO to act in this capacity.
Suitably qualified hydrogeologist	<p>means a person who:</p> <ul style="list-style-type: none"> (a) demonstrates competency in the area of hydrogeology; and (b) has a minimum of at least six years working in the area of hydrogeology; and (c) is employed by an independent third party external to the Licence Holder's business. <p>or is otherwise approved in writing by the CEO to act in this capacity.</p>
TDS Cell 1	refers to the previously referenced MIC Titanium Dioxide Slurry disposal cell on the Premises Map in Figure 1, Schedule 1.
TDS Cell 1 leachate pond	refers to the leachate pond for the collection of leachate (underdrainage and supernatant water) collected from the TDS Cells in Figure 1, Schedule 1.
TDS Cell 2	refers to the previously referenced CC2 titanium dioxide slurry disposal cell whose construction and resulting structure was divided two stages, in the areas labelled Tronox Cell 2 and Tronox Cell 2A in Figure 1, Schedule 1.
TDS Cell 2 leachate pond	refers to the leachate pond for the collection and storage of leachate (underdrainage and supernatant water) collected from the TDS Cells in Figure 1, Schedule 1.
Titanium Dioxide Tailings	means the process residue from the Titanium Dioxide Processing and finishing plants (Part V licence numbers L6046/1967/15 and L8870/2014/1).
waste	has the same meaning given to that term under the EP Act.

END OF CONDITIONS

Schedule 1: Maps

Figure 1: Premises map

The Premises is shown in the map below. The red line depicts the Premises boundary with excised extractive industries operations defined by the coordinated in Schedule 2.

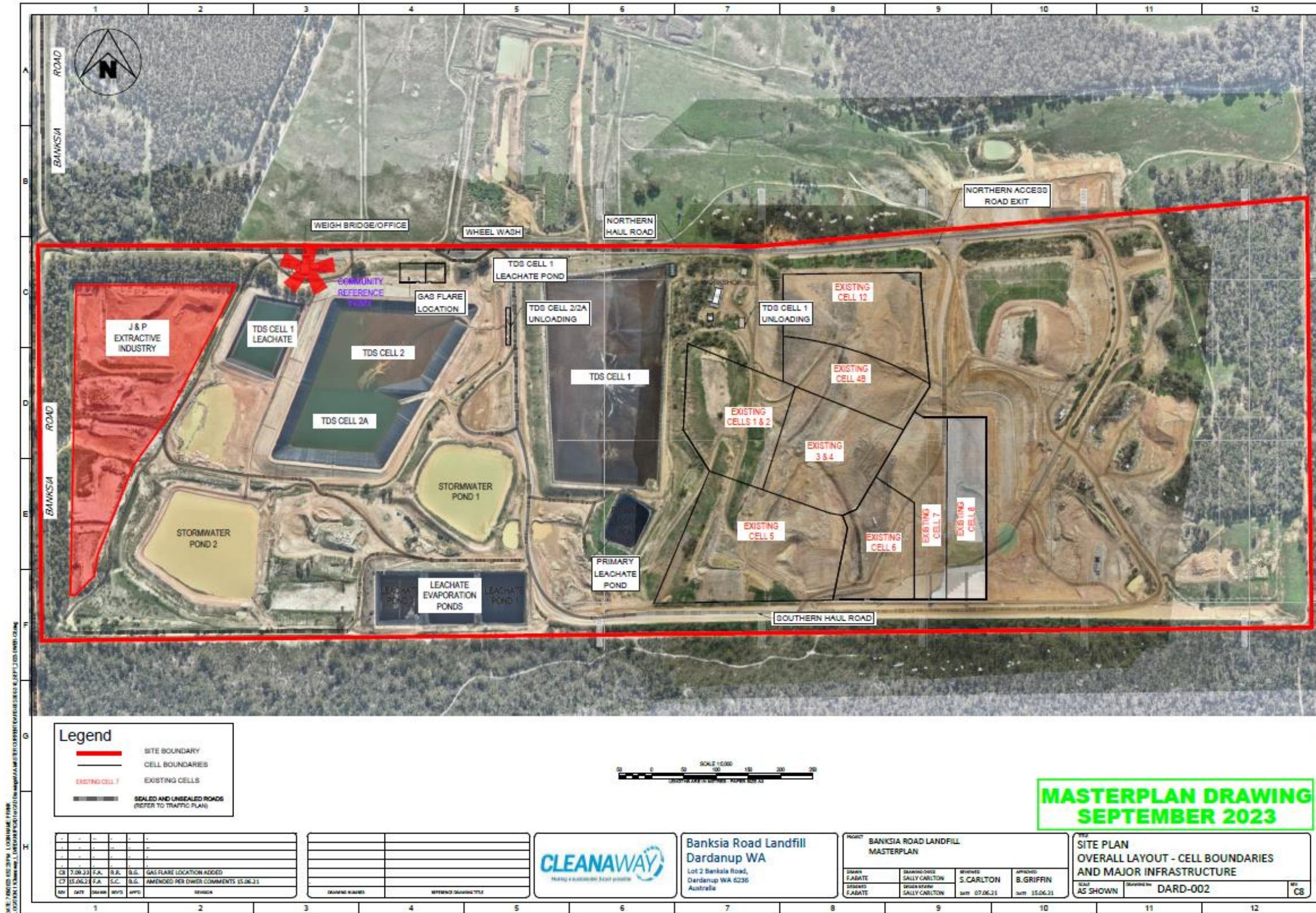
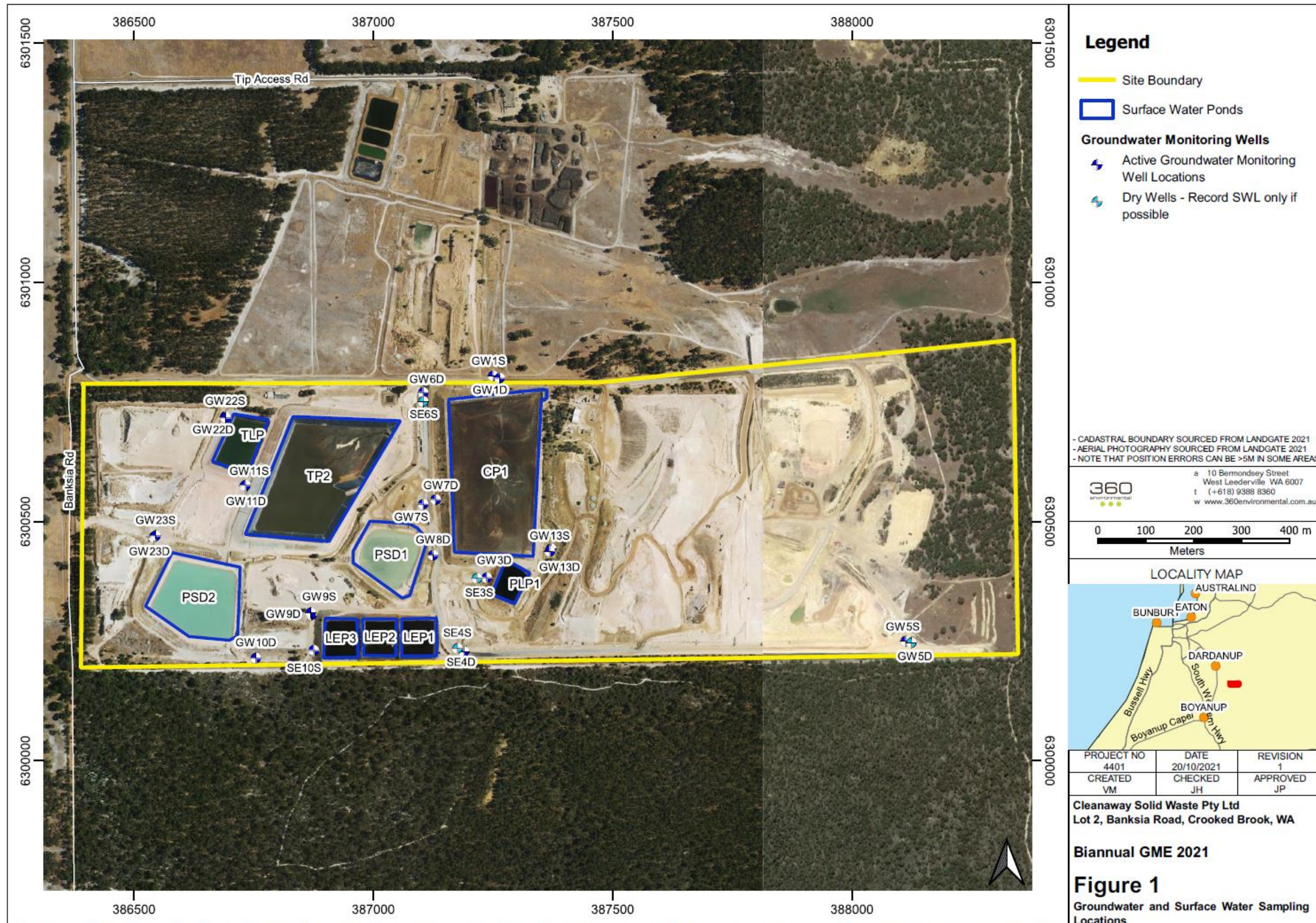


