Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence number	L8454/2010/2
Licence holder	Chichester Metals Pty Ltd
ACN	109 264 262
Registered business address	256 St Georges Terrace PERTH WA 6000
DWER file number	DWERVT16939 / INS-0001680
Duration	24/08/2015 to 23/08/2036
Date of issue	20/08/2015
Date of amendment	22/01/2026
Premises details	Christmas Creek Mine Site Tenements E46/610, E46/612, M46/320, M46/321, M46/322, M46/323, M46/324, M46/325, M46/326, M46/327, M46/328, M46/329, M46/330, M46/331, M46/332, M46/333, M46/334, M46/335, M46/336, M46/337, M46/338, M46/339, M46/340, M46/341, M46/342, M46/343, M46/344, M46/345, M46/346, M46/347, M46/348, M46/349, M46/350, M46/351, M46/352, M46/353, M46/354, M46/355, M46/403, M46/406, M46/412, M46/413, M46/414, M46/415, M46/416, M46/417, M46/418, M46/419, M46/420, M46/421, M46/422, M46/423, M46/424, G46/7, L46/49, L46/56, L46/58, L46/86, L46/87, L46/106, L46/111, E46/566 and L46/66 MULGA DOWNS WA 6751 As depicted by the Premises map in Schedule 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	77,000,000 tonnes per annual period
Category 6: Mine dewatering	110,000,000 tonnes per annual period (reinjected)
Category 31: Chemical manufacturing	195 tonnes per annual period
Category 44: Metal melting or refining	5,000 tonnes per annual period (output of

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	Assessed production / design capacity
	2,500 tonnes of green iron per annual period)
Category 52: Electric power generation	63.6 MWe per annual period
Category 54: Sewage facility	1,040 cubic metres per day
Category 57: Used tyre storage	2,000 tyres
Category 64: Class II putrescible landfill	10,000 tonnes per annual period
Category 73: Bulk storage of chemicals	15,183.10 cubic metres in aggregate
Category 77: Concrete batching or cement products manufacturing	100,000 tonnes per annual period

This licence is granted to the licence holder, subject to the attached conditions, on 22 January 2026, by:

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

Licence history

Date	Reference number	Summary of changes
23/08/2010	L8454/2010/1	Licence issued for Christmas Creek Camp Wastewater Treatment Facility operation, category 54
09/12/2010	L8454/2010/1	Licence amendment to include putrescible landfill, category 89
10/11/2011	L8454/2010/1	Licence amendment to authorise power station operation category 52, ore processing facility category 5, additional WWTP, Tailings Storage Facility (TSF) and supporting infrastructure
12/03/2012	L8454/2010/1	Licence amendment to include category 6 (dewatering) and category 73 (bulk storage of chemicals)
13/06/2013	L8454/2010/1	Amendment initiated by Licence Holder to increase the capacities authorised in categories 5, 6, 52, 54 and 73.
15/08/2013	L8454/2010/1	Amendment initiated by Licence Holder to authorise increase in capacity of category 6 to 43 Mt/a
12/12/2013	L8454/2010/1	Amendment initiated by Licence Holder to construct and operate mobile crushing and screening facilities and operate Vasse TSF
20/08/2015	L8454/2010/2	Licence reissue and amendment to add Windich TSF2 and update to new template Licence
7/7/2016	L8454/2010/2	Licence amendment for approval to construction the Flinders Strip 12 In-Pit TSF, Windich Above-Ground TSF and the Karntama Village WWTP sludge handling unit, update prescribed premises boundary, increase category 73 approved design capacity, replace category 89 with category 64, inclusion of conditions for the reinjection of mine dewater and removal of requirement to implement the Water Management Scheme, and inclusion of a 2 MW Caterpillar C175 generator as an emission point to air
28/02/2017	L8454/2010/2	Amendment Notice 1 Approval to construct and operate the Flinders In-Pit TSF (below water table tailings deposition), update the Vasse and Windich TSF groundwater monitoring requirements, changes to the requirements for controls on sewage pipelines, update the containment infrastructure requirements, changes to the used tyre storage requirements and include total dissolved solids in the WWTP monitoring suite
14/07/2017	L8454/2010/2	Licence amendment to update the containment infrastructure requirements in Table 1.2.1, include a provision in Table 1.2.3 to allow clean fill to be used as cover material, remove reference to the Mobile Crushing and Screening Environmental Management Procedure, remove reference to infrastructure which has been constructed, removal of the Flinders In-Pit TSF deposition limit, removal of the air emission monitoring requirements

Date	Reference number	Summary of changes
16/07/2018	L8454/2010/2	Licence amendment to combine the two existing TSFs at Flinders, being the Flinders Strip 12 TSF and the Flinders In-Pit TSF into one consolidated landform (Flinders In-Pit TSF Complex); reduce the capacity of category 52 from 56 MW to 54 MW; update condition 1.2.1 to include the high risk saline pipelines; remove condition 1.2.11; update condition 4.3.1 to remove reference to the leak detection system; and remove the pipeline sample CCSP0011 and include CCSP0024
15/01/2019	L8454/2010/2	Licence amendment to allow the disposal of reverse osmosis reject water to be discharged to the existing Construction Camp irrigation area; construction of the Lefroy Turkey's Nest; and installation and operation of 11 saline injection bores
30/01/2020	L8454/2010/2	Licence amendment for construction/ installation of Vertical Wet High Intensity Magnetic Separator Plant, 5 Diesel Generator sets (1400kW) and a reverse osmosis plant (350kL).
07/08/2020	L8454/2010/2	Licence amendment for installation of a new 1600kW Diesel Generator, increase in capacity of 5 existing generators (1600kW), construction of five additional saline injection bores and addition of a new emission to land point (L3). Minor administrative amendments to mapping and terminology within Licence.
23/11/2020	L8454/2010/2	DWER initiated licence amendment to authorise RO brine for irrigation and roadways (previously assessed but information delayed) and an administrative amendment to update the number of saline reinjection bores. Removing construction and compliance requirements for the Vertical Wet High Intensity Magnetic Separator (V-WHIMS) Plant, Diesel Generator Sets and Karntama Camp RO Plant as compliance reports received.
03/06/2021	L8454/2010/2	Licence amendment for: • Construction and operation of a Hydrogen Refuelling Station (HRS) at the Christmas Creek Karntama Village that will be used for the refuelling of hydrogen powered vehicles onsite; • Addition of the existing Elvis Turkey's Nest and proposed Mobile Max Turkey's Nest to the list of water containment infrastructure on the licence; • Three additional tailings spigots required for tailings deposition along the southern and eastern embankments within Strip 12 of the Flinders In-Pit Tailings Storage Facility (TSF); and • Update to Schedule 1 map of containment infrastructure for disposal of used tyres, construction waste with updated five year mine pits and waste dumps. Licence reformatted into current Licence template with condition numbers modified.
5/04/2022	L8454/2010/2	Licence amendment for: • Construction of the new Flinders In-Pit TSF2 Facility;

Date	Reference number	Summary of changes
		• OPF1 Lump Plant extension to the existing OPF1; • Change the location of the proposed Hydrogen Refuelling Station (HRS); and • Install two back-up emergency generator sets at the power station.
28/09/2023	L8454/2010/2	Licence amendment for: • Category 6 (mine dewatering) - Construction and operation of dewatering infrastructure, including: ➢ 108 saline injection bores (SAI43 – SAI151) drilled into the Oakover aquifer (25 within the existing saline and transfer system and 83 in the undeveloped Hall, Bull and Cue mine areas); ➢ 21 high-density polyethylene (HDPE) lined turkey nests/transfer ponds with pump stations (8 within the existing saline and transfer system and 13 in the undeveloped Hall, Bull and Cue mine areas); and ➢ 151 kilometres (km) of pipeline corridors (~66 km to the existing saline and transfer system and ~85 km from the proposed undeveloped Hall, Bull and Cue mine areas); • Construction and operation of three settlement ponds, including: ➢ 2 HDPE-lined ponds to hold process water; and ➢ 1 earthen-lined pond to hold borefield water; and ➢ Administrative amendments to existing licence conditions.
14/06/2024	L8454/2010/2	Licence amendment for: • Construction and operation of the Christmas Creek Green Iron Pilot Plant (CCGIPP) (Category 44: metal melting or refining); • Construction and operation of the Christmas Creek Concrete Batching Plant (CCCBP) (Category 77: concrete batching or cement products manufacturing); • Alignment of the monitoring frequency of inspections for tailings storage facility (TSF) embankment freeboard, from the existing daily when the facility is in operation to the proposed fortnightly TSF inspections, whilst the facility is not operational; • Ruby turkey's nest that is approved to contain 'brackish' water to be changed to include the storage of 'saline or brackish' water within the containment infrastructure; and • Additional condition to the Licence to provide flexibility during the design, construction, and installation of the proposed Categories 44 and 77 infrastructure.
02/07/2025	L8454/2010/2	Licence amendment for: • Administrative removal of the Windich TSF1 and TSF2 (Windich TSF Complex) and Vasse TSF and associated infrastructure from the Christmas Creek Mine Site Licence L8454/2010/2;

Date	Reference number	Summary of changes
		• Transfer of the existing Christmas Creek (hall overland conveyor, primary ore crushing plant, ore processing facility infeed, and hydrocarbons / chemical storage areas) from Works Approval W6787/2023/1 to the Christmas Creek Mine Site Licence L8454/2010/2 following compliance with the requirements specified in Table 1 of Condition 1, Condition 2 and Condition 3 of the Works Approval; • Construction and operation of the new Flinders IPTSF3, associated pipelines and infrastructure due to the existing Flinders IPTSF2 reaching full capacity; and • Minor administrative amendment to Schedule 1: Maps in Figure 9, 10, and 11.
27/11/2025	L8454/2010/2	Licence Amendment for: • Amendments to the existing CCGIPP (not limited to an extension of the prescribed premises boundary, an increase in the estimated water usage and the use of RO reject for dust suppression); • Construction and operation of the new LEDER Pilot Plant under the existing Category 44 (metal melting or refining) to convert iron to green iron. The LEDER Pilot Plant is anticipated to produce up to 150 tonnes per annum of green iron; and • Increase in groundwater abstraction and reinjection at the Christmas Creek Mine Site from the existing 43 gigalitres per annum (GL/annum) to the proposed 110 GL/annum in accordance with Ministerial Statement (MS) 1033 under section 45C of the EP Act.
22/01/2026	L8454/2010/2	Licence Amendment for: • Equipping of up to 30 injection bores and 17 km of pipeline corridors within the Proposed Saline Injection Expansion Envelope within the Category 6 limit of 110 GL/annum; and • Amendments to the existing Schedule 1 Maps (Figure 3, Figure 8, Figure 9, Figure 10, Figure 11, Figure 16 and Figure 18) to include the Gatehouse turkeys nest located on tenement L46/99.

Interpretation

In this licence:

(a) the words ‘including’, ‘includes’ and ‘include’ in conditions mean “including but not limited to”, and similar, as appropriate;

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

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

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

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

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

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

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

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

Licence conditions

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

General

1. The licence holder must ensure limits specified in Table 1 are not exceeded.

Table 1: Production or design capacity limits

Category[1]	Category description[1]	Premises production or design capacity limit
5	Processing or beneficiation of metallic or non-metallic ore	77,000,000 tonnes per annual period
6	Mine dewatering	110,000,000 tonnes per annual period (reinjected)
31	Chemical manufacturing	195 tonnes per annual period
44	Metal melting or refining	5,000 tonnes per annual period (output of 2,500 tonnes of green iron per annual period)
52	Electric power generation	63.6 MWe per annual period
54	Sewage facility	1,040 cubic metres per day
57	Used tyre storage	2,000 tyres
64	Class II putrescible landfill	10,000 tonnes per annual period
73	Bulk storage of chemicals	15,183.10 cubic metres in aggregate
77	Concrete batching or cement products manufacturing	100,000 tonnes per annual period

Note 1: *Environmental Protection Regulations 1987*, Schedule 1.

Infrastructure and equipment

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

Table 2: Infrastructure and equipment requirements

Site infrastructure and equipment	Operational requirement	Infrastructure location
Hall overland conveyor Primary ore crushing plant Ore processing facility infeed	• 4,200 tonnes per hour; • Dust suppression equipment to be regularly maintained; • Stormwater drainage controls to be regularly maintained; and • Daily visual inspections to ensure dust controls, stormwater controls and hydrocarbons / chemicals controls are working effectively.	Schedule 1: Figure 17
Hydrocarbons / chemical storage areas	• Chemicals and hydrocarbons stored within bunds of appropriate capacity; • Any leakage and spills from chemical and hydrocarbon storage facilities must be contained	Schedule 1: Figure 14

Site infrastructure and equipment	Operational requirement	Infrastructure location
	to prevent contamination of surrounding soil, watercourses, and drainage systems; • Suitable spill response equipment must be available and maintained in close proximity to the chemical and hydrocarbon storage location; • All chemicals and hydrocarbons appropriately segregated from potential ignition sources; • Storage Data Sheets readily available for all stored chemicals and hydrocarbons. These must be in close proximity to the chemical and hydrocarbon storage location; • Spillage and/or collected and potentially contaminated rainfall recovery should occur when needed to ensure optimal availability of bund capacity; • Discharge of any spillage and/or rainfall from within a bund is not permitted; and • Portable bunding units are only to be used for the temporary storage of chemicals and hydrocarbons.	
LEDER Plant	• Water sprays, foggers and dust collection systems must be installed, maintained and fully operational during all periods of plant operation; and • Stormwater drainage controls to be regularly maintained.	Schedule 1 Figure 19

3. The licence holder must ensure that all pipelines or sections of pipelines containing tailings and high-risk saline pipelines (as identified on the map of environmentally sensitive areas depicted in Schedule 1) are either:

(a) equipped with telemetry; or

(b) equipped with automatic cut-outs in the event of a pipe failure; or

(c) provided with secondary containment sufficient to contain any spill for a period equal to the time between routine inspections.

4. The licence holder must ensure that the waste material specified in Table 3 is only stored and/or treated within vessels or compounds listed in Table 3 and identified on the map of containment infrastructure in Schedule 1, in accordance with the requirements specified within Table 3.

Table 3: Containment infrastructure

Storage vessel or compound	Material	Requirements
Flinders In-Pit TSF1 Complex Flinders In-Pit TSF2 Complex	Tailings	• Maintain and operate a minimum freeboard equivalent to that required to contain a 1 in 100-year storm event over 72 hours from the operational pond surface to lowest elevation of perimeter embankment;

Storage vessel or compound	Material	Requirements
Flinders In-Pit TSF3		• Visual markers installed to adequately monitor freeboard; • Install, maintain and operate a supernatant water collection and return system only when a recoverable volume of water is present; • Flinders In-Pit TSF1 Complex maximum tailings elevation level of Relative Level 437.0 m; • Flinders In-Pit TSF2 Complex maximum tailings elevation level of Relative Level 437.0 m; • Flinders In-Pit TSF3 maximum tailings elevation level of Relative Level 444.0 m (Stage 1); and • Flinders In-Pit TSF3 maximum tailings elevation level of Relative Level 433.0 m (Stage 2).
Flinder's Decant Settlement Pond, Franco's Turkey's Nest (Village Road), Ollies Turkey's Nest, Windich Decant Sediment Pond, and Vasse Decant Settlement Pond,	Brackish water	• Earthen Pond; and • Minimum vertical freeboard of 100 mm.
TLO Settlement Pond (Jeffs)	Brackish water Potentially hydrocarbon contaminated treated wastewater from Power station treated water pond	• Earthen Pond; and • Minimum vertical freeboard of 100 mm.
OPF1 Turkey's Nest OPF2 Turkey's Nest Akmar Turkey's Nest Baltic Turkey's Nest Caspian Turkey's Nest Charlton Turkey's Nest Codgers Transfer Pond Crank Transfer Pond Eyre Turkey's Nest Gatehouse Turkey's Nest Helsinki Turkey's Nest (RCH1) Laura's Turkey's Nest Windich Ponds x 3 Young Settlement Ponds	Saline or Brackish water	• HDPE liner; • New transfer ponds / turkeys nests HDPE liners; and • Minimum vertical freeboard of 200 mm.

Storage vessel or compound	Material	Requirements
OPF1 and OPF2 Settlement Ponds RCH 'Micky's Pond' Settlement Pond Lefroy Turkey's Nest Elvis Turkey's Nest Mobile Max Turkey's Nest Ruby Turkey's Nest 21 transfer ponds / turkey nests including: • 8 transfer ponds / turkey nests in the existing saline and transfer system; and • 13 transfer ponds / turkey nests in the undeveloped Hall, Bull, and Cue areas)		
CCY1 Treatment Ponds 1, 2 and 3	Potentially hydrocarbon contaminated treated wastewater from the CCY1 oily water separator	• HDPE liner; and • Minimum vertical freeboard of 200 mm.
CCY2 Treatment Ponds 1 and 2	Potentially hydrocarbon contaminated treated wastewater from the CCY2 oily water separator	• HDPE liner; and • Minimum vertical freeboard of 200 mm.
Power Station pond	Potentially hydrocarbon contaminated treated wastewater from the Bulk Diesel Storage Facility oily water separator	• HDPE liner.
Green Iron water pond	Reject process water	• HDPE liner; and • Minimum vertical freeboard of 200 mm.
LEDER Emergency Storage Tank	Process water from the LEDER Pilot Plant	• Must be installed on compacted soil or concrete hardstand and surrounded by bunding.
LEDER Tailings Storage	Tailings	• Stored in suitable storage tanks (IBCs) on-site before being periodically removed off-site for further evaluation and subsequent disposal.

5. The licence holder must:

(a) undertake inspections as detailed in Table 4;

(b) where any inspection identifies that an appropriate level of environmental protection is not being maintained, take corrective action to mitigate adverse environmental impacts as soon as practicable; and

(c) maintain a record of all inspections undertaken.

Table 4: Inspection of infrastructure

Scope of inspection	Type of inspection	Frequency of inspection
Tailings delivery pipelines	Visual integrity	Daily whilst operational
Tailings decant water return pipelines	Visual integrity	Daily whilst operational
Tailings storage facility embankment freeboard	Visual to confirm required freeboard capacity is available	Daily whilst operational and within 24 hours of a significant rainfall event when access permits OR Fortnightly whilst not operational and within 24 hours of a significant rainfall event when access permits
Saline water infrastructure (transfer ponds, settlement ponds and pipelines)	Visual integrity	Daily
Pipeline transferring RO brine from the Karntama RO Plant area to the Codgers Transfer Pond	Visual integrity	Twice weekly
Green Iron water pond infrastructure and vertical freeboard	Visual integrity	Daily whilst operational and within 24 hours of a significant rainfall event when access permits OR Fortnightly whilst not operational and within 24 hours of a significant rainfall event when access permits

6. The licence holder must undertake an annual water balance for the TSFs. The water balance must as a minimum consider the following:

(a) site rainfall;

(b) evaporation;

(c) tailings return water recovery volumes;

(d) seepage recovery volumes; and

(e) volumes of tailings deposited.

7. The licence holder must ensure that where wastes produced on the Premises are not taken off-site for lawful use or disposal, they are managed in accordance with the requirements in Table 5.

Table 5: Management of waste[1, 2, 3]

Waste type	Management strategy	Requirements
Sewage	Biological, physical, and chemical treatment	• 1,040 m^3/day cumulatively.
Used tyres	Storage	• Not more than 2,000 used tyres must be stored at the premises at any one time; • Used tyre stacks must not exceed 500 tyres per stack and 5 m in height; • Used tyre stacks are to be stored no less than 6 m from any other tyre stacks; and • The waste tyre stockpiles must not exceed 1000 m^2 in area.
	Burial in waste rock materials or completed mining voids	• Tyres must be placed in cells of less than 1000 tyres and only in those locations shown on the Map of emission points in Schedule 1; • Cover of at least 1 m of waste rock will be placed over each cell; and • Cell locations where tyres are to be buried will be surveyed and the latitude and longitude recorded.
Inert Waste Type 1 Putrescible Waste Clean Fill and Bio remediated soils as described for Class II Waste as defined in the Landfill Definitions Uncontaminated Fill	Receipt, handling and disposal of waste by landfilling	<u>All waste types</u> • No more than 10,000 tonnes per year of all waste types cumulatively must be disposed of by landfilling; • Disposal of waste by landfilling must only take place within the landfill area shown on the Map of emission points in Schedule 1; • Disposal of untreated timber and concrete in mining voids and waste rock facilities must only occur at the locations shown on the Map of emissions points in Schedule 1; • Waste must be placed in a defined trench or within an area enclosed by earthen bunds; • The active tipping area must be restricted to a maximum linear length of 60 m; and • Construction, operation and decommissioning of landfill cells can occur within the defined landfill area providing there is no waste within: ➢ 100 m of any surface water body; and ➢ 3 m of the highest level of the water table aquifer.
RO Reject Stream	Onsite irrigation to irrigation area using blended RO reject	• Undiluted RO reject stream will not be used for irrigation.

