



Works approval number W6714/2022/1

Works approval holder BHP Iron Ore Pty Ltd

ACN 008 700 981

Registered business address 125 St Georges Tce
PERTH WA 6000

DWER file number DER2022/000290

Duration 03/02/2023 to 02/02/2026

Date of issue 02/02/2023

Premises details Mt Whaleback/Orebody 29/30/35
Tenements E52/2009-1, ML244SA, G52/19-G52/27,
G52/276, G52/277, G52/279; and Special Leases
K858923 and N088235
NEWMAN WA 6753
As defined by the coordinates in Schedule 2:
Premises boundary

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed production / design capacity
Category 5: Processing or beneficiation of metallic or non-metallic ore	80,000,000 tonnes per annum

This works approval is granted to the works approval holder, subject to the attached conditions, on 2 February 2023, by:

Alana Kidd

Manager, Resource Industries

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

Works approval history

Date	Reference number	Summary of changes
02/02/2023	W6714/2022/1	Works approval granted.

Interpretation

In this works approval:

- (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 works approval:
 - (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 works approval requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this works approval.

Works approval conditions

The works approval holder must ensure that the following conditions are complied with:

Construction phase

Infrastructure and equipment

1. The works approval holder must:
 - (a) construct and/or install the infrastructure and/or equipment;
 - (b) in accordance with the corresponding design and construction / installation requirements; and
 - (c) at the corresponding infrastructure location; and
 - (d) within the corresponding timeframe,as set out in Table 1.

Table 1: Design and construction / installation requirements

	Infrastructure	Design and construction / installation requirements	Infrastructure location	Timeframe
1.	TSF1 and TSF3	<p>Dust controls to be implemented during construction phase:</p> <ul style="list-style-type: none">• Occupational and ambient dust levels are controlled by the implementation of the following measures:<ul style="list-style-type: none">➢ Water tankers are used to apply water to sites within areas of operation which have the potential to generate dust, including unsealed roads, haul roads and construction areas;➢ Areas of exposed soil (land disturbance) are minimised; and➢ Disturbed areas are rehabilitated as they become available;• Routine maintenance and housekeeping practices are employed to ensure that waste materials in or around the premises do not accumulate and lead to the generation of unacceptable airborne dust;• Chemical suppressants will be used for general site dust suppression where required;• Major traffic thoroughfares will be sealed and kerbing or bunding will be installed to discourage off-road passage. Vehicle traffic will	Schedule 1: Maps, Premises map, Figure 1	Prior to the submittal of the Environmental Compliance Report required by condition 3

	Infrastructure	Design and construction / installation requirements	Infrastructure location	Timeframe
		<p>preferably be directed along routes that are regularly maintained and sprayed with dust suppressants;</p> <ul style="list-style-type: none"> • Speed limits will be enforced to minimise dust emissions; and • Site personnel will be required to undergo training and be made aware of their responsibility to reduce and report excessive dust emissions. <p>Design and construction / installation requirements:</p> <ul style="list-style-type: none"> • Raising facilities by a total of 9 m in 3 x 3 m raises; • Increase TSF1 from crest level of RL 594 m up to RL 603 m; • Increase TSF2 from crest level of RL 593 m up to RL 602 m; • Perimeter embankment raises will be progressively constructed from Beneficiation rejects or suitable sitewon materials (imported fill), typically in 3 m upstream raises; • The height of the raises may vary but are expected to be between 2 and 3 m, depending on the availability of construction materials; • The raises will be constructed with downstream and upstream side slopes of 3.3H:1V and 2H:1V, respectively, consistent with the existing slope batters on the TSFs; • The first proposed raise will include a bench at the existing crest level to accommodate existing infrastructure at the crest; • Surface water management measures will be put in place to manage stormwater runoff from the future embankment raises; • Stormwater will be diverted away from the TSFs consistent with existing practice; and • The TSFs are designed and operated to maintain a minimum of a 300mm freeboard. <p>Pipeline requirements:</p> <ul style="list-style-type: none"> • Pipeline has leak detection alarms 		

	Infrastructure	Design and construction / installation requirements	Infrastructure location	Timeframe
		<p>provided by flow meters installed at the processing plant and on the TSF embankment;</p> <ul style="list-style-type: none"> • Pipeline has pressure alarms provided by pressure transmitters at the discharge of the transfer pumps; • Pipeline is installed through brownfields areas of the site, typically the pipeline runs in a pipeline trace bordered by earthen windrows to contain any potential spillage, or adjacent to existing roads which are bounded by edge protection windrows that will perform the same function in containing spills; and • Where the pipeline is buried it is fully enclosed in a HDPE pipe sleeve, including where it crosses a local watercourse. 		

