Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence number	L5415/1988/9
Licence holder	BHP Iron Ore Pty Ltd
ACN	008 700 981
Registered business address	125 St Georges Terrace PERTH WA 6000
DWER file number	DER2013/000900-1
Duration	17/11/2015 to 16/11/2030
Date of issue	05/11/2015
Date of amendment	13/02/2024
Premises details	Wheelarra Hill (Jimblebar) Iron Ore Mine Tenements L52/108, L52/109, L52/163, I126948, M266SA and ML244SA NEWMAN WA 6753

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	92,000,000 tonnes per annum
Category 6: Mine dewatering	47.225 gigalitres per annual period
Category 12: Screening etc. of material	500,000 tonnes per year
Category 54: Sewage facility	Approved production or design capacity of 120m^3 per day
Category 64: Class II putrescible landfill site	25,000 tonnes per annual period
Category 73: Bulk Storage of chemicals etc	5,000 cubic metres in aggregate

This amended licence is granted to the licence holder, subject to the attached conditions, on 13 February 2024, by:

Sonya Poor

Digitally signed by Sonya Poor
Date: 2024.02.13 08:38:53 +08'00'

SENIOR ENVIRONMENTAL OFFICER, INDUSTRY REGULATION

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

Licence History

Reference number	Date	Summary of changes
L5415/1988/1	17/11/2000	First licence noted in the Industry Licensing System.
L5415/1988/2	17/11/2001	Licence reissue.
L5415/1988/3	17/11/2002	Licence reissue.
L5415/1988/4	17/11/2003	Licence reissue.
L5415/1988/5	17/11/2004	Licence reissue.
L5415/1988/6	17/11/2006	Licence reissue.
L5415/1988/7	17/11/2007	Licence reissue.
L5415/1988/8	17/11/2010	Licence reissue.
L5415/1988/8	30/05/2013	Licence amendment to: • Add in a category 54 WWTP with the capacity to treat a maximum of 102.5 cubic metres per day (m^3/day). Another WWTP onsite processes 8 m^3/day (total capacity of both plants is 110.5 m^3/day); • Remove conditions (conditions 4, 5 and 6 of the previous licence) relating to the Enviroburner as it no longer present onsite. This was picked up during the inspection conducted by Inspection and Compliance Branch in 2012; • Rename sampling locations for the hydrodynamic trial; • Implement operation of Stage 3a of the hydrodynamic trial; and • Include category 73 for two 1.4 megalitre (ML) vertical cylindrical diesel storage tanks and associated infrastructure.
L5415/1988/8	23/01/2014	Licence amendment to: • Increase category 5 from 15 million tonnes per annum (Mtpa) to 51 Mtpa – addition of 6 Mtpa constructed under W5277/2012/1 and 30 Mtpa constructed under W4655/2010/1; • Implement operation of Stage 3b of the hydrodynamic trial – injection of approximately 2 ML/day into one existing production bore (JBGW0076P); • Include groundwater monitoring bores associated with Stage 3b; and • Rename bores associated with Stages 2 and 3a of the hydrodynamic trial.
L5415/1988/8	11/06/2015	Licence amendment to: • Realign the prescribed premises boundary to include Orebody 18 operations (licensed under L8044/1987/2) and the ANSF;

Reference number	Date	Summary of changes
		• Approve the disposal of wastewater from the ANSF to the Jimblebar Bioremediation Facility; • Include a third re-injection bore as part of the Managed Aquifer Recharge (MAR) trial; and • Amend the groundwater monitoring requirements.
L5415/1988/9	5/11/2015	Licence renewal and update to template version 2.9.
L5415/1988/9	21/04/2016	Licence amendment to: • Assess the construction and operation of the Orebody 31 dewatering discharge point to Ophthalmia Dam and discharge of up to 16.2 Gigalitres per annum (GL/a); • Increase category 6 to include Orebody 18 and Orebody 31 (total 23.5 GL/a discharged via reinjection and discharge to Jimblebar and Copper Creeks and Ophthalmia Dam); • Realign the prescribed premises boundary to include the Orebody 31 deposit; • Consolidate discharge monitoring locations, amend creekline surface water monitoring, including Orebody 18 MAR monitoring requirements and remove requirement to monitor riparian vegetation; and • Remove conditions which duplicate regulation under Part IV of the EP Act.
L5415/1988/9	13/10/2016	Licence amendment to: • Include an additional discharge point to a tributary of Jimblebar Creek; • Amend the Orebody 18 and South Jimblebar MAR programs; • Update conditions relating to sewage monitoring; • Update the prescribed premises address; and • Remove conditions that are not valid, enforceable and/or risk based
L5415/988/9	27/08/2018	Licence amendment 1 to: • Increase the Jimblebar (Wheelarra Hill) category 5 Premises design capacity by 7 Mtpa to 65 Mtpa. This increases the Licence total capacity for category 5 to 82 Mtpa. • Increase the throughput for category 6 to 37.735 GL/a. • Increase the throughput capacity for category 64 to 15,000 tonnes per annum (tpa). • Increase category 73 to 5,000 m^3. • Removal of monitoring requirements for MAR monitoring bore HSJ0169 and replacement with monitoring bore SJ0571RM. • Removal of rising stage sampler locations JBSW006, JBSW007 and JBSW008 and replacement with the three new rising stage sampler locations JBSW009, JBSW010 and JBSW011.

Reference number	Date	Summary of changes
		Administrative changes to the Licence, comprising: • Increasing the volume of nutrient rich water in Table 1.2.4 from 400,000 L to 4,000,000 to correct an administrative error. • Update Table 1.2.6 to remove completed construction requirements. • Replace the reference to L2 to L1 in Table 4.2.1 of the Licence.
L5415/1988/9	19/02/2019	Licence amendment 2 to: • Increase Category 5 approved throughput by an additional 10 Mtpa to a total of 92 Mtpa. • Reconfigure the Orebody 18 managed aquifer reinjection (MAR) scheme to increase the maximum design capacity from 8.76 GL/a (24 ML/day) to 13.14 GL/a (36 ML/day). • Allow for the construction of a new inert landfill (Category 63). • Amend the prescribed premises boundary to include the expansion of the Orebody 18 MAR scheme. • Add Category 12 to the licence, with an approved throughput of 200 000 tpa.
L5415/1988/9	16/07/2019	Licence amendment 3 to: • Construct a new 5 Mtpa relocatable crusher. • Increase Category 6 from 37.735 GL/a to 47.255 GL/a. • Construct a second pipeline from Orebody 31 to Ophthalmia Dam. • Dispose of 16.425 GL/a (average of 45 mega litres per day (ML/d) of surplus water from the Wheelarra Hill (Jimblebar) mining operations to Ophthalmia Dam. • Substitute three of the MAR bores with a depth to groundwater monitoring requirement with three new monitoring bores adjacent to the MAR bores.
L5415/1988/9	30/04/2020	Licence amendment to: • Correct an administrative error associated with the Orebody 18 managed aquifer recharge (MAR) bores. Amendment Notice 3 incorrectly identified the requirement to monitor flow rate and cumulative volumes in monitoring bores HEOP0842P, HEOP0828M and HEOP0838M, instead of the requirement to monitor the flow rate and cumulative volumes in MAR injection bores HEOP0847P, HEOP0843P and HEOP0845P; • Replace groundwater monitoring JBGW0009P with the nearby HSJ0083M. Monitoring JBGW0009P will be decommissioned as part of an expansion to the Primary Crusher 3 run of mine (ROM) pad; • Expand the boundary of the Premises to the south so the description of the Premises boundary in the Existing Licence coincides with the boundary

