Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence number	L8306/2008/3
Licence holder	Newmont Boddington Gold Pty Ltd
ACN	101 199 731
Registered business address	Level 2, 388 Hay Street SUBIACO WA 6008
DWER file number	2013/002375-2
Duration	1/05/2023 to 30/04/2043
Date of issue	26/04/2023
Date of amendment	22/03/2024
Premises details	Newmont Boddington Gold Gold Mine Road, BODDINGTON WA 6390 Legal description – As defined by the tenements listed 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	45,000,000 tonnes per annual period
Category 6: Mine dewatering	4,000,000 tonnes per annual period
Category 33: Chemical blending or mixing	35,000 tonnes per annual period
Category 54: Sewage facility	270 cubic metres per day
Category 57: Used tyre storage (general)	100 tyres
Category 63: Class I inert landfill site	2,000 tonnes per annual period
Category 73: Bulk storage of chemicals etc	6,000 cubic metres in aggregate

This amended licence is granted to the licence holder, subject to the attached conditions, on 2, March 2024 by:

Kang Tam
Digitally signed by Kang Tam
Date: 2024.03.22 15:17:24 +08'00'

A/SENIOR ENVIRONMENTAL OFFICER, INDUSTRY REGULATION
REGULATORY SERVICES
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Premises instrument history

Date	Reference number	Summary of changes
W6227/2006/1	22 May 2006	Works Approval granted for the expansion of the existing RDA to facilitate recommencement of operations.
W4295/2006/1	21 December 2006	Works Approval granted for construction of accommodation village sewage facility.
W4313/2006/1	15 February 2007	Works Approval granted for construction of the processing plant.
L8306/2008/1	1 May 2009	Licence granted.
L8306/2008/2	23 April 2014	Licence reissued, including licence holder amendment and DWER licence review, issued in REFIRE format.
L8306/2008/2	12 March 2015	Amendment authorising Stage 7 to Stage 11 RDA embankment lifts and administrative corrections.
L8306/2008/2	28 March 2019	Amendment Notice 1, including licence review and operational changes.
L8306/2008/2	7 May 2020	Amendment to address matters subject to an appeal by the licence holder of conditions 1.3.1, 1.3.2, 3.8.1, 3.8.2 and 4.1.1 that were amended in Amendment Notice 1. Updated to current licence format, with minor errors corrected.
L8306/2008/2	21 April 2021	Amendment to increase throughput of processing plant to 45,000,000 tonnes per annual period, authorising construction of Stage 14 to Stage 18 lifts to F1/F3 RDA embankments, including further monitoring locations around F1/F3 RDA and including bioremediation facility.
L8306/2008/2	11 February 2022	Amendment to include details of the Stage 15 to Stage 18 Design Report for F1/F3 RDA. Amendment to allow for operation of Stage 16 of F1/F3 RDA once construction of that stage has been completed. Amendment to authorise construction of a temporary sump SD8SU-D1 to replace SD8SU-D when that sump is covered by earthworks of the Saddle Dam 8 buttress.
L8306/2008/3	26 April 2023	Licence renewed. Amendment to allow for operation of Stage 17 and 18 of F1/F3 RDA once construction of that stage has been completed. Amendment to authorise Thirty-Four Mile Brook Diversion Pond for discharge of mine dewater.
L8306/2008/3	22 March 2024	Amendment to extend the submission date of AER and AACR from 90 days to six months after the end of each annual period.

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:

Infrastructure and equipment

1. The licence holder is authorised to:

   (a) construction embankment raises for the infrastructure listed in Table 1 to the construction height; and

   (b) operate the infrastructure listed in Table 1 to the operating height, only when the Environmental Compliance Report as required by condition 34 has been submitted by the licence holder for that stage,

   as specified in Table 1.

Table 1: Staged construction and operating heights

Infrastructure	Stage	Construction height (m RL)	Operating height (m RL)[1]
F1 RDA	14	350.5	350.5
	15	353.0	353.0
	16	355.5	355.5
	17	358.0	358.0
	18	361.0	361.0

Note 1: Operating height limit includes freeboard requirements specified in condition 0.

2. The licence holder must ensure that all pipelines containing tailings residue or residue water are either:

   (a) equipped with telemetry systems and pressure sensors along pipelines to allow the detection of leaks and failures;

   (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.

3. The licence holder must ensure that waste disposed within the Contaminated Rock Facility and waste tyre disposal area (as per Figure 4 of Schedule 1: Maps) shall only comprise of:

   (a) waste rock, including hydrocarbon contaminated waste rock;

   (b) conveyor belt;

   (c) oversized tyres, if:

      (i) they are placed on the bottom of each bench with one batch height per bench;

      (ii) batches are no more than 3 oversize tyres;

      (iii) batches are separated from one another by at least 1m;

      (iv) no oversized tyres are deposited within 50 m of the final toes of each bench; and

      (v) each bench shall be covered with 15 m of waste rock.

(d) hydrocarbon contaminated soils and sediments stored within bioremediation cells within the Contaminated Blue Rock Facility. Bioremediation cells must be constructed with:

(i) 2m-deep compacted oxide floor that drains to a bunded evaporation sump that collects surface water from within the cell; and

(ii) three external bund walls around the perimeter of the cell to separate external runoff from the cell.

4. The licence holder must ensure that tailings, decant water contaminated storm water and waste water treatment plant effluent are only discharged into containment cells with the relevant infrastructure requirements and at the locations specified in Table 2 and identified in Schedule 1: Maps.

Table 2: Containment infrastructure

Containment cell or dam number(s)	Reference location on maps of containment structures (Schedule 1)	Material Accepted	Infrastructure requirements
F1 RDA	Figure 1: Containment infrastructure - RDAs	Residue tailings generated from gold and copper production and associated activities. Water from the Perimeter Sump SD8SU-A1 and F1-RDA underdrainage.	Lined with a drainage layer**,** geo-membrane (synthetic liner) with permeability equivalent to $1x10^{-13}$ m/s and a compacted clay liner with a permeability of not more than that exhibited by 300mm of $1x10^{-8}$ m/s. The area outside the decant pond shall be lined with a system of seepage containment comparable to that of a compacted clay liner with a permeability of not more than that exhibited by 300mm of $1x10^{-8}$ m/s. Supplemental controls to include cut-off trenches, underdrainage solution collection pipes.

Containment cell or dam number(s)	Reference location on maps of containment structures (Schedule 1)	Material Accepted	Infrastructure requirements
R4 RDA	Figure 1: Containment infrastructure - RDAs	Treated sewage waste water from sewage facilities within the premises and the Boddington Waste Water Treatment Plant. Residue tailings waste water from Catch Pit 3 and/or Catch Pit 4. Water from F1 RDA sumps: SD3SU-A SD3SU-C SD4SU-B SD5SU-A SD5SU-B SD7SU-A SD7SU-B SD8SU-C SD8SU-D. SD8SU-D1 Underdrainage water (from underdrainage and LCRS) and beach drainage from F1 RDA into R4 RDA is only permitted according to condition 1.3.11.	Constructed from an in situ clay blanket capped by 1m of consolidated residue with a modelled permeability of 1.0 x 10^{-8} m/s.

Containment cell or dam number(s)	Reference location on maps of containment structures (Schedule 1)	Material Accepted	Infrastructure requirements
F1 RDA perimeter sumps (SD3SU-A SD3SU-B[1] SD3SU-C SD4SU-B SD5SU-A SD5SU-B SD7SU-A SD7SU-B SD8SU-C SD8SU-D SD8SU-D1).	Figure 1: Containment infrastructure - RDAs	Water accumulated within the sump by toe drain water, groundwater and surface water inflows.	Unlined with incorporated pumping system
F1 RDA Perimeter Sump SD8SU-A1	Figure 1: Containment infrastructure - RDAs	Water accumulated within the sump by toe drain water, groundwater, surface water inflows and tailings water from the F1 RDA beach drain.	Unlined with incorporated pumping system.
Catch pits 1, 2, 3 and 4	Figure 2: Containment infrastructure - Processing	Residue tailings waste water.	First stage concrete lined, second stage clay lined.
Process Water Pond	Figure 2: Containment infrastructure - Processing	Return water from F1 RDA and R4 RDA, water from the Impacted Water Sump, North Clear Water Pond and South Clearwater pond.	Earth fill embankment with a double HDPE liner.
Storm Water Pond Number 1	Figure 2: Containment infrastructure - Processing	Contaminated stormwater. Treated sewage waste water from sewage facilities within the premises and the Boddington Waste Water Treatment Plant	HDPE lined.
Storm Water Pond Number 2	Figure 2: Containment infrastructure - Processing	Contaminated stormwater	HDPE lined.

