Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence number	L5850/1993/11
Licence holder	Yilgarn Iron Pty Ltd
ACN	626 035 078
Registered business address	1 Sleat Road APPLECROSS WA 6153
DWER file number	2012/002671
Duration	28/10/2013 to 27/10/2032
Date of amendment	24 May 2024
Premises details	Koolyanobbing Iron Ore Project KOOLYANOBBING WA 6427 Being part Tenements L77/319, M77/606-I, M77/607-I, M77/611-I, L77/988-I, M77/989-I, M77/990-I, and M77/1278-1, and Crown Lease N466339 as depicted in Schedule 1.

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed production capacity**
Category 05: Processing or beneficiation of metallic or non-metallic ore	Iron Ore Processing: 13,100,000 tonnes per annual period; and Tailings Volume Deposited: 600,000 tonnes per annual period
Category 06: Mine Dewatering	600,000 tonnes per annual period
Category 12: Screening etc. of materials	500,000 tonnes per annual period
Category 54: Sewage Facility	300 cubic metres per day
Category 64: Class II putrescible landfill site	4,000 tonnes per annual period

This licence is granted to the licence holder, subject to the attached conditions, on 24 May 2024, by:

Mariana Almeida de Moraes
Digitally signed by Mariana Almeida de Moraes
Date: 2024.05.24 13:08:03 +08'00'

Mariana de Moraes
SENIOR ENVIRONMENTAL OFFICER, RESOURCE INDUSTRIES
REGULATORY SERVICES
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Licence history

The licences issued for the Premises since 19/10/2007 are:

Instrument	Issued	Description
L5850/1993/9	19/10/2007	Licence re-issue
L5850/1993/10	17/09/2010	Licence re-issue
L5850/1993/11	25/10/2013	Licence re-issue
L5850/1993/11	26/03/2015	Licence amendment for pit-to-pit dewatering and format conversion
L5850/1993/11	14/05/2015	Amendment to improvement condition IR1(a)
L5850/1993/11	19/11/2015	Increase in throughput and removal of improvement conditions
L5850/1993/11	1/09/2016	Licence amendment to incorporate A Deposit Mine Pit as an emission point.
L5850/1993/11	24/04/2017	Amendment Notice 1 to include Range F deposit, update the premises boundary and maps, include Category 12 and include waste locations to reflect current site operations.
L5850/1993/11	28/09/2017	Amendment Notice 2 to amend table 2.4.1 to include emission point L2, remove MBH1 & MBH2 from condition 3.5.1 table 3.5.1 and replace premises map, map of emission points for waste water treatment plant (WWTP).
L5850/1993/11	23/10/2019	Amendment Notice 3 to transfer licence from 'Cliffs Asia Pacific Iron Ore Pty Ltd' to 'Yilgarn Iron Pty Ltd'. Reduce category 64 production design capacity from 6,000 to 4,000 tonnes per annum and include 'C pit', remove category 6 & 57 from the licence including the removal of approved discharge points at Lake K and remove monitoring of vegetation, water quality, sediment and dewater pipeline inspections.
L5850/1993/11	03/11/2020	Amendment of licence to add conditions to provide for the development and operation of an in-pit Tailing Storage Facility (TSF) to dispose of lithium refinery tailings from Albemarle Kemerton Plant. Previous amendment notices consolidated at this time.
L5850/1993/11	07/10/2022	Amendment of licence to remove the requirement for the installation of piezometers within the base of the C Pit tailings storage facility (TSF) and adding the requirement for three additional monitoring bores surrounding the C Pit TSF
L5850/1993/11	14/10/2022	DWER initiated amendment to correct an administrative error within the table of contents.

L5850/1993/11	24/05/2024	The following amendments are being sought:
		Category 5:
		<u>C Pit:</u>
		• Construction of two tailings transfer pads:
		  ○ C Pit crest transfer pad; and
		  ○ laydown transfer pad;
		• Installation of four monitoring bores surrounding the C Pit Tailings Storage Facility (TSF);

Instrument	Issued	Description
		• Tailings deposition changed from batter berm to a 'flat top design' within C pit; and Category 6: <u>A and B Pits:</u> • Construction and operation of dewatering infrastructure (from A Pit to B Pit via the B Pit turkeys nest) (up to 600,000 tpa); and • Installation of contingency production bore (for B Pit).

END OF INTRODUCTION

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

Infrastructure and equipment

1. The licence holder must construct and/or install the infrastructure listed in, Table 1 in accordance with;

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

(b) at the corresponding infrastructure location.

as set out in Table 1.

Table 1: Design and construction / installation requirements

Infrastructure	Design and construction / installation requirements	Infrastructure location
C Pit Crest Transfer Pad	• Pad hardstand incorporates perimeter bunds designed to contain 100-year ARI 24-hour event, with a ≥1% fall to exit drain directing leachate to C Pit. • Pad hardstand area designed and constructed to support, without sustained damage, the load of the material on it and any machinery to be used on the surface. • Clean stormwater from surrounding areas diverted away from pad and work area.	Schedule 1, Figure 7 Figure 8

Laydown Transfer Pad and sump	• Pad hardstand incorporates perimeter bunds designed to contain 100-year ARI 24-hour event. with a ≥1% fall to exit drain directing leachate to sump.
	• Pad hardstand area and sump which incorporate the equivalent of either:
	  ○ An engineered soil liner achieving a permeability of $1x10^{-8}$ m/s or less with a minimum thickness of 300 mm and minimum compaction of 95%; or
	  ○ A concrete or asphalt cement surface.
	• Pad hardstand area designed and constructed to support, without sustained damage, the load of the material on it and any machinery to be used on the surface.
	• Clean stormwater from surrounding areas diverted away from the pad, sump, and work area.
		Schedule 1,
		Figure 9
		Figure 10

Dewatering pipeline from A pit to B pit	• Pipeline from A Pit to B Pit, via Turkey's Nest; and • Pipeline constructed to meet the requirements of Condition 5.	Schedule 1, Figure 1
Stage 2 C Pit TSF	• Make a compressed 2 m foundation layer of E Pit rock waste at 364m AHD. • The top surface of the tails will be graded to a slope of less than 5 degrees; • The dry tailings will be compacted and capped once deposition has ceased and tailings are deemed dry enough. • The outer final surface will be compacted using a 16t smooth drum roller with vibration and covered with a 1 m thick layer of waste rock. • Single finished tailings elevation no higher than 382 mAHD and elevation with 1 m of waste rock capping at no higher than 383 m AHD.	Schedule 1, Figure 2 Figure 3

Pipeline from contingency production bore to B Pit	• Pipeline to carry water from contingency production bore to B Pit. • Production Bore to be installed and available for use to ensure water levels within Pit C are maintained below pre mining water levels. • Pipeline constructed to meet the requirements of Condition 5.	Schedule 1, Figure 1 Figure 2

2. The licence holder must within 30 calendar days of an item of infrastructure or equipment required by condition 1 and Table 1 being constructed and/or installed:

(a) undertake an audit of their compliance with the requirements of condition 1 and Table 1; and

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

3. The Environmental Compliance Report required by condition 2, must include as a minimum the following:

(a) certification by a suitably qualified geotechnical engineer that the items of infrastructure or component(s) thereof, as specified in condition 1 and Table 1, have been constructed in accordance with the relevant requirements specified in condition 1 and Table 1;

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

(c) a well construction report evidencing compliance with the requirements of condition 1 and Table 1; and

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

The licence holder must design, construct, and install groundwater monitoring wells in accordance with the requirements specified in Table 2.

Table 2: Infrastructure requirements – groundwater monitoring wells

Infrastructure	Design, construction, and installation requirements	Monitoring well location(s)	Timeframe
Groundwater monitoring well MB02A to replace dry well MB02 Groundwater monitoring well MB05 to replace MB03 which is unsafe to take samples from. Groundwater Monitoring wells MB06 and MB07	<u>Well design and construction:</u> Designed and constructed in accordance with ASTM D5092/D5092M-16: Standard practice for design and installation of groundwater monitoring bores. Well screens must target the part, or parts, of the aquifer most likely to be affected by contamination[1]. Where temporary/seasonal perched features are present, wells must be nested, and the perched features individually screened.	As depicted in Schedule 1, Figure 1	Must be constructed, developed (purged), and determined to be operational prior to commencement of dewatering activities (for bores MB06 and MB07) and within 2 months of licence amendment being issued for MB02 and MB05.
	<u>Logging of borehole:</u> Soil samples must be collected and logged during the installation of the monitoring wells. A record of the geology encountered during drilling must be described and classified in accordance with the Australian Standard Geotechnical Site Investigations AS1726. Any observations of staining / odours or other indications of contamination must be included in the bore log.		
	<u>Well construction log:</u> Well construction details must be documented within a well construction log to demonstrate compliance with *ASTM D5092/D5092M-16*. The construction logs shall include elevations of the top of casing position to be used as the reference point for water-level measurements, and the elevations of the ground surface protective installations.		
	<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		
	<u>Well network map:</u> A well location map (using aerial image overlay) must be prepared and include the location of all monitoring wells in the monitoring network and their respective identification numbers.		