Waste type	Management strategy	Requirements
	stream with treated sewage effluent	
	Onsite dust suppression and/or ore processing using blended RO reject stream with mine dewatering water	• Undiluted RO reject stream will not be used for dust suppression and/or ore processing.
HRS output water	HRS output water is transferred from the HRS to the Elvis Turkey's Nest where it is used for dust suppression	• Output water from HRS plant.
LEDER Pilot Plant output water	LEDER Pilot Plant is pumped from the Plant to the Elvis Turkey's Nest	• Output water from the LEDER Pilot Plant; and • Undiluted RO reject stream will not be used for dust suppression.

Note 1: Requirements for landfilling tyres are set out in Part 6 of the *Environmental Protection Regulations 1987*.
Note 2: Additional requirements for the acceptance and landfilling of Controlled waste (including asbestos and tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.
Note 3: Clean Fill and Uncontaminated Fill can also be used as cover for landfill capping.

8. The licence holder must ensure that cover is applied and maintained on landfilled wastes in accordance with Table 6 and that sufficient stockpiles of cover are maintained on site at all times.

Table 6: Cover requirements[1]

Waste Type	Material	Depth	Timescales
Putrescible waste	Inert and incombustible material	300 mm	As soon as practicable, but at least weekly, after deposit
All waste		1,000 mm	Within three months of the final waste load in each trench

Note 1: Additional requirements for the covering of tyres are set out in Part 6 of the *Environmental Protection Regulations 1987*.

9. The licence holder must ensure that windblown waste within and outside the landfill area is collected on at least a monthly basis and returned to the active tipping area.

10. The licence holder must construct and/or install the infrastructure listed in Table 7, in accordance with:

(a) the corresponding design and construction requirement / installation requirement; and

(b) at the corresponding infrastructure location,

as set out in Table 7.

Table 7: Design and construction infrastructure requirements

Infrastructure	Requirements (Design and construction)
Saline injection bores as depicted on the map in Schedule 1	
Saline injection bores	Installation of following 5 saline injection bores drilled into the Oakover aquifer at the saline injection borefield: SAI33 SAI34 SAI35 SAI36 SAI37 Installation of 108 saline injection bores drilled into the Oakover aquifer: SAI43 – SAI151 Installation of 30 saline injection bores drilled into the Oakover aquifer: SAI201 – SAI231
21 transfer ponds / turkey nests including: • 8 transfer ponds / turkey nests in the existing saline and transfer system; and • 13 transfer ponds / turkey nests in the undeveloped Hall, Bull, and Cue areas)	• HDPE liner; and • Minimum vertical freeboard of 200 mm.
Transport of mine dewatering water via: • new pipelines servicing the existing saline injection and transfer system; • new pipelines servicing the proposed Hall saline injection and transfer system; and • new pipelines servicing the proposed saline injection expansion envelope (approximately 17km of pipeline corridors) – as per Schedule 1, Figures 9 to 11.	Refer to condition 3.
OPF1 Settlement Pond OPF2 Settlement Pond RCH 'Micky's Pond' Settlement Pond	• HDPE liner; and • Minimum vertical freeboard of 200 mm.
OPF1 Lump Plant extension	
Crushing and Screening: • Screen • Oversize crusher Conveyor: • Conveyor to lump product	• Dust suppression equipment and measures to be included in the plant design and will include dust covers, skirts, and water sprayers; and • Containment bunds designed and constructed around the proposed OPF1 Lump Plant to manage any surface water run-off.

Infrastructure	Requirements (Design and construction)
• Conveying system into existing plant Stacker: • Stacker • Sample station	
Back Up Diesel Gensets	
2 x Back Up Diesel Gensets	• 2 x 1600 kW emergency back up diesel gensets; • Emission point height 3.7 m; • Diesel fired genset engine; and • Low sulphur diesel fuel.
Green Iron Pilot Plant	
Green Iron Pilot Plant	• Dust suppression equipment and measure to be included in the plant design and will include water sprays, foggers and dust collection systems; • Construction of hardstands, bunding and / or windrows to divert and segregate stormwater within and externally to the plant; • Stormwater sumps and drains must be constructed, where required within the footprint of the plant to manage potentially contaminated stormwater; and • Location as per Figure 18 and Figure 19, Schedule 1 of this licence.
RO reject pipelines from the Green Iron Pilot Plant to the Elvis Turkey's Nest	Pipeline to be: • Equipped with telemetry systems and pressure sensors along pipelines to allow the detection of leaks and failures; or • Equipped with automatic cut-outs in the event of a pipe failure; or • Installed with secondary containment (v-drains and scour pits) sufficient to contain any spill for a period of equal to the time between routine inspections.
Concrete Batching Plant[1]	
Mobile trailer mounted batch plant: • Vertical cement silo • Horizontal cement silo • Cement weigh hopper • Twin aggregate weigh bins • Other associated infrastructure and equipment	• Must be located away from major surface water bodies; • Aggregate storage bins / bays must be fitted with dedicated water spray system; • Construction of sediment basins, bunding, and vegetated batters to control surface water sediment and to reduce impact to water quality from the plant; • Installation and construction of diversion structures, where required (bunds or channels) to separate and divert clean surface water flows around the plant works areas and stockpiles; • Concrete load bay and pad area must be designed with a wedge pit for the first flush and capable of holding approximately 13,500 L and a washout box capable of holding approximately 25,000 L; • Constructed designated collection points and sedimentation traps to collect all stormwater drainage,

Infrastructure	Requirements (Design and construction)
	wash-down water, and spillages from within the plant works areas for treatment; • Installation of sprinklers for dust management, temperature, and moisture control on stockpiles; and • Location as per Figure 18, Schedule 1 of this licence.
Flinders In-Pit TSF3	
In-pit tailings storage facility	• Tailings pipeline must be steel and/or HDPE lined will be constructed with the below material/pipe types or equivalent: ➢ HDPE Lined Steel ➢ PU Lined Steel ➢ HDPE ➢ UHMWPE and meet the requirements in Condition 3; • Stage 1 to provide tailings storage of approximately 31.6 Mm^3 to the maximum tailings level of 444.0 mRL; and • Stage 2 to provide tailings storage of approximately 21.5 Mm^3 to the maximum tailings level of 433.0 mRL.
LEDER Plant	
LEDER Plant	• Dust suppression equipment and dust monitors to be included in the plant design and will include water sprays, foggers and dust collection systems; • Construction of hardstands, bunding and / or windrows to divert and segregate stormwater within and externally to the plant; • Stormwater sumps and drains must be constructed, where required within the footprint of the plant to manage potentially contaminated stormwater; and • Location as per Figure 19, Schedule 1 of this licence.
LEDER Emergency tank	• To be constructed on impervious pad with bunding.
LEDER Tailings Storage	• IBCs to be installed on site, suitable of storing tailings materials.

Note 1: the *Environmental Protection (Concrete Batching and Cement Product Manufacturing) Regulations 1998* also apply.

11. The licence holder must operate the infrastructure listed in condition 10 in accordance with the conditions of this licence, once the design and construction requirements specified in condition 10 have been met[1].

Note 1: corresponding compliance reporting requirements are specified in condition 39.

12. The licence holder must manage dust and stormwater at the Green Iron Pilot Plant and the Concrete Batching Plant, once operational, using the infrastructure, equipment and management measures specified in Table 7 for that infrastructure.

13. The licence holder must ensure that any treated saline effluent used for dust suppression is carried out in a manner that does not cause damage to surrounding vegetation.

Emissions and discharges

Authorised discharge points for emissions

14. The licence holder must ensure that where waste is emitted to air from the emission points in Table 8 and identified on the map of emission points in Schedule 1, it is done so in accordance with the conditions of this licence.

Table 8: Emission points to air

Emission point reference and location on Map of emission points	Emission Point	Emission point height (m)	Source, including any abatement
A1 – A27	27 x 2 MW Cummins diesel genset	9.4	Diesel fired genset engine; low sulphur diesel fuel
A28 – A33	6 x 1600 kW Diesel Generator	3.7	Diesel fired genset engine; low sulphur diesel fuel
A34 – A35	2 x 1600 kW emergency backup diesel gensets	3.7	Diesel fired genset engine; low sulphur diesel fuel

15. The licence holder must ensure that where waste is emitted to surface water from the nominated contingency discharge points in Table 9 and identified on the map of emission points in Schedule 1 it is done so in accordance with the conditions of this licence.

Table 9: Point source emissions to surface water

Emission point reference	Description	Source including abatement
CCDP04 (W1) CCDP01 (W2) CCDP02 (W3) CCDP03 (W4)	Contingency discharge of mine dewater in the event that reuse, reinjection, in pit disposal and temporary storage are not available or have been exhausted	Mine dewater

16. The licence holder must ensure that where waste is emitted to groundwater from the emission points in Table 10 and identified on the map of emission points or maps of saline injection expansion envelopes in Schedule 1, it is done so in accordance with the conditions of this licence.

Table 10: Point source emissions to groundwater

Emission point reference and location on Map of emission points		Description	Source including abatement
Saline Injection Zone SAI01, SAI01A SAI02 SAI03A, SAI03B SAI04, SAI04A SAI04B SAI05, SAI05B SAI06, SAI07 SAI08, SAI09 SAI10, SAI11 SAI12, SAI12a SAI12b SAI13, SAI13A SAI14, SAI14A SAI15, SAI15A SAI16, SAI16A SAI16B SAI17, SAI17B SAI18, SAI18B SAI19 SAI20 SAI20A, SAI20B SAI21 SAI21A, SAI21B SAI22, SAI22A SAI23 SAI23R, SAI23A SAI24, SAI25 SAI26, SAI27 SAI28, SAI03R SAI10A SAI29, SAI30 SAI31, SAI32 SAI33, SAI34 SAI35, SAI 36, SAI37, SAI38, SAI39, SAI40, SAI41, SAI42 SAI43 – SAI151 (equipping of 108 new injection bores) SAI201 – SAI231 (equipping of 30 new injection bores)	Brackish Injection Zone HSB42 HSB43 HSB44 HSB45 HSB46 HSB47 HSB48 HSB49 HSB50 HSB51 HSB52 HSB53 HSB54 HSB55 HSB56 HSB57 HSB58 HSB59 HSB60 HSB61 HSB62 HSB63	Direct injection below ground	Water from mine dewatering

17. The licence holder must ensure that where waste is emitted to land from the emission points in Table 11 and identified on the map of emission points in Schedule 1, it is done so in accordance with the conditions of this licence.

Table 11: Emissions to land

Emission point reference	Description	Source including abatement
L1 - Karntama irrigation area	Pipe feeding irrigation area of 15 hectares	Treated wastewater from Karntama WWTP and reverse osmosis reject water
L2 - Construction Camp irrigation area	Pipe feeding irrigation area of 13 hectares	Treated wastewater pipeline–from Construction Camp WWTP and reverse osmosis reject water
L3 - Power station treated water pond	Gravity fed overflow from the Power Station Pond through a low point in the southern embankment wall of the Power Station Pond Rock armouring is present at the overflow point to prevent erosion of the embankment wall. The water is then directed into a diversion channel that flows into the TLO Settlement Pond (Jeffs)	Wastewater treated through the Power Station OWS that is then transferred to the Power Station Pond
L4 - RO brine used for dust suppression and/or ore processing	RO brine is transferred to the Codgers Transfer Pond where it is mixed with groundwater and used for dust suppression and/or ore processing	RO reject water (brine)
L5	HRS and green iron output water is transferred to the Elvis Turkey's Nest where it is used for dust suppression; Stored and used as process water in the operation of the Green Iron Pilot Plant: And / or: Stored and used as process water in the operation of the LEDER Pilot Plant.	HRS output water and green iron RO reject water (brine)

18. The licence holder must not cause or allow emissions to land greater than the limits listed in Table 12.

Table 12: Emission limits to land

Emission point reference	Description	Parameter	Reportable Limit (including units)	Averaging period
L3 - Power station treated water pond	Gravity fed overflow from the Power Station Pond through a low point in the southern embankment wall of the Power Station Pond	Total Recoverable Hydrocarbons	15 mg/L	Spot sample

Emission point reference	Description	Parameter	Reportable Limit (including units)	Averaging period
	Rock armouring is present at the overflow point to prevent erosion of the embankment wall. The water is then directed into a diversion channel that flows into the TLO Settlement Pond (Jeffs)			

Monitoring

General monitoring

19. The licence holder must ensure that:

(a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;

(b) all wastewater sampling is conducted in accordance with AS/NZS 5667.10;

(c) all surface water sampling is conducted in accordance with AS/NZS 5667.6;

(d) all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and

(e) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured unless indicated otherwise in the relevant table.

20. The licence holder must ensure that:

(a) monitoring is undertaken in each weekly period such that there are at least four days in between the days on which samples are taken in successive weeks;

(b) monitoring is undertaken in each monthly period such that there are at least 15 days in between the days on which samples are taken in successive months;

(c) monitoring is undertaken in each quarterly period such that there are at least 45 days in between the days on which samples are taken in successive quarters;

(d) monitoring is undertaken in each six-monthly period such that there are at least five months in between the days on which samples are taken in successive periods of six months; and

(e) monitoring is undertaken in each annual period such that there are at least nine months in between the days on which samples are taken in successive years.

21. The licence holder must ensure that all monitoring equipment is operated and calibrated in accordance with the manufacturer's specifications.

22. The licence holder must ensure that all monitoring in Table 13 is conducted according to the specification in that table.

Table 13: Monitoring of point source emissions to surface water

Emission point reference	Parameter	Limit	Units	Frequency
CCDP04 (W1) CCDP01 (W2) CCDP02 (W3) CCDP03 (W4)	Electrical conductivity	15,000	µS/cm	1) 30 minutes following commencement of discharge; and 2) 24 hourly intervals thereafter during the duration of the contingency discharge event.
	Turbidity	100	NTU	
	Cumulative water meter readings	-	m^3	1) prior to discharge event at the designated discharge point; and 2) 24 hourly intervals for the duration of the contingency discharge event.

23. The licence holder must undertake the monitoring in Table 14 according to the specification in that table.

Table 14: Monitoring of point source emissions to groundwater

Emission point reference	Parameter	Units	Frequency
Each saline and brackish reinjection emission point referenced in Table 10	Cumulative volume[1]	GLpa	Annually
CCSP0001 (Hillside East Brackish Injection Borefield) Saline Injection Borefield CCSP0024 (Windich Saline) CCSP0015 (Crank Saline)	pH[2]	pH units	Six monthly when reinjecting
	Electrical Conductivity	µS/cm	
	Total Dissolved Solids	mg/L	
	Total Suspended Solids	mg/L	
	Major cations and anions – Sodium Potassium Calcium Magnesium Chloride Alkalinity Sulfate Nitrate	mg/L	
	Metals, Metalloids and Non-metals - Aluminium Antimony Arsenic Beryllium Boron Cadmium Chromium Cobalt	mg/L	

Emission point reference	Parameter	Units	Frequency
	Copper Iron Manganese Mercury Nickel Lead Selenium Silver Zinc		

Note 1: Determined using water balance calculations consistent with the *Christmas Creek Groundwater Operating Strategy* (CC-PH-HY-0002).
Note 2: In-field non-NATA accredited analysis permitted.

24. The licence holder must undertake the monitoring in Table 15 according to the specifications in that table and compare to the relevant ANZG (2018) Guidelines.

Table 15: Monitoring of emissions to land

Emission point reference	Parameter	Units	Frequency
L1, L2	Cumulative volume of treated wastewater discharged via irrigation	m^3	Monthly
	Cumulative volume of treated wastewater discharged via dust suppression	m^3	
	Biochemical Oxygen Demand	mg/L	Quarterly
	Total suspended solids	mg/L	
	Total dissolved solids	mg/L	
	pH[1]	pH units	
	Total Nitrogen	mg/L	
	Total Phosphorus	mg/L	
	E. coli	cfu/100mL	
L3	Total Recoverable Hydrocarbons	mg/L	Quarterly when discharging One week after the reportable limit in Table 12 is exceeded, for a maximum of three total consecutive exceedances, following which discharge from that emission point must cease, until such time as the limit is no longer exceeded
L4	Cumulative volume of Reverse Osmosis brine discharged to the Codgers Transfer Pond	m^3	Monthly

Emission point reference	Parameter	Units	Frequency
	pH[1]	pH units	
	Electrical Conductivity	µS/cm	
	Total Dissolved Solids	mg/L	
	Sulphate	mg/L	
L5	Cumulative volume of Reverse Osmosis brine discharged to the Elvis Turkey's Nest	m^3	Monthly
	pH[1]	pH units	
	Electrical Conductivity	µS/cm	
	Total Dissolved Solids	mg/L	
	Sulphate	mg/L	

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

25. The licence holder must undertake the monitoring in Table 16 according to the specifications in that table.

Table 16: Process monitoring

Emission point reference	Monitoring point location	Parameter	Units	Frequency
CCY1 and CCY2 treatment ponds	Final treated wastewater storage pond prior to reuse for dust suppression	Volumetric flow rate	m^3/day	Monthly
		Total Recoverable Hydrocarbons	mg/L	
		Total Dissolved Solids	mg/L	

26. The licence holder must undertake the monitoring in Table 17 according to the specifications in that table.

Table 17: Monitoring of ambient groundwater quality

Monitoring point reference and location[2]	Parameter	Units	Averaging period	Frequency
Flinders In-Pit TSF 1 Complex monitoring bores: FLM06_D FLM08_D FLM17 CCE04MB_S and CCE04MB_D **Flinders In-Pit TSF 2 Complex monitoring bores:**	Standing water level	mbgl	Spot sample	Monthly
	pH[1]	pH units	Spot sample	Quarterly
	Electrical conductivity	µS/cm		
	Total Dissolved Solids	mg/L		
	Major cations and anions - Sodium Potassium Calcium Magnesium Chloride Sulfate			

Monitoring point reference and location[2]	Parameter	Units	Averaging period	Frequency
FLM07_S FLM26_D FLM28_D	Alkalinity Nitrate Ammonia			
Flinders In-Pit TSF3 monitoring bores: WDM35 FLM26_D FLM37 FLM38 FLM39 FLM40	**Dissolved metals, metalloids and non-metals –** Aluminum Antimony Arsenic Beryllium Boron Cadmium Cobalt Chromium Copper Iron Manganese Mercury Nickel Lead Selenium Silver Thallium Uranium Zinc			
Mine dewater reinjection monitoring bores				
<u>Zone B:</u>	Standing water level	mbgl	Spot sample	Six monthly
SAM59_D SAM59_S	pH[1]	pH units	Spot sample	Six monthly
SAM07_D SAM07_S	Electrical conductivity	µS/cm		
SAM12_S	Total Dissolved Solids	mg/L		
SAM12_D SCX01_S SCX06 (All) SCX06_S SCX06_D SAM15_I SAM15_S SAM18_D SAM18_S SAM64_D	**Major cations and anions –** Sodium Potassium Calcium Magnesium Chloride Alkalinity Sulfate Nitrate			
SAM64_S SAM85_D SAM85_S	**Metals, metalloids, and non-metals –** Aluminum			

Monitoring point reference and location[2]	Parameter	Units	Averaging period	Frequency
SAM109_D SAM109_S SAM110_D SAM110_S <u>Zone C:</u> HSMB29_D HSMB29_S SCX03_S	Antimony Arsenic Beryllium Boron Cadmium Cobalt Chromium Copper Iron Manganese Mercury Nickel Lead Selenium Silver Zinc			

Note 1: In-field non-NATA accredited analysis permitted.
Note 2: No sample required if bore is dry.

Management of groundwater mounding from reinjection activities

27. The licence holder must manage reinjection activities to mitigate impacts from groundwater mounding in accordance with the requirements outlined in Schedule 4.

28. The licence holder must implement the Trigger Levels and Contingency Program outlined in Schedule 4.

29. The Licence Holder must record, investigate and take corrective action for any exceedance of the trigger criteria specified in Schedule 4 in accordance with the requirements outlined in Schedule 4.