Figure 2: Groundwater monitoring well map



Schedule 2: Excised extractive industry boundary

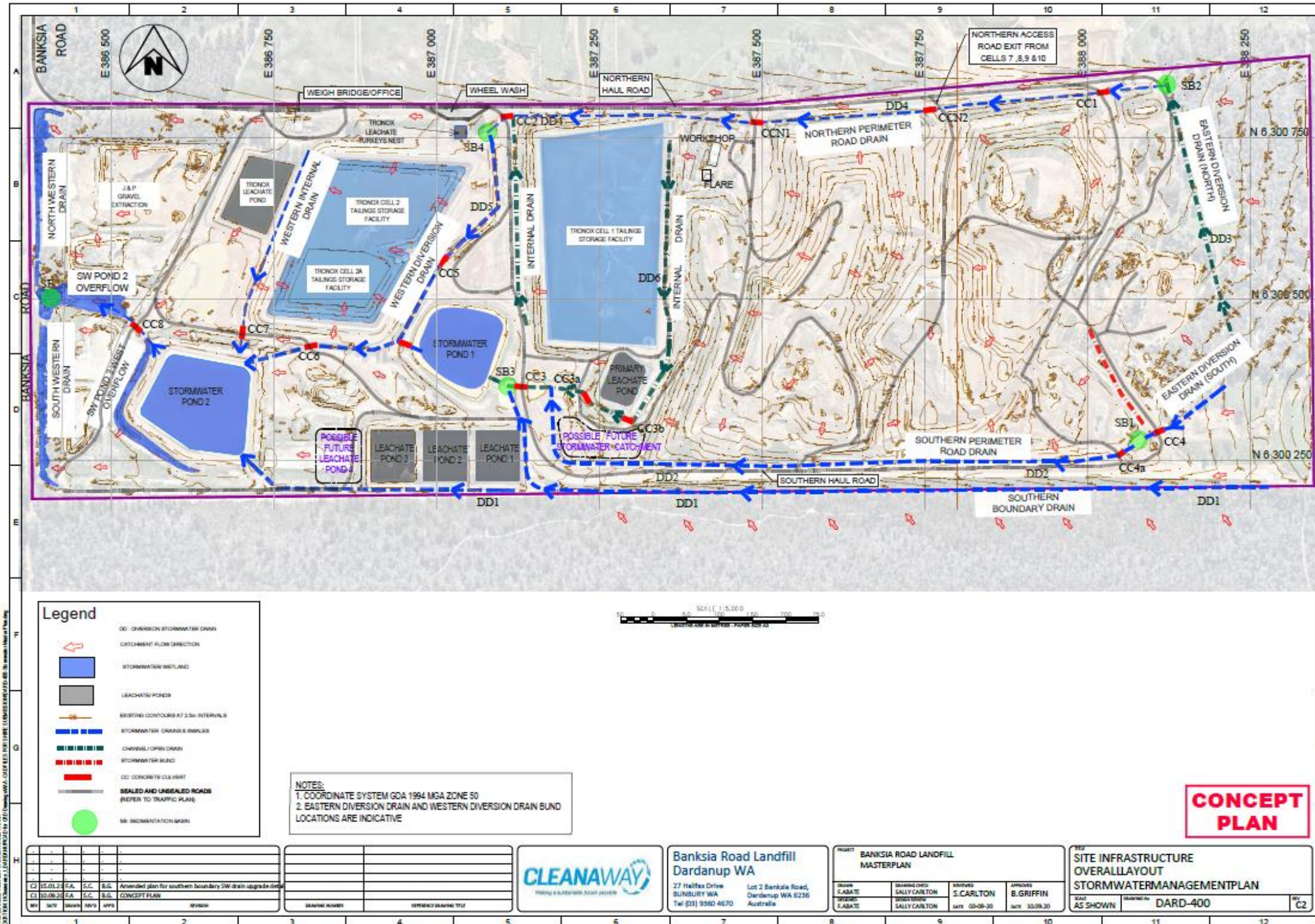
The excised extractive industry operation is defined by the coordinates in Table 28.

Table 28: Extractive Industry boundary coordinates (GDA94)

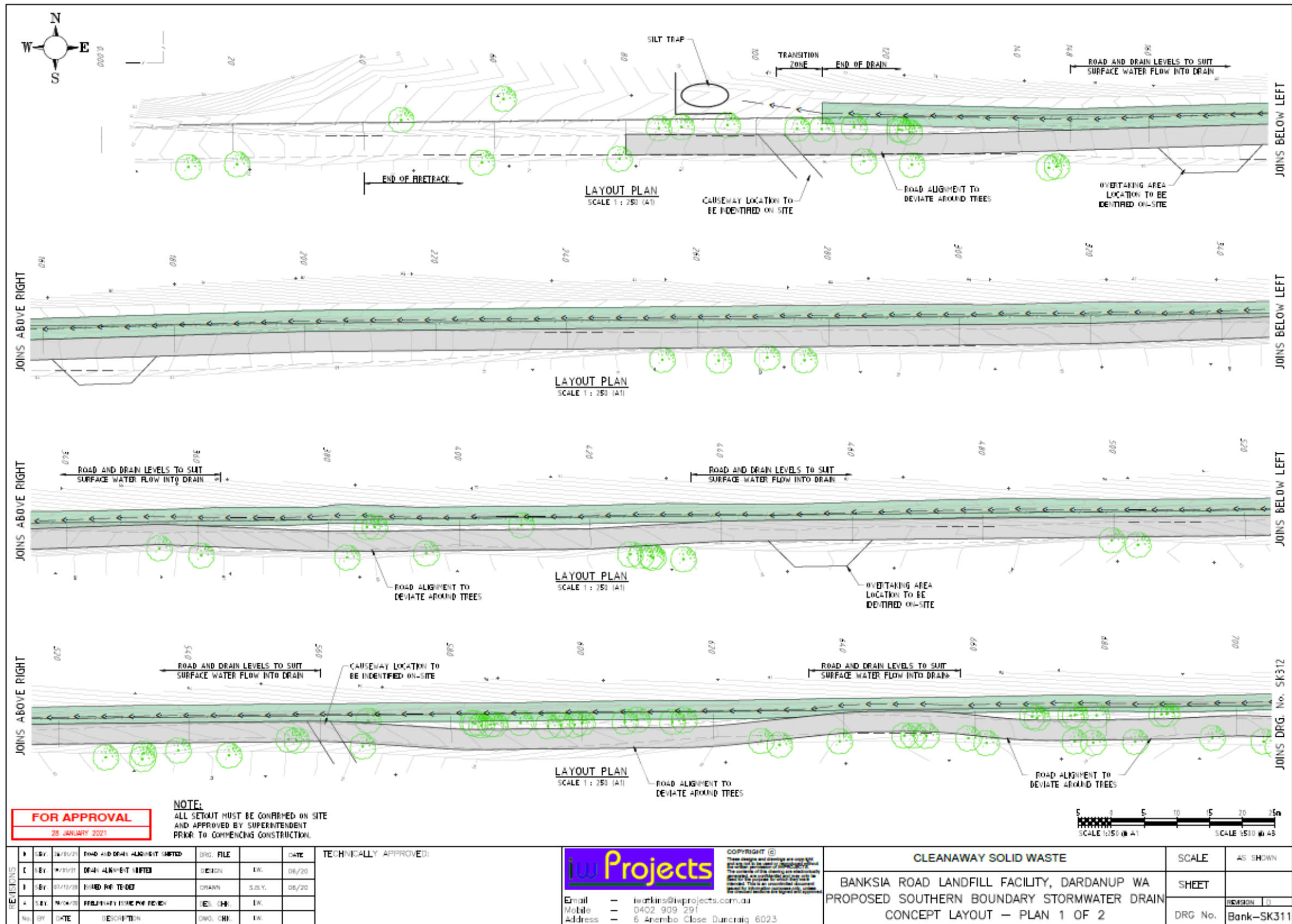
Easting	Northing	Zone
115.77814	-33.43114	<i>GDA 2020</i>
115.77811	-33.42659	<i>GDA 2020</i>
115.78116	-33.42665	<i>GDA 2020</i>
115.78034	-33.42811	<i>GDA 2020</i>
115.77930	-33.42932	<i>GDA 2020</i>
115.77840	-33.43109	<i>GDA 2020</i>
115.77863	-33.43083	<i>GDA 2020</i>

Schedule 3: Plans

Plan 1: Proposed stormwater management layout



Plan 1A: Poposed southern boundary stormwater management drain layout



REVISIONS		NO.	BY	DATE	DESCRIPTION	DRG. CHG.	DATE
1	REV	01/10/20			ROAD AND DRAIN ALIGNMENT LIMITED		
2	REV	01/10/20			DRAIN ALIGNMENT LIMITED		
3	REV	01/10/20			ROAD RE-TE-007		
4	REV	01/10/20			PROPOSED DRAINAGE FIELDS		

TECHNICALLY APPROVED:

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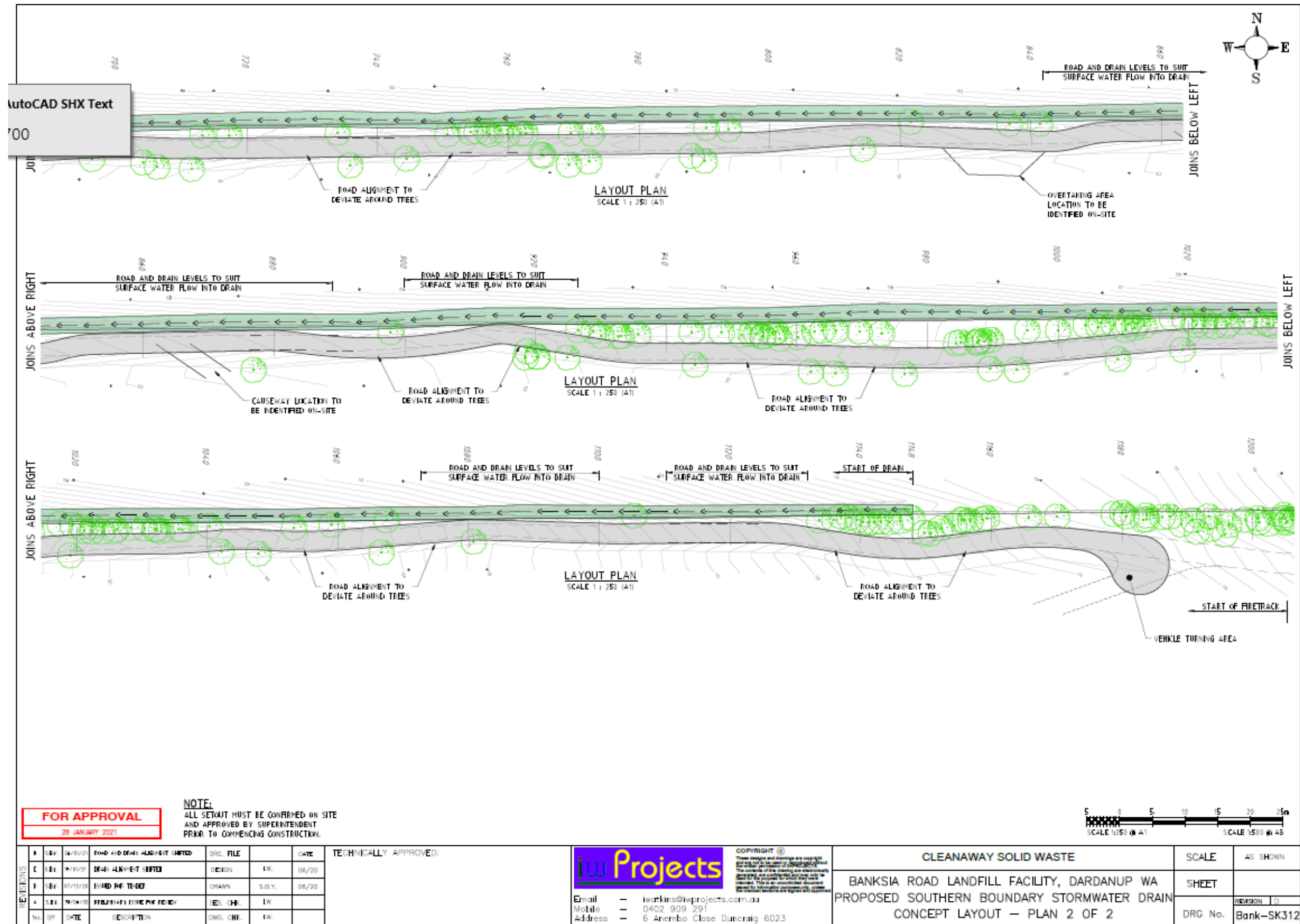
Email - hwkins@iwprojects.com.au
Mobile - 0402 909 291
Address - 6 Anemba Close Durra Craig 6023

