Works Approval

Works approval number W6353/2020/1

Works approval holder Hamersley Iron Pty Ltd

ACN 004 558 276

DWER file number DER2019/000647

Duration 19/06/2020 to 18/06/2025

Date of issue 18/06/2020

Greater Tom Price Iron Ore Mine

Mining tenements ML4SA, G47/1258, G47/1260, L47/161, L47/209, L47/210, L47/342, L47/552,

L47/645, L47/668, L47/698, L47/721, G47/1271,

L47/745, L47/824, L47/826 and L47/858

MOUNT SHEILA WA 6751

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations</i> 1987)	Assessed production / design capacity
Category 5: Processing or beneficiation of metallic or non-metallic ore	36,000,000 tonnes per annual period
Category 12: Screening etc.	10,000,000 tonnes per annual period
Category 54: Sewage facility	40 cubic metres per day
Category 73: Bulk storage of chemicals	704 cubic metres in aggregate

This works approval is granted to the works approval holder, subject to the attached conditions, on **18 June 2020**, by:

Alana Kidd

Premises details

A/Manager, Resource Industries

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

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, as set out in Table 1.

Table 1: Design and construction / installation requirements

	Infrastructure	Site Plan Reference		
	Prescribed Activity Category 5			
Wes	stern Turner Syncline Stage 2 (WTS2) Processing Facility			
1	Run-of-Mine (ROM) Pad			
2	ROM bin			
3	Two apron feeders			
4	Vibrating grizzly			
5	Primary gyrator crusher	Figures 2 and 3 in Schedule 1		
6	Concreted hardstand under and around new processing facility	9		
7	Surface water run-off collection sump			
8	Oil-water collection and treatment system			
9	Transfer conveyor – including skirts or covers and dust suppression sprays			
10	Overland conveyor (OLC) with a permanent cover	Figures 4(A – I) in Schedule 1		
11	OLC loading points			
12	Transfer station at WTS1 - including a surge bin and apron feeder	Figure 5		
	Prescribed Activity Category 12			
Mok	oile crushing and screening facility (amendment of prescribed prem	ises boundary)		
1	Jaw Crusher	-		

	Infrastructure	Site Plan Reference		
2	Heavy Duty Screen	-		
	Prescribed Activity Category 54			
Con	struction of a new waste water treatment facilities at the Tom Price	mine		
1	One BioMAX C40K Waste Water Treatment plants with the following treated effluent water quality design criteria:	Figures 6 and 7 in Schedule 1		
	(i) pH between 6.8-8.5			
	(ii) Biological oxygen demand less than 20 mg/L			
	(iii) Total suspended solids less than 30 mg/L			
	(iv) Total nitrogen less than 10 mg/L			
	(v) Total phosphorus less than 2 mg/L			
	(vi) E.coli less than 10 cfu/100 ml			
	Prescribed Activity Category 73			
Hea	vy Vehicle Refuelling Facility (HVRF)			
1	Three 200,000 L fuel storage tanks	Figures 8 and 9 in Schedule 1		
2	Road train unloading			
3	Heavy vehicle refuelling bays with fuel arms and associated bunds as per Australian Standard 1940-2004 (AS 1940-2004):			
4	Light vehicle refuelling			
5	Storage for engine oil, hydraulic oil, coolant and grease at each of the refuel bays - constructed to as per AS 1940-2004			
6	Spillage drive-in collection sump			
7	Concrete hardstand at road tanker unloading pads, unloading pump, dispensing pump and heavy vehicle refuelling bays			
8	Oily water collection and treatment system – Ultraspin (HD25) hydro-cyclone			

Compliance reporting

- 2. The Works approval holder must within 30 calendar days of an item of infrastructure 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 and experienced Engineer (eligible for membership of the Institute of Engineers, Australia) 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 conditions 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.
- Where an item of infrastructure has been certified as not being located or constructed, or does not comply with the corresponding requirements, the Works approval holder must correct the non-compliant or defective works, prior to re-certifying, or provide to the CEO a description of, and explanation for, any departures from the requirements specified in condition 1 that do not require relocation or rectification and do not constitute a material defect along with the Environmental Compliance Report.

Environmental commissioning phase

Environmental commissioning requirements and emission limits

- 5. The Works approval holder may only commence environmental commissioning of an item of infrastructure listed in condition 6 once the Environmental Compliance Report has been submitted for that item of infrastructure in accordance with conditions 2 and 3 of this works approval.
- **6.** 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
Comprises the following infrastructure/ equipment: a) Run-of-Mine (ROM) Pad b) ROM bin c) Two apron feeders d) Vibrating grizzly e) Primary gyrator crusher f) Transfer conveyor g) Overland conveyor h) Transfer station at WTS1 i) Oil-water separator	Environmental commissioning is comprised of: Stage 1: verify construction completion to design intent. Stage 2: Pre-commissioning – functional testing of equipment. Stage 3: No-load Commissioning – dynamic testing of operating systems without process materials	For a period not exceeding 3 calendar months in aggregate.
Mobile crusher plant (MCP)	None specified	For a period not exceeding 1 calendar month in aggregate.
One BioMAX C40K Waste Water Treatment Plants	Monthly monitoring of the quality of the effluent will be undertaken during commissioning to ensure that the water quality is trending towards stabilisation.	For a period not exceeding 4 calendar months in aggregate.

- 7. During the commissioning period the Works approval holder must monitor the WWTP treated effluent stream for the parameters as listed in Table 8 of Schedule 3 and ensure the effluent meets the limit specification.
- **8.** During environmental commissioning, the Works approval holder must ensure that the emission specified in Table 3, is discharged only from the corresponding discharge point and only to the corresponding discharge point location.

Table 3: Authorised discharge points during commissioning

	Emission	Discharge point
1.	Treated effluent	Discharged to the environment via existing licenced drainage lines and new discharge point as shown in Figure 7 of Schedule 1

Environmental commissioning reporting

- **9.** 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 2.
- **10.** The Works approval holder must ensure the Environmental Commissioning Report required by condition 9 of this works approval includes the following:
 - (a) a summary of the environmental commissioning activities undertaken, including timeframes;

- (b) a summary of the environmental performance of each item of infrastructure as constructed or installed:
- (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

- **11.** The Works approval holder may conduct time limited operations for an item of infrastructure specified in condition 1:
 - (a) where the item of infrastructure is not authorised to undertake environmental commissioning, the Environmental Compliance Report as required by conditions 2 and 3 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 9 has been submitted by the Works approval holder.
- **12.** The Works approval holder may conduct time limited operations for the following items of infrastructure:
 - (a) for a period not exceeding 180 calendar days for mobile crushing plant and ore processing facility and 90 days for the WWTP, from the day the works approval holder meets the requirements of condition 10 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*.

Time limited operations requirements and emission limits

13. During time limited operations, the Works approval holder must ensure that the premises infrastructure listed in Table 4 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 4.

Table 4: Infrastructure and equipment requirements during time limited operations

	Site infrastructure and equipment	Operational requirement	Infrastructure location
1.	Ore Processing Facility (OPF)	Record volumes of wet ore concentrate produced during time limited operation	Figure 2 in Schedule 1
		 Ensure dust minimisation and stormwater management is undertaken. 	
2.	WWTP	Record volumes of treated waste produced during time limited operations	Figure 6 in Schedule 1

Monitoring during time limited operations

- **14.** The Works approval holder must monitor treated wastewater emissions during time limited operations in accordance with Table 8 in Schedule 3.
- **15.** The Works approval holder must monitor emissions during time limited operations in accordance with Table 5.

Table 5: Emissions and discharge monitoring during time limited operations

Discharge point	Monitoring location	Parameter	Frequency	Averaging Period	Unit
OWS	ows	Total Reportable Hydrocarbons	Monthly	Spot sample	mg/L

- **16.** The Works approval holder must record the results of all monitoring activity required by conditions 14 and 15.
- 17. The Works approval holder must ensure that monthly monitoring is undertaken at least 15 days apart.

Compliance reporting

- 18. 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 or 60 calendar days before the expiration date of the works approval, whichever is the sooner.
- **19.** The Works approval holder must ensure the report required by condition 18 includes the following:
 - (a) a summary of the time limited operations, including timeframes and amount of ore concentrate produced by the OPF and tailings deposited into TSF;
 - (b) a summary of monitoring results obtained during time limited operations under conditions 14 and 15;
 - (c) a review of 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)

- **20.** 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.
- **21.** 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 conditions 1 and 2;
 - (b) any maintenance of infrastructure that is performed in the course of complying with the conditions of this works approval;
 - (c) monitoring programmes undertaken in accordance with conditions 14 and 15; and
 - (d) complaints received under condition 20.
- **22.** The books specified under condition 21 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 have the meanings defined.