30. The Licence Holder must record, investigate, and take corrective action and report to the CEO within 28 calendar days for any exceedance of the threshold criteria specified in Schedule 4.

31. The licence holder must include the following information in the report referred to in condition 30:

(a) the nature and spatial extent of the exceedance;

(b) the time and date when the exceedance occurred;

(c) whether any environmental impact occurred as a result of the exceedance and, if so, what that impact was and where the impact occurred;

(d) the details of the management action(s) taken in response to the exceedance;

(e) the details and results of any investigation undertaken into the cause of the exceedance; and

(f) what action has been taken, or will be taken, to prevent the exceedance occurring again and for the purpose of minimising the likelihood of environmental harm.

Specified actions

32. The licence holder must design, construct, and install groundwater monitoring wells, or utilise existing groundwater monitoring wells and provide as-constructed information, in accordance with the requirements specified in Table 18.

Table 18: Expansion of ambient groundwater monitoring network requirements

Infrastructure	Design, construction, and installation requirements	Monitoring well location(s)	Timeframe
Expanded monitoring well network to cover the spatial extent of the area where the proposed new injection bores will be installed	New monitoring bore locations, including the utilisation of existing groundwater monitoring wells, are selected in the expanded wastewater reinjection areas. The density and distribution of these new monitoring sites should be approximately the same as in the original wastewater reinjection areas.	To be advised	Individual monitoring bores to be suitably constructed, developed and monitored prior to the operation of their associated injection bores.
	At each of the new monitoring sites, a couplet of monitoring bores is constructed: • one with a screened-interval near the base of the shallow aquifer just above the confining bed; and • one with a screened-interval just below the confining bed in the deeper aquifer.		
	Well design and construction: Designed and constructed in accordance with Minimum Construction Requirements for Water Bores in Australia, 4th Edition. 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.		
	Logging of borehole: Solids 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 using a logging criteria derived from 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 Minimum Construction Requirements for Water Bores in Australia, 4th Edition. The construction logs shall include elevations of the top of casing position to be used as the		

Infrastructure	Design, construction, and installation requirements	Monitoring well location(s)	Timeframe
	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.

Records and reporting

33. 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 condition 10 of this licence;

(c) any maintenance of infrastructure that is performed in the course of complying with the conditions of this licence;

(d) monitoring programmes undertaken in accordance with condition 22, Table 13, condition 23, Table 14, condition 24, Table 15, condition 25, Table 16 and condition 26, Table 17 of this licence; and

(e) complaints received under condition 36 of this licence.

34. The books specified under condition 33 must:

(a) be legible;

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

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

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

35. 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 31 March each year, after the end of that annual period an Annual Audit Compliance Report in the approved form.

36. 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; and

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

37. The licence holder must:

(a) prepare an Environmental Report that provides information in accordance with Table 19 for the annual period,

(b) submit that Environmental Report to the CEO by 31 March each year, after the end of the annual period.

Table 19: Environmental reporting requirements

Condition or table (if relevant)	Parameter	Format or form
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken.	None specified
Condition 6	Annual water balance.	None specified
Condition 17, Table 11	L1 and L2 – representative photographs of the irrigation areas, summary of vegetation health and weed management (within the irrigation areas) implemented during reporting period. L3 – summary of inspections of erosion and vegetation health and weed management with controls implemented during reporting period.	None specified
Condition 22, Table 13	Contingency discharge monitoring.	None specified
Condition 23, Table 14	Groundwater reinjection monitoring.	None specified
Condition 24, Table 15	Monitoring of emissions to land and interpretation of results against plant design specifications and relevant ANZG (2018) Guidelines.	None specified
Condition 25, Table 16	Process monitoring results and interpretation of results.	None specified

Condition or table (if relevant)	Parameter	Format or form
Condition 26, Table 17	Ambient groundwater monitoring results; and a comparison of results from the Flinders In-Pit TSF1 Complex, Flinders In-Pit TSF2 Complex and Flinders TSF3 groundwater monitoring bores against the site specific trigger values detailed in the document, *Life of Mine Geochemistry Programme – Site Specific Trigger Values* (45-SY-EN-0001). Details of investigations conducted, including outcomes, environmental impacts, and remedial actions, in relation to trigger exceedances and a discussion of any trends identified.	None specified
Condition 27-31	Management of groundwater mounding from reinjection activities: • Summary of Class 1 trigger level exceedances; • Summary of reported Class 2 trigger level exceedances; and • Overall summary of reinjection system performance.	None specified
Condition 35	Compliance	None specified
Condition 36	Complaints summary	None specified

38. The licence holder must ensure that the Environmental Report also contains:

(a) an assessment of the information contained within the report against previous monitoring results; and

(b) a list of any original monitoring reports submitted to the licence holder from third parties for the annual period and make these reports available on request.

39. The licence holder must ensure that the conditions listed in Table 20 are notified to the CEO in accordance with the notification requirements of the table.

Table 20: Notification requirements

Condition or table (if relevant)	Parameter	Notification requirement[1]	Format or form[2]
Condition 1, Table 1 Condition 4, Table 3 Condition 7, Table 5 Condition 22, Table 13	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5 pm of the next usual working day.	N1
Condition 10, Table 7	The licence holder must submit a compliance document to the CEO, following the construction and/or installation of an item of infrastructure or equipment required by Condition 10, Table 7. The compliance documents must: (a) be certified by a suitably qualified engineer and certify that the works were constructed in accordance with the construction requirements specified in Condition 10,	Submitted quarterly, by the last day of the following month.	None specified

Condition or table (if relevant)	Parameter	Notification requirement[1]	Format or form[2]
	(b) Table 7; (c) include as constructed plans or a detailed site plan for each item of infrastructure or component of infrastructure specified in Condition 10, (d) Table 7; and (e) be signed by a person authorised to represent the licence holder and contain the printed name and position of that person within the company.		
Condition 15	Contingency discharge	Within 3 days of cessation of the discharge; and including results from the monitoring required under Condition 22, Table 13	None specified
Condition 32, Table 18	Expansion of ambient groundwater monitoring network requirements The licence holder must submit a compliance document to the CEO, following the construction and/or installation of the groundwater monitoring network expansion required by Condition 32, Table 18. The compliance documents must: (a) be certified by a suitably qualified engineer and/or a suitably qualified hydrogeologist and certify that the works were constructed in accordance with the construction requirements specified in Condition 32, Table 18; (b) include confirmation that the requirements specified in Condition 32, Table 18 have been met; and (c) be signed by a person authorised to represent the licence holder and contain the printed name and position of that person within the company.	Prior to the installation of 108 saline injection bores drilled into the Oakover aquifer: SAI43 – SAI151	None specified
Condition 30 and 31	Refer to conditions 30 and 31 for reporting requirements.		

Note 1: Notification requirements in the Licence must not negate the requirement to comply with s72 of the Act.
Note 2: Forms are in Schedule 2.

Definitions

In this licence, the terms in Table 21 have the meanings defined.

Table 21: Definitions

Term	Definition
ACN	Australian Company Number
AHD	Australian height datum
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 to 31 December in the same year
ANZG (2018)	means the recent version and relevant parts of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia) Available at www.waterquality.gov.au/anz-guidelines
AS/NZS 2033:3008	means the Australian Standard AS/NZS 2033:3008 *Australian Installation of polyethylene pipe systems*
AS/NZS 4129:2008	means the Australian Standard AS/NZS 4129:2008 *Fittings for polyethylene (PE) pipes for pressure applications*
AS/NZS 4130:2009	means the Australian Standard AS/NZS 4130:2009 *Polyethylene (PE) pipes for pressure applications*
AS/NZS 4131:2010	means the Australian Standard AS/NZS 4131:2010 *Polyethylene (PE) compounds for pressure pipes and fittings*
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples*
AS/NZS 5667.6	means the Australian Standard AS/NZS 5667.6 *Water Quality – Sampling – Guidance on sampling of rivers and streams*
AS/NZS 5667.10	means the Australian Standard AS/NZS 5667.10 *Water Quality – Sampling – Guidance on sampling of waste waters*
AS/NZS 5667.11	means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on sampling of groundwaters*
averaging period	means the time over which a limit is measured or a monitoring result is obtained
books	has the same meaning given to that term under the EP Act.
CCGIP	means Christmas Creek Green Iron Pilot Plant
CCY	means Central Contractors Yard

Term	Definition
CEO	means Chief Executive Officer of the Department. "submit to / notify the CEO" (or similar), means either: Director General Department administering the *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 or: info@dwer.wa.gov.au
Clean Fill	has the meaning defined in the Landfill Definitions
controlled waste	has the definition in Environmental Protection (Controlled Waste) Regulations 2004
Department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) 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.
DWER	means Department of Water and Environmental Regulation
emission	has the same meaning given to that term under the EP Act.
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
freeboard	means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point
GLpa	means gigalitres per annum
HDPE	means high density polyethylene
HRS	Hydrogen Refuelling Station
Inert Waste Type 1	has the meaning defined in the Landfill Definitions
Inert Waste Type 2	has the meaning defined in the Landfill Definitions
Landfill Definitions	means the document titled *"Landfill Waste Classification and Waste Definitions"* published by the Chief Executive Officer of the Department of Water and Environmental Regulation as amended from time to time
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.
mbgl	means metres below ground level

Term	Definition
MW	means megawatts
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
normal operating conditions	means any operation of a particular process (including abatement equipment) excluding start-up, shut-down and upset conditions, in relation to stack sampling or monitoring
NTU	means Nephelometric Turbidity Units
premises	refers to the premises to which this licence applies, as specified at the front of this licence and as shown on the premises maps Figures 1 - 22
prescribed premises	has the same meaning given to that term under the EP Act.
putrescible waste	has the meaning defined in the Landfill Definitions
quarterly	means the 4 inclusive periods from 1 January to 31 March, 1 April to 30 June, 1 July to 30 September and 1 October to 31 December
RO	means reverse osmosis
RTU	means Remote Telemetry Units
Schedule 1	means Schedule 1 of this Licence unless otherwise stated
Schedule 2	means Schedule 2 of this Licence unless otherwise stated
Schedule 3	means Schedule 3 of this Licence unless otherwise stated
Schedule 4	means Schedule 4 of this Licence unless otherwise stated
six monthly’	means the 2 inclusive periods from 1 January to 30 June and 1 July to 31 December
spot sample	means a discrete sample representative at the time and place at which the sample is taken
TDS	means Total Dissolved Solids
TSF	means Tailings Storage Facility
Uncontaminated Fill	has the meaning defined in the Landfill Definitions
µS/cm	means microsiemens per centimetre
waste	has the same meaning given to that term under the EP Act.
WWTP	means 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).

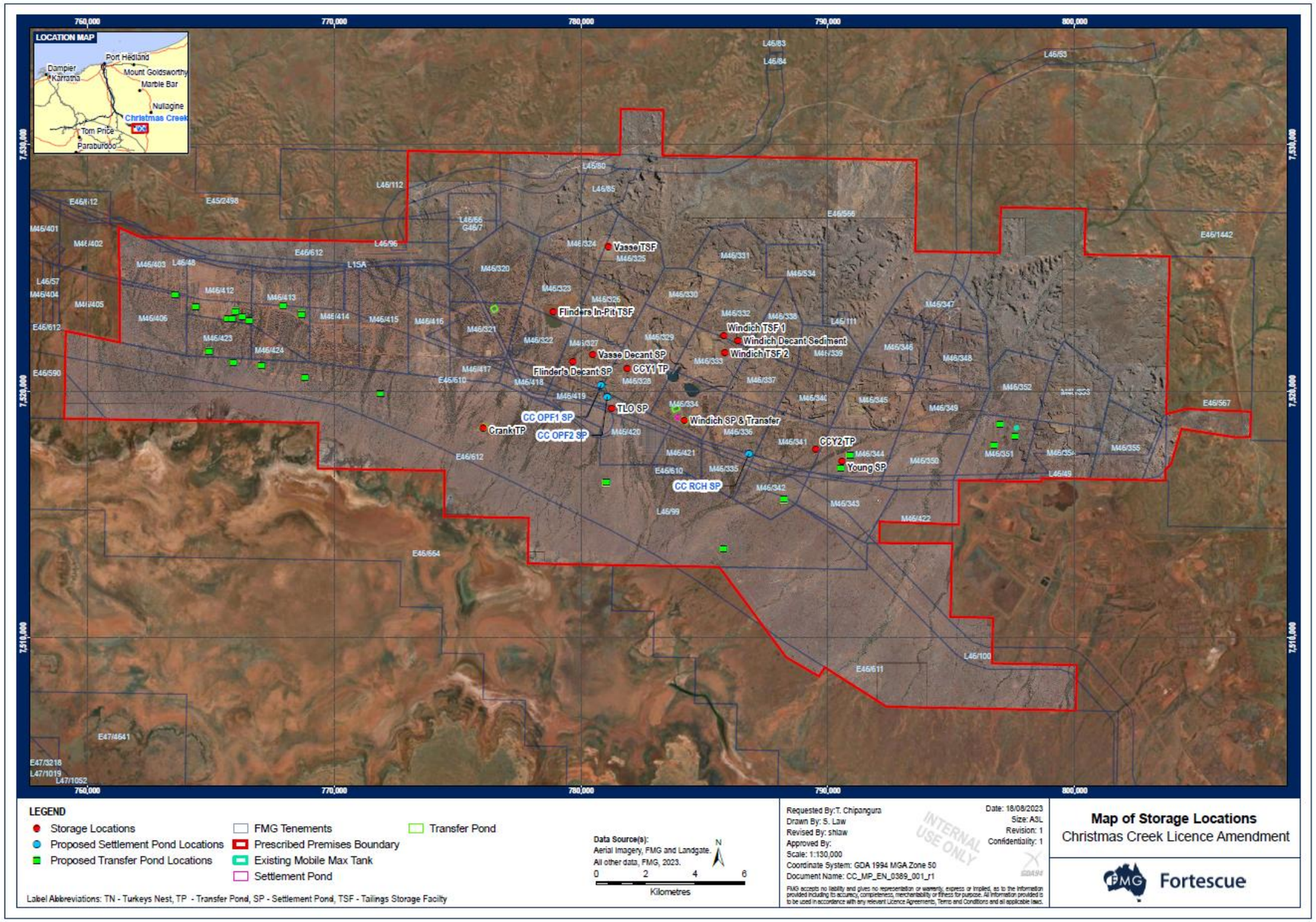

Figure 1: Premises Map with the red line depicting the Premises boundary

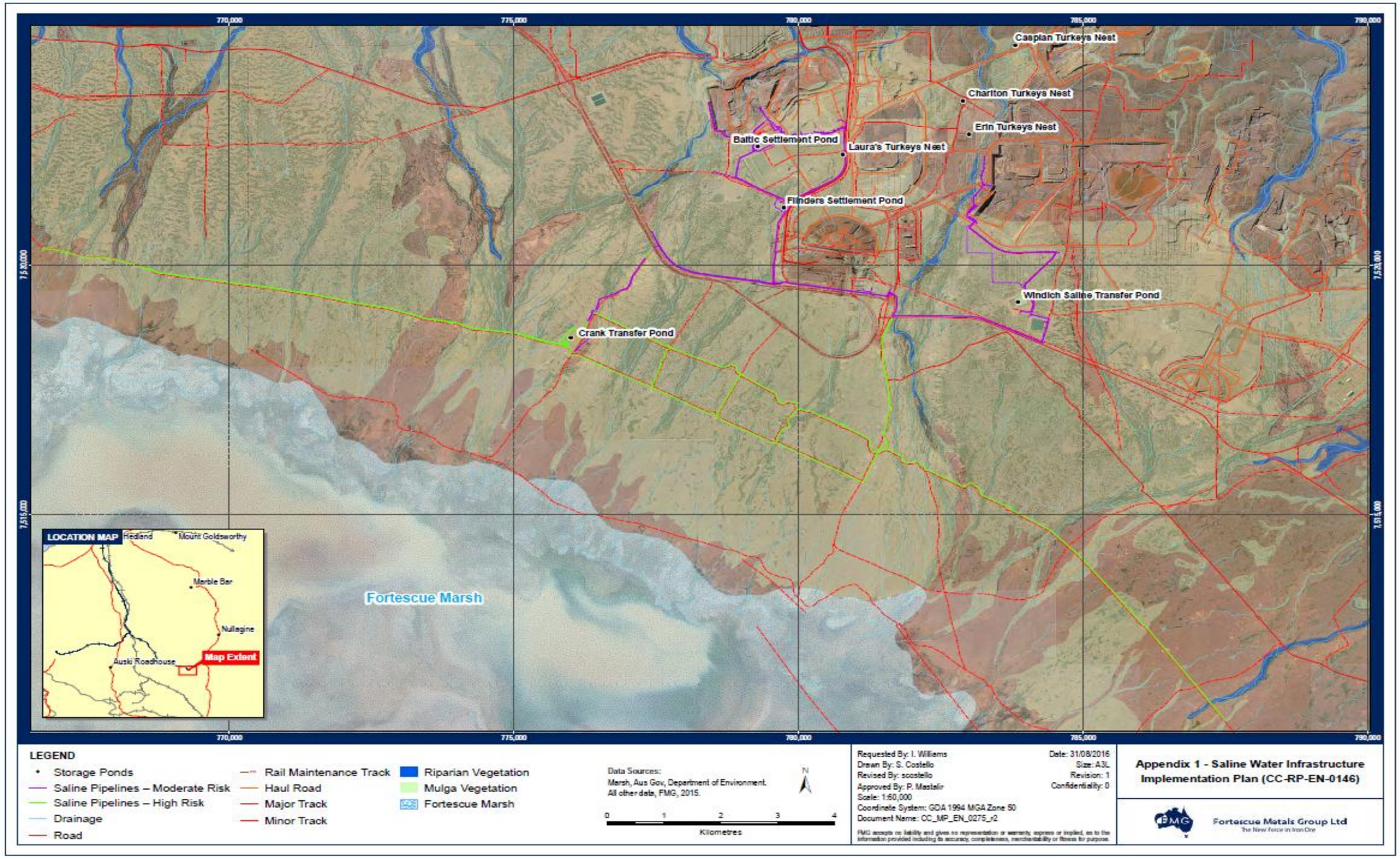

Figure 2: Map of environmentally sensitive areas referred to in Condition 3

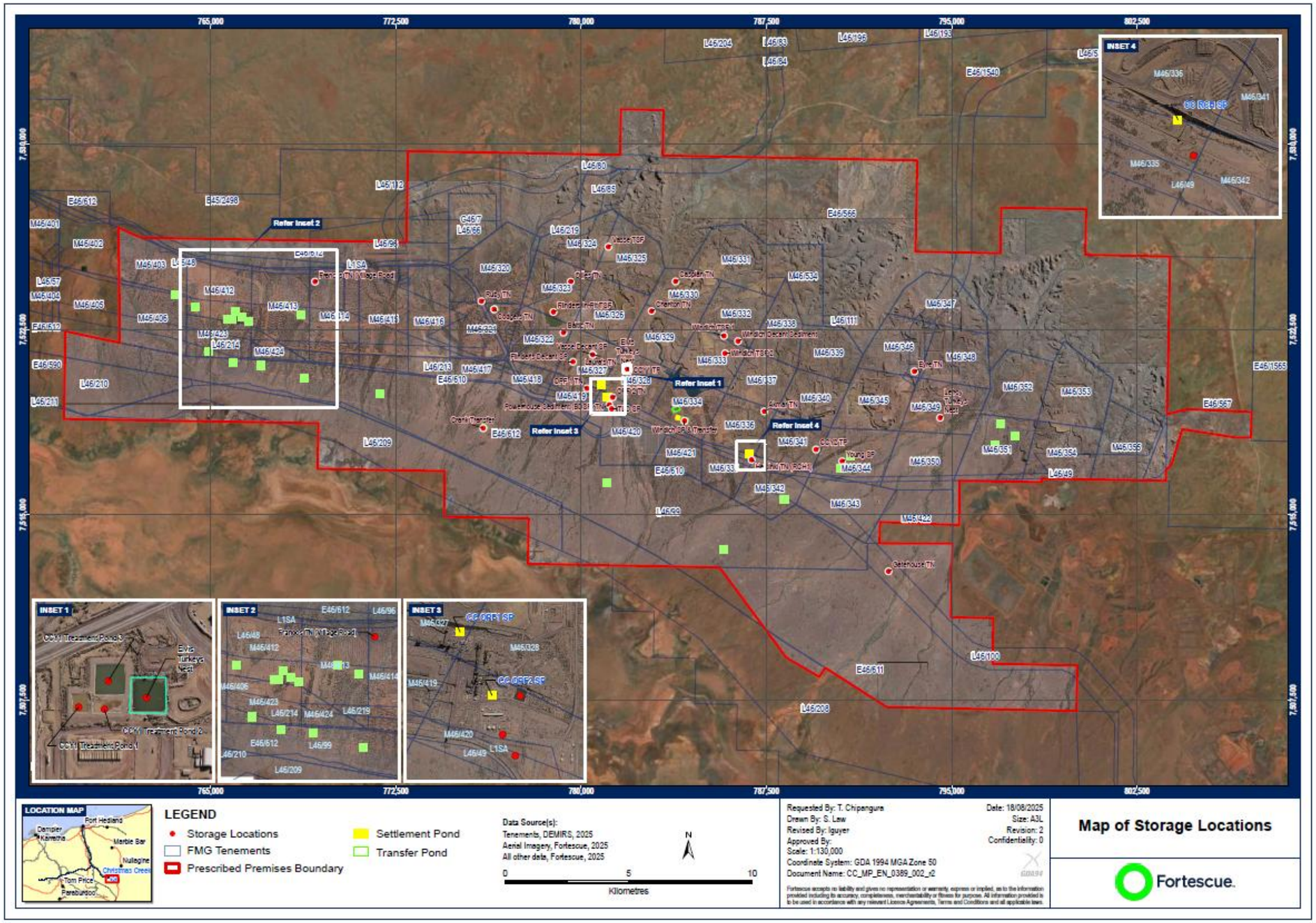

Figure 3: Map of containment infrastructure referred to in Condition 4, Table 3 (note Mobile Max Turkey's Nest can be relocated around the mine site to provide additional water storage capacity)

