Government of Western Australia
Department of Water and Environmental Regulation

Works Approval

Works approval number	W3004/2025/1
Works approval holder	Pilgangoora Operations Pty Ltd
ACN	616 560 395
Registered business address	Level 2, 146 Colin Street WEST PERTH WA 6005
DWER file number	APP-0026944
Duration	12/08/2025 to 11/08/2030
Date of issue	11/08/2025
Premises details	Pilgangoora Operations Mining tenements M45/1256, M45/511, M45/333, L45/417, L45/454, L45/614, G45/350, G45/351 MARBLE BAR WA 6760 As depicted in Schedule 1, Figure 1

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed production / design capacity**
Category 5: Processing or beneficiation of metallic or non-metallic ore	9,000,000 tonnes per annum
Category 52: Electric power generation	19.5 MW in aggregate
Category 54: Sewage facility	50 m^3 per day
Category 73: Bulk storage of chemicals	174 m^3 in aggregate

This works approval is granted to the works approval holder, subject to the attached conditions, on 11 August 2025, by:

Alana Kidd

Digitally signed by Alana Kidd
Date: 2025.08.11 12:38:04 +08'00'

Alana Kidd
Manager, Green Energy

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

Works approval history

Date	Reference number	Summary of changes
11/08/2025	W3004/2025/1	Works approval granted.

Interpretation

In this works approval:

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

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

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

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

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

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

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

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

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

Works approval conditions

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

Construction phase

Infrastructure and equipment

1. The works approval holder must:

(a) construct 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 1.

Table 1: Design and construction/installation requirements

Item	Infrastructure	Design and construction / installation requirements	Infrastructure location

1.	P2000 processing plant	• Capable of processing up to 9,000,000 tonnes per annum.
		• Production of up to 6,000,000 tonnes per annum (dry) of wet tailings.
		• Plant constructed on a graded concrete pad.
		• Equipped with a functioning dust suppression system.
		• Water sprays located on all transfer points.
		• Water sprays and/or dust covers installed at all large dry screens.
		• Primary crushing area, consisting of:
		  ○ One primary crusher.
		  ○ One rock breaker.
		  ○ One primary feeder.
		  ○ Dry product screens.
		  ○ Secondary crushers.
		  ○ Fully enclosed transfer conveyors fitted with dual head scrapers and skirting systems to contain and encapsulate dust and spillage.
		  ○ Automated dust water sprays on all conveyor transfers.
		  ○ ROM bin fitted with vehicle triggered dust sprays.
		  ○ Concrete bunding that provides a containment capacity equivalent to 110% of the capacity of the hydraulic
			As shown in Figure 2 of Schedule 1

Item	Infrastructure	Design and construction / installation requirements	Infrastructure location

		circuit.
		• Ore sorting area, consisting of:
		  ○ Dry product screens fitted with dust covers.
		  ○ Secondary crushers.
		  ○ Fully enclosed transfer conveyors fitted with dual head scrapers and skirting systems to contain and encapsulate dust and spillage.
		  ○ Ore sorters.
		  ○ Dust collector fitted to ore sorting equipment.
		  ○ Sorter eject stacking conveyor.
		• Crushed ore stockpile area, consisting of:
		  ○ Crushed ore stockpile containing a partially sealed, permanent steel cover system at elevated levels to encapsulate and minimise dust emissions.
		  ○ Fully enclosed transfer conveyors fitted with dual head scrapers and skirting systems to contain and encapsulate dust and spillage.
		  ○ Automated dust water sprays on all transfer conveyors.
		• Grinding/classification area, consisting of:
		  ○ Semi autogenous grinding (SAG) mill.
		  ○ Ball mill.
		  ○ Pebble crusher.
		  ○ Reclaim feeders.
		  ○ Fully enclosed transfer conveyors fitted with dual head scrapers and skirting systems to contain and encapsulate dust and spillage.
		  ○ Automated dust water sprays on all transfer conveyors.
		  ○ Dewatering screens.
		  ○ Cyclone clusters.
		  ○ Concrete bunding that provides a containment capacity equivalent to 110% of the capacity of the largest tank, with sump pumps to direct material to the processing plant for reuse.	

Item	Infrastructure	Design and construction / installation requirements	Infrastructure location
		○ Dedicated bunds for each hydraulic power pack system that provides a containment capacity equivalent to 110% of the capacity of each system, and manual pump-out sump. • Magnetic separation area, consisting of: ○ Low intensity magnetic separators (LIMS). ○ Wet high intensity magnetic separators (WHIMS). ○ Concrete bunding that provides a containment capacity equivalent to 110% of the capacity of the largest tank, with sump pumps to direct material to the processing plant for reuse. • Tantalum recovery area, consisting of: ○ Cyclone clusters. ○ Spirals. ○ Gravity separation tables. ○ Dewatering vacuum filter. ○ Concrete bunding to provide a containment capacity equivalent to 110% of the capacity of the largest tank, with sump pumps to direct material to the processing plant for reuse. • Flotation area, consisting of: ○ Deslime cyclone clusters. ○ Concentrate tanks fitted with high level alarms. ○ Flotation tank cells. ○ Concrete bunding that provides a containment capacity equivalent to 110% of the capacity of the largest tank, with sump pumps to direct material to the process plant for reuse. • Concentrate thickening and dewatering area, consisting of: ○ Deslime cyclone clusters. ○ Acid attritioning tanks. ○ Thickener. ○ Vacuum filters. ○ Concrete bunding that provides a	

Item	Infrastructure	Design and construction / installation requirements	Infrastructure location
		containment capacity equivalent to 110% of the capacity of the largest tank, with sump pumps to direct material to the process plant for reuse. ○ Concrete slab under the thickener that is graded towards a sump pump with containment capacity equivalent to 110% of maximum slurry bed, with sump pumps to direct material to the processing plant for reuse. • Concentrate storage area, consisting of: ○ Fully enclosed transfer conveyors fitted with dual head scrapers and skirting systems to contain and encapsulate dust and spillage. ○ Automated dust water sprays on all transfer conveyors. ○ Stacking conveyor. ○ Three-sided and roofed concrete storage bunkers with a concrete slab graded towards sump pumps to direct material to the processing plant for reuse. • Tails thickening and disposal area, consisting of: ○ Deslime cyclone clusters. ○ Dewatering screen. ○ Thickener fitted with bed level alarm linked to process control infrastructure to indicate if there is a leak in the thickener. ○ Tailings holding tank fitted with high level alarm. ○ Two final tailings pump trains. ○ Concrete bunding that provides a containment capacity equivalent to 110% of the capacity of the largest tank, with sump pumps to direct material to the processing plant for reuse. ○ Concrete slab under the thickener that is graded towards a sump pump with containment capacity equivalent to 110% of maximum slurry bed, with sump pumps to direct material to the processing plant for reuse. • Process water pond:	

Item	Infrastructure	Design and construction / installation requirements	Infrastructure location
		○ Two cells with a 20 ML total storage capacity. ○ Process water pond overflow captured in a land drain and directed to the P2000 processing plant pad sedimentation pond. ○ Constructed with a HDPE liner. ○ Installation of a minimum 1200 mm high exclusion fence around the perimeter. ○ Process water pond to be capable to maintain a minimum 500 mm freeboard.	
2.	P2000 processing plant pad drainage	• Constructed in accordance with Figure 5 and Figure 6 of Schedule 1. • Pad graded to capture and direct all surface water runoff to a sedimentation pond using land drains. • Sedimentation pond to be designed with total capacity of 33,170 m^3 to cater for a 24 hour, 1 in 10 year storm event. • Sedimentation pond to be capable of maintaining a minimum 500 mm freeboard. • Installation of a minimum 1200 mm high exclusion fence around sedimentation pond. • Overflow from the sedimentation pond must be captured in a toe drain and discharged to an existing creek through a daylight drain. • Toe drain base to have a minimum 500 mm of facing class rock protection underlain by Geotextile Bidim A64 or equivalent.	As shown in Figure 2 of Schedule 1
3.	Tailings filtration plant	• Capable of filtering up to 6,000,000 tonnes per annum of tailings. • Capable of dewatering tailings to 15-20% moisture content. • Plant constructed on a concrete pad with concrete bunding with a containment capacity equivalent to 110% of the capacity of largest tank. • Tailings filtration area, must consist of: ○ Four filter feed tanks fitted with high level alarms.	As shown in Figure 2 of Schedule 1

Item	Infrastructure	Design and construction / installation requirements	Infrastructure location
		○ Dewatering filters. ○ Return water storage, directing return water to 5 ML dam. • Dry tailings loadout area, consisting of: ○ Transfer conveyors. ○ One stacking conveyor. ○ One sediment pond. • Water sprays and/or dust covers must be installed at all transfer points on conveyors. • Feed tanks must be fitted with level exceedance alarms and automatic process control shut-offs to prevent over-topping. • Reclaim area consisting of a compacted waste rock pad and a 500 mm high compacted waste rock bund with sufficient capacity to contain all stormwater generated from a 24 hour, 1 in 10 year storm event. • Reclaim area must be graded to direct all surface water run off to the tailings filtration plant sediment pond. • Minimum 300 mm earthen bund installed around reclaim area. • Sediment pond constructed to have sufficient capacity to contain all stormwater runoff from tailings filtration plant generated from a 24 hour, 1 in 10 year storm event.	
4.	Tailings and decant water pipeline	• Pipelines must be constructed according to Australian Standards AS/NZS 2033, 4129, 4130 and 4131 for polyethylene pipes. • Pipelines must be located within bunded corridors for secondary spillage containment. • Where pipelines are constructed within road corridors, those roads must be bunded by earthen windrows to contain pipeline leaks. • Pipelines to be equipped with leakage detection (flow and pressure monitoring) with automatic cutouts in the event of a pipeline failure.	As shown in Figure 2 and Figure 7 of Schedule 1
5.	Waste rock landforms	• Toe drains constructed at the base of the	As shown in Figure

Item	Infrastructure	Design and construction / installation requirements	Infrastructure location
	(WRLs)	WRLs to capture all run off and sediment and direct it to sumps where it can infiltrate into underlying soils. • Overflow from the sumps must be captured in a toe drain and directed to the P2000 processing plant pad sedimentation pond. • Sump water to be regularly collected and returned to the mine water distribution network for use in mining activities and dust suppression. • Crest bunds to be incorporated at the top of the WRLs and back-sloping berms to retain water.	8 of Schedule 1
6.	Heavy mining equipment (HME) area	• Constructed in accordance with Figure 9 of Schedule 1. • Oily water separator to be designed and installed to treat hydrocarbon waste to a maximum TRH concentration of <15 mg/L. • Oily water waste stream to be directed to and contained in a 250 kL storage tank. • HME pad graded to capture and direct all surface water runoff to sedimentation ponds using land drains. • Sedimentation pond 1 constructed in accordance with Figure 10 in Schedule 1. • Sedimentation pond 1 total capacity of 14,280 m^3 to cater for a 24 hour, 1 in 10 year storm event. • Sedimentation pond 2 to be constructed in accordance with Figure 11 in Schedule 1. • Sedimentation pond 2 to have a total capacity of 12,240 m^3 to cater for a 24 hour, 1 in 10 year storm event. • Sedimentation ponds to be capable to maintain a minimum 500 mm freeboard. • Installation of a minimum 1200 mm high exclusion fence around sedimentation ponds.	As shown in Figure 2, Figure 3, and Figure 9 of Schedule 1
7.	Natural gas generators	• Installation of seven 2.5 MW natural gas generators with a height of 10.1 m. • Installed on the existing engine haul.	Within the power station, as shown in Figure 2, Figure 3, and Figure 12 of Schedule 1

Item	Infrastructure	Design and construction / installation requirements	Infrastructure location
8.	Wastewater treatment plant (WWTP)	• Sequence Batch Reactor (SBR) installed with capacity to treat up to 50 m^3 per day. • WWTP installed on a bunded concrete pad. • WWTP containerised with external tanks. • Chemical-dosing IBCs to be installed within individual bunds. • WWTP dosing lines contained inside a sealed outer hose. • WWTP to be installed with an alarm and interlock system capable of detecting excessive levels and shutting off pumps. • Treated effluent/irrigation tank to be fitted with high level alarm. • Flow meters to be installed at influent inlet point and effluent egress point. • WWTP to be capable to meet the treated wastewater quality criteria outlined in Table 2. • Treated wastewater that meets specified criteria to only be directed to the new 1.8 ha WWTP spray field.	As shown in Figure 2 of Schedule 1
9.	WWTP spray field	• Spray field area must be at least 1.8 ha. • A minimum 300 mm high windrow installed around spray field. • Stock exclusion fence to be installed around the spray field irrigation area. • Treated effluent to be irrigated to the spray field through a minimum of nine evenly distributed sprinklers.	At the coordinates specified in Table 17, as shown in Figure 2 of Schedule 1
10.	Reagent storage tanks	• One 150 m^3 mica pre-float bulk collector storage tank. • One 20 m^3 mica pre-float live collector storage tank. • Four 1 kL IBCs for containing frother. • Each reagent storage tank is to be contained within individual bunded areas sized to 110% of the largest held capacity with local sump pumps to manage rainfall and removal of spillage by directing material to the processing plant for reuse.	Within the storage precinct, as shown in Figure 3 of Schedule 1

WWTP wastewater treatment criteria

2. The works approval holder must ensure that wastewater produced from the WWTP specified in Table 1 is treated to the criteria specified in Table 2 prior to discharge.

