Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence number	L8464/2010/2
Licence holder	FMG Solomon Pty Ltd
ACN	128 959 179
DWER file number	DER2013/001363-2
Duration	18/10/2015 to 17/10/2025
Date of issue	15/10/2015
Date of amendment	29/07/2024
Premises details	Solomon Mine E47/1011, E47/1334, E47/1532, M47/1409, M47/1410, M47/1411, M47/1413, M47/1431, M47/1453, M47/1466, M47/1473, M47/1474, M47/1475, L47/293, L47/294, L47/296, L47/301, L47/351, L47/360, L47/362, L47/363, L47/367, L47/381, E47/382, L47/391, L47/392, L47/397, L47/471, L47/472, L47/710, L47/711, L47/813, L47/814, P47/1279, P47/1286, P47/1287, P47/1304, P417/1305, P47/1735, P47/1736 and portion of E47/1319, E47/1333, E47/1398, E47/1399, E47/1447, E47/3094, E47/3464, L47/361 and L47/713 (as defined by the coordinates listed in Schedule 2) MT SHEILA WA 6751

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	Approved premises production or design capacity
Category 5: Processing or beneficiation of metallic or non-metallic ore	Not more than 95,300,000 tonnes per annual period
Category 6: Mine dewatering	25,000,000 tonnes per annual period
Category 54: Sewage facility	Not more than 1,178 cubic metres per day
Category 57: Used tyre storage (general)	2500 tyres
Category 61: Liquid waste facility	110,000 tonnes per annual period
Category 62: Solid waste depot	6,000 tonnes per annual period
Category 64: Class II putrescible landfill site	14,000 tonnes per annual period
Category 73: Bulk storage of chemicals	Not more than 9,560 cubic metres in aggregate

This licence is granted to the licence holder, subject to the attached conditions, on 29 July 2024, by:

Timothy Moran

Digitally signed by Timothy Moran
Date: 2024.07.29 16:17:34 +08'00'

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

Premises history

Date	Reference number	Summary of changes
22 April 2010	W4645/2010/1	Works approval for construction of Castle Camp WWTP
14 October 2010	L8464/2010/1	New licence for Castle Camp WWTP
3 March 2011	W4846/2010/1	Works approval for Castle Camp upgrade to category 54
3 November 2011	W4881/2011/1	Works approval for Dally Camp WWTP
23 June 2011	W4900/2011/1	Works approval for Direct Shipping Ore Processing Plant
4 August 2011	W4930/2011/1	Works approval for Mobile Crushing Plant
4 August 2011	W4932/2011/1	Works approval for Stockyard Mobile Crushing Plant
4 August 2011	W4940/2011/1	Works approval for Ellie Camp WWTP
9 February 2012	W5088/2011/1	Works approval for Kangi Camp WWTP and waste transfer station
9 February 2012	L8464/2010/1	Licence amendment increase capacity
3 November 2011	W5110/2011/1	Works approval for Processing plant and tailings facility
14 June 2012	L8464/2010/1	Licence amendment increase capacity
19 July 2012	W5192/2012/1	Works approval for Bulk fuel facility
1 November 2012	W5246/2012/1	Works approval for Central Facilities Infiltration trench
21 February 2013	L8464/2010/1	Licence amendment add category 5, 12 and 73
7 July 2013	W5407/2013/1	Works approval for an additional Ore Mobile Crushing Facility
29 August 2013	W5429/2013/1	Landfill and Waste Transfer Station
5 December 2013	L8464/2010/1	Licence amendment increase capacity category 5 and update the licence template
25 September 2014	W5690/2014/1	Works approval for construction of three OPFs (two at Kings and one at Firetail)
12 February 2015	L8464/2010/1	Licence amendment to increase capacity of categories 5 and 73, and add category 64
23 April 2015	L8464/2010/1	Licence amendment to include categories 57 and 61
15 October 2015	L8464/2010/2	Licence renewal and amendment to upgrade Dally Camp WWTP, include discharges from OWS as emissions to land, change the TSF monitoring requirements and update the prescribed premises boundary

2 June 2016	L8464/2010/2	Licence amendment for works approval to construct landfill and waste transfer station
15 May 2017	L8464/2010/2	Licence amendment to approve TSF embankment lift, remove OWS discharge and monitoring locations, increase category 57 and 73 approved design capacities and include additional inert waste disposal location
19 June 2017	L8464/2010/2	Licence amendment to remove the Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAC) monitoring requirements from Tables 2.2.2, 3.2.1 and 3.4.1
18 January 2018	L8464/2010/2	Licence amendment to remove ambient groundwater monitoring bore GQ8 (WF-MB001S) at the landfill from Table 3.5.1
7 December 2018	L8464/2010/2	Licence amendment for upgrades to the Dally Camp WWTP
15 May 2019	L8464/2010/2	Licence amendment to include category 6 (mine dewatering) including emissions points and associated monitoring requirements and to change the premises boundary
15 January 2020	L8464/2010/2	Licence amendment for: • Additional water infrastructure for storage and disposal of groundwater abstraction through mine dewatering • Installation of the Queens Crushing Facility • Additional fuel storage at Solomon Stores Removal of two upstream tailings storage facility (TSF) 1 groundwater monitoring bores
14 June 2022	L8464/2010/2	Licence amendment for: • Additional Tailings Storage Facility (TSF) decant infrastructure; • New dewatering disposal option; and • Additional groundwater supplementation bores.
28 September 2023	L8464/2010/2	Licence amendment with key changes being the installation and operation of four new re-injection bores for the Karijini Supplementation Scheme, one additional groundwater monitoring bore and replacement the Kangi WWTP.
29 July 2024	L8464/2010/2	Licence amendment to construct and operate the replacement Solomon landfill.

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

General

1 The licence holder must ensure the 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	95,300,000 tonnes of ore per annual period
6	Mine dewatering	25,000,000 tonnes per annual period
54	Sewage facility	Not more than 1,178 cubic metres per day
57	Used tyre storage (general)	2500 tyres stored at any one time
61	Liquid waste facility	110,000 tonnes per annual period
62	Solid waste depot	6,000 tonnes per annual period
64	Class II putrescible landfill site	14,000 tonnes per annual period
73	Bulk storage of chemicals	9,560 m^3 in aggregate

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

Infrastructure and equipment

2 The licence holder must ensure that all pipelines (or sections of pipelines) containing tailings are either:
(a) equipped with telemetry; or
(b) equipped with automatic cut-outs in the event of a pipe failure; and/or
(c) provided with secondary containment sufficient to contain any spill for a period equal to the time between routine inspections.

3 The licence holder must construct and/or install the infrastructure listed in Table 2, in accordance with:
(a) the corresponding design and construction/installation requirement;
(b) at the corresponding infrastructure location; and
(c) within the corresponding timeframe;
as set out in Table 2.

Table 2: Design and construction/installation requirements

Item No.	Infrastructure	Design and construction/ installation requirement	Infrastructure location	Timeframe
1	New Solomon Landfill	• Maintain a minimum 2m separation distance between the base of the landfill cell and the highest groundwater level. • Install a perimeter stormwater diversion bund and/or channel around landfill to prevent stormwater run-off from entering the landfill • Detention basin to be installed within landfill cell floor with base of landfill graded towards detention basin for	As depicted in Figures 4 and 6, Schedule 1	N/A

Item No.	Infrastructure	Design and construction/ installation requirement	Infrastructure location	Timeframe
		leachate/stormwater collection.		
2	Groundwater monitoring bores	A minimum of two bores must be installed. <u>Well design and construction:</u> 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. <u>Logging of borehole:</u> Solid 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. <u>Well construction log:</u> 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 reference point for water-level measurements, and the elevations of the ground surface protective installations. <u>Well development:</u> 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. <u>Installation survey:</u> the vertical (top of casing) and horizontal position of each monitoring well must be surveyed and subsequently mapped by a suitably qualified surveyor.	One up-gradient and one down-gradient of the new Solomon Landfill as depicted in Figures 4 and 6, Schedule 1	Must be constructed, developed (purged), and determined to be operational by no later than 30 calendar days prior to the deposition of waste into the new Solomon Landfill.

Item No.	Infrastructure	Design and construction/ installation requirement	Infrastructure location	Timeframe
		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.		
3	Waste transfer station/depot	• Must be graded, bunded and/or constructed of a hardstand surface with the placement of IBCs and/or skip bins to store and separate wastes that will be removed from the premises (i.e. recyclables, hazardous wastes). • Include an enclosed battery storage container.	As depicted in Figure 6, Schedule 1	N/A

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 licence holder must within 30 calendar days of an item of infrastructure or equipment required by condition 3 being constructed and/or installed:
(a) undertake an audit of their compliance with the requirements of condition 3; and
(b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.

5 The Environmental Compliance Report required by condition 4, must include as a minimum the following:
(a) certification by a qualified, competent person that all infrastructure items or component(s) thereof, as specified in condition 3, Table 2 have been constructed in accordance with the relevant requirements specified in condition 3 and;
(b) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

6 The licence holder must ensure that waste material is only stored and/or treated within the 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 and waste treatment infrastructure

Storage vessel or compound	Material	Requirements
Category 5		
TSF1	Tailings	• Maintain a minimum freeboard of 500 mm as measured from the operational pond surface to lowest elevation of perimeter embankment. • Provide additional sufficient freeboard to minimise the likelihood of erosion of the embankments by wave action. • Install and maintain a seepage collection and recovery system. • Crest elevation to Relative Level 605 mAHD.
Gee-Pit	Tailings decant water mixed with stormwater	• Contingency discharge of TSF decant water/stormwater to Gee-Pit Creek during high rainfall events.
Category 6		
• 17 ML raw water storage facility • 7 ML raw water storage facility	Fresh to marginal water sourced from mine pit dewatering and water supply borefields	• Earthen ponds; and • Minimum vertical freeboard of 100 mm
Queens Turkeys Nest		• Pre-stressed concrete panel containment structure
Wastewater treatment		
Kangi WWTP	Raw and treated wastewater	• Maintain earthen bunding surrounding WWTP to ensure it can contain spills • Overflow to be directed to emergency pond • WWTP fitted with high-level alarms
Category 64		
Solomon in-pit landfill	Stormwater runoff	• Maintain a perimeter stormwater diversion bund and/or channel around the cell to prevent stormwater from entering the landfill. • Retention pond within the pit floor to store stormwater flows generated within the landfill cells. • Base of the landfill pit to be graded towards the detention basin so that water does not pool in the deposited waste

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 4.