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

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

Premises operation

5. The licence holder shall ensure that all pipelines containing environmentally hazardous materials are either:

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

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

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

6. The licence holder shall ensure that any saline dewatering effluent shall only be managed in the following manner:

(a) used for dust suppression in a manner that does not cause damage to surrounding native vegetation; and

(b) discharged in accordance with the conditions 24 and 25 of this licence.

7. The licence holder shall ensure that tailings, process water and treated wastewater are only discharged into dams or ponds with the relevant infrastructure requirements and at the locations specified in Table 3 and identified in Schedule 1.

Table 3: Containment infrastructure

Containment point reference	Containment cell or dam number(s)	Material	Infrastructure requirements
C1	Solids settling tank	Sewage	Maintained to prevent leaks
C2	Pond 1	Sewage	Lined with in-situ clay
L1	Pond 2	Treated sewage	None specified
C3	Wash pond C3	Fresh water from Perth to Kalgoorlie pipeline	Lined with HDPE to achieve a permeability of at least $<10^{-9}$ m/s or equivalent
C4, C5 and C6	Wash ponds	Washdown water and, stormwater from across site and ore handling plant.	Lined with HDPE to achieve a permeability of at least $<10^{-9}$ m/s or equivalent
C Pit TSF	C Pit TSF	Tailings	Have monitoring bores positioned such that the groundwater level and quality surrounding the TSF can be determined. The base of waste rock is track rolled to create a trafficable running Capped by 1 m waste rock at 383 m AHD
Turkeys Nest	Turkeys Nest	Groundwater	Lined with HDPE to achieve a permeability of at least $<10^{-9}$ m/s or equivalent Contains a volume of 8,400 kL. Freeboard of 500 mm.

Containment point reference	Containment cell or dam number(s)	Material	Infrastructure requirements
			"Turkeys Nest" as labelled in 'A Pit, B Pit and C Pit TSF infrastructure map' in Schedule 1
Laydown Transfer Pad	Laydown Transfer Pad sump	Leachate from Laydown Pad	500 mm freeboard maintained. Lined with the equivalent of either: • An engineered soil liner achieving a permeability of $1x10^{-8}$ m/s or less with a minimum thickness of 300 mm and minimum compaction of 95%; or • A concrete or asphalt cement surface with a thickness of at least 100 mm.

8. The licence holder shall manage containment cells in Table 3 such that:

(a) a minimum top of embankment freeboard of 300 mm or a 1 in 100 year/72 hour storm event (whichever is greater) is maintained; and

(b) methods of operation minimise the likelihood of erosion of the embankments by wave action.

9. The licence holder shall:

(a) undertake inspections as detailed in Table 4;

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

(c) maintain a record of all inspections undertaken.

Table 4: Inspection of infrastructure

Scope of inspection	Type of inspection	Frequency of inspection
C3, C4, C5 and C6	Freeboard capacity	Daily
L1	Freeboard capacity	Weekly
C Pit	Tailings level in m AHD	Monthly

10. The licence holder shall only allow waste to be accepted on to the Premises if:

(a) it is of a type listed in Table 5;

(b) the quantity accepted is below any limit listed in Table 5; and

(c) it meets any specification listed in Table 5.

Table 5: Waste acceptance

Waste	Quantity Limit	Specification[1]
WWTPs		
Sewage	Cumulative total for all WWTPs of 300 m^3/day	Accepted through sewer inflows only
Landfill		
Clean Fill	None	None Specified
Inert Waste Type 1	Cumulative total of 4,000 tonnes per annual period	Waste containing visible asbestos or ACM shall not be accepted.
Inert Waste Type 2		Scrap metal, tyres and plastic only
Putrescible waste		None specified
TSF – C PIT		
Tailings	No more than 600,000 tonnes per annual period. No more than 2,100,000 tonnes at any one time	None specified
TRANSFER PADS		
Laydown transfer pad	35,100 tonnes	Temporary transfer of tailings between equipment or contingency temporary storage of tailings
C Pit Transfer pad	6,100 tonnes	Temporary transfer of tailings between equipment or contingency temporary storage of tailings

Note 1: Additional requirements for the acceptance of controlled waste are set out in the *Environmental Protection (Controlled Waste) Regulations 2004.*

11. The licence holder shall ensure that where waste does not meet the waste acceptance criteria set out in condition 10 it is removed from the Premises by the delivery vehicle or, where that is not possible, the licence holder shall contact the CEO to agree a course of action in relation to the waste.

12. The licence holder shall ensure that the wastes accepted onto the Premises are only subjected to the process(es) set out in Table 6 and in accordance with any process requirements described in that table.

Table 6: Waste processing

Waste type	Process	Process requirements[1, 2]
Sewage	Physical, biological and chemical treatment	Treatment of sewage waste shall be limited at or below the treatment capacity of 300 m^3/day cumulative volume.
Sewage sludge	Disposal	Removed by a licensed controlled waste carrier
All	Disposal of waste by landfilling	(i) A suitable barrier is installed to prevent windblown waste leaving the trench. (ii) The separation distance between the base of the landfill and the highest groundwater level shall not be less than 2 m.
Clean Fill	Receipt, handling and storage prior to disposal, and disposal (burial)	Stockpile clean fill to allow for the covering of waste for at least two weeks.
Inert Waste Type 1		Buried in trenches at the F, K and A2 WRL putrescible landfill sites as depicted in Schedule 1.
Inert Waste Type 2	Receipt, handling and storage prior to disposal, and disposal (burial)	(i) Used tyres buried at the B/C, and D Pits, A2, F and K WRL landfill sites as depicted in Schedule 1. (ii) Used tyres stored in Haulage and K1 yards in the open are arranged in rows with at least 3m separating each row to allow access for firefighting equipment. (iii) Each row of stored used tyres is not more that 18m in length, or 10 m in width, or not more than 4m in height. (iv) No more than 1,000 tyres stored at any location.
Putrescibles waste	Disposal	(i) Buried in trenches at the F, K and A2 WRL putrescible landfill sites as depicted in Schedule 1. (ii) The tipping area is less than 20 metres in length. (iii) Stormwater is diverted away from the trench or tipping face.
All used or surplus lubricants, hydraulic fluids and radiator coolant or inhibitors	Storage and disposal	Stored in holding tanks for recycling and removal to an appropriate facility.
Tailings	Disposal of tailings to C Pit TSF	(i) Tailings must be covered during transport within the premises boundary before being unloaded inside C Pit (ii) Minimum of 12 passes with a static weight 16 tonne smooth drum roller with vibration, prior to commencing subsequent layer (iii) Compacted layers to achieve a maximum 400 mm thickness. (iv) Tailings are not to be placed at a level higher than 382mRL.
Tailings	Temporary transfer of tailings between equipment or contingency temporary storage of tailings	(i) Must be used only for a temporary transfer of tailings between equipment or as a contingency. (ii) Dust suppression controls must be in place at all times during use of the pads. (iii) Any stockpiles must have maximum height of 3 m. (iv) Tailings moisture being adequately maintained to ensure dust lift off from stockpiles are minimised. (v) Following 6 months of operation of pads, at least one visual inspection of vegetation condition surrounding the pads must be undertaken

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*.

13. The licence holder shall ensure that cover is applied and maintained on landfilled wastes in accordance with Table 7 and that sufficient stockpiles of cover are maintained on site at all times.

Table 7: Cover requirements[1]

Waste Type	Cover requirements
Putrescible Waste	Covered with a minimum of 200 mm clean fill at least weekly.
Inert Waste Type 2 (Tyres)	To be covered at regular intervals such that no more than 1,000 tyres are left exposed at any one time with sufficient quantities of Type 1 inert waste or clean fill to prevent the spread of fire and harbouring of disease vectors.
Inert Waste Type 1	No cover required.

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

14. The licence holder shall take all reasonable and practical measures to ensure that no wind-blown waste escapes from the Premises and that wind-blown waste is collected on at least a weekly basis and returned to the tipping area.

15. The licence holder shall ensure that no waste is burnt on the Premises.

16. The licence holder shall implement the following measures for managing the risk of fires:

(a) ensure that firefighting equipment, stored onsite, is capable of controlling and extinguishing a tyre fire;

(b) ensure that tyre stacks do not obscure fire protection equipment (including fire hydrants and fire hoses) or any related signage; and

(c) maintain a firebreak of at least 3 metres around the boundary at the premises.

17. The licence holder shall manage the infiltration of treated wastewater such that sludges are removed from the base of the pond to maintain the infiltration performance and ensure freeboard is sufficient.