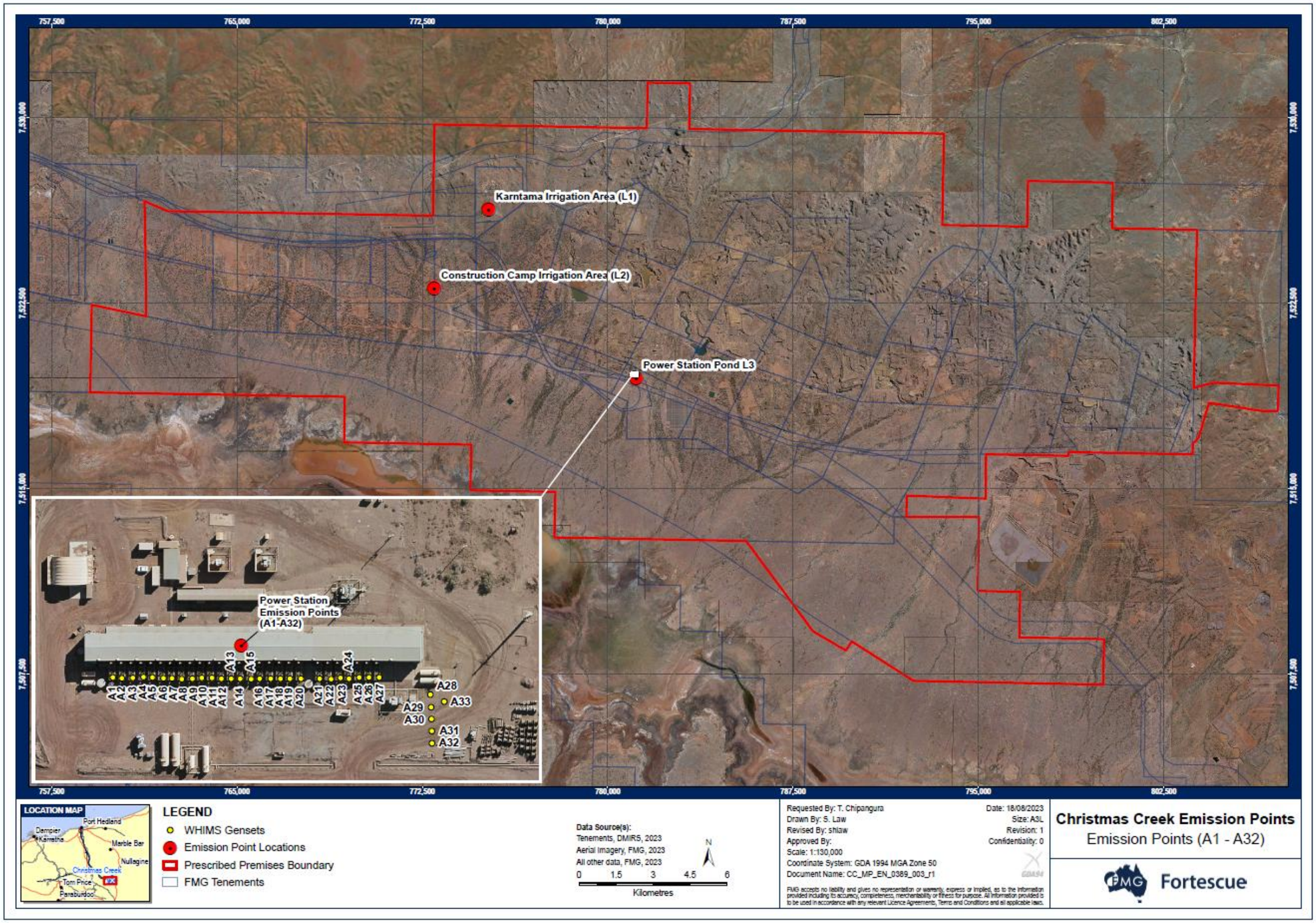

Figure 4: Map of emission points referred to in Condition 14, Table 8 and Condition 17, Table 11

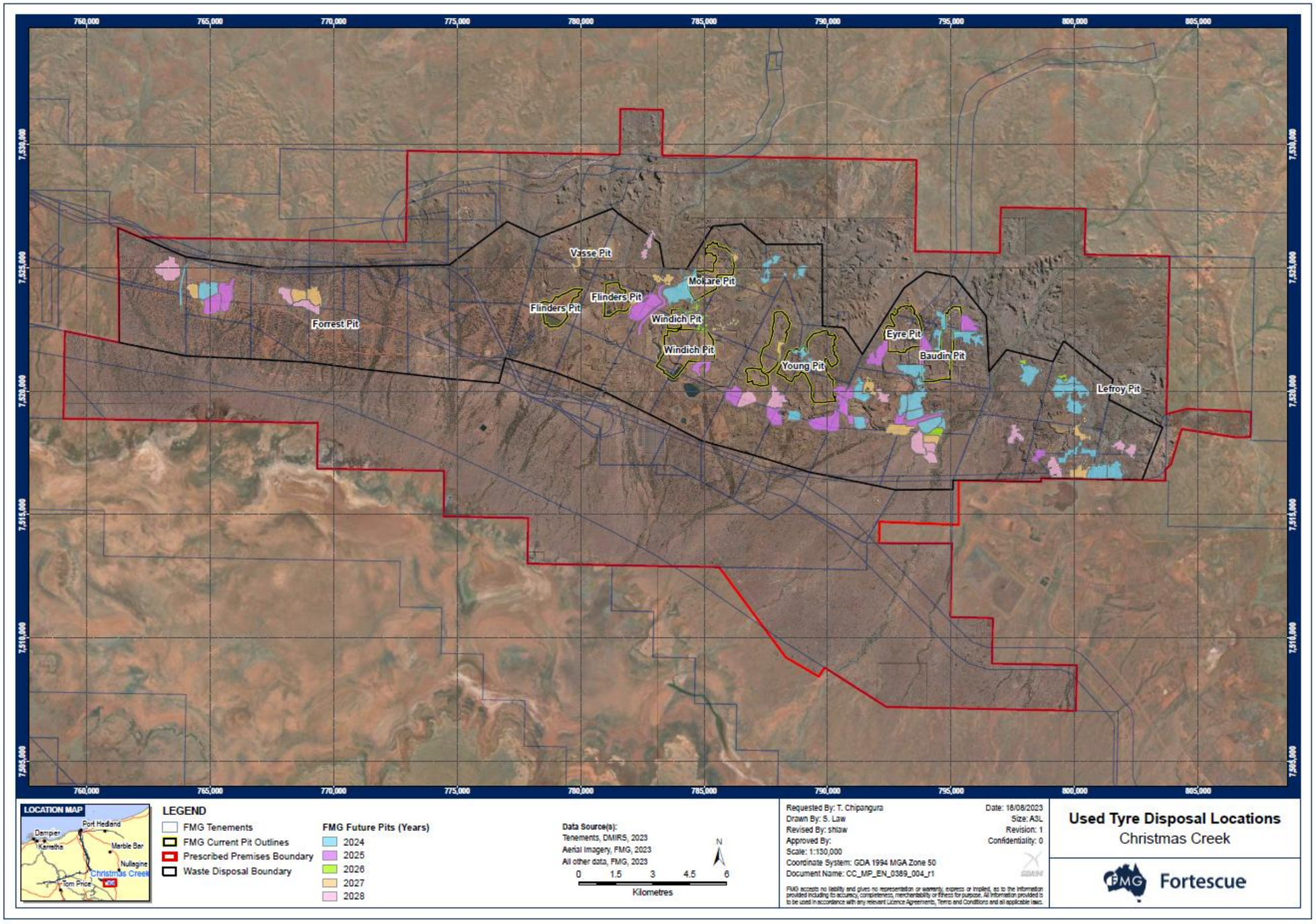

Figure 5: Locations of the used tyres and construction waste disposal locations, defined in Condition 7, Table 5

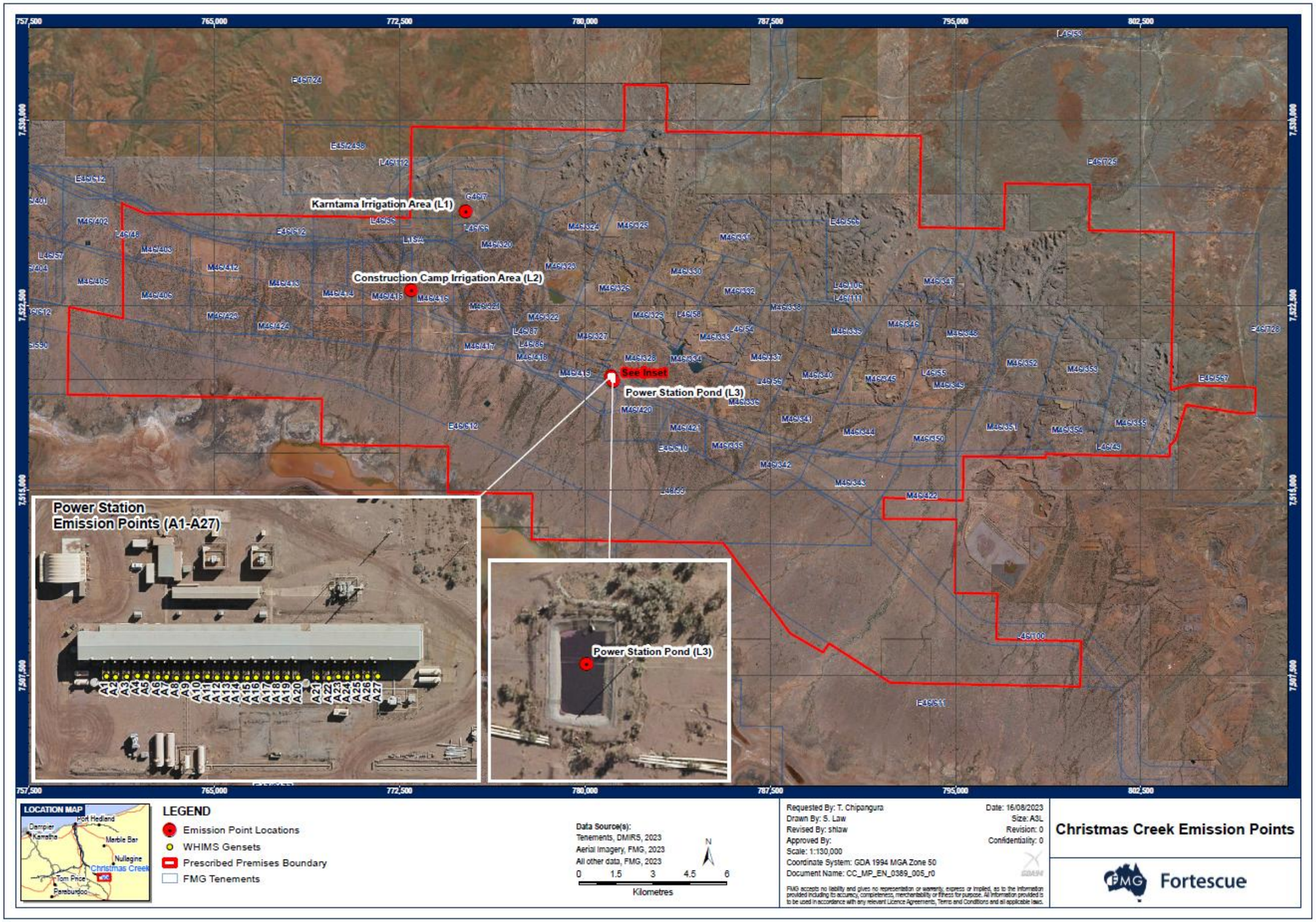

Figure 6: The locations of the emission points defined in Condition 14, Table 8 and Condition 17, Table 11 and monitoring locations defined in Condition 25, Table 15

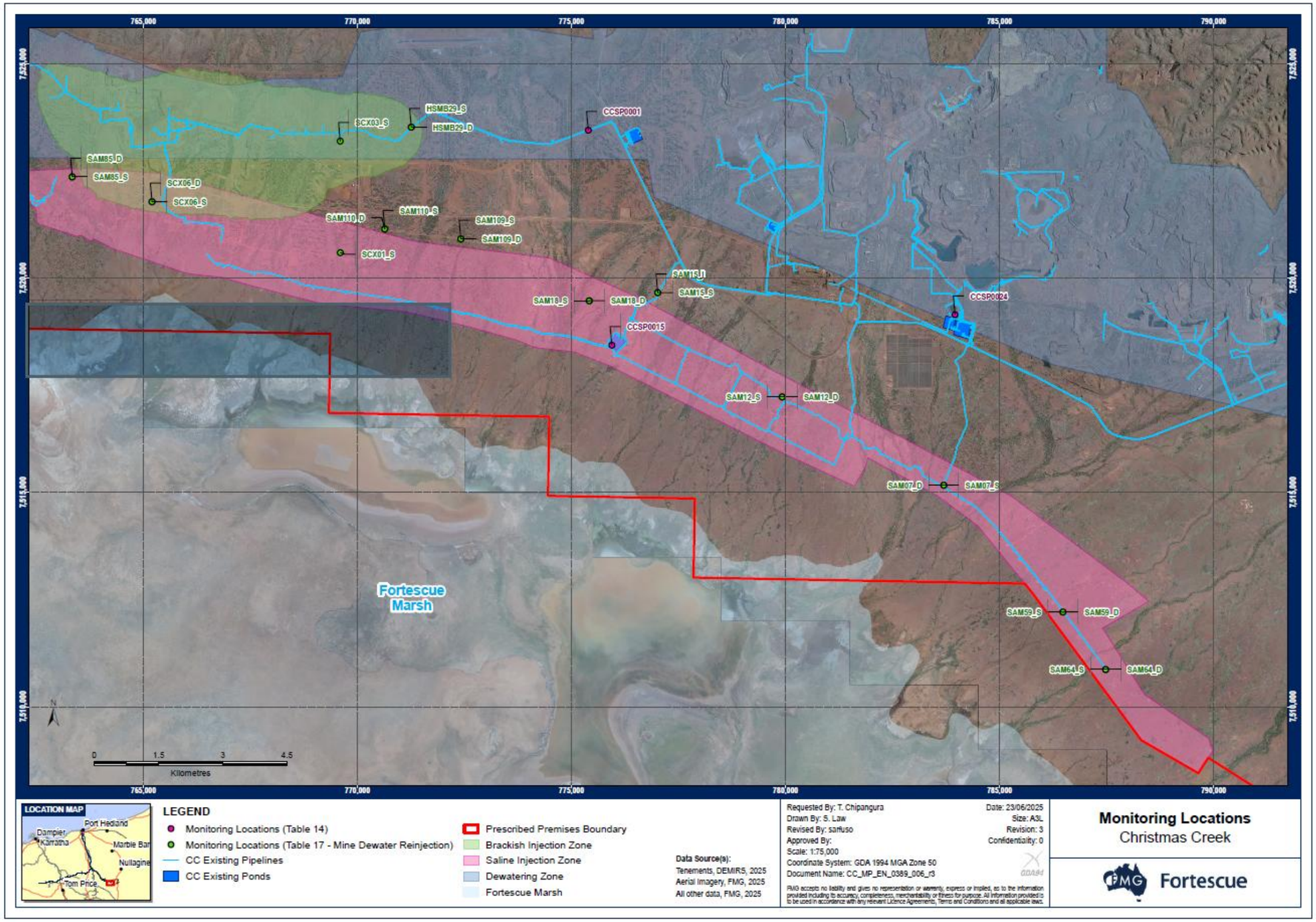

Figure 7: The locations of the emission points defined in Condition 15, Table 9 and monitoring locations defined in Condition 22, Table 13