Table 4: Management of waste

Waste type	Management strategy	Requreiments[1,2]
Sewage	Biological and physical	Not to exceed 1,178 m^3/day
Treated wastewater	Chemical treatment (disinfection) prior to onsite irrigation	Not applicable
Sewage sludge	Storage (enclosed tanks) and sludge press	Liquid sludge to be dewatered and turned into a spadable material prior to disposal into approved on-site putrescible landfill sites
Reverse Osmosis (RO) Reject Stream	Onsite irrigation, dust suppression, garden reticulation and process water	• Not more than 360 kL/day of RO Reject Stream to be reused on the premises. • Subject to requirements specified in: ➢ Condition 16, Table 10; ➢ Condition 23,Table 14; and ➢ Condition 25,Table 16.
	Direct discharge to surface water via existing supplementation network	
	Direct discharge to groundwater via existing reinjection network	
Used tyres	Storage	• Not more than 2,500 used tyres shall be stored at the Premises at any one time. • Used tyres shall not be stored closer than 6 m from any other tyre stack.
Clean Fill	Receipt, handling and disposal by landfilling	• Disposal of clean fill waste by landfilling shall only take place within the prescribed premises in the locations as shown in the Map of disposal points in Figure 4, Schedule 1. • Waste shall be placed in a defined trench or within an area enclosed by earthen bunds. • All disposal locations are to be surveyed and the latitude and longitude recorded. • The separation distance between the base of the landfill and the highest groundwater level shall not be less than 2 m.
Inert Waste Type 1 Putrescible Waste Inert Waste Type 2	Receipt, handling and disposal by landfilling	<u>Untreated wood</u> Untreated Wood is only to be disposed to the Solomon Landfill, Firetail North Waste Dump, Firetail Waste Wood Disposal Area and Kings

Waste type	Management strategy	Requreiments[1,2]
(tyres/rubber waste and conveyor belts)		Waste Dump (as depicted in the map of disposal points in Figure 4, Schedule 1). Other authorised wastes Burial of waste shall only take place within the prescribed premises in the Solomon Landfill, Kings Mine Pit, Kings Waste Dump, Firetail South Waste Dump, Firetail South Mine Pit, Firetail North Mine Pit, Trinity Waste Dump and Trinity Mine Pit as shown in the Map of disposal points in Figure 4, Schedule 1. Cell locations where used tyres and other waste rubber are to be buried will be surveyed and the latitude and longitude recorded. New Solomon Landfill The new landfill described in Condition 3, Table 2, may only receive waste (untreated wood, Inert Waste Types 1 and 2, putrescible waste, clean fill) once the compliance reports described in Condition 4 and 5 have been submitted to the department. Burning of waste is not permitted within the Solomon Landfill
Tailings decant water	Storage and reuse in processing	Discharged to the: • Contingency discharge of TSF decant water/stormwater to Gee-Pit during high rainfall events

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*.

8 The licence holder must ensure that the irrigation of treated wastewater meets the following:

(a) no irrigation generated run-off, spray drift or discharge occurs beyond the boundary of the designated irrigation areas, as identified in the map of emissions points (L1 and L2) depicted in Schedule 1;
(b) wastewater is evenly distributed over the irrigation area;
(c) no soil erosion occurs;
(d) irrigation does not occur on land that is waterlogged; and
(e) a healthy vegetation cover is maintained over the wastewater irrigation areas.

9 The licence holder must ensure that cover is applied and maintained on landfilled wastes in accordance with Table 5 and that sufficient stockpiles of cover are maintained on site at all times.

Table 5: Cover requreiments[1]

Waste Type	Material	Depth	Timescales
Clean Fill	No cover required		
Inert Waste Type 1			

Waste Type	Material	Depth	Timescales
Inert Waste Type 2	Inert and incombustible material	1,000 mm	Within 3 months of achieving final waste contours
Putrescible waste		Sufficient to ensure waste is totally covered and no waste is left exposed	At least weekly

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

10 The licence holder must:
(a) undertake inspections as detailed in Table 6;
(b) where any inspection identifies that an appropriate level of environmental protection is not being maintained, take corrective action to mitigate adverse environmental consequences as soon as practicable; and
(c) maintain a record of all inspections undertaken.

Table 6: Inspection of infrastructure

Scope of inspection	Type of inspection	Frequency of inspection
Tailings pipelines	Visual integrity	Daily
Tailings return water lines	Visual integrity	Daily
TSF1 embankment freeboard	Visual to confirm required freeboard capacity is available	Daily

11 The licence holder must undertake an annual water balance for the TSF. The water balance shall 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.

12 The licence holder must construct the infrastructure listed in Table 7 in accordance with the corresponding infrastructure requirements in Table 7. The licence holder must not depart from the design and construction requirements specified in Table 7 except:
(a) where such departure is minor in nature and does not materially change or affect the infrastructure; or
(b) where such departure improves the functionality of the infrastructure and does not increase risks to public health, public amenity or the environment; and
(c) all other conditions in this licence are still satisfied.

Table 7: Infrastructure requirements[1]

Infrastructure	Requirements (Design and construction)
Category 6	
Weelumurra Creek Injection borefield	• Duplicated injection borefield west of existing Weelumurra Creek supplementation borefield.

Infrastructure	Requirements (Design and construction)
	• Duplicated injection borefield east of existing Weelumurra Creek supplementation borefield.

Note 1: Where the details and commitments of the documents listed in condition 12 are inconsistent with any other condition of this licence, the conditions of this licence shall prevail.

13 The licence holder must maintain the following infrastructure to ensure that stormwater from operational areas is diverted for treatment prior to disposal or discharge:

(a) sediment basins at the Sizing Hubs, Kings and Firetail Ore Processing Facilities, Direct Shipping Ore Processing Plant, Rail Stockyard, Queens Crushing Facility and Mobile Crushing Facilities;

(b) diversion drain to the north-east of the stockyard; and

(c) drains and sealed collection sumps around satellite fuel facilities and maintenance workshops, excluding roofed and bunded facilities.

Emissions and discharges

Authorised discharge points for emissions

14 The licence holder must ensure that where waste is emitted to surface water from the emissions 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: Point source emissions to surface water

Emission point reference and location on Map of emissions points	Description	Source, including any abatement
Kangeenarina Creek Supplementation System SOL-FM012 SOL-FM013	Water discharged via a pipeline to up to 4 spigots on Kangeenarina Creek for the purpose of supplementation	Mine dewater from mine pits within the prescribed premises boundary or groundwater sourced from water supply borefields discharged to Kangeenarina Creek

15 The licence holder must ensure that where waste is emitted to groundwater from the emissions 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 groundwater

Emission point reference and location on Map of emission points	Description	Source, including any abatement
Kangeenarina Creek Infiltration System	Water discharged via buried, slotted pipelines to Kangeenarina Creek for the purpose of supplementation	Mine dewater from mine pits within the prescribed premises boundary or groundwater sourced from water supply borefield discharged to Kangeenarina Creek

Emission point reference and location on Map of emission points	Description	Source, including any abatement
Weelumurra North Supplementation Injection Bores WIN001 WIN002 WIN003 WIN004 WIN005 WIN006 WIN007 WIN008 WIN009 SM_WM_IJ_10 SM_WM_IJ_11 SM_WM_IJ_12 SM_WM_IJ_13 SM_WM_IJ_14 SM_WM_IJ_15 SM_WM_IJ_16 SM_WM_IJ_24 SM_WM_IJ_25 SM_WM_IJ_26 SM_QU_IJ_01 SM_QU_IJ_02 SM_QU_IJ_03 SM_QU_IJ_04 SM_QU_IJ_05 SM_QU_IJ_06	Mine dewater discharged to up to 25 of the Weelumurra North Supplementation Injection Bores in Weelumurra Creek for the purpose of supplementation	Mine dewater sourced from mine pits within the prescribed premises boundary or groundwater sourced from a water supply borefield discharged to Weelumurra Creek
Karijini Supplementation Injection Bores (Figure 2) KIN002R2 KIN003 KIN004 KIN005 KIN006 KIN007	Groundwater sourced from the Southern Fortescue Borefield discharged to Karijini Supplementation Injection Bores near the boundary of Karijini National Park for the purpose of supplementation	Groundwater sourced from the Southern Fortescue Borefield discharged to the boundary of Karijini National Park.
Kings East Managed Aquifer Recharge	Mine dewater discharged to backfilled pit for the purpose of managed aquifer recharge and excess water management	Mine dewater sourced from mine pits within the prescribed premises boundary

16 The licence holder must ensure that where waste is emitted to land from the emission points in Table 10 and identified on the map of emission points in Schedule 1 it is done so in accordance with the conditions of this licence.

Table 10: Emissions to land

Emission point reference and location on Map of emission points	Description	Source including abatement
L1	Discharge of treated wastewater to a 12.5 hectare irrigation field	Effluent from Castle/Dally Camp WWTP
L2	Discharge of treated wastewater and Reverse Osmosis reject water to a 16.3 hectare irrigation field, onsite dust suppression and landscape irrigation	Effluent from Kangi Camp WWTP and Reverse Osmosis reject water
L3	Discharge of treated wastewater	Bulk Fuel Facility oily water separator
L5	Mine dewater discharged to the Central Facilities Kangi Infiltration Trench Trench of approximately 130 m x 60 m in size where water infiltrates or evaporates	Mine dewater sourced from mine pits within the prescribed premises boundary or groundwater sourced from a water supply borefield Discharged to Kangi Infiltration Trench in the case that it is not required for supplementation purposes and exceeds the storage capacity of the site water distribution system
L12 Shown as Gee-Pit in Figure 15	Contingency discharge pipeline Contingency discharge of TSF decant water/stormwater to Gee-Pit during high rainfall events	Decant water/stormwater

17 The licence holder must not cause or allow emissions to land greater than the limits listed in Table 11.

Table 11: Emission limits to land

Emission point reference	Parameter	Limit (including units)	Averaging period
L3 (Oily water separator emission to land)	Total Recoverable Hydrocarbons	15 mg/L	Spot sample (when flowing)

Monitoring

General monitoring

18 The licence holder must ensure that:
- (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1 unless otherwise indicated;
- (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;
(e) all microbiological samples are collected and preserved in accordance with AS/NZS 2031; and
(f) 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.

19 The licence holder must ensure that:
(a) Monitoring is undertaken in each weekly period such that there are at least 4 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 5 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 9 months in between the days on which samples are taken in successive years.

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

Discharge point monitoring

21 The licence holder must undertake the monitoring in Table 12 according to the specification in that table.

Table 12: Monitoring of point source emissions to surface water

Emission point reference and location on Map of emission points	Parameter	Units	Frequency
Kangeenarina Creek Supplementation System SOL-FM012 (SSWE001) SOL-FM013 (SSWE002)	Cumulative water meter readings	m^3	Continuous
Delivery pipeline to the Kangeenarina Creek Supplementation System	pH[1]	pH units	Six monthly when discharge is occurring
Delivery pipeline to the Kangeenarina Creek Supplementation System	Electrical Conductivity	µS/cm	Six monthly when discharge is occurring
	Total Dissolved Solids	mg/L	

Emission point reference and location on Map of emission points	Parameter	Units	Frequency
	Major cations and anions Sodium Potassium Calcium Magnesium Chloride Sulfate Alkalinity Nitrate **Metals, Metalloids and Non-metals** Aluminium Antimony Arsenic Beryllium Boron Cadmium Cobalt Chromium Copper Iron Manganese Mercury Nickel Lead Selenium Silver Zinc	mg/L	

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

22 The licence holder must undertake the monitoring in Table 13 according to the specification in that table.

Table 13: Monitoring of point source emissions to groundwater

Emission point reference and location on Map of emission points	Parameter	Units	Frequency
Kangeenarina Creek Infiltration System Weelumurra North Supplementation Injection Bores WIN001 WIN002 WIN003 WIN004 WIN005 WIN006 WIN007 WIN008 WIN009 SM_WM_IJ_10 SM_WM_IJ_11 SM_WM_IJ_12 SM_WM_IJ_13 SM_WM_IJ_14 SM_WM_IJ_15 SM_WM_IJ_16 SM_WM_IJ_24 SM_WM_IJ_25 SM_WM_IJ_26 SM_QU_IJ_01 SM_QU_IJ_02 SM_QU_IJ_03 SM_QU_IJ_04 SM_QU_IJ_05 SM_QU_IJ_06 **Karijini Supplementation Bores** KIN002R2 KIN003 KIN004 KIN005 KIN006 KIN007	Cumulative water meter readings	m^3	Continuous
Kangeenarina Creek Infiltration System Delivery pipeline to Weelumurra North Supplementation Injection Bores Delivery pipeline to Karijini Supplementation Injection Bores Delivery pipeline to Kings East Managed Aquifer Recharge scheme	pH[1]	pH units	Six monthly