CLEANAWAY SOLID WASTE

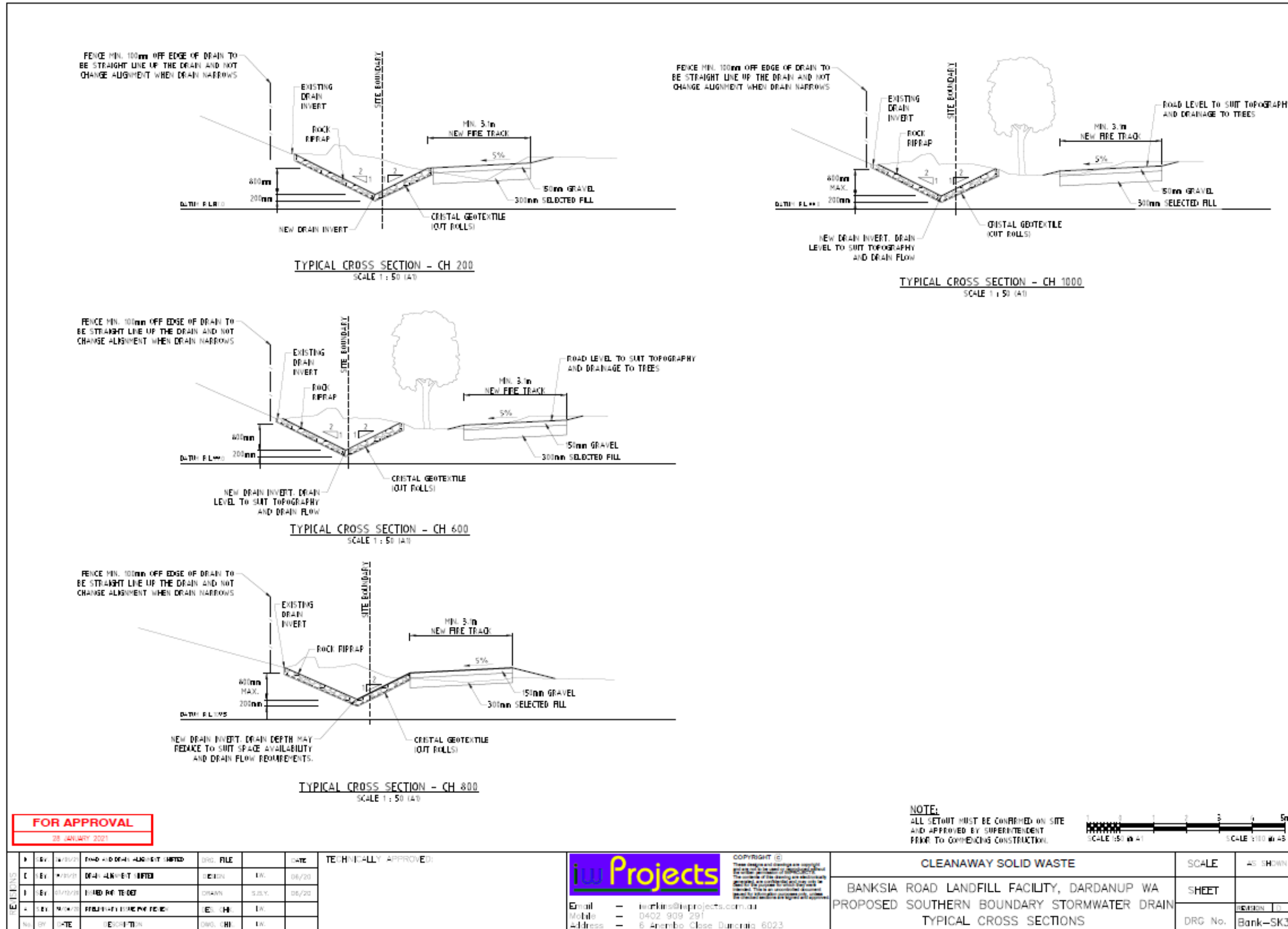
BANKSIA ROAD LANDFILL FACILITY, DARDANUP WA
PROPOSED SOUTHERN BOUNDARY STORMWATER DRAIN
CONCEPT LAYOUT - PLAN 1 OF 2

SCALE	AS SHOWN
SHEET	
DRG No.	Bank-SK311

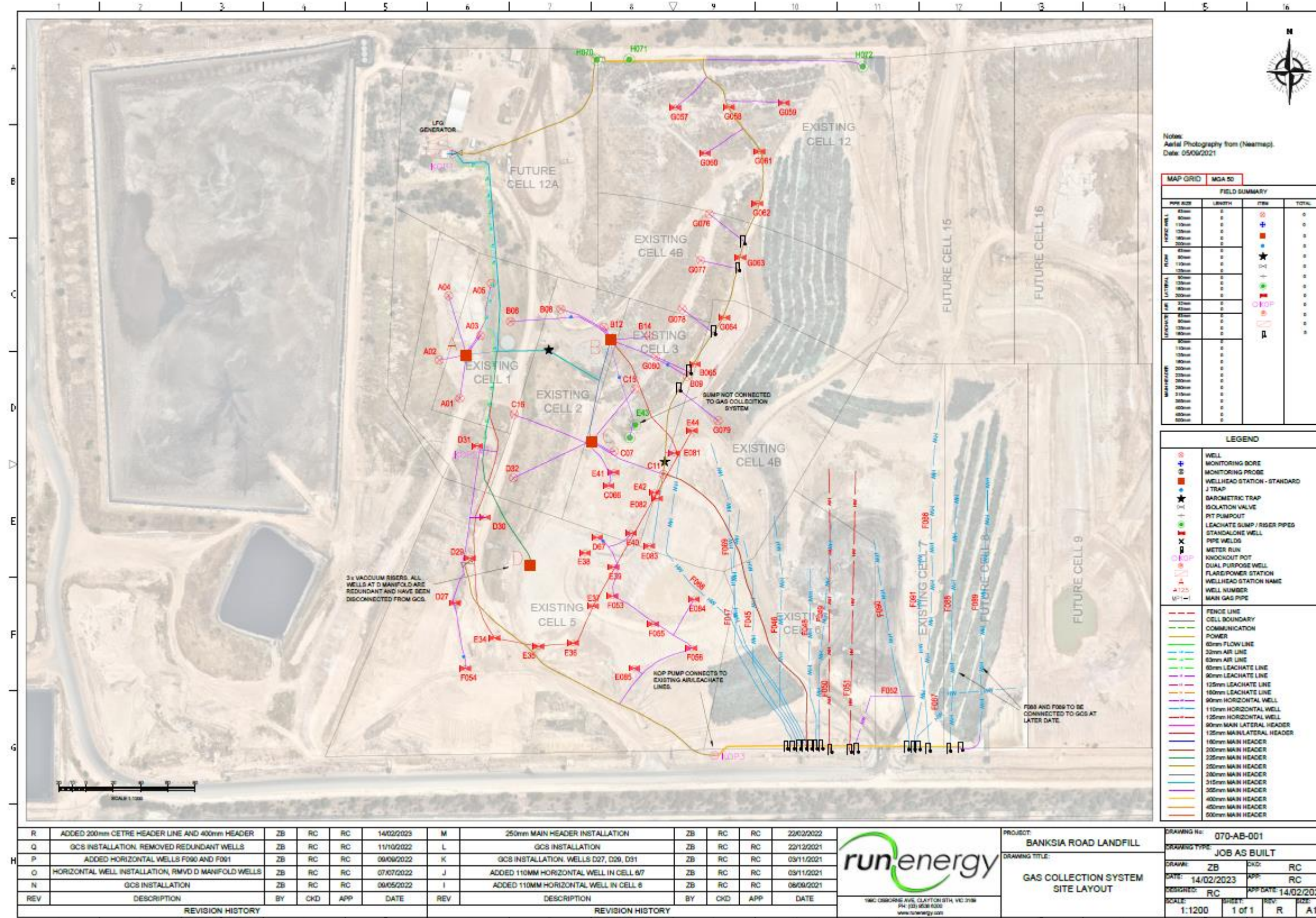
Plan 1B: Poposed southern boundary stormwater management drain layout