Reference number	Date	Summary of changes
		approved via a Section 45C to MS 857 on 9 November 2018; and • Consolidate the Licence by incorporating changes made under Amendment Notices 1-3.
L5415/1988/9	17/03/2022	Licence amendment to: • Allow for the disposal of inert waste type 1 (concrete) in licensed landfills, pits or overburden storage areas within the premises boundary; • Update monitoring and emission point names; • Replace bore JBGW0080M with HSJ0081M; • Include Orebody 18 Turkeys Nest OB18GWLTN1 as a sample point for emissions to groundwater; and • Expand the premises boundary.
L5415/1988/9	19/07/2022	Licence amendment to: **Category 5** • Construction of a new Train Load Out (TLO) with no change to the throughput. **Category 6** • Caramulla Managed Aquifer Recharge (MAR) scheme – increase to the MAR capacity by 10.95 GL/a reinjection, and creek discharge by 32.85 GL/a. However, the capacity remains at 47.225 GL/a. • Addition of the Caramulla reinjection bores. • Addition of the Caramulla MAR monitoring bores. • Addition of the Creek Discharge monitoring bore. • Addition of the Caramulla Creek Discharge Point. • Addition of the HASHI Turkeys Nest FJB0016 as a water quality monitoring point. **Category 12** • Design capacity increase of 300,000 tpa that will result in a total capacity of 500,000 tpa. • Installation and operation of a mobile crushing and screening plant with a maximum capacity of 1 Mtpa at the Jimblebar Rail Loop. **Category 64** • Design capacity increase of 10,000 tpa that results in a total capacity of 25,000 tpa for the additional inert waste. • Construction of two new inert landfills. **Other** • Removal of the groundwater depth requirements for Orebody 18 MAR monitoring bore HMG0058M. • Removal of failed Orebody 18 MAR bore HEOP0842P. • Expanding the prescribed premises boundary to the east to incorporate the Caramulla MAR scheme and associated facilities with the new TLO.

Reference number	Date	Summary of changes
		• Removal of the Ninga MAR injection bores and addition of bores HEOP0842M, HEOP0828M, and HEOP0838M.
L5415/1988/9	13/02/2024	Licence amendment to: **Category 5:** • Amend the design of the new Jimblebar Train Load Out (TLO) from a single to dual bin. **Category 6:** <u>Caramulla MAR</u> • Expand the Caramulla MAR construction zone. • Add flow meter FJB0018. • Add emission point reference FJB0018. <u>Orebody 18 MAR</u> • Remove works specifications relating to the Orebody 18 MAR. • Remove all monitoring requirements for the bores associated with OB18 MAR. • Remove Turkeys Nest OB18GWLTN1 monitoring requirements. • Remove blocked bore HMG0121M. • Remove HMG0103M and HMG0119M. <u>South Jimblebar MAR</u> • Remove all monitoring requirements for the bores associated with South Jimblebar MAR. • Replace SJB0001 with SJB0012. • Remove JBDMOWW007 and replace with SJTN001 (South Jimblebar Turkeys Nest). • Remove HEOP0828M, HEOP0838M and HEOP0842M and replace with HEOP0835M, HEOP0826M, and HEOP0829M. <u>Jimblebar reinjection bores</u> • Remove all references to the 'Jimblebar reinjection bores' HSJ0003P, HSJ0069P, HSJ0076P and HMG0056P. <u>Ophthalmia Dam Discharge Point Sample Tap</u> • Add FNPI0002 (Ophthalmia Dam Discharge Point Sample Tap) with the requirement to monitor electrical conductivity and hydrochemistry quarterly (when reinjecting). Or if the sample tap cannot be accessed then from one of the Orebody 18 injection bores (HEOP0847P, HEOP0843P or HEOP0845P). • Remove HEOP0847P, HEOP0843P and HEOP0845P monitoring requirements, keeping cumulative volume and flow rate. <u>Other</u> • Correction of typological errors.

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:

Premises operation

1. The licence holder must only accept waste on to the Premises if:

(a) it is of a type listed in Table 1;

(b) the quantity accepted is below any quantity limit listed in Table 1; and

(c) it meets any specification listed in Table 1.

Table 1: Waste acceptance

Waste type	Quantity limit	Specification[1]
Inert Waste Type 1	25,000 tonnes per annual period	None specified
Inert Waste Type 2		None specified
Putrescible Waste		None specified
Sewage	120 m^3/day[2]	Accepted through sewer inflow(s) only

Note 1: Additional requirements for the acceptance of controlled waste (including asbestos and tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.
Note 2: Quantity limit measured as volume of treated wastewater discharged to designated irrigation areas.

2. The licence holder must ensure that where waste does not comply with condition 1 it is removed from the Premises by the delivery vehicle or, where that is not possible, stored in a segregated storage area or container and removed to an appropriately authorised facility as soon as practicable.

3. The licence holder must ensure that wastes accepted onto the Premises are only subjected to the process(es) set out in Table 2 and in accordance with any process limits described in that Table.

Table 2: Waste processing

Waste type	Process(es)	Process limits[1 2]
Putrescible Waste	Receipt, handling and disposal of waste by landfilling	<u>All waste types</u> Disposal of waste by landfilling shall only take place within the landfill areas shown on the Premises Map in Schedule 1 The separation distance between the base of the landfill and the highest groundwater level shall not be less than 2 m
Clean Fill		
Inert Waste Type 1		Inert concrete waste (crushed concrete, concrete rail sleeper etc.) shall only be landfilled in the landfill areas, pits or overburden storage areas located within the prescribed premises boundary shown in Schedule 1

Waste type	Process(es)	Process limits[1] [2]
Inert Waste Type 2		Tyres and conveyor belts shall only be landfilled in overburden storage areas located within the prescribed premises boundary shown in Schedule 1
Sewage	Biological, physical and chemical treatment	120 m^3/day

Note 1: Additional requirements for the acceptance and landfilling of controlled waste (including asbestos and tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.
Note 2: Additional requirements for the burial of tyres are set out in Part 6 of the *Environmental Protection Regulations 1987*.

4. 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 a cell or phase takes place within 6 months after disposal in that cell or phase has been completed.

5. The licence holder must ensure that cover is applied and maintained on landfilled wastes in accordance with Table 3 and that sufficient stockpiles of cover are maintained on site at all times.