Emission point reference and location on Map of emission points	Parameter	Units	Frequency
Kangeenarina Creek Infiltration System Delivery pipeline to Weelumurra North Supplementation Injection Bores Delivery pipeline to Karijini Supplementation Injection Bores Delivery pipeline to Kings East Managed Aquifer Recharge scheme	Electrical Conductivity	µS/cm	Six monthly
	Total Dissolved Solids	mg/L	
	Major cations and anions Sodium Potassium Calcium Magnesium Chloride Sulfate Alkalinity Nitrate		
	Metals, Metalloids and Non-metals Aluminium Antimony Arsenic Beryllium Boron Cadmium Cobalt Chromium Copper Iron Lead Manganese Mercury Nickel Selenium Silver Zinc		

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

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

Table 14: Monitoring of emissions to land

Monitoring point reference	Parameter	Units	Averaging Period	Frequency
L1 - L2	Cumulative volume of treated wastewater discharged from each WWTP	m^3	Cumulative monthly	Continuous
	Cumulative volume of Reverse Osmosis reject water stream discharged via irrigation	m^3	Cumulative monthly	Continuous
	pH[1]	pH units	Spot sample	Quarterly
	5-Day Biochemical Oxygen Demand	mg/L		
	Total Suspended Solids			
	Total Nitrogen			
	Total Phosphorus			
	E.coli	cfu/100mL		
L3	Total Recoverable Hydrocarbons	mg/L	Spot sample (when flowing)	Quarterly
L5	Cumulative volume of dewater water discharged to Central Facilities Kangi Infiltration Trench	m^3	Cumulative for the period of discharge	For the period of discharge
L12	Volume of water discharged to Gee Pit	kL	Spot sample (when flowing)	Continuous
	Total Dissolved Solids	mg/L		At commencement of discharge event and weekly thereafter while discharge is occurring
	Major cations and anions Sodium Potassium Calcium Magnesium Chloride Sulfate **Dissolved metals** Arsenic Cadmium Cobalt Chromium Copper Mercury Nickel Lead Selenium Zinc	mg/L		

Note 1: 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.

Table 15: Monitoring of inputs and outputs

Input/Output	Parameter	Units	Averaging Period	Frequency
Waste Inputs	Volume of Inert Waste Type 1, Inert Waste Type 2 (tyres/rubber waste and conveyor belts) and Putrescible waste	tonnes	Each load	Cumulative monthly total

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

Table 16: Process monitoring

Monitoring point reference	Process description	Parameter	Units	Limit	Frequency	Method
TSF1	Tailings delivery to TSF	Volume and mass of tailings deposited into the TSF	m^3 and tonnes	N/A	Continuous	None specified
	TSF return line	Volumes of water recovered from the TSF	m^3 and kL			
L4 (Stockyard TK901 Storage Tank)	Treated wastewater accepted on site from the Solomon Power Station and used for dust suppression	Cumulative volume	m^3	N/A	Cumulative monthly	Continuous
		pH[1]	pH units	N/A	Quarterly	None specified
		Total Dissolved Solids	mg/L	<5,000		
		Total Recoverable Hydrocarbons	mg/L	<15		

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

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
Bulk Fuel Facility groundwater monitoring bores				
GQ1 (FITL-MB-001) GQ2 (FITL-MB-002) GQ11[3] (FITL-MB-002D)	Standing water level	mAHD; mbgl	Spot sample	Six monthly
	Total Recoverable Hydrocarbons	mg/L		
TSF1 groundwater monitoring bores				
GQ3 (TSF1-MB-006DR) GQ5 (TSF1-MB-004) GQ7 (TSF1-MB-005D)	Standing water level	mAHD	Spot sample	Quarterly

Monitoring point reference and location[2]	Parameter	Units	Averaging period	Frequency
GQ3 (TSF1-MB-006DR) GQ5 (TSF1-MB-004) GQ7 (TSF1-MB-005D)	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 Alkalinity Nitrate Ammonia	mg/L		
	Dissolved metals, metalloids and non-metals Antimony Arsenic Boron Cadmium Cobalt Chromium Copper Iron Manganese Mercury Molybdenum Nickel Lead Selenium Strontium Uranium Zinc			
Landfill monitoring bores				
GQ9 (WF-MB001D) GQ10 (WF-MB002D) Groundwater Bore #1 Groundwater Bore #2	Standing water level	mbgl	Spot sample	Quarterly
	pH[1]	pH units		
	Electrical Conductivity	µS/cm		
	Total Dissolved Solids	mg/L		

Monitoring point reference and location[2]	Parameter	Units	Averaging period	Frequency
GQ9 (WF-MB001D) GQ10 (WF-MB002D) Groundwater Bore #1 Groundwater Bore #2	**Dissolved metals** Arsenic Cadmium Chromium Copper Mercury Lead Nickel Zinc Nitrate Total Phosphorus	mg/L	Spot sample	Quarterly
Karijini Supplementation Scheme monitoring bores				
AS-MB038S	Standing water level	mbgl	Spot sample	Six monthly
	pH[1]	pH units		
	Electrical Conductivity	µS/cm		
	Total Dissolved Solids	mg/L		
	Total Phosphorus	mg/L		
	Major cations and anions Sodium Potassium Calcium Magnesium Chloride Sulfate Alkalinity Nitrate Ammonia	mg/L		
	Dissolved metals Arsenic Cadmium Chromium Copper Mercury Lead Nickel Selenium Zinc	mg/L		

Note 1: In-field non-NATA accredited analysis permitted.
Note 2: No sample required if bore is dry.
Note 3: Sampling may be undertaken from GQ11 if GQ2 bore is unblocked or redrilled.

Information

27 The licence holder must maintain accurate and auditable books that include 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 12, Table 7 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 21, Table 12; 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 30 of this licence.

28 The books specified under condition 27 must:
(a) be legible;
(b) if amendment, be amended in such a way that the original version(s) and any subsequent amendments remain legible and area 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.

29 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.

30 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 of 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.

31 The licence holder must record and maintain a permanent record of all disposal sites authorised under condition 7.

32 The licence holder must submit to the CEO by no later than 31 March each year, after the end of each annual period, an Annual Environmental Report for that annual period for the conditions listed in Table 18, and which provides information in accordance with the corresponding requirement set out in Table 18.

Table 18: Annual Environmental Report

Condition or table (if relevant)	Parameter	Format or form
-	Summary of any failure or malfunction of any pollution control equipment and any	None specified

Condition or table (if relevant)	Parameter	Format or form
	environmental incidents that have occurred during the annual period and any action taken	
Condition 7, Table 4	Untreated wood, used tyre and other waste rubber disposal locations	None specified
Condition 11	TSF annual water balance	
Condition 17, Table 11 Condition 25, Table 16	Limit exceedances	
Condition 21, Table 12	Discharge to surface water monitoring	
Condition 22, Table 13.	Groundwater reinjection monitoring and infiltration discharge monitoring	
Condition 23, Table 14	Monitoring of emissions to land, including an interpretation of results against plant design specifications for L1 and L2	
Condition 24, Table 15	Monitoring of inputs and recording of quantities of waste disposed of at each site	
Condition 25, Table 16	Mass of tailings deposited into TSF1, recovered water and recovered seepage water	
	L3 monitoring results – treated wastewater used for dust suppression	
	L4 monitoring results – water accepted from Solomon Power Station used for dust suppression	
Condition 26, Table 17	Ambient groundwater monitoring results, and for GQ3, GQ5 and GQ7 (TSF monitoring bores) and AS-MB038S (Karijini Supplementation Scheme monitoring bore) a comparison of results against the site-specific trigger values detailed in the document, *Solomon Water Quality Threshold Assessment Rev 2* (SO-AS-EN-0071). Details of investigations conducted, including outcomes, environmental impacts and remedial actions, in relation to trigger exceedances and a discussion of any trends identified. Trend analysis to include the four most recent sampling events for the following parameters measured in bores GQ3, GQ4, GQ5 and AS-MB038S: pH, bicarbonate, sulfate and TDS. The Mann-Kendall statistical test, or comparable statistical test, is to be used to determine if there is a statistically significant change in parameter concentration.	
Condition 29	Compliance	

Condition or table (if relevant)	Parameter	Format or form
Condition 30	Complaints summary	

33 The licence holder must ensure that the Annual Environmental Report also contains an assessment of the information contained within the report against previous monitoring results and licence limits.

34 The licence holder must submit the information in Table 19 to the CEO according to the specifications in that table.

Table 19: Non-annual reporting requirements

Condition or table (if relevant)	Parameter	Reporting period	Reporting date (after end of the reporting period)	Format or form
-	Copies of original monitoring reports submitted to the licence holder by third parties	Not Applicable	Within 14 days of the CEO's request	As received by the licence holder from third parties

35 The licence holder must ensure that the parameters 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	Format or form
-	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. Part B: As soon as practicable	N1
Condition 12, Table 7	The licence holder shall submit a compliance document to the CEO, following the construction of the supplementation infrastructure. The compliance document/s shall: (a) be certified by a suitably qualified engineer and certify that the works were constructed in accordance with the construction requirements specified in condition 12, Table 7; (b) provide a list of departures from the specified works certified by a suitably qualified engineer; and (b) be signed by a person authorised to represent the licence holder and contain the printed name and position of that person within the company.	Within one month of completion of construction	None specified

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

Definitions

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

Table 21: Definitions

Term	Definition
ACN	Australian Company Number
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
ANZECC/ARMCANZ	means Australian and New Zealand Guidelines for Fresh and Marine Water Quality
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.
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.

Term	Definition
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.
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)
freeboard	means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point
HDPE	means high density polyethylene
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.
Mann-Kendall statistical test	'Mann-Kendall statistical test' as per Mann, H. B. (1945). Nonparametric tests against trend. Econometrica 13, 245–259. doi: 10.2307/1907187 & Kendall, M. G. (1975). Rank Correlation Methods. New York, NY: Oxford University Press.
mbgl	means metres below ground level
NATA	means the National Association of Testing Authorities, Australia
NATA accredited	means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis
premises	refers to the premises to which this licence applies, as specified at the front of this licence and as shown on Figure 1
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

Term	Definition
RO	means reverse osmosis
Schedule 1	means Schedule 1 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
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