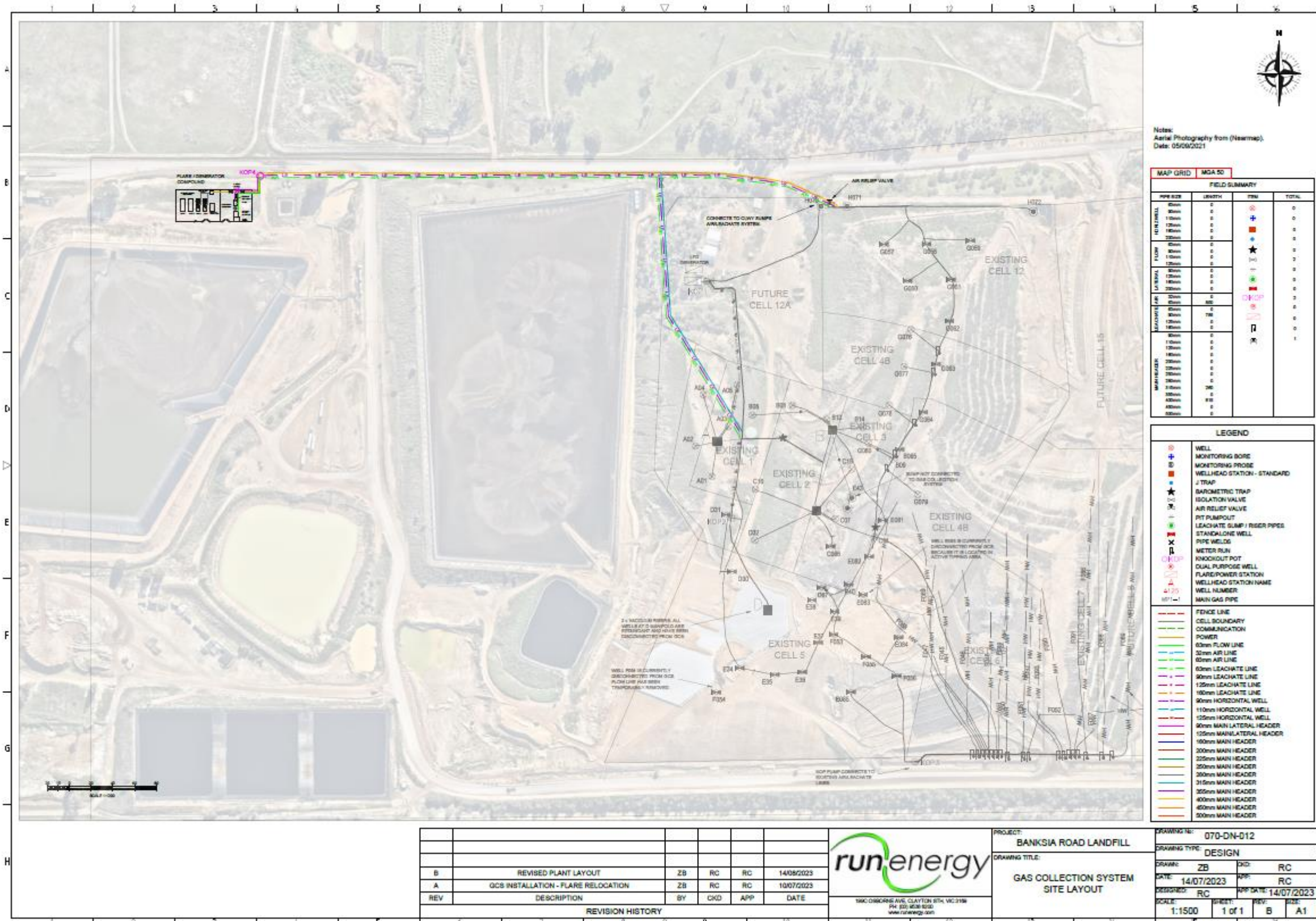
Plan 2: Poposed southern boundary stormwater management drain typical cross sections



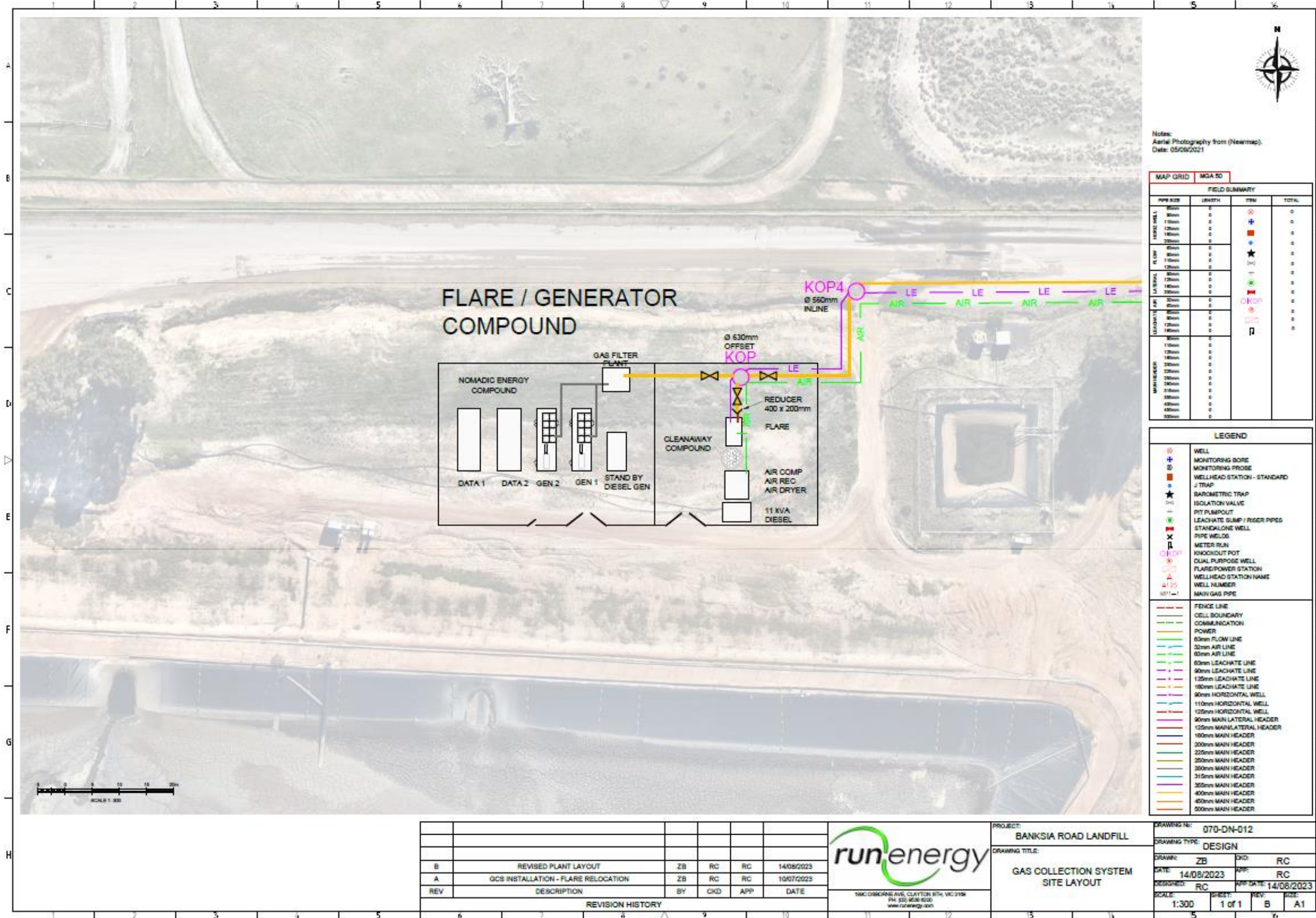
Plan 3: As built landfill gas collection system plans



Plan 4: As built landfill gas collection system plans with location of flare station and landfill gas conveyance infrastructure



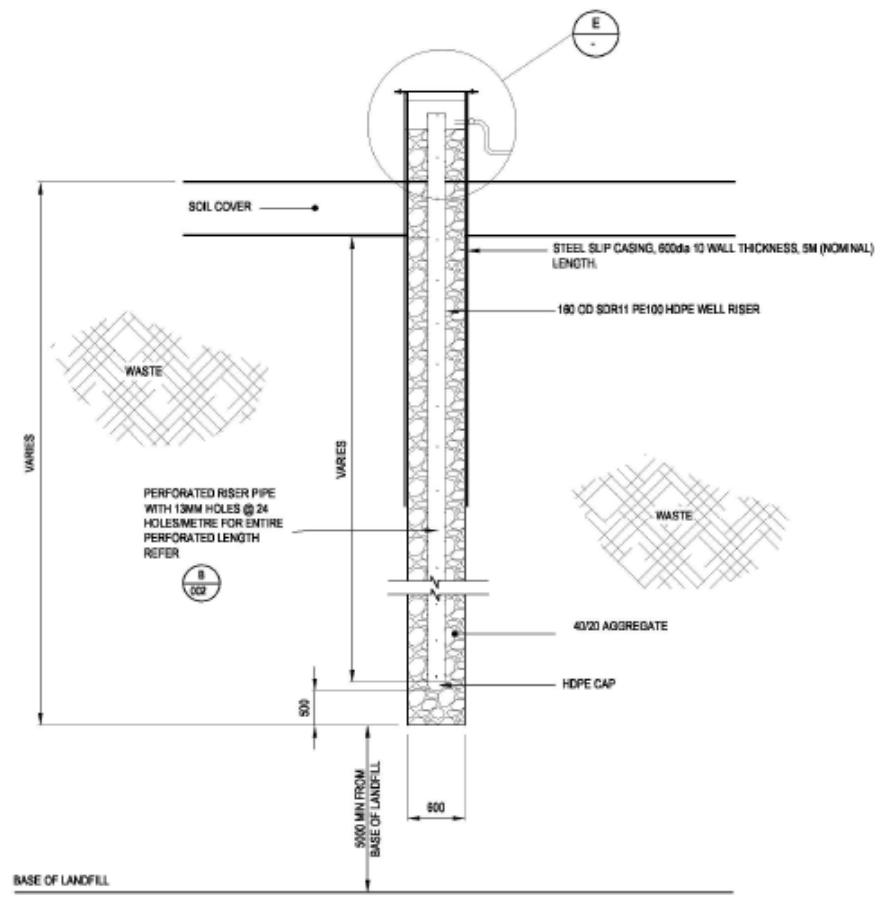
Plan 5: Landfill flare station components