Table 2: Emission treatment criteria

Item	Emission	Parameter	Limit
1.	Treated wastewater	Total Suspended Solids (TSS)	<30 mg/L
		Biochemical Oxygen Demand (BOD)	<20 mg/L
		Total Nitrogen (TN)	<30 mg/L
		Total Phosphorous (TP)	<7.5 mg/L
		Residual free chlorine	0.2-2 mg/L
		pH	6.5-8.5
		E.coli	<1000 cfu/100 ml

Construction of groundwater monitoring wells

3. The works approval holder must design, construct, and install groundwater monitoring wells in accordance with the requirements specified in Table 3.

Table 3: Infrastructure requirements – groundwater monitoring wells

Infrastructure	Design and construction / installation requirements	Infrastructure location	Timeframe
New groundwater monitoring wells: WRLMB01 WRLMB02 WRLMB03 WRLMB04 as depicted in Figure 16 of Schedule 1	Well design and construction: • Designed and constructed in accordance with *ASTM D5092/D5092M-16: Standard practice for design and installation of groundwater monitoring bores*. • Well screens must target the part, or parts, of the aquifer most likely to be affected by contamination[1]. Where temporary/seasonal perched features are present, wells must be nested, and the perched features individually screened.	As shown in Figure 16 of Schedule 1.	Must be constructed, developed (purged), and determined to be operational by no later than 30 calendar days prior to commencement of time limited operations for the tailings filtration plant.
	Logging of borehole: • Soil samples must be collected and logged during the installation of the monitoring wells. • A record of the geology encountered during drilling must be described and classified in accordance with the Australian Standard Geotechnical Site Investigations AS1726.		

	• Any observations of staining / odours or other indications of contamination must be included in the bore log.		
	Well construction log: • Well construction details must be documented within a well construction log to demonstrate compliance with *ASTM D5092/D5092M-16*. • The construction logs shall include elevations of the top of casing position to be used as the reference point for water-level measurements, and the elevations of the ground surface protective installations.		
	Well development: • All installed monitoring wells must be developed after drilling to remove fine sand, silt, clay and any drilling mud residues from around the well screen to ensure the hydraulic functioning of the well. A detailed record should be kept of well development activities and included in the well construction log.		
	Installation survey: • The vertical (top of casing) and horizontal position of each monitoring well must be surveyed and subsequently mapped by a suitably qualified surveyor.		
	Well network map: • A well location map (using aerial image overlay) must be prepared and include the location of all monitoring wells in the monitoring network and their respective identification numbers.		

Note 1: refer to Section 8 of Schedule B2 of the *Assessment of Site Contamination NEPM* for guidance on well screen depth and length.

4. The works approval holder must, within 60 calendar days of the monitoring wells being constructed, submit to the CEO a well construction report evidencing compliance with the requirements of condition 3.

Groundwater monitoring prior to time limited operations

5. The works approval holder must conduct a groundwater monitoring programme in accordance with the requirements specified in Table 4 and record the results of all monitoring activities conducted under that programme.

Table 4: Groundwater monitoring of ambient concentrations

Monitoring location	Parameter	Unit	Frequency	Method
New groundwater monitoring wells: WRLMB01 WRLMB02 WRLMB03 WRLMB04 as depicted in Figure 16 of Schedule 1 Existing groundwater monitoring wells (South WRL1): MB01-1 MB01-2 MB02-1 MB02-2 MB03-1 MB03-2 MB04-1 MB04-2 As depicted in Figure 17 of Schedule 1 Existing groundwater monitoring wells (5 ML dam): PMB001 PMB003 TMFMB003 As depicted in Figure 18 of Schedule 1	Standing water level[1]	mbgl	A single sampling event undertaken prior to commencement of time limited operations	AS/NZS 5667.1 AS/NZS 5667.11
	pH[1]	pH units		
	Electrical Conductivity[1]	µS/cm		
	Ammonia, NH_3	mg/L		
	Bicarbonate Alkalinity as HCO_3			
	Calcium Carbonate $CaCO_3$			
	Carbonate Alkalinity as CO_3			
	Nitrate, NO_3 as NO_3			
	Nitrite, NO_2 as NO_2			
	Total Alkalinity as $CaCO_3$			
	Total Dissolved Solids, TDS			
	Total Hardness by Calculation			
	Sulfate, SO_4			
	Calcium, Ca			
	Chloride, Cl			
	Lithium, Li			
	Magnesium, Mg			
	Potassium, K			
	Silica, Soluble			
	Sodium, Na			
	Total nitrogen, TN			
	Total phosphorus, TP			
	Aluminum, Al			
	Antimony, Sb			
	Arsenic, As			

Monitoring location	Parameter	Unit	Frequency	Method
	Barium, Ba			
	Bismuth, Bi			
	Boron, B			
	Bromide, Br			
	Cadmium, Cd			
	Caesium, Cs			
	Chromium, Cr			
	Cobalt, Co			
	Copper, Cu			
	Fluoride, F			
	Hexavalent Chromium, Cr^{6+}			
	Iron, Fe			
	Lead, Pb			
	Manganese, Mn			
	Mercury, Hg			
	Molybdenum, Mo			
	Nickel, Ni			
	Niobium, Nb			
	Rubidium, Rb			
	Selenium, Se			
	Silicon, Si			
	Tantalum, Ta			
	Thallium, Tl			
	Thorium, Th			
	Tin, Sn			
	Uranium, U			
	Vanadium, V			

Monitoring location	Parameter	Unit	Frequency	Method
	Zinc, Zn			
	Gross Alpha	Bq/L		
	Gross Beta			
	Radium 226			
	Radium 228			

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

6. The works approval holder must adhere to the field quality assurance and quality control procedures specified in Schedule 3 for the monitoring required by condition 5.

7. All sample analysis undertaken in accordance with condition 5 must be undertaken by laboratories with current NATA accreditation for the relevant parameters, unless otherwise specified.

Compliance reporting

8. The works approval holder must within 90 calendar days of an item of infrastructure or equipment required by conditions 1 and 3 being constructed or installed:

(a) undertake an audit of their compliance with the requirements of conditions 1 and 3; and

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

9. The Environmental Compliance Report required by condition 8, must include as a minimum the following:

(a) certification by a title of a suitably qualified and experienced person that the items of infrastructure or component(s) thereof, as specified in conditions 1 and 3, have been constructed in accordance with the relevant requirements specified in conditions 1 and 3;

(b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in conditions 1 and 3; and

(c) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

Groundwater monitoring reporting

10. The works approval holder must submit to the CEO, a monitoring report demonstrating compliance with condition 4, 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 (as outlined in Schedule 3);

(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); and

(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*.

Environmental commissioning phase

Environmental commissioning requirements and emission limits

11. The works approval holder may only commence environmental commissioning of an item of infrastructure identified in condition 12 once the Environmental Compliance Report has been submitted for that item of infrastructure in accordance with condition 8 of this works approval.

12. Any environmental commissioning activities undertaken for an item of infrastructure specified in Table 5 may only be carried out:

(a) in accordance with the corresponding commissioning requirements; and

(b) for the corresponding authorised commissioning duration.

Table 5: Environmental commissioning requirements

Item	Infrastructure	Commissioning requirements	Authorised commissioning duration
1.	Wastewater treatment plant (WWTP)	Irrigation via at least nine sprinklers.	For a period not exceeding 180 calendar days in aggregate (combined total for 3 sequenced commissioning phases; (1) Dry testing; (2) Wet testing; and (3) Balanced operation)
		Not more than 50 m^3 of treated effluent applied per day to the WWTP spray field.	
		Only irrigate treated wastewater from the WWTP to the WWTP spray field, as specified by Figure 2 in Schedule 1 and Table 17 in Schedule 2.	

13. During environmental commissioning, the works approval holder must ensure that the emission(s) specified in Table 6 are discharged only from the corresponding discharge point(s) and only at the corresponding discharge point location(s).

Table 6: Emission and discharge points during environmental commissioning

Item	Emission	Discharge point	Discharge point location
1.	Treated wastewater	WWTP spray field	As shown in Figure 2 in Schedule 1 and defined in Table 17 in Schedule 2

14. During environmental commissioning, the works approval holder must ensure that

the emissions from the discharge point listed in Table 6 do not exceed the treatment criteria listed in Table 2 when monitored in accordance with condition 15.

Monitoring during environmental commissioning

15. The works approval holder must monitor emissions during environmental commissioning in accordance with Table 7.

Table 7: Emissions and discharge monitoring during environmental commissioning

Discharge point/monitoring location	Parameter	Unit	Frequency	Averaging period	Method
Discharge point: WWTP spray field as shown in Figure 2 in Schedule 1 and defined in Table 17 in Schedule 2 Monitoring location: Effluent pipeline from final effluent tank	Volume[1]	m^3	Continuous during phase 2 and phase 3 commissioning periods	Per day	Flow metering device
	Total Suspended Solids (TSS)	mg/L	Monthly during phase 3 commissioning period	Spot sample	AS/NZS 5667.1 AS/NZS 5667.10
	Biochemical Oxygen Demand (BOD)				
	Total Nitrogen (TN)				
	Total Phosphorous (TP)				
	Residual free chlorine				
	pH[1]	pH units			
	E.coli	cfu/100 ml			

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

16. The works approval holder must record the results of all monitoring activity required by condition 15.

17. All sample analysis undertaken in accordance with condition 15 must be undertaken by laboratories with current NATA accreditation for the relevant parameters, unless otherwise specified.

Compliance reporting

18. The works approval holder must submit to the CEO an Environmental Commissioning Report within 30 calendar days of the completion date of environmental commissioning for each item of infrastructure specified in Table 5.

19. The works approval holder must ensure the Environmental Commissioning Report required by condition 18 of this works approval includes the following:

(a) a summary of the environmental commissioning activities undertaken, including timeframes and volume of influent processed;

(b) the emissions monitoring results recorded in accordance with conditions 15 and 16;

(c) a summary of the environmental performance of each item of infrastructure or equipment as installed, which at a minimum includes records detailing the:

(i) commissioning of the systems; and

(ii) testing the systems;

(d) a review of the works approval holder's performance and compliance against the conditions of this works approval; and

(e) where they have not been met, measures proposed to meet the manufacturer's design specifications and the conditions of this works approval, together with timeframes for implementing the proposed measures.

Time limited operations phase

Commencement and duration

20. The works approval holder may only commence time limited operations for an item of infrastructure identified in condition 22:

(a) where the item of infrastructure is not authorised to undertake environmental commissioning, the Environmental Compliance Report as required by condition 8 has been submitted by the works approval holder for that item of infrastructure; and

(b) where the item of infrastructure is authorised to undertake environmental commissioning under condition 12, the Environmental Commissioning Report for that item of infrastructure as required by condition 18 has been submitted by the works approval holder.

21. The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 22 (as applicable):

(a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 20 for that item of infrastructure; or

(b) until such time as a licence for that item of infrastructure is granted in accordance with Part V of the *Environmental Protection Act 1986*, if one is granted before the end of the period specified in condition 21(a).

Time limited operations requirements and emission limits

22. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 8 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 8.