Schedule 1: Maps

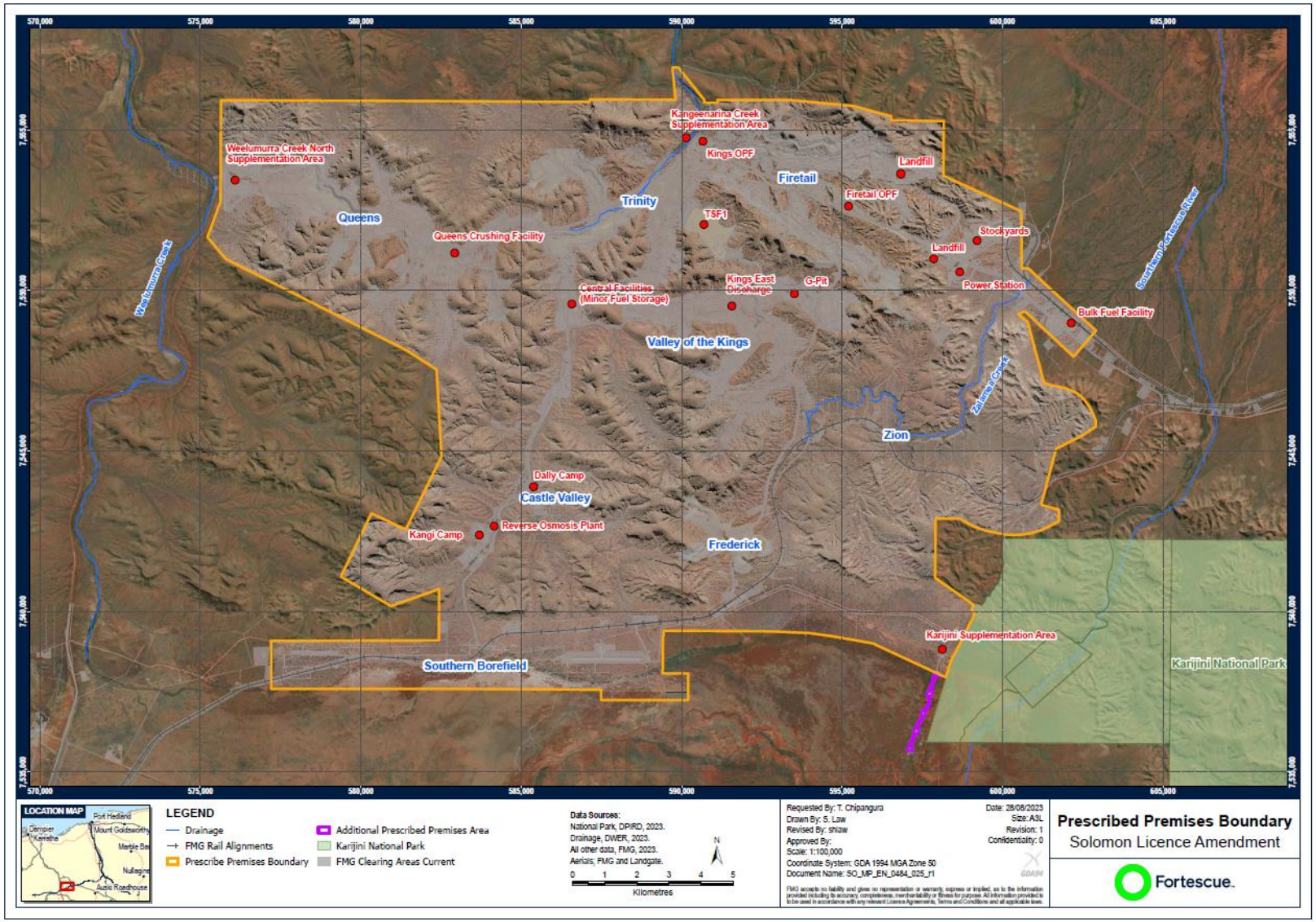

Figure 1 Prescribed premises boundary and key infrastructure

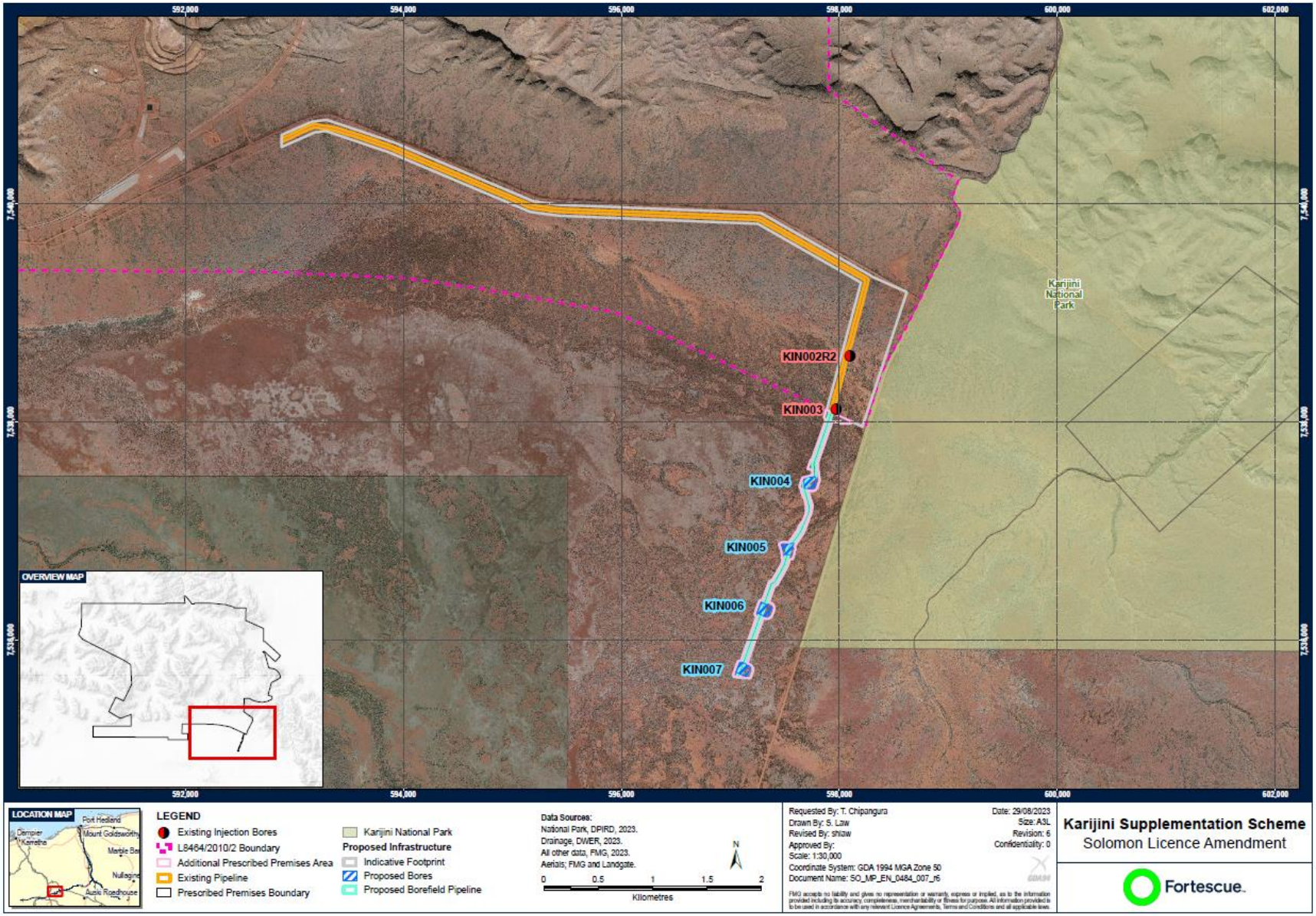

Figure 2 Existing and proposed Karijini Supplementation Scheme bores

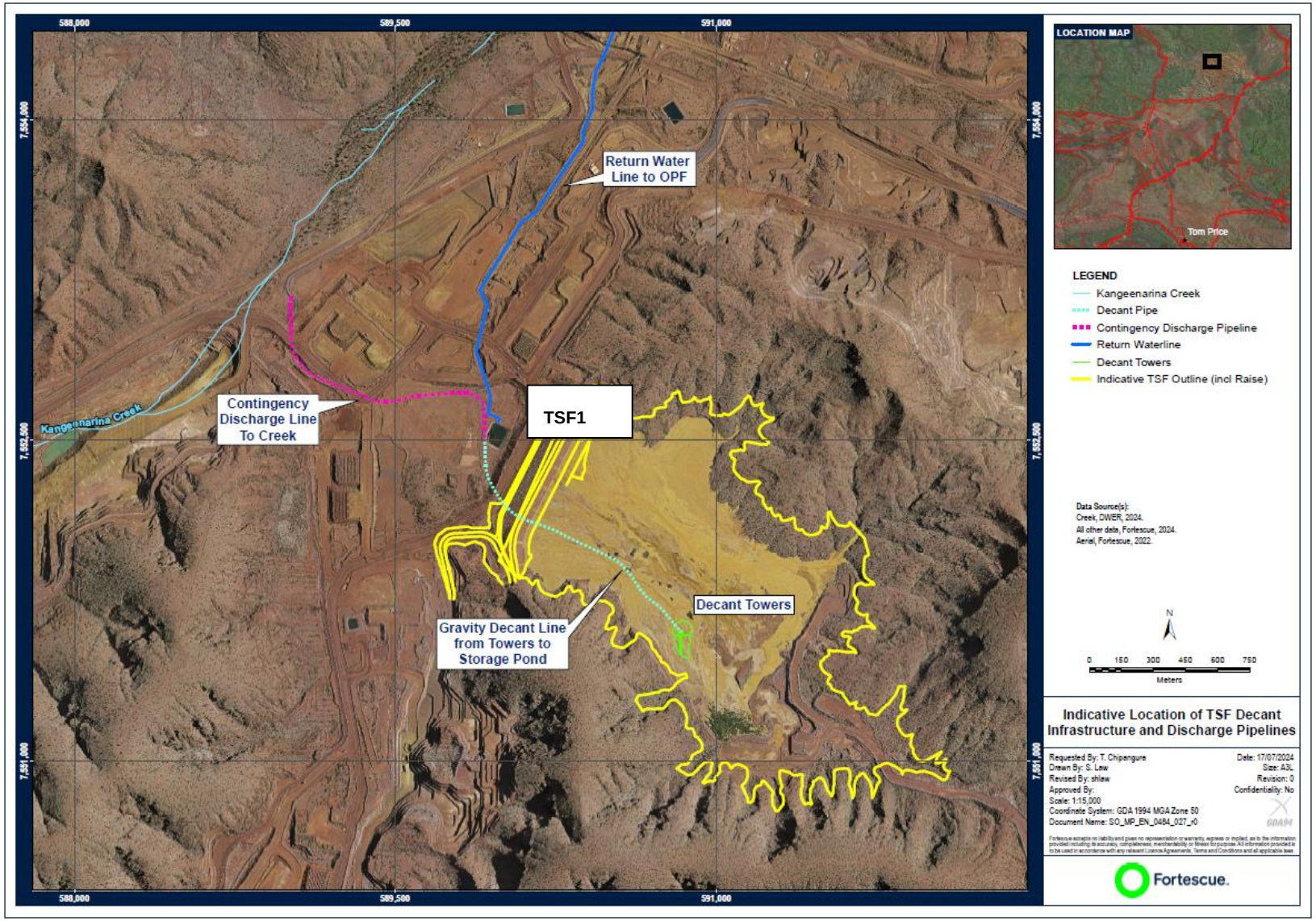

Figure 3: The location of the containment infrastructure defined in Condition 6, Table 3 and the contingency discharge pipeline defined in Condition 14, Table 8.

