Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence number	L7851/2002/6
Licence Holder	BHP Iron Ore Pty Ltd
ACN	008 700 981
Registered business address	Level 1, City Square Brookfield Place 125 -137 St Georges Terrace PERTH WA 6000
DWER file number	DER2013/000925-1
Duration	17/11/2014 to 16/11/2027
Date of issue	13/11/2014
Date of amendment	22/01/2024
Premises details	Mining Area C Project Mining Tenement ML281SA NEWMAN WA 6753 As depicted in Schedule 1

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed production capacity**
Category 5: Processing or beneficiation of metallic or non-metallic ore	151, 000,000 tonnes per Annual Period
Category 6: Mine dewatering	34,840,000 tonnes per Annual Period
Category 12: Screening, etc. of material	2,000,000 tonnes per Annual Period
Category 52: Electric power generation	20 MW
Category 54: Sewage facility	1,138 m^3 per day
Category 63: Class I inert landfill site	25,000 tonnes per Annual Period
Category 73: Bulk storage of chemicals etc.	10,000 m^3 in aggregate
Category 85B: Water desalinisation plant	0.9125 gigalitres per Annual Period
Category 89: Putrescible landfill site	5,000 tonnes per Annual Period

This amended licence is granted to the Licence Holder, subject to the attached conditions, on 22 January 2024, by:

Melissa Chamberlain

Digitally signed by Melissa Chamberlain
Date: 2024.01.22 14:22:11 +08'00'

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

Licence history

Date	Reference number	Summary of changes
19/08/2002	W3663/2002/1	New works approval application for construction of prescribed premises
10/12/2002	W3687/2002/1	Works approval application to construct category 54 sewage facility and category 63 and 64 landfills
05/05/2003	L7851/2002/1	New licence application to allow ore processing operations to commence
05/05/2004	L7851/2002/2	Licence re-issue
07/11/2004	L7851/2002/3	Licence re-issue
05/09/2005	W4105/2002/1	Works approval application to increase capacity of category 5 ore processing infrastructure
21/10/2005	W4162/2002/1	Works approval application to construct category 54 sewage facility
07/11/2006	L7851/2002/4	Licence re-issue
17/11/2009	L7851/2002/5	Licence re-issue
31/05/2010	W4665/2010/1	Works approval application to construct category 89 putrescible landfill
11/07/2011	W4939/2011/1	Works approval application to increase capacity of category 5 ore processing infrastructure
05/03/2012	W5079/2011/1	Works approval application relating to Managed Aquifer Recharge trial
10/09/2012	W5244/2012/1	Works approval application – Category 5 additional crushing and screening plant (5mtpa).
17/11/2014	L7851/2002/6	Licence re-issue and amendment to REFIRE format
22/01/2014	L7851/2002/6	Minor amendment
07/04/2016	L7851/2002/6	Amendment and update to template version 2.9.
29/09/2016	L7851/2002/6	Amendment to increase Category 6 production capacity, approve construction of the Packsaddle Infiltration Ponds and MAC WTP, include Category 85B and include the Western and Central Sediment Basins as emission points to land.
5/10/2017	L7851/2002/6	Amendment Notice 1 Licence amendment initiated by Licensee to increase Category 6 and Category 63 production capacity, approve construction of the

		Juna Downs MAR Scheme, approve construction and operation of a new WWTP spray field for the Mulla Mulla Camp and include associated monitoring conditions, include the light vehicle washdown bay as emission point to land along with associated monitoring conditions and expand the premises boundary
16/10/2018	L7851/2002/6	Amendment Notice 2 Licence amendment initiated by Licensee to update to the Premises legal description to include new (approved) tenure, expand the approved L7851/2002/6 boundary, install a second screening plant to increase the capacity of the existing relocatable (ore) crushers, increase to Category 5 processing rate of 6 Mtpa, amend reinjection bore nomenclature and amend associated figures, add four new dewatering discharge locations, add a new Premises Category (12) to allow for the operation of two 1 million tonne capacity mobile crushing screening units, increase Category 54 throughput from 480 m^3/day to 1,110 m^3/day (increase of +630 m^3/day) in line with the Mulla Mulla Village WWTP throughput, incorporate construction requirements for the Mulla Mulla Village WWTP (W6092/2017/1) into L7851/2002/6, add new effluent emission (reference) points for the two spray field locations associated with the Mulla Mulla Village WWTP, increase Category 63 inert waste disposal volume by 5,000 tpa to account for an increase in inert waste resulting from the construction of the Southern Flank mining hub, increase Category 73 fuel storage volume by 2,500 m^3 to allow for the installation of an additional 15 fuel bullets within the revised Premise boundary, increase Category 89 putrescible waste volume by 2,000 tpa to account for an increase in putrescible waste resulting from the expansion of Mulla Mulla Village, approve the construction and operation of a new putrescible landfill, assess the increased discharge of mine dewater to the western sediment basin and increased the maximum discharge volume accordingly.
7/11/2019	L7851/2002/6	Amendment Notice 3 • Category 5 minor upgrades to the conveyors and stacker drives for the Ore Handling Plants and installation of a new 5 Mtpa relocatable crusher (for a total screening plant and associated relocatable crusher operational capacity of maximum 12 million tonne per annum). • Category 6 remove the depth to groundwater restriction on the six Juna Downs Reinjection bores and place this restriction on six adjacent bores; • Retain 34.931 GL/a maximum surplus water disposal, but increase the Juna Downs MAR reinjection limit from 7.3 GL/a to 12.775 GL/a, replace the Juna Downs MAR monitoring bore HCF0044M, as it is shallow and often dry, with HCF0023M, which is located 12 m south west, include two additional reinjection bores (HGSL0037P and HGSL0038P) and two associated monitoring bores (HGSL0019M and HGSL0025M) at Juna Downs (these bores will be managed under the existing licence limits and thresholds), remove A Deposit MAR monitoring bores, add a new discharge point for the Western Sediment Basin and allow the overtopping of the Packsaddle infiltration ponds to the natural drainage line as part of a three year trial. • Category 12 increase the capacity of the single mobile stemming plant from 130 ktpa to 400 ktpa to create a 2 – 3 year stockpile of stemming material.

17/08/2020	L7851/2002/6	Licence amendment initiated by the Licence Holder for the following: • accept sewage from the entire site to process at the WWTP • inert concrete waste disposed in pit or OSAs • expansion of a putrescible landfill • OWSs operate anywhere in the premises • general administrative corrections. • Process to consolidate amendment notices into one instrument.
12/03/2021	L7851/2002/6	Licence amendment initiated by the Licence Holder for the following: • Amend Condition 2.2.2, Table 2.2.2 and Condition 3.2.1, Table 3.2.1 to split bore HGSL0012M into two: HGSL0012M1 and HGSL0012M2; • Amend Condition 3.2.1, Table 3.2.1 to read: HGSL005 HGSL006 HGSL014 HGSL015 HGSL031 HGSL032 HGSL037P HGSL038P or E Deposit Turkeys Nest if access to above listed bores is not available; • Amend Condition 1.2.2, Table 1.2.1 to remove mention of the Biomax brand WWTPs; and • Amend Condition 1.2.10, Table 1.2.4 and production or design capacity limits table to increase the annual disposal limit of the inert landfill from 15,500 tonnes to 25,000 tonnes.
18/11/2021	L7851/2002/6	Licence amendment initiated by the Licence Holder for the following: **Category 5:** • Addition of System B and D from works approval W6142/2018/1. **Category 6:** • Making the following monitoring bore changes: Replace the references to monitoring bore HGSL0012M with replacement bores HGSL0012M1 and HGSL0012M2; and • Adding a note to Table 15 and Table 16 to the affect that that water quality monitoring is not required if a bore is dry. **Category 54:** • Increase the limit of Category 54 by 28 m^3/day to a total of 1,138 m^3/day to allow for operation of the Biomax constructed under Works Approval W6327/2019/1; • Add the location of the MAC Rail Loop Biomax and associated spray field (L21) to Figure 1 and Figure 2; and • Transfer Stage 2 construction from the works approval onto the Licence. **Category 63:** • Remove the location inert landfill at the MAC Rail Loop from Figure 1 as this has been closed and rehabilitated.

22/04/2022	L7851/2002/6	• Add South Flank Infrastructure (Systems C, E, F, G H, J, K and L), which have been constructed and commissioned under works approval W6142/2018/1 and are now in Time Limited Operations; • Add location of South Flank Primary Crushers 1 and 2; • Increase the Assessed Production Capacity from 71 Mtpa up to 151 Mtpa; and • Remove discharge point L11 as it is no longer in use (L20 is used instead). • Removal of the new dust monitors in the licence: SFAQRT003, ACAQRT012, ACAQRT013, and ACAQRT015 as: – Monitors SFAQRT003, ACAQRT012, ACAQRT013 or ACAQRT015 are E-samplers (not BAM units) and therefore do not comply with AS3580.9.11 as referenced in Table 20; and – Monitors ACAQRT012, ACAQRT013 or ACAQRT015 will be highly impacted by nearby activities, including wheel generated and non-processing related dust. Therefore they will not provide useful data with respect to dust generation for the OHP. • Updated Table 20 to remove the above dust monitors • Updated Figure 1 showing the location of dust monitors and thus removed Figure 7 as now redundant
25/11/2022	L7851/2002/6	Licence amendment initiated by the Licence Holder for the following: • Add the South Flank surplus water scheme (South Flank Managed Aquifer Recharge (MAR) scheme and Pebble Mouse Creek Discharge Point) constructed and commissioned under Works Approval W6338/2019/1 (note this does not increase the limit for Category 6); • Extend the Packsaddle Infiltration Pond Trial beyond December 2022, add two new discharge points and increase the volume (note this does not increase the limit for Category 6); • Refinement of Category 6 volume (slight decrease) to align with MS1072; • Remove Point L3 as this point has been decommissioned and all Mulla Mulla wastewater is treated via L13/14; and • Allow for the construction and operation of two new putrescible landfill facilities.
22/01/2024	L7851/2002/6	Licence amendment initiated by the Licence Holder for the following: **Category 5** • Replacement of the existing 5 million tonnes per annum (mtpa) relocatable crusher with two fully mobile plants (1 x 2 mtpa and 1 x 3 mtpa). This will not change the approved throughput of 151 mtpa. • Enable the fully mobile plants to be relocated within the Prescribed Premises as required provided they are not located within 1 km of the premises boundary. **Category 6** • Juna Downs MAR:

		○ Replace monitoring bore HCF0045M with adjacent bore HCF0019M; ○ Add the Juna Downs Balance Tank as a contingency discharge point (L3) in the event the tank needs to be drained or overtops. • South Flank MAR: ○ Update the name of monitoring bore HSFMARREP which has been constructed and renamed as HSF0054M. ○ Add a new bore (HSF5614M) to replace HSF0054M when it is replaced in FY24. **Category 63** • Construction and operation of a new inert landfill at South Flank **Category 89** • Construction and operation of a new putrescible landfill at South Flank

Interpretation

In this licence:

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

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

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

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

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

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

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

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

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

Licence conditions

The Licence Holder must ensure that the following conditions are complied with:

General

1. The Licence Holder must ensure the limits specified in Table 1 are not exceeded.

Table 1: Production or design capacity limits

Category[1]	Category description[1]	Premises production or design capacity limit
5	Processing or beneficiation of metallic or non-metallic ore	151, 000,000 tonnes of ore per annual period

6	Mine dewatering	34,840,000 tonnes per Annual Period (production capacity).
		
		Discharge in aggregate with production capacity consisting of up to:
		• 10,950,000 tonnes per Annual Period (discharged to the Western Sediment Basin);
		• 8,760,000 tonnes per Annual Period (discharged to the Central Sediment Basin);
		• 16,425,000 tonnes per Annual Period in aggregate for the Packsaddle Infiltration Trial consisting of up to:
		  ○ 10,950,000 tonnes per Annual Period (discharged to the Packsaddle Infiltration Ponds); and
		  ○ 16,425,000 tonnes per Annual Period to discharge Points A (L4) and B (L5);
		• 12,775,000 tonnes per Annual Period (reinjection – Juna Downs);
		• 12,760,000 tonnes per Annual Period to South Flank MAR reinjection bores; and
		• 12,760,000 tonnes per Annual Period surface water discharge to Pebble Mouse Creek.