Table 8: Infrastructure and equipment requirements during time limited operations

Item	Site infrastructure and equipment	Operational requirement	Infrastructure location
1.	P2000 processing plant	• Use and maintenance of controls as detailed in condition 1, Table 1. • Visual inspection of tailings thickener and alarm systems twice daily.	As shown in Figure 2, Figure 4 and Figure 14 of Schedule 1

Item	Site infrastructure and equipment	Operational requirement	Infrastructure location
		• Decant water to be directed to the TSF3 decant water return pond, or returned to the process water pond for reuse at the P2000 processing plant or for dust suppression. • Process water pond to be supplied by decant water, reclaimed water from the tailings filtration plant, captured stormwater, and/or raw water. • Any soil that becomes contaminated due to a spill to be collected and treated at the Monster bioremediation pad. • Spill kits located nearby to all hydraulic power packs and maintenance activities. • Crushed ore stockpiles in stockpile area to have a maximum height of 60 m.	
2.	P2000 processing plant pad drainage	• Use and maintenance of controls as detailed in condition 1, Table 1. • Stormwater captured in the sedimentation pond to be pumped to the P2000 processing plant process water pond for reuse. • Any soil that becomes contaminated due to a spill to be collected and treated at the monster bioremediation pad.	As shown in Figure 2 of Schedule 1
3.	Tailings filtration plant	• Use and maintenance of controls as detailed in condition 1, Table 1. • A maximum of two dewatered tailings stockpiles at the reclaim area. • Tailings to be accepted from the P2000 processing plant and/or any existing processing plant within the premises. • Any soil that becomes contaminated due to a spill to be collected and treated at the monster bioremediation pad. • Spill kits to be located at the tailings filtration plant to enable quick response to leaks and minor spills of chemicals. • Stormwater captured in the sedimentation pond to be pumped to the tailings filtration plant return water storage pond for reuse. • Use of water trucks as required for dust suppression at dewatered tailings	As shown in Figure 2 of Schedule 1

Item	Site infrastructure and equipment	Operational requirement	Infrastructure location
		stockpiles, transfer conveyors to WRLs, and haul trucks transporting dewatered tailings.	
4.	Tailings and decant water pipeline	• Use and maintenance of controls as detailed in condition 1, Table 1. • Physical inspection of the pipeline corridors twice daily. • In the event flow meter readings indicate pipeline failure, the affected pipeline is to be shut down and not operated until repaired.	As shown in Figure 2 and Figure 7 of Schedule 1
5.	Waste rock landforms (WRLs)	• Use and maintenance of controls as detailed in condition 1, Table 1. • Not more than 4,250,000 tonnes in aggregate of dewatered tailings to be deposited at the WRLs during time limited operations authorised under condition 21.	As shown in Figure 8 of Schedule 1
6.	Natural gas generators	• Use and maintenance of controls as detailed in condition 1, Table 1.	Within the power station, as shown in Figure 2, Figure 3, and Figure 12 of Schedule 1
7.	Wastewater treatment plant (WWTP)	• Use and maintenance of controls as detailed in condition 1, Table 1. • Daily visual inspections of alarm system and treatment and containment infrastructure/equipment.	As shown in Figure 2 of Schedule 1
8.	WWTP spray field	• Use and maintenance of controls as detailed in condition 1, Table 1. • Daily visual inspections of irrigation area to ensure there is no waterlogging of soil or ponding and to identify maintenance requirements.	At the coordinates specified in Table 17, as shown in Figure 2 of Schedule 1
9.	Reagent storage tanks	• Use and maintenances of controls as detailed in condition 1, Table 1.	Within the storage precinct, as shown in Figure 3 of Schedule 1

23. During time limited time operations, the works approval holder must ensure that the emission(s) specified in Table 9 are discharged only from the corresponding discharge point(s) and only at the corresponding discharge point location(s).

Table 9: Emission and discharge points during time limited operations

Item	Emission	Discharge point	Discharge point location
1.	Decant water	P2000 processing plant process water pond	As shown in Figure 2 in Schedule 1
		TSF3 decant water return pond	As shown in Figure 14 in Schedule 1
		5 ML dam via the TSF3 decant water return pond	As shown in Figure 14 and Figure 15 in Schedule 1
		For dust suppression activities	As shown in Figure 14 in Schedule 1
2.	Tailings	TSF3	As shown in Figure 14 in Schedule 1
		Tailings filtration plant	As shown in Figure 2 in Schedule 1
3.	P2000 processing plant sedimentation pond water	P2000 processing plant process water pond	As shown in Figure 2 in Schedule 1
4.	P2000 processing plant sedimentation pond overflow	Ephemeral creek via daylight drain	As shown in Figure 15 in Schedule 1
5.	Reclaimed water	5 ML dam via the TSF3 decant water return pond	As shown in Figure 14 and Figure 15 in Schedule 1
		For dust suppression activities	As shown in Figure 14 in Schedule 1
		P2000 processing plant process water pond	As shown in Figure 2 in Schedule 1
6.	Tailings filtration plant sediment pond water	Tailings filtration plant return water storage pond	As shown in Figure 2 in Schedule 1
7.	Dewatered tailings	South WRL1, Pilgangoora Creek WRL, and Western WRL	As shown in Figure 8 in Schedule 1
		TSF3	As shown in Figure 14 in Schedule 1
8.	HME area sedimentation pond 1 and pond 2 overflow	Pilgangoora Creek	As shown in Figure 14 in Schedule 1
9.	HME area sedimentation	HME area wash bays and existing	As shown in Figure 9 in

Item	Emission	Discharge point	Discharge point location
	pond 1 and pond 2 water	pond	Schedule 1
10.	Emissions to air: NOx, SOx, CO, VOC, and PM_{10}	Power station stacks	As shown in Figure 2 in Schedule 1
11.	Treated wastewater	WWTP spray field	As shown in Figure 2 in Schedule 1 and defined in Table 17 in Schedule 2

24. During time limited operations, the works approval holder must ensure that the emissions from the discharge points listed in Table 9 do not exceed the corresponding limit(s) when monitored in accordance with condition 25.

Table 10: Emission and discharge limits during time limited operations

Item	Discharge point	Emission/parameter	Limit
1.	TSF3 - spigots	Tailings discharged from P2000 processing plant	Combined limit of 6,000,000 tonnes per annum
2.	Tailings filtration plant		
3.	South WRL1, Pilgangoora Creek WRL, and Western WRL	Dewatered tailings	Combined limit of 8,500,000 tonnes per annum
4.	5 ML dam	Reclaimed water Decant water from TSF3 decant water return pond	Volume discharged must allow for 500 mm freeboard to be maintained at the 5 ML dam
5.	WWTP spray field	Parameters outlined in condition 2, Table 2	As per condition 2, Table 2
		Volume of treated effluent	50 m^3 per day

Emissions monitoring during time limited operations

25. The works approval holder must monitor the quality of decant and reclaimed water during time limited operations in accordance with Table 11.

Table 11: Decant and reclaimed water monitoring during time limited operations

Monitoring location	Parameter[2, 3]	Unit	Frequency	Method
P2000 processing plant tailings discharge point	Volume[1]	m^3	Continuous	Flow metering device
	pH[1]	pH units	A single sampling event	AS/NZS

Monitoring location	Parameter[2, 3]	Unit	Frequency	Method
5 ML dam	Electrical Conductivity[1]	µS/cm	undertaken between 30 and 60 calendar days following commencement of time limited operations (e.g. operation of P2000 processing plant and tailings filtration plant) AND A single sampling event undertaken between 120 and 180 calendar days following commencement of time limited operations (e.g. operation of P2000 processing plant and tailings filtration plant)	5667.1 AS/NZS 5667.11
	Ammonia, NH_3	mg/L		
	Bicarbonate Alkalinity as HCO_3			
	Calcium Carbonate $CaCO_3$			
	Carbonate Alkalinity as CO_3			
	Total Dissolved Solids, TDS			
	Total Alkalinity as $CaCO_3$			
	Total Hardness by Calculation			
	Sulfate, SO_4			
	Aluminium, Al			
	Antimony, Sb			
	Arsenic, As			
	Boron, B			
	Barium, Ba			
	Bismuth, Bi			
	Calcium, Ca			
	Cadmium, Cd			
	Chlorine, Cl			
	Cobalt, Co			
	Chromium, Cr			
	Caesium, Cs			
	Copper, Cu			
	Fluoride, F			
	Hexavalent Chromium, Cr^{6+}			
	Iron, Fe			
	Potassium, K			
	Lead, Pb			
	Lithium, Li			

Monitoring location	Parameter[2, 3]	Unit	Frequency	Method
	Magnesium, Mg			
	Mercury, Hg			
	Molybdenum, Mo			
	Manganese, Mn			
	Nickel, Ni			
	Niobium, Nb			
	Nitrite, NO_2 as NO_2			
	Nitrate, NO_3 as NO_3			
	Phosphorus, P			
	Rubidium, Rb			
	Selenium, Se			
	Silicon, Si			
	Silver, Ag			
	Sodium, Na			
	Strontium, Sr			
	Tantalum, Ta			
	Thallium, Tl			
	Thorium, Th			
	Tin, Sn			
	Uranium, U			
	Vanadium, V			
	Zinc, Zn			
	Gross Alpha	Bq/L		
	Gross Beta			
	Radium-226			
	Radium-228			

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

Note 2: Level of detection is required to be sufficient to enable a comparison with ANZECC/ARMCANZ Guidelines.

Note 3: Metals should be monitored as total metals.

26. The works approval holder must record the results of all monitoring activity required by condition 25.

27. All sample analysis undertaken in accordance with condition 25 must be undertaken by laboratories with current NATA accreditation for the relevant parameters, unless otherwise specified.

28. The works approval holder must monitor the discharge of treated wastewater during time limited operations in accordance with Table 12.

Table 12: Treated wastewater discharge monitoring during time limited operations

Monitoring location	Parameter	Unit	Frequency	Averaging period	Method
Effluent pipeline from final effluent tank	Volume[1]	m^3	Continuous	Per day	Flow metering device
	Total Suspended Solids (TSS)	mg/L	Monthly	Spot sample	AS/NZS 5667.1 AS/NZS 5667.10
	Biochemical Oxygen Demand (BOD)				
	Total Nitrogen (TN)				
	Total Phosphorous (TP)				
	Residual free chlorine				
	pH[1]	pH units			
	E.coli	cfu/100 ml			

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

29. The works approval holder must record the results of all monitoring activity required by condition 28.

30. All sample analysis undertaken in accordance with condition 28 must be undertaken by laboratories with current NATA accreditation for the relevant parameters, unless otherwise specified.

31. The works approval holder must monitor the discharge of stormwater during time limited operations in accordance with Table 13.

Table 13: Stormwater discharge monitoring during time limited operations

Monitoring location	Parameter	Unit	Frequency	Method
P2000 processing plant sedimentation pond HME area sedimentation pond 1 HME area sedimentation	Volume[1]	m^3	Prior to and following significant rainfall events	Flow metering device
	pH[1]	pH units		AS/NZS 5667.1 AS/NZS
	Electrical Conductivity[1]	µS/cm		

Monitoring location	Parameter	Unit	Frequency	Method
pond 2	Bicarbonate Alkalinity as HCO_3	mg/L		5667.10
	Total Alkalinity as $CaCO_3$			
	Total Dissolved Solids (TDS)			
	Total Suspended Solids (TSS)			
	Chloride, Cl			
	Lithium, Li			
	Magnesium, Mg			
	Potassium, K			
	Sodium, Na			
	Sulfate, SO_4			

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

32. The works approval holder must record the results of all monitoring activity required by condition 31.

33. All sample analysis undertaken in accordance with condition 31 must be undertaken by laboratories with current NATA accreditation for the relevant parameters, unless otherwise specified.

34. The works approval holder must monitor the emissions to air from the power station during time limited operations in accordance with Table 14.