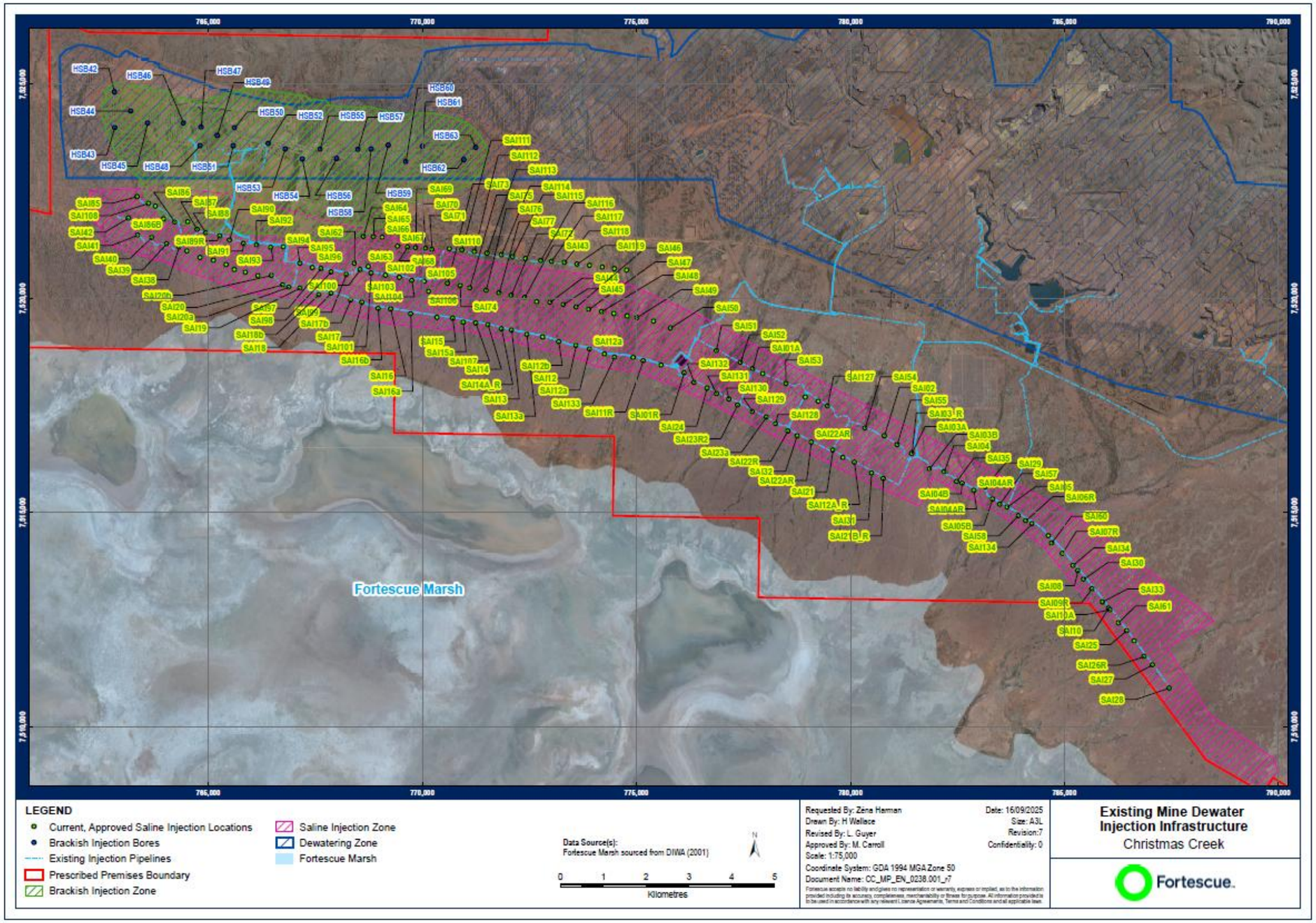

Figure 8: The locations of the emission points defined in Condition 16, Table 10

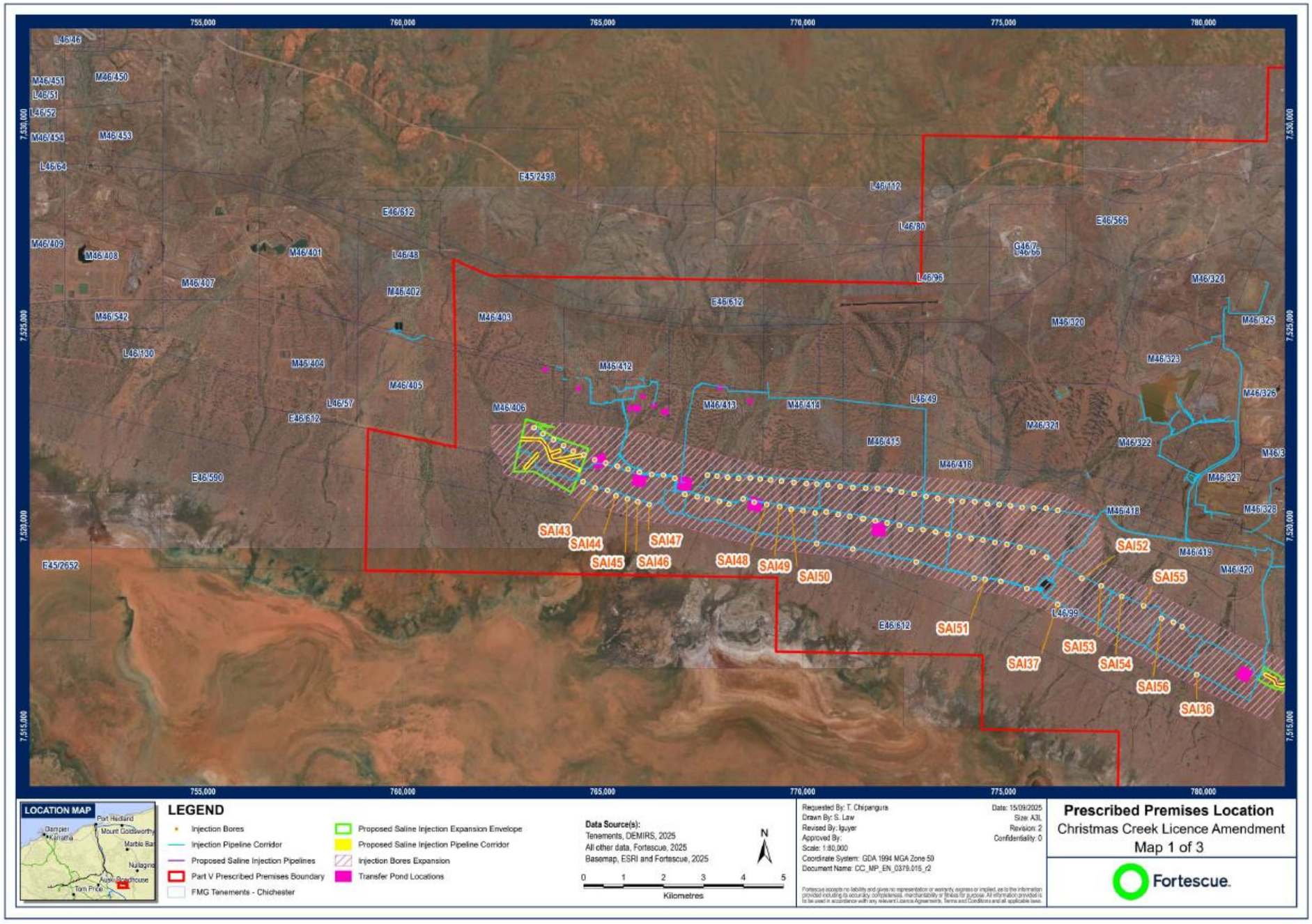

Figure 9: Map 1 of Expansion of Injection Bores emission points defined in Condition 16, Table 10

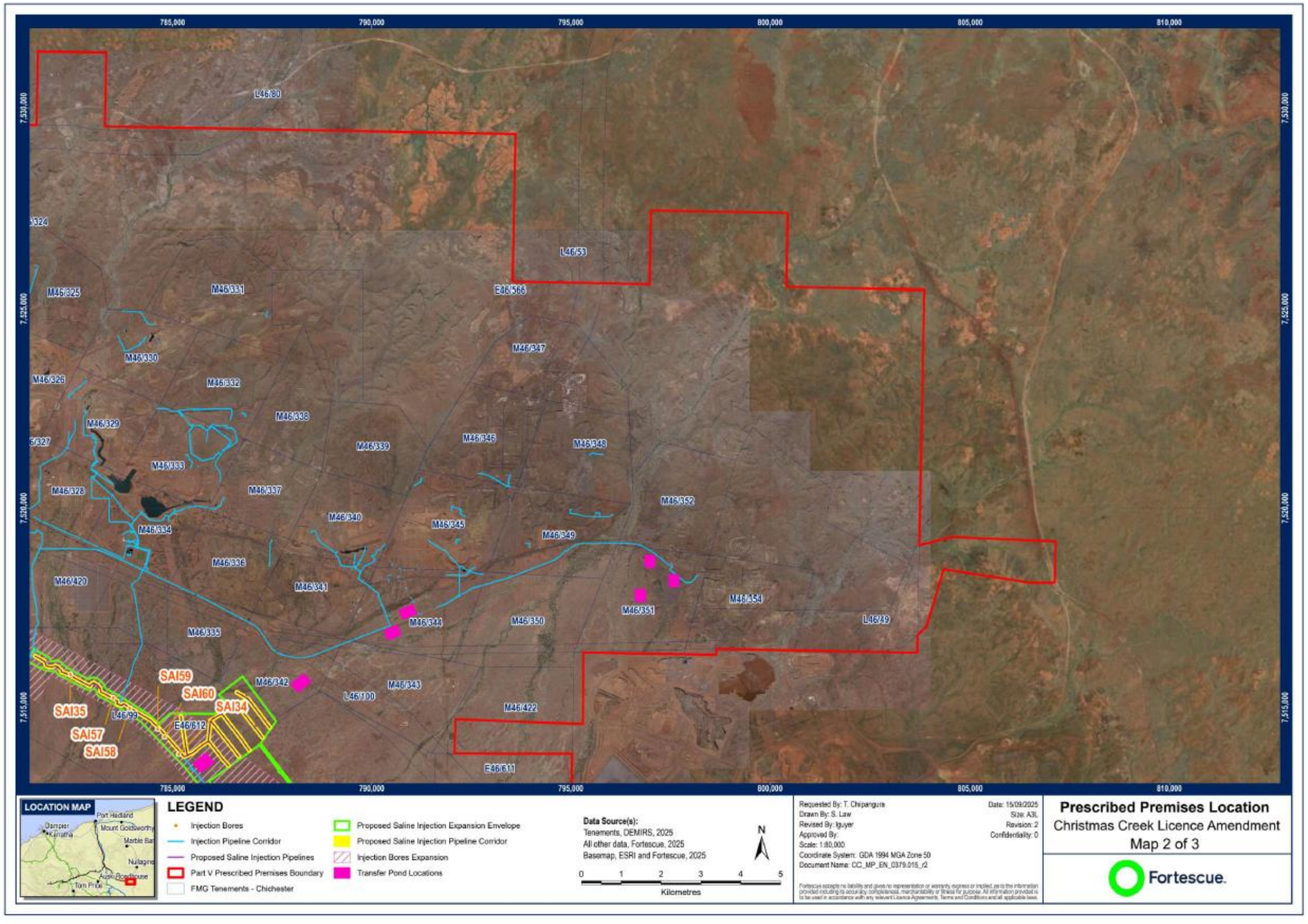

Figure 10: Map 2 of Expansion of Injection Bores emission points defined in Condition 16, Table 10

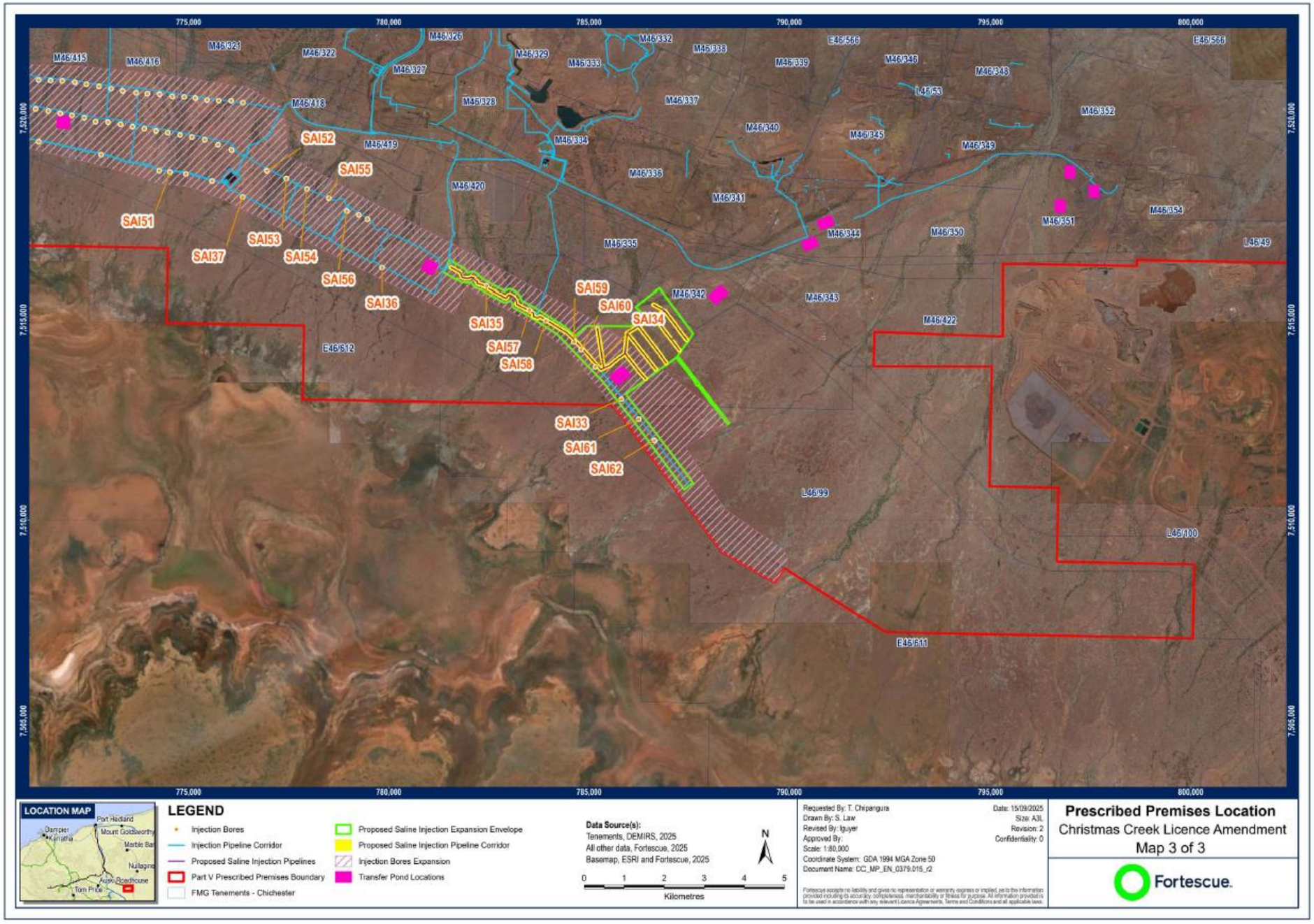

Figure 11: Map 3 of Expansion of Injection Bores emission points defined in Condition 16, Table 10

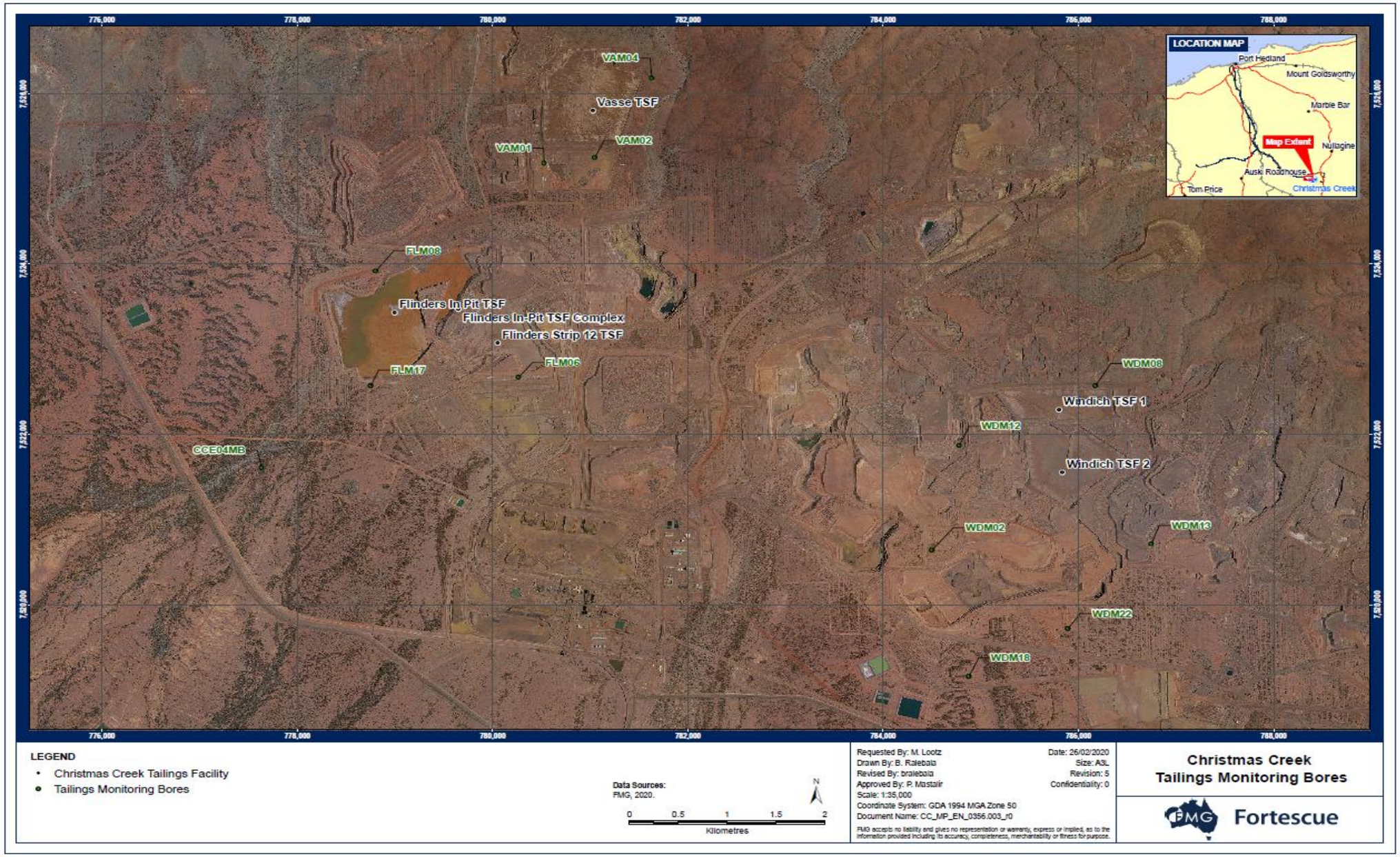

Figure 12: The locations of the TSF monitoring points defined in Condition 26, Table 17

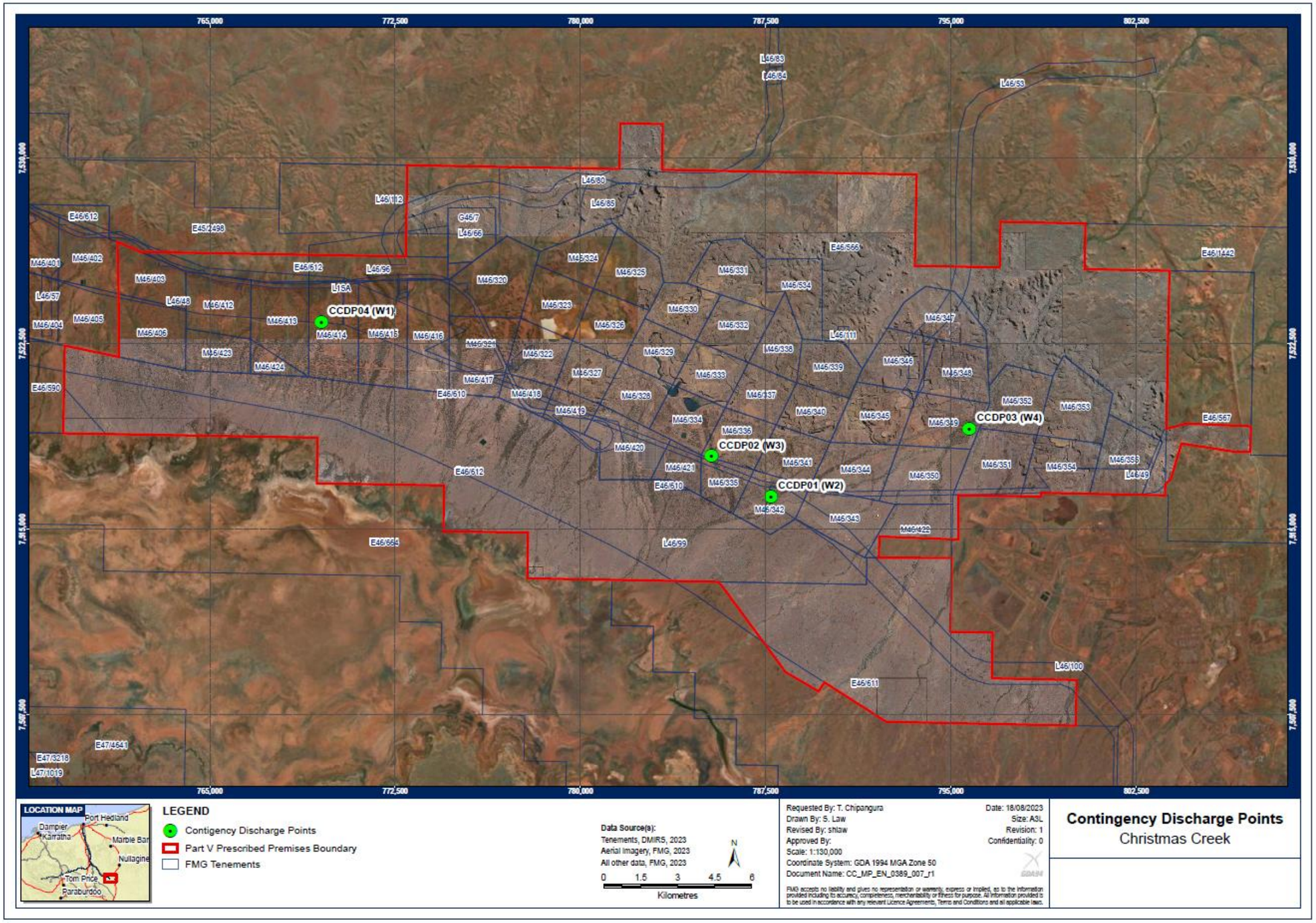

Figure 13: The locations of the monitoring locations defined in Condition 23, Table 14 and Condition 26, Table 17