12	Screening, etc. of material	2,000,000 tonnes per Annual Period
52	Electric power generation	20 MW in aggregate
54	Sewage facility	1,138 m^3/day
63	Class I inert landfill site	25,000 tonnes per Annual Period
73	Bulk storage of chemicals, etc	10,000 cubic metres in aggregate
85B	Water desalinisation plant	0.9125 gigalitres per Annual Period
89	Putrescible landfill site	5,000 tonnes per Annual Period

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

Infrastructure and equipment

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

Table 2: Infrastructure and equipment requirements

Site infrastructure and equipment	Operational requirement	Infrastructure location
Systems C, E, F, G H, J, K and L		
Stockyard 2 **(South Stockyard)** RC02 South Stockyard to TL02 RC01 South Stockyard to TL01 CV314 Shuttle	• Automated dust suppression water cannons installed, able to wet the stockpiles and surrounding areas; • Stockpile reclamation area and TLO: ➢ Water sprays used and maintained on the conveyor belt associated with ST04; and ➢ Luffing is enabled on ST04; • Automated dust suppression water cannons installed along the embankments (CV485, CV513, MC308, MC314, CV484), are able to wet the stockpiles and surrounding reclamation areas (Row H, G, F, E, J) in South Stockyard (SY2). ➢ CV485 – 29 new water cannons; ➢ CV513 – 41 water cannons, 28 new and 13 existing; ➢ MC308 – 26 existing water cannons; ➢ MC314 – 37 water cannons 9 new and 28 existing; and ➢ CV484 – 40 new water cannons; • BOC sprays maintained along Conveyor 484 (CV484); • All dust suppression will be maintained as required; • Ore car capping spray (OC522) at TLO2 is operational; • Drains and culverts under the existing conveyors at the western end will be maintained to divert water away from the Stockyard 2 work areas; • Perimeter drains around Stockyard 2 will be maintained to divert water away from the infrastructure. The eastern side of Stockyard 2 has a series of breaks in the windrows to allow runoff from the stockyard floor to flow into the Mining Area C plant diversion drain.	Schedule 1: Maps, Figure 1 Schedule 1: Maps, Figure 6
Primary Crushing Stations (PC1 and PC2) Two Metso gyratory 70-89s Mk	• The following dust control equipment is fitted and maintained at the primary crushing stations:	Schedule 1: Maps, Figure 1 Schedule 1: Maps,

Site infrastructure and equipment	Operational requirement	Infrastructure location
III primary crushing stations (PC1 and PC2) 40 Mtpa name plate capacity each ROM pad for each crushing facility	➢ Foggers and water cannons; ➢ Covers and/or hoods; ➢ Enviromist System DSF401 (PC1); and ➢ Enviromist System DSF404 (PC2); • All process infrastructure buildings (PC1, PC2, OHP3 and associated transfer stations) have floor slabs installed and maintained for washdown and clean-up including slurry disposal systems: ➢ System B (TS314); ➢ System D (TS477); ➢ System E (TS412); ➢ System F (TS439, TS471, TS472, TS476); ➢ System G (TS473); and ➢ System H (TS513); • Table drains along the perimeters of the process and non-processing infrastructure pads will be maintained to divert stormwater away from the infrastructure; • Table drains along the conveyor embankment and culverted crossings in the drains to discharge water into the existing Mining Area C plant diversion drain will be maintained for the Coarse Ore Stockpile; • Concrete floors with a fall to a sump to collect spills and stormwater to be maintained; and • Slurry from the sumps is able to be pumped to a sedimentation pond at each of PC1, PC2 and OHP3.	Figure 6
Overland conveyors Overland conveyers CV411, CV412, CV413 and Interconnecting conveyors	• The following dust control equipment is fitted and maintained for the overland and interconnecting conveyors CV411, CV412, CV413: ➢ BOC systems which are informed by Low Frequency Microwave Moisture Analysis located on the Overland Conveyors, scalping screen conveyor, fines and lump transfer conveyors and the TLO feed conveyors; and	Schedule 1: Maps, Figure 1 Schedule 1: Maps, Figure 6

Site infrastructure and equipment	Operational requirement	Infrastructure location
	➢ Conveyor transfer chutes enclosed; • BOC systems are maintained to transport and transfer product at above DEM Level and set to designed specifications on Overland Conveyors and interconnecting conveyors including: ➢ System D (CV477, 484, 49); ➢ System B (MC314, MC315); ➢ System C (CV512); ➢ System E (CV405, 412, 413); ➢ System F (CV434, 436, 435, 439, 471, 474, 472, 475, 476); ➢ System K (CV411); ➢ System H (CV503); ➢ System G (CV473, 485, 495); and ➢ System L (CV478).	
System B		
Conveyor MC314	• Water sprays maintained on the conveyor belt associated with ST04; • Nine automated dust suppression water cannons maintained along the extension of Conveyor MC314, which are able to wet the stockpiles and surrounding areas; and • Drains and culverts maintained under the existing conveyors at the western end to divert water away from the new work areas.	Schedule 1: Maps, Figure 1
System D		
Stacker 4 ST04	• BOC sprays maintained along Conveyor 484 (CV484); and • Luffing is enabled on Stacker 4.	Schedule 1: Maps, Figure 1
Stacker 4 ST04 Stockpiles	• Water sprays maintained on the conveyor belt associated with ST04; • Nine automated dust suppression water cannons maintained along the extension of Conveyor MC314, which are able to wet the stockpiles and surrounding areas; • Perimeter drains maintained around the stockyard to divert water away from the infrastructure; and • The eastern side of the Stockyard includes a series of breaks in the	

Site infrastructure and equipment	Operational requirement	Infrastructure location
	windrows to allow runoff from the stockyard floor to flow into the Mining Area C plant diversion drain.	
Conveyor 484 (CV484)	• 40 water cannons maintained along Conveyor 484 (CV484); and • New drains and culverts maintained under the existing conveyors at the western end to divert water away from the new work areas.	
Fully Mobile Crushers		
1 x 2 mtpa Relocatable Crusher, comprising: • Terex J-1480 Jaw Crusher (C120 Equivalent) • Terex C-1550 Cone Crusher (HP400 Equivalent) • Terex 984 screen (horizontal 20 x 6ft triple deck)	• Must be located at least 1 km from premises boundary and can be relocated provided they are not operated within 1 km of the prescribed premises boundary and the Licence Holder notifies DWER one month prior to the relocation; and • The Licence Holder must operate the expanded fully mobile crushers in accordance with the conditions of this Licence, following submission of the compliance document required under Condition 39, Table 23.	Schedule 1: Maps, Figure 1
I x 3 mtpa Relocatable Crusher, comprising: • Kleemann MC125 Jaw Crusher (C125 Equivalent) • Kellmann MCO13 Cone Crusher (HP400 Equivalent) • Kleemann MS23 screen (incline 8 x 2.3 m triple deck)	• Must be located at least 1 km from premises boundary and can be relocated provided they are not operated within 1 km of the prescribed premises boundary and the Licence Holder notifies DWER one month prior to the relocation; and • The Licence Holder must operate the expanded fully mobile crushers in accordance with the conditions of this Licence, following submission of the compliance document required under Condition 39, Table 23.	Schedule 1: Maps, Figure 1
C50K Biomax WWTP and Irrigation Area		
C50K Biomax WWTP	• WWTP pump-out tank high level alarm is to be maintained to enable the system to be managed to prevent the facility overtopping.	Schedule 1: Maps, Figure 1
Irrigation Area	• Discharge pipe flow meter to be maintained to ensure approved volume to irrigation field is not exceeded; • 10 cm earthen bund around the irrigation area to be maintained to minimize runoff; and • Stock fencing around the irrigation area	Schedule 1: Maps, Figure 1

Site infrastructure and equipment	Operational requirement	Infrastructure location
	to be maintained.	
Inert Landfill		
Inert Landfill	• Disposal of waste shall only take place within the landfill areas shown in Figure 1, Schedule 1	Schedule 1: Maps, Figure 1
Putrescible Landfills		
Putrescible Landfill	• The four (4) landfill trenches are to not exceed 200 m long, 25 m wide and 2.5 m deep; • Windrows maintained along the southern and eastern boundary of the landfill facility to direct stormwater away from the trenches; and • Perimeter fencing maintained around active landfill trenches.	Schedule 1: Maps, Figure 1
Three putrescible landfills	• Series of trenches with the following maximum dimensions: ➢ Location 1: Up to four trenches: length of 400m, width 25m and depth 2.5m deep; ➢ Location 2: Up to five trenches length of 500m, width 25m and depth 2.5m deep; and ➢ South Flank: Up to four trenches: length of 400m, width 25m and depth 2.5m • Windrows to be maintained along the landfill boundaries to direct stormwater away from the trenches, with perimeter fencing maintained around active landfill trenches; and • Additional cells may be installed on top of the original cells once they have reached capacity.	Schedule 1: Maps, Figure 1
South Flank Surplus Water Scheme		
South Flank MAR Scheme	• Eight reinjection Bores: HSF5462P, HSF5463P, HSF5464P, HSF5465P, HSF5466P, HSF5467P, HSF5469P and HSF5496P; • Five monitoring bores HSF0055M2, HSF5473M, HSF5482M or HSF0054M or HSF5614M, HSF5494M and HSF5480M; • Flow meters to be maintained at the	Schedule 1: Maps, Figure 3

Site infrastructure and equipment	Operational requirement	Infrastructure location
	Balance Tank, MAR Borefield and Pebble Mouse Creek discharge point; and • Ruptures can be determined utilising the difference between these if there is a rupture.	
Pebble Mouse Creek Discharge Scheme	• Pebble Mouse Creek Discharge Point (L6); • Flow meters to be maintained at the South Flank Turkeys Nest, Balance Tank, MAR Borefield and Pebble Mouse Creek discharge point; • Ruptures can be determined utilising the difference between these if there is a rupture; and • Discharge point inspected quarterly for erosion. If erosion is noted, additional erosion controls will be implemented and if necessary, repairs conducted.	Schedule 1: Maps, Figure 2
Packsaddle Infiltration Basin Discharge Points A and B		
Discharge Point A and B	• Two discharge points downstream of the Packsaddle Infiltration basins: ➢ Packsaddle Discharge Point A (L4); and ➢ Packsaddle Discharge Point B (L5); and • Approximately 3 km of pipeline from Packsaddle Pond (L8) to Discharge Points A (L4) and B (L5).	Schedule 1: Maps, Figure 2

3. The Licence Holder must only accept waste onto the inert landfill, putrescible landfills, rubber/tyre dump and sewage treatment plants, shown on the maps in Schedule 1, if:
   (a) it is of a type listed in Table 3;
   (b) the quantity accepted is below any quantity limit listed in Table 3; and
   (c) it meets any specification listed in Table 3.