Table 14: Power station emission monitoring during time limited operations

Monitoring location	Parameter	Unit	Frequency	Averaging period	Method
Power station stacks	NOx	mg/m^3 m^3/s	Two separate sample events separated by at least one week within the first three months of emissions through the discharge point	60 minutes	USEPA Method 7E
	SOx				USEPA Method 8
	CO				USEPA Method 10B
	VOC				USEPA Method 18
	PM_{10}				USEPA Method 210A

35. The works approval holder must record the results of all monitoring activity required by condition 34.

Groundwater monitoring during time limited operations

36. The works approval holder must monitor emissions during time limited operations in accordance with Table 15.

Table 15: Groundwater monitoring of ambient concentrations

Monitoring location	Parameter	Unit	Frequency	Method
New groundwater monitoring wells: WRLMB01 WRLMB02 WRLMB03 WRLMB04 as depicted in Figure 16 of Schedule 1 Existing groundwater monitoring wells (South WRL1): MB01-1 MB01-2 MB02-1 MB02-2 MB03-1 MB03-2 MB04-1 MB04-2 As depicted in Figure 17 of Schedule 1 Existing groundwater monitoring wells (5 ML dam): PMB001 PMB003 TMFMB003 As depicted in Figure 18 of Schedule 1	Standing water level[1]	mbgl	Monthly during time limited operations for the tailings filtration plant	AS/NZS 5667.1 AS/NZS 5667.11
	Total Dissolved Solids, TDS	mg/L		
	Sulfate, SO_4			
	Boron, B			
	Fluoride, F			
	Vanadium, V			
	pH[1]	pH units	A single sampling event undertaken between 30 and 60 calendar days following commencement of time limited operations for the tailings filtration plant AND A single sampling event undertaken between 120 and 180 calendar days following commencement of time limited operations for the tailings filtration plant	
	Electrical Conductivity[1]	µS/cm		
	Ammonia, NH_3	mg/L		
	Bicarbonate Alkalinity as HCO_3			
	Calcium Carbonate $CaCO_3$			
	Carbonate Alkalinity as CO_3			
	Nitrate, NO_3 as NO_3			
	Nitrite, NO_2 as NO_2			
	Total Alkalinity as $CaCO_3$			
	Total Hardness by Calculation			
	Calcium, Ca			
	Chloride, Cl			
	Lithium, Li			
	Magnesium, Mg			
	Potassium, K			
	Silica, Soluble			
	Sodium, Na			
	Total nitrogen, TN			

Monitoring location	Parameter	Unit	Frequency	Method
	Total phosphorus, TP			
	Aluminum, Al			
	Antimony, Sb			
	Arsenic, As			
	Barium, Ba			
	Bismuth, Bi			
	Bromide, Br			
	Cadmium, Cd			
	Caesium, Cs			
	Chromium, Cr			
	Cobalt, Co			
	Copper, Cu			
	Hexavalent Chromium, Cr^{6+}			
	Iron, Fe			
	Lead, Pb			
	Manganese, Mn			
	Mercury, Hg			
	Molybdenum, Mo			
	Nickel, Ni			
	Niobium, Nb			
	Rubidium, Rb			
	Selenium, Se			
	Silicon, Si			
	Tantalum, Ta			
	Thallium, Tl			
	Thorium, Th			
	Tin, Sn			

Monitoring location	Parameter	Unit	Frequency	Method
	Uranium, U			
	Zinc, Zn			
	Gross Alpha	Bq/L		
	Gross Beta			
	Radium 226			
	Radium 228			

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

37. The works approval holder must record the results of all monitoring activity required by condition 36.

38. The works approval holder must adhere to the field quality assurance and quality control procedures specified in Schedule 3 for the monitoring required by condition 36.

39. All sample analysis undertaken in accordance with condition 36 must be undertaken by laboratories with current NATA accreditation for the relevant parameters, unless otherwise specified.

Compliance reporting

40. The works approval holder must submit to the CEO a report on the time limited operations within 60 calendar days of the completion date of time limited operations or 30 calendar days before the expiration date of the works approval, whichever is the sooner.

41. The works approval holder must ensure that the report required by condition 40 includes the following:

(a) a summary of the time limited operations, including timeframes and the amount of material processed;

(b) a summary of the monitoring results obtained during time limited operations under conditions 25, 28, 31, 34, and 36;

(c) a summary of the environmental performance of all infrastructure as constructed or installed (as applicable), which includes records detailing the:

(i) amount of spodumene processed;

(ii) tailings density (solid vs water content);

(iii) dewatered tailings density (solid vs water content);

(iv) amount of tailings deposited into TSF3;

(v) amount of tailings processed at the tailings filtration plant;

(vi) amount of dewatered tailings produced;

(vii) amount of dewatered tailings disposed at each WRL and at TSF3;

(viii) volume of runoff from WRLs captured in sumps;

(ix) volume of captured stormwater directed to the P2000 processing plant process water pond;

(x) volume of raw water directed to the P2000 processing plant process

water pond;

(xi) volume of reclaimed water directed to the P2000 processing plant process water pond;

(xii) volume of decant water directed to the P2000 processing plant process water pond;

(xiii) volume of decant water discharged for dust suppression;

(xiv) volume of reclaimed water discharged to the TSF3 decant water return pond;

(xv) volume of reclaimed water and decant water discharged to the 5 ML dam; and

(xvi) volume of reclaimed water discharged for dust suppression;

(d) a review of operational performance and compliance against the conditions of the works approval and the Environmental Commissioning Report; and

(e) where the manufacture's design specifications and the conditions of this works approval have not been met, what measures will the works approval holder take to meet them, and what timeframes will be required to implement those measures.

Records and reporting (general)

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

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

(b) the time and date of the complaint;

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

(d) the complete details and dates of any action taken by the works approval holder to investigate or respond to any complaint.

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

(a) the works conducted in accordance with condition 1;

(b) any maintenance of infrastructure that is performed in the course of complying with conditions 1, 12, and 22;

(c) monitoring programmes undertaken in accordance with conditions 5, 15, 25, 28, 31, 34, and 36; and

(d) complaints received under condition 42.

44. The books specified under condition 43 must:

(a) be legible;

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

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

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

Definitions

In this works approval, the terms in Table 16 have the meanings defined.

Table 16: Definitions

Term	Definition
ANZECC/ARMCANZ Guidelines	means the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australia and New Zealand Environment and Conservation Council and the Agriculture and Resource Management Council of Australia and New Zealand*. Paper No. 4. Canberra. (ANZECC/ARMCANZ).
Assessment of Site Contamination NEPM	means the *National Environment Protection (Assessment of Site Contamination) Measure 1999*, as amended from time to time.
AS1726	means the Australian Standard AS1726 *Geotechnical site investigations*, as amended from time to time.
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 *Water quality - Sampling Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples*.
AS/NZS 5667.10	means the most recent version and relevant parts of the Australian Standard AS/NZS 5667.10 *Water Quality – Sampling – Guidance on sampling of waste waters*.
AS/NZS 5667.11	means the Australian Standard AS/NZS 5667.11 *Water quality - Sampling Guidance on sampling of groundwaters*.
ASTM D5092/D5092M-16	means the ASTM internation standard for *Standard practice for design and installation of groundwater monitoring bores (Designation: ASTM D5092/D5092M-16)*, as amended from time to time.
books	has the same meaning given to that term under the EP Act.
Bq/L	becquerels per litre
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department administering the *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 info@dwer.wa.gov.au
Department	means the department established under section 35 of the *Public Sector Management Act 1994* and designated as

Term	Definition
	responsible for the administration of Part V Division 3 of the EP Act.
discharge	has the same meaning given to that term under the EP Act.
emission	has the same meaning given to that term under the EP Act.
environmental commissioning	means the sequence of activities to be undertaken to test equipment integrity and operation, or to determine the environmental performance, of equipment and infrastructure to establish or test a steady state operation and confirm design specifications.
Environmental Commissioning Report	means a report on any commissioning activities that have taken place and a demonstration that they have concluded, with focus on emissions and discharges, waste containment, and other environmental factors.
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure and/or equipment has been constructed and/or installed in accordance with the works approval.
EP Act	*Environmental Protection Act 1986* (WA).
EP Regulations	*Environmental Protection Regulations 1987* (WA).
Guideline: Assessment and management of contaminated sites	means the document titled *Assessment and management of contaminated sites, Contaminated sites guidelines* (Department of Environment Regulation, December 2014), as amended from time to time.
ha	hectares
HME	heavy mining equipment
IBC	Intermediate Bulk Container
m^3	cubic metres
m^3/s	cubic metre per second
mbgl	metres below ground level
mg/L	milligrams per litre
mg/m^3	milligrams per cubic metre
ml	millilitres
mm	millimetres
Monster	As shown in Figure 4.

Term	Definition
bioremediation pad	
MW	megawatt
µS/cm	microsiemens per centimetre
NATA	National Association of Testing Authorities, Australia
premises	the premises to which this works approval applies, as specified at the front of this licence and as shown on the premises map (Figure 1) in Schedule 1 to this works approval.
prescribed premises	has the same meaning given to that term under the EP Act.
time limited operations	refers to the operation of the infrastructure and equipment identified under this works approval that is authorised for that purpose, subject to the relevant conditions.
TSF	tailings storage facility
USEPA Method 7E	means the US EPA *Method 7E – Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrumental Analyzer Procedure)*.
USEPA Method 8	means the US EPA *Method 8 – Determination of Sulfuric Acid and Sulfur Dioxide Emissions from Stationary Sources*.
USEPA Method 10B	means the US EPA *Method 10B – Determination of Carbon Monoxide Emissions from Stationary Sources*.
USEPA Method 18	means the US EPA *Method 18 – Measurement of Gaseous Organic Compound Emissions by Gas Chromatography*.
USEPA Method 210A	means the US EPA *Method 201A – Determination of PM_{10} and $PM_{2.5}$ Emissions from Stationary Sources (Constant Sampling Rate Procedure)*.
works approval	refers to this document, which evidences the grant of the works approval by the CEO under section 54 of the EP Act, subject to the conditions.
works approval holder	refers to the occupier of the premises being the person to whom this works approval has been granted, as specified at the front of this works approval.
WRL	waste rock landform
WWTP	wastewater treatment plant