18. The licence holder shall manage the wastewater treatment vessels such that:

(a) overtopping of the vessels does not occur;

(b) stormwater runoff is prevented from entering the vessels;

(c) there is no discernible seepage loss from the vessels; and

(d) vegetation and floating debris (emergent or otherwise) is prevented from growing or accumulating in the vessels.

19. The licence holder shall ensure the limits specified in Table 8 are not exceeded.

Table 8: Production or design capacity limits

Category[1]	Category description[1]	Premises Production or design capacity limit
05	Processing or beneficiation of metallic or non-metallic ore	Iron Ore Processing: 13,100,000 tonnes per annual period; and Tailings Volume Deposited: 600,000 tonnes per annual period
6	Mine dewatering	600,000 tonnes per annual period
12	Screening etc. of materials	500,000 tonnes per annual period
54	Sewage Facility	300 cubic metres per day
64	Class II putrescible landfill site	4,000 tonnes per annual period

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

20. The licence holder must complete construction of associated infrastructure in accordance with the documentation listed in Table 9 and in the location depicted in Schedule 2 plans titled “ROM pad redesign and material handling infrastructure”.

Table 9: Construction requirements[1]

Document	Parts	Date of Document
Email from YIPL dated 19 July 2019 titled “L5850 - Proposed upgrade to OHP stackers” and 11 October 2019 titled “L5859 Licence Amendment Notice 3” from Neil Smith Key Infrastructure is; 1. Redesign of the feed bin and ramp to the primary crusher on the ROM so that road trains can direct tip into the feed bin. 2. Install two additional linear stackers (option 1) or stacker and reclaimer for lump and fines material handling and/or loading hopper for loading railway trains (option 2).	1. Attached design file titled “ROM pad area upgraded.jpg” 2. Attached design file titled “Koolyanobbing linear stacking Rev A.PDF” and “Stacker Reclaimer and TLO layout.PDF”	19 July 2019 19 July 2019 and 11 October 2019

Emissions

Emissions to land

21. The licence holder is permitted, subject to conditions in the Licence, to emit waste to land through the emissions points listed in Table 10 and identified in the Map of emission points in Schedule 1.

Table 10: Emissions to land

Emission point reference and location on Map of emission points	Description	Source including abatement
L1	Treated wastewater evaporation/infiltration pond (Pond 2)	Treated wastewater from the sewage facility
L2	Treated wastewater irrigated to Oval	Treated wastewater from the sewage facility
B Pit	Water from A Pit dewatering activities and water recirculation from contingency production bore	A Pit and contingency production bore
C Pit TSF	Lithium refinery tailings	Kemerton Lithium Plant

Dust emissions

22. The licence holder must ensure that:

(a) all product and waste stockpiles; and

(b) all unsealed access roads,

are wetted down during operations at all times using the water sprays on the Koolyanobbing Ore Handling Plant and water trucks.

Monitoring

General monitoring

23. The licence holder shall ensure that:

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

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

(c) all surface water sampling is conducted in accordance with AS/NZS 5667.4, AS/NZS 5667.6 or AS/NZS 5667.9 as relevant;

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

(e) all sediment sampling is conducted in accordance with AS/NZS 5667.12;

(f) all microbiological samples are collected and preserved in accordance with AS/NZS 2031; and

(g) 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.

24. The licence holder shall 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 5 months apart.

25. The licence holder shall ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer's specifications.

26. The licence holder shall, 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.

27. The licence holder must conduct a groundwater monitoring programme in accordance with the requirements specified in condition 30 and record the results of all monitoring activity conducted under that programme.

28. The licence holder must adhere to the field quality assurance and quality control procedures specified in condition 30for the monitoring required by condition 27.

29. All sample analysis must be undertaken by laboratories with current accreditation from the National Association of Testing Authorities (NATA) for the relevant parameters, unless otherwise specified in condition 30.

30. The licence holder must monitor groundwater for concentrations of the identified parameter(s) in accordance with Table 11.

Table 11: Groundwater monitoring of ambient concentrations

Monitoring well location	Parameter	Unit	Frequency	Averaging period	Method
MB01, MB02A, MB04, MB05, MB06 and MB07 as indicated Schedule 1, Figure 1	SWL	mbgl and m AHD	Six-monthly following installation[1]	Spot sample	Spot sample[2]
	pH[1]	-			
	TDS	mg/L		Spot sample	Spot sample, in accordance with AS/NZS 5667.11.
	Lithium				
	Antimony				
PB01	SWL	mbgl and m AHD	Six-monthly following installation[1]	Spot sample	Spot sample[2]

Note 1: Exact locations of MB05, MB06, MB07 and PB01 to be determined following on-ground investigations and endorsed by a qualified hydrogeologist to be fit for purpose prior to drilling.

Note 2: In-field non-NATA accredited analysis permitted.

Monitoring of emissions to land

31. The licence holder shall undertake the monitoring in Table 12 according to the specifications in that table.

Table 12: Monitoring of emissions to land

Monitoring point reference and location	Process description	Parameter	Units	Averaging period	Frequency
L1	Discharge from WWTP to infiltration pond (Pond 2)	*E. coli*	cfu/100 mL	Spot sample	Six monthly
		pH[1]	N/A	Spot sample	Quarterly
		Biochemical Oxygen Demand	mg/L		
		Total Nitrogen			
		Total Phosphorus			
L1	Discharge from WWTP to infiltration pond (Pond 2)	Total Suspended Solids	mg/L	Spot sample	Quarterly
		Total Dissolved Solids			
		Ammonium-nitrogen			
		Nitrate+nitrate-nitrogen			
C Pit	Tailings discharge	pH	N/A		1 test per 1000 m^3 until 20,000 m^3
		EC	mS/cm		
		Moisture content as determined by AS1289 2.1.1	%		
		Maximum dry density	t/m^3		
		Percent solids	N/A		
B Pit	Water discharged to B Pit from dewatering of A Pit	Volume	kL	Cumulative annual	Continuous

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

Monitoring of inputs and outputs

32. The licence holder shall undertake the monitoring in Table 13 according to the specifications in that table.

Table 13: Monitoring of inputs and outputs

Input/Output	Monitoring point reference	Parameter	Units	Averaging period	Frequency
Sewage - Inlet Flow	Inflow meter at P1	Volumetric flow rate (cumulative)	m^3/day	Monthly	Continuous
Waste Inputs	N/A	Inert Waste Type 1, Inert Waste Type 2	m^3 (where no weighbridge is present)	Annual	Each load arriving at the Premises
Waste Outputs	N/A	Waste type as defined in the Landfill Definitions			Each load leaving or rejected from the Premises
Tailings discharge	C Pit	Tailings throughput	tonnes	monthly	Each load arriving at premises

Records and reporting

Records

33. All information and records required by the Licence shall:

(a) be legible;

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

(c) except for records listed in 33(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and

(d) for those following records, be retained until the expiry of the Licence and any subsequent licence:

(i) off-site environmental effects; or

(ii) matters which affect the condition of the land or waters.

34. The licence holder shall ensure that:

(a) any person left in charge of the Premises is aware of the conditions of the Licence and has access at all times to the Licence or copies thereof; and

(b) any person who performs tasks on the Premises is informed of all of the conditions of the Licence that relate to the tasks which that person is performing.

35. The licence holder shall complete an Annual Audit Compliance Report indicating the extent to which the licence holder has complied with the conditions of the Licence, and any previous licence issued under Part V of the Act for the Premises for the previous annual period.

36. The licence holder shall implement a complaints management system that as a minimum records the number and details of complaints received concerning the environmental impact of the activities undertaken at the Premises and any action taken in response to the complaint.

Reporting

37. The licence holder shall submit to the CEO an Annual Environmental Report by 28 February after the end of the annual period. The report shall contain the information listed in Table 14 in the format or form specified in that table.

Table 14: Annual Environmental Report

Condition or table (if relevant)	Parameter	Format or form[1]
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
35	Compliance	Annual Audit Compliance Report (AACR)
36	Complaints summary	None specified
19	Prescribed category throughputs	
Table 6	Performance of dust controls within transfer pads and result of visual monitoring of vegetation condition compared with previous photos.	
Table 11	Monitoring of groundwater	
Table 12	Monitoring of emissions to land	
Table 13	Monitoring of inputs and outputs	
-	TSF annual audit as prepared by the designer of the facility	
-	Measures taken to suppress dust	

Note 1: AACR form available from DWER website at: https://www.der.wa.gov.au/our-work/licences-and-works-approvals/publications

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

Notification

39. The licence holder shall ensure that the parameters listed in Table 15 are notified to the CEO in accordance with the notification requirements of the table.