Table 3: Waste acceptance criteria

Waste type	Quantity limit	Specification[1]
Inert Waste Type 1	25,000 tonnes/year cumulative	None specified
Inert Waste Type 2		Tyres, rubber and plastic only
Putrescible Waste	5,000 tonnes/year cumulative	None specified
Sewage	1,138 m^3/day	• Accepted through sewer inflow(s). • Accepted from non-sewered facilities at the Premises. • Flow recorded as inflow at

Waste type	Quantity limit	Specification[1]
		Packsaddle WWTP Pond System. • Flow recorded at outflow at all other licenced WWTPs.

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.*

4. The Licence Holder must ensure that:
   (a) where waste does not meet the waste acceptance criteria set out in condition 3, it is removed from the Premises; and
   (b) where compliance with condition 4(a) is not possible, waste is stored in a segregated storage area or container and removed to an appropriately authorised facility as soon as practicable.

5. The Licence Holder must ensure that wastes accepted onto the landfills, rubber/tyre dump and sewage treatment plants are only subjected to the process(es) set out in Table 4 and in accordance with any process limits described in Table 4.

Table 4: Waste processing

Waste type(s)	Process	Process limits[1,2]
All	Disposal of waste by landfilling	• Must only take place within the areas shown in Schedule 1. • No waste shall be temporarily stored or landfilled within 35 m from the boundary of the premises. • The separation distance between the base of the landfill and the highest groundwater level shall not be less than 2 m.
Inert Waste Type 1	Receipt, handling and disposal by landfilling	Inert concrete waste (e.g. crushed concrete, concrete rail sleeper, etc) shall only be landfilled within licensed landfill facilities, pits or overburden storage areas located within the prescribed premises boundary shown in Schedule 1.
Inert Waste Type 2 – Tyres/Rubber[1]	Receipt, handling, storage prior to disposal by landfilling	• To be stored in piles of up to 100 units with a 6 m separation distance between piles. • Tyres/rubber must only be landfilled in overburden storage areas located within the prescribed premises boundary shown in Schedule 1.
Putrescible Waste	Receipt, handling, storage prior to disposal by landfilling	• Must only be placed in the Putrescible Landfill sites shown in Schedule 1.
Sewage	Biological, physical and chemical treatment	• None specified
Sewage sludge	Drying and storage	• None specified

Note 1: Requirements for landfilling tyres are set out in Part 6 of the *Environmental Protection Regulations1987.*

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.*

6. The Licence Holder must manage the landfilling activities described in Table 4 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 rehabilitation material; and
   (c) rehabilitation of a cell or phase takes place within 6 months after disposal in that cell or phase has been completed.
7. The Licence Holder must ensure that cover is applied and maintained on landfilled wastes in accordance with Table 5.

Table 5: Cover requirements[1]

Waste Type	Material	Depth	Timescales
Inert Waste Type 1	N/A	N/A	No cover required
Inert Waste Type 2	Type 1 Inert waste, Clean Fill, Uncontaminated Fill or soil	100 mm	As soon as practicable following the achievement of final process limits (as defined in Table 4) in the area(s) in which tyres are deposited.
Putrescible Waste		150 mm	As soon as practicable and not later than weekly.
		1,000 mm	Within 3 months of achieving final waste contours.

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

8. The Licence Holder must prevent unauthorised access to the landfill(s).
9. 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.
10. The Licence Holder must manage the wastewater treatment facilities, wastewater treatment evaporation ponds and irrigation areas such that:
    (a) stormwater runoff resulting from site drainage must be prevented from entering the wastewater treatment ponds or causing erosion of the outer pond embankments;
    (b) overtopping of the ponds must not occur, except as a result of a storm event of 10 years average recurrence interval and 72 hours duration;
    (c) vegetation and debris (emergent or otherwise) is prevented from growing or accumulating in the pond wastewaters or on the inner pond embankments; and
    (d) no irrigation generated run-off, spray drift or discharge occurs beyond the boundary of the defined irrigation area(s).
11. The Licence Holder must ensure that waste material is only stored and/or treated within vessels or compounds listed in Table 6 and identified in Schedule 1 in accordance with the requirements specified within Table 6.

Table 6: Containment Infrastructure

Storage vessel or compound	Emission Reference[1]	Material	Requirements
Packsaddle evaporation / infiltration ponds	L1	250 m^3/day of effluent from the Packsaddle Village Closed Pond system	Minimum vertical freeboard of 300 mm except during a 72 hour duration, ten year annual recurrence interval storm event
	L2	80 m^3/day of effluent from the Packsaddle Biomax	
Treated Oily Water Ponds	N/A	Treated potentially hydrocarbon contaminated wastewater.	1.5 mm HDPE lined evaporation pond to achieve a permeability of less than 10^{-9} m/s Minimum vertical freeboard of 300 mm except during a 72 hour duration, ten year annual recurrence interval storm event
Packsaddle Infiltration Ponds	L4, L5, L8, L9 and L10	Mine dewater	Overtopping four year trial to expire 12 months after construction of the additional two discharge points L4 and L5 or by 31 December 2024, whichever comes first. Two new discharge points located downstream of L8 to enable the wetting front to be extended to the distances proposed in the original trial.
Pebble Mouse Creek Discharge Point	L6	Mine dewater	Discharge of surplus mine dewater to Pebble Mouse Creek.
Western Sediment Basin	L15, L19 and L20	Mine dewater	Minimum vertical freeboard of 300 mm except during a 72 hour duration, ten year annual recurrence interval storm event
Central Sediment Basin	L12, L16 and L18	Mine dewater	Water is designed to flow from Central Sediment Basin along drainage lines to the east and reporting to the Eastern Sediment Basin. Water is then prevented from leaving the site at the Eastern Sediment Basin.

Note 1: Location of emission points shown in Schedule 1, Map of emissions to land and process monitoring.

12. The Licence Holder must not depart from the specifications for the infrastructure in each row of Table 7 except:
    a) where such departure is minor in nature and does not materially change or affect the infrastructure; or
    b) where such departure improves the functionality of the infrastructure and does not increase risks to public health, public amenity or the environment; and is in accordance with all other conditions of this Licence.

Table 7: Infrastructure to be constructed

Infrastructure	Specifications (design and construction)
Sediment Basins	
Central Sediment Basin New discharge points	Construction of new discharge point (L16) for the Central Sediment Basin.
Western Sediment Basin New discharge points	• Construction of two new discharge points (L15 and L19) for the Western Sediment Basin; and • Design minimises the risk of scouring and erosion by the use of rip rap and diffuser pipes.
Landfills	
3 x inert landfills	• Constructed at South Flank Primary Crusher 1 (1.4 km east of the crusher) and Primary Crusher 2 (2.2 km and 3.2 km north west of the crusher); • the tipping area of the site will not be greater than 30 m in length and 2 m above ground level; and • Windrows will be built around the facilities to prevent stormwater from entering.
MAC C50K Biomax WWTP	
Additional parts	• Busch Blower, IBC unit and additional dosing pump.
Stage 2 of the MAC Rail Loop Biomax	• Sub-soil drippers installed over a 4,005m^2 area (for a total field size, inclusion of Stage 1, of 9,125m^2; • 10cm earthen bund installed around perimeter of irrigation spray-field; • Minimum of 2m vertical separation distance maintained between the irrigated ground surface and groundwater levels; and • Fence with safety signage installed to deter access.
Packsaddle Infiltration Trial	
Two additional discharge points	• Two discharge points downstream of the Packsaddle Infiltration basins: ➢ Packsaddle Discharge Point A (L4); and ➢ Packsaddle Discharge Point B (L5); and • Approximately 3 km of pipeline from Packsaddle Pond (L8) to Discharge Points A (L4) and B (L5).
Putrescible Landfills	
Three putrescible landfills	• Three new landfills. Each landfill will be constructed with a series of trenches with the following maximum dimensions: ➢ Location 1: Up to four trenches: length of 400m, width 25m and depth 2.5m deep; and ➢ Location 2: Up to five trenches length of 500m, width 25m and depth 2.5m deep; • Windrows will be maintained along the landfill boundaries to direct stormwater away from the trenches, with perimeter fencing maintained around active landfill trenches; and • Additional cells may be installed on top of the original cells once they have reached capacity.
Fully Mobile Crushers	
1 x 2 mtpa Relocatable Crusher	• Terex J-1480 Jaw Crusher (C120 Equivalent) with dust spray nozzles • Terex C-1550 Cone Crusher (HP400 Equivalent) • Cone crusher discharge conveyor to be covered • Terex 984 screen (horizontal 20 x 6ft triple deck)

Infrastructure	Specifications (design and construction)
1 x 3 mtpa Relocatable Crusher	• Kleemann MC125 Jaw Crusher (C125 Equivalent) with dust spray nozzles • Kellmann MCO13 Cone Crusher (HP400 Equivalent) • Kleemann MS23 screen (incline 8 x 2.3 m triple deck) • Screen feed conveyor to be covered • Screen box operates enclosed at top, bottom and discharge chute

13. The Licence Holder must operate discharge point L16 for the Central Sediment Basin in accordance with the conditions of this Licence, following submission of the compliance document required under Condition 39, Table 23.
14. The Licence Holder must operate discharge points L15 and L19 for the Western Sediment Basin in accordance with the conditions of this Licence, following submission of the compliance document required under Condition 39, Table 23.
15. The Licence Holder must operate, the mobile crushing and screening plants no closer than 1 km to the edge of the prescribed premises boundary as shown in the figure showing the prescribed premises in Schedule 1 of this Licence.
16. The Licence Holder must operate discharge points L4 and L5 for the Packsaddle Infiltration Trial and the two putrescible landfills in accordance with the conditions of this Licence, following submission of the compliance document required under Condition 39, Table 23.

Emissions and discharges

17. The Licence Holder must ensure that where waste is emitted to groundwater from the emission points in Table 8, it is done so in accordance with the conditions of this Licence.

Table 8: Emission points to groundwater

Emission point[1]	Description	Source including abatement
HGSL0005 HGSL0006 HGSL0014 HGSL0015 HGSL0031 HGSL0032 HGSL0037P HGSL0038P HSF5462P HSF5463P HSF5464P HSF5465P HSF5466P HSF5467P HSF5469P HSF5496P	Direct injection below ground	Water from surplus mine dewatering

Note 1: Location of emission points shown in Schedule 1, Map of Managed Aquifer Recharge monitoring program.