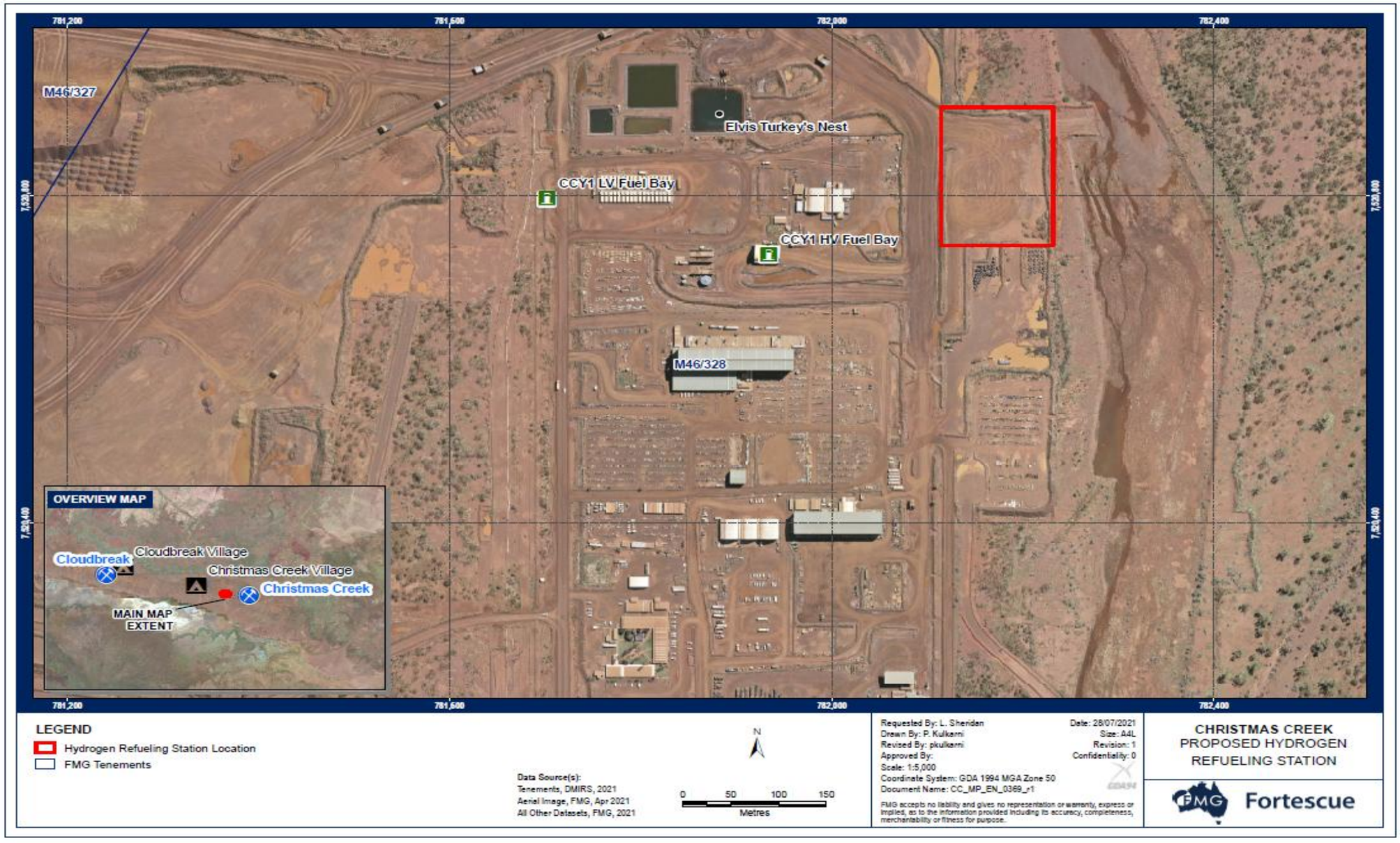

Figure 14: Location of the Hydrogen Refuelling Station

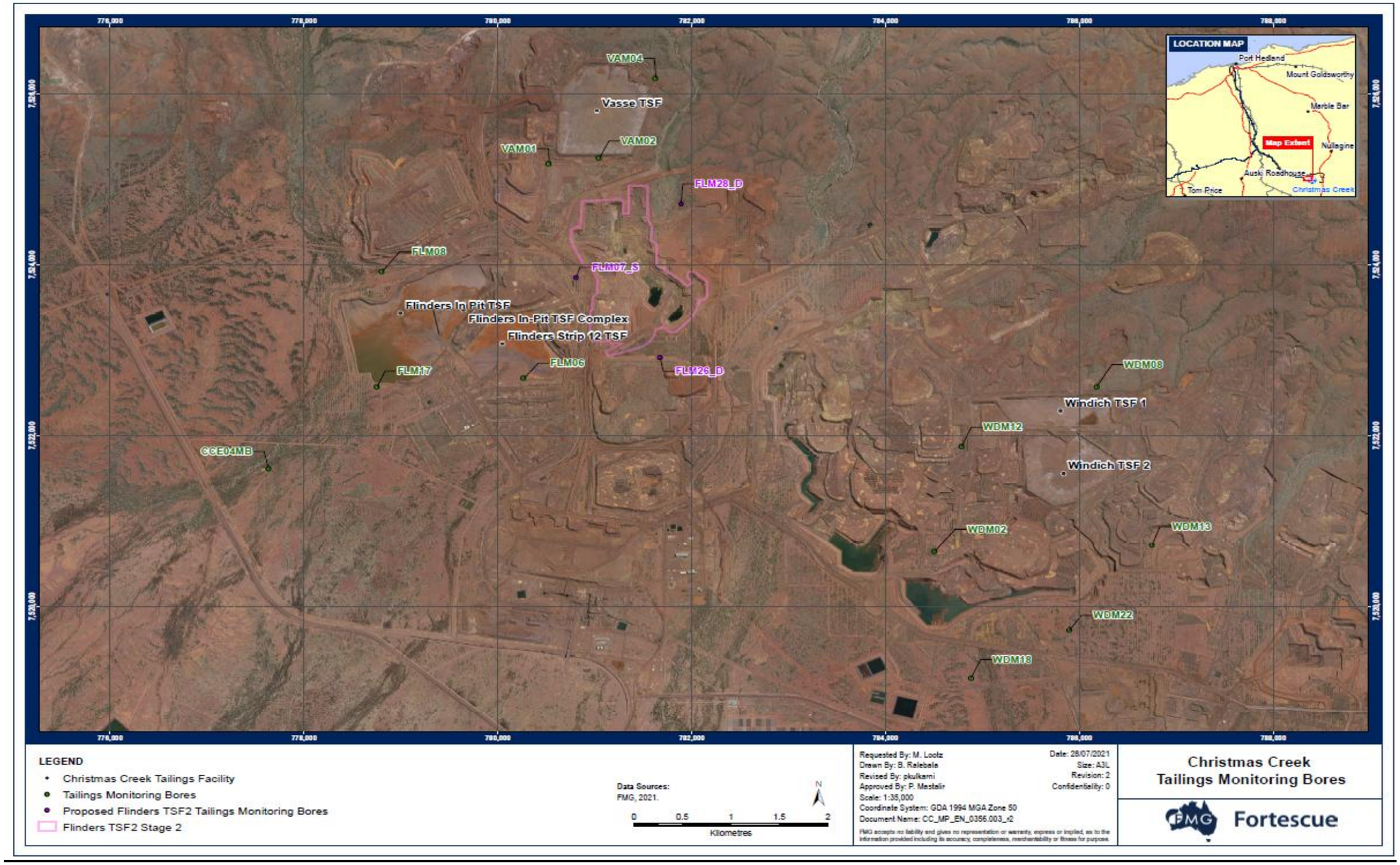

Figure 15: Proposed Flinders TSF2 Complex and groundwater monitoring bores

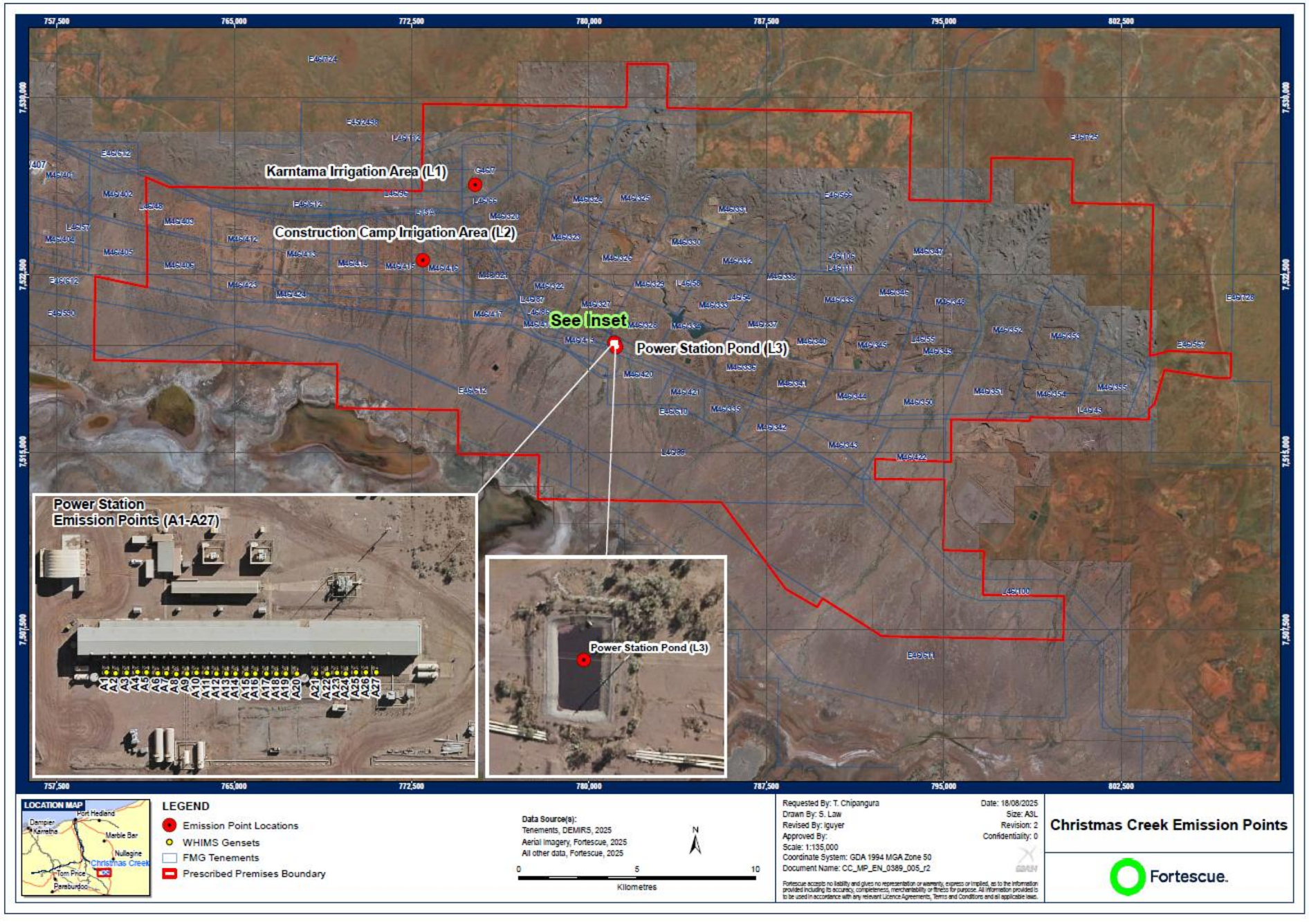

Figure 16: Location of the proposed new diesel generator sets

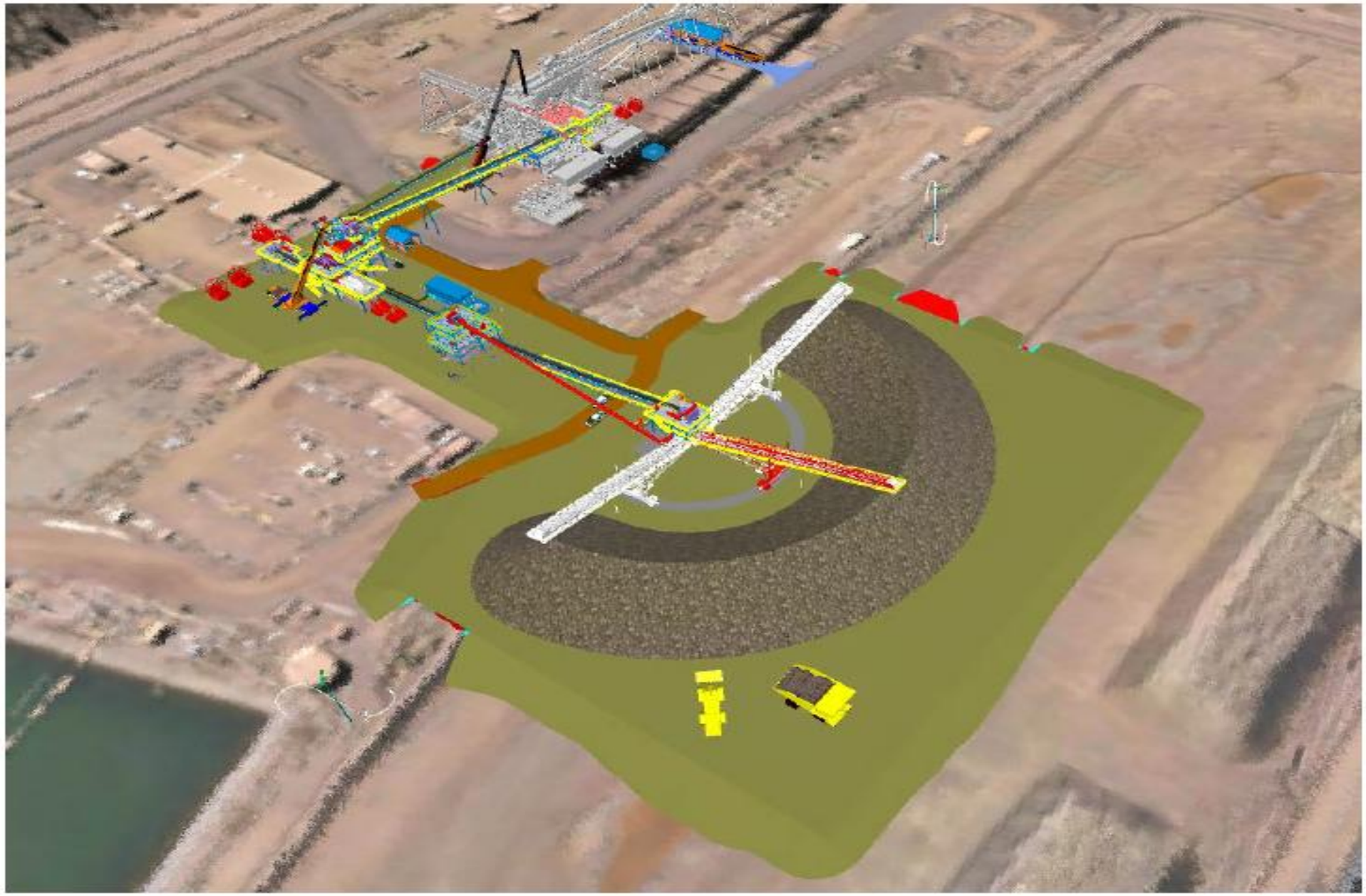

Figure 17: Indicative layout of proposed OPF1 Lump Plant

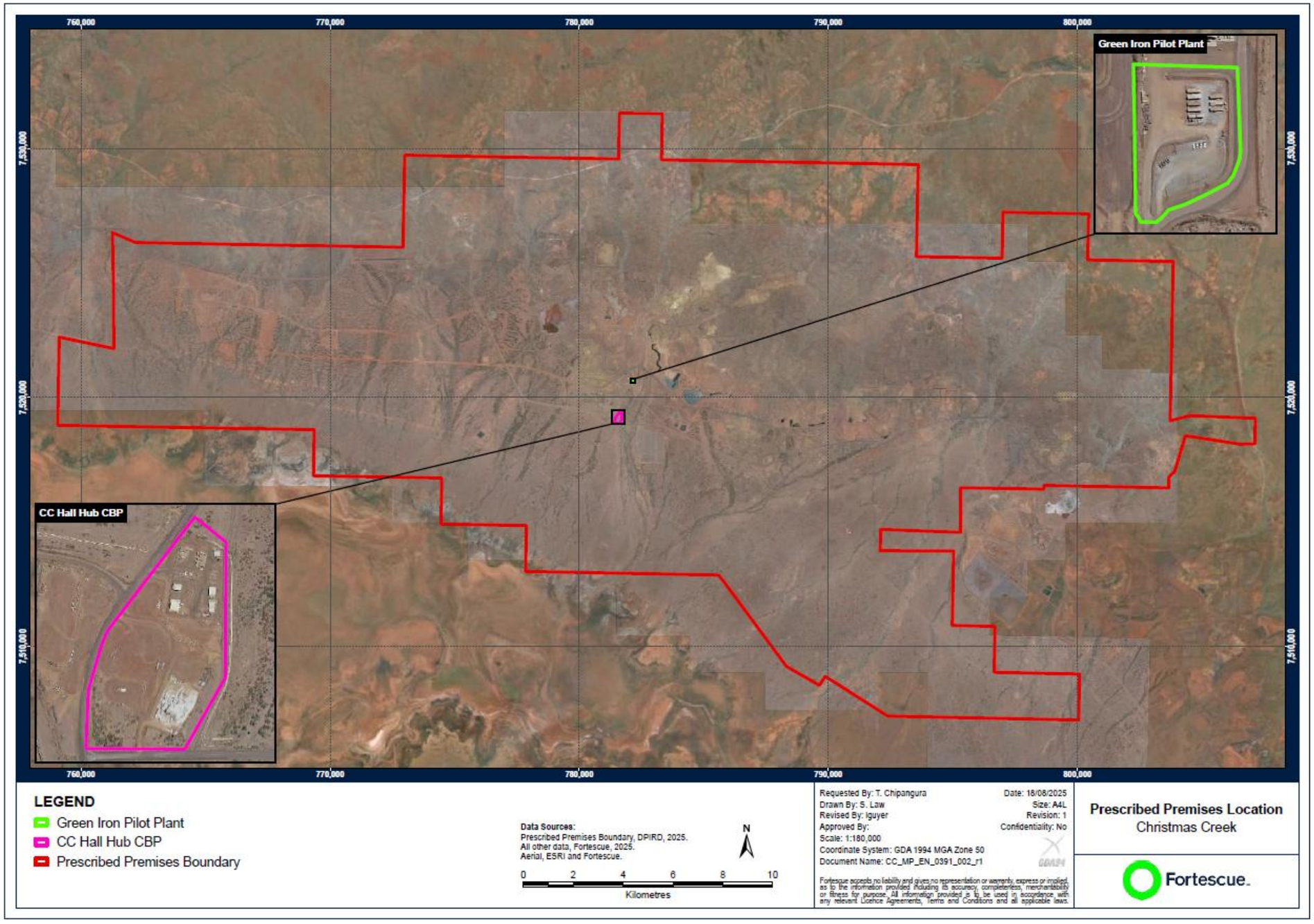

Figure 18: Locations of the proposed Green Iron Pilot Plant and Concrete Batching Plant