Table 15: Notification requirements

Condition or table (if relevant)	Parameter	Notification requirement[1]	Format or form[2]
Table 10	Breach of any limit specified in the Licence	Part A: As soon as practicable, but no later than 5pm of the next usual working day. Part B: As soon as practicable	N1

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

Definitions

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

Table 16: Definitions

Term	Definition
Act	means the Environmental Protection Act 1986.
annual period	means the inclusive period from 1 January until 31 December in the same year.
ARI	means Average Recurrence Interval.
AS 1289.2.1.1	means the Australian Standard AS1289.2.1.1 Methods of testing soils for engineering purposes - Soil moisture content tests - Determination of the moisture content of a soil - Oven drying method (standard method).
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 handERRling of samples.
AS/NZS 5667.4	means the Australian Standard AS/NZS 5667.4 Water Quality – Sampling – Guidance on sampling from lakes, natural and man-made.
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.
AS/NZS 5667.12	means the Australian Standard AS/NZS 5667.12 Water Quality – Sampling – Guidance on sampling of bottom sediments.
averaging period	means the time over which a limit is measured or a monitoring result is obtained.
BIF	means Banded Iron Formation.
CEO	means Chief Executive Officer of the Department of Water and Environmental Regulation; CEO for the purpose of correspondence means; Director General Department administering the Environmental Protection Act 1986 Locked Bag 10 Joondalup DC WA 6919 or: info@dwer.wa.gov.au
cfu/100mL	means coliform forming units per 100 millilitres.
DWER	means Department of Water and Environmental Regulation - as of 1 July 2017, the Department of Environment Regulation (DER), the Office of the Environmental Protection Authority (OEPA) and the Department of Water (DoW) amalgamated to form the Department of Water and Environmental Regulation (DWER). DWER was established

	under section 35 of the Public Sector Management Act 1994 and is responsible for the administration of the Environmental Protection Act 1986 along with other legislation.
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.
kL	means kilolitre(s).
km	means kilometre(s)
Licence	means this Licence numbered L5850/1993/11 and issued under the Act.
Licence holder	means the person or organisation named as licence holder on page 1 of the Licence.
m	means metre(s)
mm	means millimetre(s)
m AHD	means elevation in metres using Australian Height Datum.
mbgl	means metre(s) below ground level.
mg/L	means milligram per litre
mRL	means metre(s) reduced level
m/s	means metre(s) per second.
µS/cm	means microseimens per centimetre.
Mtpa	means million tonnes per annum.
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.
PEC	means Priority Ecological Communities.
Premises	means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Licence.
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.
Schedule 1	means Schedule 1 of this Licence unless otherwise stated.
Schedule 2	means Schedule 2 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.

Suitably Qualified Geotechnical Engineer	means a person who: • holds a Bachelor of Engineering recognised by the Australian Institute of Engineers; and • has a minimum of five years of experience working in geotechnical engineering including experience in the design of tailings storage facilities.
SWL	means standing water level.
tailings	means tailings produced through concentration of spodumene by the Albemarle Kemerton Plant.
tpa	Means tonnes per annum.
t/m^3	Means tonnes per cubic metre
TSF	means tailings storage facility.
wastewater treatment vessels	means any vessel or tank containment infrastructure associated with the treatment or disposal of wastewater and includes, but is not limited to, the solids settling tank, open biological treatment dam (Pond 1) and an evaporation/infiltration dam (Pond 2).
WRL	means Waste Rock Landform.

Schedule 1: Maps

Premises map

The Premises is shown in the map below (in Figure 1). The red line depicts the new Premises boundary.

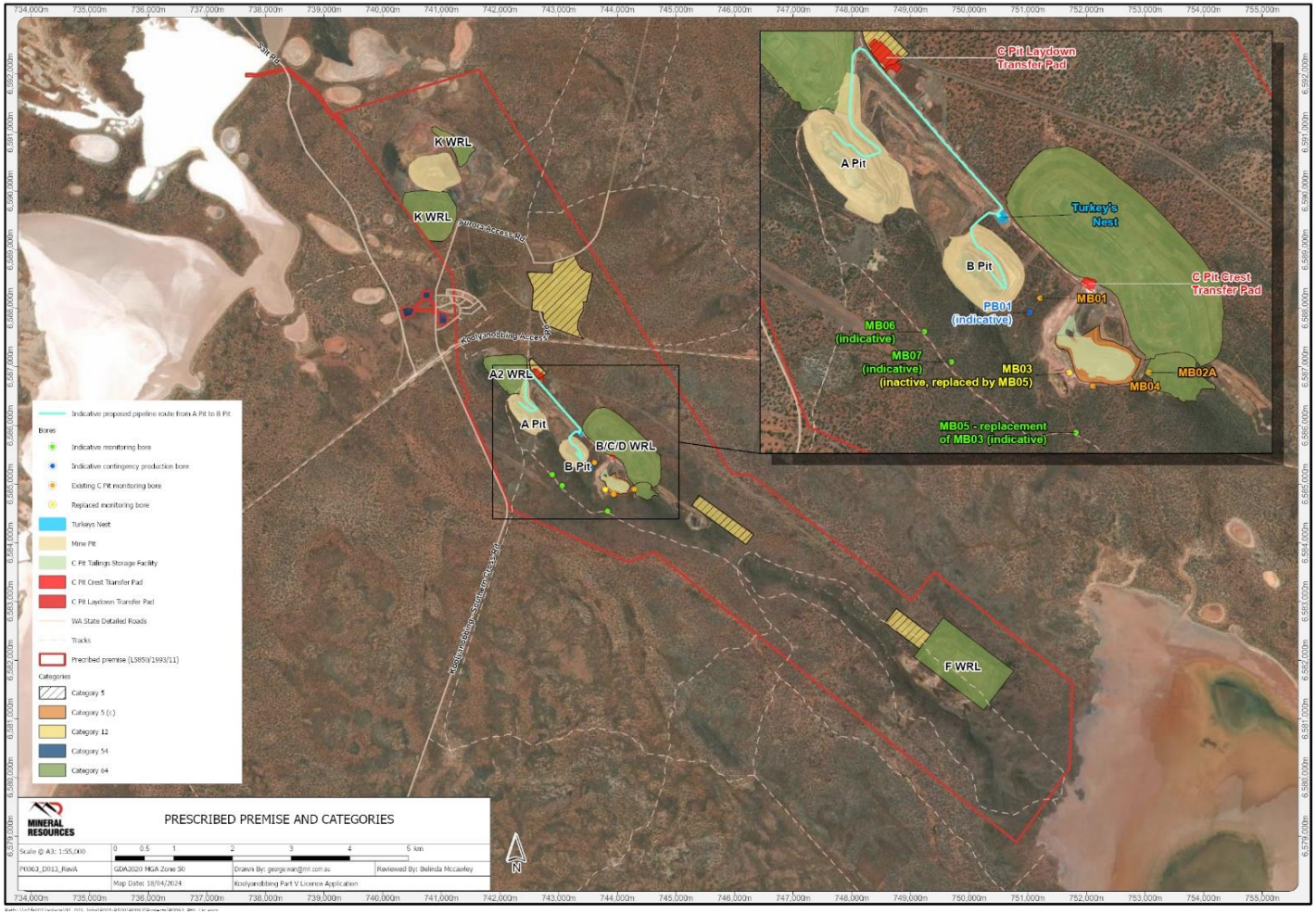

Figure 1: Premises and infrastructure map.

Map of C Pit TSF

C Pit TSF as defined in Table 1 is shown below in Figure 2.