END OF CONDITIONS

Schedule 1: Maps

Premises map

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

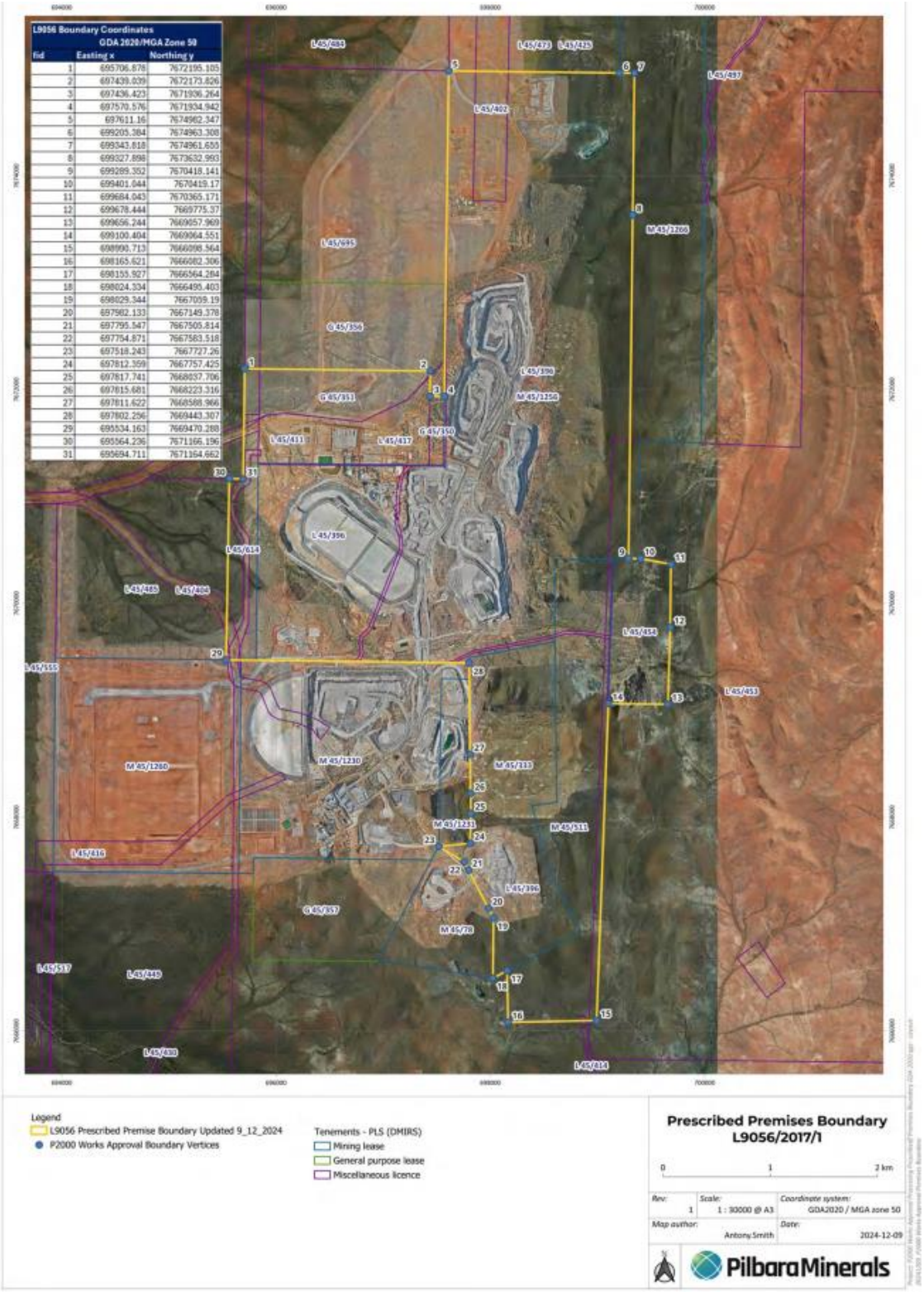

Figure 1: Map of the boundary of the prescribed premises

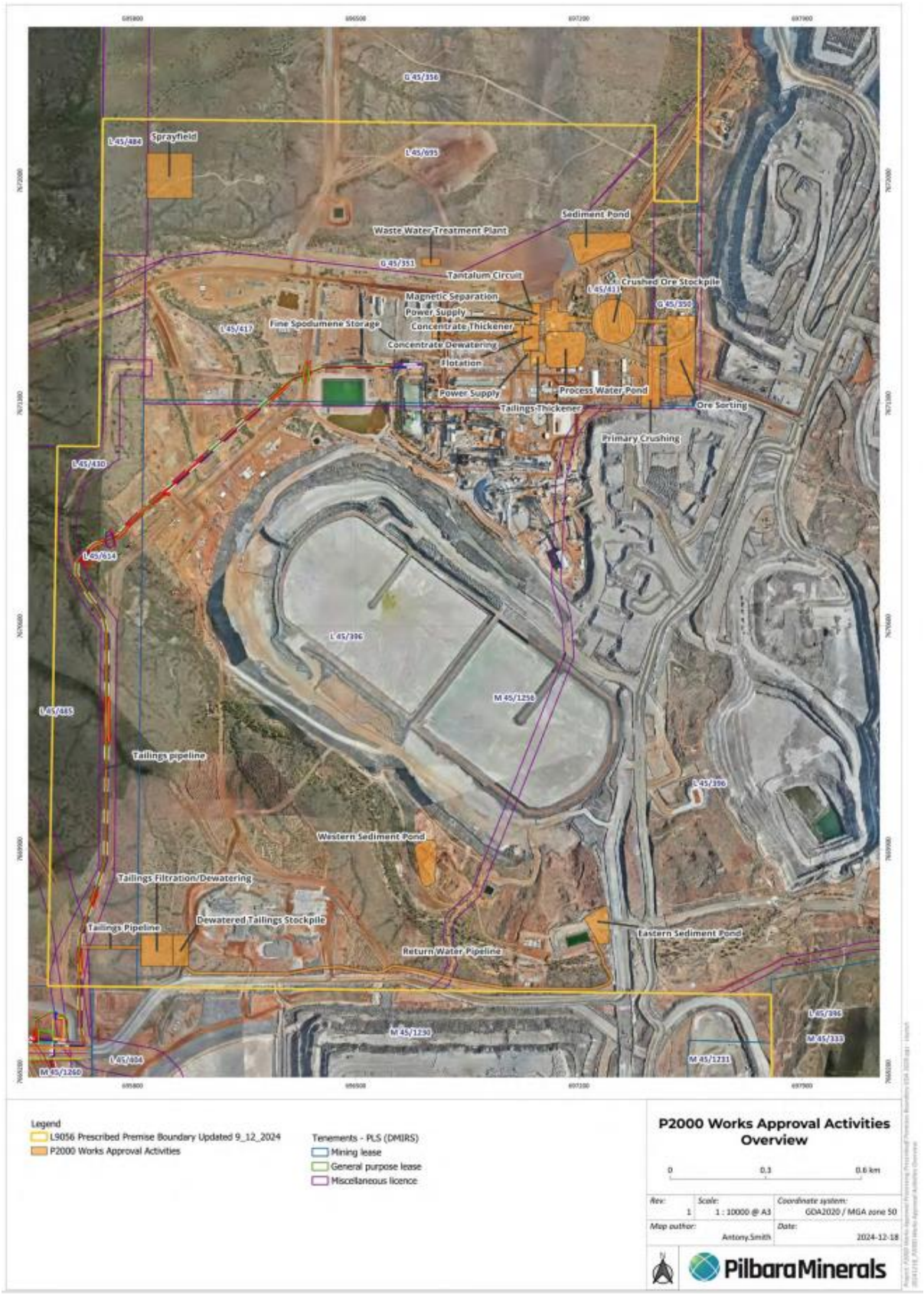

Figure 2: Key infrastructure layout

Figure 3: HME area, reagent storage precinct, and power station layout

Figure 4: Monster bioremediation pad location

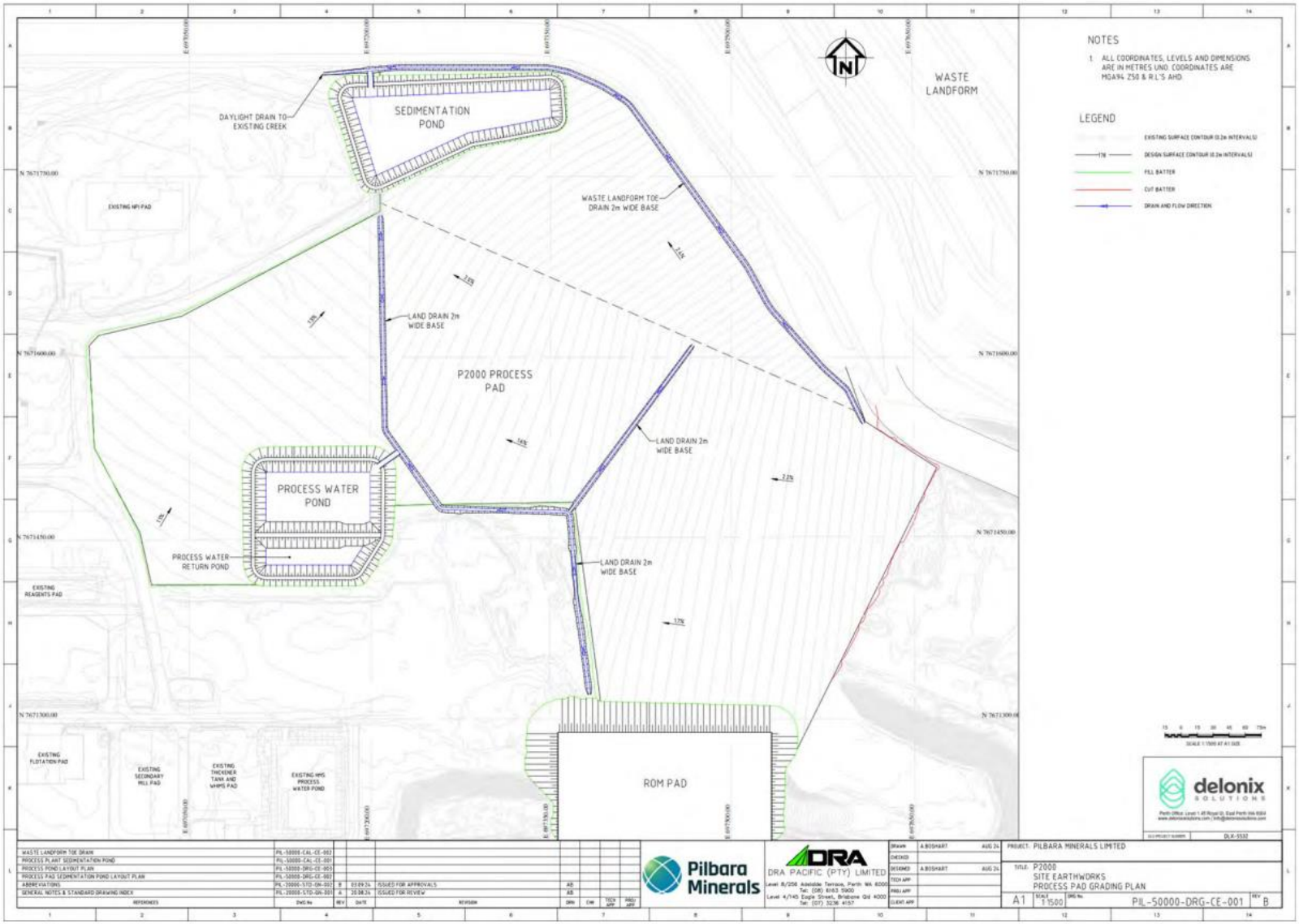