Plan 6: General landfill gas collection system – Temporary well head construction details

L8904/2015/1 (Date amended: 3/02/2025)

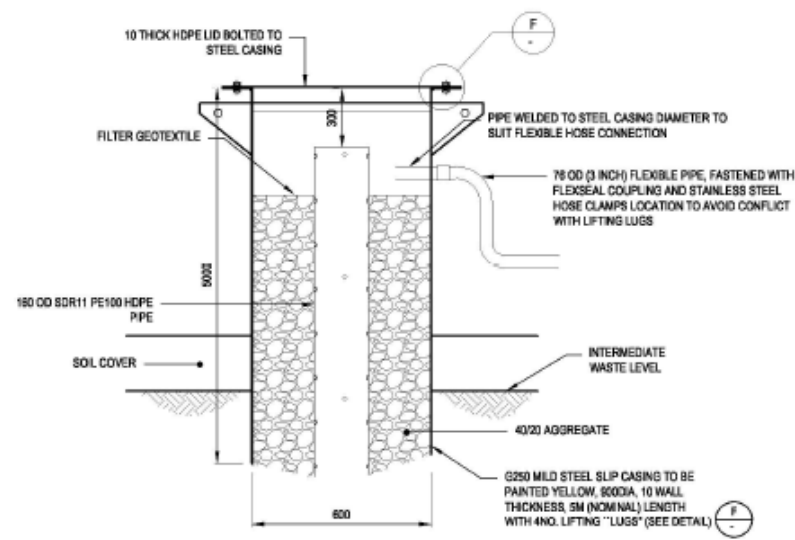
IR-T06 Licence template (v7.0) (February 2020)



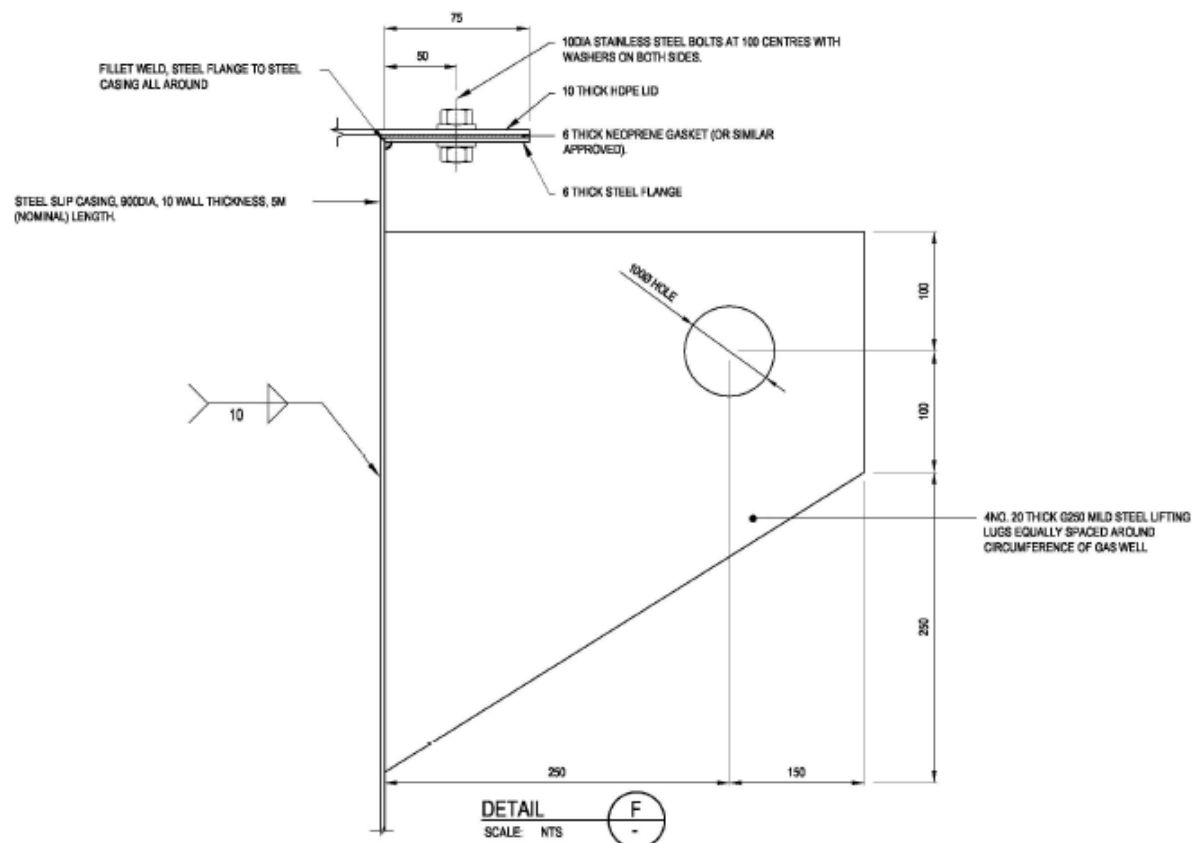
TYPE 2 PROGRESSIVE LANDFILL GAS EXTRACTION WELL DETAIL
SCALE: N.T.S (Refer Note 2)

REMINDER: CLIENT TO ADVISE WHICH WELLS WILL BE EXTENDED AND REFER THEM TO TYPE 2 WELLS.

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.