Compliance reporting

2. The works approval holder must within 7 calendar days of an item of infrastructure or equipment required by condition 1 being constructed and/or installed:
 - (a) undertake an audit of their compliance with the requirements of condition 1; and
 - (b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.
3. The Environmental Compliance Report required by condition 2, must include as a minimum the following:
 - (a) certification by a suitably qualified professional engineer or builder that the items of infrastructure or component(s) thereof, as specified in condition 1, have been constructed in accordance with the relevant requirements specified in condition 1;
 - (b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 1; and
 - (c) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

Environmental commissioning phase

Environmental commissioning requirements and emission limits

4. The works approval holder may only commence environmental commissioning of an item of infrastructure identified in condition 5 once the Environmental Compliance report has been submitted for that item of infrastructure in accordance with condition 2 of this works approval.

5. Any environmental commissioning activities undertaken for an item of infrastructure specified in Table 2 may only be carried out:
- (a) in accordance with the corresponding commissioning requirements; and
 - (b) for the corresponding authorised commissioning duration.

Table 2: Environmental commissioning requirements

	Infrastructure	Commissioning requirements	Authorised commissioning duration
1.	TSF1 and TSF3 wall lifts	<ul style="list-style-type: none"> • Testing and verification of tailings transfer pumps and gland water system; • Testing and verification of TSF decant return pumps, including instrumentation; • Testing and verification of the tailings transfer pipeline and spigot assembly components; • Verification of dam monitoring instrumentation; • Tailings deposited to the TSF are wet. As the tailings dry they set in a hard crust preventing the lift off of dust from the facility; • Tailings will be actively discharged into the TSFs at a rate of up to ~1 Mtpa through multiple spigots around most of the perimeter and from the dividing wall, with deposition adjusted as required to maintain the supernatant ponds around the water recovery systems of TSF 1 and TSF 3, located near the ridgeline bounding the TSFs to the southwest. consistent with the existing operation of the TSF; • Tailings deposition will periodically be rotated between TSF 1 and TSF 3 to allow the tailings to dry and consolidate prior to each embankment raise; • Supernatant water from the TSFs will be removed via pump-out decant systems that are consistent with existing operations; • An annualised average of ~30% to 40% of the process water transported with the tailings should be available for recycling to the process plant under normal operating conditions, depending on Beneficiation Plant through-put; and 	Six months per wall lift

	Infrastructure	Commissioning requirements	Authorised commissioning duration
		<ul style="list-style-type: none"> The TSFs are designed and operated to maintain a minimum of a 300mm freeboard. 	

Monitoring during environmental commissioning

6. The works approval holder must submit to the CEO an Environmental Commissioning Report within 60 calendar days of the completion date of environmental commissioning for each item of infrastructure specified in Table 1.
7. The works approval holder must ensure the Environmental Commissioning Report required by condition 6 of this works approval includes the following:
 - (a) a summary of the environmental commissioning activities undertaken, including timeframes and amount of tailings discharged to the TSFs;
 - (b) a summary of the environmental performance of each item of infrastructure or equipment as constructed or installed (as applicable), which at minimum includes records detailing the (for example):
 - (i) environmental commissioning of the infrastructure;
 - (ii) testing and verification of the:
 - tailings transfer pumps and gland water system;
 - TSF decant return pumps, including instrumentation;
 - tailings transfer pipeline and spigot assembly components; and
 - dam monitoring instrumentation;
 - (c) a review of the works approval holder's performance and compliance against the conditions of this works approval; and
 - (d) where they have not been met, measures proposed to meet the manufacturer's design specifications and the conditions of this works approval, together with timeframes for implementing the proposed measures.