Figure 5: P2000 processing plant pad drainage layout

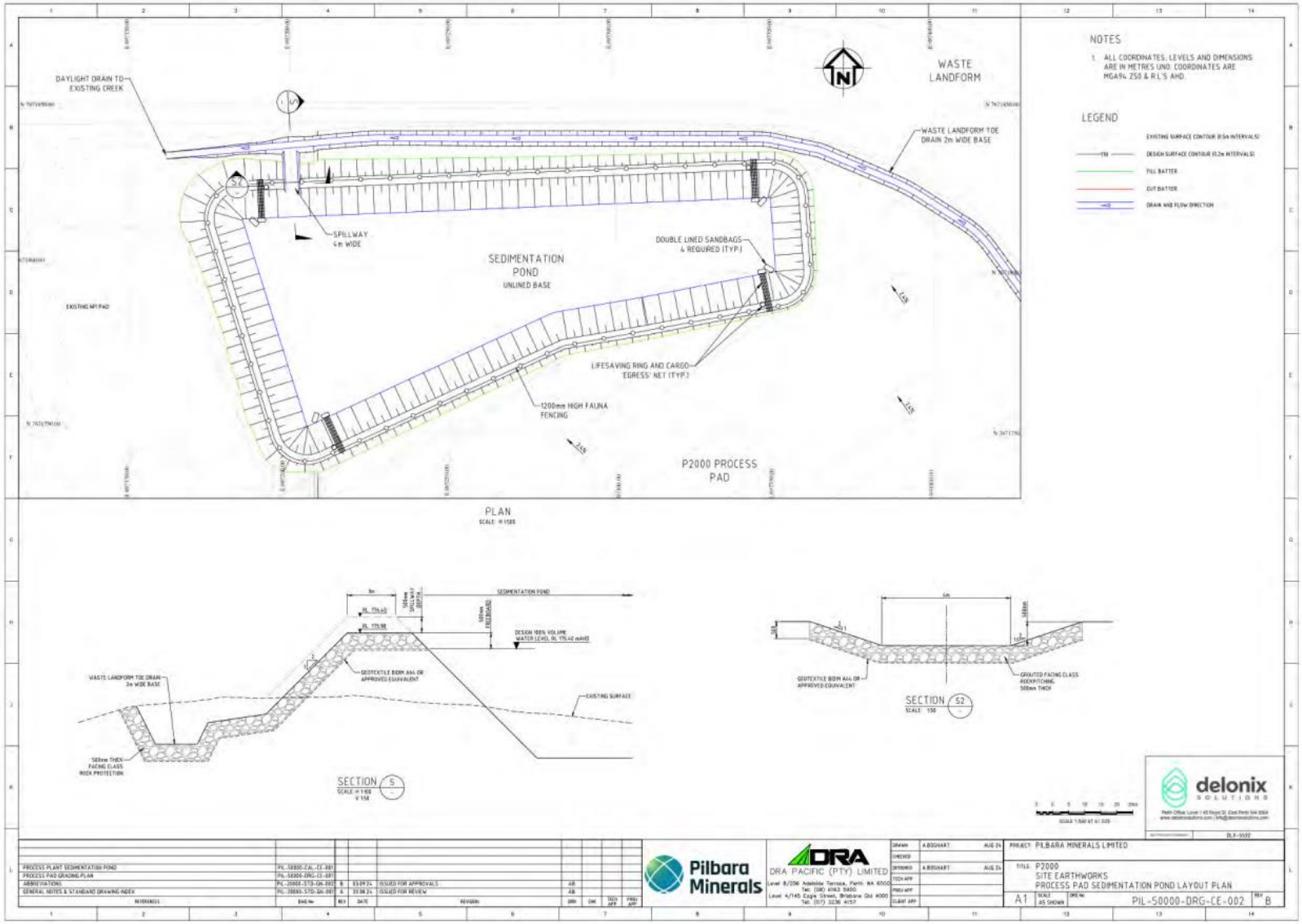

Figure 6: P2000 processing plant pad sedimentation pond

Figure 7: Tailings and decant water pipelines location

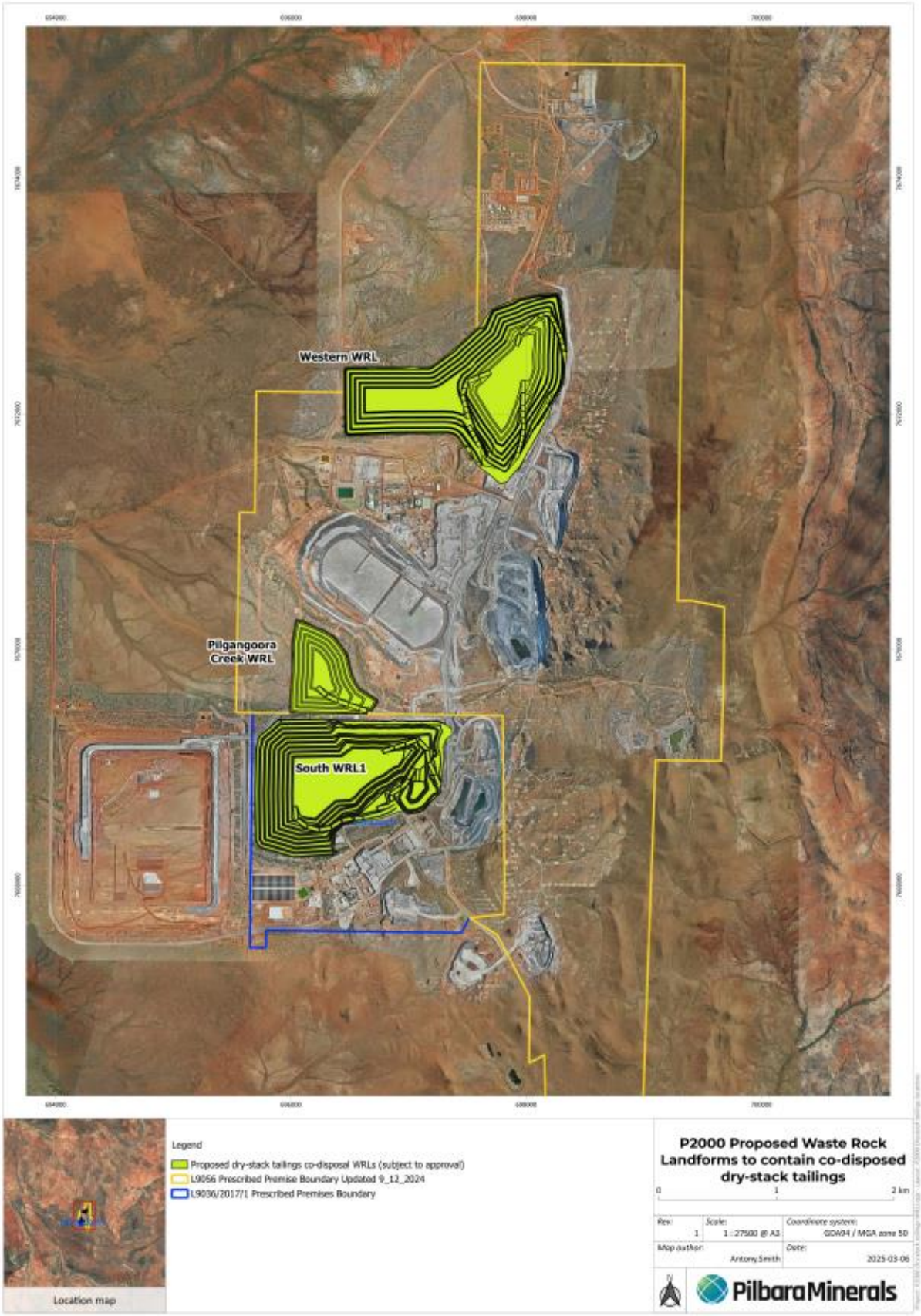

Figure 8: Waste rock landforms (WRLs) locations

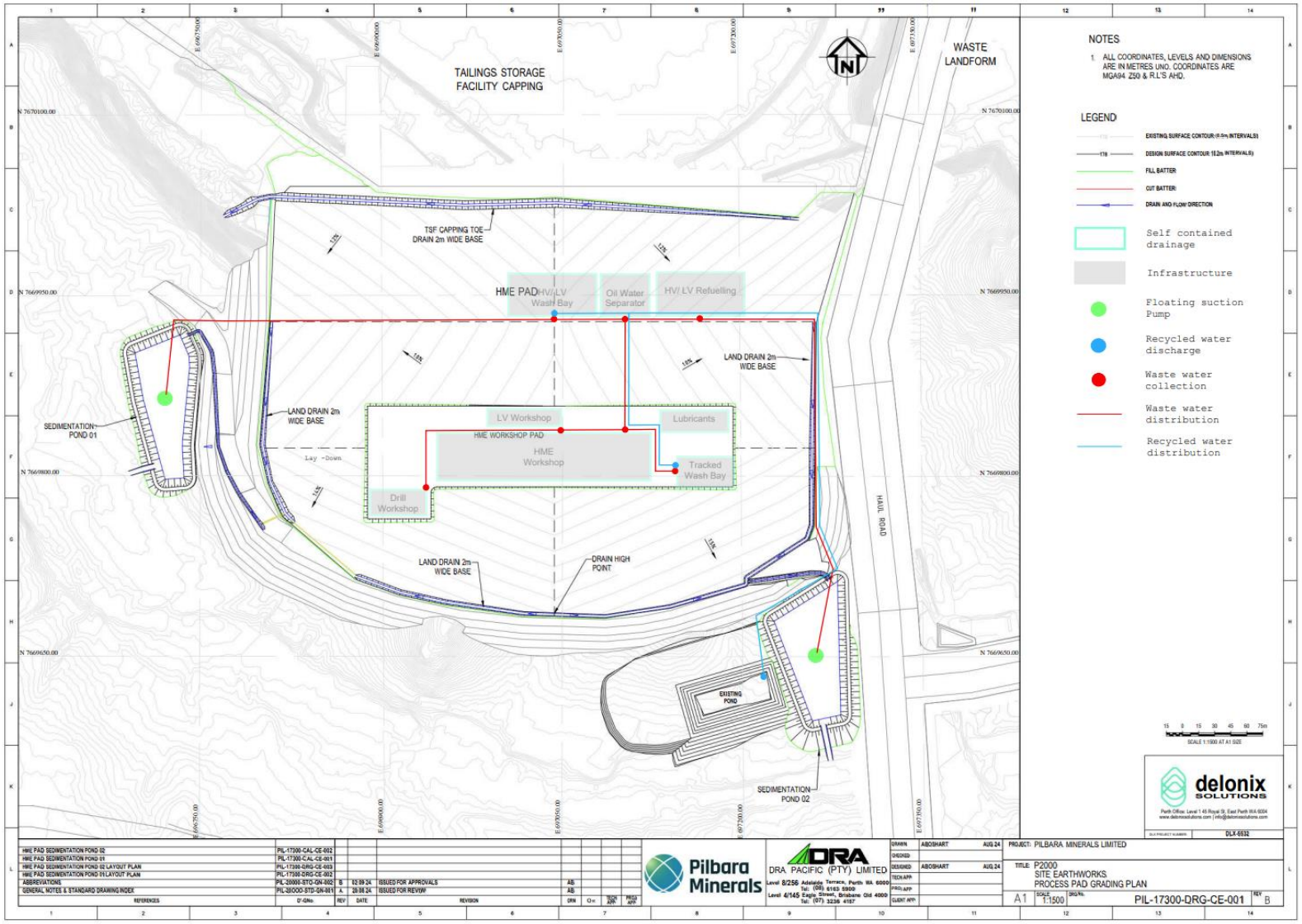

Figure 9: HME area layout

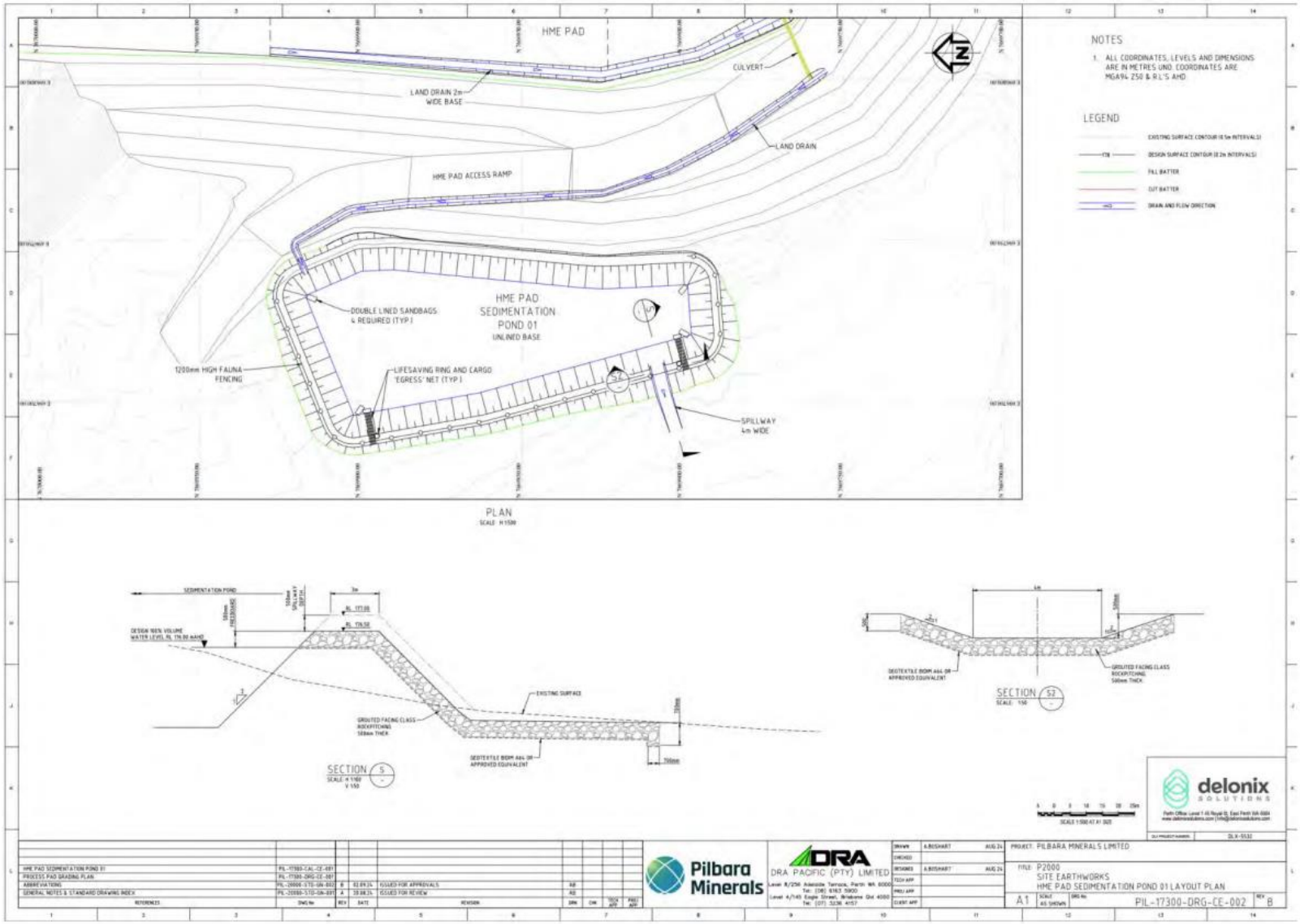

Figure 10: HME area sedimentation pond 1

