



Licence Number	L8739/2013/1
Licence Holder	Cable Sands (W.A.) Pty Ltd
ACN	009 137 142
Registered business address	Lot 962 Koombana Drive BUNBURY WA 6230
File Number	DER2014/000656-1
Duration	17 May 2013 to 19 May 2036
Date of amendment	4 March 2022
Premises	Wonnerup Mineral Sands Mine 109 Sues Rd YALYALUP WA 6280 Being Lot 100 on Deposited Plan 65306, Mining Lease M70/360 and M70/569 and part of Miscellaneous Licence L70/161, as depicted in Schedule 1

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed design capacity
Category 6: Mine dewatering: premises on which water is extracted and discharged into the environment to allow the mining of ore	600,000 tonnes per year
Category 8: Mineral sands mining or processing: premises on which mineral sands ore is mined, screened, separated or otherwise processed.	2,500,000 tonnes per year

This amended Licence is granted to the Licence Holder, subject to the following conditions, on 4 March 2022, by:

**A/MANAGER, RESOURCE INDUSTRIES
REGULATORY SERVICES**

An officer delegated by the CEO under section 20 of the EP Act

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Introduction

This Introduction is not part of the Licence conditions.

DWER's industry licensing role

The Department of Water and Environmental Regulation (DWER) is a government department for the state of Western Australia in the portfolio of the Minister for Environment. DWER's purpose is to advise on and implement strategies for a healthy environment for the benefit of all current and future Western Australians.

DWER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DWER works with the business owners, community, consultants, industry and other representatives to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DWER also monitors and audits compliance with works approvals and licence conditions, takes enforcement action as appropriate and develops and implements licensing and industry regulation policy.

Licence requirements

This Licence is issued under Part V of the Act. Conditions contained within the Licence relate to the prevention, reduction or control of emissions and discharges to the environment and to the monitoring and reporting of them.

Where other statutory instruments impose obligations on the Premises/Licence Holder the intention is not to replicate them in the licence conditions. You should therefore ensure that you are aware of all your statutory obligations under the Act and any other statutory instrument. Legislation can be accessed through the State Law Publisher website using the following link:

<http://www.slp.wa.gov.au/legislation/statutes.nsf/default.html>

For your Premises relevant statutory instruments include but are not limited to obligations under the:

Department of Water and Environmental Regulation

- *Environmental Protection (Unauthorised Discharges) Regulations 2004* – these Regulations make it an offence to discharge certain materials such as contaminated stormwater into the environment other than in the circumstances set out in the Regulations.
- *Environmental Protection (Controlled Waste) Regulations 2004* - these Regulations place obligations on you if you produce, accept, transport or dispose of controlled waste.
- *Environmental Protection (Noise) Regulations 1997* – these Regulations require noise emissions from the Premises to comply with the assigned noise levels set out in the Regulations.

You must comply with your licence. Non-compliance with your licence is an offence and strict penalties exist for those who do not comply.

Licence holders are also reminded of the requirements of section 53 of the Act which places restrictions on making certain changes to prescribed premises unless the changes are in accordance with a works approval, licence, closure notice or environmental protection notice.

Licence fees

If you have a licence that is issued for more than one year, you are required to pay an annual licence fee prior to the anniversary date of issue of your licence. Non payment of annual licence fees will result in your licence ceasing to have effect meaning that it will no longer be valid and you will need to apply for a new licence for your Premises.

Ministerial conditions

If your Premises has been assessed under Part IV of the Act you may have had conditions imposed by the Minister for Environment. You are required to comply with any conditions imposed by the Minister.

Premises description and Licence summary

The premises is a medium scale, low grade heavy mineral sands mine located near Busselton on the Southern Swan Coastal Plain, approximately 220 km south of Perth. The mine is predominantly located on cleared farming land in an area characterised by medium rainfall and heavy clay soils. There are several rural receptors within 450 m of the premises boundary, in addition to 58 individual properties within a 1.5 km radius of the mine.

Mining is undertaken using dry mining techniques, with the Superficial Aquifer dewatered to allow mining below the water table. Mined ore is pumped as a slurry to a concentrator plant, where the titanium minerals are separated from clay fines and sand fractions to produce heavy mineral concentrate, which is stockpiled and transported to the Licence Holder's mineral separation plant in Bunbury for further processing. Sand and clay fractions are returned as tailings to mined voids.