Table 6: 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 Environmental Protection Act 1986 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	Environmental Protection Act 1986 (WA).	
EP Regulations	Environmental Protection Regulations 1987 (WA).	
МСР	Mobile crusher plant	
OLC	Overland conveyor	
OPF	Ore Processing Facility	
ows	Oily Water Separator	

Term	Definition
premises	the premises to which this works approval applies, as specified at the front of this works approval 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.
time limited operations	refers to the operation of the infrastructure and equipment identified under this works approval that is authorised for that purpose, subject to the relevant conditions.
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.
WTS	Western Turner Syncline
WWTP	Waste water treatment plant

END OF CONDITIONS

Schedule 1: Maps

Premises map

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

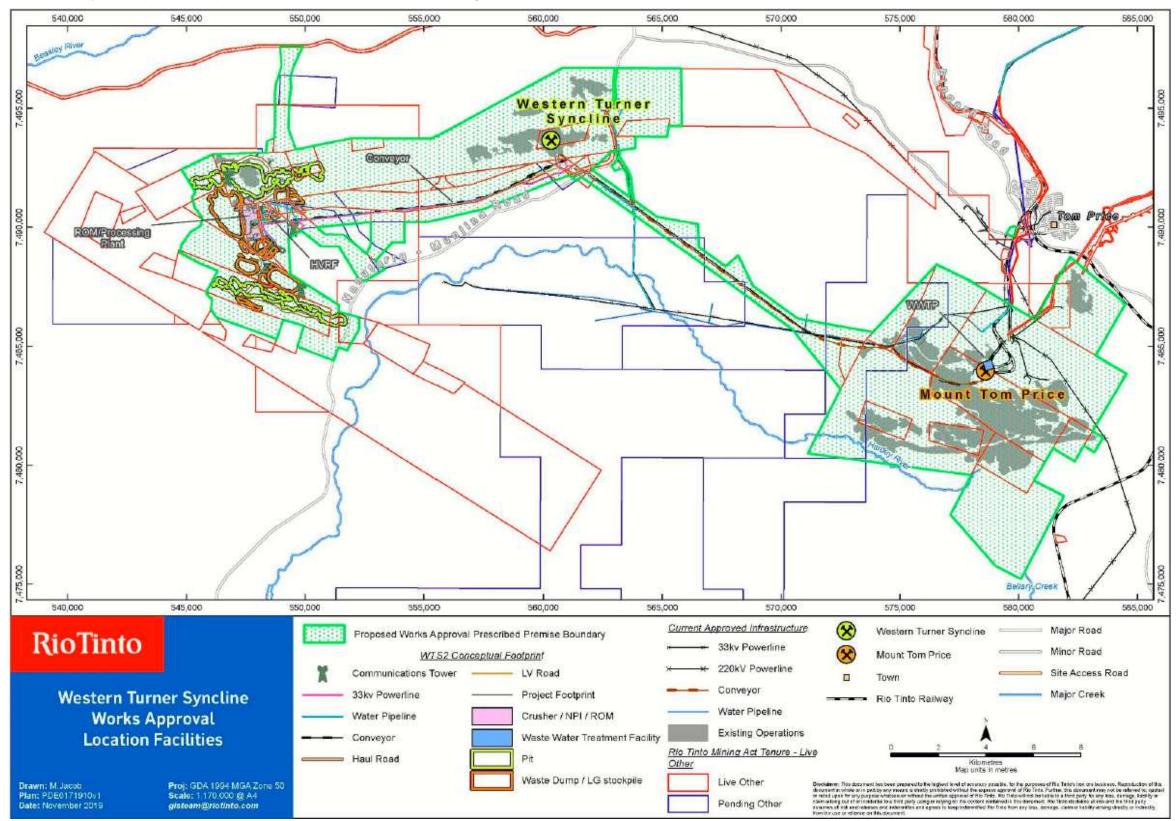


Figure 1: Map of the boundary of the prescribed premises

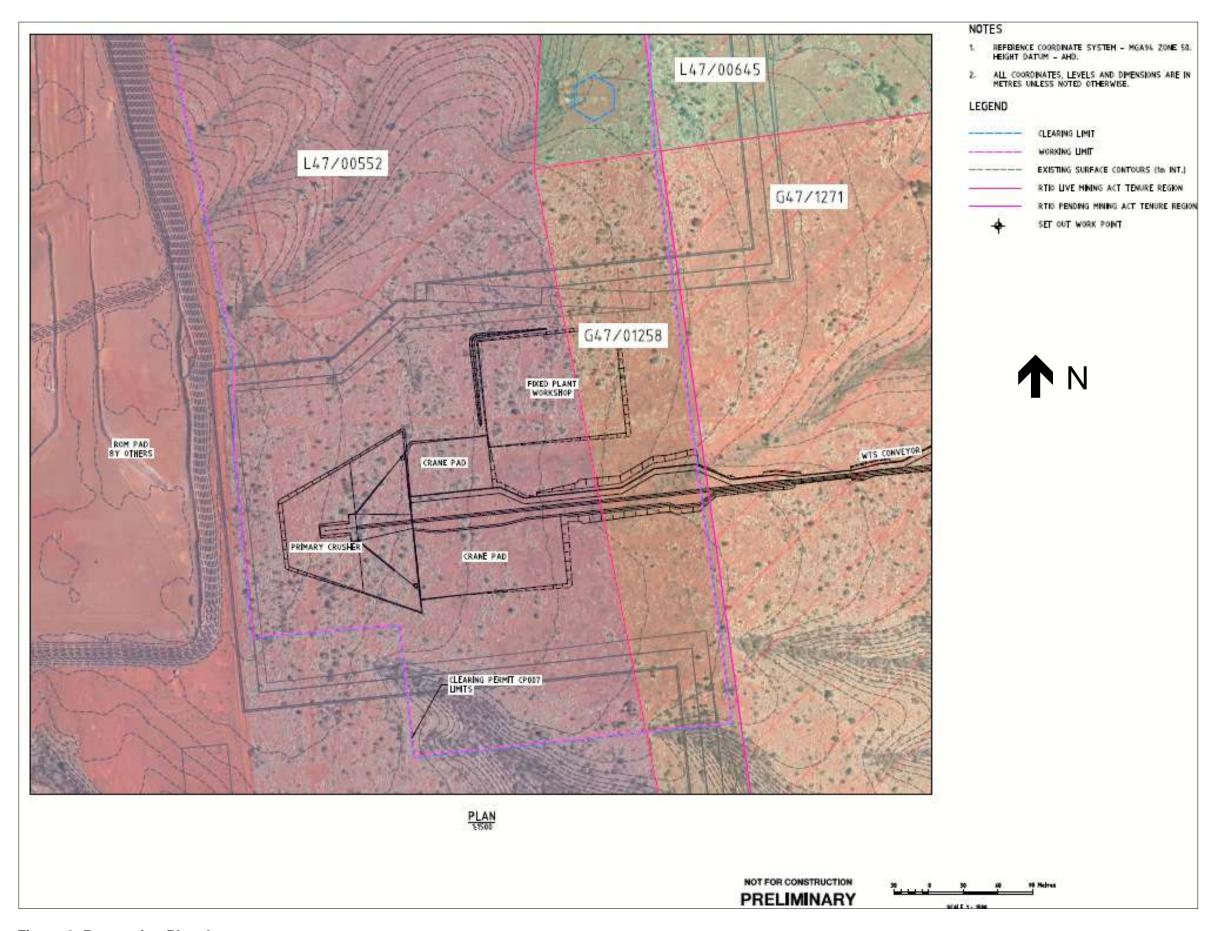


Figure 2: Processing Plant layout

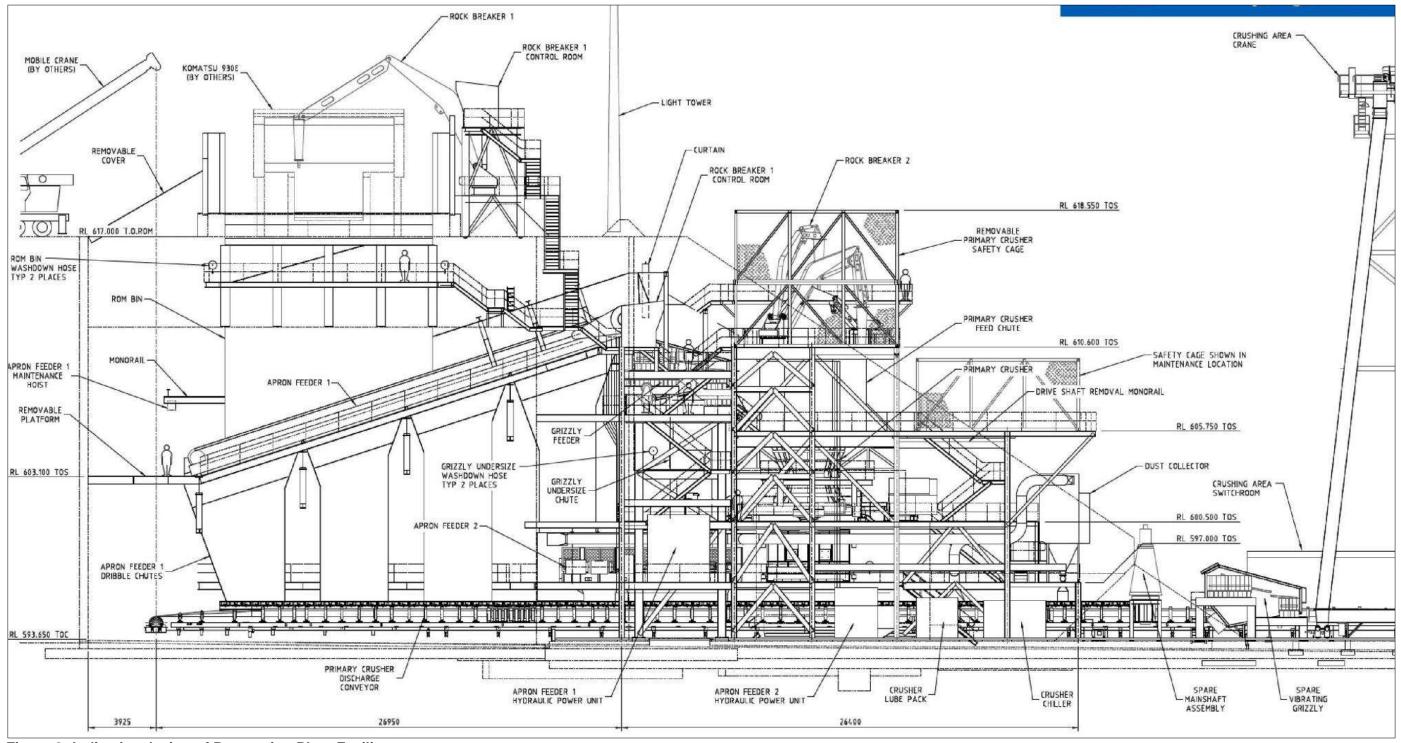


Figure 3: Indicative design of Processing Plant Facility