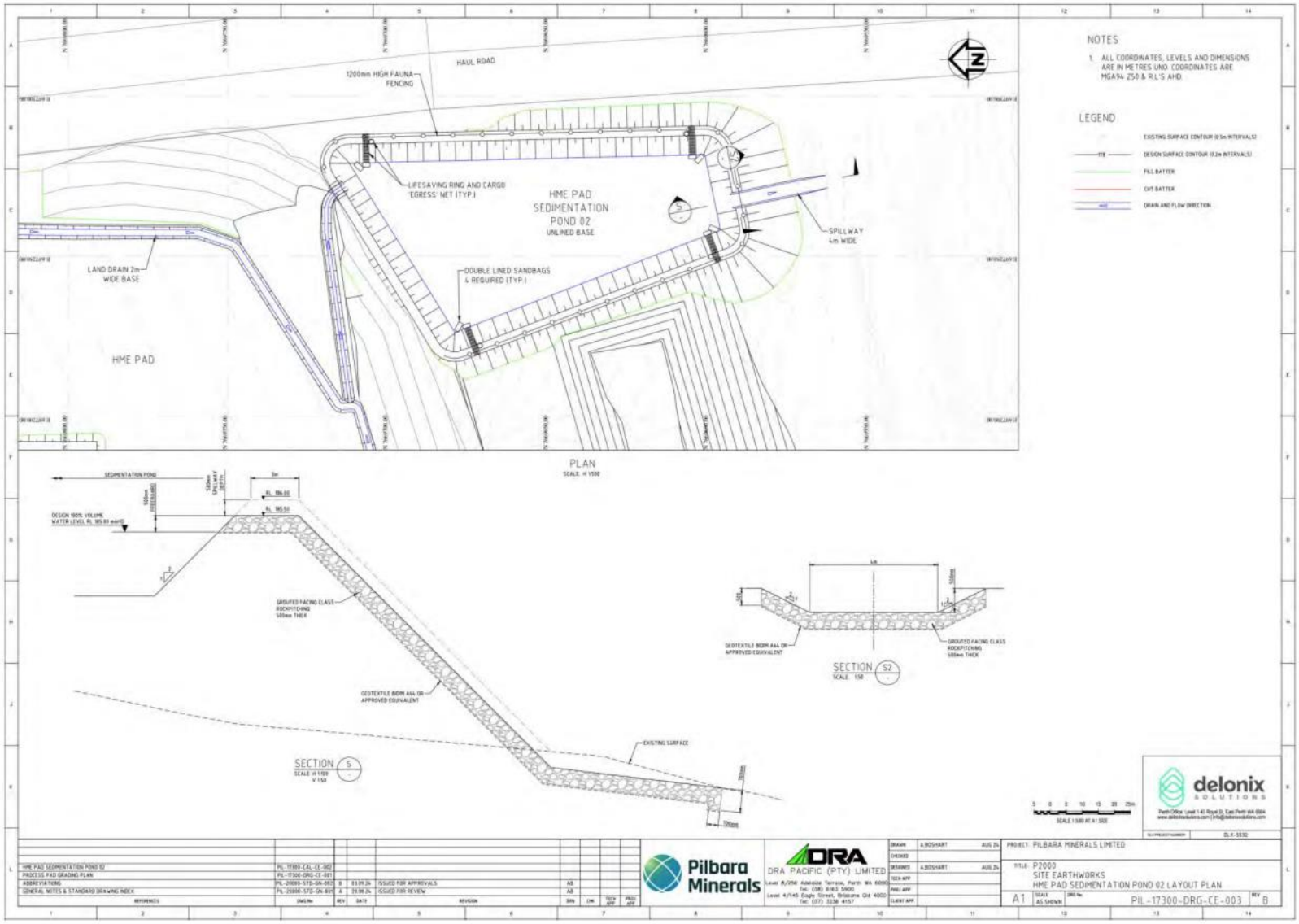

Figure 11: HME area sedimentation pond 2

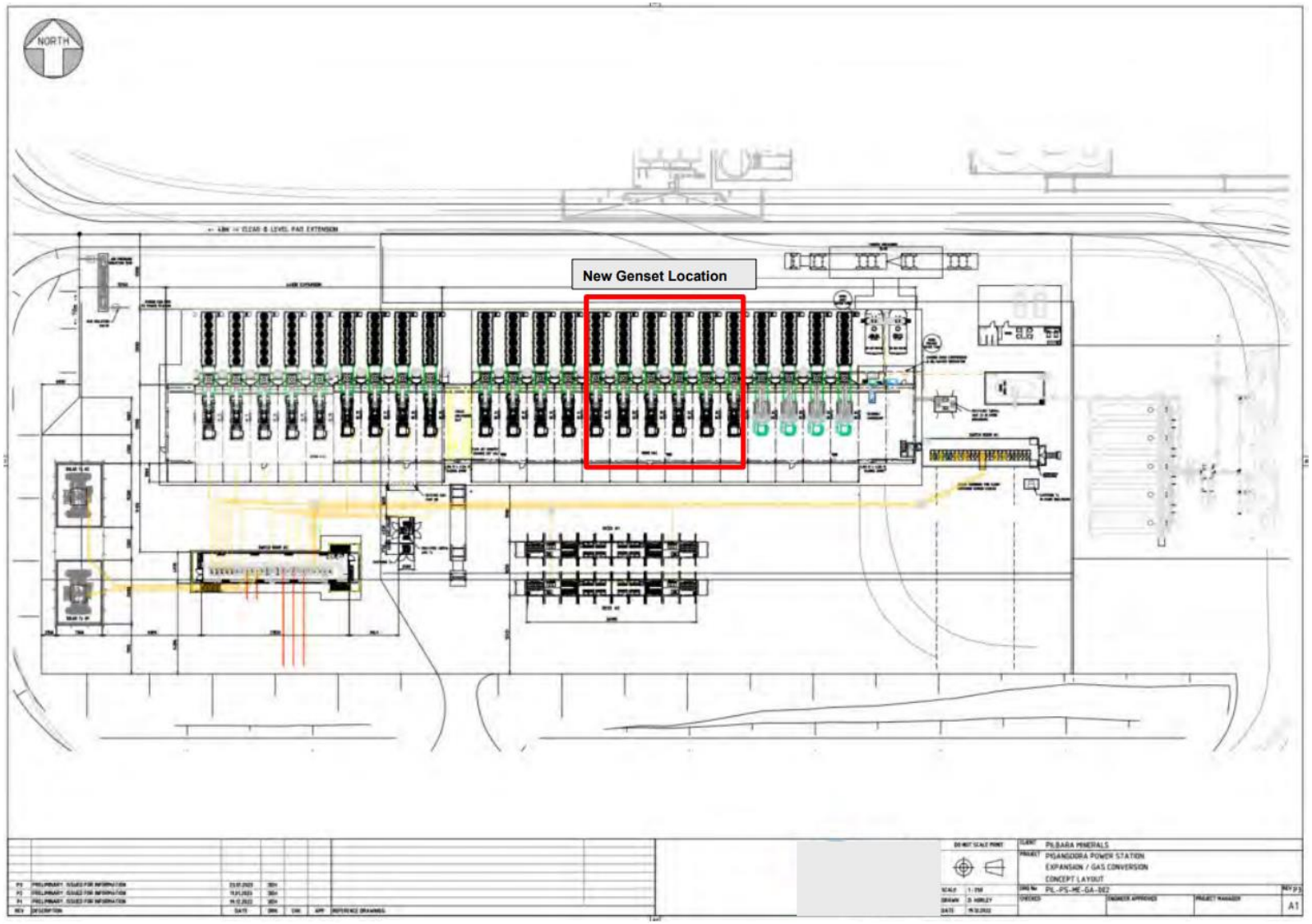

Figure 12: Power station layout

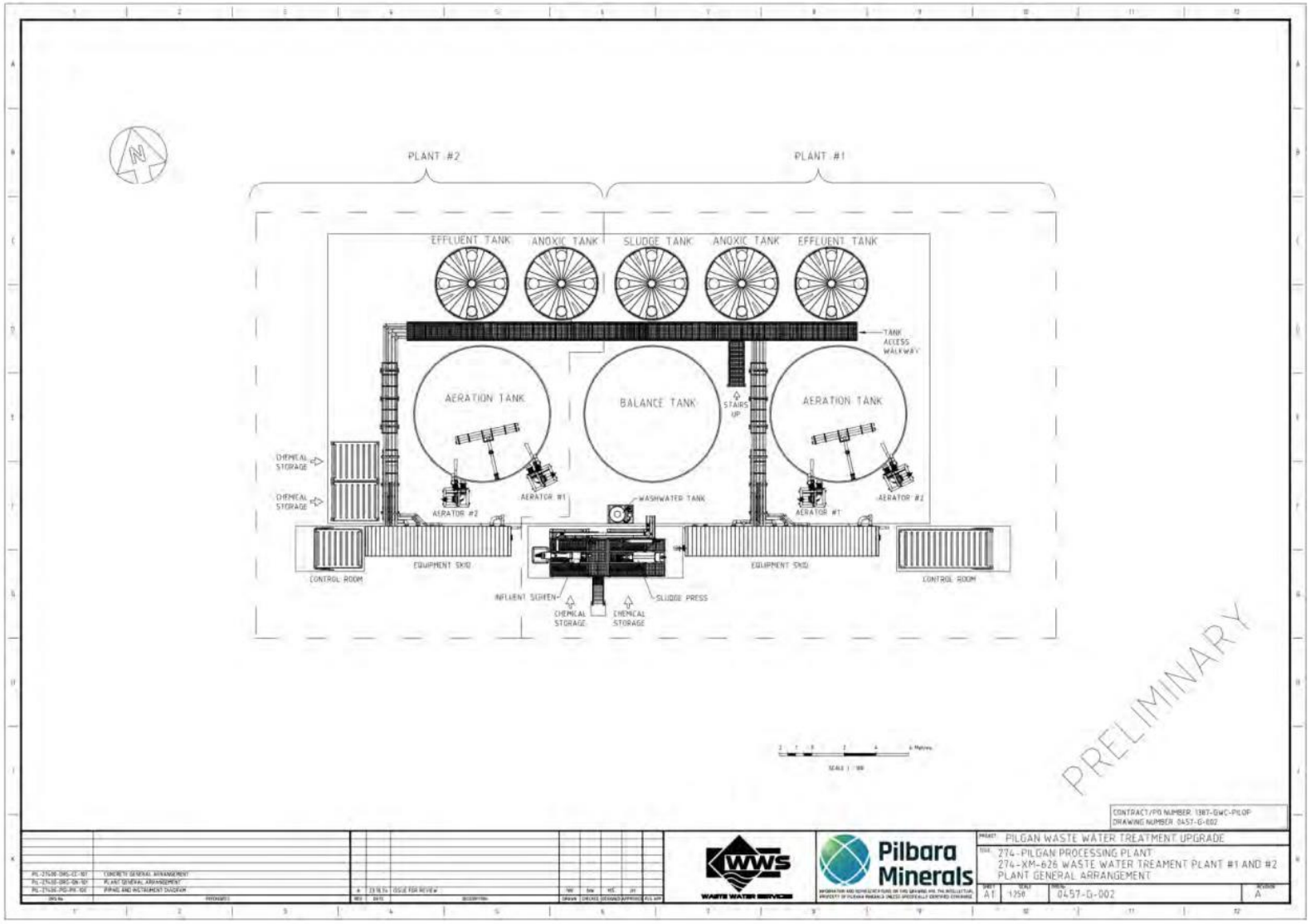

Figure 13: WWTP (‘plant #2’) general arrangement

Emissions and discharge locations

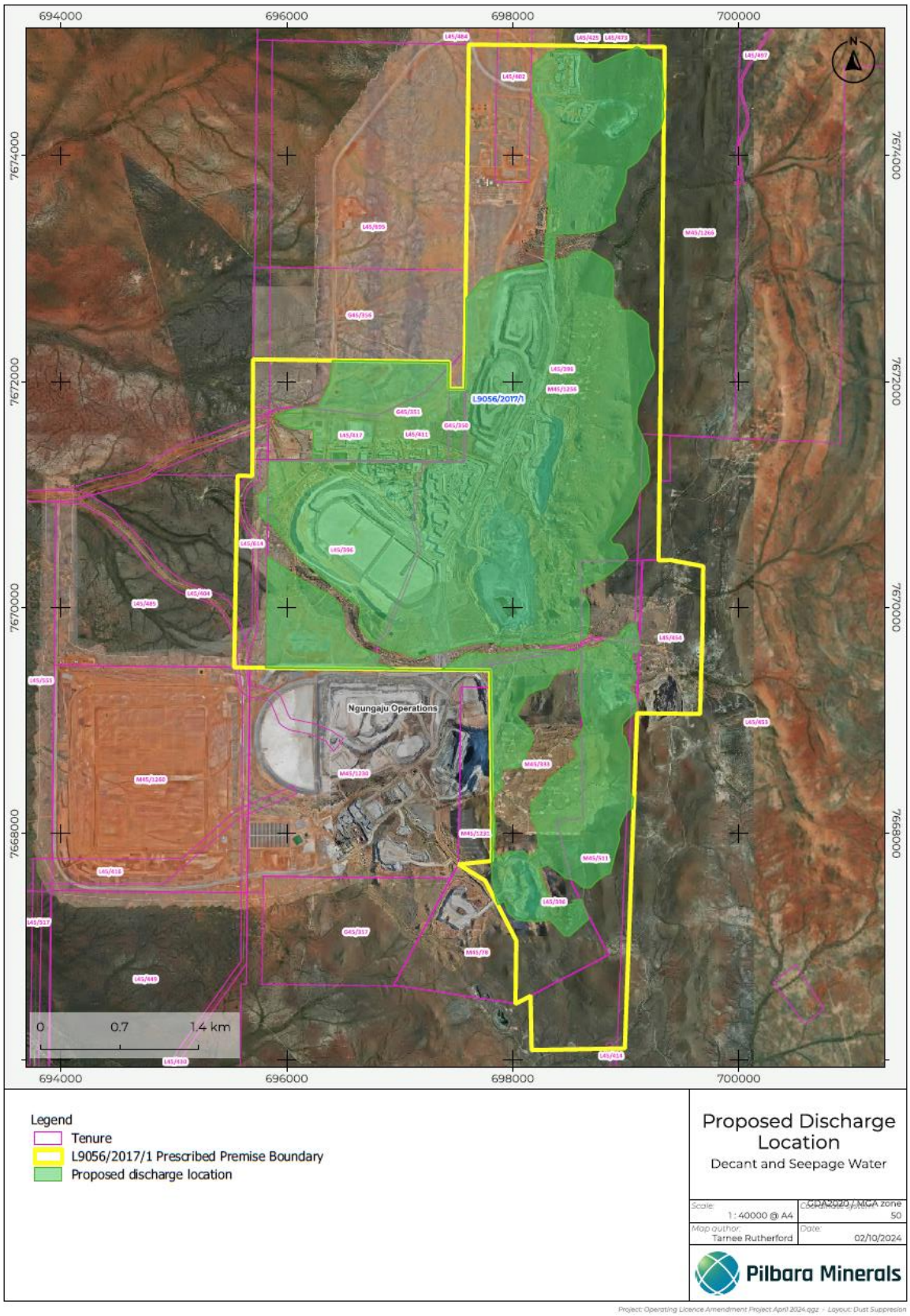

Figure 14: Authorised locations for use of decant and reclaimed water for dust suppression activities – authorised discharge area is shown in green