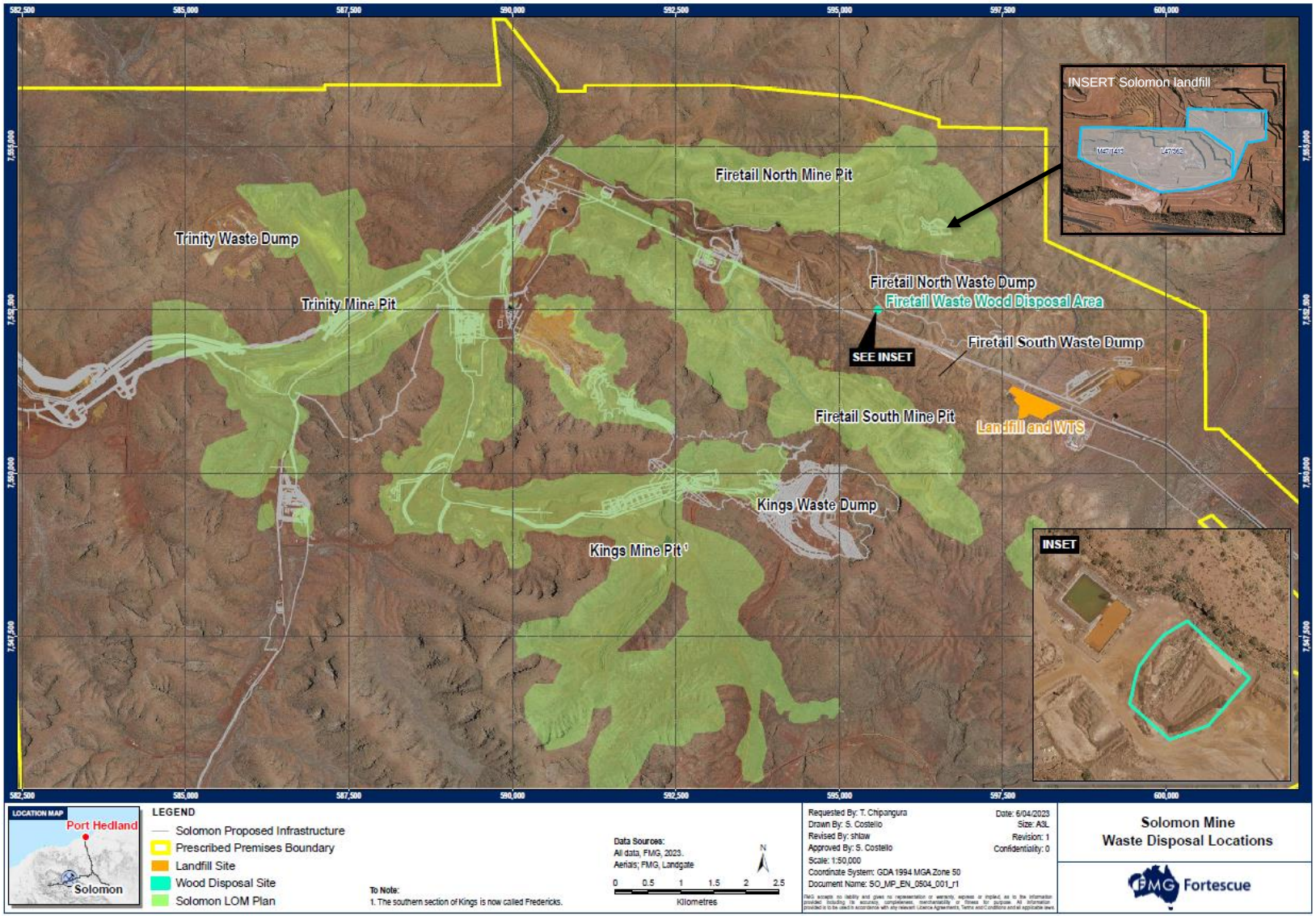

Figure 4: Waste disposal locations. The used tyre and other waste rubber disposal sites as per Condition 7, Table 4. Firetail North Waste Dump and Firetail Waste Wood Disposal Area are for the disposal of untreated timber.

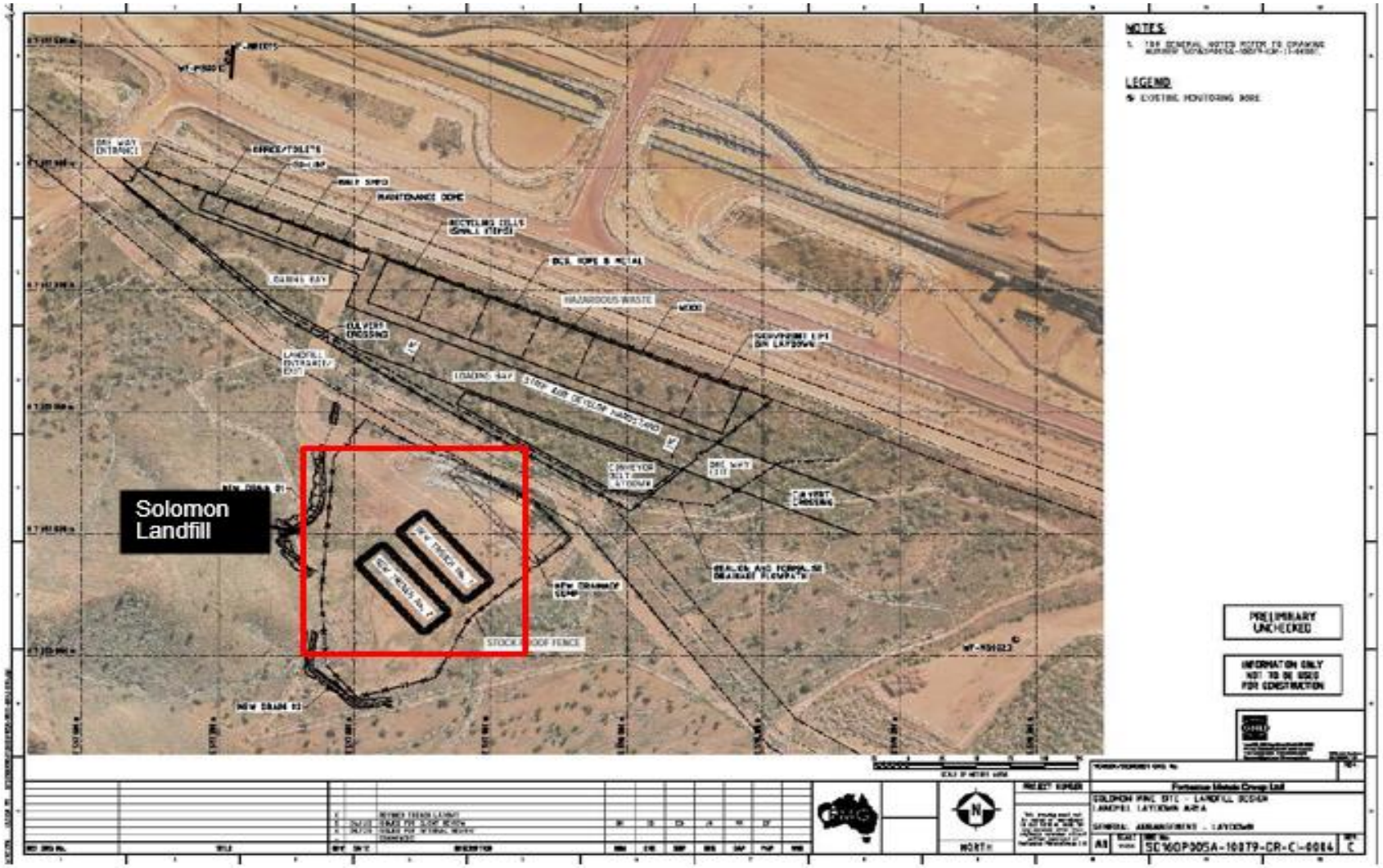

Figure 5: The used tyre and other waste rubber disposal sites as per Condition 7, Table 4. Firetail North Waste Dump and Firetail Waste Wood Disposal Area are for the disposal of untreated timber.

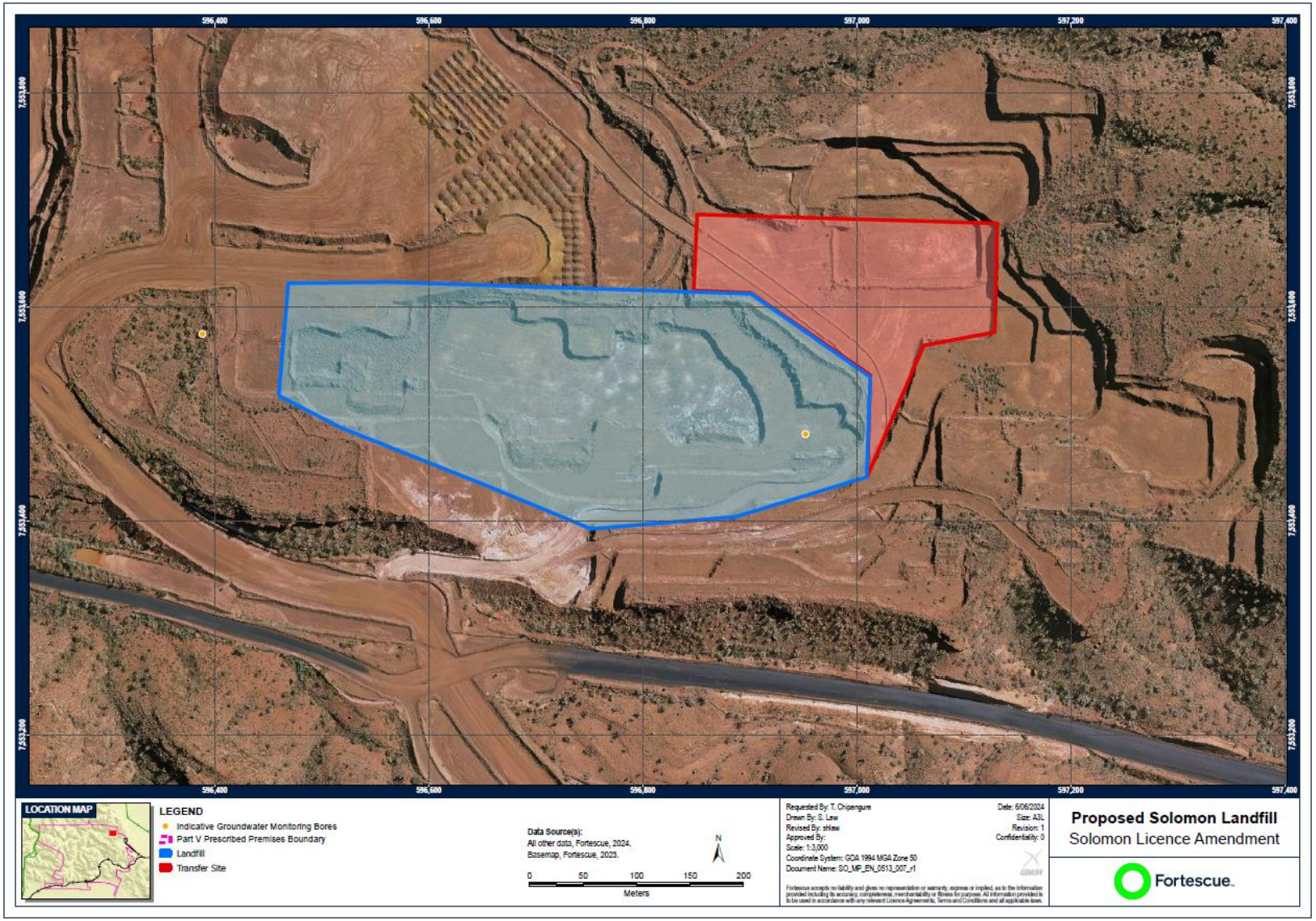

Figure 6: New Solomon landfill, and monitoring bore locations defined in Condition 26, Table 17 (licence amendment June 2024)