Containment cell or dam number(s)	Reference location on maps of containment structures (Schedule 1)	Material Accepted	Infrastructure requirements
CIL Containment Sump	Figure 2: Containment infrastructure - Processing	Stormwater from the area surrounding the Carbon in Leach Area. Residue tailings generated from gold and copper production and associated activities	Constructed within a concrete bund.
South Clear Water Pond	Figure 2: Containment infrastructure - Processing	Wandoo South Pit dewatering and Waste Rock Dump runoff.	Low strength shale rock at depth greater than 8m overlain by clay / silt material from 2.5m to 8m depth with clay core embankments.
Thirty-Four Mile Brook Diversion Pond	Figure 10: Site infrastructure	Wandoo North Pit dewatering	Clay lining must be maintained. Spillway to North Wandoo pit must be maintained.
North Wandoo Pit	Figure 10: Site infrastructure	Overflow from Thirty-Four Mile Brook Diversion Pond, including Wandoo North Pit dewatering	Emergency discharge location for receiving overflow from Thirty-Four Mile Brook Diversion Pond via spillway.
No. 7 Eastern Drain	Figure 3: Containment infrastructure - Mining impacted water	Surface runoff from No.7 Waste Rock Dump.	Rip rap lined rectangular open channel.
Number 9 Drain and Sediment Ponds	Figure 3: Containment infrastructure - Mining impacted water	Runoff from No. 9 Waste Rock Dump.	Cut in situ rectangular open channel.
Impacted Water Drains (IWD01, IWD 02 and IWD03)	Figure 3: Containment infrastructure - Mining impacted water	WRD seepage water	Rock filled trenches incorporating slotted HDPE drainage pipe.
Cut-off Trench 01	Figure 3: Containment infrastructure - Mining impacted water	WRD seepage water	Rock filled trench incorporating slotted HDPE drainage pipe.
Mine Water Drain 05	Figure 3: Containment infrastructure - Mining impacted water	Mine runoff water	Cut in situ, rectangular open channel.
Wet Well Dike (WWD)	Figure 3: Containment infrastructure - Mining impacted water	WRD Seepage water	Earth fill embankment with a compacted clay core and a low-permeability cut-off barrier underlain.

5. The licence holder must ensure that a freeboard equal to or greater than that specified in Table 3 is maintained for each containment structure specified in Table 3 and identified in Schedule 1: Maps.

Table 3: Freeboard requirements

Containment cell or dam number(s)	Reference location	Freeboard requirement
F1 RDA	Figure 1 of Schedule 1: Maps.	500 mm
R4 RDA		
Catch pits 1, 2, 3 and 4	Figure 2 of Schedule 1: Maps.	300 mm
Process Water Pond		
Storm Water Pond Number 1		
Storm Water Pond Number 2		
Carbon in Leach Containment Sump		

6. The licence holder must only accept waste if:

(a) it is of a type listed in Table 4;

(b) the quantity accepted is below any quantity limit listed in Table 4;

(c) it meets any specification listed in Table 4.

Table 4: Waste acceptance

Waste type	Quantity limit	Specification
Inert Waste Type 1	2,000 tonnes per annual period (cumulatively)	None specified.
Inert Waste Type 2		Plastic only (excluding used tyres)
Clean Fill		None specified.
Controlled Waste Category K130: Sewage waste from reticulated sewage system	270 cubic metres per day (cumulatively)	Accepted through sewer inflow(s) only.
Controlled Waste Category K210: Septage wastes		Tankered into the premises and discharged in the pre-treatment area (as marked on Figure 5 in Schedule 1: Maps) via an enclosed pipeline. Tankered into the premises and discharged via the Pump Station receivable point.
Vegetable and food processing liquid wastes		None specified.
Controlled Waste Category L150: Industrial wash water contaminated with a controlled waste	None specified	Washdown water generated from the ship loading of Newmont Boddington Gold products at Bunbury Port.
Hydrocarbon contaminated	1,600 m^3	Material treated by bioremediation

Waste type	Quantity limit	Specification
material		within the Bioremediation Facility to the specifications as required in condition 13.

7. The licence holder must ensure that wastes accepted at the inert landfill are only subjected to the process(es) set out in Table 5 and in accordance with any process limits described in Table 5.

Table 5: Waste processing

Waste type	Activity	Process specifications[1,2]
Clean Fill Inert Waste Type 1 Inert Waste Type 2	Receipt, handling and disposal of waste produced at the premises.	(1) Dispose of waste by landfilling must only take place within the Inert Landfill shown on Figure 4 in Schedule 1: Maps; and (2) The separation distance between the base of the landfill and the highest groundwater level shall not be less than 2m.
Special Waste Type 1		(1) To be removed from site to a licensed facility.

Note 1: Requirements for landfilling tyres are specified 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) Regulation 2004*.

8. The licence holder must manage the landfilling activities to ensure:

(a) waste is levelled and compacted as soon as practicable after it is discharged;

(b) waste is placed and compacted to ensure all faces are stable and capable of retaining restoration material; and

(c) restoration of the landfill takes place within six months after disposal in that landfill has been completed.

9. The licence holder is permitted to burn timber that cannot be reasonably and practicably removed from the premises, if:

(a) it is performed in a designated burning area with the burn pit identified on Figure 4 in Schedule 1: Maps;

(b) the timber is free of treated timbers;

(c) it is burnt quickly and in such a way that the generation of smoke is minimised; burning does not commence before 0800 and the Fire Control Officer for the Premises declares the area safe by the end of shift at the end of the same day; and

(d) there is present in the area from the time burning commences until the Fire Control Officer for the Premises declares the area safe:

(i) a fire fighting vehicle carrying at least 500 litres of water, fitted with at least 30 m of 19 mm diameter rubber hose and with a pump capacity capable of delivering a minimum 250 litres of water per minute at a minimum of 700 kPa through a nozzle capable of projecting water by spray or by jet; and

(ii) two persons, who have such qualifications in firefighting.

10. The licence holder must:

(a) undertake inspections as detailed in Table 6; and

(b) where any inspection identified 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	Twice daily
Return water lines	Visual integrity	Twice daily
RDA embankment	Visual for freeboard	Daily
F1 RDA decant pond	Survey of decant pond elevation	Weekly
	Survey of tailings beach Bathymetric survey	Quarterly

11. The licence holder is permitted to discharge seepage collected from the underdrainage, beach drainage and leachate collection recovery systems to R4 RDA in the following circumstances:

(a) when the F1 RDA decant pond volume is anticipated to reach the Target Limit (as defined in Table 18); and

(b) notification has been made to the CEO in accordance with condition 36.

12. The licence holder must ensure that the waste types specified in Table 7 are only subjected to the corresponding process, subject to the corresponding process limits and/or specifications.

Table 7: Waste processing

Waste type	Process	Process limits and/or specifications
Hydrocarbon contaminated soils other than those treated in the Contaminated Blue Rock Facility	Bioremediation	(1) Must be treated and retained in the bioremediation facility until the treated material meets TRH concentrations below the Screening Levels for commercial/industrial premises, NEPM (Assessment of Site Contamination). (2) If the above limits are not met disposal must be by a licensed Controlled Waste carrier and according to Controlled Waste Regulations 2004.
	Disposal to: • inert landfill, • road fill, or • Contaminated Blue Rock Facility.	(1) TRH concentrations below the Ecological Screening Levels for commercial/industrial premises, NEPM (Assessment of Site Contamination).

13. The licence holder must ensure that the infrastructure and equipment listed in Table 8 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 8.

Table 8: Infrastructure and equipment requirement

Site infrastructure and equipment	Operational requirement	Infrastructure location
Bioremediation facility	(1) Each cell must have: (a) A HDPE lined evaporation sump 2 m deep with a gradient sufficient to direct all surface water the sumps. (b) Three bund walls around each cell 2.5 m high. (c) Sloped to prevent uncontaminated water entering the cells. (1) Only hydrocarbon contaminated material generated on the premises is accepted for treatment in the facility. (2) Water from the evaporation sumps must be treated through an oil water separator prior to discharge to the process pond.	Bioremediation Facility as depicted on Figure 4 of Schedule 1: Maps.

14. The licence holder must construct the embankment raises to the F1 RDA in accordance with the documentation detailed in Table 9.

Table 9: Construction requirements for raises to F1 RDA

Document	Parts	Date of document
F1/F3 Residue disposal area: Stage 15 – Stage 18 Design Report	All	10 August 2021

15. The licence holder must construct the infrastructure listed in Table 10, in accordance with:

(a) the corresponding design and construction; and

(b) at the corresponding infrastructure location; and

as set out in Table 10.

Table 10: Design and construction requirements

Infrastructure	Design and construction requirement	Infrastructure location
SD8SU-D1	• Unlined with incorporated pumping system; • Sized to contain the same volume of seepage as currently contained within SD8SU-D.	Located approximately 150 m to the south of the existing sump SD8SU-D, on the outer perimeter of the F1 RDA.
Thirty-Four Mille Brook Diversion Pond spillway	• Spillway constructed at RL 237 m of Thirty-Four Mile Brook Diversion Pond; • Width at base is 10 m, with total depth of 1 m; • Comprise a 500mm-thick grouted riprap apron; • Spillway linked directly into drain constructed in oxide fill, directed towards	Located between Thirty-Four Mile Brook Diversion Pond and North Wandoo Pit.

Infrastructure	Design and construction requirement	Infrastructure location
	discharge at North Wandoo Pit.	

Emissions and discharges

Air emissions

16. The licence holder must ensure that the emissions specified in Table 11 are discharged only from the corresponding emission location and at the corresponding height specified in Table 11.