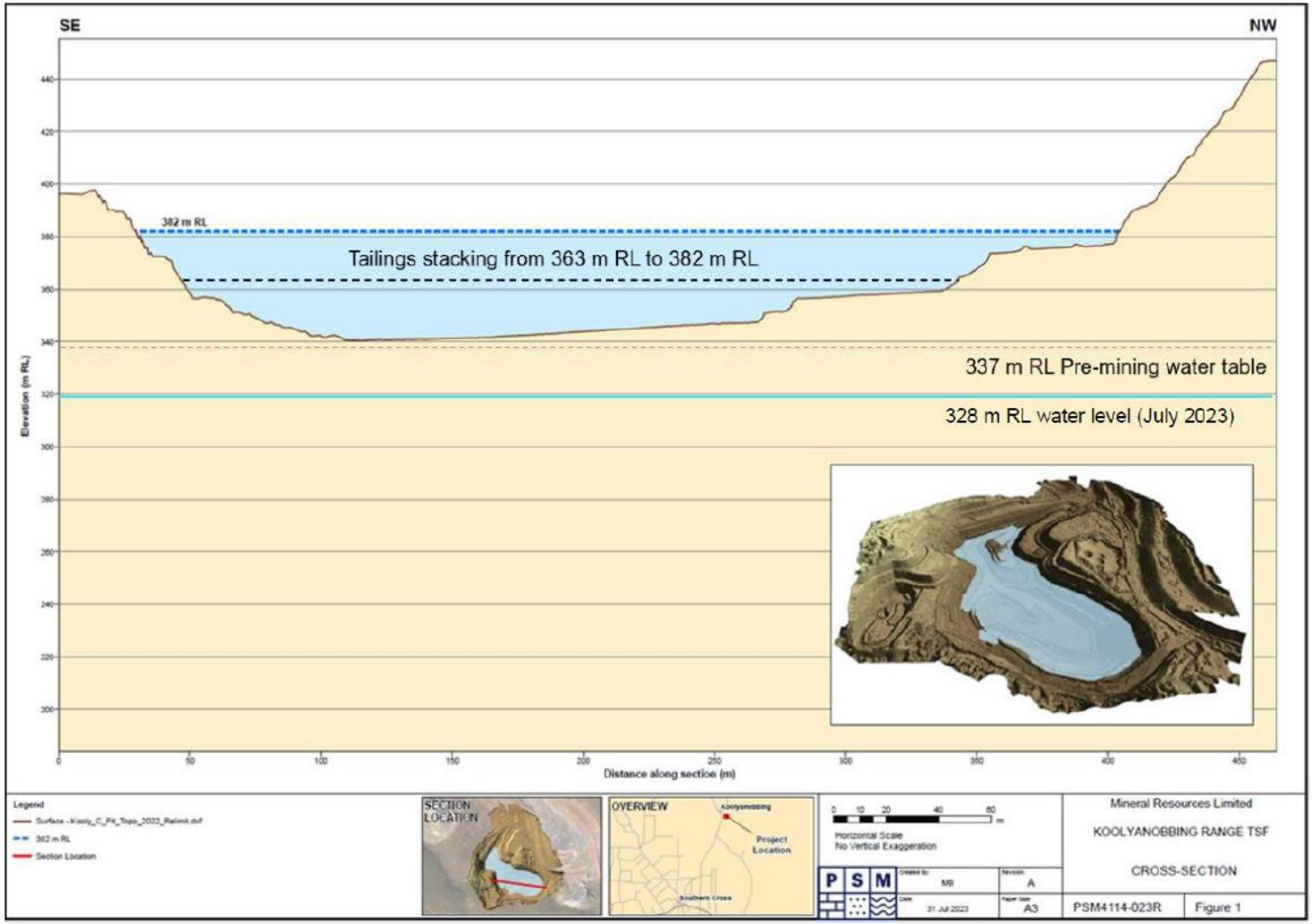

Figure 2: Map of C Pit TSF

Map of C Pit TSF 'flat-top' conceptual design is shown below in Figure 3.

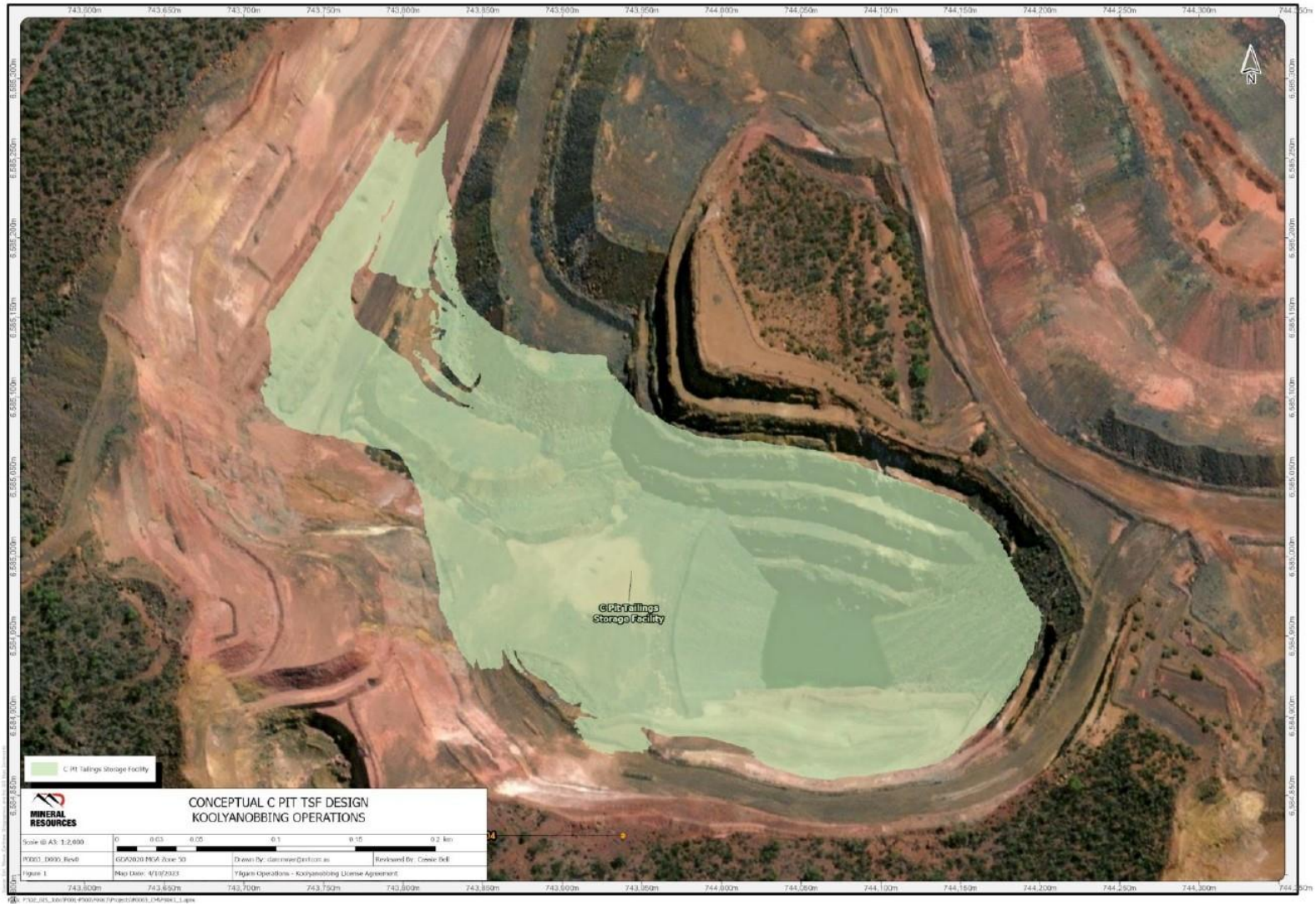

Figure 3: C Pit TSF 'flat-top' conceptual design.

Map of emission points

The locations of the WRLs defined in Table 6 are shown below (in Figure 4).