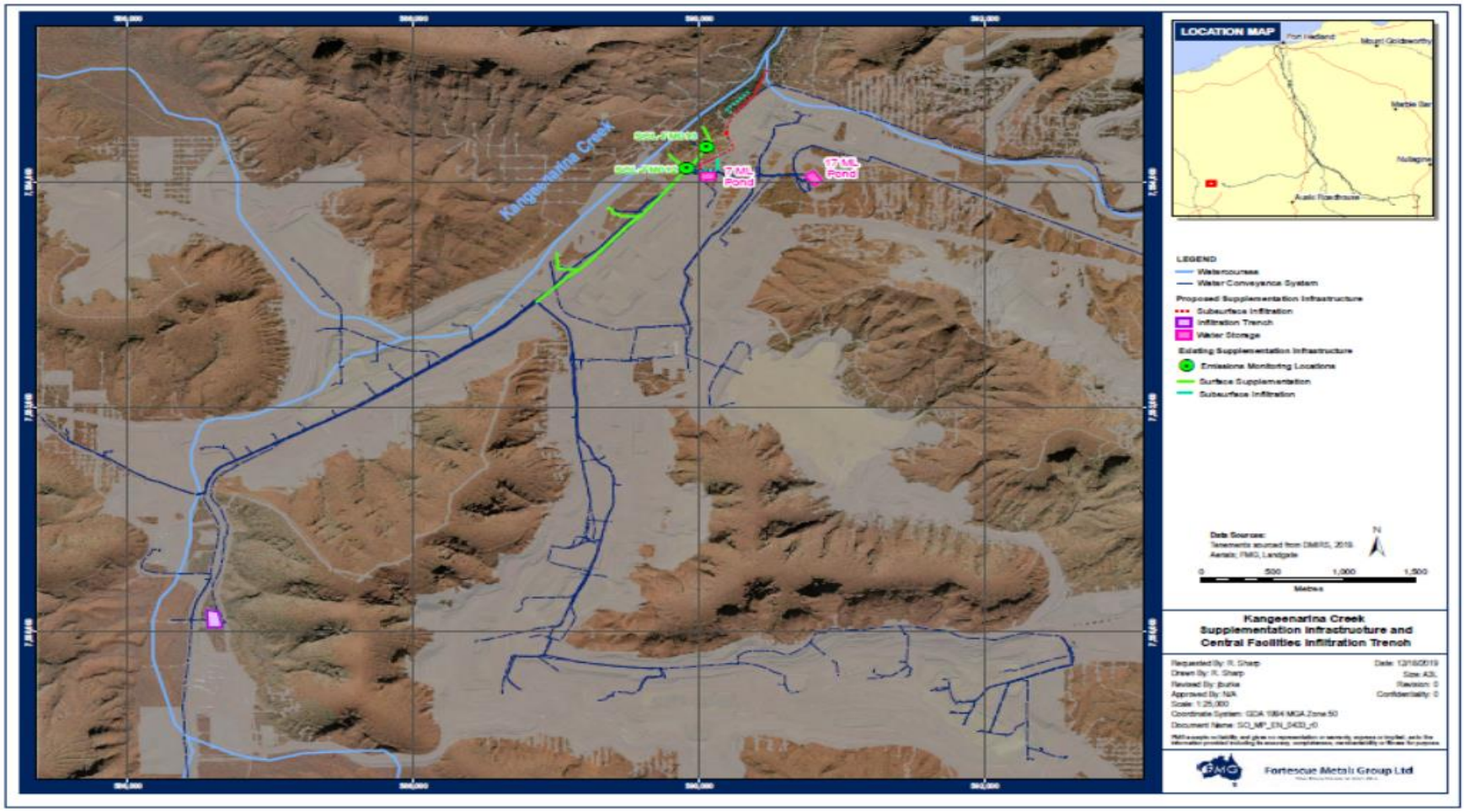

Figure 7: The location of emission and monitoring points defined in Condition 14, Table 8, Condition 15, Table 9, Condition 21, Table 12 and Condition 22, Table 13.

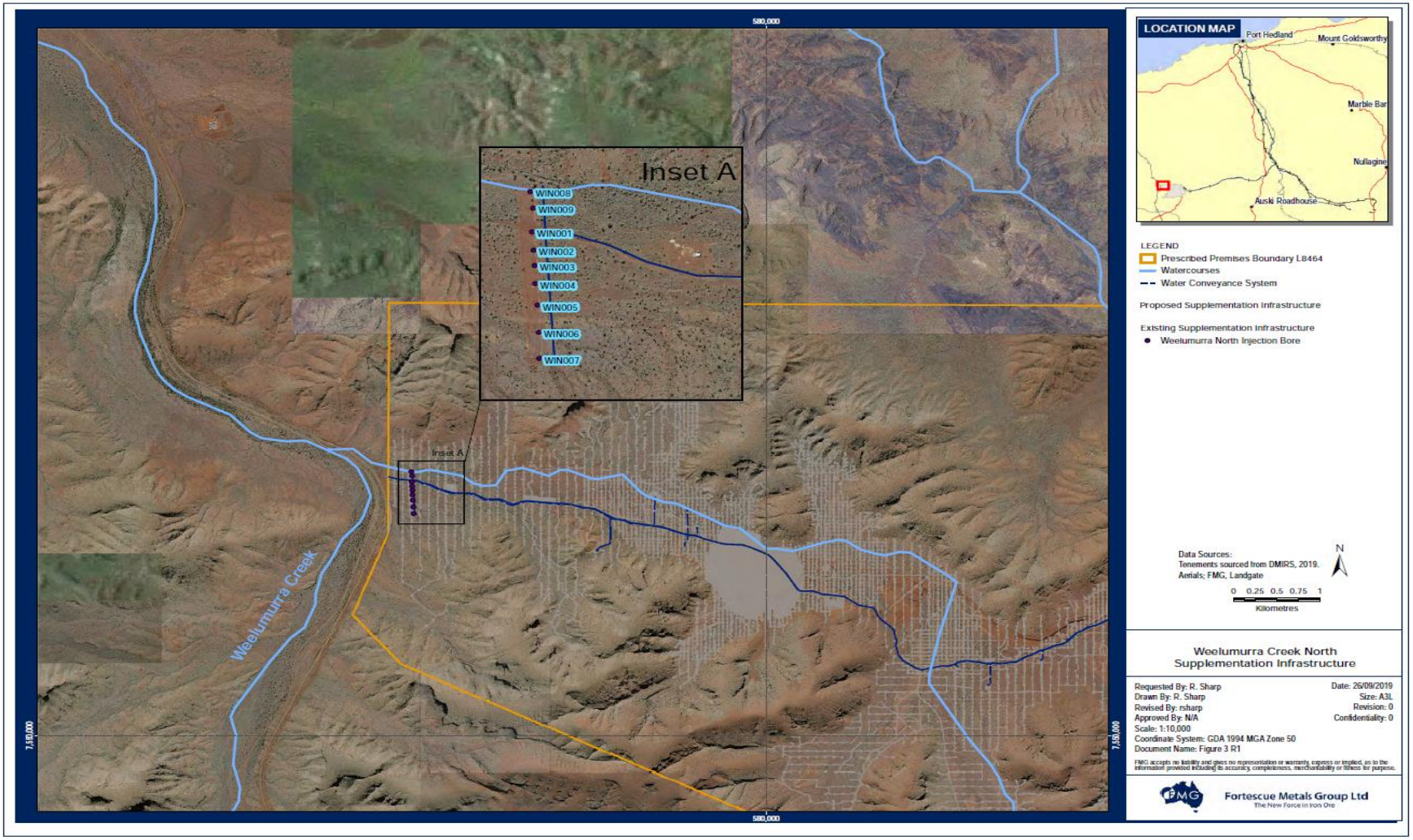

Figure 8: The location of emission and monitoring points defined in Condition 15, Table 9, Condition 21, Table 12 and Condition 22, Table 13.

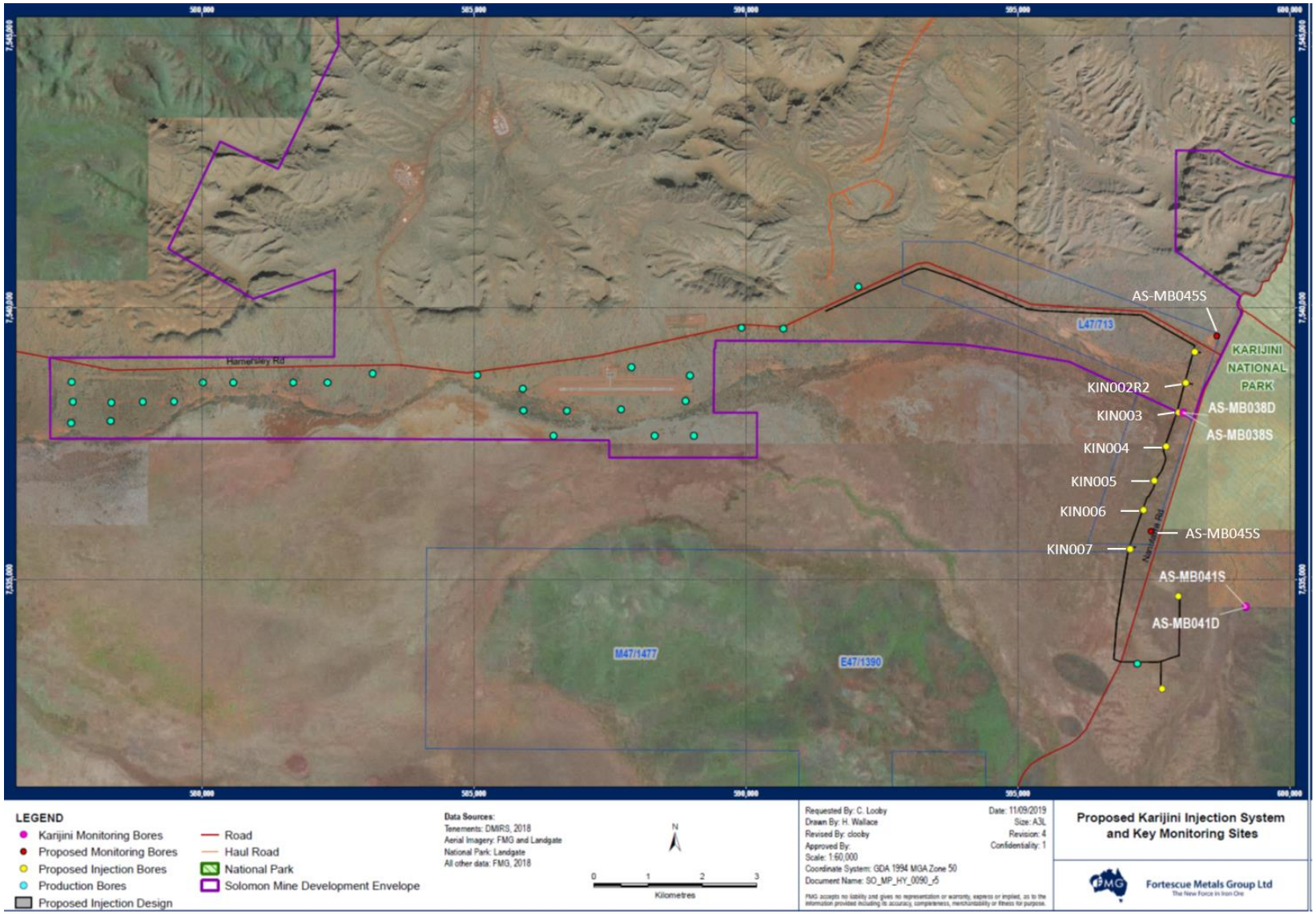

Figure 9: The location of emission and monitoring points defined in Condition 15, Table 9, Condition 21, Table 12 and Condition 22, Table 13.

Figure 10: The locations of the emission points L1, L2 and L3, defined in Condition 16, Table 10, and location of the new bulk fuel facility.

Figure 11: The location of the monitoring point L4 defined in Condition 25,Table 16.

Figure 12: The locations of the Bulk Fuel Facility groundwater monitoring points defined in Condition 26,Table 17.