Table 11: Point source emissions to air

Emission point reference	Emission point	Emission point height (m)	Source, including any abatement	Emission infrastructure location
A1	Secondary crushing circuit	7	Secondary crushing circuit via bag filters.	Figure 6 of Schedule 1: Maps
A2	Coarse screening circuit		Coarse screening circuit via bag filters.	
A3	Tertiary crushing circuit		Tertiary screening circuit via bag filters.	
A4	Fine Ore Bin 1 (625-BIN-1-01) vent	28	Cyclone feed sump/ fine screening area, including water sprays	
A5	Fine Ore Bin 2 (625-BIN-2-01) vent			
A6	Fine Ore Bin 3 (625-BIN-3-01) vent			
A7	Fine Ore Bin 4 (625-BIN-4-01) vent			
A13	Carbon regeneration kiln 1 stack	22	Carbon regeneration kiln 1.	
A14	Carbon regeneration kiln 2 stack		Carbon regeneration kiln 2.	
A15	Bullion smelting furnace room stack	17	Bullion smelting furnace.	
A24	Elution vessels and gas-fired heaters exhaust duct	16.45	Elution vessels and gas-fired heaters.	
A25	Electrolyte and electrowinning cells vent	19	Electrolyte and electrowinning cells.	
A26	Cyanide destruction circuit vent	11	Cyanide destruction circuit.	Figure 7 of Schedule 1: Maps

Fugitive dust emissions

17. The licence holder must use all reasonable and practical measures to prevent, and where that is not practicable, to minimise, dust emissions from the Premises.

Odour emissions

18. The licence holder must ensure that odour emitted from the premises does not unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person who is not on the premises.

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 surface water sampling is conducted in accordance with AS/NZS 5667.6;

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

(d) all stack air sampling is conducted in accordance with AS 4323.1;

(e) all non-continuous sampling and analysis of stack air quality are undertaken by a holder of NATA accreditation for the relevant methods of sampling and analysis; and

(f) all laboratory samples are submitted to a laboratory with current NATA accreditation for the parameters relevant parameters measured.

20. The licence holder must ensure that:

(a) monthly monitoring is undertaken at least 15 days apart;

(b) quarterly monitoring is undertaken at least 45 days apart; and

(c) six monthly monitoring is undertaken at least five months apart.

21. The licence holder must ensure that all monitoring equipment used on the premises to comply with conditions 26, 27 and 28 is calibrated in accordance with the manufacturer's specifications.

22. The licence holder must, where the requirements for calibration cannot be practicably met or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.

Process monitoring

23. The licence holder must record production or throughput data and any other process parameters to any non-continuous monitoring undertaken.

24. The licence holder must undertake monitoring of the water balance for F1 RDA each quarterly period and, as a minimum, record the following information:

(a) volume of tailings stored in the F1 RDA;

(b) tailings volume discharged to the F1 RDA;

(c) tailings water returned to the processing plant;

(d) volumes of seepage underdrainage collected from the underdrainage and LCRS and returned to the F1 RDA;

(e) volumes of beach drainage returned to F1 RDA;

(f) volumes of perimeter sump water returned to F1 RDA;

(g) volumes of perimeter sump water discharged to R4 RDA;

(h) rainfall;
(i) evaporation; and
(j) estimate of seepage losses from F1 RDA.

25. The licence holder must undertake the monitoring specified in Table 12 and record and investigate results that do not meet any limit specified.

Table 12: Process monitoring

Monitoring point	Monitoring location	Process description	Parameter	Unit	Frequency	Limit	Method
F1 Residue Disposal Area Booster station (Caro's Acid Cyanide Destruction System)	As depicted in Figure 7 of Schedule 1: Maps	Return water from the F1 RDA decant pond to Process Pond 1.	WAD cyanide	mg/L	Continuous (15-minute averaging period)	30	Continuous WAD cyanide analyser
Catch Pit 3 Catch Pit 4	As depicted in Figure 2 of Schedule 1: Maps	Residue tailings waste water discharged from Catch Pits 3 and 4 and discharged to R4 RDA.			Prior to a discharge event to R4 RDA	50	None specified

Air monitoring

26. The licence holder must undertake the monitoring in Table 13 according to the specifications in that table.

Table 13: Monitoring of point source emissions to air

Emission point reference, as depicted in Schedule 1: Maps, Figure 6.	Parameter	Units[1]	Averaging period	Frequency[2]	Method
(1) Secondary crushing circuit (A1); (2) Coarse screening circuit (A2); (3) Tertiary crushing circuit (A3); (4) Carbon regeneration kiln 1 stack (A13); (5) Carbon regeneration kiln 2 stack (A14); (6) Bullion	PM	mg/m^3 g/s	Stack Test (60-minute average)	Six monthly	USEPA Method 5 or USEPA Method 17
	PM_{10}				USEPA Method 201A[3]

Emission point reference, as depicted in Schedule 1: Maps, Figure 6.	Parameter	Units[1]	Averaging period	Frequency[2]	Method
smelting furnace room stack (A15).					
(1) Carbon regeneration kiln 1 stack (A13) (2) Carbon regeneration kiln 2 stack(A14) (3) and (4) Bullion smelting furnace room stack (A15)	Sulfur dioxide		Stack test (30-minute average)		USEPA Method 6, 6C or 8
	NO_x				USEPA Method 7E
(1) Bullion smelting furnace room stack (A15)	Benzene	$\mu g/m^3$ g/s			USEPA Method 18
	Total VOC as n-hexane				

Note 1: All units are referenced to STP dry.
Note 2: Monitoring shall be undertaken to reflect normal operating conditions and any limits or conditions on inputs or production.
Note 3: If sampling conditions do not suit the method, particle size distribution analysis can be conducted using USEPA Methods 5 or 17.

Water monitoring

27. The licence holder must undertake the monitoring specified in Table 14 and record and investigate results that do not meet any target specified.

Table 14: Monitoring of surface water quality

Monitoring point	Monitoring location	Parameter	Unit	Averaging period	Frequency	Target
Background sites[1], comprising: (2) HBBK14; (3) SDBK2; (4) 34MBPD1; (5) HRPB1. Compliance sites, comprising[1]: (1) 34BK109; (2) 34BK110; (3) BGBK6;	As depicted in Schedule 1: Maps, Figure 8.	pH[2]	pH unit	Spot sample	Monthly	Between 5.0 – 9.0[3]
		Electrical conductivity[2]	µS/cm			---
		Total dissolved solids	mg/L			---
		Total suspended solids	mg/L			---
		Metals and metalloids, including[4]: (1) aluminium (Al);	mg/L			---

Monitoring point	Monitoring location	Parameter	Unit	Averaging period	Frequency	Target
(4) WHBK10. F1 RDA perimeter sumps, comprising: (1) SD3SU-A; (2) SD3SU-B; (3) SD3SU-C; (4) SD4SU-B; (5) SD5SU-A; (6) SD5SU-B; (7) SD7SU-A; (8) SD7SU-B; (9) SD8SU-A1; (10) SD8SU-C; (11) SU8SU-D; (12) SD8SU-D1[5].		(2) arsenic (As); (3) cadmium (Cd); (4) cobalt (Co); (5) chromium (Cr); (6) copper (Cu); (7) iron (Fe); (8) mercury (Hg); (9) manganese (Mn); (10) molybdenum (Mo); (11) nickel (Ni); (12) lead (Pb); (13) antimony (Sb); (14) selenium (Se); (15) titanium (Ti); (16) tungsten (W); (17) zinc (Zn)				
		Major ions, including: (1) bicarbonate (CO_3); (2) sulfate (SO_4); (3) calcium (Ca); (4) chloride (Cl); (5) fluoride (F); (6) magnesium (Mg); (7) potassium (K); (8) sodium (Na); (9) titratable acidity (H^+).	mg/L			---
		WAD cyanide	mg/L			50
Compliance sites, comprising[1]: (1) WHBK10.	As depicted in Schedule 1: Maps, Figure 8.	Parameters, including: (1) Dissolved oxygen; (2) Biochemical oxygen demand.	mg/L	Spot sample	Monthly	---
		Nutrients, including: (1) total nitrogen; (2) total phosphorus.	mg/L	Spot sample	Monthly	---
		Microbial parameters, including: (1) *E. coli*;	cfu/ 100mL	Spot sample	Monthly	---

Monitoring point	Monitoring location	Parameter	Unit	Averaging period	Frequency	Target
		(2) thermotolerant coliforms.				

Note 1: Monthly sampling only required when flowing, where there is adequate water to be sampled.
Note 2: In-field non-NATA-accredited analysis permitted.
Note 3: Target for pH is only applicable for F1 RDA perimeter sump monitoring points.
Note 4: Total metal analysis should be performed on surface water samples.
Note 5: Monitoring at SD8SU-D1 is only required if SD8SU-D cannot be sampled or has been decommissioned.

28. The licence holder must undertake monitoring specified in Table 15 and record and investigate results that do not meet any target specified.