Table 3: Cover requirements[1]

Waste Type	Material	Depth	Timescales
Inert Waste Type 1	Inert and incombustible material	Sufficient to ensure the waste is completely covered and that no waste is exposed	Weekly or as soon as practicable after deposit and prior to compaction
Putrescible Waste			
Inert Waste Type 2 (Tyres and conveyor belts only)	Soil	500 mm	As soon as practical following the achievement of final waste levels in the area(s) in which tyres are deposited.

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

6. The licence holder must prevent unauthorised access to the landfill.

7. The licence holder must ensure that wind-blown waste is contained within the boundary of the Premises and that wind-blown waste is returned to the tipping area on at least a monthly basis.

8. The licence holder must manage the wastewater treatment ponds in a manner such that:

(a) stormwater runoff resulting from site drainage shall be prevented from entering the wastewater treatment ponds or causing erosion of the outer pond embankments;

(b) overtopping of the ponds shall not occur, except as a result of an extreme rainfall event; and

(c) vegetation and debris (emergent or otherwise) is prevented from growing or accumulating in the pond wastewaters or on the inner pond embankments.

9. The licence holder must ensure that waste material is only stored and/or treated within vessels or compounds listed in Table 4 and identified in Schedule 1 in accordance with the requirements specified within Table 4.

Table 4: Containment Infrastructure

Storage vessel or compound	Material	Requirements
Evaporation pond 1	102 m^3/day of effluent from the Hub WWTP	• 1.5 mm HDPE lined evaporation pond to achieve a permeability of $<10^{-9}$ m/s; and • minimum vertical freeboard of 300 mm
Evaporation pond 2	5 m^3/day of effluent from the Primary Crusher WWTP	• 1.5 mm HDPE lined evaporation pond to achieve a permeability of $<10^{-9}$ m/s; and • minimum vertical freeboard of 300 mm
Orebody 18 and Jimblebar bioremediation treatment cells	Hydrocarbon contaminated soil and nutrient rich wastewater from the Ammonium Nitrate Facility	• 1.5 mm HDPE lined cells to achieve a permeability of $<10^{-9}$ m/s; • any contaminated runoff from the treatment cells is contained; • a maximum of 4,000 kL of nutrient rich wastewater per annum may be discharged into the cells; and • the discharge of nutrient rich wastewater is managed to ensure pooling is minimised

10. The licence holder must ensure the limits specified in Table 5 are not exceeded.

Table 5: Production or design capacity limits

Category[1]	Category description[1]	Premises production or design capacity limit
5	Processing or beneficiation of metallic or non-metallic ore	92,000,000 tonnes of ore per annual period
6	Mine dewatering	47.225 gigalitres per annual period (production capacity). Discharge in aggregate with production capacity consisting of up to: • 23.36 gigalitres reinjected (OB 18 and Caramulla MAR schemes); • 35.04 gigalitres discharged to Copper Creek, tributary of Jimblebar Creek and Caramulla Creek; and • 32.625 gigalitres discharged to Ophthalmia Dam
12	Screening etc. of material	500,000 tonnes per annual period
73	Bulk storage of chemicals, etc	5,000 cubic metres in aggregate

Note 1: *Environmental Protection Regulations 1987*, Schedule 1.
Note 2: Limit applicable upon submission of compliance documentation required under condition 37.

Infrastructure and equipment

11. The licence holder must:

(a) install the infrastructure and equipment;

(b) in accordance with the corresponding design and construction requirements; and

(c) at the corresponding infrastructure location

as set out in Table 6.

Table 6: Design and construction / installation requirements

Infrastructure / Equipment	Design and construction / installation requirements	Infrastructure location
Jimblebar (Wheelarra Hill) mining operations		
Relocatable crusher	Construction of a new 5 Mtpa relocatable crusher at Jimblebar Hub.	5 Mtpa relocatable crusher in Schedule 1: Maps Figure 1
Up to 1 Mtpa mobile crushing and screening plant (non-ore)	Operation of a up to 1 Mtpa crushing and screening plant to process non-ore material for the TLO project.	Up to 1 Mtpa mobile crushing and screening plant to be located adjacent to the Jimblebar Rail Loop as shown in Schedule 1: Maps Figure 1
Jimblebar new TLO	Construction and operation of a new TLO adjacent to the existing TLO.	Jimblebar New TLO as shown in Schedule 1: Maps Figure 1 Figure 4 Figure 5
Duplicate pipeline and pump station upgrades	Pipelines constructed using ±5,700m of ±DN 500. Pipework run parallel to the existing water conveyance pipeline between TK1063 to Jimblebar Hub. An upgrade to increase the capacity of the WH56 Pump station by installing two additional diesel pumps and associated equipment.	'Pipeline to be Duplicated' shown in Schedule 1: Maps Figure 1
Category 64 inert landfill	Located at the eastern edge of Orebody 31.	Orebody 31 Inert landfill location as shown in Schedule 1: Maps

Infrastructure / Equipment	Design and construction / installation requirements	Infrastructure location
		Figure 1
	Two new inert landfills within the Jimblebar Rail Loop.	Inert Landfills as shown in the Jimblebar Hub in Schedule 1: Maps Figure 1
Caramulla MAR scheme	Additional reinjection bores to meet the 10.95 GL/a rate (if required) and replacement reinjection bores for failed bores.	To be located within the Construction Zone for new Caramulla MAR bores as shown in Schedule 1: Maps Figure 1

12. The licence holder must operate the relocatable crusher in accordance with the conditions of this Licence, following submission of the compliance document required under condition 37.

13. The licence holder must operate the mobile crushing and screening plant in accordance with the conditions of this Licence, following submission of the compliance document required under condition 37.

14. The licence holder must operate the new TLO in accordance with the conditions of this Licence, following submission of the compliance document required under condition 37.

15. The licence holder must operate the Caramulla MAR scheme injection and monitoring bores in accordance with the conditions of this Licence, following submission of the compliance document required under condition 37.

16. The licence holder must ensure that the site infrastructure and equipment listed in Table 7 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 7.

Table 7: Infrastructure and equipment requirements

Site infrastructure and equipment	Operational requirement	Infrastructure location
Orebody 31 dewatering infrastructure	• Maintain turkeys nest liner and 10 ML capacity which includes sufficient emergency storage for 12 hours of demand and 4 hours of transfer pump station capacity; and • Maintain perforated outlet and rip rap at the contingency discharge point at Jimblebar Creek tributary (FNJV0150).	Schedule 1 Figure 1 Figure 2
Train Loadout (TLO)	Maintain and operate dust suppression measures during operation.	Figure 4 Figure 5

Emissions and discharges

General

17. The licence holder must record and investigate the exceedance of any descriptive or numerical limit specified in this section of the Licence.

Point source emissions to surface water

18. The licence holder must ensure that the emissions specified in Table 8, are only discharged from the corresponding discharge point and are subject to the corresponding operational requirements.