18. The Licence Holder must not cause or allow point source emissions to exceed the limits listed in Table 9.

Table 9: Point source emission limits to groundwater

Monitoring point[1]	Parameter	Limit (including units)	Averaging period
HCL0008M HGSL0002M HGSL0010M HGSL0012M1 HGCL0012M2 HGSL0019M HGSL0022M HGSL0025M HGSL0028M	Depth to groundwater	Not less than 7 mbgl	Spot sample
HSF0055M2 HSF5473M HSF5482M or HSF0054M or HSF5614M HSF5494M HSF5480M		Not less than 30 mbgl	

Note 1: Location of monitoring points shown in Schedule 1, Map of Managed Aquifer Recharge monitoring program.

19. The Licence Holder must take the specified management action in the case of an event in Table 10.

Table 10: Management actions

Emission point	Related monitoring point	Event	Management action
HGSL0005	HCL0008M	Any time the monitoring data indicates an exceedance of the limit at the monitoring point specified in Condition 18, Table 9.	The Licence Holder must immediately cease direct injection at an emission point where a limit exceedance at the related monitoring point has occurred.
HGSL0006	HGSL0002M		
HGSL0014	HGSL0010M		
HGSL0015	HGSL0012M1 HGSL0012M2		
HGSL0031	HGSL0022M		
HGSL0032	HGSL0028M		
HGSL0037P	HGSL0019M		
HGSL0038P	HGSL0025M		
HSF5462P HSF5463P HSF5464P HSF5465P HSF5466P HSF5467P HSF5469P HSF5496P	HSF0055M2 HSF5473M HSF5482M or HSF0054M or HSF5614M HSF5494M HSF5480M		The Licence Holder must immediately cease direct injection at bore(s) associated with the breach of the limit

20. The Licence Holder must ensure that where waste is emitted to land from the emission points in Table 11 it is done so in accordance with the conditions of this Licence.

Table 11: Emissions to land

Emission point[1]	Description	Source including abatement
L1	Discharge of treated wastewater from Packsaddle Village WWTP to designated unlined evaporation/infiltration pond	Treated wastewater from Packsaddle Village WWTP
L2	Discharge of treated wastewater from Packsaddle Village WWTP to unlined evaporation/infiltration pond	Treated wastewater from Packsaddle Village WWTP
L3	Contingency discharge point at Juna Downs Balance Tank in event tank needs to be drained or overtops	Mine dewater
L4	Discharge of excess mine dewater west of the Packsaddle Infiltration ponds	Mine dewater
L5		
L6	Discharge of excess mine dewater to the Pebble Mouse Creek Discharge Point	Mine dewater
L7	Discharge of reject water from the Mining Area C Water Treatment Plant to designated irrigation area	Reject water from the Mining Area C Water Treatment Plant
L8	Discharge of excess mine dewater to the Packsaddle Infiltration ponds	Mine dewater
L9		
L10		
L12	Discharge of excess mine dewater to the Central Sediment Basin	Mine dewater
L13	Discharge of treated wastewater from the Mulla Mulla Camp WWTP to designated irrigation area	Treated wastewater from Mulla Mulla Camp WWTP
L14		
L15	Discharge of excess mine dewater to the Western Sediment Basin	Mine dewater
L16	Discharge of excess mine dewater to the Central Sediment Basin	Mine dewater
L18		
L19	Discharge of excess mine dewater to the Western Sediment Basin	Mine dewater
L20[2]	Discharge of excess mine dewater to the Western Sediment Basin	Mine dewater
L21	Discharge point to MAC Rail Loop WWTP irrigation area	Treated effluent from the MAC Rail Loop WWTP

Note 1: Location of emission points shown in Schedule 1, Map of emissions to land and process monitoring.

21. The Licence Holder must not cause or allow emissions to land greater than the limits listed in Table 12.

Table 12: Emission limits to land

Emission point	Description	Parameter	Limit (including units)
Heavy vehicle washdown bays, workshop oily water separators, light vehicle wash down bay, potentially contaminated water from other sources such as bunded hydrocarbon storage areas and refuelling aprons	Discharge point(s) where treated potentially hydrocarbon contaminated wastewater is discharged	Total Recoverable Hydrocarbons	Not more than 15 mg/L
L6	Location where excess mine dewater is discharged	Distance	Pebble Mouse Creek Wetting Front Limit 10.4 km east of L6
L7	Location where reject water from the Mining Area C Water Treatment Plant is discharged	Total Dissolved Solids	Not more than 1,800 mg/L
L3, L4, L5, L8, L9 and L10	Locations where excess mine dewater is discharged	Distance	Wetting Front Limit Marker SCPH0010: • Distance from Coondewanna Flats PEC 3.8 km; • Distance from the Discharge Point (Northern Route) 20.6 km; and • Distance from the Discharge Point (Southern Route) 16.9 km.

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;
    (d) all microbiological samples are collected and preserved in accordance with AS/NZS 2031; and
    (e) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured unless indicated otherwise in the relevant table.

23. The Licence Holder must ensure that:

    (a) Monitoring is undertaken in each weekly period such that there are at least 4 days in between the days on which samples are taken in successive weeks;

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

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

(d) Monitoring is undertaken in each six-monthly period such that there are at least 5 months in between the days on which samples are taken in successive periods of six months; and

(e) Monitoring is undertaken in each annual period such that there are at least 9 months in between the days on which samples are taken in successive years.

24. The Licence Holder must ensure that all monitoring equipment is operated and calibrated in accordance with the manufacturer's specifications.

Discharge point monitoring

25. 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

Monitoring point[1]	Parameter	Units	Averaging period	Frequency
Juna Downs HGSL0005 HGSL0006 HGSL0014 HGSL0015 HGSL0031 HGSL0032 HGSL0037P HGSL0038P Or E Deposit Turkeys Nest if access to above listed bores is not available **South Flank** South Flank Balance Tank or alternatively the following individual bores HSF5462P HSF5463P HSF5464P HSF5465P HSF5466P HSF5467P HSF5469P HSF5496P	Cumulative Volume[2]	m^3/day	Spot Sample	Monthly
	Electrical Conductivity[2]	µS/cm	Spot sample	Quarterly
	pH[2]	pH Units		
	Aluminium	mg/L		
	Arsenic			
	Barium			
	Boron			
	Calcium Carbonate			
	Cadmium			
	Calcium			
	Chloride			
	Chromium			
	Copper			
	Fluoride			
	Iron			
	Lead			
	Magnesium			
	Manganese			
	Mercury			

Monitoring point[1]	Parameter	Units	Averaging period	Frequency
	Molybdenum			
	Nickel			
	Nitrate			
	Potassium			
	Selenium			
	Sodium			
	Sulfate			
	Total Dissolved Solids			
	Zinc			
HCL0008M HGSL0002M HGSL0010M HGSL0012M1 HGSL0012M2 HGSL0019M HGSL0022M HGSL0025M HGSL0028M HSF0055M2 HSF5473M HSF5482M or HSF0054M or HSF5614M HSF5494M HSF5480M	Groundwater level	mbgl	Spot Sample	Monthly

Note 1: pH, electrical conductivity and hydrochemistry samples are only required to be taken from one emission point during each monitoring period, and only emission points that are active in the monitoring period are required to be sampled.
Note 2: In-field non-NATA accredited analysis permitted.

26. 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	Monitoring point location	Parameter	Units	Averaging Period	Frequency
L1 – L2, L13, L14 and L21	Flow meter to irrigation area or evaporation / infiltration pond	Volumetric flow rate (cumulative)[1]	m^3/day	Monthly	Continuous
	Final storage tank - prior to discharge to emission points	pH[1]	pH units	Spot sample	Quarterly
		5-Day Biochemical Oxygen Demand	mg/L		
		Total Suspended Solids			
		Total Nitrogen			

Emission point	Monitoring point location	Parameter	Units	Averaging Period	Frequency
		Total Phosphorus			
		E.coli	cfu/ 100mL		
L7	Flow meter to irrigation area	Volumetric flow rate (cumulative)[1]	m^3/day	Quarterly	Continuous
	Final storage tank – prior to discharge emission point	Total Dissolved Solids[1]	mg/L	Spot sample	Quarterly
L3 L4 L5 L8 L9 L10 L20 L15 L19	E Deposit Turkeys nest or at the trunk line prior to the infiltration/ sediment basin	Volumetric flow rate (cumulative)[1]	m^3/day	Quarterly	Continuous
		pH[1]	pH units	Spot sample	Quarterly
		Electrical Conductivity[1]	µS/cm		
		Aluminium	mg/L		
		Arsenic			
		Barium			
		Boron			
		Calcium Carbonate			
		Cadmium			
		Calcium			
		Chloride			
		Chromium			
		Copper			
		Fluoride			
		Iron			
		Lead			
		Magnesium			
		Manganese			
		Mercury			
		Molybdenum			
		Nickel			
		Nitrate			
		Potassium			
		Selenium			
		Sodium			

Emission point	Monitoring point location	Parameter	Units	Averaging Period	Frequency
		Sulfate			
		Total Dissolved Solids			
		Zinc			
L6	Flow meter to discharge point	Cumulative Volume[1]	m^3/day	Quarterly	Continuous
	South Flank Balance Tank or at the trunk line prior to the discharge point.	pH[1]	pH units	Spot sample	Quarterly
		Electrical Conductivity[1]	µS/cm		
		Aluminium	mg/L		
		Arsenic			
		Barium			
		Boron			
		Calcium Carbonate			
		Cadmium			
		Calcium			
		Chloride			
		Chromium			
		Copper			
		Fluoride			
		Iron			
		Lead			
		Magnesium			
		Manganese			
		Mercury			
		Molybdenum			
		Nickel			
		Nitrate			
		Potassium			
		Selenium			
		Sodium			
		Sulfate			
		Total Dissolved Solids			

Emission point	Monitoring point location	Parameter	Units	Averaging Period	Frequency
		Zinc			
	Pebble Mouse Creek Wetting Front Limit Gauging Station	Visual inspection[1]	N/A	During discharge to L6	Monthly
L12 L16 L17 L18	A Deposit Turkeys nest or at the trunk line prior to the infiltration/ sediment basin	Volumetric flow rate (cumulative)[1]	m^3/day	Quarterly	Continuous
		pH[1]	pH units	Spot sample	Quarterly
		Electrical Conductivity[1]	µS/cm		
		Aluminium	mg/L		
		Arsenic			
		Barium			
		Boron			
		Calcium Carbonate			
		Cadmium			
		Calcium			
		Chloride			
		Chromium			
		Copper			
		Fluoride			
		Iron			
		Lead			
		Magnesium			
		Manganese			
		Mercury			
		Molybdenum			
		Nickel			
		Nitrate			
		Potassium			
		Selenium			
		Sodium			
		Sulfate			
		Total Dissolved Solids			
		Zinc			

Emission point	Monitoring point location	Parameter	Units	Averaging Period	Frequency
L3, L4, L5, L8, L9 and L10	Wetting Front Limit Marker SCPH0010	Visual inspection[1]	NA	During discharge to L8, L9 or L10	Monthly
Treated potentially hydrocarbon contaminated wastewater	Discharge point(s) where treated wastewater from heavy vehicle wash down bays, workshop oily water separators, untreated water from the light vehicle wash down bay and potentially contaminated water from other sources, such as bunded hydrocarbon storage areas and refuelling aprons, is discharged	Amount of wastewater discharged[1]	m^3/ annum	Annual (estimation)	Annual
		Total Recoverable Hydrocarbons	mg/L	Spot Sample	Quarterly when discharging. Weekly if the reportable limit in Condition 21, Table 12 is exceeded. If there are three consecutive weekly exceedances, discharge from that emission point must cease.