Time limited operations phase

Commencement and duration

8. The works approval holder may only commence time limited operations for an item of infrastructure identified in condition 11:
 - (a) where the item of infrastructure is not authorised to undertake environmental commissioning, the Environmental Compliance Report as required by condition 2 has been submitted by the works approval holder for that item of infrastructure; and
 - (b) where the item of infrastructure is authorised to undertake environmental commissioning under condition 5, the Environmental Commissioning Report for that item of infrastructure as required by condition 6 has been submitted by the works approval holder.
9. The works approval holder may conduct time limited operations for item of infrastructure specified in condition 11 (as applicable):

- (a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 8 (as applicable) for that item of infrastructure; or
 - (b) until such time as a licence for that item of infrastructure is granted in accordance with Part V of the *Environmental Protection Act 1986*, if one is granted before the end of the period specified in condition 9(a).
- 10.** During time limited operations, the works approval holder must record the following data monthly for the site water balance:
- (a) site rainfall from the on-site weather station;
 - (b) evaporation rate from the on-site weather station;
 - (c) tailings return water recovery volumes;
 - (d) seepage recovery volumes;
 - (e) estimate of seepage losses; and
 - (f) volumes of tailings deposited.

Time limited operations requirements and emission limits

- 11.** During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 3 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 3.

Table 3: Infrastructure and equipment requirements during time limited operations

	Site infrastructure and equipment	Operational requirement	Infrastructure location
1.	TSF1 and TSF3 wall lifts	<ul style="list-style-type: none"> Tailings deposited to the TSF are wet. As the tailings dry they set in a hard crust preventing the lift off of dust from the facility; Tailings will be actively discharged into the TSFs at a rate of up to ~1 Mtpa through multiple spigots around most of the perimeter and from the dividing wall, with deposition adjusted as required to maintain the supernatant ponds around the water recovery systems of TSF 1 and TSF 3, located near the ridgeline bounding the TSFs to the southwest. consistent with the existing operation of the TSF; Tailings deposition will periodically be rotated between TSF 1 and TSF 3 to allow the tailings to dry and consolidate prior to each embankment raise; Supernatant water from the TSFs will be removed via pump-out 	Schedule 1: Maps, Premises map, Figure 1

	Site infrastructure and equipment	Operational requirement	Infrastructure location
		<p>decant systems that are consistent with existing operations;</p> <ul style="list-style-type: none"> An annualised average of ~30% to 40% of the process water transported with the tailings should be available for recycling to the process plant under normal operating conditions, depending on Beneficiation Plant through-put; and The TSFs are designed and operated to maintain a minimum of a 300mm freeboard. 	
2.	On-site weather station	<ul style="list-style-type: none"> Record monthly site rainfall Record monthly evaporation rate 	Schedule 1: Maps, Premises map, Figure 1

Compliance reporting

12. The works approval holder must submit to the CEO a report on the time limited operations within 60 calendar days of the completion date of time limited operations of 60 calendar days before the expiration date of the works approval, whichever is the sooner.
13. The works approval holder must ensure the report required by condition 12 includes the following:
 - (a) a summary of the time limited operations, including timeframes and amount of tailings discharged to the TSFs;
 - (b) a summary of the environmental performance of all infrastructure as constructed or installed (as applicable), which includes records detailing the:
 - (i) amount of tailings discharged to the TSFs; and
 - (ii) water balance as conducted in condition 10;
 - (c) a review of operational performance and compliance against the conditions of the works approval and the Environmental Commissioning Report; and
 - (d) where the manufacturer's design specifications and the conditions of this works approval have not been met, what measures will the works approval holder take to meet them, and what timeframes will be required to implement those measures.

Records and reporting (general)

14. The works approval holder must record the following information in relation to complaints received by the works approval 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 works approval holder to investigate or respond to any complaint.
- 15.** The works approval holder must maintain accurate and auditable books including the following records, information, reports, and data required by this works approval:
- (a) the works conducted in accordance with condition 1;
 - (b) any maintenance of infrastructure that is performed in the course of complying with condition 1;
 - (c) complaints received under condition 14.
- 16.** The books specified under condition 15 must:
- (a) be legible;
 - (b) if amended, be amended in such a way that the original version(s) and any subsequent amendments remain legible and are capable of retrieval;
 - (c) be retained by the works approval holder for the duration of the works approval; and
 - (d) be available to be produced to an inspector or the CEO as required.

Definitions

In this works approval, the terms in Table 4 have the meanings defined.

Table 4: Definitions

Term	Definition
Books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 Joondalup DC WA 6919 info@dwer.wa.gov.au
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V Division 3 of the EP Act.
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.
Environmental commissioning	means the sequence of activities to be undertaken to test equipment integrity and operation, or to determine the environmental performance, of equipment and infrastructure to establish or test a steady state operation and confirm design specifications.
Environmental Commissioning Report	means a report on any commissioning activities that have taken place and a demonstration that they have concluded, with focus on emissions and discharges, waste containment, and other environmental factors.
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure and/or equipment has been constructed and/or installed in accordance with the works approval.
EP Act	<i>Environmental Protection Act 1986</i> (WA).
EP Regulations	<i>Environmental Protection Regulations 1987</i> (WA).
Premises	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 works approval.
prescribed premises	has the same meaning given to that term under the EP Act.