DETAIL E TYPICAL TEMPORARY WELL HEAD DETAIL
SCALE: N.T.S

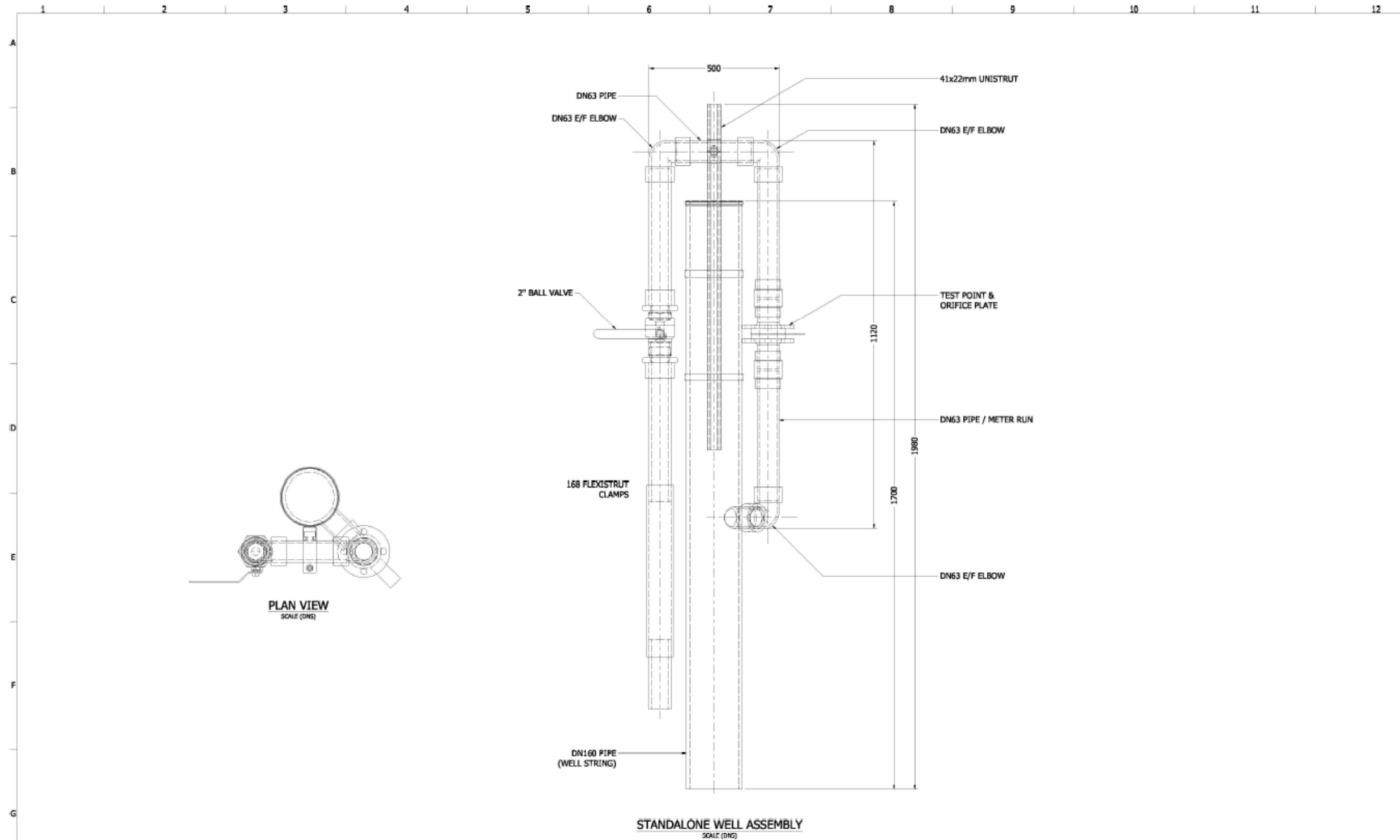


DETAIL F
SCALE: N.T.S



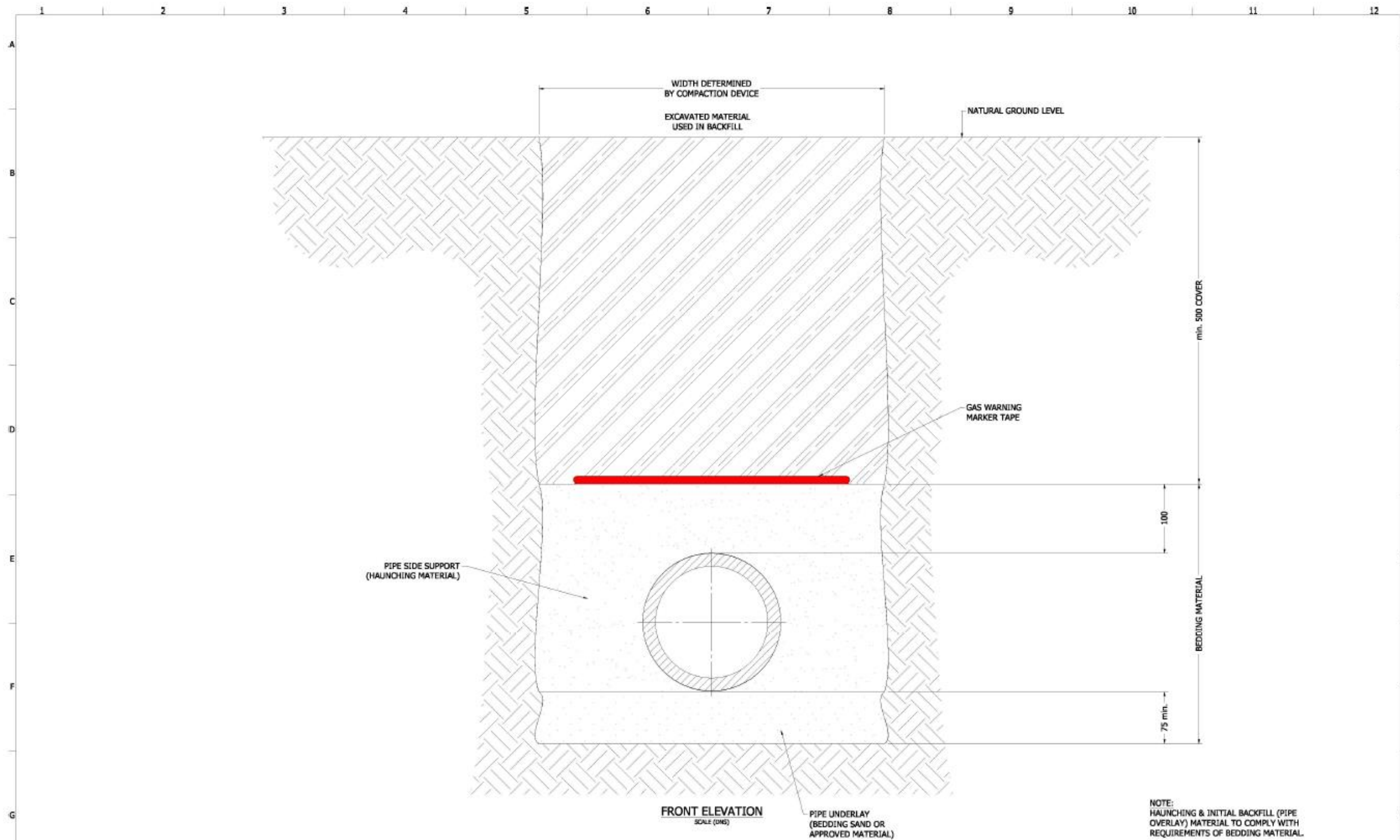
1	DRAFT FOR CLIENT REVIEW	KMJA	SFP	15.01.20	DESIGNED	SFP	Jan.20	DRAWING STATUS	CLIENT	CLEANAWAY SOLID WASTE PTY LTD.			
	2				FINAL	KMJA	SFP				31.01.20	DRAWN	KMJA
					DESIGN CHECKED				TITLE				
					DRAWING CHECKED				LFG MANAGEMENT SYSTEM DETAILED DESIGN				
					NOT FOR CONSTRUCTION		THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION PURPOSES UNLESS SIGNED AS APPROVED		VERTICAL GAS WELL DETAILS SHEET 2				
REV	DESCRIPTION	CAD	CHK	DATE	APPROVED	DATE	SCALE (A3)		AS SHOWN	DWG No.	1003307.7000-07	REV	2

Plan 6A: General landfill gas collection system – Stand alone well head construction details



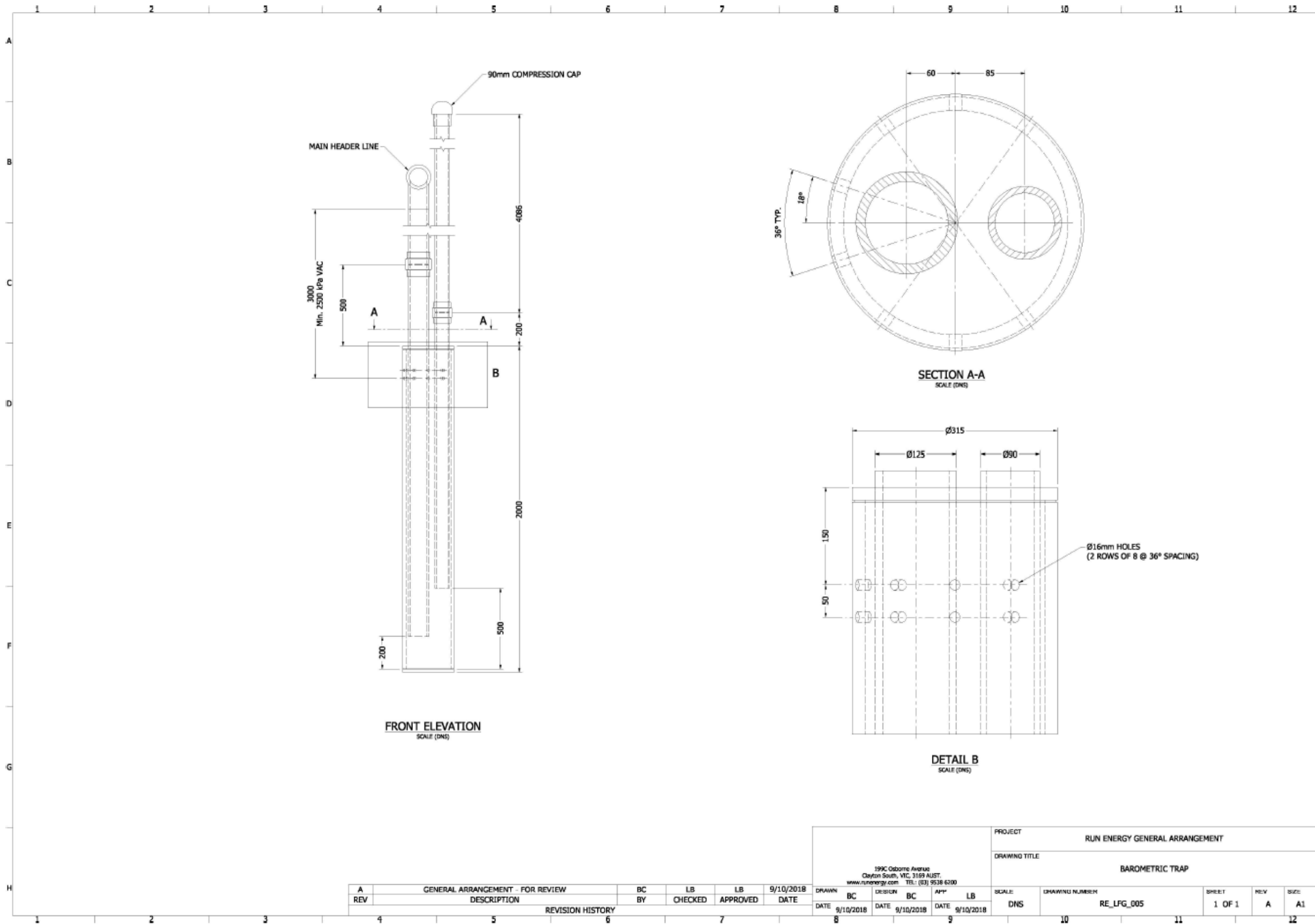
GENERAL ARRANGEMENT - FOR REVIEW					BC	LB	LB	29/10/2018	PROJECT: RUI ENERGY GENERAL ARRANGEMENT DRAWING TITLE: STANDALONE WELL HEAD 199C Osborne Avenue Clayton South, VIC 3169 AUSTR. www.ruienergy.com.au TEL: (03) 9338 6000				
REV	DESCRIPTION	BY	CHECKED	APPROVED	DATE	DATE	DATE	DATE	SCALE: DNG	DRAWING NUMBER: RE_LFG_D12	SHEET: 1 OF 1	REV: A	SIZE: A1
DIVISION HISTORY									DRAWN: BC DESIGN: BC APP: LB DATE: 29/10/2018 DATE: 29/10/2018 DATE: 29/10/2018				