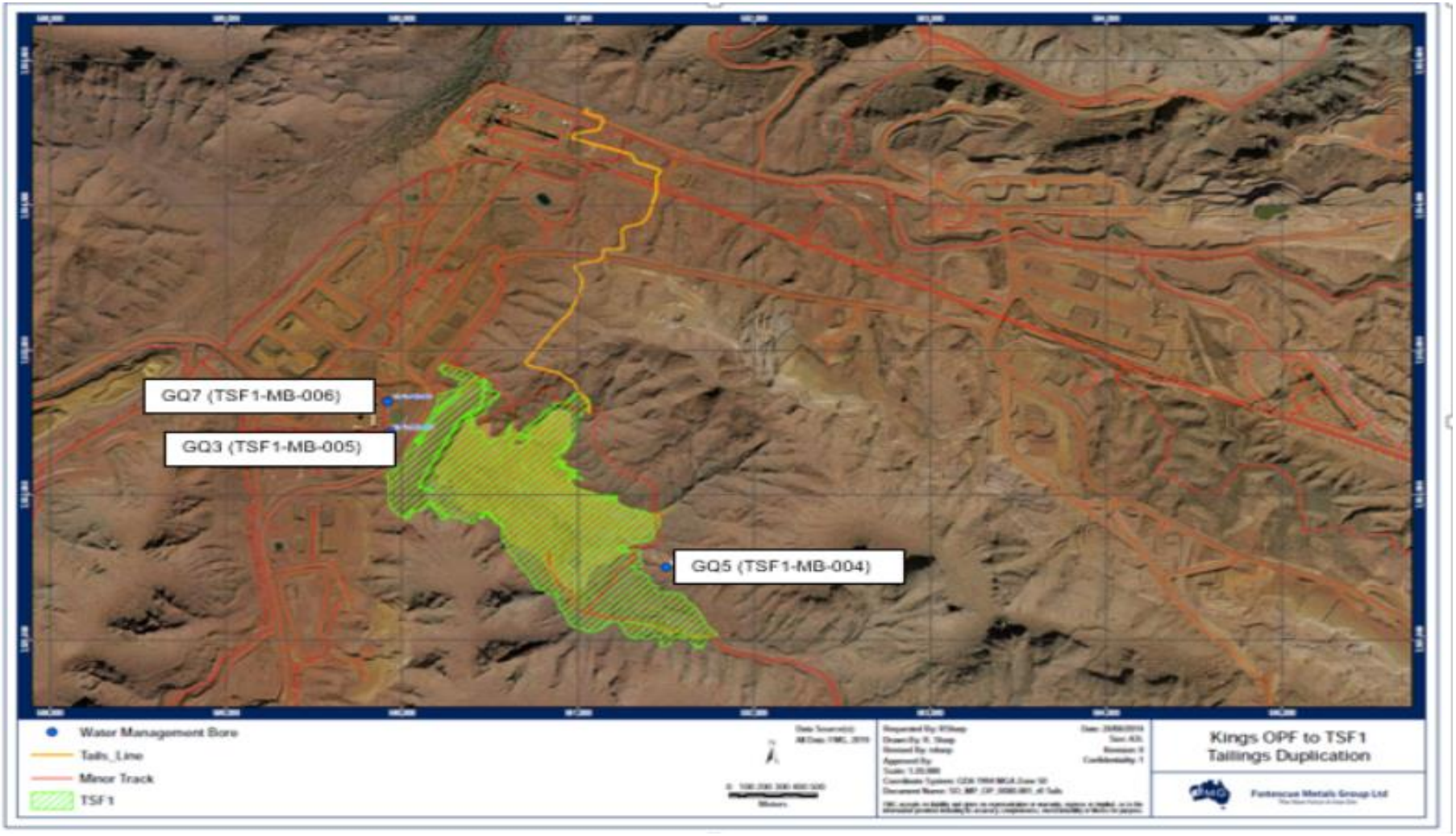

Figure 13: The locations of the TSF1 groundwater monitoring points defined in Condition 26, Table 17 and the tailings delivery pipeline.

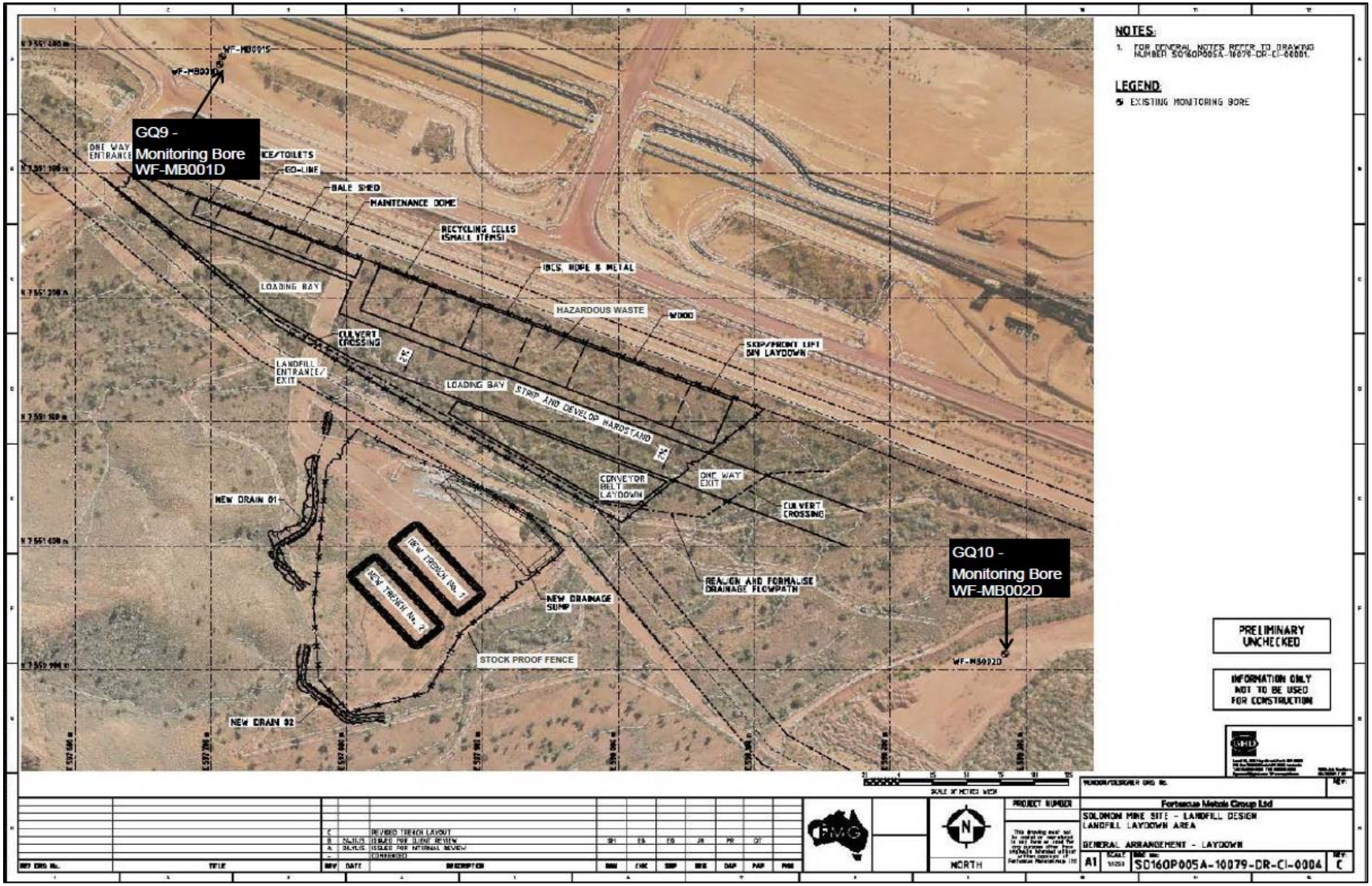

Figure 14: The locations of the Landfill monitoring points defined in Condition 26, Table 17.

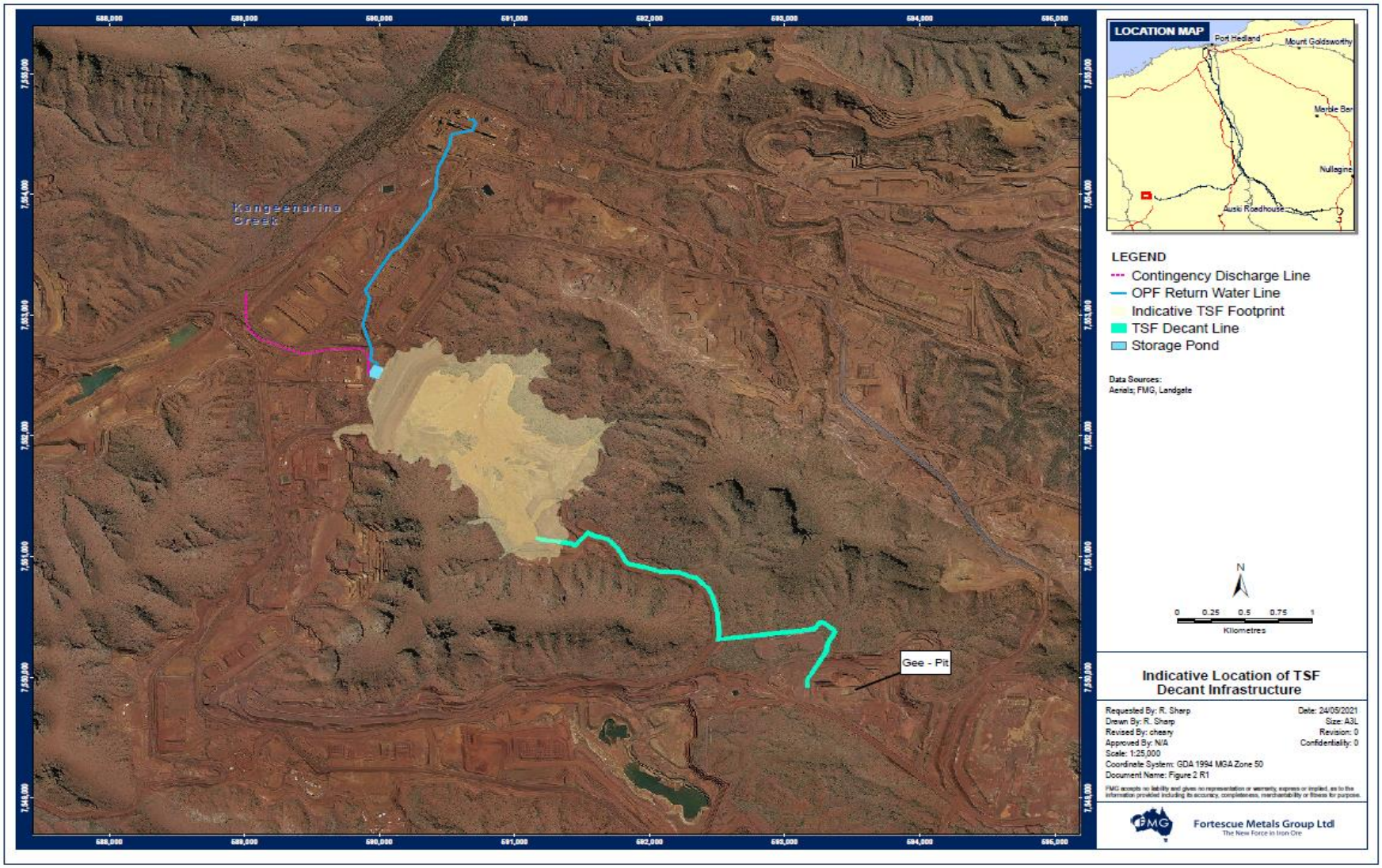

Figure 15: Indicative Location of TSF Decant Infrastructure.