Term	Definition
Time limited operations	refers to the operation of the infrastructure and equipment identified under this works approval that is authorized for that purpose, subject to the relevant conditions.
TSF	Tailings Storage Facility
waste	has the same meaning given to that term under the EP Act.
works approval	refers to this document, which evidences the grant of the works approval by the CEO under section 54 of the EP Act, subject to the conditions.
works approval holder	refers to the occupier of the premises being the person to whom this works approval has been granted, as specified at the front of this works approval.

END OF CONDITIONS

Schedule 1: Maps

Premises map

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

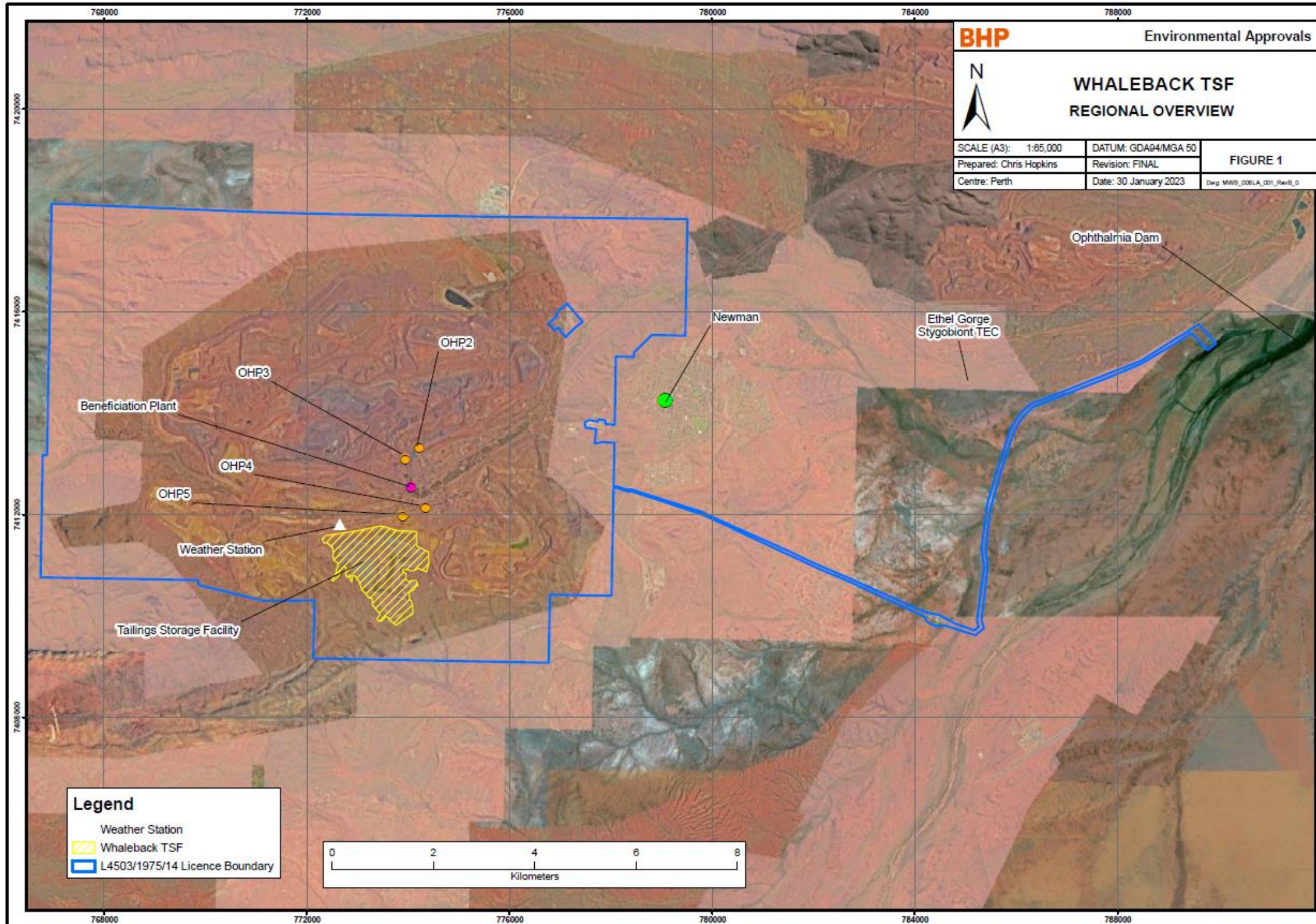


Figure 1: Map of the boundary of the prescribed premises

Schedule 2: Premises boundary

The premises boundary is defined by the coordinates in Table 5.