Plan 6B: General landfill gas collection system – Trench details

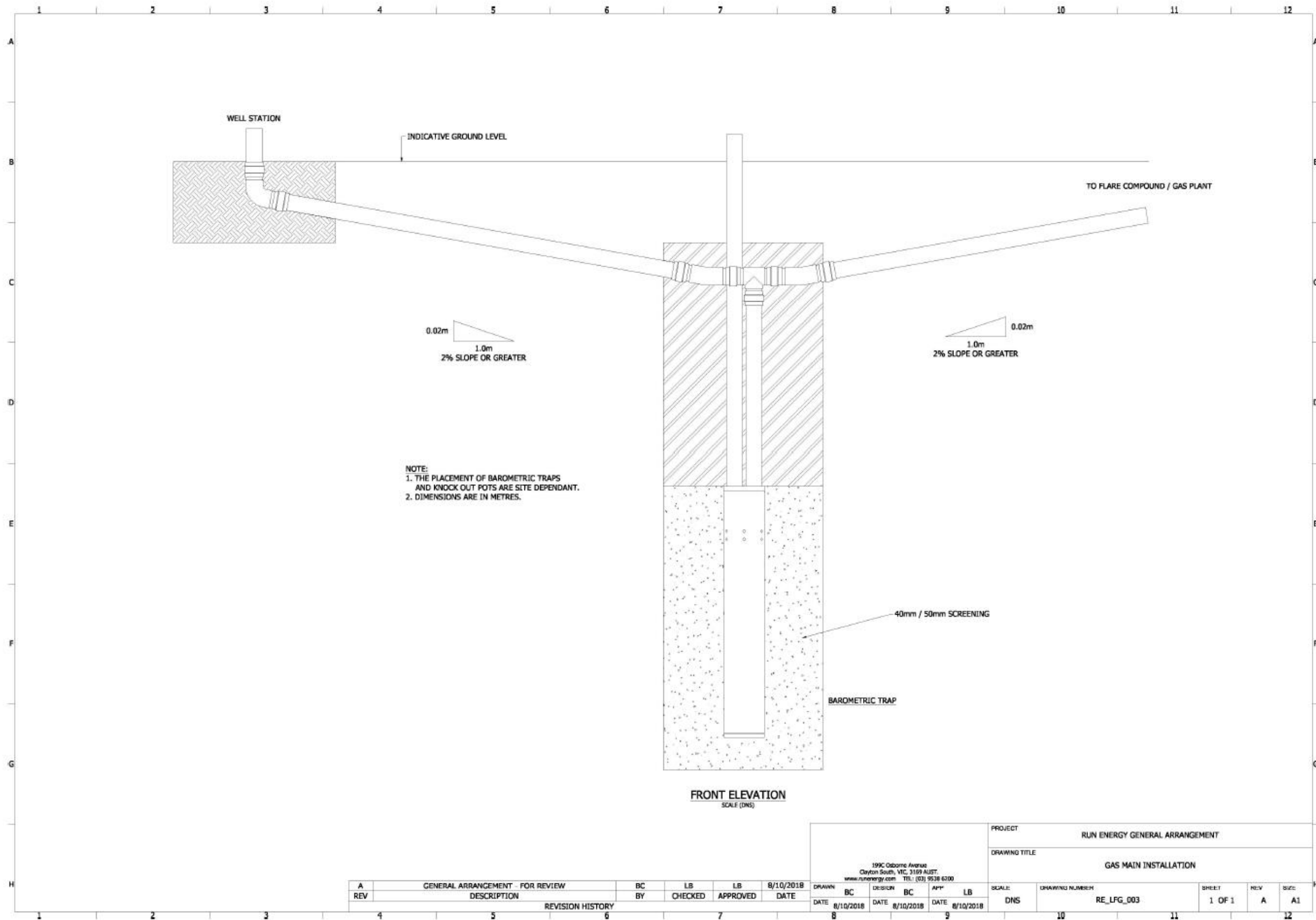


199C Osborne Avenue Clayton South, VIC, 3169 AUST. www.runenergy.com TEL: (03) 9538 6300					PROJECT RUN ENERGY GENERAL ARRANGEMENT																																
					DRAWING TITLE TRENCH DETAIL																																
<table border="1"> <thead> <tr> <th>REV</th> <th>DESCRIPTION</th> <th>REVISION HISTORY</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>GENERAL ARRANGEMENT FOR REVIEW</td> <td></td> </tr> </tbody> </table>			REV	DESCRIPTION	REVISION HISTORY	A	GENERAL ARRANGEMENT FOR REVIEW		<table border="1"> <thead> <tr> <th>BY</th> <th>CHECKED</th> <th>APPROVED</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>BC</td> <td>LB</td> <td>LB</td> <td>9/10/2018</td> </tr> </tbody> </table>	BY	CHECKED	APPROVED	DATE	BC	LB	LB	9/10/2018	<table border="1"> <thead> <tr> <th>DRAWN</th> <th>DESIGN</th> <th>APP</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>BC</td> <td>BC</td> <td>LB</td> <td>9/10/2018</td> </tr> </tbody> </table>	DRAWN	DESIGN	APP	DATE	BC	BC	LB	9/10/2018	<table border="1"> <thead> <tr> <th>SCALE</th> <th>DRAWING NUMBER</th> <th>SHEET</th> <th>REV</th> <th>SIZE</th> </tr> </thead> <tbody> <tr> <td>DN5</td> <td>RE_LFG_006</td> <td>1 OF 1</td> <td>A</td> <td>A1</td> </tr> </tbody> </table>	SCALE	DRAWING NUMBER	SHEET	REV	SIZE	DN5	RE_LFG_006	1 OF 1	A	A1
REV	DESCRIPTION	REVISION HISTORY																																			
A	GENERAL ARRANGEMENT FOR REVIEW																																				
BY	CHECKED	APPROVED	DATE																																		
BC	LB	LB	9/10/2018																																		
DRAWN	DESIGN	APP	DATE																																		
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SCALE	DRAWING NUMBER	SHEET	REV	SIZE																																	
DN5	RE_LFG_006	1 OF 1	A	A1																																	

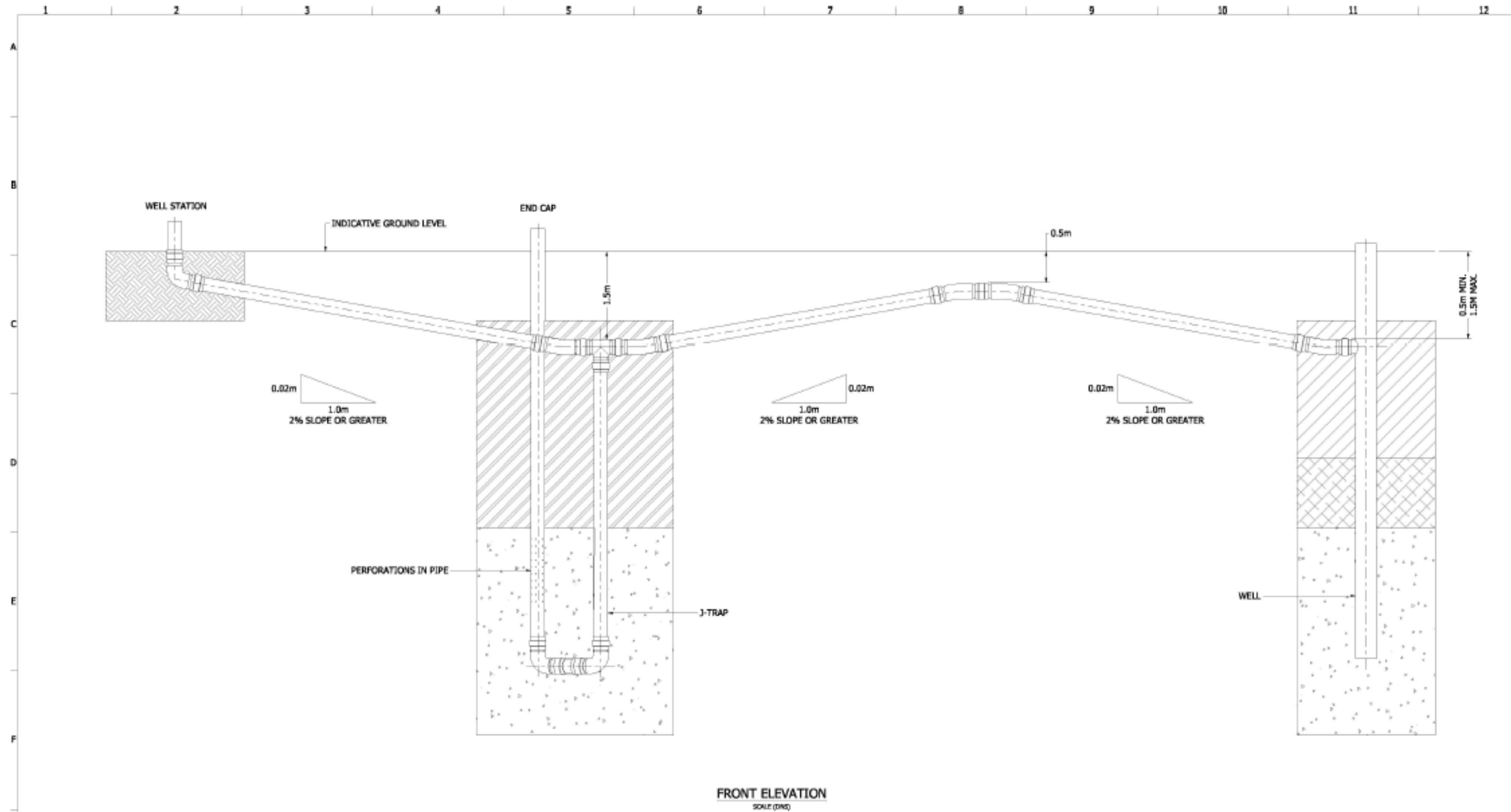
Plan 6C: General landfill gas collection system – Barometric trap construction details



Plan 6D: General landfill gas collection system – Gas main installation construction details