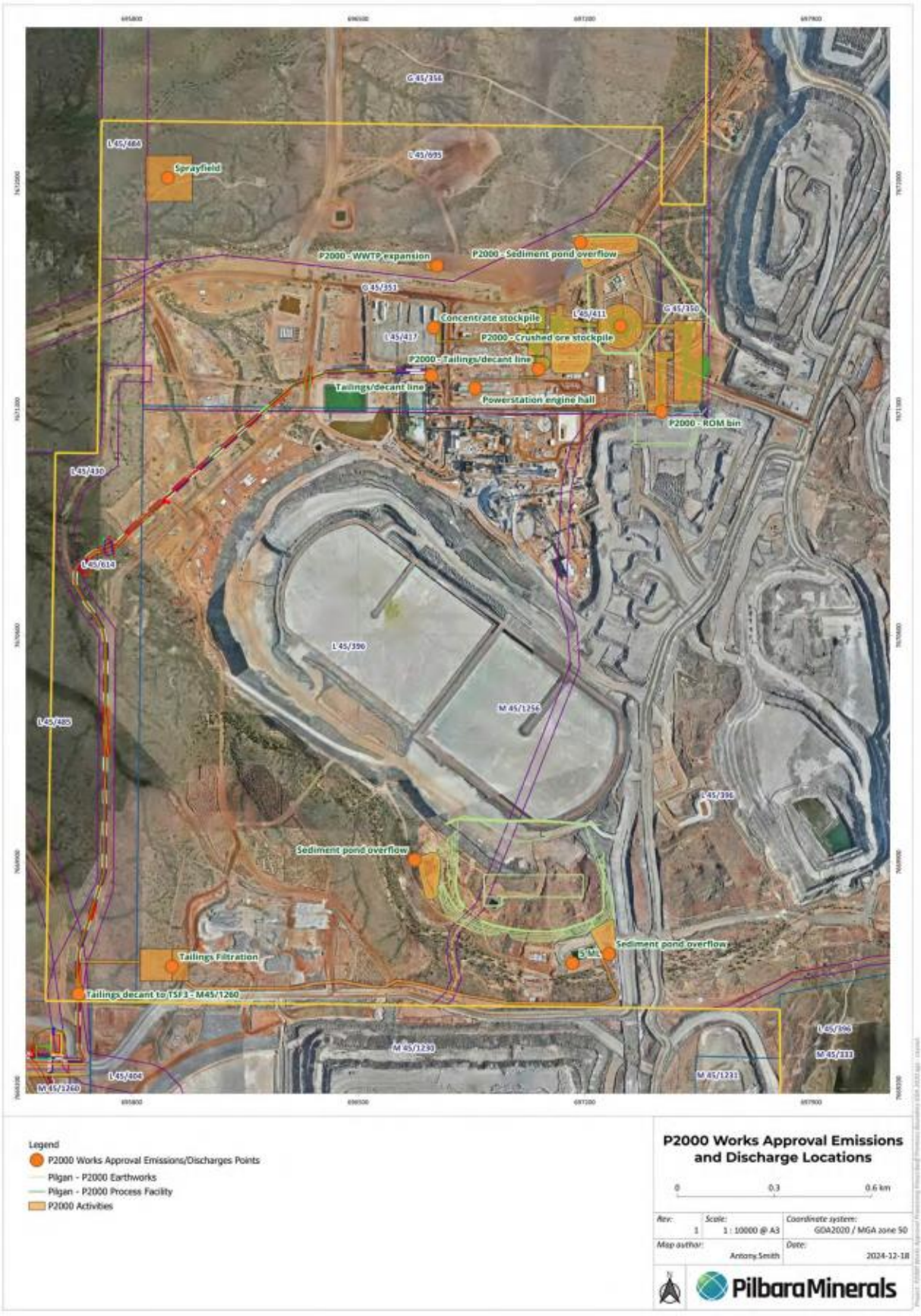

Figure 15: Authorised emissions and discharge points

Groundwater monitoring well locations

Figure 16: New groundwater monitoring well locations

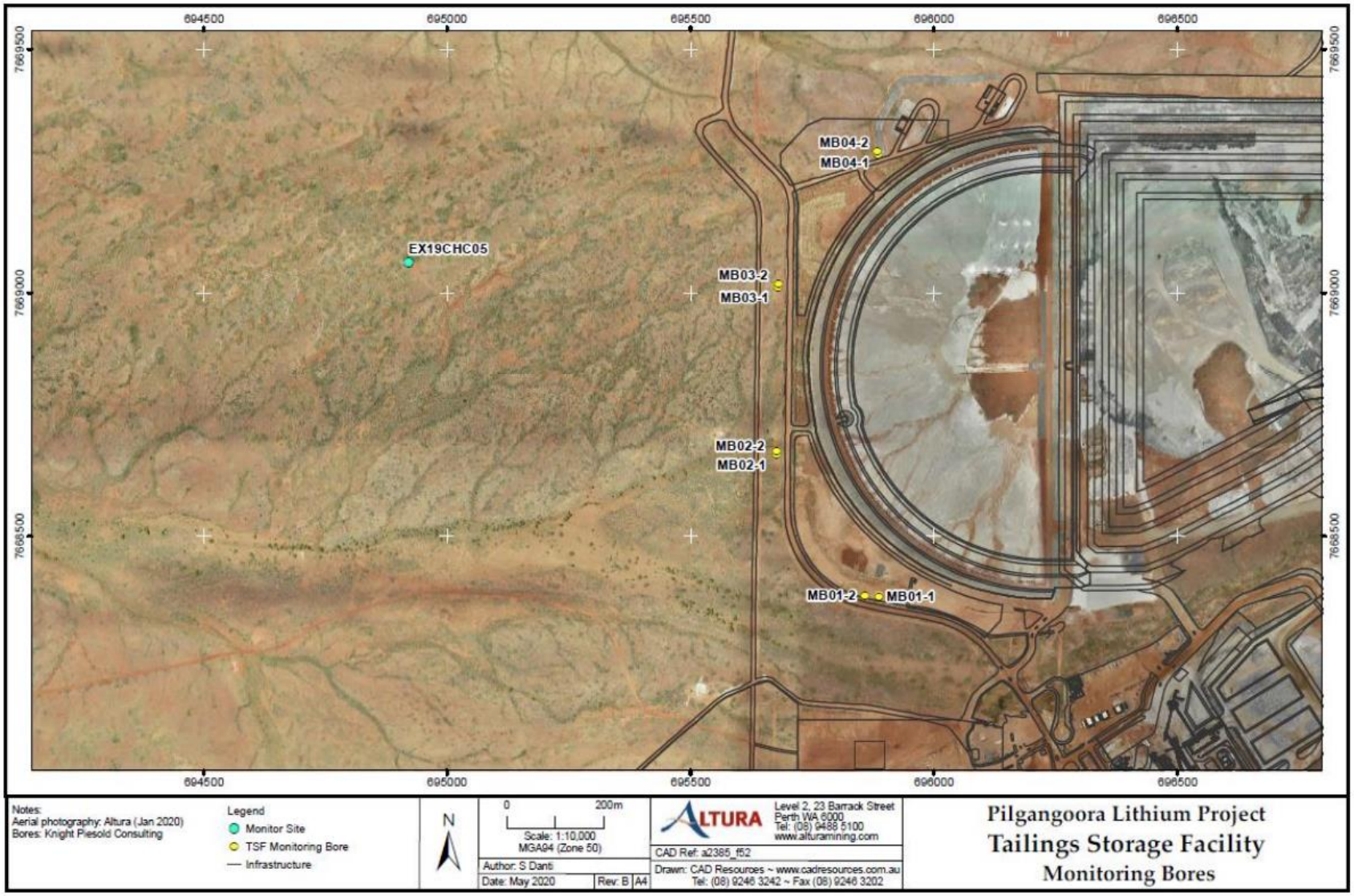

Figure 17: Existing groundwater monitoring well locations (South WRL1)

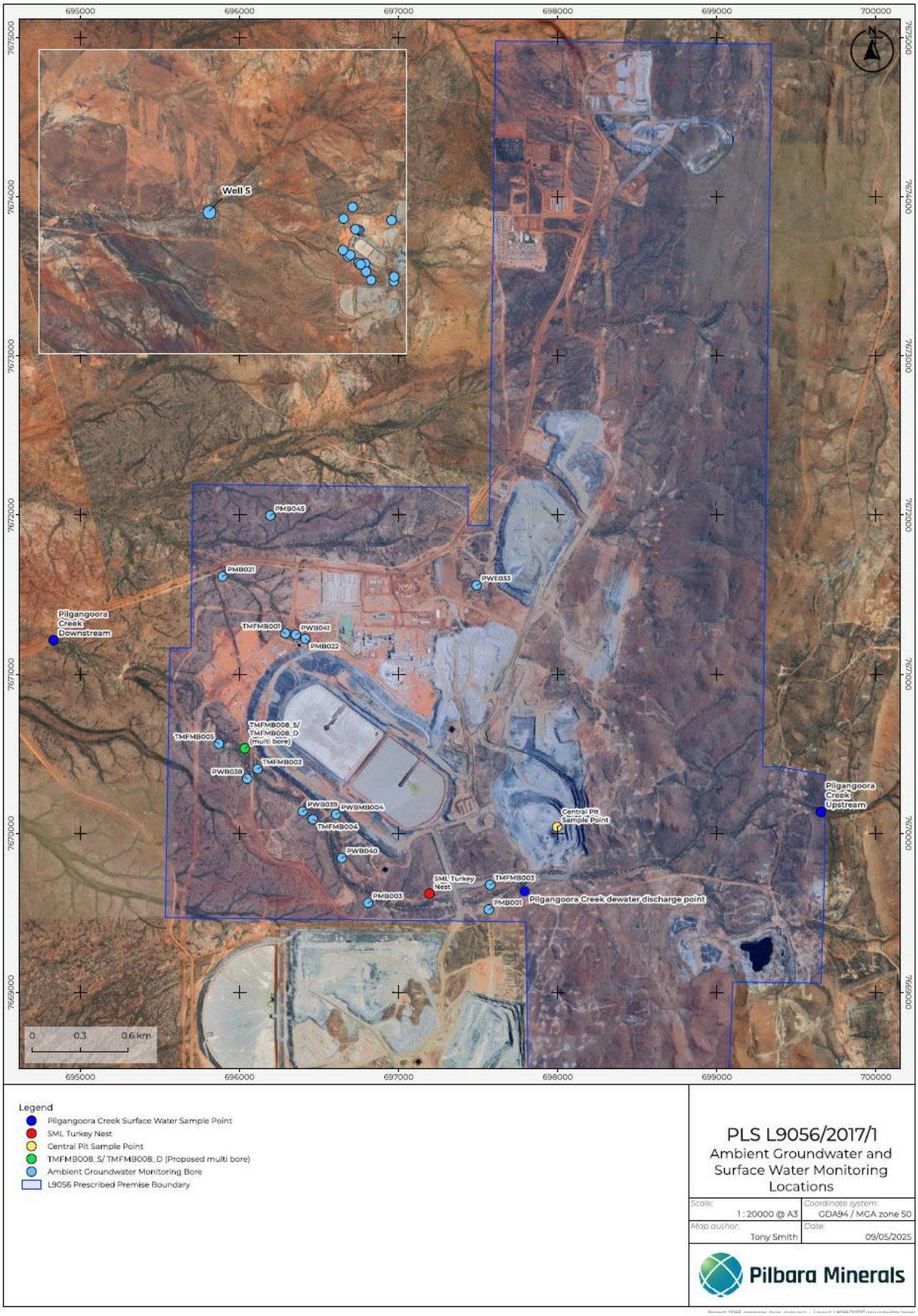

Figure 18: Existing groundwater monitoring well locations (L9056/2017/1)

Schedule 2: Spray field location

The corners of the spray field are the coordinates listed in Table 17.

Table 17: Spray field coordinates (GDA2020, MGA Zone 50)

Spray field point	Easting	Northing
Northwest	695848.084	7672080.567
Northeast	695981.239	7672080.62
Southeast	695981.239	7671947.639
Southwest	695847.8	7671947.529

Schedule 3: Groundwater monitoring quality assurance and quality control

The works approval 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;

  (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.