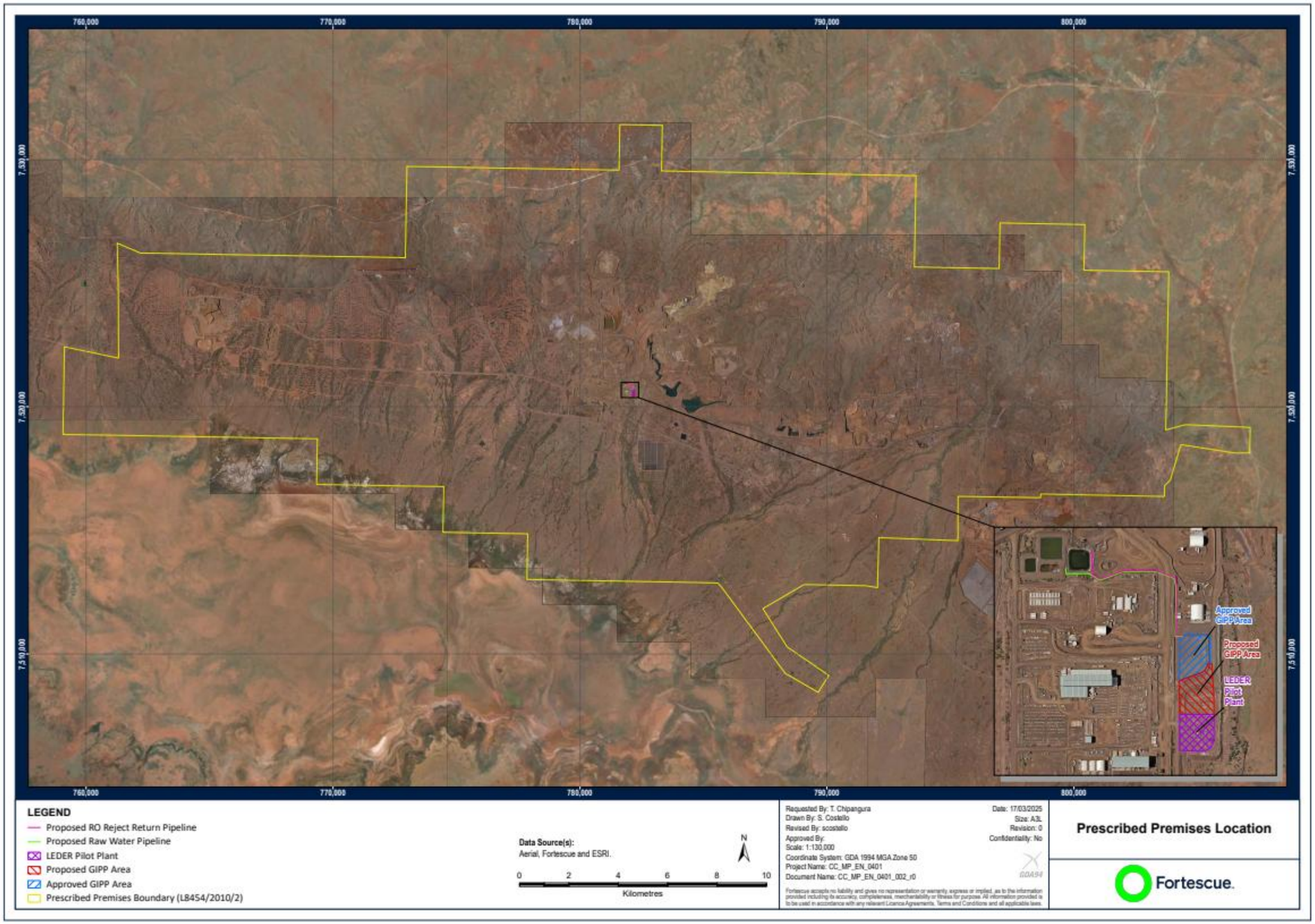

Figure 19: Extended Green Iron Pilot Plant and LEDER Pilot Plant

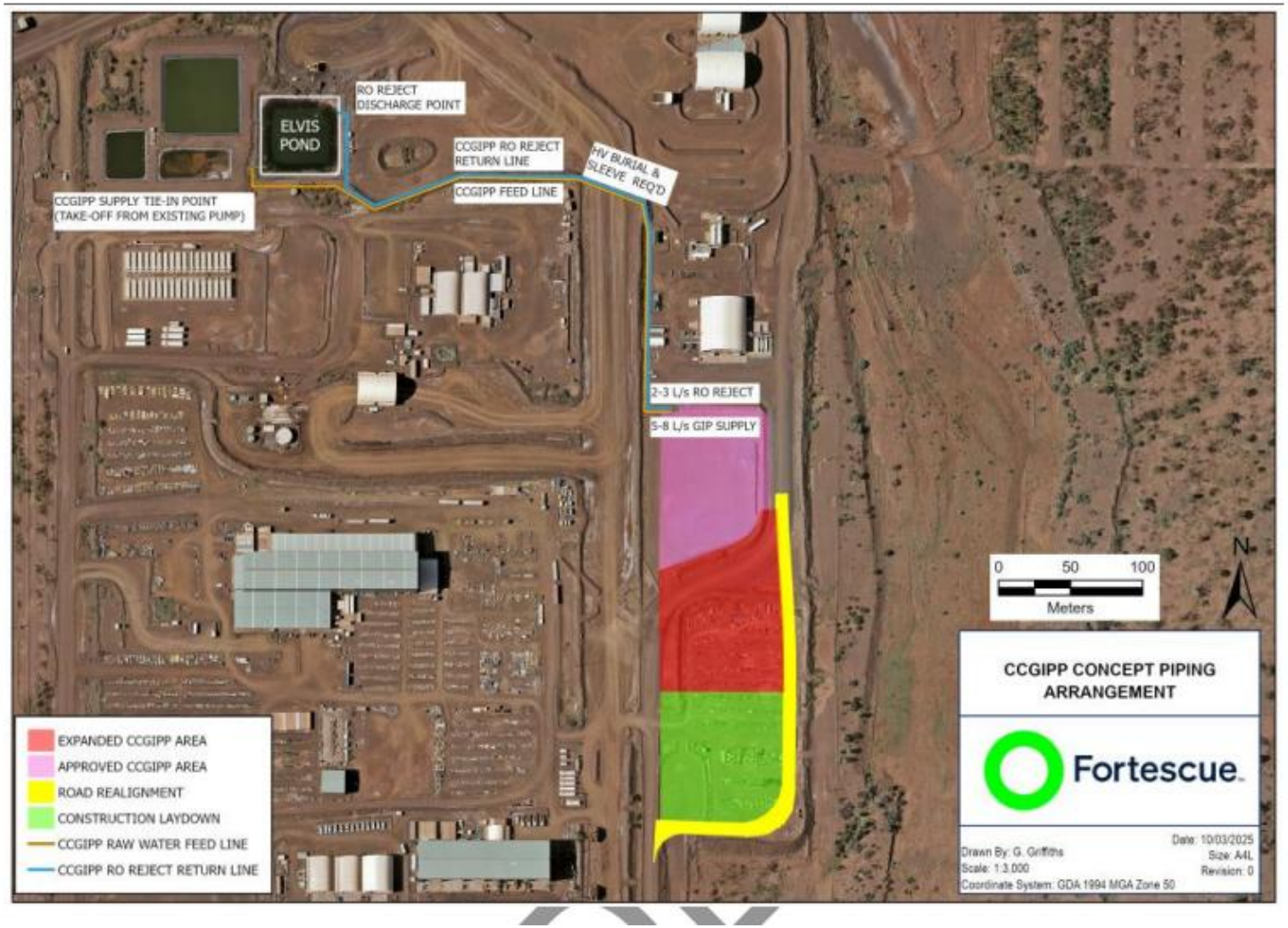

Figure 20: Indicative layout of the proposed pipeline and arrangement from Elvis TN to the CCGIPP

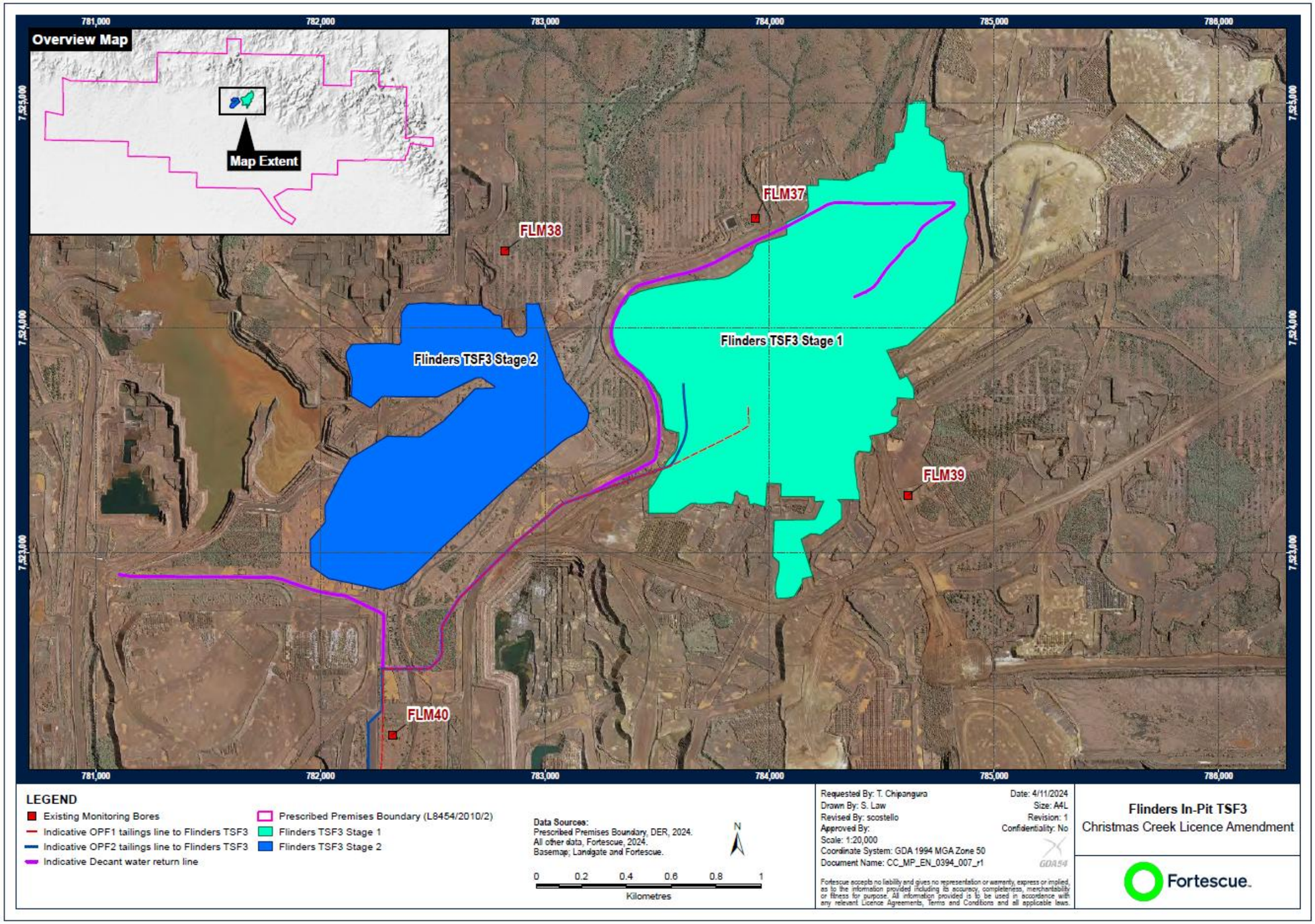

Figure 21: Flinders In-Pit TSF3, indicative tailings line and decant water return line and existing groundwater monitoring bores

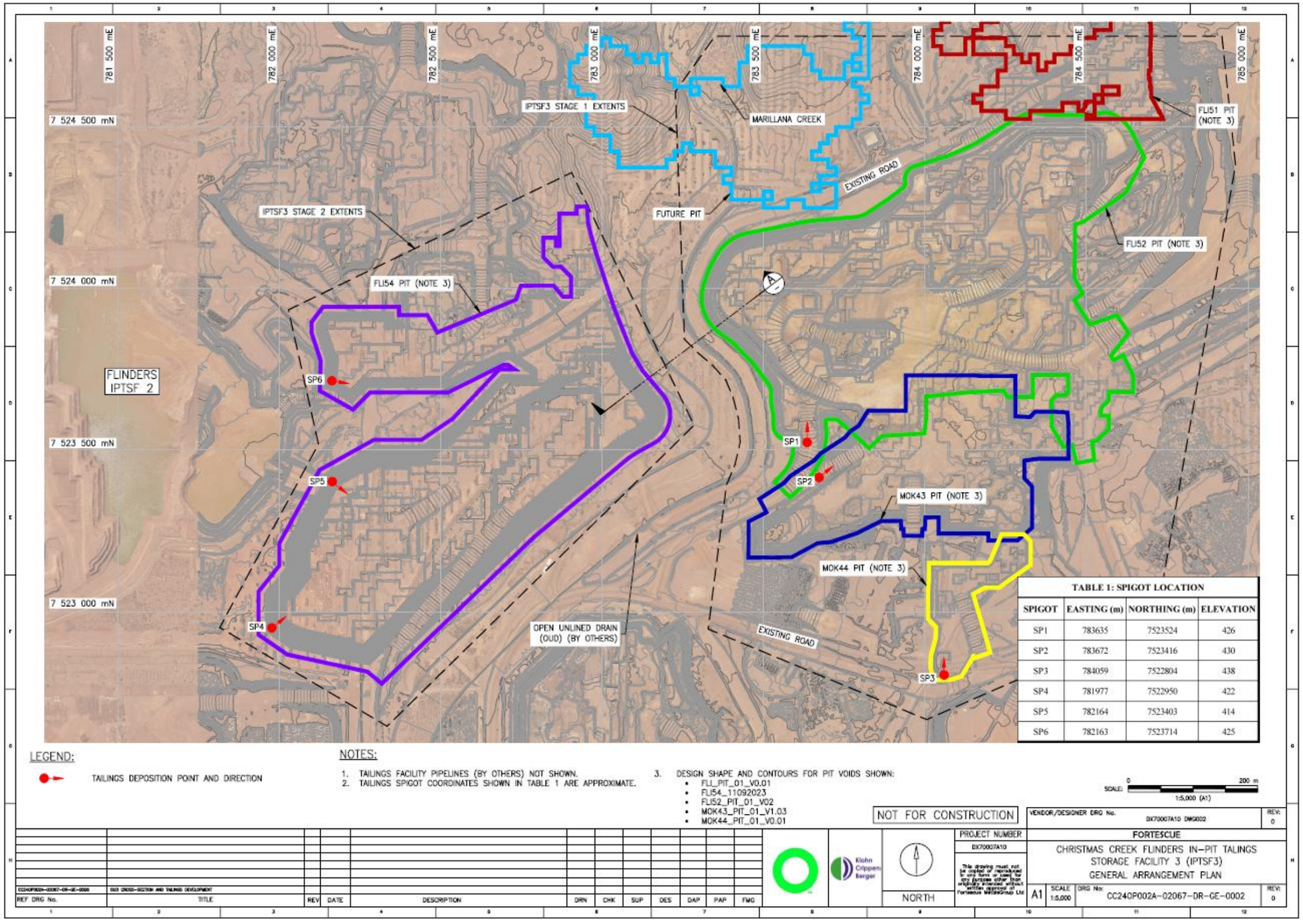

Figure 22: Flinders In-Pit TSF3 General arrangement plan including indicative tailings deposition locations

L8454/2010/2 (date of latest update: 22/01/2026)

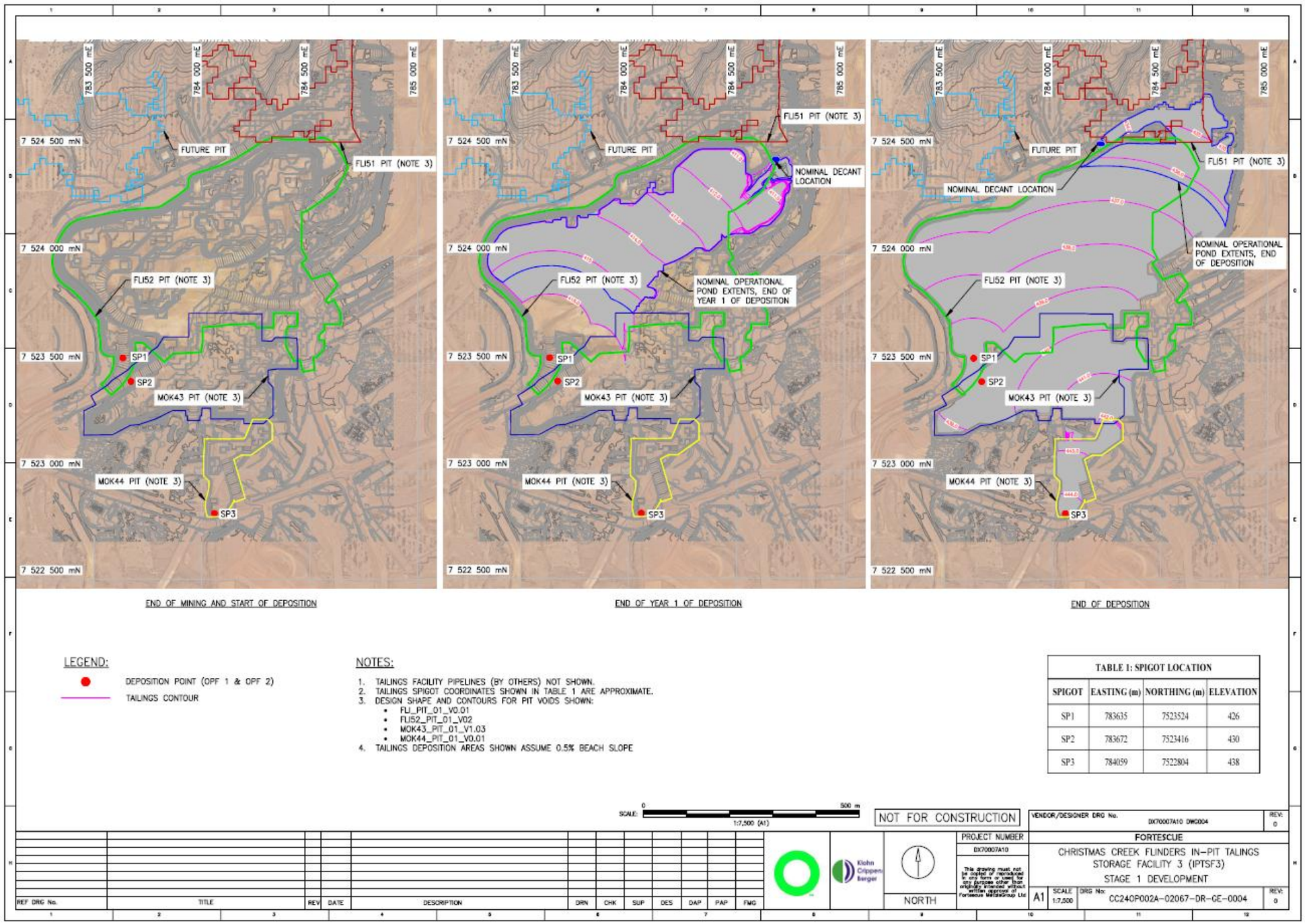

Figure 23: Flinders In-Pit TSF3 Stage 1 development

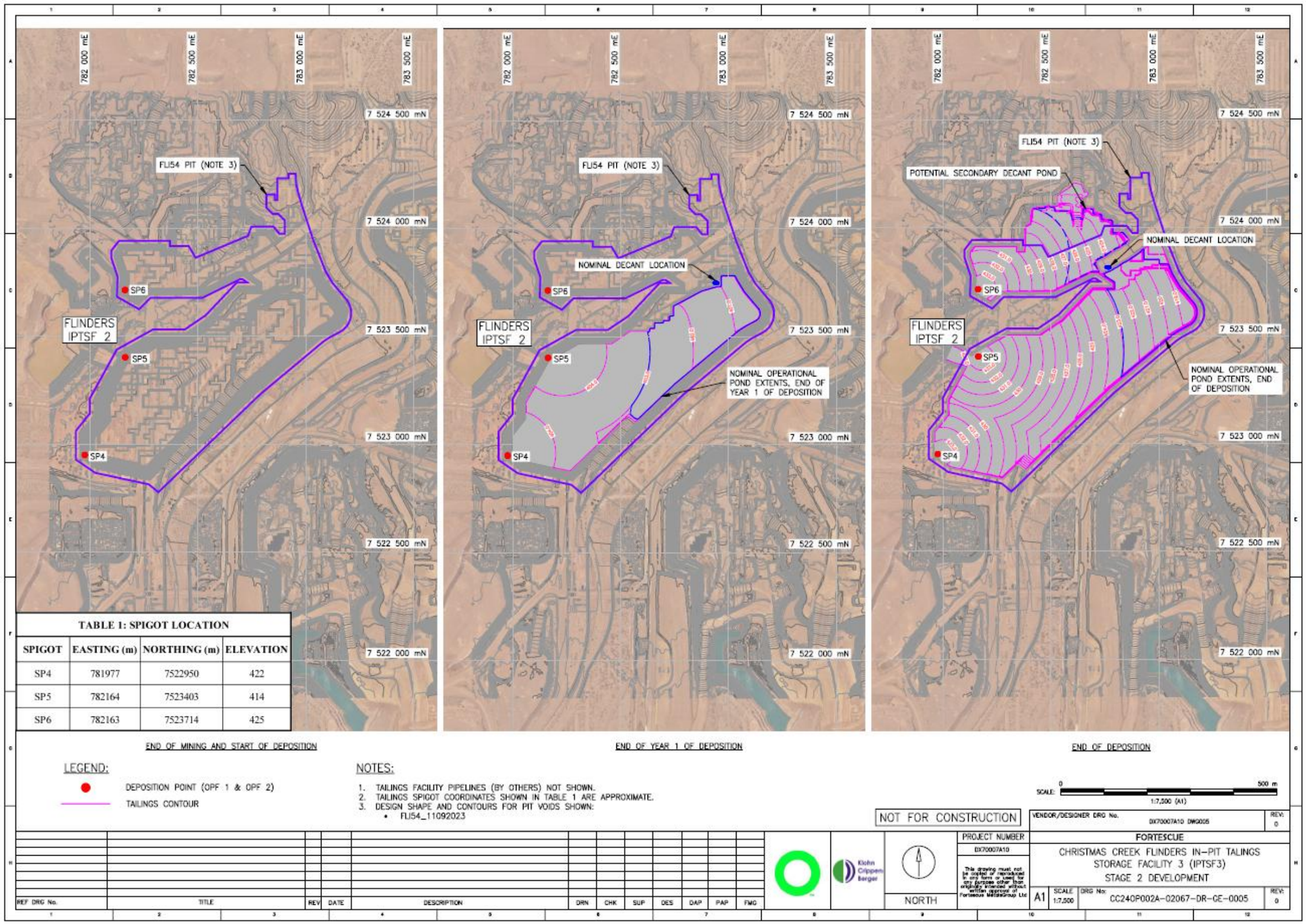

Figure 24: Flinders In-Pit TSF3 Stage 2 development

Schedule 2: Premises boundary

The corners of the premises boundary are the coordinates listed in Table 22.