Table 5: Premises boundary coordinates

Easting	Northing
779513.71	7417827.58
779470.28	7415531.20
778814.47	7415543.48
778458.11	7415199.77
778456.43	7415110.05
778102.77	7415116.72
778077.29	7413765.48
778073.62	7413765.32
777904.82	7413790.52
777887.23	7413793.15
777894.69	7413861.37
777880.64	7413863.19
777775.48	7413876.82
777745.68	7413860.27
777734.64	7413835.98
777601.63	7413858.76
777573.49	7413863.58
777487.40	7413830.46
777487.40	7413830.42
777502.85	7413720.09
777717.52	7413685.89
777690.39	7413494.10
777679.31	7413406.76
777703.74	7413403.74
777830.67	7413432.44
778039.51	7413418.30
778066.09	7413416.50
778070.69	7413415.09
778054.88	7412576.53
778066.81	7412572.72
778076.24	7412569.70
778171.18	7412539.37
778244.52	7412515.94
778275.69	7412505.98
778322.93	7412497.24
778362.60	7412491.81
778407.10	7412493.96
778415.15	7412494.35
778421.17	7412494.64
778435.11	7412490.08

Easting	Northing
778562.63	7412448.36
778614.16	7412431.51
778646.91	7412420.79
778756.40	7412384.97
778764.66	7412382.27
778828.33	7412361.44
778914.77	7412334.02
779040.58	7412294.10
779309.00	7412208.95
779410.14	7412176.86
779688.45	7412088.57
779799.08	7412053.47
779822.79	7412042.59
780018.09	7411952.92
780147.89	7411893.32
780489.58	7411736.44
780539.67	7411713.44
780622.09	7411675.60
780948.36	7411530.14
781010.14	7411502.60
781394.47	7411331.25
781491.59	7411287.95
781499.32	7411284.50
781624.79	7411226.03
781779.47	7411153.95
781988.18	7411056.68
782030.42	7411037.00
782113.24	7411000.86
782423.16	7410865.65
782531.79	7410818.25
782628.03	7410776.26
782839.08	7410683.20
782933.81	7410641.44
783347.40	7410459.07
783368.49	7410449.77
783422.88	7410425.79
783810.77	7410249.45
783927.05	7410196.58
784032.77	7410148.52
784036.55	7410147.07

Easting	Northing
784072.04	7410133.38
784221.56	7410075.73
784240.40	7410068.46
784255.72	7410062.56
784265.93	7410060.82
784273.29	7410059.57
784478.28	7410024.77
784499.10	7410013.18
784548.17	7409985.85
784633.49	7409938.33
784785.30	7409853.78
784849.92	7409831.58
784877.47	7409822.11
784965.28	7409791.94
785183.96	7409716.80
785257.15	7409785.59
785259.35	7409787.65
785250.97	7409825.76
785245.83	7409849.13
785243.68	7409858.90
785230.06	7409920.85
785239.85	7409993.83
785262.59	7410163.46
785271.92	7410233.02
785277.12	7410271.81
785284.85	7410329.43
785320.75	7410600.08
785363.26	7410945.83
785323.58	7411320.87
785338.70	7411493.75
785386.65	7411900.45
785392.55	7411950.50
785432.22	7412210.76
785456.88	7412296.81
785607.93	7412823.86
785832.39	7413521.51
785909.85	7413726.50
786068.75	7413982.99
786139.10	7414046.45
786300.20	7414191.76

Easting	Northing
786579.94	7414298.56
786680.78	7414337.06
786736.28	7414358.25
786905.57	7414422.88
787119.23	7414504.45
787217.13	7414542.73
787789.45	7414766.53
787905.59	7414811.94
788466.35	7415032.06
788778.33	7415229.22
789143.50	7415460.00
789503.00	7415690.91
789532.60	7415709.93
789606.77	7415757.57
789638.01	7415721.63
789692.48	7415658.95
789853.81	7415473.33
789939.30	7415374.97
789919.09	7415359.48
789891.71	7415338.49
789771.71	7415246.50
789701.51	7415323.70
789505.14	7415539.64
789468.47	7415579.97
789071.70	7415333.41
788778.33	7415157.42
788489.02	7414983.88
788410.87	7414951.32
787829.07	7414708.97
787080.64	7414419.49
786337.98	7414132.25
786239.43	7414035.04
786130.15	7413927.25
786125.23	7413919.59
785979.76	7413693.44
785908.91	7413504.50
785896.29	7413464.55
785860.70	7413351.85
785689.18	7412808.75
785516.28	7412193.05
785473.79	7411973.18
785454.32	7411801.23
785400.30	7411324.19
785398.21	7411305.76
785435.56	7410946.83
785318.86	7409913.30