Table 15: Monitoring of ambient groundwater

Monitoring point	Monitoring location	Parameter	Unit	Averaging period	Frequency	Target
Monitoring sites, comprising: (1) WD7BR4; (2) WTBR2; (3) LPBR1; (4) F1BR24D-2; (5) F1BR25D-2; (6) F1BR26S; (7) F1BR29S; (8) F1BR29D; (9) F1BR31S; (10) F1BR31D; (11) F1BR34S; (12) F1BR34D; (13) F1BR35D; (14) F1BR38D; (15) F1BR40D; (16) F1BR43S; (17) F1BR43D. Compliance sites, comprising[1]: (1) WD8BR5; (2) WD9BR3; (3) BUBR6; (4) BUBR7; (5) BUBR10; (6) F1BR16D; (7) F1BR19S; (8) F1BR22D; (9) F1BR23D; (10) F1BR26D; (11) F1BR36D;	As depicted in Schedule 1: Maps, Figure 9.	Standing water level	mbgl; mAHD	Spot sample	Quarterly	---
		pH[1]	pH unit			Between 5.0 – 9.0[2]
		Electrical conductivity[1]	µS/cm			---
		Total dissolved solids	mg/L			---
		Metals and metalloids, including[3]: (1) aluminium (Al); (2) arsenic (As); (3) cadmium (Cd); (4) cobalt (Co); (5) chromium (Cr); (6) copper (Cu); (7) iron (Fe); (8) mercury (Hg); (9) manganese (Mn); (10) molybdenum (Mo); (11) nickel (Ni); (12) lead (Pb); (13) antimony (Sb); (14) selenium (Se); (15) titanium (Ti); (16) tungsten (W); (17) zinc (Zn)	mg/L			---
		Major ions, including: (1) bicarbonate (CO_3);	mg/L			---

Monitoring point	Monitoring location	Parameter	Unit	Averaging period	Frequency	Target
(12) F1BR39D-2; (13) F1BR42D; (14) R4BR105D; (15) R4BR106D.		(2) sulfate (SO_4); (3) calcium (Ca); (4) chloride (Cl); (5) fluoride (F); (6) magnesium (Mg); (7) potassium (K); (8) sodium (Na); (9) titratable acidity (H^+).				
		Cyanide, including: (1) Total cyanide; (2) WAD cyanide	mg/L			---
Compliance site, comprising: (1) R4BR109	As depicted in Schedule 1: Maps, Figure 9.	Standing water level	mbgl; mAHD	Spot sample	Quarterly	---

Note 1: In-field non-NATA-accredited analysis permitted.
Note 2: Target for pH is only applicable for F1 RDA perimeter sump monitoring points.
Note 3: Dissolved metal analysis should be performed on groundwater samples.

Records and reporting

29. 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.

30. 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 conditions 14 and 15 of this licence;

(c) any maintenance of infrastructure that is performed in the course of complying with conditions 2, 3, 4, 6, 7, 8, 9 and 13 of this licence;

(d) monitoring programmes undertaken in accordance with condition 25, 26, 27 and 28 of this licence; and

(e) complaints received under condition 29 of this licence.

31. The books specified under condition 30 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 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.

32. 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 six months after the end of that annual period an Annual Audit Compliance Report in the approved form.

33. The licence holder must submit to the CEO no later than six months after the end of each annual period, an Annual Environmental Report for that annual period for the conditions listed in Table 16, and which provides information in accordance with the corresponding requirement set out in Table 16.

Table 16: Annual Environmental Report

Condition	Parameter	Format or form
---	Summary of any failure or malfunction of any pollution control equipment or any incidents that have occurred during the annual period and any actions taken.	None specified.
Condition 23	Any relevant process, production or operational data recorded.	None specified.
Condition 24	Monthly water balance of F1 RDA.	Tabulated data for water balance, including raw data files, such as Excel, .csv or equivalent editable format.
Condition 25	Process monitoring target exceedances and the outcome of any investigations.	None specified.
Condition 26	Point source air monitoring results, including a summary of trends in monitoring results and a comparative assessment against historical monitoring data.	Tabulated data for monitoring results; Time-series plots for trend analysis; and Raw data files, such as Excel, .csv or equivalent editable format.
Condition 27; Condition 28	Surface water and ambient groundwater monitoring results, including any target exceedances and the outcome of any investigations. A summary of the trends in surface water and ambient groundwater monitoring results, including a comparative assessment against historical monitoring data.	
Condition 29	Summary of complaints received during the annual period and any actions taken.	None specified.
Condition 32	Compliance against the conditions of this licence.	AACR
----	Copies of original monitoring reports submitted to the licence holder by third parties relating to the requirements of this licence.	As received by the licence holder from third parties.
Condition 36	Summary of environmental incidents during the annual period and any actions taken.	None specified.

34. The licence holder must within 90 calendar days of an item of infrastructure or equipment required by conditions 14 and within 30 calendar days of an item of infrastructure or equipment required by condition 15 being constructed and/or installed:

(a) undertake an audit of their compliance with the requirements of condition 14 and/or 15 for that item of infrastructure; and

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

35. The Environmental Compliance Report required by condition 34 must include, as a minimum, the following:

(a) certification by a suitably qualified geotechnical engineer that the items of infrastructure or components thereof, as specified in condition 14 have been constructed in accordance with the relevant requirements specified in condition 14; or

(b) certification by a suitably qualified engineer that the items of infrastructure or components thereof, as specified in condition 15 have been constructed in accordance with the relevant requirements specified in condition 15; and

(c) as constructed plans and a detailed site plan for each item or component of infrastructure specified in conditions 14 and/or 15; and

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

36. The licence holder must ensure that the parameters listed in Table 17 are notified to the CEO in accordance with the notification requirements specified in Table 17.

Table 17: Notification requirements

Condition	Parameter	Notification requirement[1]	Format or form
----	Any failure or malfunction of any pollution control equipment or any incident, which has caused, is causing or may cause a pollution.	Part A: As soon as practicable but no later than 5pm of the next usual working day from the day the breach is identified. Part B: As soon as practicable.	N1 form
-----	Incidents where the F1 Residue Disposal Area Booster Station shows a WAD cyanide concentration of over 50 mg/L over a 1-hour period.		
Condition 26, 27 and 28	Breach of any limits specified in the licence.		
Condition 11	Discharge of water from underdrainage, LCRS drainage and beach drainage to R4 RDA	Within 48 hours of any planned discharge, detailing: (1) circumstances arising to the discharge; (2) planned duration of discharge; and (3) expected volume to be discharged.	None specified.
Condition 22	Calibration report	As soon as practicable.	None specified.

Note 1: Notification requirements in the licence shall not negate the requirement to comply with s72 of the EP Act.
Note 2: Forms are in Schedule 2: Notification & Forms.

Definitions

In this licence, the terms in Table 18 have the meanings defined.

Table 18: Definitions

Term	Definition
ACN	Australian Company Number
AHD	means the 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 until 31 December of the immediately following year.
AS 4323.1	means the Australian Standard AS4323.1 *Stationary Source Emissions Method 1: Selection of sampling positions.*
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of sampling programs, sampling techniques and the preservation and handling of samples.*
AS/NZS 5667.6	means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on sampling of rivers and streams.*
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 or target 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
CIL	means Carbon In Leach.
clean fill	has the same meaning given to that term in the Landfill Waste Classification and Waste Definitions 1996 (as amended 2019).
controlled waste	has the same meaning given to that term under the *Environmental Protection (Controlled Waste) Regulations 2004*.

Term	Definition
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.
designated burning area	means an area of the Onsite Waste Disposal Area that has been designated by the licence holder and which: 1. is at least 50 m from the boundary of the Onsite Waste Disposal Area; 2. has no inflammable material on it, other than the timber, for a radius of 50 m; and 3. is positioned on an area of Onsite Waste Disposal Area, where waste (other than the timber to be burnt) has not been deposited.
discharge	has the same meaning given to that term under the EP Act.
E. coli	means *Escherichia coli*.
ecological screening levels	refers to guideline values detailed in Schedule B1 of the NEPM.
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)
F1 RDA	means the tailings storage facility (i.e., residue disposal area) for the premises. Also referred to as the F1/F3 RDA.
F1 RDA decant pond	means the body of process water stored within the F1 RDA below the beach formation, as shown in Schedule 1: Maps.
Fire Control Officer	means a person who has such qualifications in fire fighting or fire control as are approved, appointed to that position by the licence holder.
freeboard	means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point.
fugitive emissions	means all emissions not arising from point sources identified in this licence.
HDPE	means high-density polyethylene.
inert waste type 1	has the same meaning given to that term in the Landfill Waste Classification and Waste Definitions 1996 (as amended 2019).
inert waste type 2	has the same meaning given to that term in the Landfill Waste Classification and Waste Definitions 1996 (as amended 2019).

Term	Definition
LCRS	means Leakage Collection and Recovery System.
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.
monthly period	means a one-month period commencing from the first day of a month until the last day of the same month.
NATA	means the National Association of Testing Authorities Australia.
NATA-accredited	refers to a laboratory that is accredited by the NATA for the specified analysis of a sample at the time of the analysis.
NEPM	means the National Environmental Protection (Assessment of Site Contamination) Measure.
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 and monitoring.
NO_x	means oxides of nitrogen, calculated as the sum of nitric oxide and nitrogen dioxide, and expressed as nitrogen dioxide.
PM	means total particulate matter, including both solid fragments of material and miniscule droplets of liquid.
PM_{10}	means particles with an aerodynamic diameter equal to or less than 10 µm.
premises	refers to the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map in Schedule 1 to this licence.
prescribed premises	has the same meaning given to that term under the EP Act.
quarterly	means the four inclusive periods from 1 January to 31 March, 1 April to 30 June, 1 July to 30 September, and 1 October to 31 December.
RDA	means Residue Disposal Area.
RL	means Reduced Level (above sea level).
six monthly	means the two inclusive periods from 1 January to 30 June, and 1 July to 31 December.
special waste type 1	has the same meaning given to that term in the Landfill Waste Classification and Waste Definitions 1996 (as amended 2019).