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

27. The Licence Holder must undertake the monitoring in Table 15 according to the specifications in Table 15.

Table 15: Monitoring of inputs and outputs

Input/output	Parameters	Units	Averaging period	Frequency
Waste Inputs	Inert Waste Type 1	tonnes	N/A	Annual records of total waste arriving at each waste management facility depicted in Schedule 1
	Inert Waste Type 2			
	Putrescible Waste			

28. The Licence Holder must not cause or allow exceedance of the ambient groundwater limits listed in Table 16.

Table 16: Ambient groundwater limits

Monitoring point[1]	Parameter	Limit (including units)	Averaging period	Frequency
HCF0023M HCF0032M HCF0019M	Electrical Conductivity[2]	Not more than 1,300 µS/cm	Spot Sample	Quarterly
	Depth to groundwater	Not less than 7 mbgl		Monthly
HPSA1633 (Packsaddle Infiltration Ponds)	Standing water level	Not less than 8 mbgl	Spot sample	Quarterly
HSF0055M2 HSF5473M HSF5482M or HSF0054M or HSF5614M HSF5494M HSF5480M	Electrical Conductivity[2]	Not more than 1,300 µS/cm	Spot sample	Quarterly
	Depth to groundwater	Not less than 30 mbgl		Monthly

Note 1: Location of emission points shown in Schedule 1, Map of Managed Aquifer Recharge monitoring program.
Note 2: In-field non-NATA accredited analysis permitted.
Note 3: Water quality monitoring is not required if a bore is dry.

29. The Licence Holder must undertake the monitoring in Table 17 according to the specifications in Table 17.

Table 17: Monitoring of ambient groundwater quality

Monitoring point	Parameter	Trigger	Units	Averaging period	Frequency
HCF0023M HCF0032M HCF0019M	Depth to groundwater Level[1]	Not less than 15	mbgl	Spot Sample	Monthly
HSF0055M2 HSF5473M HSF5482M or HSF0054M or HSF5614M HSF5494M HSF5480M					
HPSA1633		Not less than 13			Quarterly
HSF0055M2 HSF5473M HSF5482M or HSF0054M or HSF5614M HSF5494M HSF5480M HPSA1633	Total Dissolved Solids	-	mg/L	Spot sample	Quarterly
HCF0023M HCF0032M HCF0019M	Electrical Conductivity[1]	-	µS/cm	Spot sample	Quarterly

Monitoring point	Parameter	Trigger	Units	Averaging period	Frequency
HCF0023M HCF0032M HCF0019M HPSA1633	Total Dissolved Solids	-	mg/L	Spot Sample	Quarterly
HSF0055M2 HSF5473M HSF5482M or HSF0054M or HSF5614M HSF5494M HSF5480M HPSA1633	Electrical Conductivity[1]	-	µS/cm	Spot Sample	Quarterly
	pH[1]	-	pH Units		
	Aluminium	-	mg/L		
	Arsenic	-			
	Barium	-			
	Boron	-			
	Calcium Carbonate	-			
	Cadmium	-			
	Calcium	-			
	Chlorine	-			
	Chromium	-			
	Copper	-			
	Fluoride	-			
	Iron	-			
	Lead	-			
	Magnesium	-			
	Manganese	-			
	Mercury	-			
	Molybdenum	-			
	Nickel	-			
	Nitrate	-			
	Potassium	-			
	Selenium	-			
	Sodium	-			
	Sulfate	-			
	Zinc	-			

Note 1: In-field non-NATA accredited analysis permitted.
Note 2: Water quality monitoring is not required if a bore is dry.

30. The Licence Holder must implement ambient environmental quality monitoring detailed in Table 18 if the depth to groundwater level trigger specified in Table 17 for the relevant monitoring points specified in Table 17 is exceeded.

Table 18: Monitoring following groundwater trigger exceedance

Monitoring point[1]	Parameter	Description	Units	Frequency
HCF0023M HCF0032M HCF0019M HPSA1633	Groundwater level	Measure groundwater levels in the monitoring point that recorded the exceedance of the trigger in Condition 29, Table 17.	mbgl	Daily at the relevant monitoring point, stopping when groundwater levels have receded to below the trigger levels specified in Condition 29, Table 17.
HSF0055M2 HSF5473M HSF5482M or HSF0054M or HSF5614M HSF5494M HSF5480M		Manage injection rates to ensure that the groundwater depth limit is not reached		Monthly stopping when groundwater levels have receded to below the trigger levels specified in Condition 28, Table 16
HCF0023M/ Site 12 HCF0032M/ Site 15 HCF0019M/ Site 20	Measurement of Leaf Water Potential	For individuals of *Eucalyptus victrix* at the sites, add measurement of Leaf Water Potential to routine monitoring (in addition to ongoing Crown Condition Score and Diameter at Breast Height) to determine the response of tree water use to elevated groundwater levels.	-	Six monthly
HCF0023M HCF0032M HCF0019M	Visual assessment	Visual assessment of surrounding vegetation.	-	Within one week of the exceedance of the trigger level specified in Condition 29, Table 17 at the relevant monitoring point. Quarterly at the relevant monitoring point, continuing no less than one quarter after groundwater levels have receded to below the trigger levels specified in Condition 29, Table 17.
	Vegetation monitoring	Vegetation monitoring in the vicinity of the monitoring point that recorded the exceedance of the trigger in Condition 29, Table 17, comprising 5 to 10 trees of a variety of species to be photographed and an assessment of each consisting of: • Tree moisture; • Foliage cover; • New growth; and • Flowering status.		

Note 1: Location of emission points shown in Schedule 1, Map of Managed Aquifer Recharge monitoring program
Note 2: In-field non-NATA accredited analysis permitted.

31. The Licence Holder must implement the Packsaddle Infiltration Ponds Vegetation Monitoring Program as detailed in Table 19 during the Packsaddle Infiltration

Overtopping trial as required by condition 11, Table 6.

Table 19: Monitoring of Packsaddle Infiltration Ponds Vegetation Monitoring Program

Monitoring point[1]	Target species	Trigger or Limit	Parameter (including units)	Frequency
1I	*Corymbia hamersleyana*	-	• Tree visual health • Tree regeneration • Weed presence and cover • Site condition • Climate and weathe4	Six monthly for the duration of the trial expiring on 31 December 2024, and six monthly for three years following the completion of the trial, until 30 June 2027
1O, 2I, 2R, 3I, 3R, 4O, 4R, 5O, 5R, 6I, 6O, 6R. 7Re, 7Rf, 10R, 11O, 12I, 12O, 12R, 13I, 13O, 13R, 14O, 14R	*Acacia aptaneura*			
1R, 2O	*Acacia aptaneura, Rhagodia* sp. Hamersley (M. Trudgen 17794)			
3O, 4I, 5I, 9O, 10O	*Acacia aptaneura, Corymbia hamersleyana*			
7Rb, 7Rc	*Acacia aptaneura, Eucalyptus victrix*			
8I, 9I, 10I, 11I	*Eucalyptus camaldulensis, Eucalyptus victrix*			
8O	*Corymbia hamersleyana, Eucalyptus camaldulensis, Eucalyptus victrix*			
11R	*Corymbia hamersleyana, Eucalyptus victrix*			
14I	*Corymbia hamersleyana, Corymbia deserticola*			
SCPH0009	-	Trigger – presence of water detected at SCPH009 during no flow conditions	Water Pressure (kPa)	Continuous
			Conductivity (µS/cm)	Continuous
SCPH0010	-	Limit – Presence of water detected at SCPH010 during no flow conditions	Water Pressure (kPa)	Continuous
			Conductivity (µS/cm)	Continuous

Note 1: Location of monitoring points shown in Schedule 1, Packsaddle infiltration trial monitoring sites

32. The Licence Holder must undertake the monitoring in Table 20 according to the specifications in Table 20.

Table 20: Monitoring of ambient air quality

Monitoring point	Parameter	Units[1]	Averaging period	Frequency	Method
Monitor 1 SFAQRT001	Particulates as PM_{10}	$\mu g/m^3$	24 hours	Continuous	AS3580.9.11
Monitor 2 SFAQRT002					
Monitor 4 SFAQRT004					
Mulla Mulla Village Monitor ACAQRT005					

Note 1: All units are referenced to STP dry

Information

33. The Licence Holder must maintain accurate and auditable books that include the following records, information, reports, and data required by this licence:

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

    (b) the works conducted in accordance with condition 12, Table 7 of this licence;

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

    (d) monitoring programmes undertaken in accordance with condition 25, Table 13; condition 26, Table 14; condition 27, Table 15; condition 28, Table 16; condition 29, Table 17; condition 30,

    (e)

    (f)

    (g) Table 18 and condition 31, Table 19; and

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

34. The books specified under condition 33 must:

    (a) be legible;

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

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

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

35. The Licence Holder must:

    (a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period; and

    (b) prepare and submit to the CEO by no later than 01 October each year, after the end of that annual period, an Annual Audit Compliance Report in the approved form.

36. The Licence Holder must record the following information in relation to complaints received by the licence holder (whether received directly from a complainant or forwarded to them by the Department of another party) about any alleged emissions from the premises:

    (a) the name and contact details of the complainant, (if provided);

    (b) the time and date of the complaint;

    (c) the complete details of the complaint and any other concerns or other issues raised; and

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

37. The Licence Holder must submit to the CEO by no later than 01 October each year, after the end of each annual period, an Annual Environmental Report for that annual period for the conditions listed in Table 21, and which provides information in accordance with the corresponding requirement set out in Table 21.