Easting	Northing
785364.21	7409758.37
785363.14	7409757.49
785336.95	7409735.76
785197.94	7409620.45
785103.92	7409650.18
784604.65	7409808.10
784591.64	7409812.22
784494.99	7409807.52
784397.04	7409802.77
784238.33	7409888.74
784191.48	7409988.87
784090.82	7410034.20
783594.53	7410264.66
783256.62	7410422.01
782606.30	7410723.36
782089.64	7410940.82
781703.75	7411118.26
781605.97	7411163.23
781342.29	7411284.47
781334.00	7411288.28
780589.85	7411639.91
780584.30	7411642.54
780256.08	7411795.42
779835.93	7411991.12
779508.10	7412099.72
779323.14	7412160.99
779185.84	7412206.48
779174.72	7412210.16
779017.83	7412262.13
778983.26	7412273.58
778948.76	7412284.78
778921.48	7412293.63
778736.26	7412353.73
778586.11	7412402.44
778415.50	7412457.80
778406.53	7412457.18
778406.41	7412457.17
778390.08	7412456.04
778352.70	7412453.45
778348.46	7412453.16
778311.64	7412464.84
778054.31	7412546.53
778016.77	7410554.76
778014.09	7410398.86
776799.83	7410422.92
776774.56	7409077.43

Easting	Northing
773273.49	7409142.97
772931.95	7409149.11
772532.04	7409156.58
772129.57	7409164.07
772134.17	7409413.36
772138.78	7409663.45
772143.40	7409913.55
772148.01	7410163.63
772150.72	7410310.49
772150.71	7410310.49
772129.67	7410310.22
772129.47	7410310.22
771957.95	7410308.08
771159.02	7410298.08
770529.12	7410450.11
770520.52	7410452.19
769872.04	7410608.70
769850.88	7410706.53
769534.05	7410712.41
766747.30	7410762.65
766791.00	7413171.49
766874.20	7413170.70
766877.64	7413354.40
766882.32	7413604.50
766887.00	7413854.49
766891.67	7414104.47
766896.35	7414354.46
766901.02	7414604.44
766905.70	7414854.42
766910.37	7415104.41
766915.05	7415354.39
766919.72	7415604.39
766924.40	7415854.39
766929.07	7416104.39
766933.74	7416354.39
766938.41	7416604.40
766947.76	7417104.41
766957.10	7417604.41
766966.97	7418132.43
767162.41	7418124.55
767540.41	7418109.30
767940.41	7418093.17
768340.42	7418077.03
768740.42	7418060.90
769140.42	7418044.77
769540.43	7418028.63

Easting	Northing
769940.44	7418012.50
770340.44	7417996.36
771040.44	7417968.13
771940.44	7417937.04
772740.45	7417923.44
773940.48	7417903.04
775140.52	7417882.64
775287.56	7417880.14
779513.71	7417827.58
776778.55	7415778.56
776891.19	7415640.23
776943.61	7415682.76
776956.62	7415668.99
776976.47	7415683.38
777006.00	7415647.30

Easting	Northing
776994.46	7415637.90
777024.40	7415601.71
777114.30	7415493.02
777136.46	7415524.11
777155.97	7415548.26
777174.82	7415569.09
777205.58	7415600.84
777229.06	7415623.00
777243.72	7415636.69
777341.18	7415728.69
777349.45	7415734.79
777356.72	7415740.74
777370.28	7415750.00
777391.45	7415762.57
777410.30	7415775.14

Easting	Northing
777431.14	7415790.68
777446.35	7415804.57
777398.48	7415860.20
777200.14	7416090.66
777139.92	7416160.62
777050.87	7416090.66
776964.46	7416022.76
776953.88	7416014.45
776968.94	7415995.89
776968.00	7415995.19
776921.31	7415955.57
776944.65	7415920.83
776778.55	7415778.56