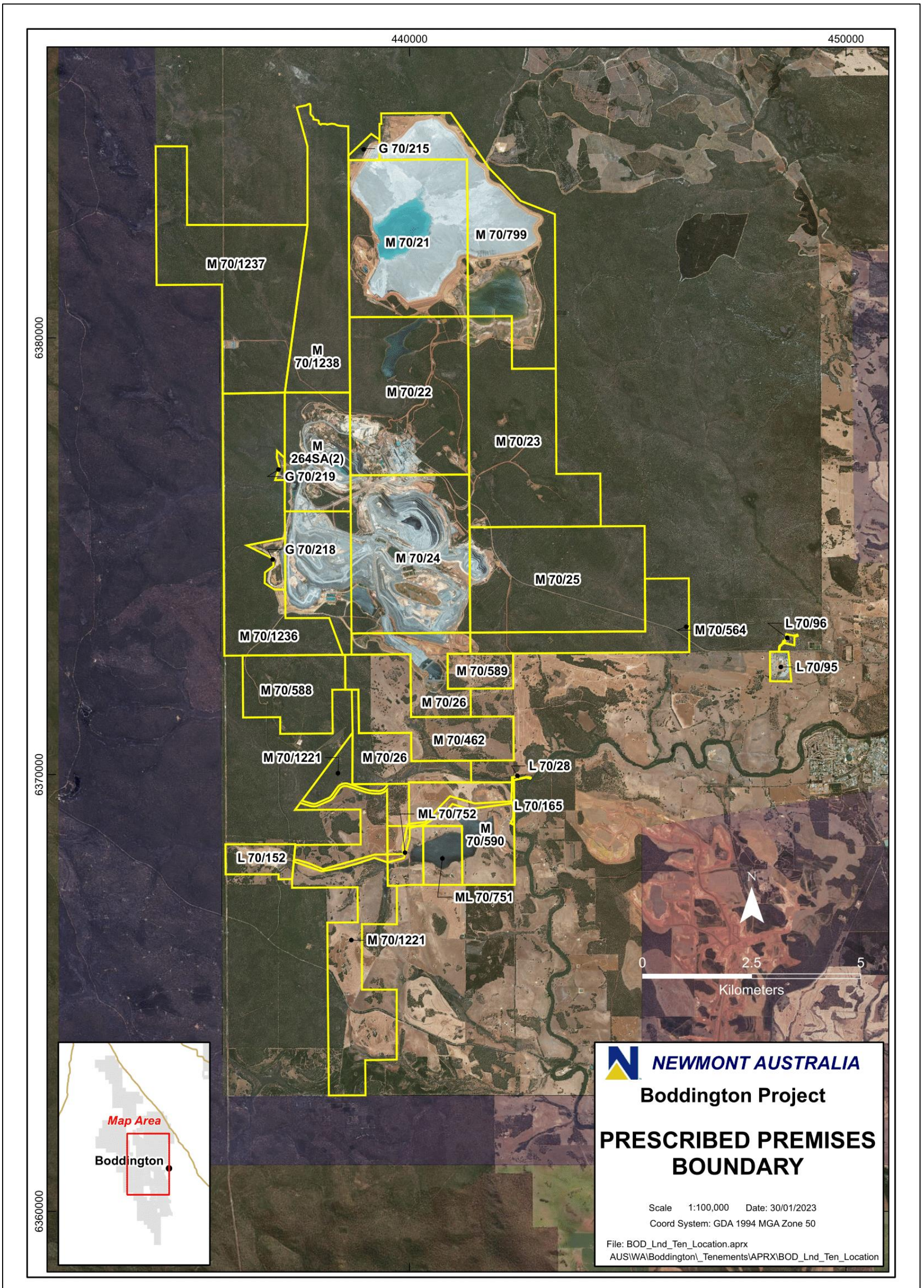
Term	Definition
spot sample	means a discrete sample representative at the time and place at which the sample is taken.
stack test	means a discrete set of samples taken over a representative period at normal operating conditions.
STP dry	means standard temperature and pressure (0 ^{o}Celsius and 101.325 kilopascals, respectively) and dry.
suitably qualified engineer	means person, who: 1. holds a Bachelor of Engineering recognised by the Australian Institute of Engineers; and 2. has a minimum of five years of experience working in the design and/or implementation of the relevant infrastructure, or who is otherwise approved by the CEO to act in this capacity.
suitably qualified geotechnical engineer	means person, who: 1. holds a Bachelor of Engineering recognised by the Australian Institute of Engineers; and 2. has a minimum of five years of experience working in civil or geotechnical engineering, including experience in the design of tailings storage facilities.
Target Limit	refers to the maximum F1 RDA decant pond volume that ca be safely stored on F1 RDA, as determined by the licence holder.
treated timber	means timber chemically treated or preserved with substances, including copper chrome arsenate, high temperature creosote, pigment emulsified creosote and light organic solvent preservative treated timbers.
TRH	means total recoverable hydrocarbons.
USEPA	means United States Environmental Protection Agency.
usual working day	means 0800 – 1700 hours, Monday to Friday excluding public holidays in Western Australia.
VOC	means volatile organic compounds.
WAD cyanide	means Weak Acid Dissociable cyanide.
waste	has the same meaning given to that term under the EP Act.
WRD	means waste rock dump.
µS/cm	means microsiemens per centimetre.

END OF CONDITIONS

Schedule 1: Maps

Premises map

The boundary of the prescribed premises is shown as yellow lines in the map below.



Land tenure comprising the premises

Mining tenements log	
Tenement ID	**Area**
M70/21	Main mining area
M70/22	Main mining area
M70/23	Main mining area
M70/24	Main mining area
M70/25	Main mining area
M70/26	Main mining area
M70/564	Main mining area
M70/799	Main mining area
G70/215	Main mining area
L70/28	Hotham River pump station
L70/95	Accommodation village
L70/96	Village sewage treatment plant
M264SA(2)	Main mining area
M70/462	Main mining area
M70/588	Main mining area
M70/589	Main mining area
M70/1031	Main mining area
M70/1236	Main mining area
M70/1237	Main mining area
M70/1238	Main mining area
G70/218	Main mining area
G70/219	Main mining area
L70/152	Hedges Dam & Pipeline
L70/165	Hedges Pump Station
M70/1221	Junglen Gully
M70/590	D6 water storage dam
ML70/751	D6 water storage dam
ML70/752	D6 water storage dam

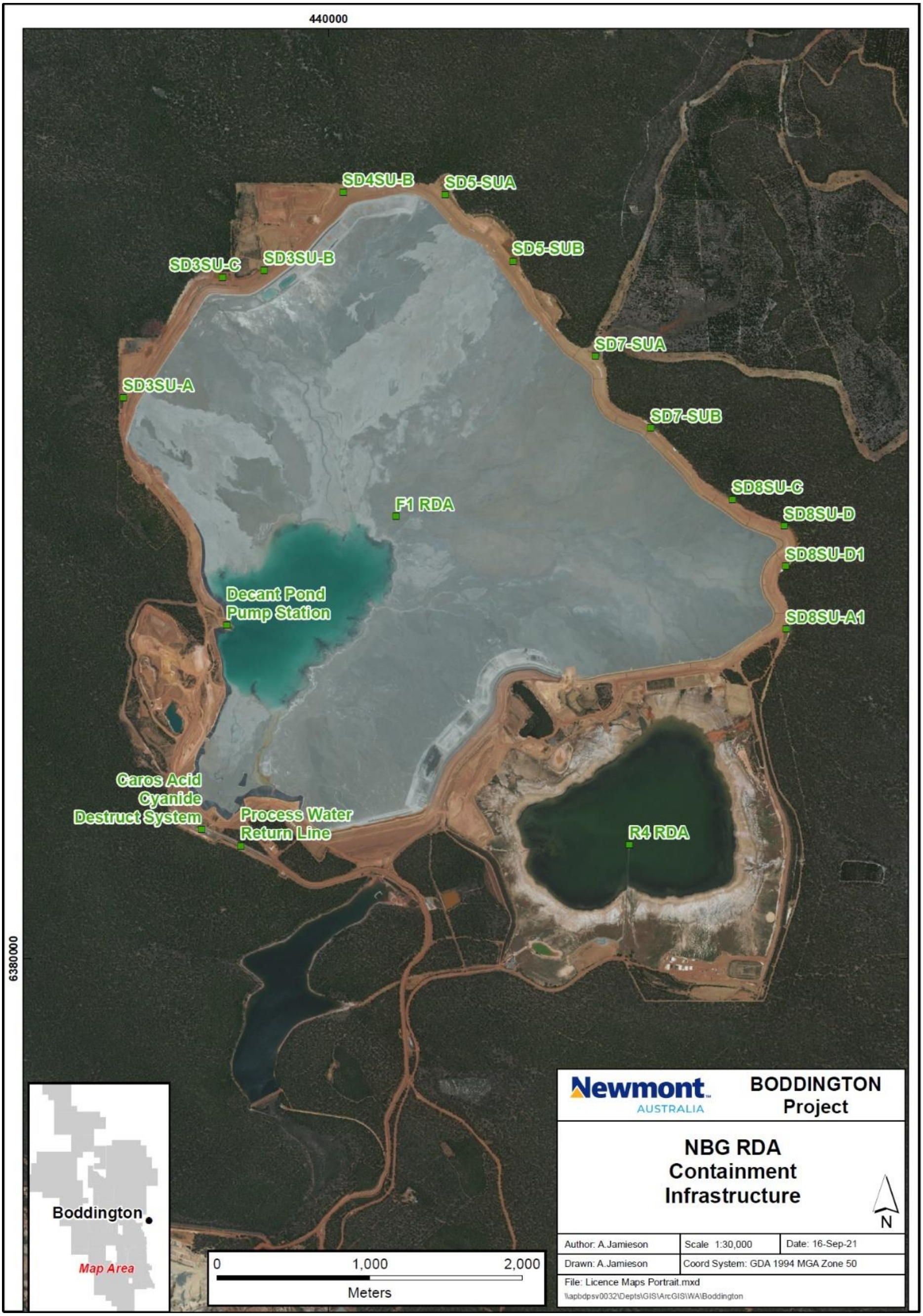


Figure 1: Containment infrastructure – RDAs (as per Table 2)