Table 21: Annual Environmental Report

Condition or table (if relevant)	Parameter	Format or form
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
-	Summary of design capacity and throughputs for each prescribed activity on the premises	None specified
Condition 3, Table 3 Condition 1, Table 1 Condition 18, Table 9 Condition 21, Table 12 Condition 28, Table 16	Limit exceedances	None specified
Condition 21, Table 12	Locations (including a figure and coordinates) where treated potentially hydrocarbon contaminated wastewater has been discharged.	None specified
Condition 25, Table 13	Cumulative volume, groundwater level, pH, electrical conductivity, physicochemical parameters as listed in Condition 25, Table 13 and a comparison of results against previous monitoring results. Details of investigations conducted, including outcomes, environmental impacts and remedial actions, in relation to previous monitoring results, and a discussion of any trends identified.	None specified
Condition 26, Table 14	L1-L2, L13, L14 and L21 – Monitoring results and comparison against the *National Water Quality Management Strategy Australian Guidelines for Sewerage Systems – Effluent Management (Agriculture and Resource Management Council of Australia and New Zealand, Australian and New Zealand Environment and Conservation Council, 1997)* and previous monitoring results.	None specified

Condition or table (if relevant)	Parameter	Format or form
	Update on improvements to L21 monitoring results.	
	L7 – Monitoring results.	
	L4-L6, L8-L10, L20, L12, L15, L16, L18 and L19 – Monitoring results and comparison of results against previous monitoring results. Details of investigations conducted, including outcomes, environmental impacts and remedial actions, in relation to exceedances and a discussion of any trends identified.	
	Treated potentially hydrocarbon contaminated wastewater – monitoring results and comparison of results against previous monitoring results. Details of investigations conducted, including outcomes, environmental impacts and remedial actions, in relation to exceedances and a discussion of any trends identified.	
Condition 27, Table 15	Inputs and outputs of waste on the premises	None specified
Condition 29, Table 17	Groundwater level trigger exceedances and ambient groundwater monitoring results.	None specified
Condition 30, Table 18	Details of investigations conducted, including outcomes, environmental impacts and remedial actions, in relation to groundwater level trigger exceedances and a discussion of any trends identified.	None specified
Condition 31, Table 19	• Summarise vegetation health monitoring data trends for the reporting year. • Summarise surface water monitoring for SCPH0009 and SCPH0010 for the reporting year. • Changes to vegetation monitoring and strategies implemented during the year. • Recommendations for further modifications based on annual review, if applicable. • Any planned changes to the vegetation monitoring program, if applicable.	None specified
Condition 32, Table 20	• PM_{10} monitoring results	None specified
Condition 35	Compliance audit	Annual Audit Compliance Report
Condition 36	Complaints summary	None specified

Note 1: Forms are in Schedule 2

38. The Licence Holder must submit the information in Table 22 to the CEO according to the specifications in Table 22.

Table 22: Non-annual reporting requirements

Condition or table (if relevant)	Parameter	Reporting period	Reporting date (after end of the reporting period	Format or form
-	Copies of original monitoring reports submitted to the Licence Holder by third parties	Not Applicable	Within 14 days of the CEOs request	As received by the Licence Holder from third parties
Condition 11, Table 6	Outcomes of the Packsaddle Infiltration Ponds Overtopping trial, including a discussion of monitoring results as per Condition 31, Table 19, environmental impacts and future actions/proposals.	31 December 2024	Within four months of the reporting period	None specified
Conditions 13, 14, 15 and 16	Commissioning report for the infrFastructure	Not applicable	Within one month of the completion of commissioning	The report must include: (a) a summary of monitoring results; (b) a list of any original monitoring reports submitted to the Licence Holder from third parties for the commissioning period; (c) a summary of the environmental performance of the infrastructure as installed, against the design specification set out in the application; and (d) where they have not been met, measures proposed to meet the design specification and/or Licence conditions, together with timescales for implementing the proposed measures.
Condition 29, Table 17 Condition 30,	Monitoring results for: • groundwater level • visual assessment • vegetation monitoring, as specified in Condition 30, Table 18 following	Completion of monitoring of: • groundwater level • visual assessment • vegetation monitoring, one quarter after groundwater	Within one month of the completion of the monitoring.	None specified

Condition or table (if relevant)	Parameter	Reporting period	Reporting date (after end of the reporting period	Format or form
Table 18	groundwater level exceedance specified in Condition 29, Table 17, including a discussion of results, environmental impacts and remedial actions.	levels have receded to below trigger levels specified in Condition 29, Table 17.		
Condition 31, Table 19	Outcomes of the Packsaddle Infiltration Ponds Overtopping trial monitoring following the completion of the trial, including a discussion of monitoring results as per Condition 31, Table 19, environmental impacts and future actions/proposals.	30 June 2027	Within four months of the reporting period	None specified

39. The Licence Holder must ensure that the parameters listed in Table 23 are notified to the CEO in accordance with the notification requirements in Table 23.

Table 23: Notification requirements

Condition or table (if relevant)	Parameter	Notification requirement	Format or form
Condition 3, Table **3** Condition 1, Table 1 Condition 18, Table 9 Condition 21, Table 12 Condition 28, Table 16	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5 pm of the next usual working day. Part B: As soon as practicable	N1
Condition 12, Table 7 Condition 13 Condition 14 Condition 15 Condition 16	The Licence Holder must submit a compliance document to the CEO, following construction of the Central Sediment Basin discharge points, Western Sediment Basin discharge points, inert landfills, South Flank WWTP infrastructure, the additional discharge points associated with the Packsaddle Infiltration Pond Trial, the three putrescible landfills and the two fully mobile plants (1 x 2mtpa	Within 7 days of the completion of construction	None specified

Condition or table (if relevant)	Parameter	Notification requirement	Format or form
	and 1 x 3mtpa) The Licence Holder must ensure compliance documentation: a) is certified by a suitably qualified professional engineer or builder stating that each item of infrastructure specified in Condition 7, Table 5 has been constructed in accordance with the conditions of the Licence with no material defects; and b) be signed by a person authorised to represent the Licence Holder and contain the printed name and position of that person within the company.		
Condition 12	If departures under Condition 12 apply, then the Licence Holder must provide the CEO with a list of departures.	Within 7 days of the completion of construction	None specified
Condition 24	Calibration report where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements.	As soon as practicable.	None specified
Condition 29, Table 17	Depth to groundwater level exceedance	Part A: As soon as practicable but no later than 5 pm of the next usual working day. Part B: As soon as practicable	N1
Condition 30, Table 18	If Condition 30, Table 18 applies, then the Licence Holder must notify the CEO that the water levels outlined in Condition 29, Table 17 have receded to below trigger levels.	Two weeks (14 days) after water levels have receded to below trigger levels.	None specified
Condition 31, Table 19	Water is detected at SCPH010 during no flow conditions.	Part A: As soon as practicable but no later than 5 pm of the next usual working day. Part B: As soon as practicable	N1

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

Table 24: Definitions

Term	Definition
Acceptance criteria	has the meaning defined in Landfill Definitions
ACN	Australian Company Number
Annual Audit Compliance Report (AACR)	means a report submitted in a format approved by the CEO (relevant guidelines and templates may be available on the Department's website).
annual period	a 12 month period commencing from 01 July until 30 June of the immediately following year.
AS/NZS 2031	means the Australian Standard AS/NZS 2031 Selection of containers and preservation of water samples for microbiological analysis
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 monitoring result is obtained
BOC	means Bulk Ore Conditioning
books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer of the Department. "submit to / notify the CEO" (or similar), means either: Director General Department administering the *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 or: info@dwer.wa.gov.au
Clean Fill	has the meaning defined in Landfill Definitions
Controlled waste	has the definition in *Environmental Protection (Controlled Waste) Regulations 2004*

Term	Definition
DEM	means Dust Extinction Moisture
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.
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
Inert waste type 1	has the meaning defined in Landfill Definitions
Inert waste type 2	has the meaning defined in Landfill Definitions
Landfill Definitions	means the document titled "Landfill Waste Classification and Waste Definitions" published by the Chief Executive Officer of the Department of Water and Environmental Regulation as amended from time to time
licence	refers to this document, which evidences the grant of a licence by the CEO under section 57 of the EP Act, subject to the specified conditions contained within.
Licence Holder	refers to the occupier of the premises, being the person specified on the front of the licence as the person to whom this licence has been granted.
MAR	means Managed Aquifer Recharge
mbgl	means metres below ground level
monthly period	means a one-month period commencing from the first calendar day of a month until the final calendar day of the same month
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
PM	means total particulate matter including both solid fragments of material and miniscule droplets of liquid
PM_{10}	means particles with an aerodynamic diameter of less or equal to 10 µm

Term	Definition
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 (Figure **1**) in Schedule 1 to this licence.
prescribed premises	has the same meaning given to that term under the EP Act.
Putrescible	has the meaning defined in Landfill Waste Classification and Waste Definitions 1996 (As amended December 2009), published by the CEO and as amended from time to time;
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
Rehabilitation	means the completion of the engineering of a landfill cell and includes capping and/or final cover
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 July to 31 December and 1 January to 30 June in the following year
spot sample	means a discrete sample representative at the time and place at which the sample is taken
ST04	means Stacker 4
Tipping area	means the area of the landfill in which waste other than cover material is being deposited
TLO	means Train Load Out
Uncontaminated Fill	has the meaning defined in Landfill Definitions
µS/cm	means microsiemens per centimetre
waste	has the same meaning given to that term under the EP Act.
WWTP	means Wastewater Treatment Plant

Schedule 1: Maps

Prescribed premises boundary, emission points to land and monitoring locations

Maps showing prescribed premises boundary, indicative general arrangement, waste disposal locations, containment infrastructure, emission points and monitoring points.