Table 8: Authorised discharge points - surface water emissions

Emission	Discharge point	Operational requirements	Discharge point location
Water from dewatering South Jimblebar discharged to creek line	FJB0004 FBJ0008	Maintain erosion controls i.e., rip rap	As shown in Schedule 1, Figure 1
Water from dewatering of Orebody 31	FNJV0150 – Orebody 31 Creek discharge	Contingency discharge to creek line (tributary of Jimblebar Creek) during high rainfall, maintenance and/or emergency events	
Water from dewatering at Jimblebar discharged to creek line	FJB0017 and FJB0018 – Caramulla Creek Discharge Point	Maintain erosion controls i.e., rip rap	

Point source emissions to groundwater

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

Table 9: Emission points to groundwater

Emission point reference on Map of emission points	Description	Source including abatement
Orebody 18 reinjection bores HEOP0847P HEOP0843P HEOP0845P	Direct injection below ground	Water from dewatering
Caramulla reinjection bores HCM0026P HCM0027P HCM0028P		

Emissions to land

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

Table 10: Emissions to land

Emission point reference and location on Map of emission points	Description	Source including abatement
L2 (JMSWRW001)	Unlined evaporation pond	Treated wastewater from the Wheelarra oily WWTP lined pond

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

Table 11: Emission limits to land

Emission point reference	Parameter	Limit (including units)	Averaging period
L2 (JMSWRW001)	Total Recoverable Hydrocarbons	15 mg/L	Spot sample

Monitoring

General monitoring

22. The licence holder must ensure that:

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

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

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

(d) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured.

23. The licence holder must ensure that:

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

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

24. The licence holder must 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.

25. 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.

Monitoring of point source emissions to surface water

26. The licence holder must undertake the monitoring in Table 12 according to the specifications in that table.

Table 12: Monitoring of point source emissions to surface water

Emission point reference	Parameter	Units	Frequency
South Jimblebar FJB0004 FJB0008 Orebody 31 FNJV0150 Caramulla Creek Discharge Point FJB0017 and FJB0018 (Creek discharge points)	Flow rate	L/s	Monthly (when discharging)
	Cumulative volume	kL	
Jimblebar Creek Discharge SJB0012 Orebody 31 FNJV0150 Caramulla Surplus Water scheme HASHI Turkeys Nest FJB0016	pH[1]	pH units	Quarterly (when discharging)
	Total Dissolved Solids, Total Suspended Solids, Al, As, B, Ba, $CaCO_3$, Cd, Ca, Cl, Cr, Cu, F, Fe, Pb, Mg, Mn, Hg, Mo, Ni, NO_3, K, Se, SiO_2, Na, SO_4, Zn	mg/L	
FNPI0002 - Ophthalmia Dam Discharge Point Sample Tap	Flow rate	L/s	Quarterly (when discharging)
	Cumulative flow rate	kL	

Note 1: pH and EC in-field non NATA accredited analysis permitted

Monitoring of point source emissions to groundwater

27. 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 groundwater

Emission point reference[1]	Parameter[1]	Units	Frequency[1]
Orebody 18 HEOP0847P HEOP0843P HEOP0845P	Cumulative volume	kL	Monthly (when reinjecting)
	Flow rate	L/s	
Orebody 18 HEOP0835M HEOP0826M HEOP0829M	Water level	mbgl	Monthly (when reinjecting)
	Electrical Conductivity	µS/cm	Quarterly (when reinjecting)
	pH[2], Total Dissolved Solids, Total Suspended Solids, Al, As, B, Ba, $CaCO_3$, Cd, Ca, Cl, Cr, Cu, F, Fe, Pb, Mg, Mn, Hg, Mo, Ni, NO_3, K, Se, SiO_2, Na, SO_4, Zn, HCO_3, Alkalinity	mg/L	
Caramulla reinjection bores HCM0026P HCM0027P HCM0028P	Cumulative volume	kL	Monthly (when reinjecting)
	Flow Rate	L/s	
Jimblebar Creek Discharge SJB0012 Caramulla Surplus Water scheme HASHI Turkeys Nest FJB0016 Orebody 18 FNPI0002 – Ophthalmia Dam Discharge Point Sample Tap or if the sample point cannot be accessed then from one of the Orebody 18 Injection bores (HEOP0847P, HEOP0843P or HEOP0845P).	Electrical Conductivity	µS/cm	Quarterly (when reinjecting)
	pH[2], Total Dissolved Solids, Total Suspended Solids, Al, As, B, Ba, $CaCO_3$, Cd, Ca, Cl, Cr, Cu, F, Fe, Pb, Mg, Mn, Hg, Mo, Ni, NO_3, K, Se, SiO_2, Na, SO_4, Zn, HCO_3, Alkalinity	mg/L	

Note 1: In the event that a bore is dry during sampling, water quality monitoring will not be undertaken. After 3 dry events, further investigations will be required.
Note 2: pH and EC in-field non NATA accredited analysis permitted

Monitoring of emissions to land

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

Table 14: Monitoring of emissions to land

Emission point reference	Parameter	Units	Frequency
L2 (JMSWRW001)	Total Recoverable Hydrocarbons	mg/L	Quarterly
	Flow rate	L/s	
	pH[1]	pH units	

Note 1: pH and EC in-field non NATA accredited analysis permitted

Ambient environmental quality monitoring

29. The licence holder must undertake the monitoring in Table 15 and Table 16 according to the specifications in those tables.

Table 15: Monitoring of ambient groundwater quality

Monitoring point reference and location[1]	Parameter[1]	Units	Averaging period	Frequency[1]
HMG0131M HCM0043M HCM0044M HCM0045M HCM0046M[2] HCM0047M HCM0059M	Depth to groundwater	mbgl	Spot sample	Monthly (when reinjecting)
HCM0019M	Depth to groundwater	mbgl	Spot sample	Monthly (when discharging)
HMG0131M	Electrical Conductivity	µS/cm	Spot sample	Quarterly (when reinjecting)
	pH[3]	pH units		
	Total Dissolved Solids	mg/L		
HMG0131M HCM0008M HCM0017M or HCM0016M	Total Suspended Solids, Al, As, B, Ba, $CaCO_3$, Cd, Ca, Cl, Cr, Cu, F, Fe, Pb, Mg, Mn, Hg, Mo, Ni, NO_3, K, Se, SiO_2, Na, SO_4, Zn	mg/L	Spot sample	Quarterly (when reinjecting)

Note 1: In the event that a bore is dry during sampling, water quality monitoring will not be undertaken. After 3 dry events, further investigations will be required.
Note 2: There are significant accessibility issues to this bore during the wet season. This bore is to be sampled monthly if access is available.
Note 3: pH and EC in-field non NATA accredited analysis permitted.