Figure 2: Containment infrastructure – Processing (as per Table 2)

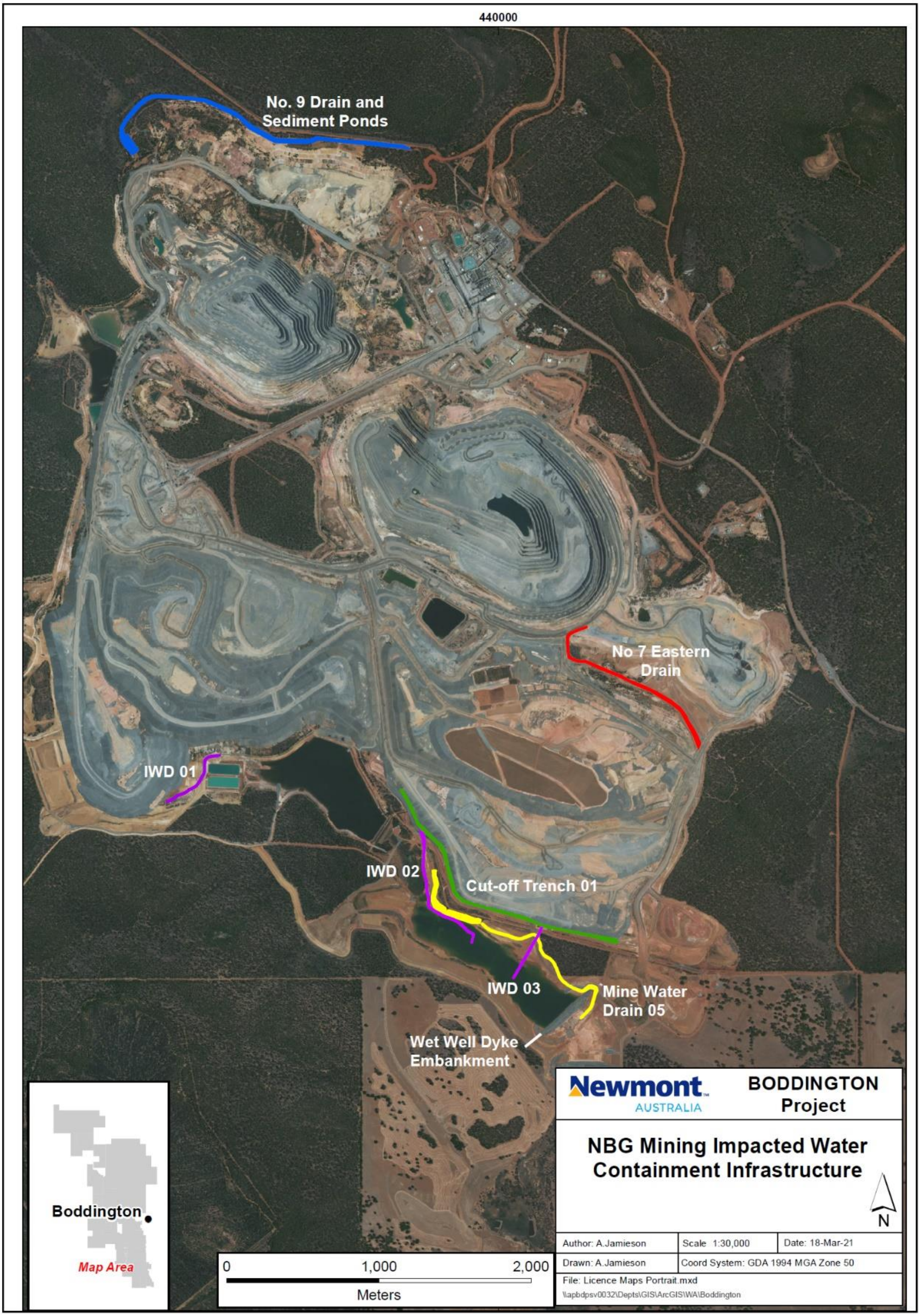


Figure 3: Containment infrastructure – Mining-impacted water (as per Table 2)

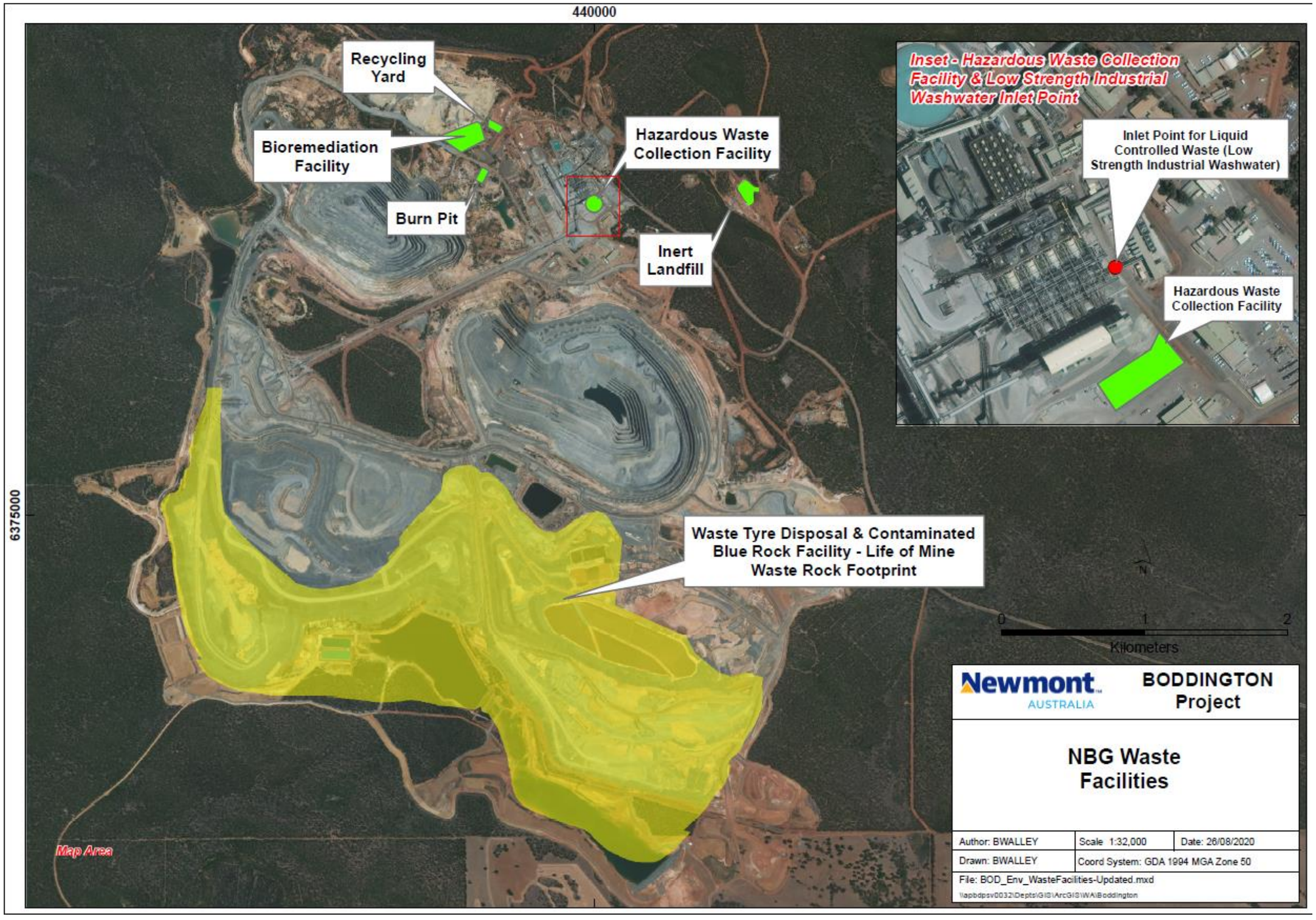


Figure 4: Location of waste disposal sites (as per conditions 3 and 9, and Table 5 and Table 8)