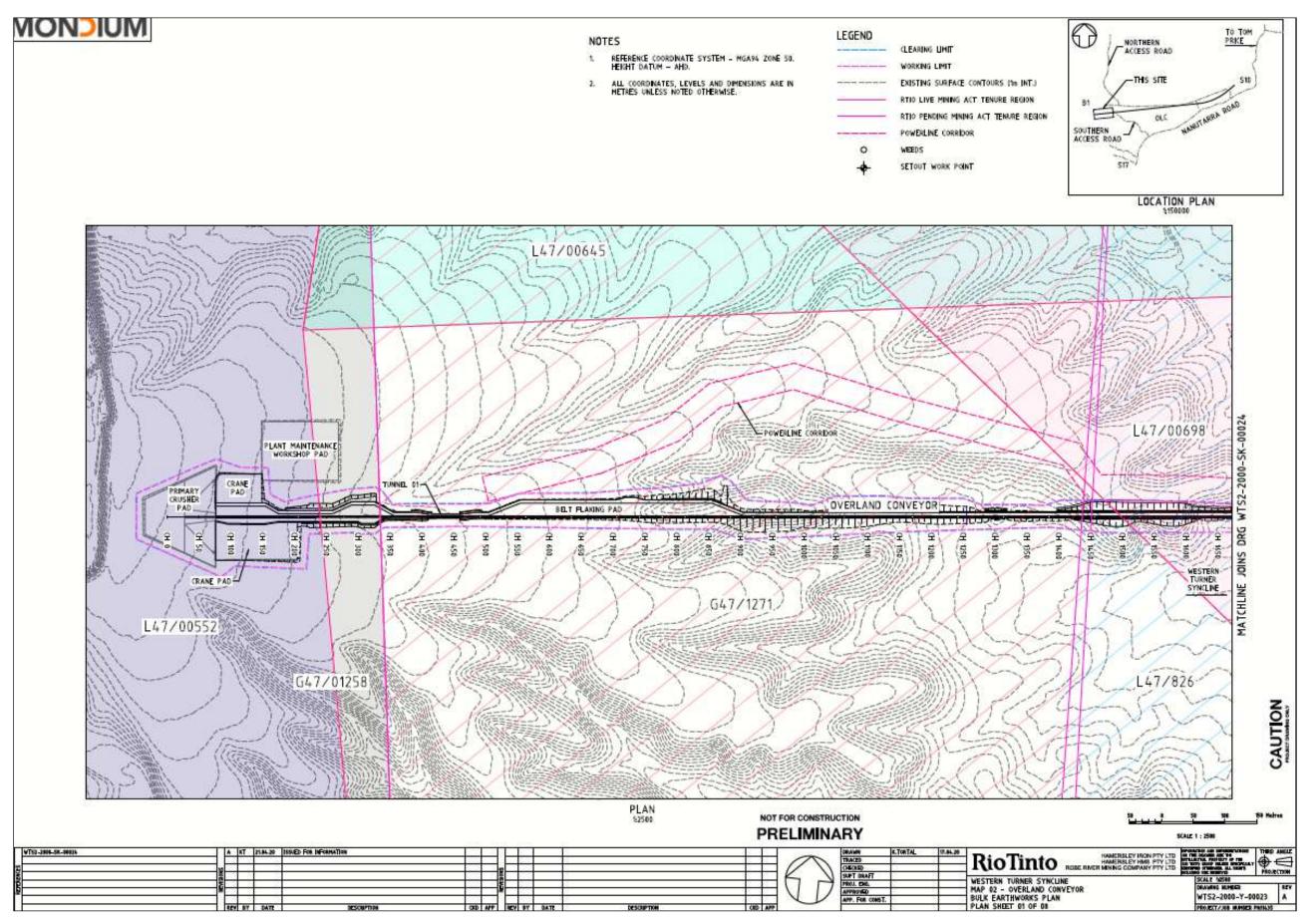


Figure 4 (A): Overland conveyor route

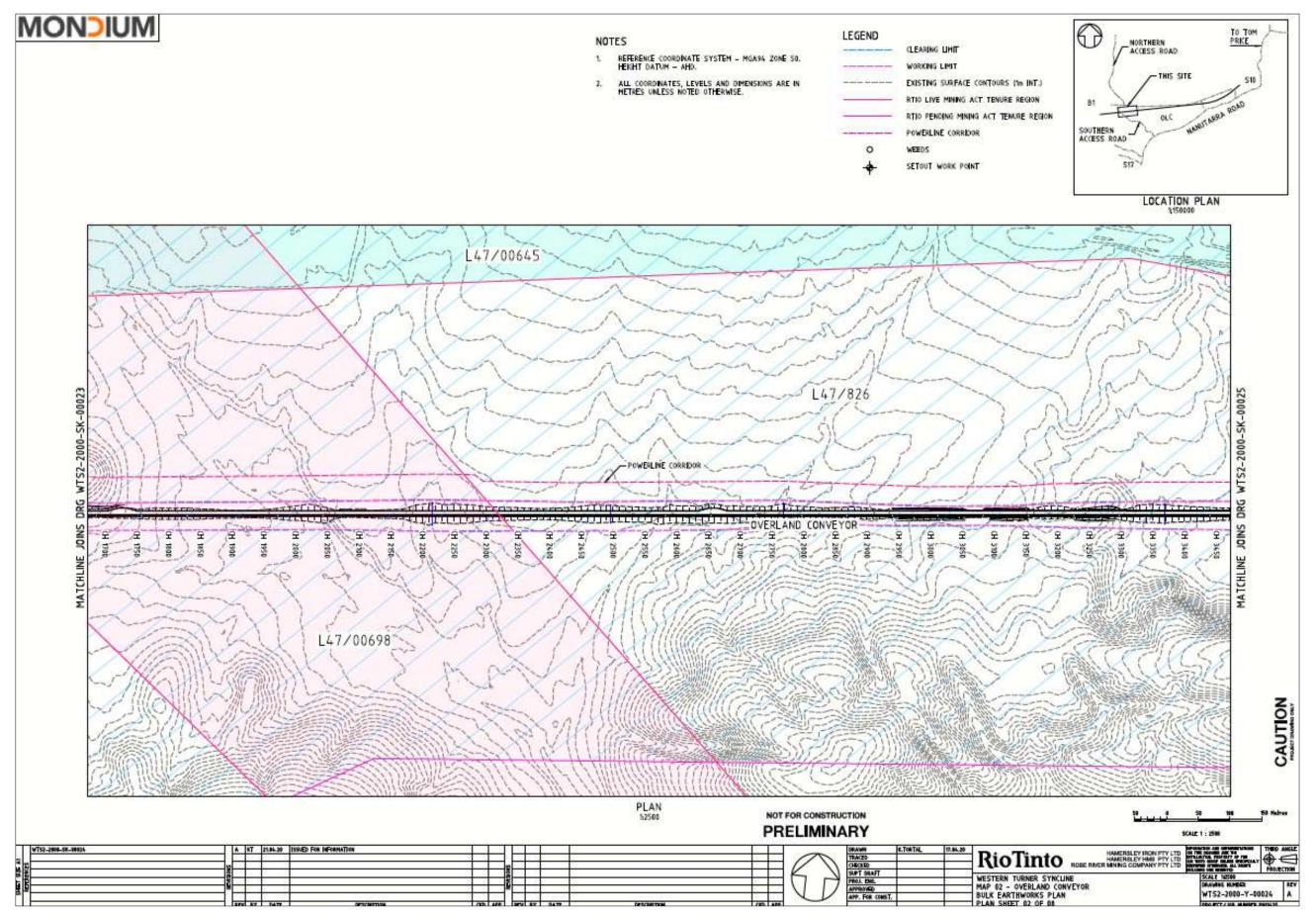


Figure 4 (B): Overland conveyor route

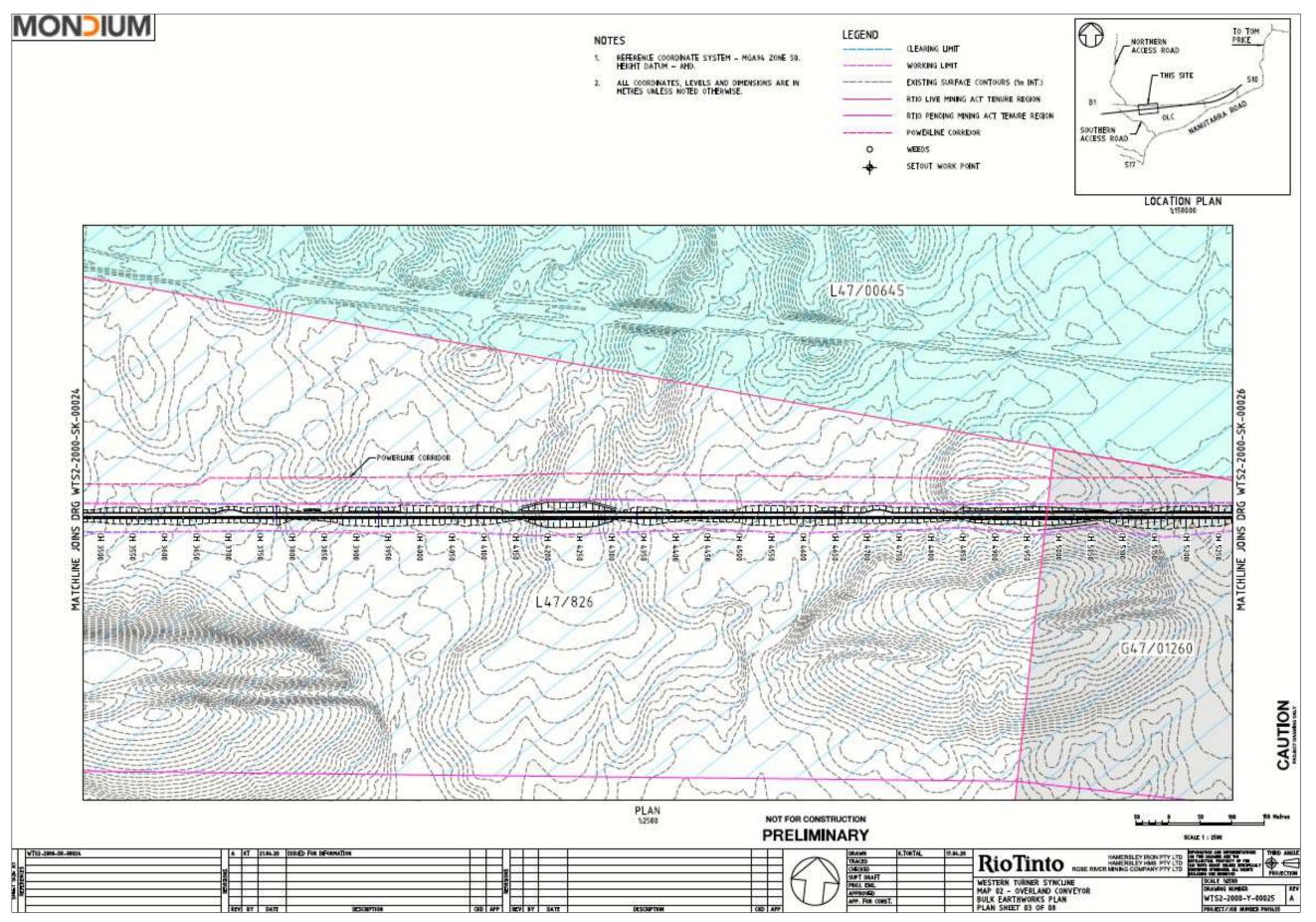


Figure 4 (C): Overland conveyor route

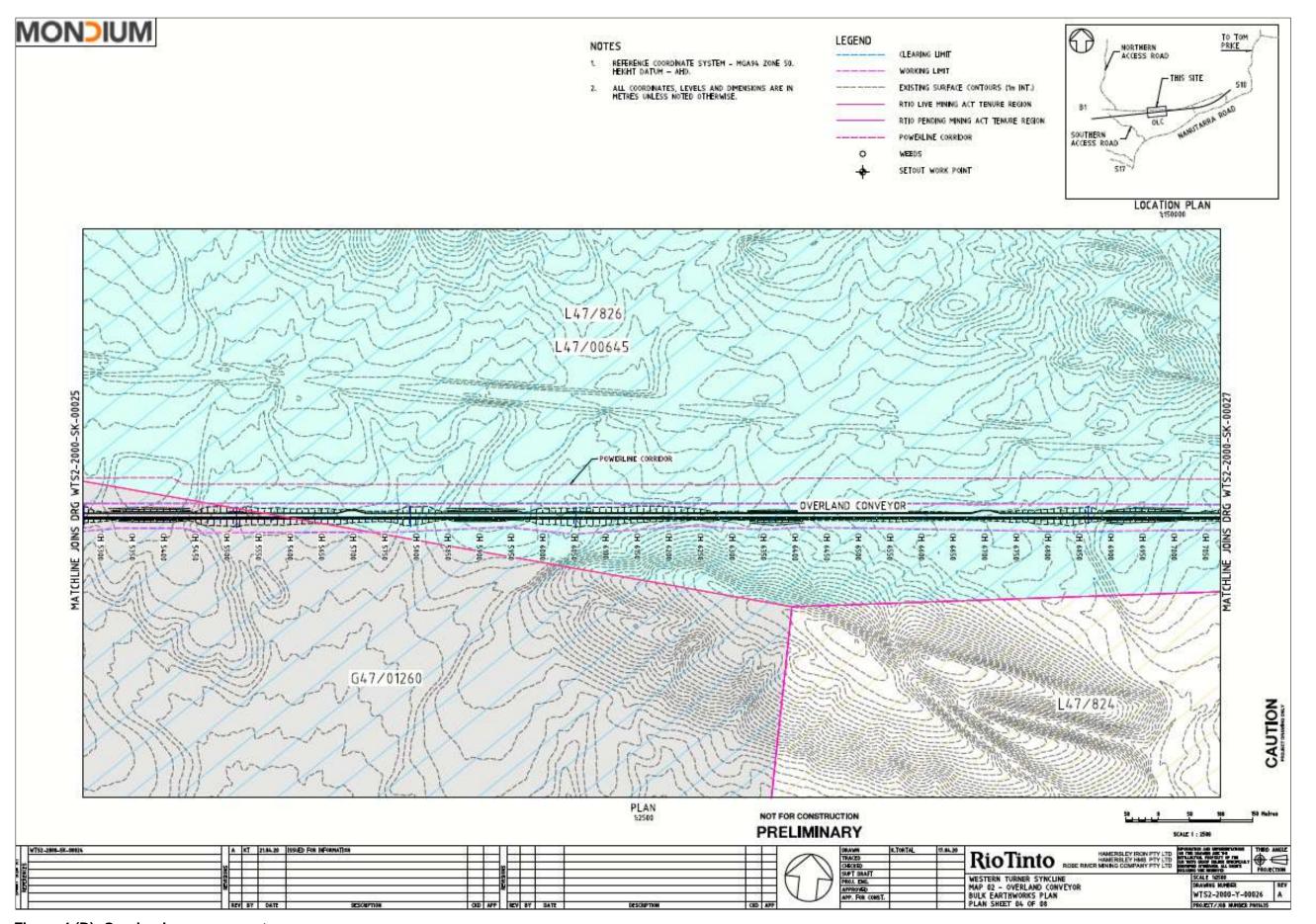


Figure 4 (D): Overland conveyor route

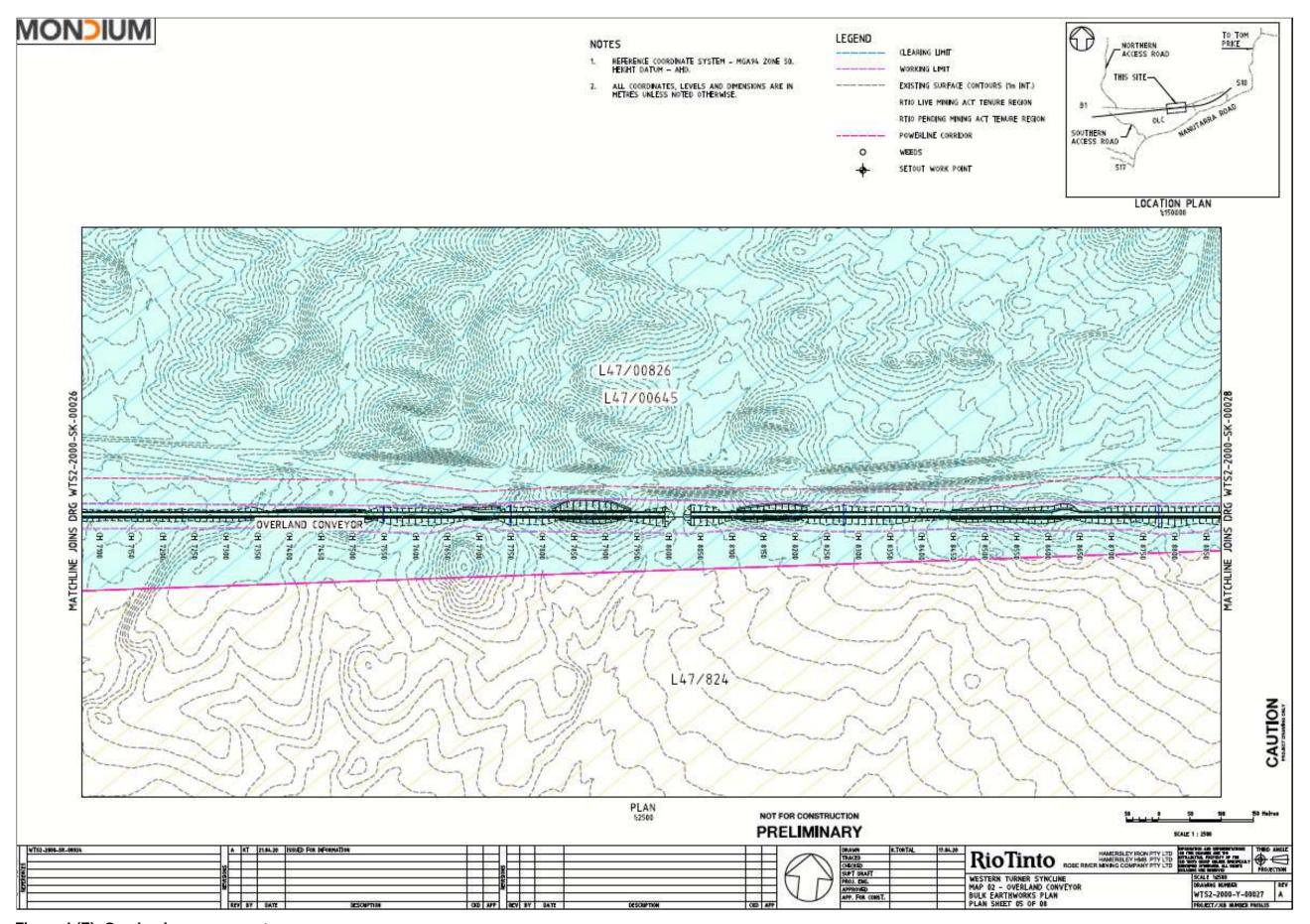


Figure 4 (E): Overland conveyor route.