Table 16: Monitoring of creek line sites

Monitoring point reference and location	Parameter	Units	Averaging period	Frequency
Monitoring Sites Copper Creek downstream (JBSW003) Jimblebar Creek upstream (JBSW004) Jimblebar Creek upstream (JBSW0010) Jimblebar Creek downstream (JBSW005) Jimblebar Creek downstream (JBSW009) Orebody 31 discharge downstream (JBSW011)	pH[1]	pH units	Spot sample	Quarterly when flowing
	Total Dissolved Solids, Total Suspended Solids, Al, As, B, Ba, $CaCO_3$, Cd, Ca, Cl, Cr, Cu, F, Fe, Pb, Mg, Mn, Hg, Mo, Ni, NO_3, K, Se, SiO_2, Na, SO_4, Zn	mg/L		

Note 1: pH and EC in-field non NATA accredited analysis permitted

Process monitoring

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

Table 17: Process monitoring

Monitoring point reference	Process description	Parameter	Limit	Averaging period	Frequency
L1 SJTN001 – South Jimblebar Turkeys Nest	Treated wastewater from the Jimblebar oily WWTP used for dust suppression	Total Recoverable Hydrocarbons	15 mg/L	Spot sample	Quarterly

Records and reporting

Records

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

(a) the calculation of fees payable in respect of this licence;

(b) the works conducted in accordance with condition 11 of this licence;

(c) any maintenance of infrastructure that is performed in the course of complying with conditions 9, 11 and 16 of this licence;

(d) monitoring programmes undertaken in accordance with conditions 26 to 30 of this licence; and

(e) complaints received under condition 34 of this licence.

32. The books specified under condition 31 must:

(a) be legible;

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

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

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

33. 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 1 October each year an Annual Audit Compliance Report in the approved form.

34. 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.

Reporting

35. The licence holder must submit to the CEO an Annual Environmental Report by the 1 October each year. The report shall contain the information listed in Table 18 in the format or form specified in that table.

Table 18: 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
Table 1	Waste acceptance	None specified
Table 2	Location of tyre disposal sites and number of tyres disposed at each site during the annual period	None specified
Table 5	Production or design capacity data and limit exceedances	None specified
Table 8	Volume of water discharged via each emission point	None specified
Table 9	Volume of water reinjected via each emission point	None specified
Table 11 and Table 17	Limit exceedances along with a summary on the corrective actions for any exceedances of these limits	None specified
Table 12	Surface water emission monitoring results and a comparison of results against established values. Details of investigations conducted, including outcomes, environmental impacts and remedial actions, in relation to trigger exceedances and a discussion of any trends identified	None specified
Table 13	Point source emissions to groundwater monitoring results and a comparison of results against established trigger values. Details of investigations conducted, including outcomes, environmental impacts and remedial actions, in relation to trigger exceedances and a discussion of any trends identified	None specified
Table 14	Emissions to land monitoring results	None specified
Table 15	Ambient groundwater monitoring results and a comparison of results against established trigger values specified in the document “Site specific trigger values – Orebody 18’, Project No. 137646012-003-M-Rev0 (Golder Associates, 2 July 2013). Details of investigations conducted, including outcomes, environmental impacts and remedial actions, in relation to trigger exceedances and a discussion of any trends identified	None specified
Table 16	Surface water monitoring results and a comparison of results against established trigger values. Details of investigations conducted, including outcomes, environmental impacts, and	None specified

Condition or table (if relevant)	Parameter	Format or form[1]
	remedial actions, in relation to trigger exceedances and a discussion of any trends identified	
Table 17	Process monitoring results from emission point L1 (water reused for dust suppression)	None specified
33	Compliance	None specified
34	Complaints summary	None specified

Note 1: Forms are in Schedule 2.

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

Notification

37. The licence holder must ensure that the parameters listed in Table 19 are notified to the CEO in accordance with the notification requirements of the table.

Table 19: Notification requirements

Condition or table (if relevant)	Parameter	Notification requirement[1]	Format or form[2]
12, 13, 14, 15	The licence holder must submit a compliance document to the CEO, following construction of the mobile crushing and screening plant, of the new TLO, Caramulla MAR Scheme reinjection and monitoring bores and relocatable crusher. The compliance document shall: a) certify that the works were constructed in accordance with the documents specified in Table 6; b) as constructed plans and a detailed site plan (for the TLO); and c) be signed by a person authorised to represent the licence holder and contain the printed name and position of that person	Within 7 days of the completion of construction	None specified
-	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
25	Calibration report	As soon as practicable.	None specified

Condition or table (if relevant)	Parameter	Notification requirement[1]	Format or form[2]
-	Copies of original monitoring reports submitted to the licence holder by third parties	Within 14 days of the CEOs request	As received by the licence holder from third parties
-	Arrival of the relocatable crusher and mobile crushing and screening plant on-site.	7 days prior to arrival.	None specified

Note 1: Notification requirement 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 20 have the meanings defined.

Table 20: Definitions

Term	Definition
ACN	Australian Company Number.
Act	means the *Environmental Protection Act 1986*.
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 July until 30 June of the immediately following year.
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples.
AS/NZS 5667.10	means the Australian Standard AS/NZS 5667.10 Water Quality – Sampling – Guidance on sampling of waste waters.
AS/NZS 5667.11	means the Australian Standard AS/NZS 5667.11 Water Quality – Sampling – Guidance on sampling of groundwaters.
averaging period	means the time over which a limit is measured or a monitoring result is obtained.
books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer of the Department. "submit to / notify the CEO" (or similar), means either: Director General Department administering the *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 or: info@dwer.wa.gov.au
cfu/100mL	means colony forming units per 100 millilitres.
Clean Fill	has the meaning defined in Landfill Definitions.
controlled waste	has the definition in *Environmental Protection (Controlled Waste) Regulations 2004*.
Department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
discharge	has the same meaning given to that term under the EP Act.

Term	Definition
EC	means Electrical Conductivity.
emission	has the same meaning given to that term under the EP Act.
EP Act	*Environmental Protection Act 1986* (WA).
EP Regulations	*Environmental Protection Regulations 1987* (WA).
freeboard	means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point.
GL/a	means gigalitres per annum.
HDPE	mean high density polyethylene.
Inert Waste Type 1	has the meaning defined in Landfill Definitions.
Inert Waste Type 2	has the meaning defined in Landfill Definitions.
kL	means kilolitres.
Landfill Definitions	means the document titled "Landfill Waste Classification and Waste Definitions 1996 (as amended 2019)" published by the Chief Executive Officer of the Department of Water and Environmental Regulation as amended from time to time.
licence	refers to this document, which evidences the grant of a licence by the CEO under section 57 of the EP Act, subject to the specified conditions contained within.
licence holder	refers to the occupier of the premises, being the person specified on the front of the licence as the person to whom this licence has been granted.
L/s	means litres per second.
MAR	means managed aquifer recharge.
mbgl	means metres below ground level.
m^3	means cubic metres.
m^3/day	means cubic metres per day.
mg/L	means milligrams per litre.
µS/cm	means micro Siemens per centimetre.
NATA	means the National Association of Testing Authorities, Australia.
NATA accredited	means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis.
premises	refers to the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map in Schedule 1 to this licence.