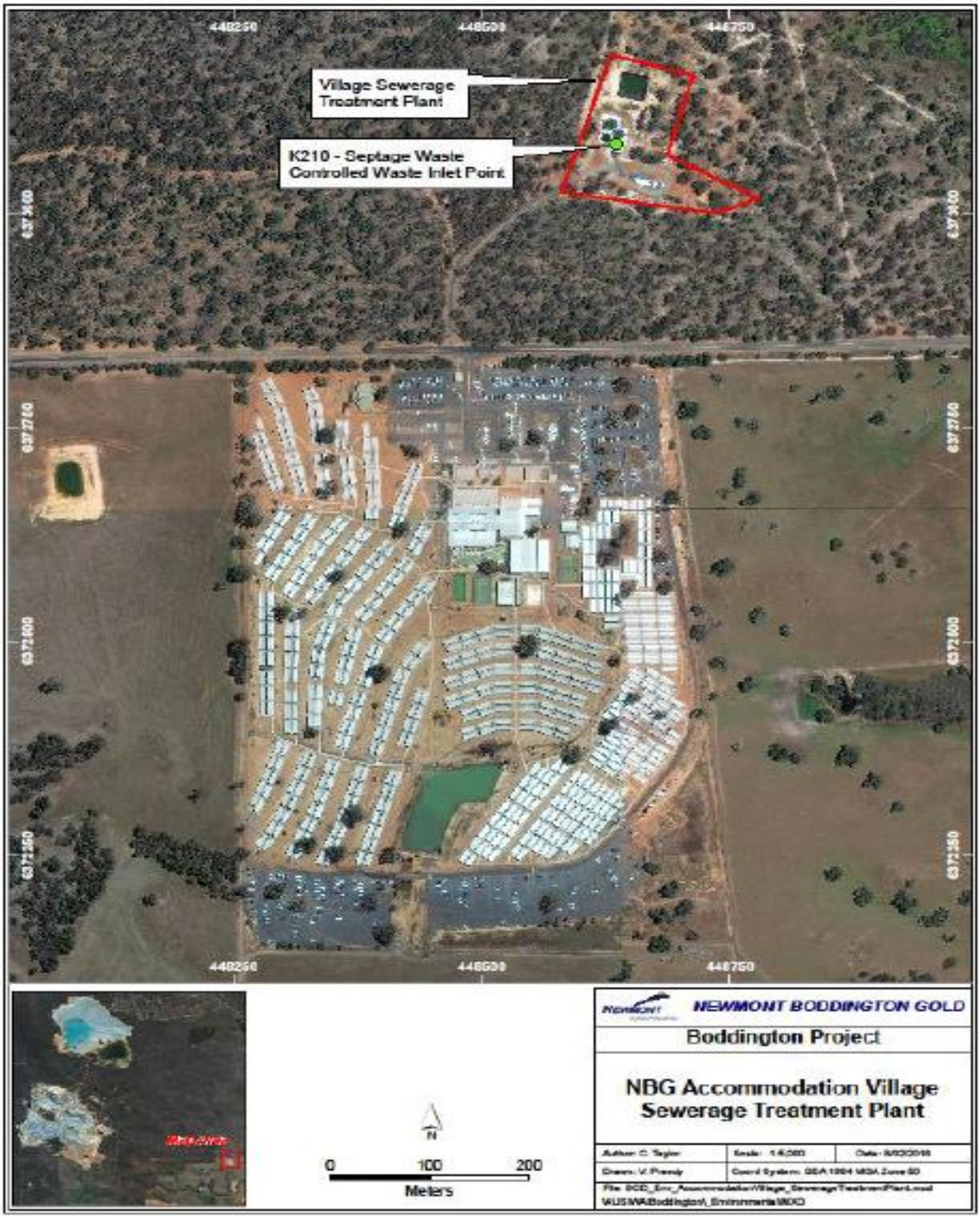


Figure 5: Location of camp wastewater treatment plant (as per Table 4)

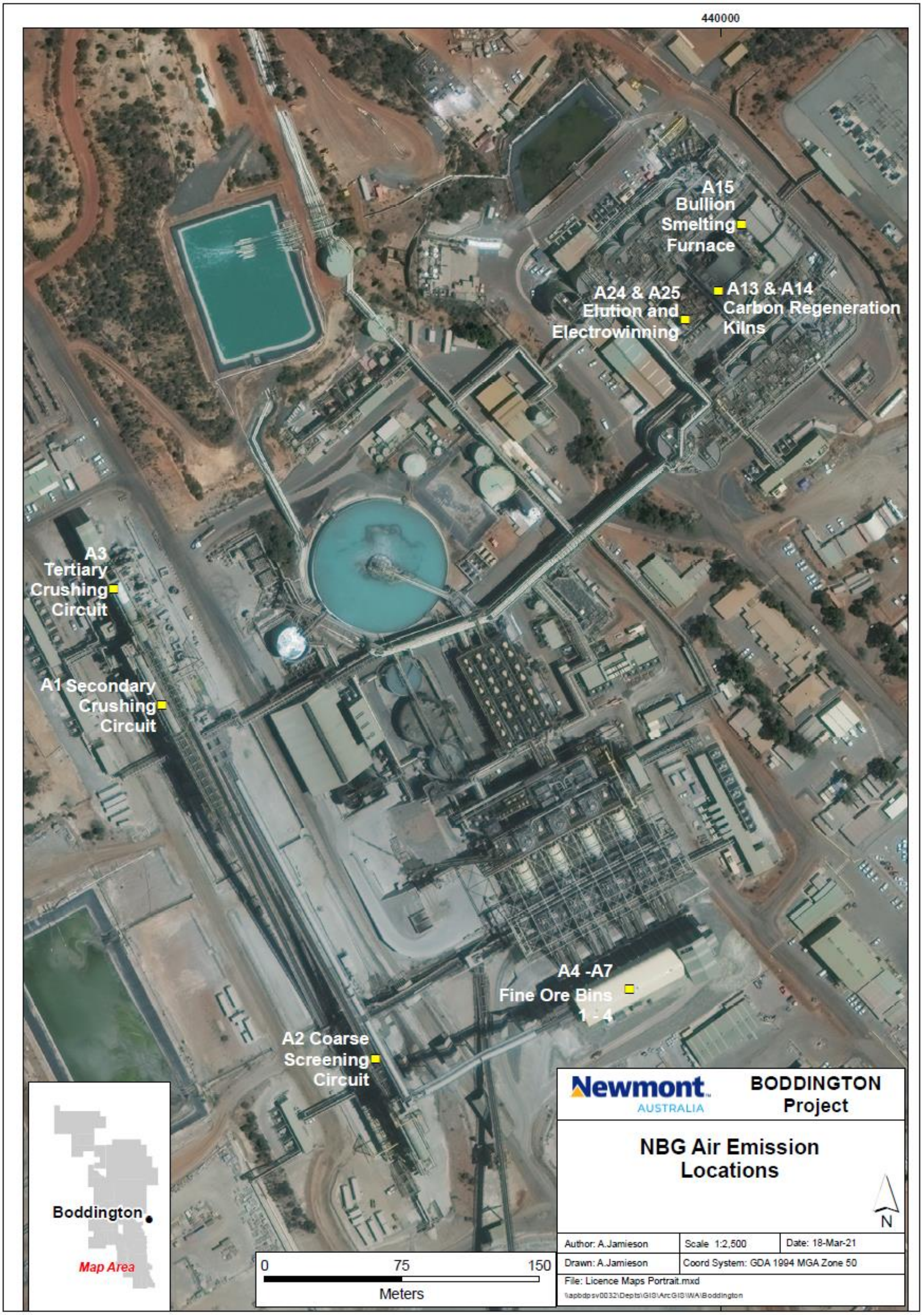


Figure 6: Air emission locations (as per condition 16)

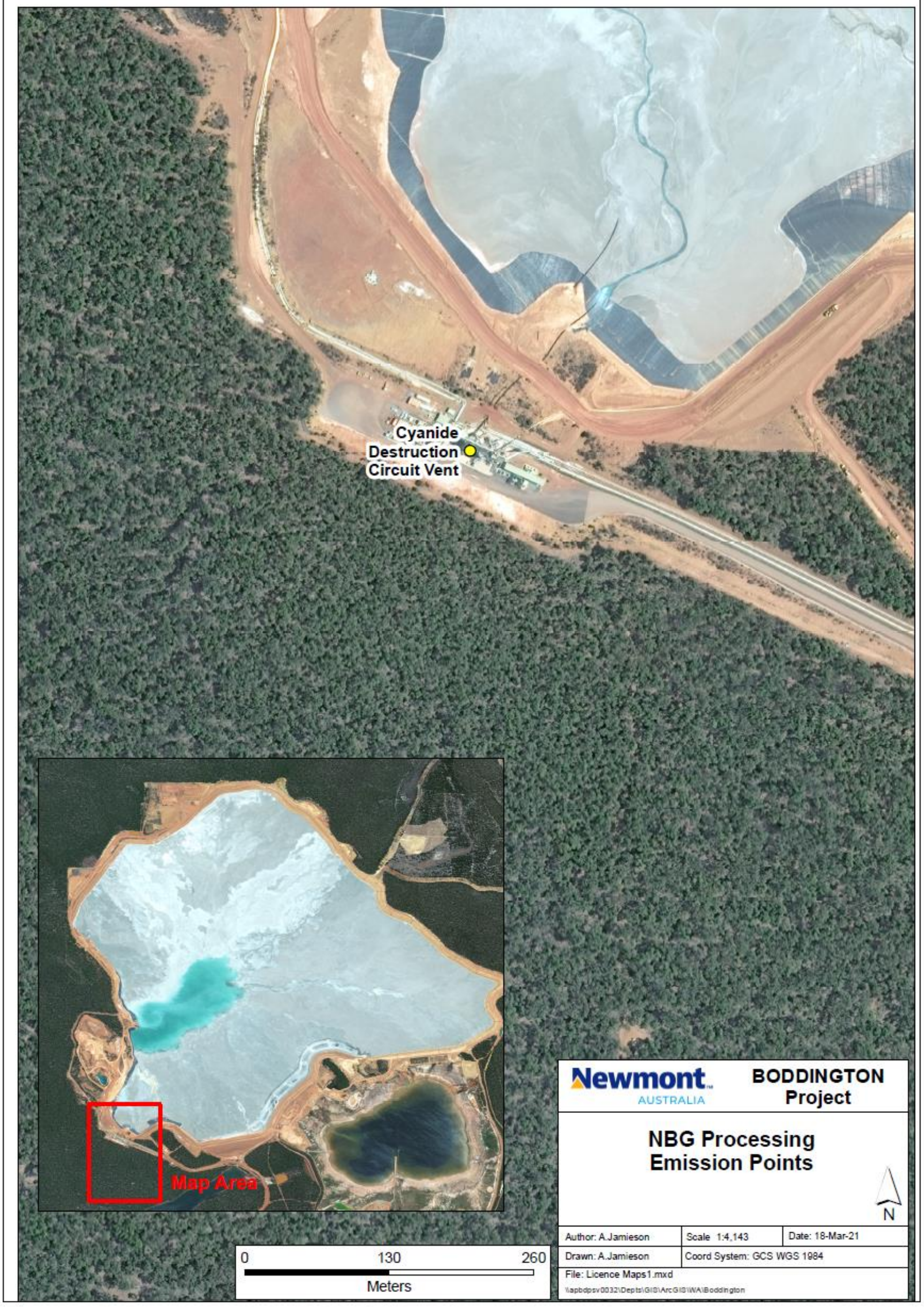


Figure 7: Cyanide destruction circuit vent (as per condition 16)