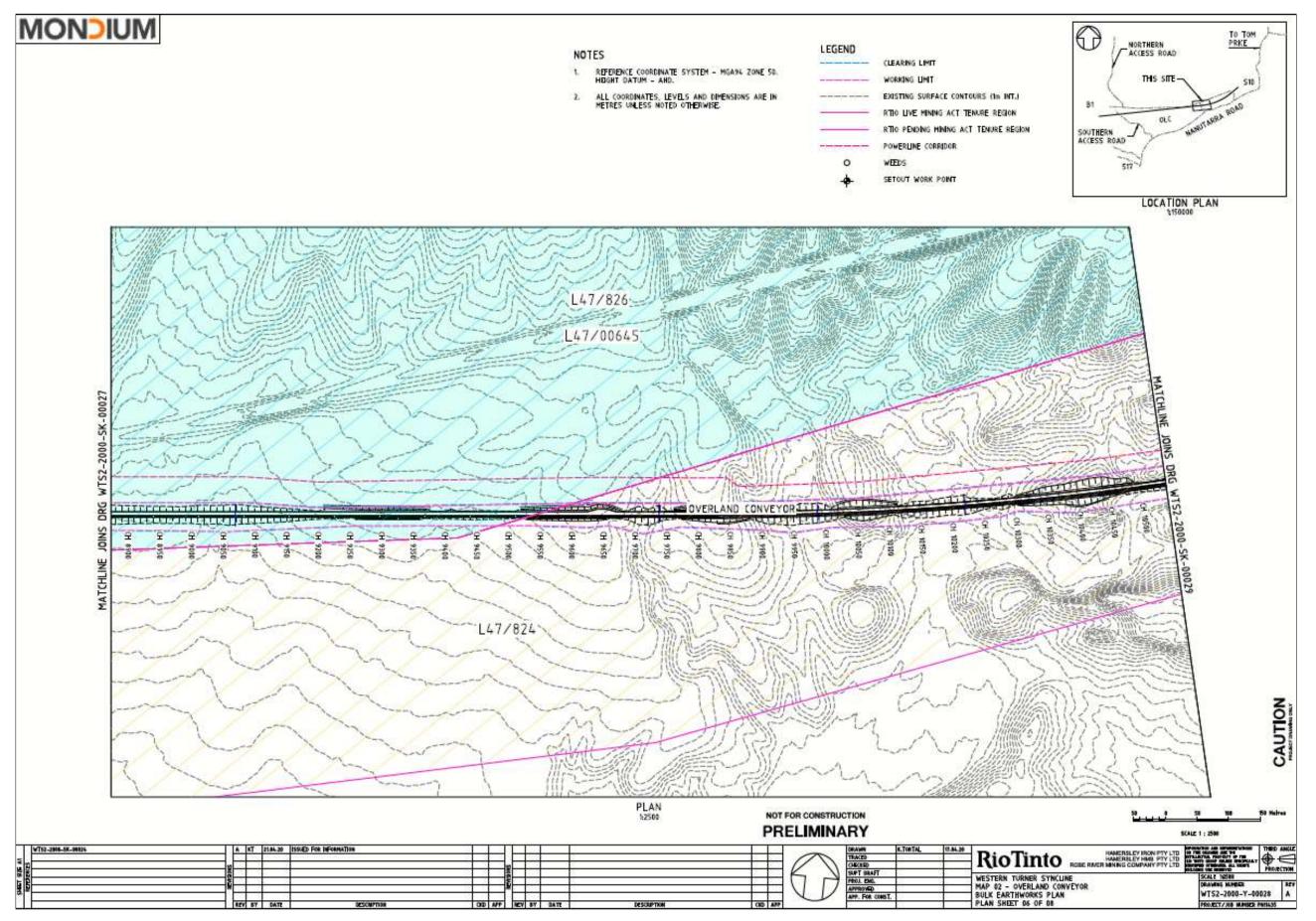


Figure 4 (F): Overland conveyor route

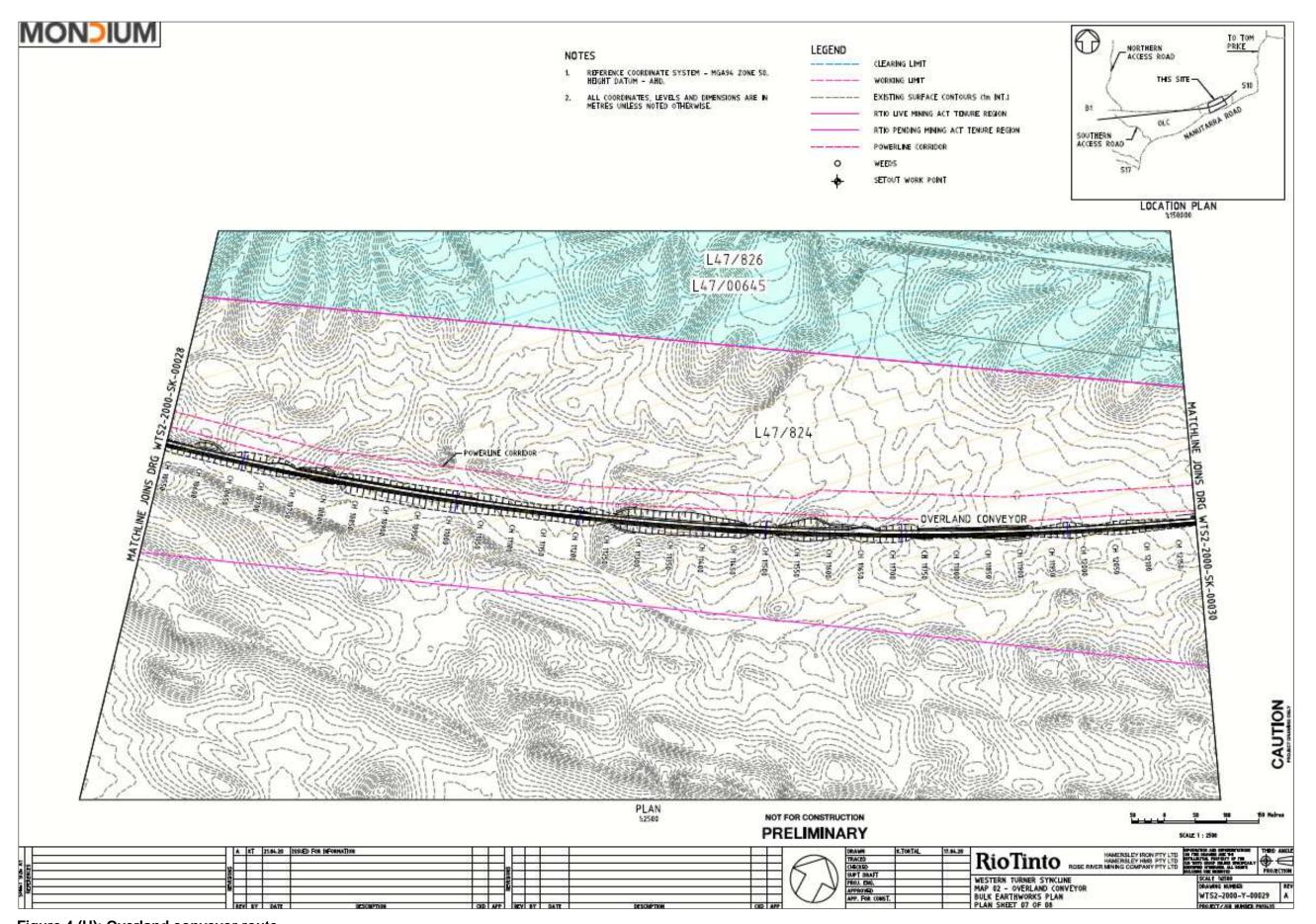


Figure 4 (H): Overland conveyor route

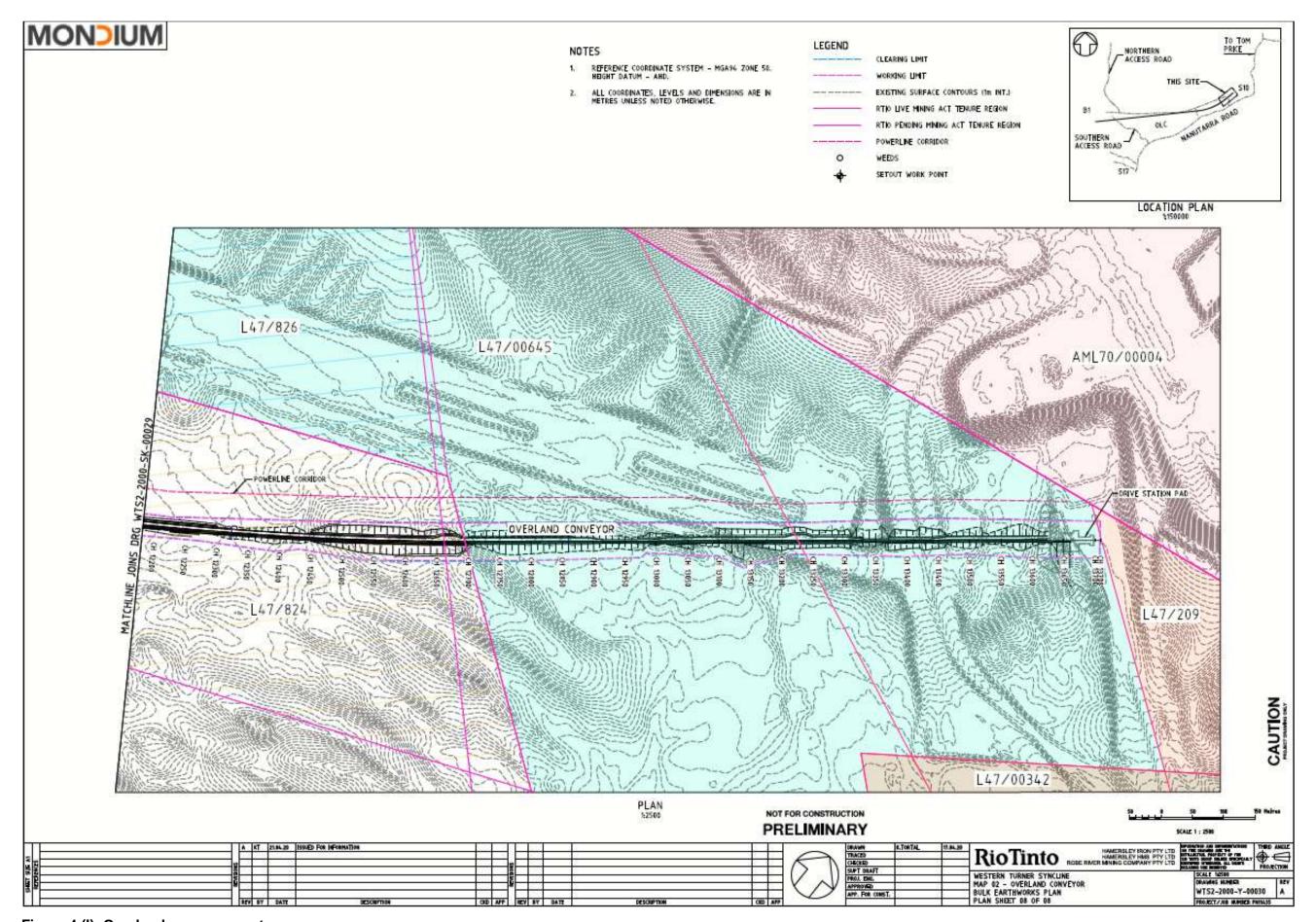


Figure 4 (I): Overland conveyor route.