Term	Definition
prescribed premises	has the same meaning given to that term under the EP Act.
Putrescible Waste	has the meaning defined in Landfill Definitions.
quarterly	means the 4 inclusive periods from 1 April to 30 June, 1 July to 30 September, 1 October to 31 December and in the following year, 1 January to 31 March.
Schedule 1	means Schedule 1 of this Licence unless otherwise stated.
Schedule 2	means Schedule 2 of this Licence unless otherwise stated.
spot sample	means a discrete sample representative at the time and place at which the sample is taken.
tpa	means tonnes per annum.
waste	has the same meaning given to that term under the EP Act.
WWTP	means wastewater treatment plant.

END OF CONDITIONS

Schedule 1: Maps

Premises map

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

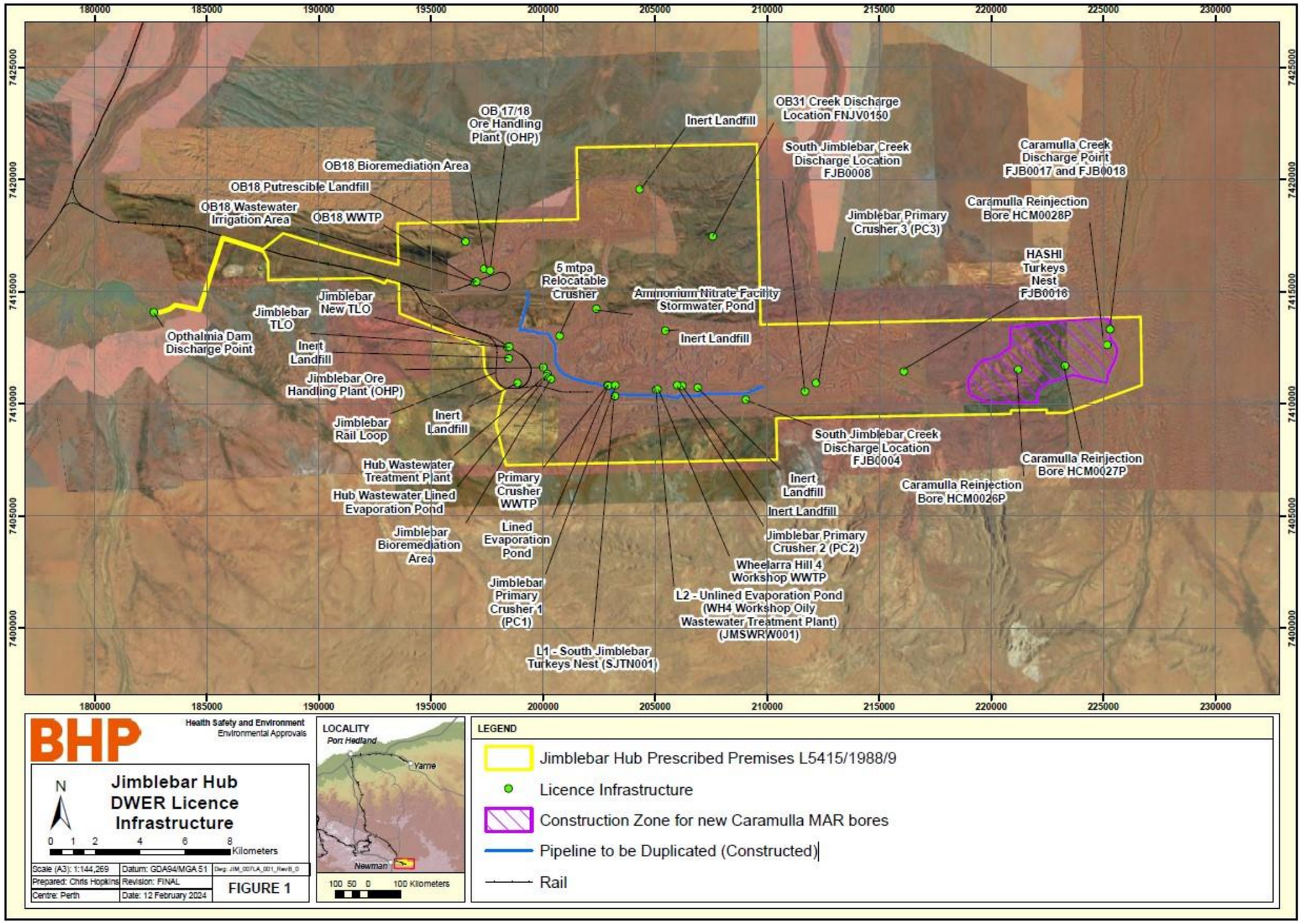

Figure 1: Map of the infrastructure and boundary of the prescribed premises

Emission points and monitoring locations

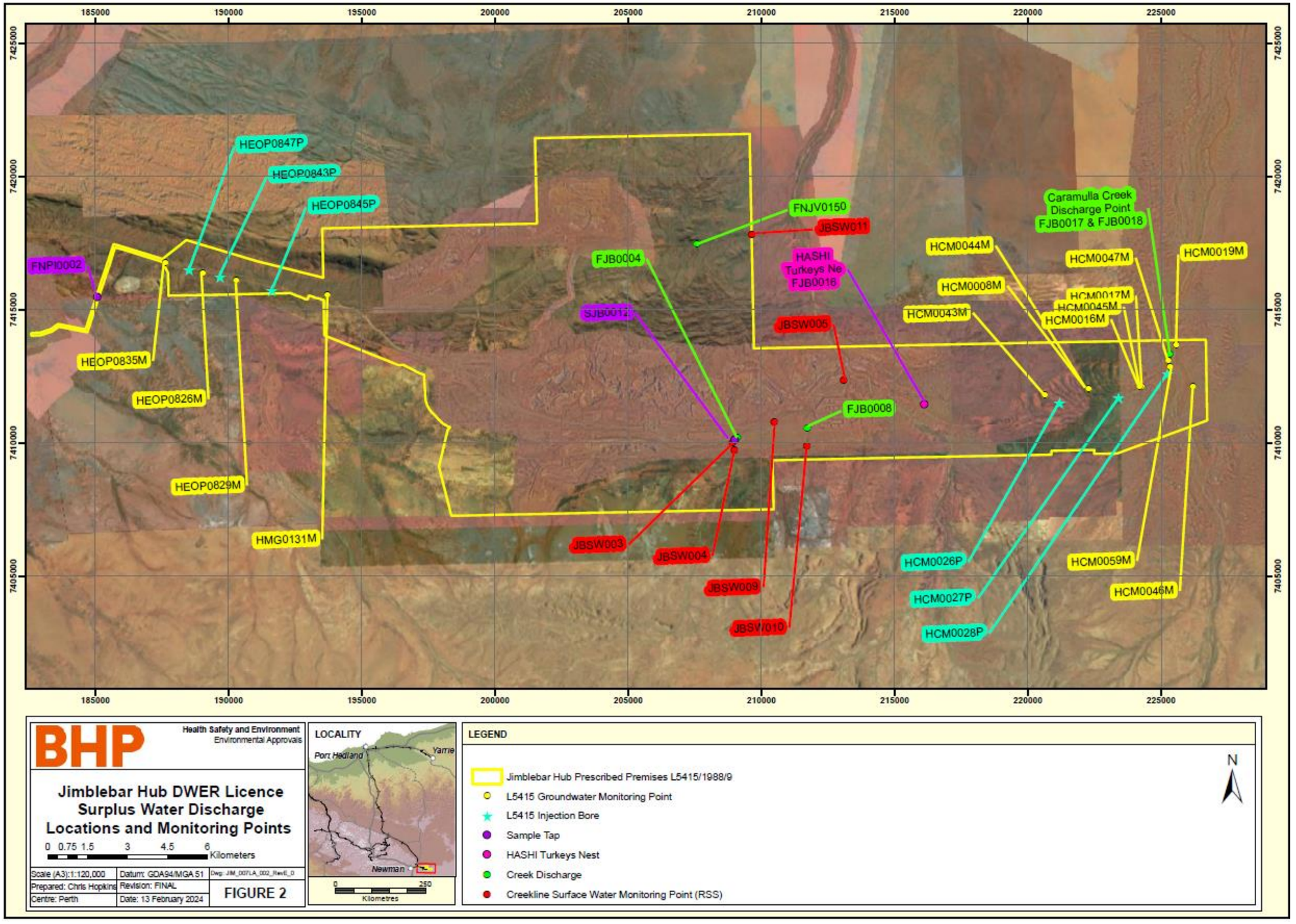

Figure 2: Emission points and monitoring locations

Wetting Front Limits

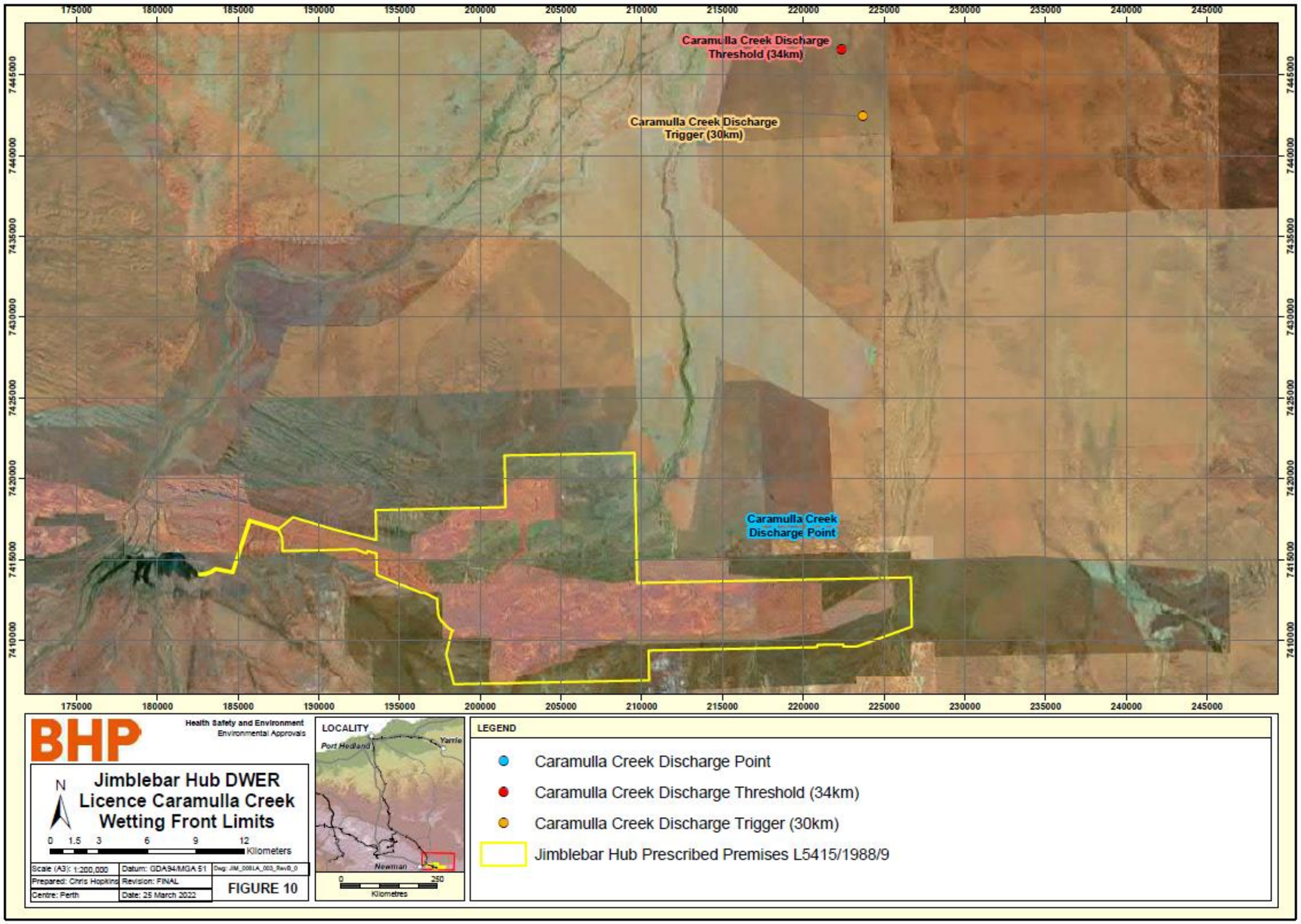

Figure 3: Jimblebar Hub Caramulla Creek Wetting Front Limits

Train Load Out replacement conveyor

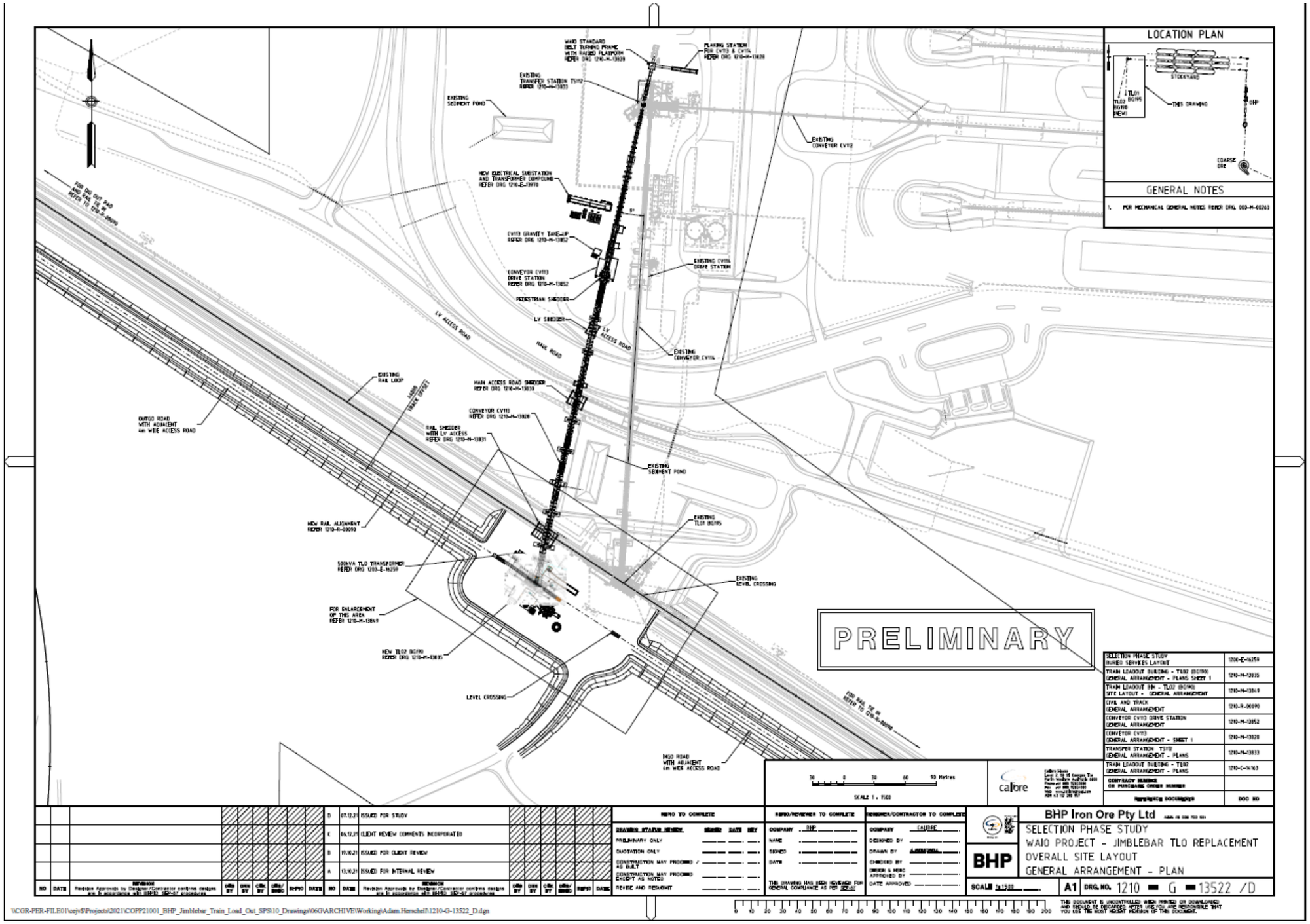

Figure 4: Schematic of the Train Load Out replacement conveyor

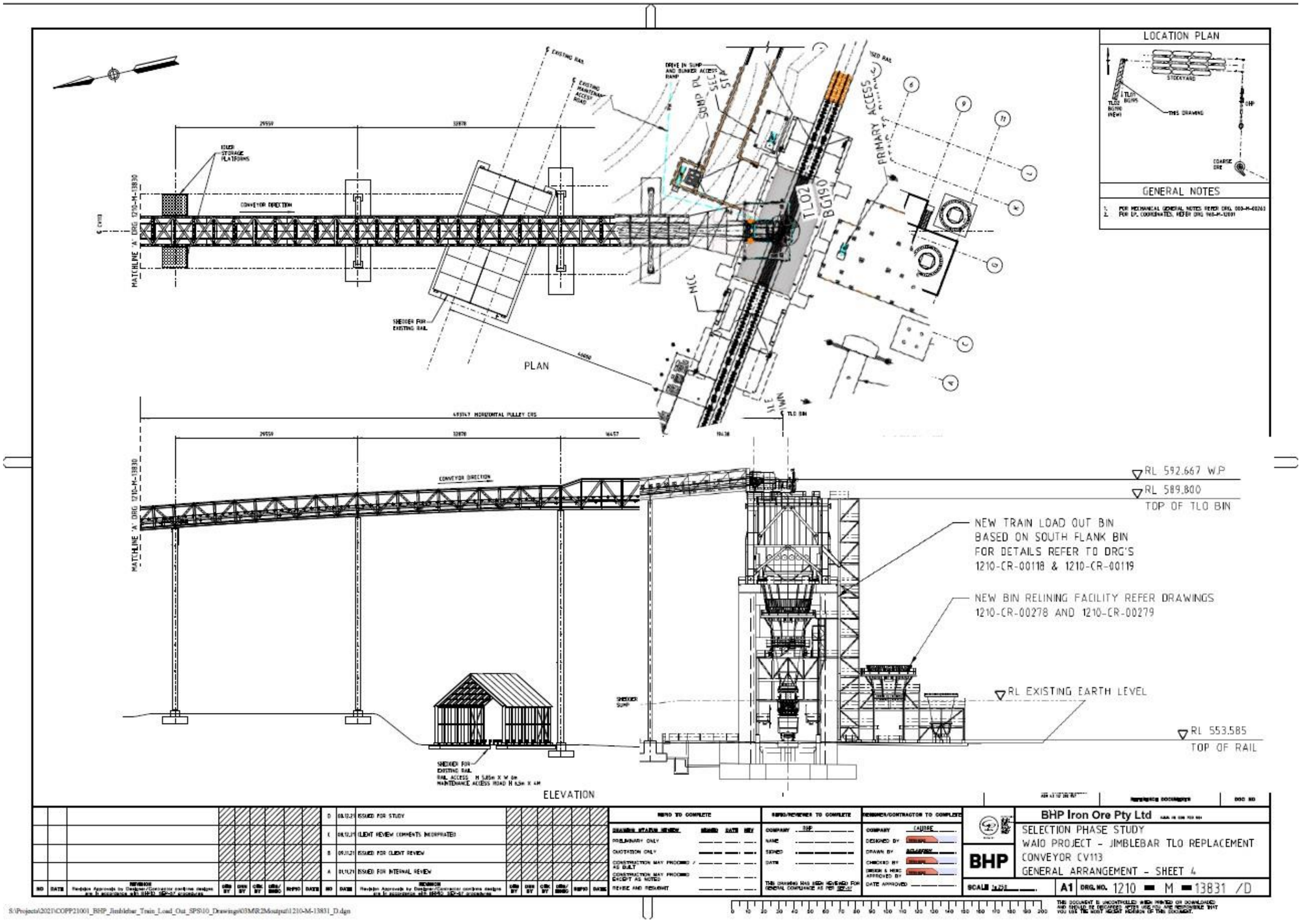

Figure 5: Schematic of the Train Load Out replacement conveyor with dual bins

Schedule 2: Reporting & notification forms

Government of Western Australia
Department of Water and Environmental Regulation

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

Notification of detection of the breach of a limit.

These pages outline the information that the operator must provide.

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

Part A

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

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

Part B

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

Name	
Post	
Signature on behalf of licence holder	
Date	