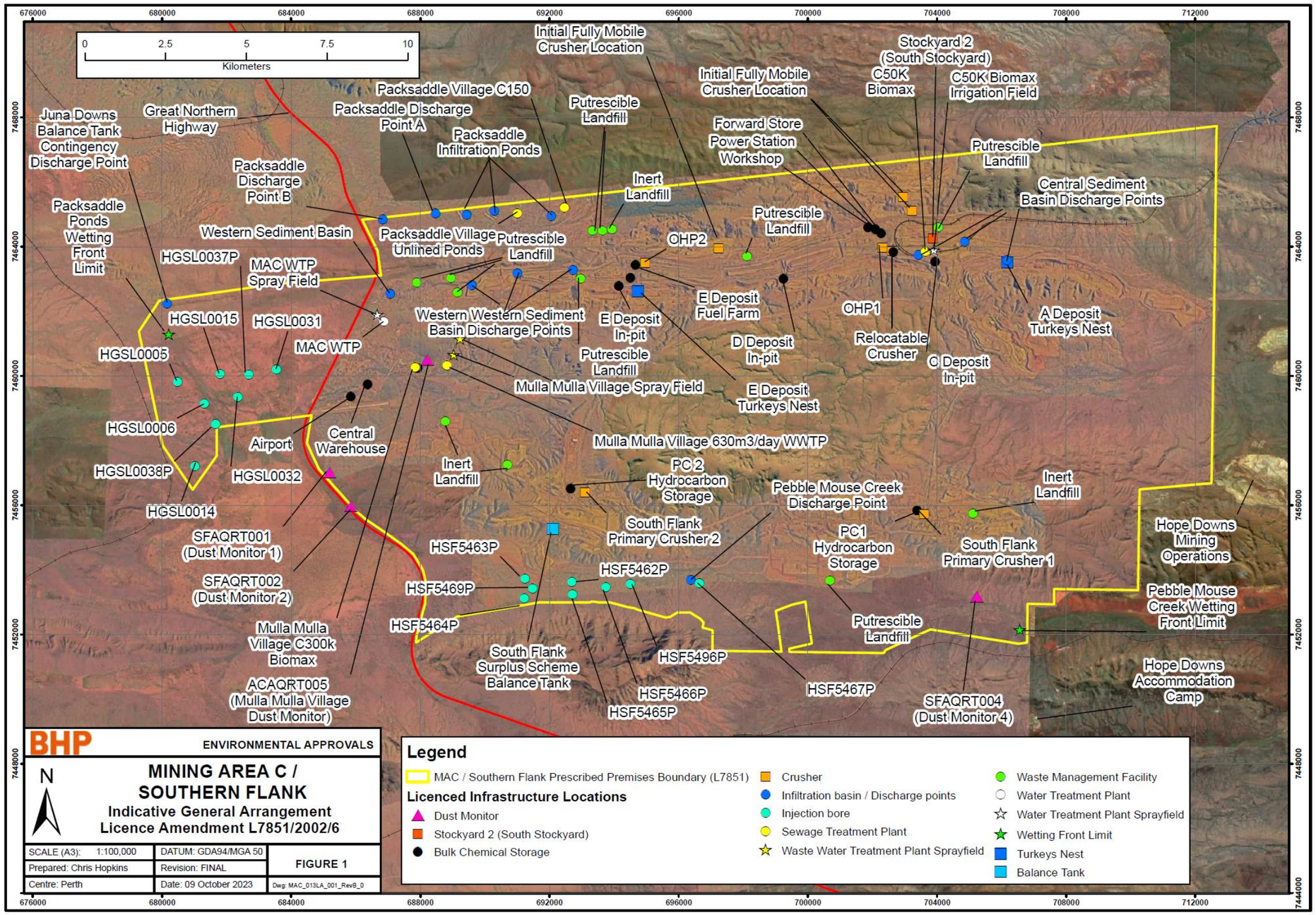


Figure 1: Site Layout and Prescribed Premises Boundary

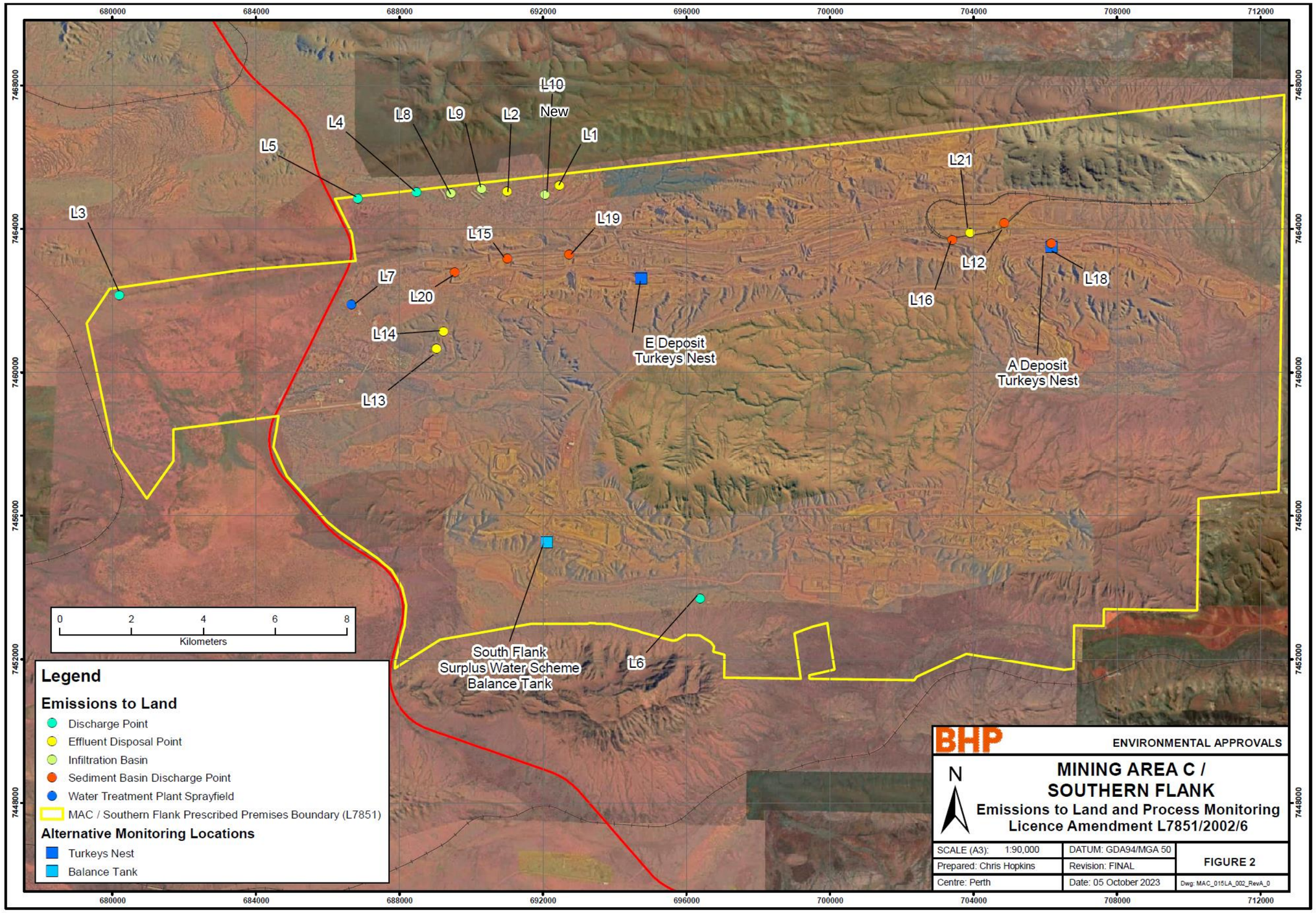


Figure 2: Emissions to Land and Process Monitoring

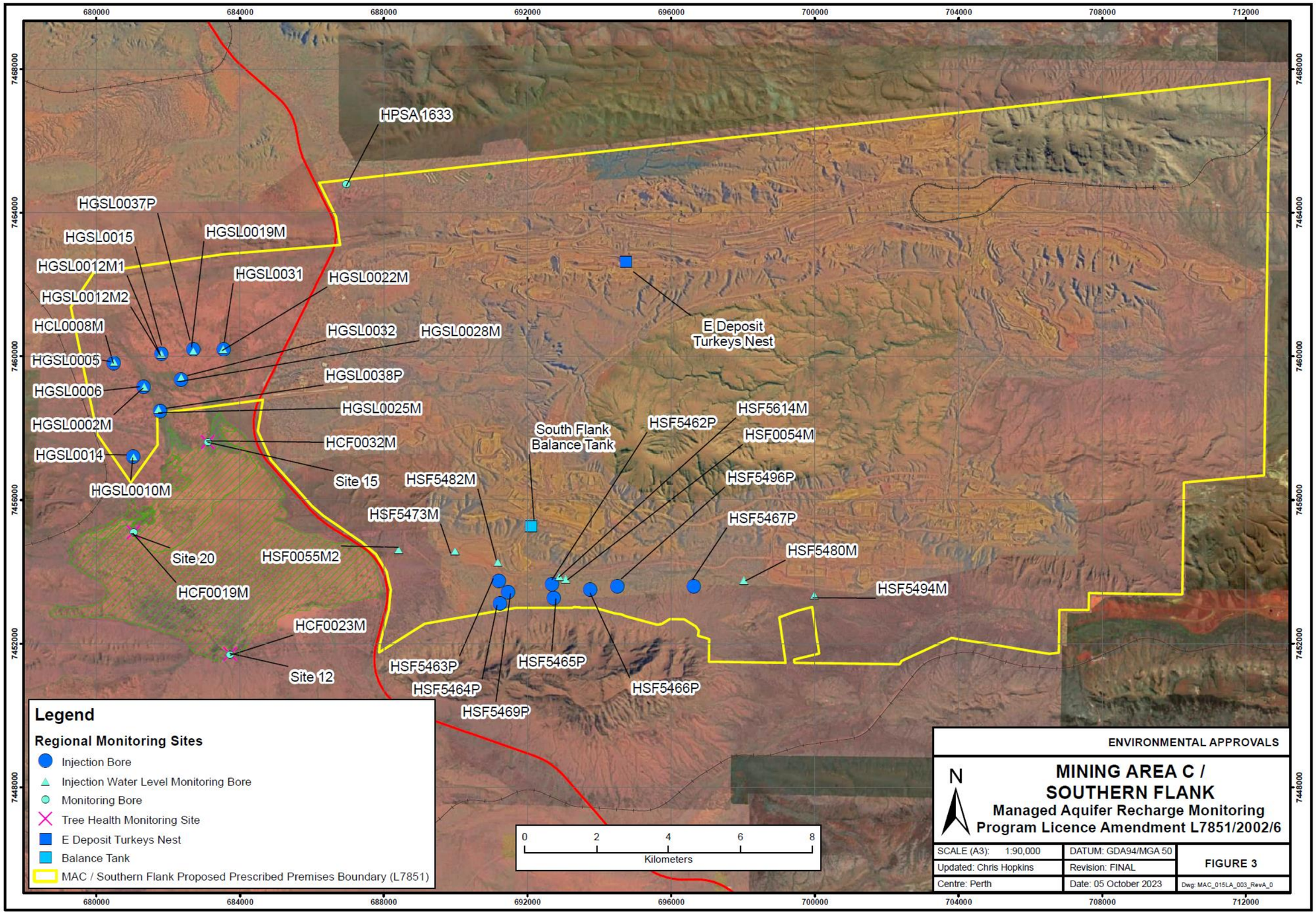


Figure 3: Managed Aquifer recharge Monitoring Program

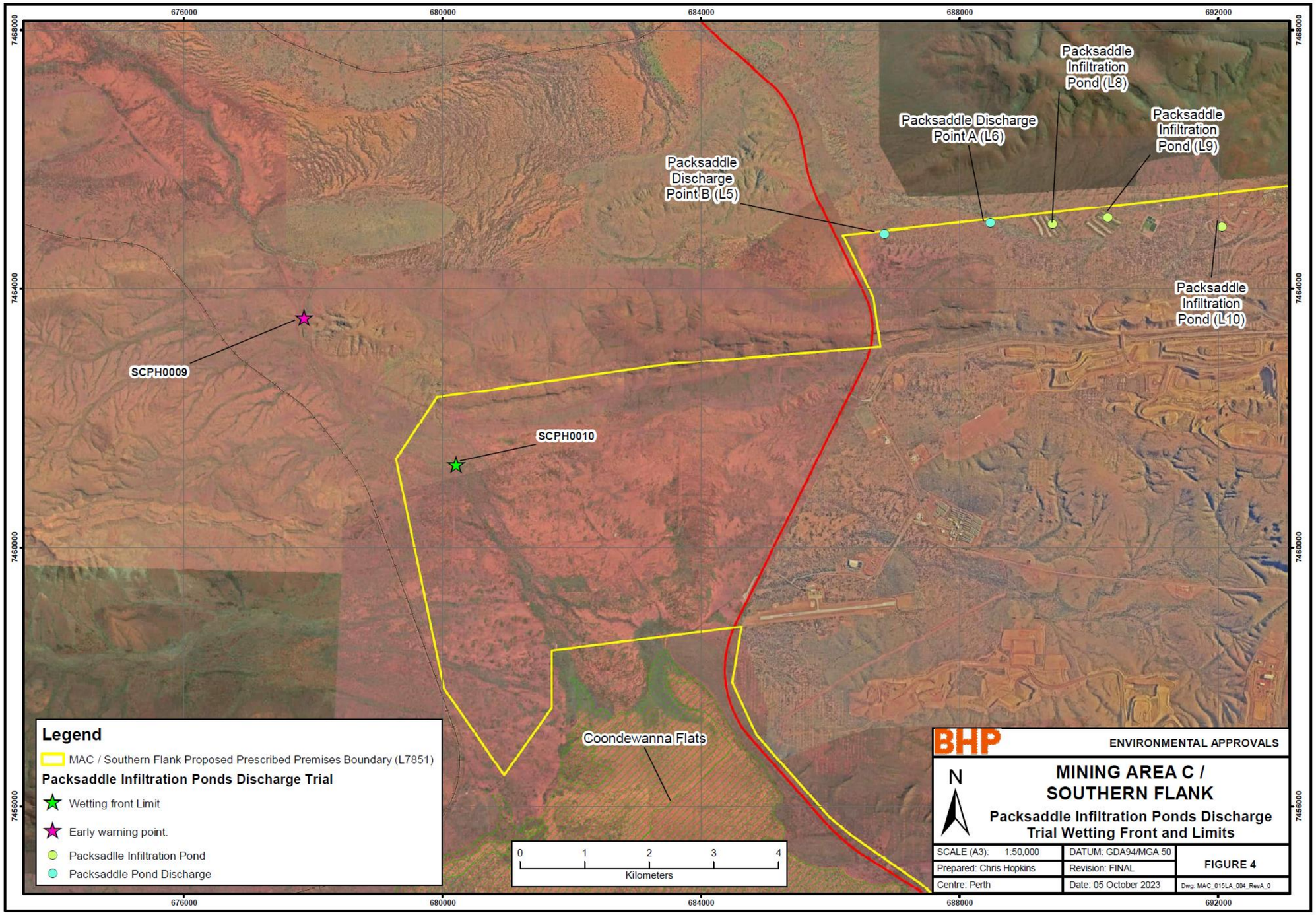


Figure 4: Packsaddle Infiltration Ponds Discharge Trial Wetting Front and Limit

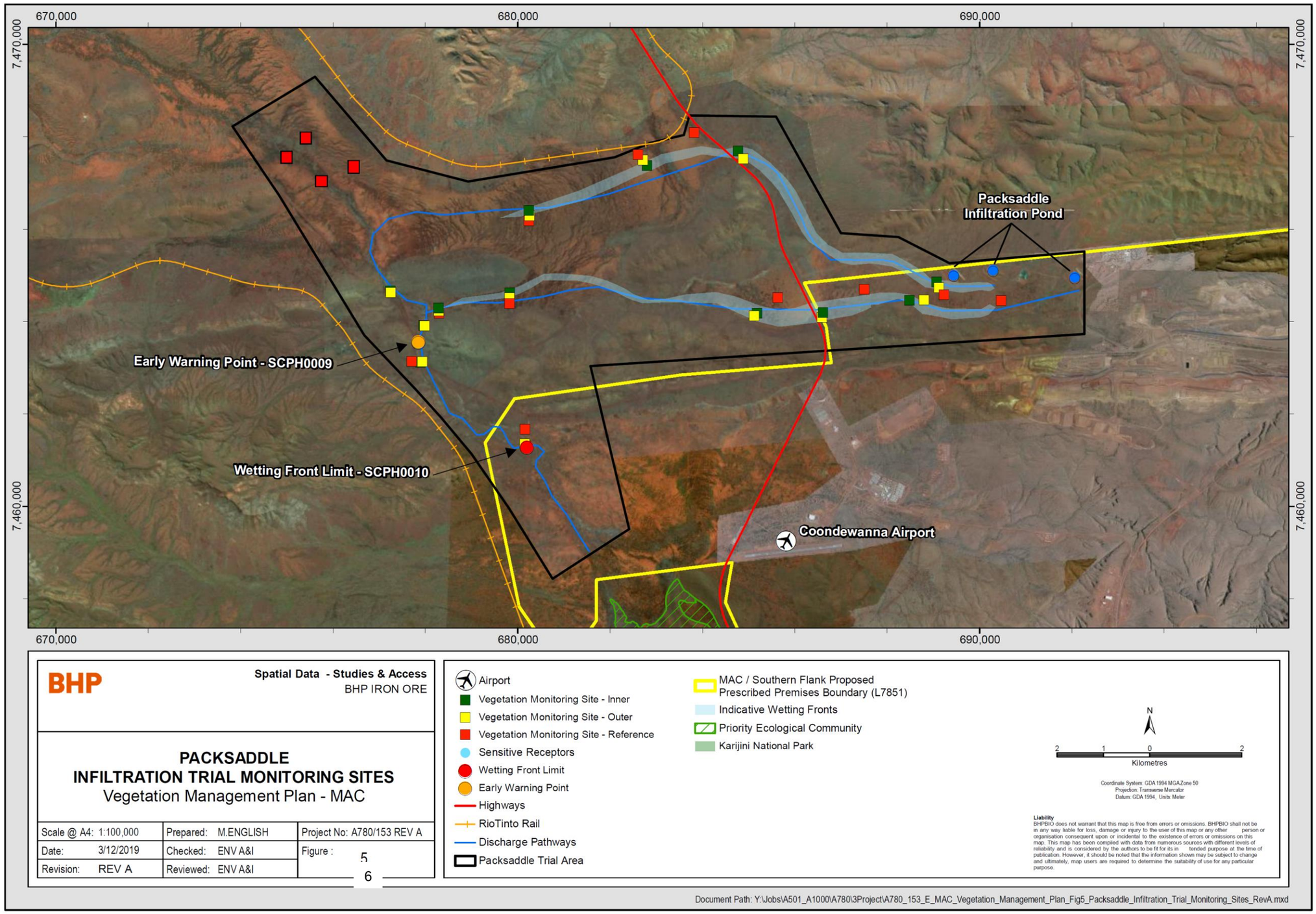
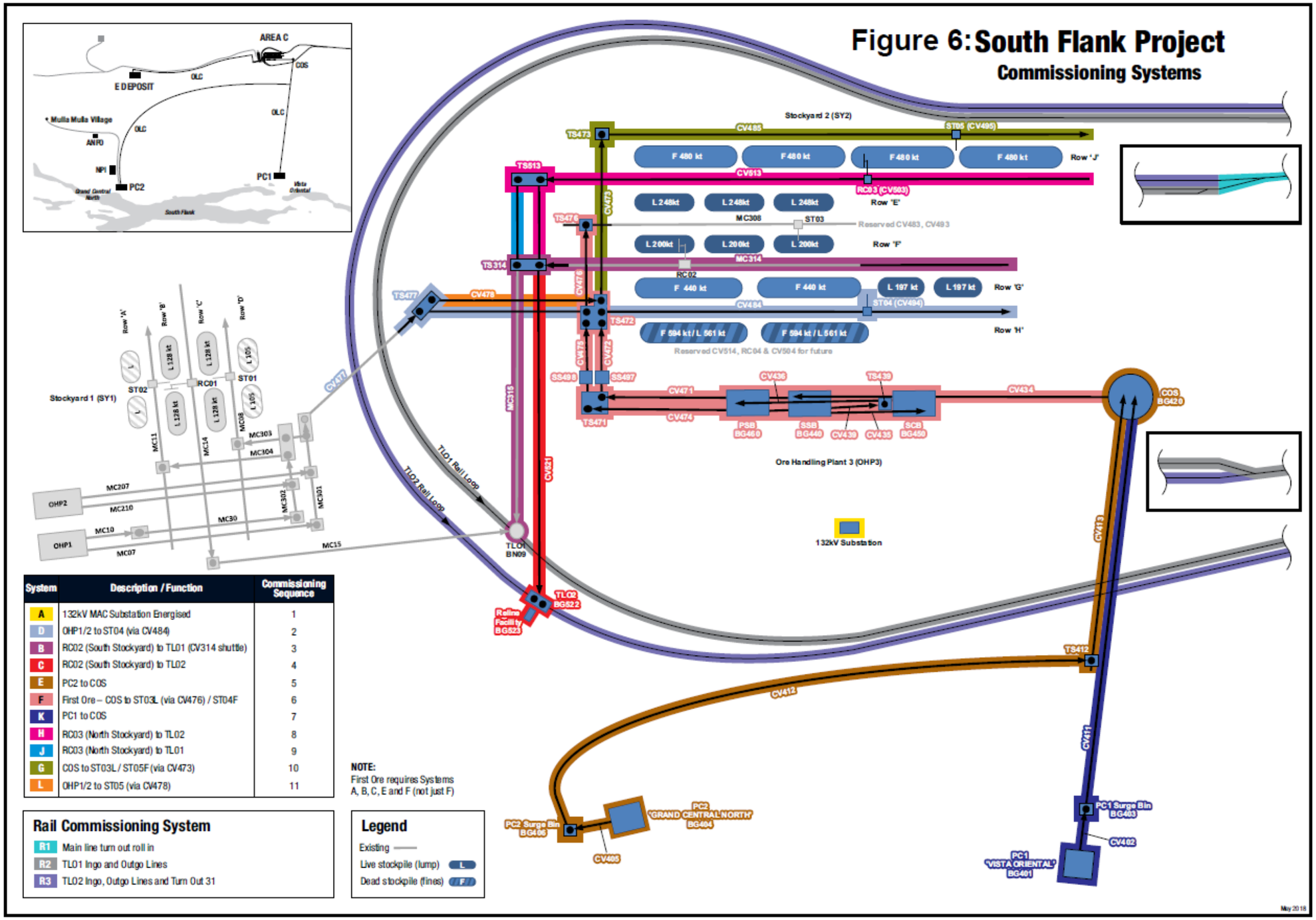


Figure 5: Packsaddle Infiltration Trial Monitoring Sites



System	Description / Function	Commissioning Sequence
A	132kV MAC Substation Energised	1
D	OHP1/2 to ST04 (via CV484)	2
B	RC02 (South Stockyard) to TL01 (CV314 shuttle)	3
C	RC02 (South Stockyard) to TL02	4
E	PC2 to COS	5
F	First Ore – COS to ST03L (via CV476) / ST04F	6
K	PC1 to COS	7
H	RC03 (North Stockyard) to TL02	8
J	RC03 (North Stockyard) to TL01	9
G	COS to ST03L / ST05F (via CV473)	10
L	OHP1/2 to ST05 (via CV478)	11

NOTE:
First Ore requires Systems A, B, C, E and F (not just F)

Rail Commissioning System

- R1 Main line turn out roll in
- R2 TL01 Ingo and Outgo Lines
- R3 TL02 Ingo, Outgo Lines and Turn Out 31

Legend

- Existing
- Live stockpile (lump) L
- Dead stockpile (fines) F

Figure 6: South Flank Schematics

Schedule 2: Reporting & notification forms

Licence:	Licence Holder:
Form: N1	Date of breach:

Notification of detection of the breach of a limit.

These pages outline the information that the operator must provide.

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

Part A

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

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

Part B

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

Name	
Post	
Signature on behalf of licence holder	
Date	