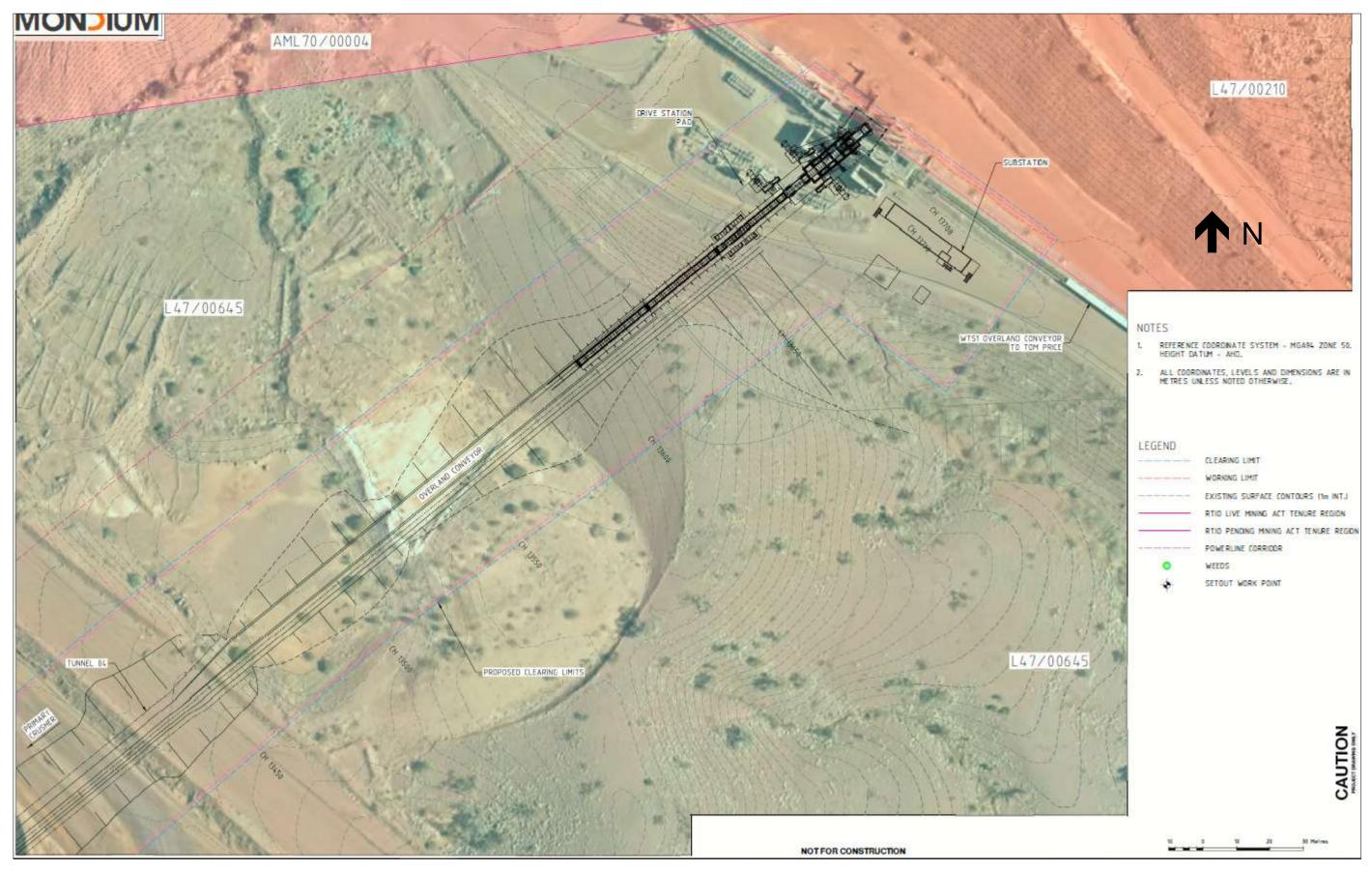


Figure 5: WTS1 Transfer Station

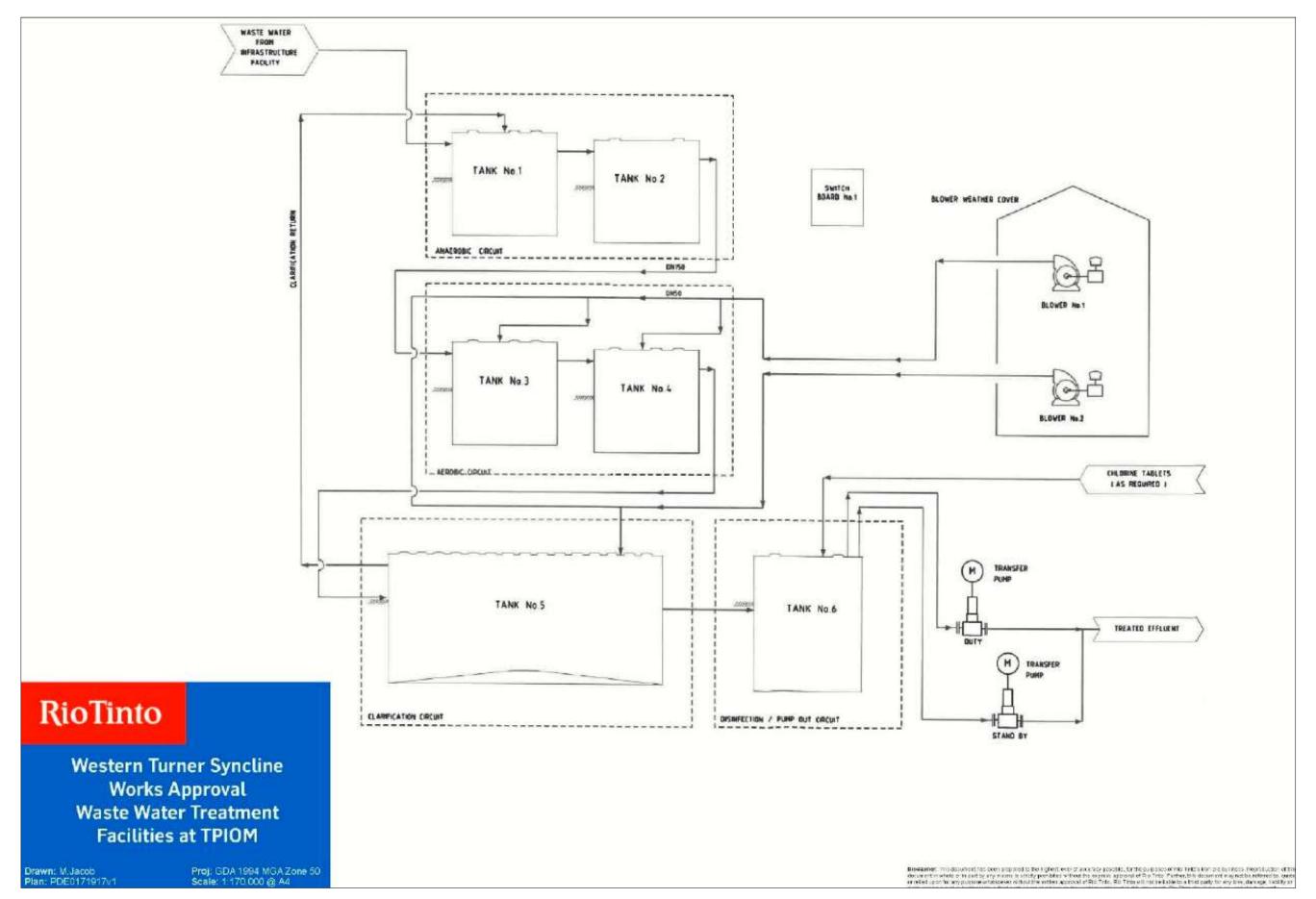


Figure 6: Process flow diagram for WWTP

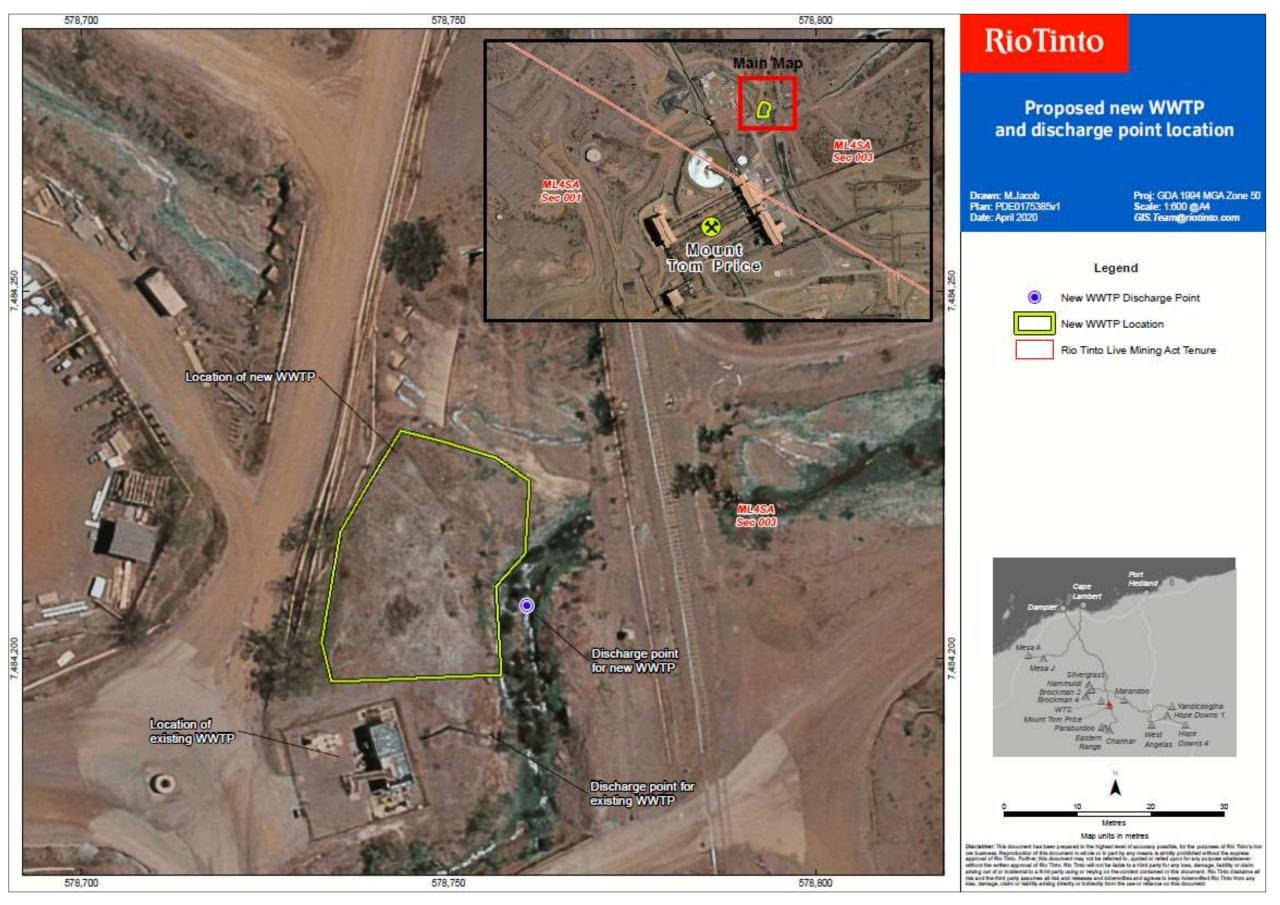


Figure 7: Existing and proposed new discharge point for WWTPs.