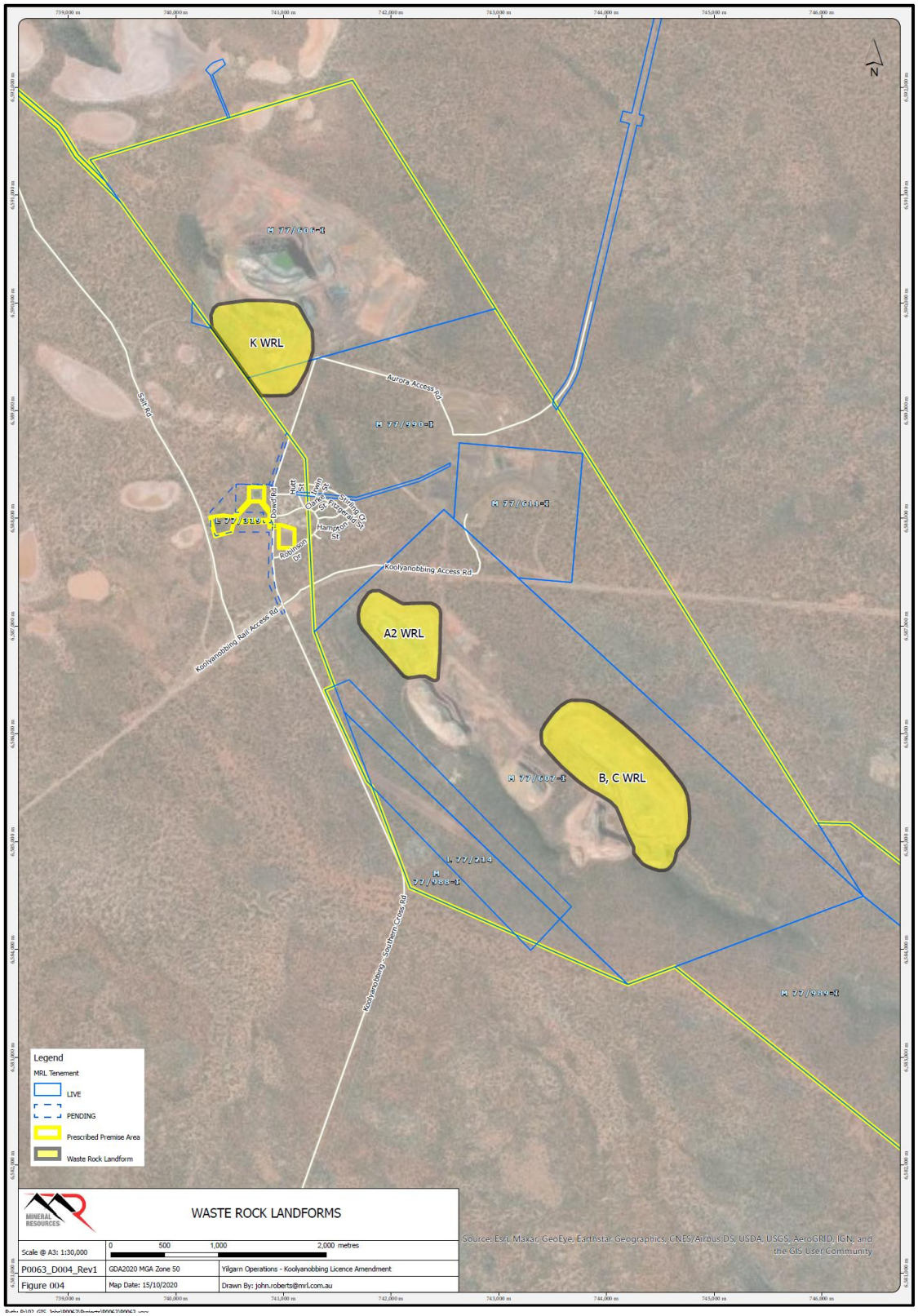

Figure 4: Location of the Waste Rock Landforms

Map of emission points

The location of the emission points defined in Table 10 and monitoring points defined in Table 12 are shown below (in Figure 5).

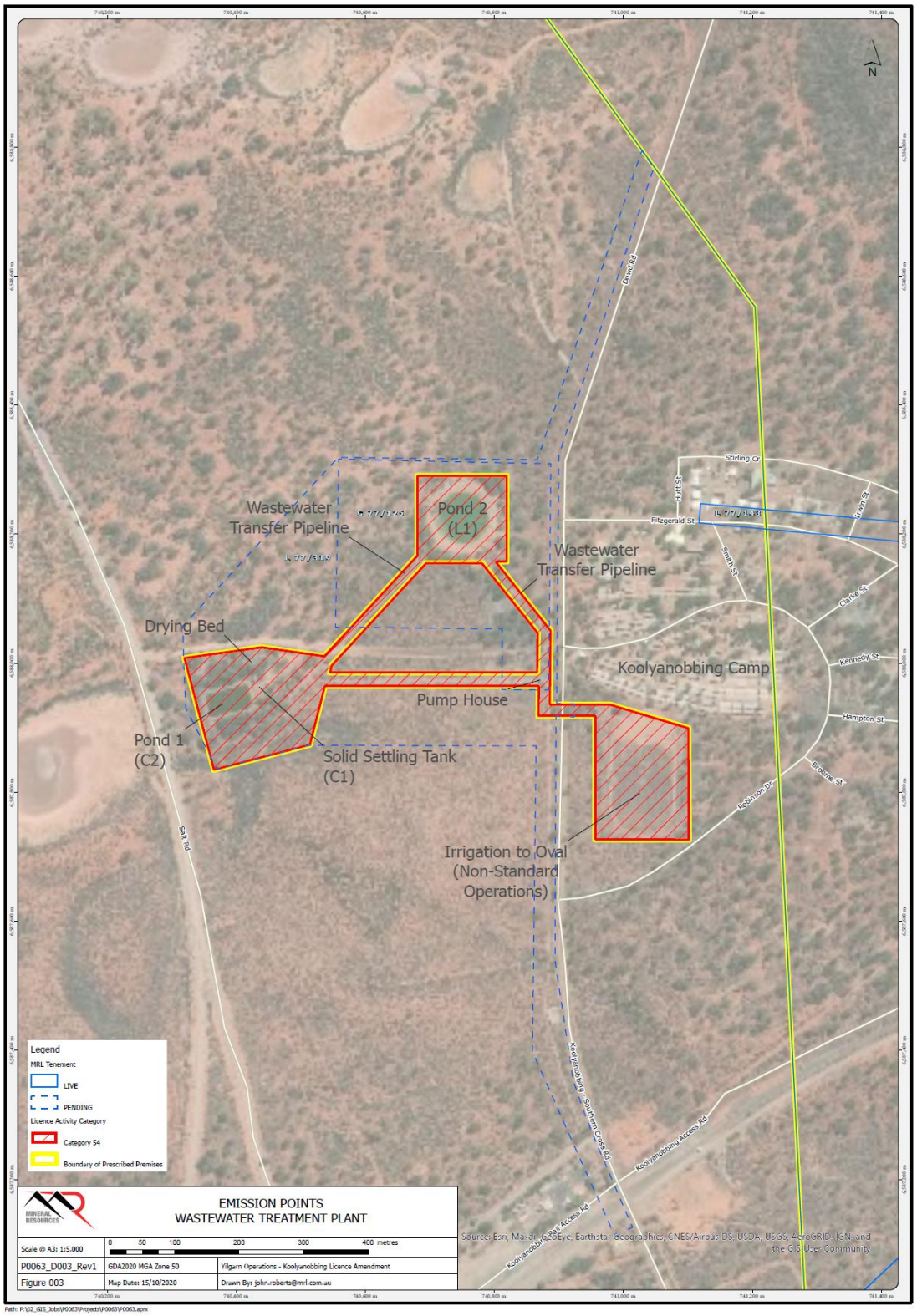

Figure 5: Location of the emission points defined in Table 10

Map of monitoring locations

The locations of emission points defined in containment infrastructure Table 3 are shown below.

Figure 6: Locations of emission points defined in containment infrastructure Table 3

Conceptual designs

C Pit Crest Transfer Pad Layout are shown below in Figure 7.

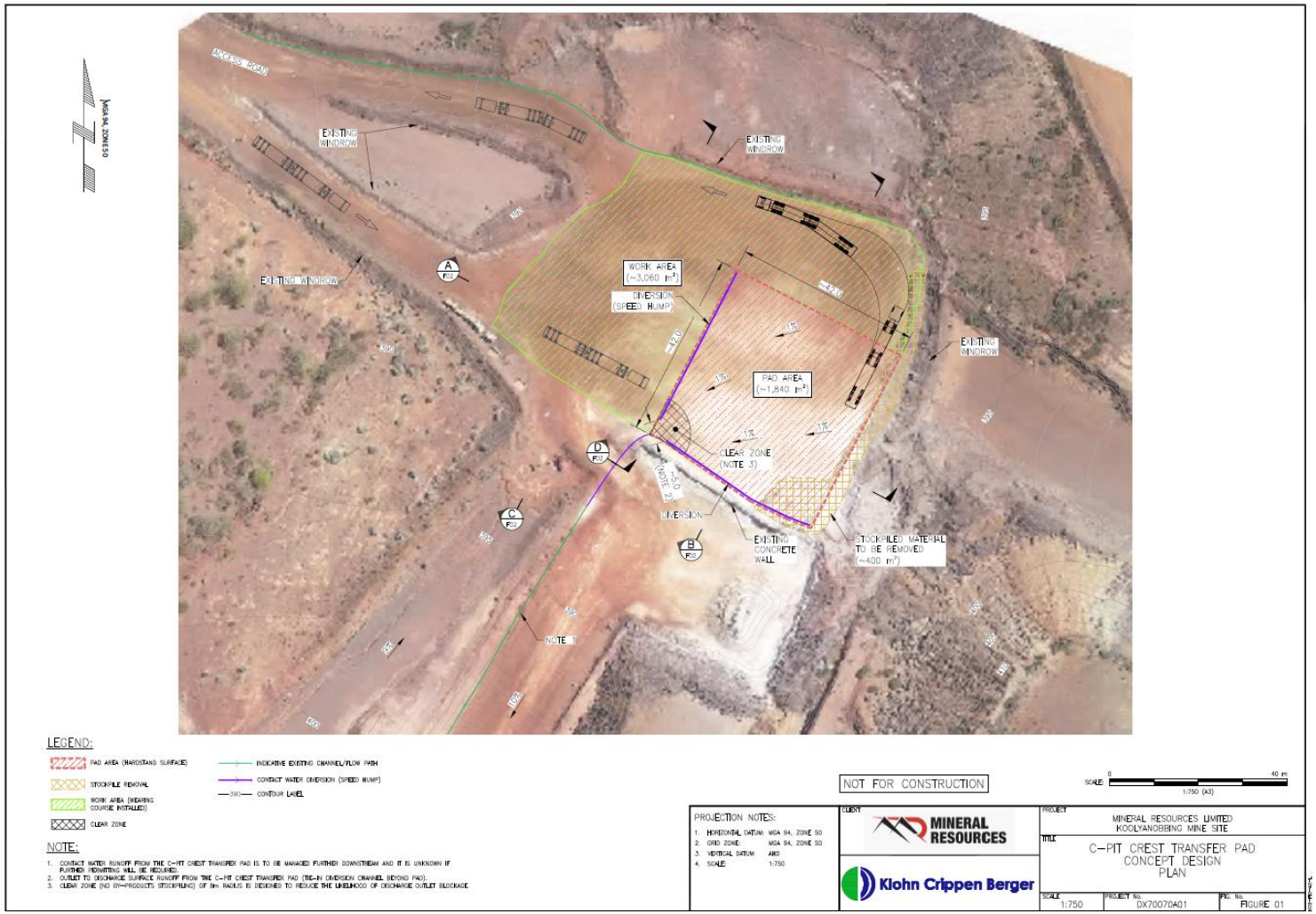

Figure 7: C Pit Crest Transfer Pad layout conceptual design plan

C Pit Crest Transfer Pad Sections and details are shown below in Figure 8.