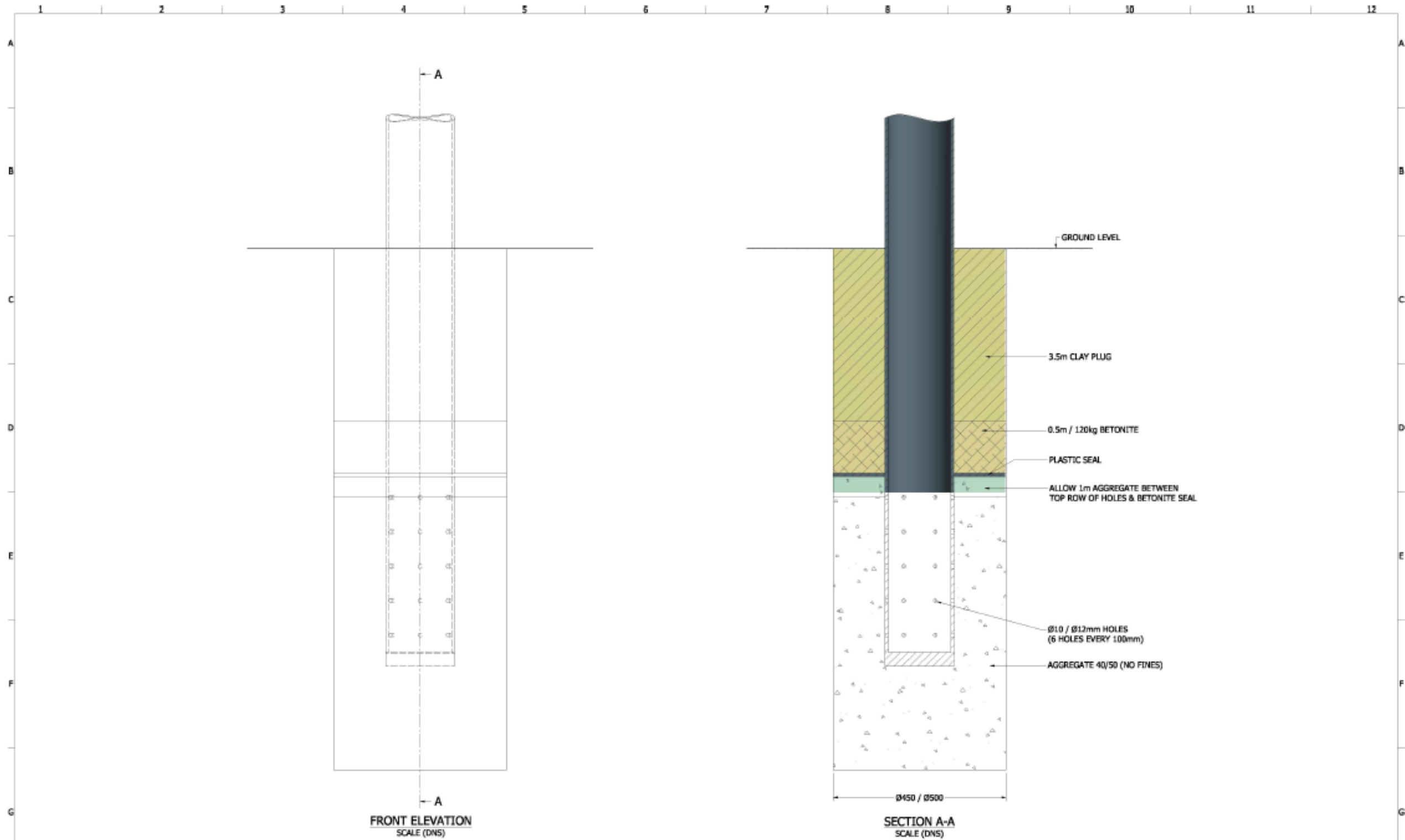


Plan 6E: General landfill gas collection system – Flow line installation construction details



REV	DESCRIPTION	BY	CHECKED	APPROVED	DATE	DATE	DATE	DATE	DATE	SCALE	DRAWING NUMBER	SHEET	REV	SIZES
A	GENERAL ARRANGEMENT FOR REVIEW	BL	LB	LB	5/10/2018	5/10/2018	5/10/2018	5/10/2018	5/10/2018	DNS	RE_LFG_002	1 OF 1	A	A1

Plan 6F: General landfill gas collection system – Well installation (Type A) construction details

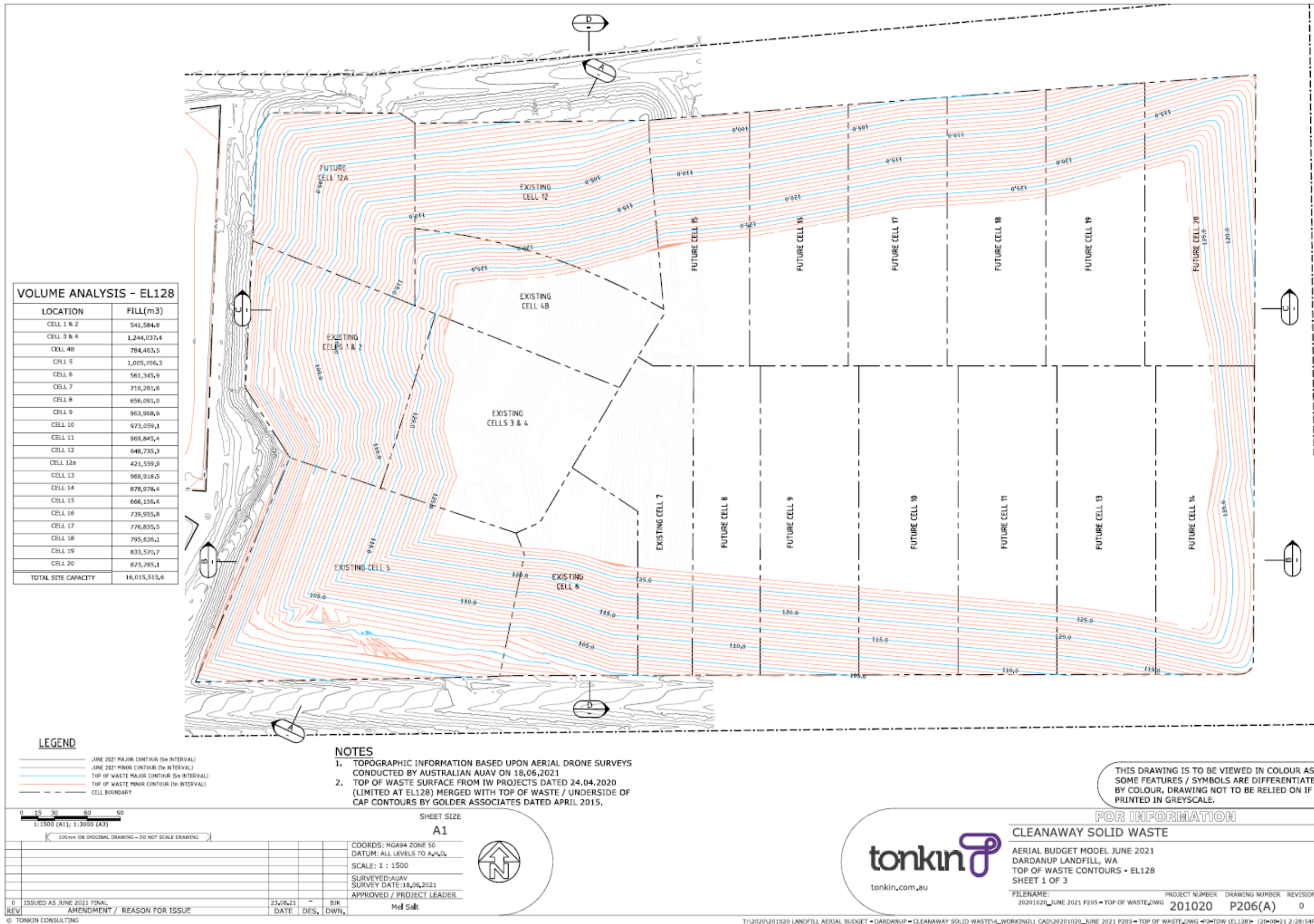


A	GENERAL ARRANGEMENT - FOR REVIEW	BC	LB	LB	3/10/2018
REV	DESCRIPTION	BY	CHECKED	APPROVED	DATE

REVISION HISTORY

259C Osborne Avenue Clayton South, VIC, 3108 AUSTRALIA www.runenergy.com TEL: (03) 9638 6280		PROJECT RUN ENERGY GENERAL ARRANGEMENT
DRAWN BC DATE 3/10/2018		DRAWING TITLE WELL INSTALLATION TYPE A
DESIGN BC DATE 3/10/2018	APP LB DATE 3/10/2018	SCALE DNS
DRAWING NUMBER RE_LFG_001		SHEET 1 OF 1
REVISION HISTORY		REV A
DATE		SIZE A1

Plan 7: Final landfill contour plan



VOLUME ANALYSIS - EL128

LOCATION	FILL(m3)
CELL 1 & 2	541,584.8
CELL 3 & 4	1,244,037.4
CELL 4B	784,463.5
CELL 5	1,005,706.3
CELL 6	561,345.9
CELL 7	710,281.8
CELL 8	656,091.0
CELL 9	963,968.6
CELL 10	973,059.1
CELL 11	969,845.4
CELL 12	648,735.3
CELL 12a	421,559.9
CELL 13	969,918.5
CELL 14	878,978.4
CELL 15	666,156.4
CELL 16	739,955.8
CELL 17	776,835.5
CELL 18	795,636.1
CELL 19	833,570.7
CELL 20	873,785.1
TOTAL SITE CAPACITY	16,015,515.6

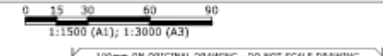
LEGEND

- JUNE 2021 MAJOR CONTOUR (5m INTERVAL)
- JUNE 2021 MINOR CONTOUR (1m INTERVAL)
- TOP OF WASTE MAJOR CONTOUR (5m INTERVAL)
- TOP OF WASTE MINOR CONTOUR (1m INTERVAL)
- - - CELL BOUNDARY

NOTES

1. TOPOGRAPHIC INFORMATION BASED UPON AERIAL DRONE SURVEYS CONDUCTED BY AUSTRALIAN AJUV ON 18.06.2021
2. TOP OF WASTE SURFACE FROM IW PROJECTS DATED 24.04.2020 (LIMITED AT EL128) MERGED WITH TOP OF WASTE / UNDERSIDE OF CAP CONTOURS BY GOLDER ASSOCIATES DATED APRIL 2015.

THIS DRAWING IS TO BE VIEWED IN COLOUR AS SOME FEATURES / SYMBOLS ARE DIFFERENTIATED BY COLOUR, DRAWING NOT TO BE RELIED ON IF PRINTED IN GREYSCALE.



SHEET SIZE
A1

COORDS: MGA94 ZONE 50
DATUM: ALL LEVELS TO A.M.S.L.
SCALE: 1 : 1500
SURVEYED: AJUV
SURVEY DATE: 18.06.2021
APPROVED / PROJECT LEADER
Mel Salt



REV	ISSUED AS	DATE	DES.	DWN.
0	ISSUED AS JUNE 2021 FINAL	23/06/21	BJK	
	AMENDMENT / REASON FOR ISSUE			

FOR INFORMATION

CLEANAWAY SOLID WASTE

AERIAL BUDGET MODEL JUNE 2021
DARDANUP LANDFILL, WA
TOP OF WASTE CONTOURS - EL128
SHEET 1 OF 3

FILENAME: 20201020_JUNE 2021 P205 - TOP OF WASTE.DWG PROJECT NUMBER: 201020 DRAWING NUMBER: P206(A) REVISION: 0

T:\2020\201020 LANDFILL AERIAL BUDGET - DARDANUP - CLEANAWAY SOLID WASTE\WORKING\1 CAD\20201020_JUNE 2021 P205 - TOP OF WASTE.DWG ->TOW (EL128) (20-06-21 2:28:54PM)

Plan 8: Rehabilitation staging plan