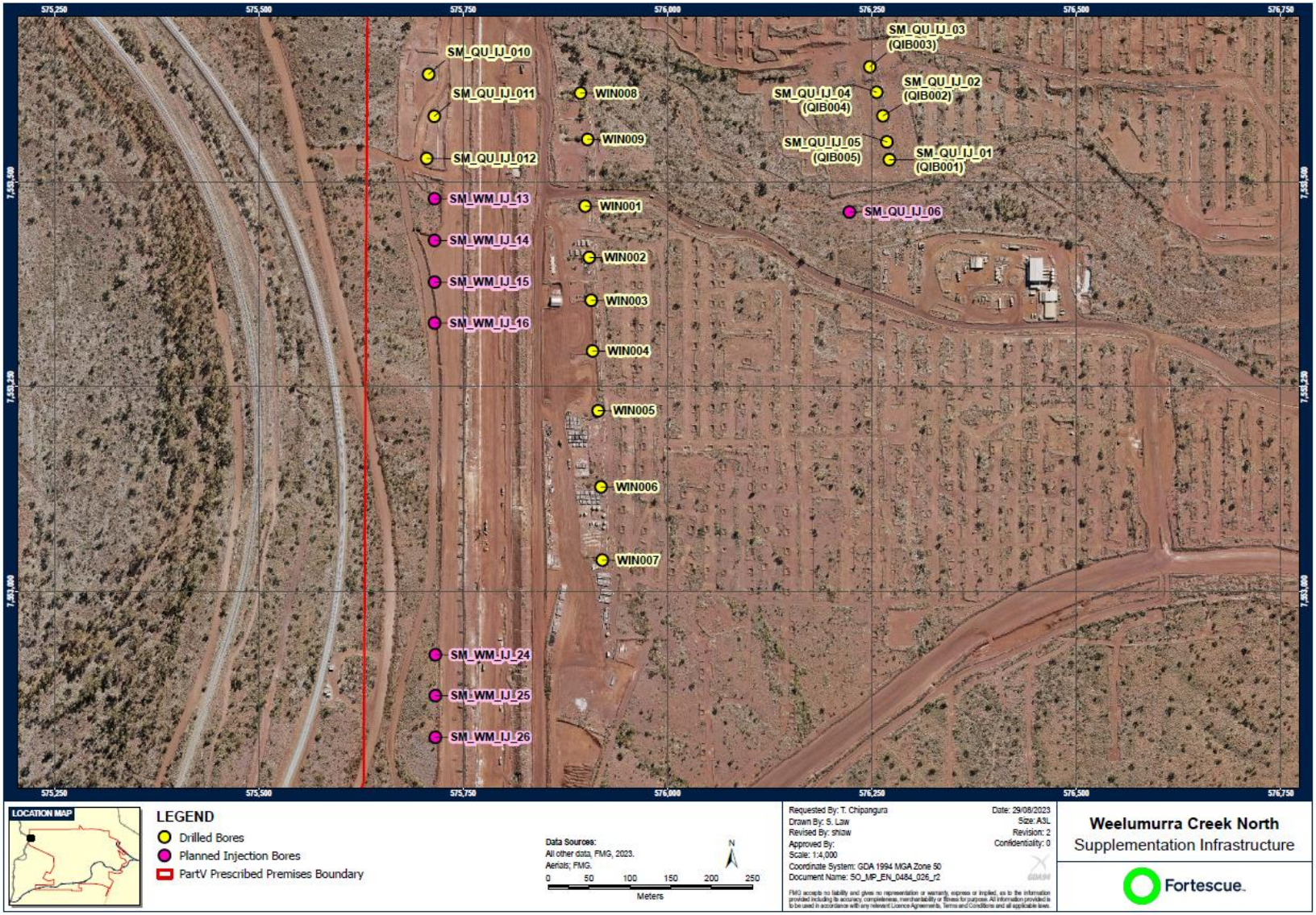

Figure 16: Weelumurra Creek North Supplementation Infrastructure.

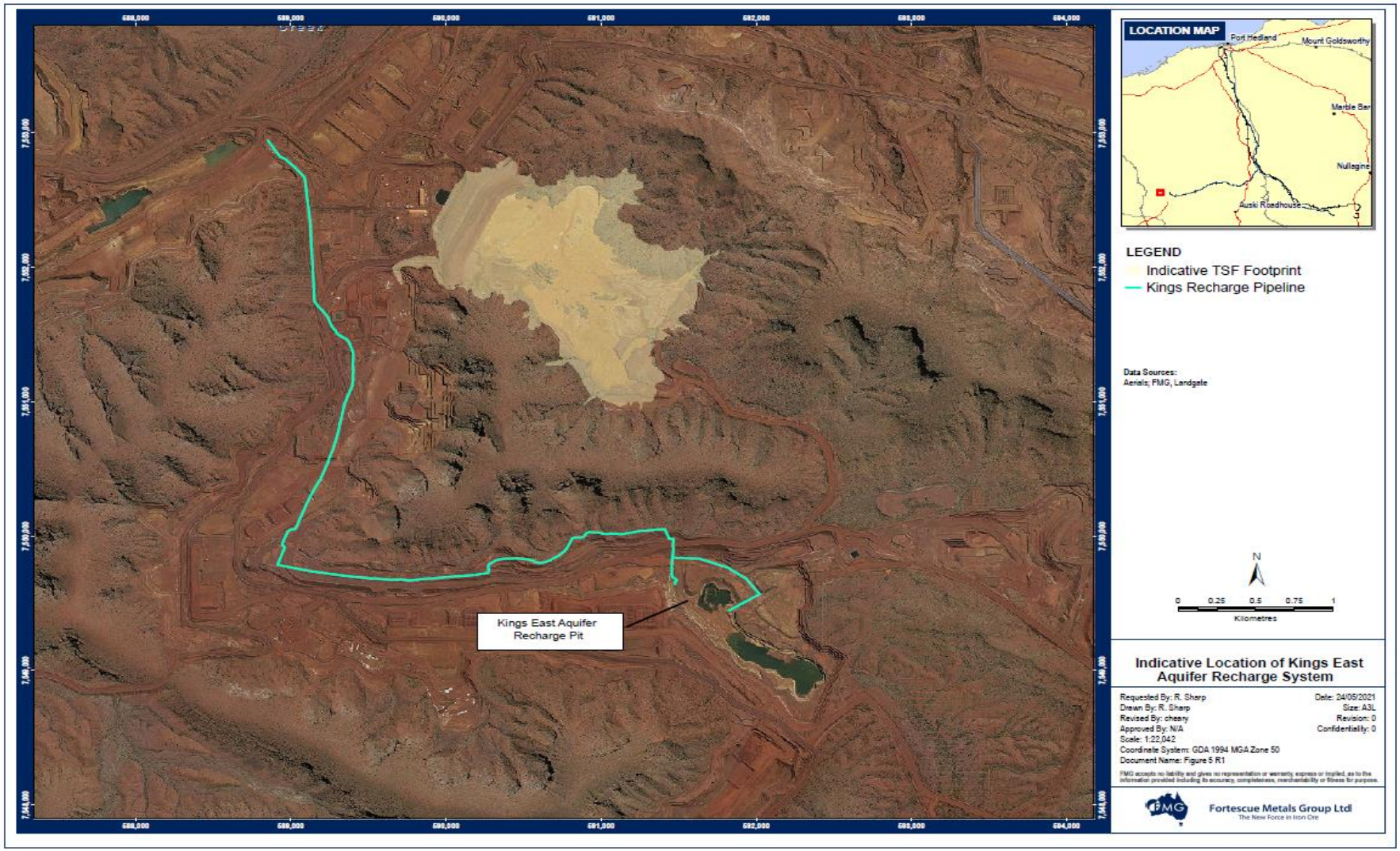

Figure 17: Indicative Location of Kings East Aquifer Recharge System.

Schedule 2: Premises boundary coordinates

ID	Easting	Northing
0	590707	7555929
1	590707.1	7555842
2	591117	7555840
3	591117.5	7555929
4	593356.5	7555928
5	595350.4	7555742
6	596532.9	7555415
7	596533.2	7555296
8	598169.4	7555270
9	598157.5	7553568
10	598157.5	7553568
11	600586.3	7552464
12	600586.4	7552439
13	600597.6	7550683
14	600810.6	7550683
15	601073.5	7550427
16	602694.6	7548944
17	602916.1	7548742
18	602209.8	7547932
19	600692.6	7549349
20	600495.8	7549257
21	600755.4	7549034
22	600784.3	7549009
23	600784.3	7549009
24	600907.7	7548552
25	600942.6	7548423
26	600979.1	7548288
27	601013	7548162
28	601008.1	7548157
29	601016.1	7548150
30	601162.2	7547609
31	601196.2	7547483
32	601295.4	7547116
33	601498.6	7547048
34	601732.8	7546999
35	601967.1	7546949
36	602152	7546875
37	602324.6	7546789
38	602509.6	7546641
39	602682.2	7546407
40	602805.5	7546185
41	602904.1	7545951
42	602904.1	7545753
43	602901	7545749
44	602885	7545738
45	602868.7	7545728
46	602835.5	7545706
47	602818.9	7545695
48	602818.6	7545695
49	602785.3	7545673
50	602768.7	7545662
51	602768.6	7545662
52	602751.8	7545651
53	602751.6	7545651
54	602735.1	7545640
55	602718.5	7545629
56	602718.1	7545629
57	602684.7	7545607
58	602684.5	7545607
59	602667.7	7545596
60	602667.4	7545596
61	602650.7	7545585
62	602650.3	7545585
63	602633.6	7545574
64	602633.4	7545574
65	602599.9	7545552
66	602599.4	7545551
67	602582.7	7545540
68	602582.2	7545540
69	602565.5	7545529
70	602548.9	7545518
71	602548.7	7545518
72	602533.6	7545508
73	602523	7545501
74	602515.3	7545496
75	602508	7545492
76	602500.4	7545487
77	602492.5	7545482
78	602485	7545478
79	602477.3	7545474
80	602469.4	7545469
81	602461.5	7545465
82	602452.2	7545460
83	602437.9	7545453
84	602437.8	7545453
85	602420	7545444
86	602366.8	7545417
87	602349.2	7545408
88	602348.8	7545408
89	602331.3	7545399
90	602313.7	7545390
91	602313.5	7545390
92	602295.7	7545381
93	602295.3	7545381
94	602277.7	7545372
95	602260.1	7545363
96	602259.7	7545363
97	602242	7545354
98	602224.4	7545345
99	602223.4	7545344
100	602187.8	7545326
101	602187.4	7545326
102	602169.6	7545317
103	602169.4	7545317
104	602151.6	7545308
105	602151.2	7545307
106	602133.4	7545298
107	602133	7545298
108	602115.2	7545289
109	602115	7545289
110	602097.3	7545280
111	602079.6	7545271
112	602079	7545270
113	602061.4	7545261
114	602026	7545243
115	602025.6	7545243
116	602008	7545234
117	601990.4	7545225
118	601990	7545225
119	601972.4	7545216
120	601954.8	7545207
121	601954.4	7545207
122	601936.8	7545198
123	601919.3	7545189
124	601902.2	7545180

125	601886	7545172
126	601870	7545164
127	601854	7545155
128	601838	7545147
129	601822	7545140
130	601806.5	7545132
131	601805.1	7545131
132	601794.9	7545126
133	601794.4	7545126
134	601789.6	7545123
135	601773.7	7545116
136	601757	7545107
137	601739.5	7545099
138	601735.3	7545097
139	601733.1	7545096
140	601733	7545096
141	601717.3	7545088
142	601716.4	7545087
143	601714.2	7545086
144	601709.7	7545084
145	601707.2	7545083
146	601706.8	7545083
147	601694.3	7545076
148	601693.5	7545076
149	601688.2	7545073
150	601683.4	7545071
151	601680.7	7545069
152	601680.1	7545069
153	601671.7	7545065
154	601203.5	7543319
155	601203.6	7543319
156	601757.1	7543167
157	601757.6	7542865
158	601757.6	7542805
159	601744.8	7542798
160	601742.2	7542797
161	601724.6	7542787
162	601721.7	7542786
163	601704.1	7542777
164	601701.6	7542775
165	601684	7542766
166	601681.3	7542764
167	601663.6	7542755
168	601660.6	7542753
169	601642.9	7542744
170	601640.4	7542743
171	601622.6	7542734
172	601620.2	7542732
173	601602.4	7542723
174	601599.4	7542722
175	601596.6	7542720
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