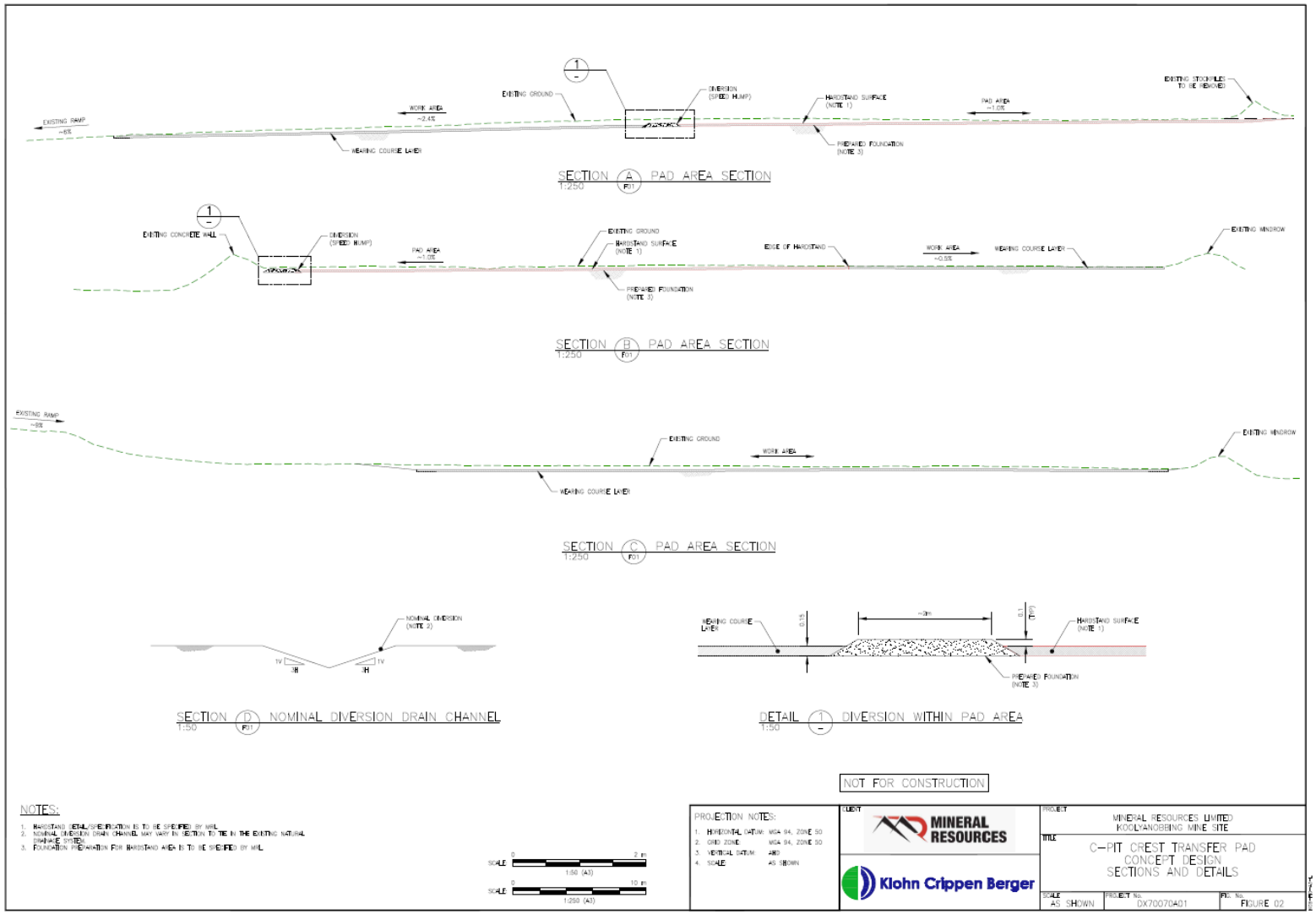

Figure 8: C Pit Crest Transfer Pad sections and details

Laydown Transfer Pad Layout are shown below in Figure 9.

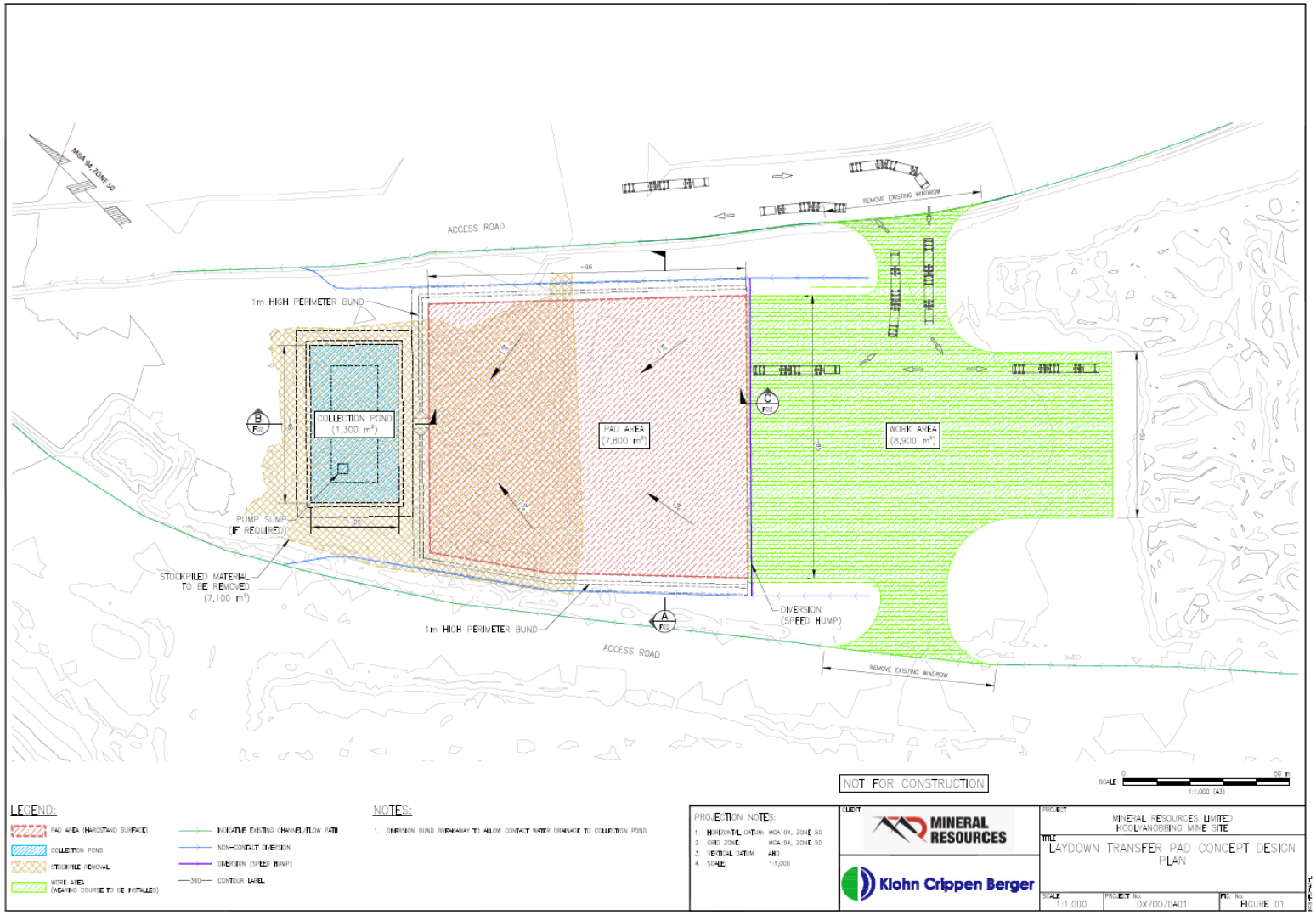

Figure 9: Laydown Transfer Pad layout conceptual design plan

Laydown Transfer Pad sections and details are shown below in Figure 10.