Table 22: Premises boundary coordinates (GDA2020)

	Easting	Northing	Zone
1.	783334.4027	7531385.151	50
2.	783300.7376	7529538.791	50
3.	785018.6658	7529507.361	50
4.	786736.6113	7529475.741	50
5.	788454.5724	7529443.931	50
6.	790172.5529	7529411.929	50
7.	791890.5508	7529379.738	50
8.	793608.5649	7529347.355	50
9.	793573.6467	7527500.881	50
10.	793538.7036	7525654.402	50
11.	795256.327	7525621.791	50
12.	796973.9684	7525588.989	50
13.	797009.3216	7527435.506	50
14.	798727.1861	7527402.532	50
15.	800445.067	7527369.368	50
16.	800409.3037	7525522.812	50
17.	802126.9995	7525489.437	50
18.	803844.7134	7525455.872	50
19.	803808.5142	7523609.273	50
20.	803772.2893	7521762.672	50
21.	803736.0387	7519916.07	50
22.	803719.3206	7519065.05	50
23.	804521.8904	7519274.37	50
24.	807141.5399	7519163.66	50

	Easting	Northing	Zone
25.	807119.2396	7518132.591	50
26.	806518.4797	7518126.229	50
27.	804333.0099	7518466.13	50
28.	803903.0296	7517033.011	50
29.	803675.1553	7516817.699	50
30.	803666.407	7516372.68	50
31.	802730.0685	7516391.025	50
32.	802557.6318	7516394.406	50
33.	798654.2783	7516470.33	50
34.	798651.3957	7516320.594	50
35.	797831.521	7516336.377	50
36.	795310.4455	7516377.464	50
37.	795303.0981	7514584.262	50
38.	792103.8748	7514706.454	50
39.	792080.2652	7513846.948	50
40.	793476.32	7513843.539	50
41.	795031.439	7513839.741	50
42.	795026.854	7513600.003	50
43.	794974.245	7510849.708	50
44.	796690.24	7510816.753	50
45.	796654.661	7508970.211	50
46.	798370.468	7508937.042	50
47.	800086.293	7508903.683	50
48.	800050.276	7507057.1	50
49.	792382.219	7507212.99	50
50.	789876.1011	7508808.673	50
51.	789876.0761	7508808.634	50

	Easting	Northing	Zone
52.	789697.9733	7508532.575	50
53.	789642.2049	7508446.133	50
54.	789492.7853	7508532.575	50
55.	788309.9969	7509216.832	50
56.	787664.8114	7510089.235	50
57.	787382.8468	7510470.501	50
58.	785777.7005	7512640.938	50
59.	785588.6608	7512873.602	50
60.	784712.7546	7512889.827	50
61.	782996.6752	7512921.423	50
62.	781280.6128	7512952.827	50
63.	779564.5692	7512984.04	50
64.	777848.5407	7513015.061	50
65.	777881.8031	7514861.393	50
66.	776165.5855	7514892.205	50
67.	774449.386	7514922.826	50
68.	774482.2133	7516769.117	50
69.	772765.8232	7516799.529	50
70.	771049.4495	7516829.749	50
71.	769333.092	7516859.778	50
72.	769365.2793	7518706.015	50
73.	767648.7343	7518735.835	50
74.	765932.2037	7518765.464	50
75.	764215.6894	7518794.902	50
76.	762499.1926	7518824.149	50
77.	760782.71	7518853.206	50
78.	759066.2432	7518882.07	50

	Easting	Northing	Zone
79.	759097.1751	7520728.201	50
80.	759125.5834	7522424.855	50
81.	761316.6532	7521965.13	50
82.	761306.3879	7524522.295	50
83.	761263.2764	7526616.432	50
84.	762197.9213	7526216.035	50
85.	764341.7484	7526179.61	50
86.	766059.0835	7526150.241	50
87.	767776.435	7526120.681	50
88.	769493.801	7526090.931	50
89.	771211.1851	7526060.99	50
90.	772928.5855	7526030.858	50
91.	772961.0688	7527877.116	50
92.	772993.5291	7529723.368	50
93.	774711.3557	7529693.082	50
94.	776429.1974	7529662.605	50
95.	778147.0574	7529631.937	50
96.	779864.9343	7529601.079	50
97.	781582.8266	7529570.03	50
98.	781616.2871	7531416.372	50
99.	783334.4027	7531385.151	50

Schedule 3: Reporting & notification forms

Licence:	Licence holder:
Form: N1	Date of breach:

Notification of detection of the breach of a limit.

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

Part A

Licence number	
Name of operator	
Location of premises	
Time and date of the detection	

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

Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	
The dates of any previous N1 notifications for the Premises in the preceding 24 months.	

Name	
Post	
Signature on behalf of licence holder	
Date	

Schedule 4: Trigger and Threshold Criteria and Contingency Program

Fortescue recognises the need to establish an appropriate management system to alert operations of potential impacts that may result in a breach of environmental management objectives. At Christmas Creek, Fortescue has developed a management framework and a system of zoning (groundwater management zones) that takes into consideration the spatial extent of the project and operations, environmental receptors and future beneficial water use.

Key elements of the framework are described below.

1. Trigger & Threshold Criteria System
2. Mine Dewater Reinjection Area
3. Trigger & Threshold Criteria Response.

1. TRIGGER & THRESHOLD CRITERIA SYSTEM

The following sections describe the application of a two-tiered trigger-threshold criteria system and response plans.

- **Trigger criteria** serve as an internal early warning for potential unexpected groundwater level, water quality and water chemistry changes which may require operational changes.
- **Threshold criteria** are aligned with unexpected groundwater level changes that may potentially impact upon the environment and future beneficial use of the aquifer which require operational changes. Threshold exceedances are required to be externally reported.

2. MINE DEWATER REIJECTION AREA

Groundwater reinjection is governed under Part V of the *Environmental Protection Act 1986* and managed through a network of monitoring bores that covers the entire Christmas Creek reinjection area. Groundwater management zones for reinjection are split into Zone B and Zone C, which represent the saline and brackish reinjection areas, respectively. The distribution of mine dewater reinjection monitoring bores is presented in Figure 1 below.

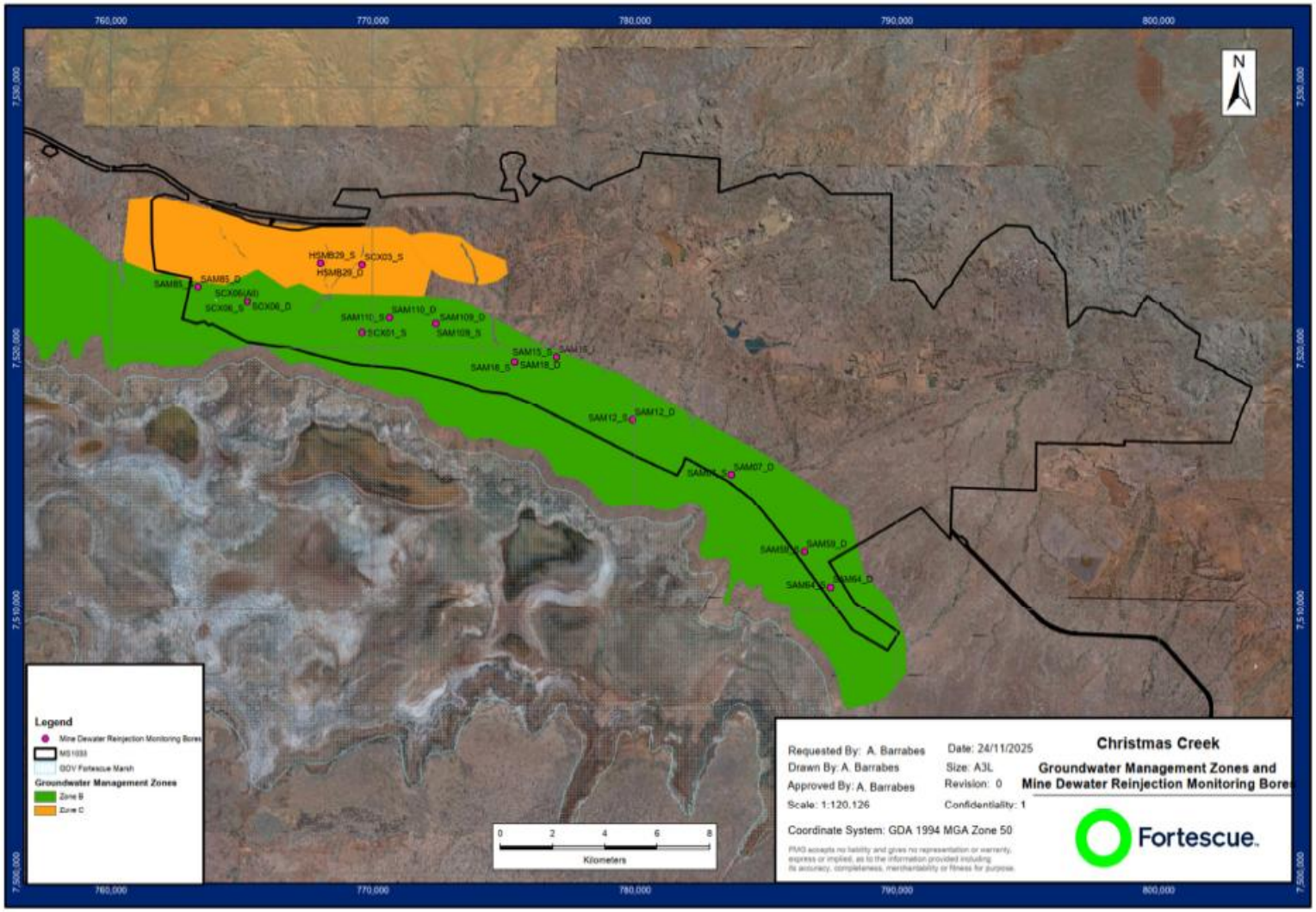

Figure 1: Mine dewater reinjection monitoring bores and groundwater management zones

Appropriate triggers and thresholds are assigned to both the shallow aquifer (alluvium and Tertiary Detritals) and to the deeper aquifers (Oakover Formation) for the saline and brackish reinjection areas. Trigger and threshold criteria are described in Table 1 below:

Table 1: Trigger and threshold criteria

Groundwater Management Zone	Monitoring Area	Aquifer	Trigger Criteria	Threshold Criteria
Zone B	Saline injection	Watertable	Increase to within 3 m below ground level	Increase to within 2.2 m below ground level
		Oakover Formation	Increase in the monitoring bore to within 0.5 m below ground level	N/A
Zone C	Brackish injection	Watertable	Increase to within 3 m below ground level	Increase to within 2.2 m below ground level
		Marra Mamba Formation	Increase to within 3 m below ground level	N/A

Coordinates, triggers, and thresholds for mine dewater reinjection monitoring bores are summarised in Table 2 below:

Table 2: Mine dewater reinjection monitoring bores and associated trigger and threshold criteria

Groundwater Management Zone	Monitoring Bore	Ground Elevation (mAHD)	Easting (mE)	Northing (mN)	Target aquifer	Trigger (meters below ground level)	Trigger (mAHD)	Threshold (meters below ground level)	Threshold (mAHD)
B	SAM07_D	415.3	783697	7515171	Oakover Formation	0.5	414.8	n/a	n/a
B	SAM07_S	415.3	783697	7515171	Tertiary Detrital	3	412.3	2.2	413.1
B	SAM109_D	418.7	772413.5	7520923.7	Oakover Formation	0.5	418.2	n/a	n/a
B	SAM109_S	418.7	772413.5	7520923.7	Lower TD.	3	415.7	2.2	416.5
B	SAM110_D	418.3	770635.9	7521153.6	Oakover Formation	0.5	417.8	n/a	n/a
B	SAM110_S	418.3	770635.9	7521153.6	Lower TD.	3	415.3	2.2	416.1
B	SAM12_D	419.7	779920	7517232	Oakover Formation	0.5	419.2	n/a	n/a
B	SAM12_S	419.7	779920	7517232	Tertiary Detrital	3	416.7	2.2	417.5
B	SAM15_I	421.5	777013	7519669	Oakover Formation	0.5	421	n/a	n/a
B	SAM15_S	421.5	777013	7519669	Alluvial Aquifer (TA/TD)	3	418.5	2.2	419.3
B	SAM18_D	416.9	775413	7519478	Oakover Formation	0.5	416.4	n/a	n/a
B	SAM18_S	416.9	775413	7519478	Tertiary Detrital	3	413.9	2.2	414.7
B	SAM59_D	414	786479	7512212	Oakover Formation	0.5	413.5	n/a	n/a
B	SAM59_S	414	786479	7512213	Tertiary Detrital	3	411	2.2	411.8
B	SAM64_D	413.6	787477	7510869	Oakover Formation	0.5	413.1	n/a	n/a
B	SAM64_S	413.6	787477	7510869	Tertiary Detrital	3	410.6	2.2	411.4
B	SAM85_D	417.4	783335.8	7522370.9	Oakover Formation	0.5	416.9	n/a	n/a
B	SAM85_S	417.4	783335.8	7522370.9	Lower TD.	3	414.4	2.2	415.2
B	SCX01_S	414.4	769599	7520601	Oakover Formation	0.5	413.9	n/a	n/a
B	SCX06(All)	415	765200	7521790	Tertiary Detrital	3	412	2.2	412.8
B	SCX06_D	415	765200	7521790	Lower TD.	0.5	414.5	n/a	n/a
B	SCX06_S	415	765200	7521790	Oakover Formation	0.5	414.5	n/a	n/a
C	HSMB29_D	427.9	767997	7523252	Marra Mamba Fm	3	424.9	n/a	n/a
C	HSMB29_S	427.9	767997	7523252	Tertiary Detrital	3	424.9	2.2	425.7
C	SCX03_S	428	769596	7523206	Tertiary Detrital	3	425	2.2	425.8

3. TRIGGER & THRESHOLD CRITERIA RESPONSE

Figure 2 provides a summary of steps taken when trigger/threshold exceedances occur. Exceedances are internally investigated: where a trigger criteria is exceeded, parameter(s) are re-measured to confirm the exceedance; where the reading is confirmed, Fortescue will implement the following where:

Trigger criteria is exceeded;

- Initiate a hydrogeological assessment with the objective of determining the reason(s) for the divergence and if necessary, increase monitoring frequency or extent; if necessary, implement changes to the water management system. This includes, but is not limited to:
  - Adjust injection volumes in impacted area;
  - Adjust volumes of water piped to the affected area by redirecting water to other injection areas;
  - Redirect disposal to void mine pits (where available); and/or
  - Explore improvements in the trigger criteria based on new data.

Threshold criteria is exceeded;

- Initiate a hydrogeological assessment with the objective of determining the reason(s) for the breach;
- Continue to modify operational activities to ensure that the groundwater level and/or salinity changes do not continue to breach the threshold value. This includes, but is not limited to:
  - Adjust injection volumes in impacted area;
  - Adjust volumes of water piped to the affected area by redirecting water to other injection areas; and/or
  - Redirect disposal to void mine pits (where available).
- Report exceedance to DWER within 28 calendar days;
- Report exceedance as part of annual environmental monitoring;
- Explore improvements in the threshold criteria based on new data.

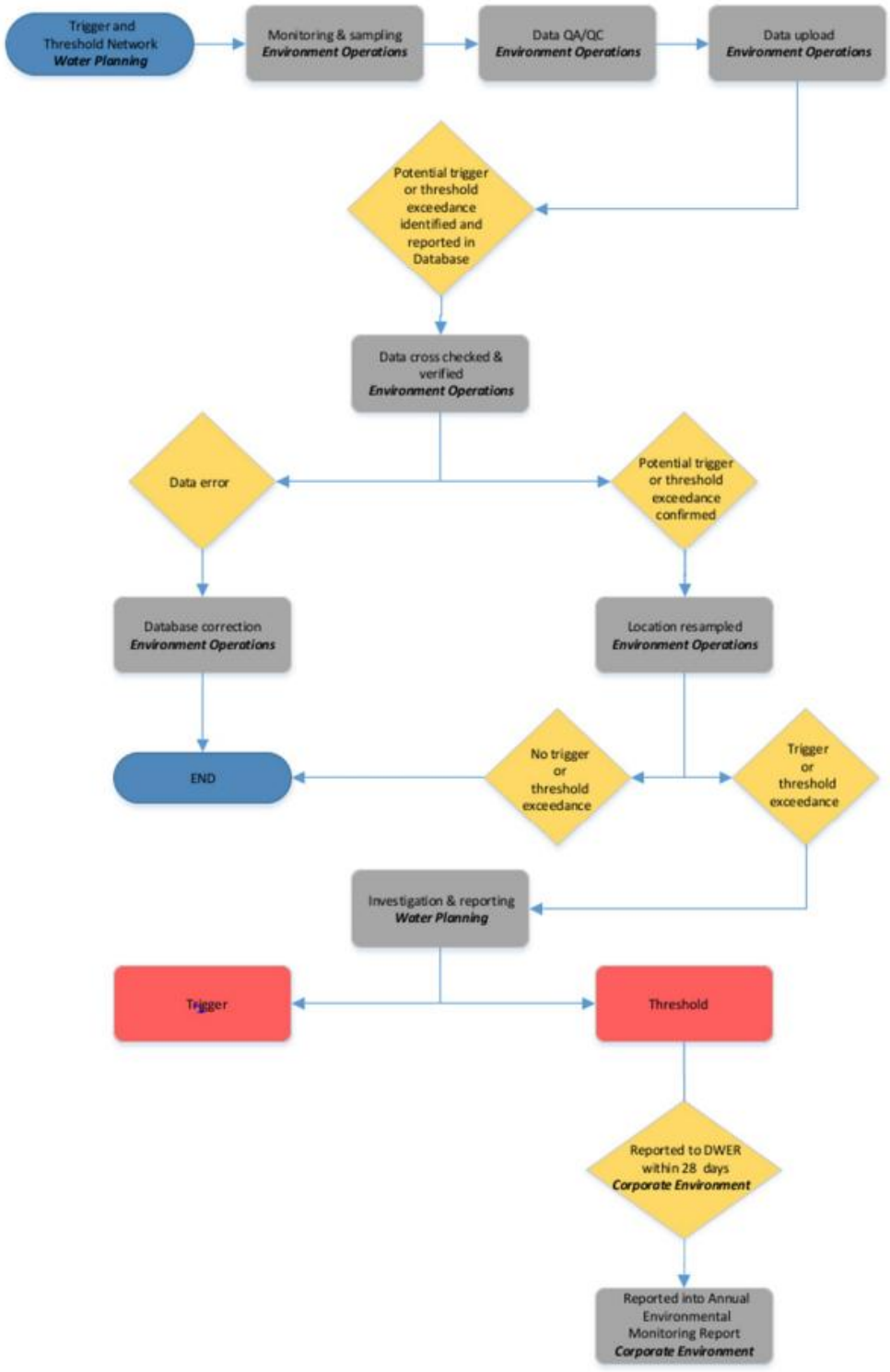

Figure 2: Part V Licence trigger and threshold exceedances management