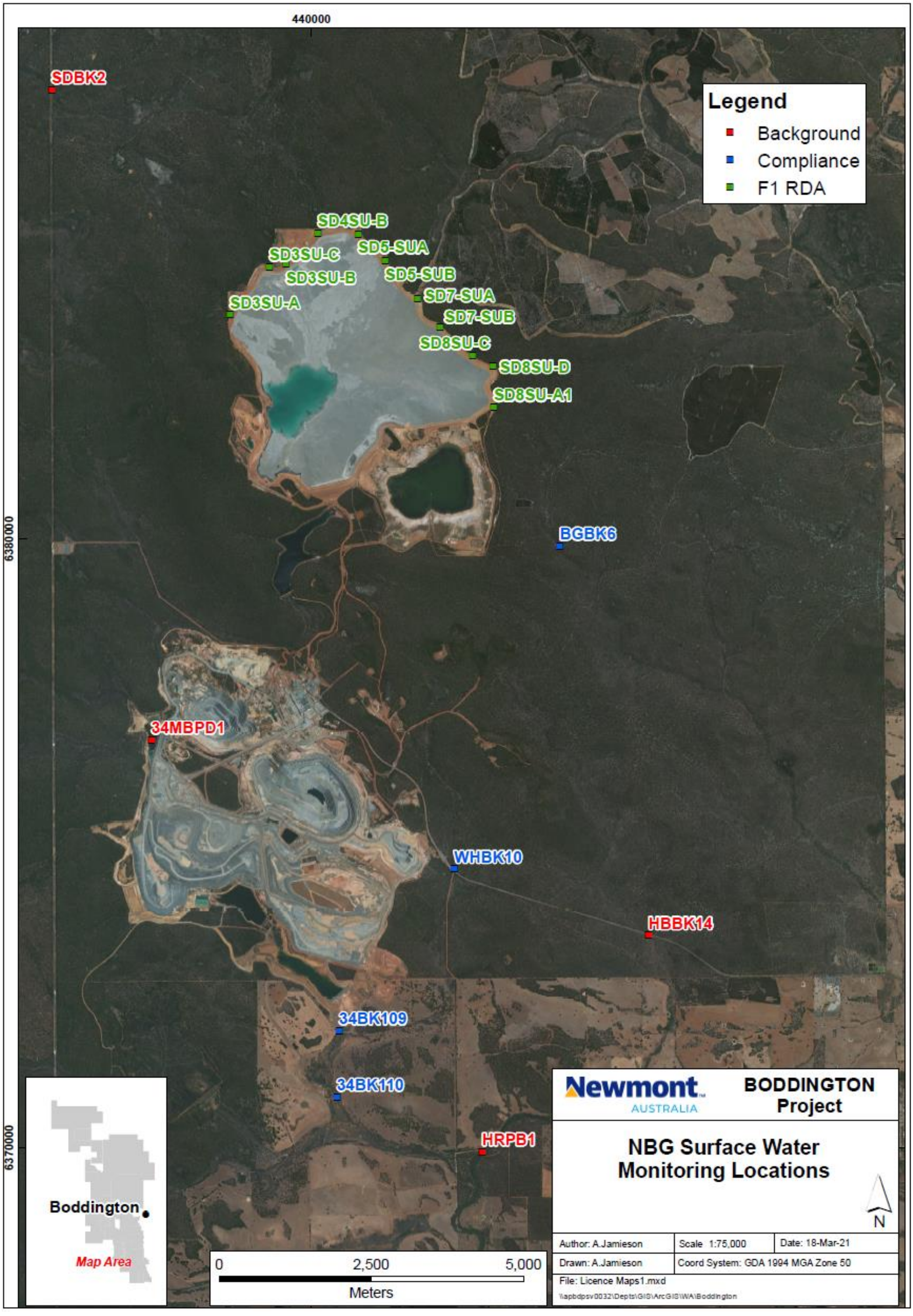


Figure 8: Surface water monitoring sites (as per Table 14)

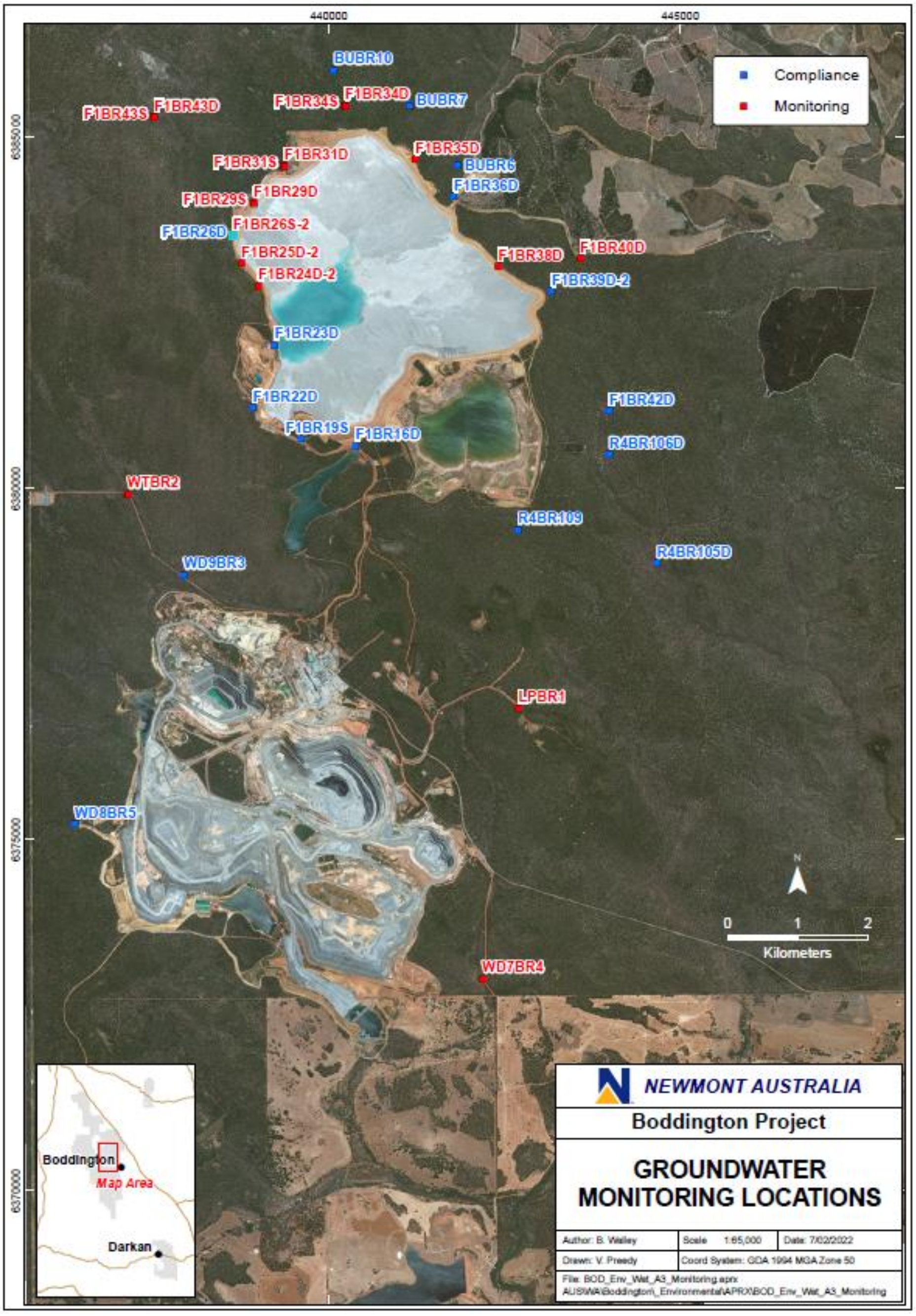


Figure 9: Groundwater monitoring bore locations (as per Table 15)

Figure 10: Site infrastructure

Schedule 2: Notification & Forms

Licence:	L8306/2008/3	Licence holder:	Newmont Boddington Gold Pty Ltd
Form:	N1	Date of breach:	

Notification of detection of the breach of a limit or any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution.

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	

Notification requirements for any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution	
Date and time of event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken , or intended to be taken, to stop any emission	
Description of the failure or accident	

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	
Date	