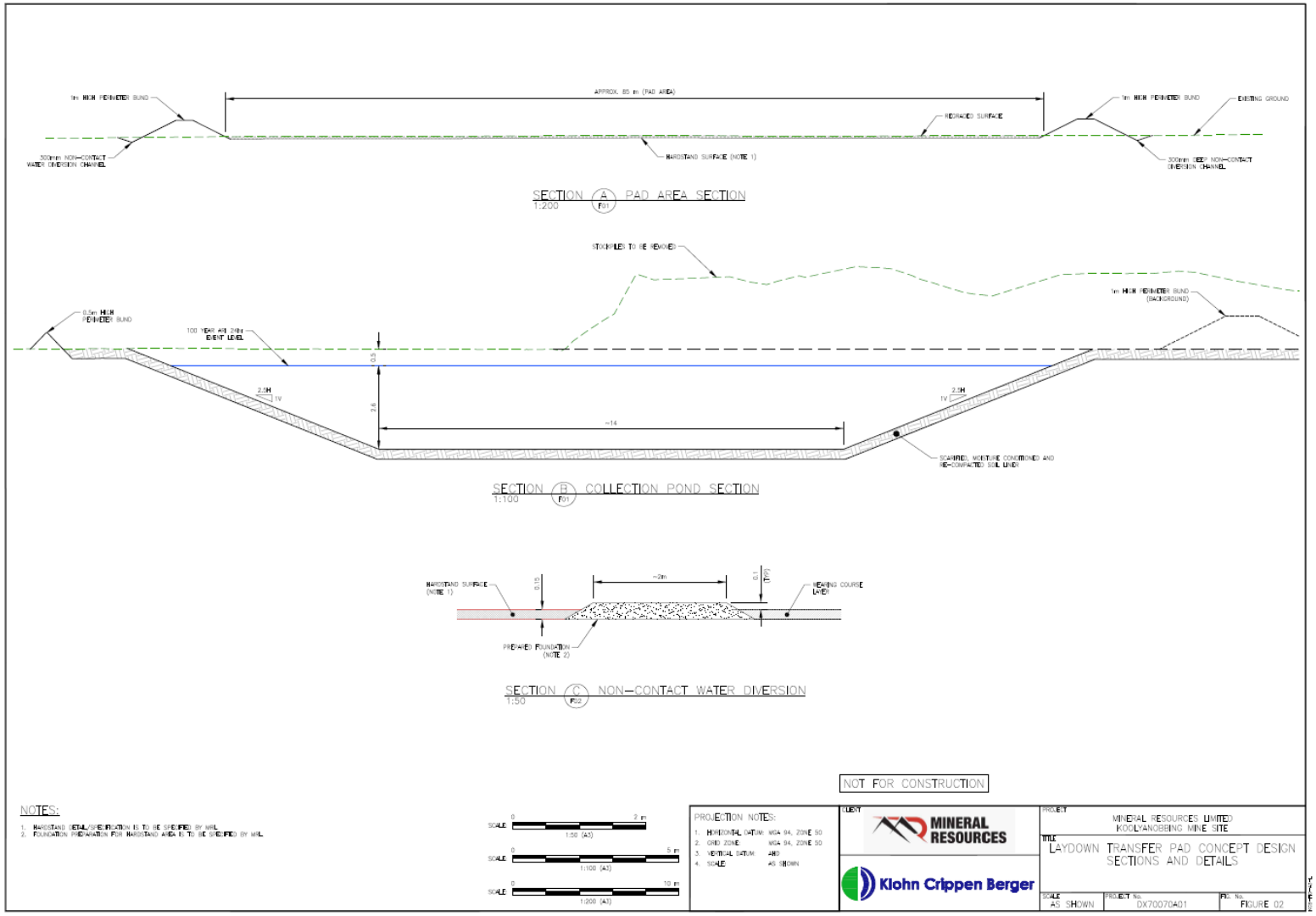

Figure 10: Laydown Transfer Pad sections and details

Train Load Out design options

ROM pad redesign to allow road trains to dump directly into the crusher feed bins

Figure 11: ROM pad redesign:

Linear stackers for ore handling during train loading (shown below in Figure 12) - option 1

Figure 12: Option 1 for arrangement of linear stackers during train loading

Linear stackers for ore handling during train loading (shown below in Figure 13) – option 2

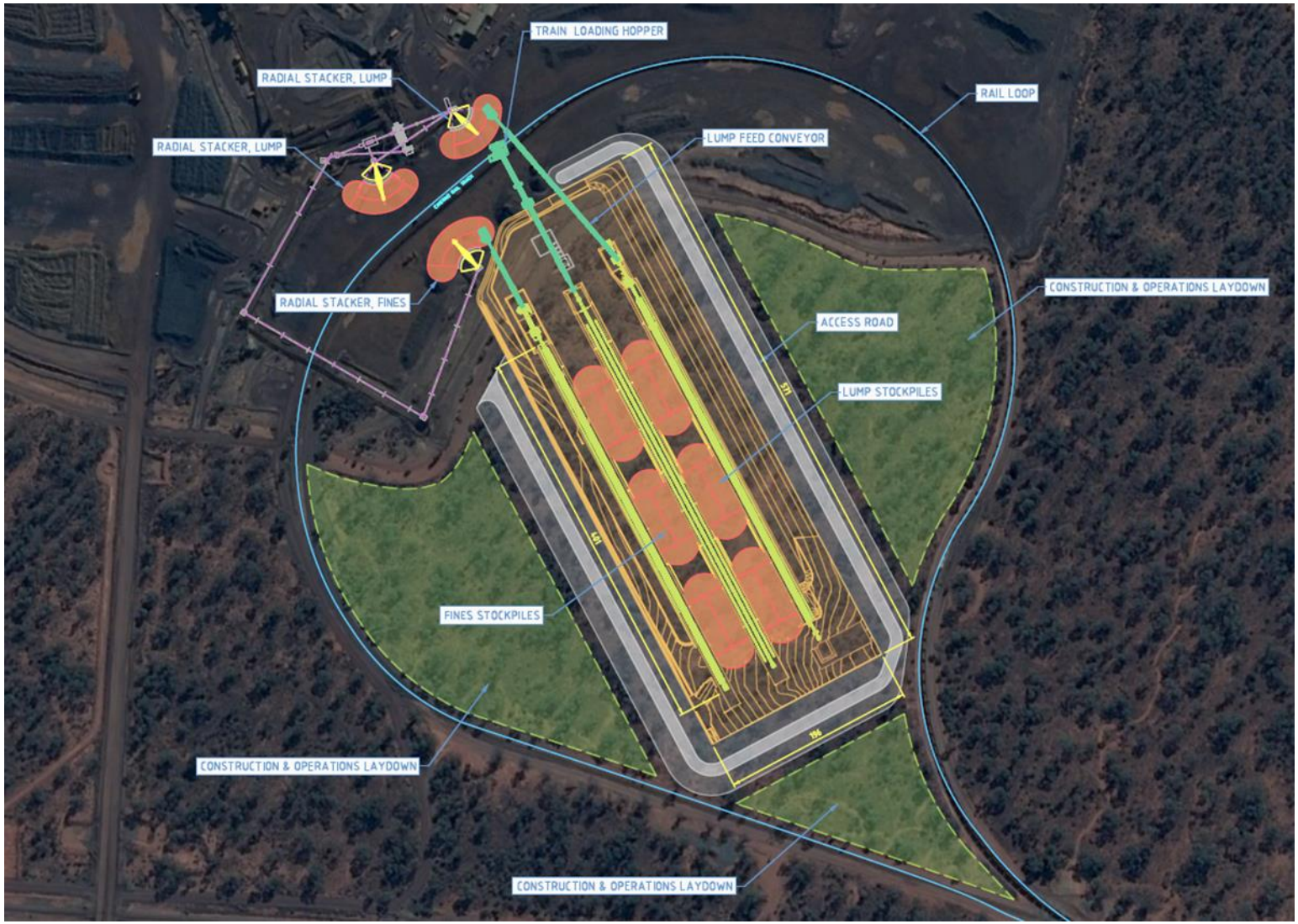

Figure 13: Option 2 for arrangement of linear stackers during train loading

Schedule 2

Government of **Western Australia**
Department of **Water and Environmental Regulation**

Licence: L5850/1993/11 **Licence holder:** Yilgarn Iron Pty Ltd

Form: N1 **Date of breach:**

Notification of detection of the breach of a limit.

These pages outline the information that the operator must provide.

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

Part A

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

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

Part B

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

Name	
Post	
Signature on behalf of licence holder	
Date	