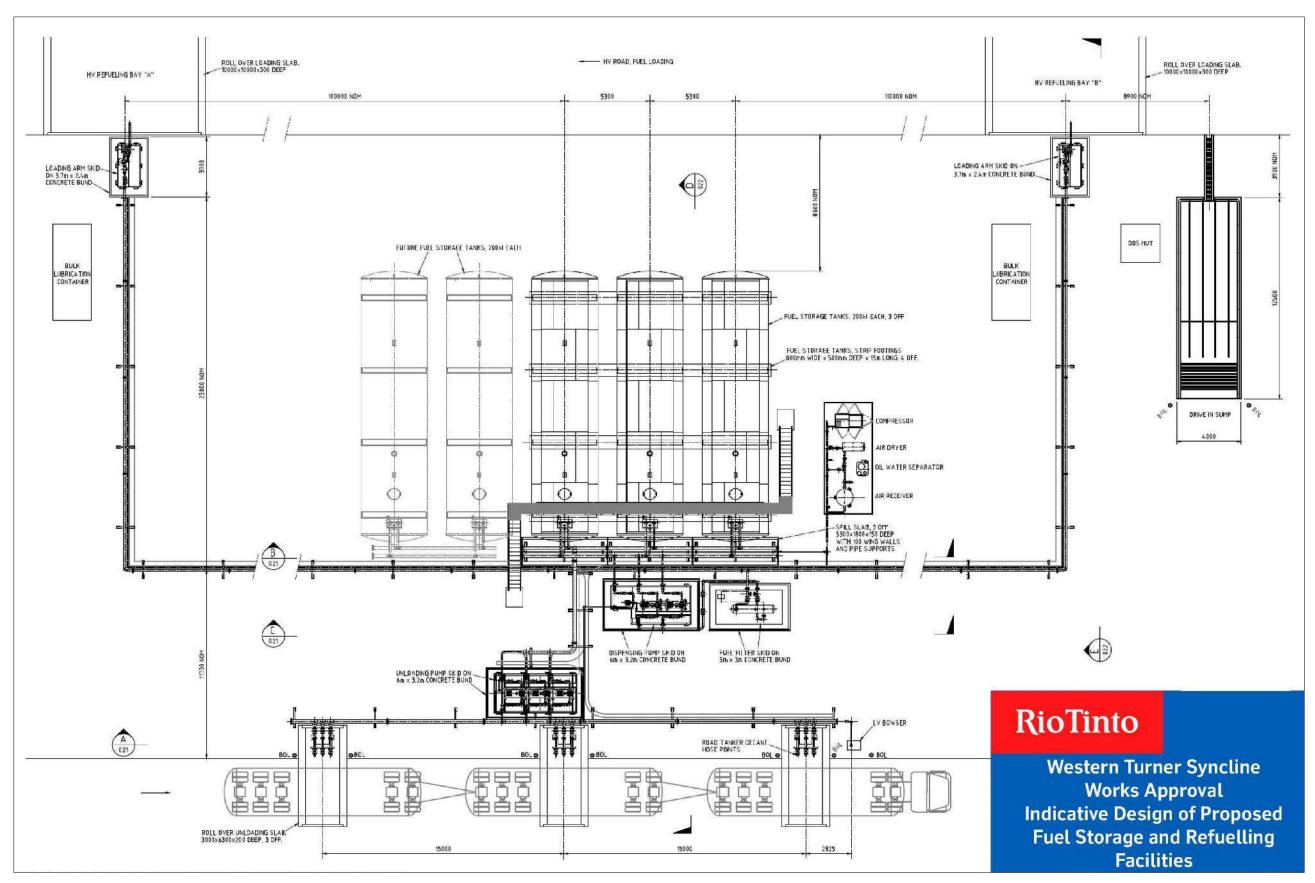


Figure 8: Proposed fuel storage and refuelling facilities

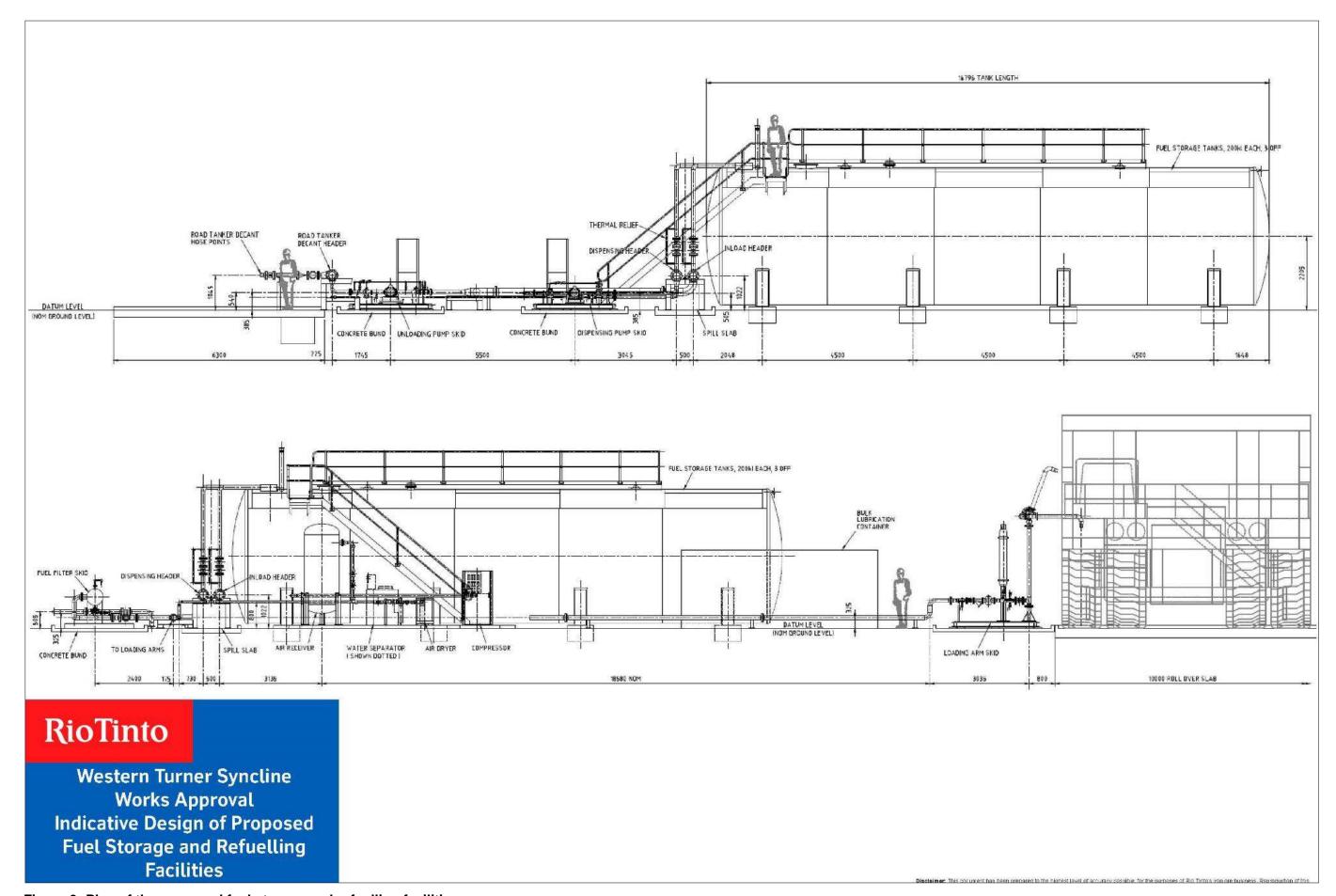


Figure 9: Plan of the proposed fuel storage and refuelling facilities

Schedule 2: Premises boundary

The new infrastructures boundaries are defined by the coordinates in Table 7.

Table 7: New infrastructure boundary coordinates

)					
Processing facilities (G47/1258)					
7,490,189					
4 and L47/00826)					

Schedule 3: Monitoring

Table 8: Treated effluent monitoring table

Location	Parameter	Units	Limit	Averaging Period	Frequency	Method
WWTP treated effluent discharge	Biochemical oxygen demand (BOD)	mg/L	30 mg/L	Spot sample	Once during commissioning and then monthly	Sample collection and preservation as per AS/NZS 5667.1; analysis as per AS/NZS 5667.10
pipeline (post treatment and pre- discharge)	Total Suspended Solids	mg/L	40 mg/L			
alconarge)	Total Nitrogen	mg/L	50 mg/L			
	Total Phosphorus	mg/L	12 mg/L			
	рН	-	6.5 – 8.5			
	E.coli	cfu/100ml	10 ⁵ cfu/100ml			