The primary emissions are noise and dust from continuous (24 hours per day) mining operations, and discharges to surface water. Noise levels are continuously monitored from permanent monitoring stations situated around the mine, and dust is monitored during the drier, summer months. Excess mine water is discharged to an agricultural

drain that flows off-site and joins the Sabina River, with water quality monitored prior to discharge, in addition to ambient water quality monitoring both upstream and downstream of the discharge point. The amendment to add Wonnerup North Stage 2 also allows discharge to a creek flowing into the Abba River, with the same water quality criteria and additional water monitoring points.

The licences and works approvals issued for the Premises since its establishment in 2012 are:

Instrument log		
Instrument	Issued	Description
W5174/2012/1	16/08/2012	Works approval for mine establishment (2 stages).
L8739/2013/1	17/05/2013	First operational licence – mining of Stage 1.
L8739/2013/1	01/08/2013	Licence amendment to specify only the external noise bunds need to be maintained to the constructed heights at all times (i.e. excludes internal in-pit noise bunds).
L8739/2013/1	26/06/2014	Licence amendment to transfer authorisation for construction of remaining infrastructure under Stage 2 of W5174.
W5745/2014/1	22/1/2015	Works Approval for Wonnerup South mine construction
L8739/2013/1	14/01/2016	Licence amendment to remove conditions regarding maintenance of external noise bund heights, noise targets and emissions to land.
L8739/2013/1	29/04/2016	Amendment by notice – extend expiry to 2036
L8739/2013/1	27/10/2017	Amendment Notice 1 – to authorise mining of Wonnerup South
L8739/2013/1	2/11/2018	Amendment Notice 2 - to authorise mining of Stage 1 of Wonnerup North
L8739/2013/1	2/11/2020	Removal of Wonnerup South from the licence
L8739/2013/1	5/3/2021	Addition of Wonnerup North Stage 2 (Phase A)
L8739/2013/1	4/3/2022	Addition of Wonnerup North Stage 2 (Phase B)

Severance

It is the intent of these Licence conditions that they shall operate so that, if a condition or a part of a condition is beyond the power of this Licence to impose, or is otherwise *ultra vires* or invalid, that condition or part of a condition shall be severed and the remainder of these conditions shall nevertheless be valid to the extent that they are within the power of this Licence to impose and are not otherwise *ultra vires* or invalid.

END OF INTRODUCTION

Licence conditions

1 General

1.1 Interpretation

1.1.1 In the Licence, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 For the purposes of this Licence, unless the contrary intention appears:

'Acid Sulfate Soils Management Plan' means the document titled "Wonnerup Projects Acid Sulfate Soils Environmental Management Plan – Revision 1", prepared by Cristal Mining Australia Ltd and dated July 2014;

'Act' means the *Environmental Protection Act 1986*;

'annual period' means the inclusive period beginning 1 January and ending on 31 December in the same year;

'ASS' means Acid Sulfate Soils, being soils or sediments which contain iron sulfides and/or other sulfuric minerals that have previously been oxidised to produce sulfuric acid (Actual Acid Sulfate Soils) or soils or sediments which contain iron sulfides and/or other sulfuric minerals that have not been oxidised (Potential Acid Sulfate Soils);

'AS 3580.1.1' means the Australian Standard AS 3580.1.1 *Methods for sampling and analysis of ambient air – Guide to siting air monitoring equipment*;

'AS 3580.9.3' means the Australian Standard AS 3580.9.3 *Methods for sampling and analysis of ambient air - Determination of suspended particulate matter – Total suspended particulate matter (TSP) – High volume sampler gravimetric method*;

'AS 4282' means the Australian Standard AS 4282-1997 *Control of the obtrusive effects of outdoor lighting*;

'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 5667.6' means the Australian Standard AS/NZS 5667.6 *Water Quality – Sampling – Guidance on sampling of rivers and streams*;

'averaging period' means the time over which a limit or target is measured or a monitoring result is obtained;

'Category 3 TSF' means a Tailings Storage Facility with a low hazard rating and maximum structure height of < 5 m, as determined by reference to the document titled "Guidelines on the Safe Design and Operating Standards for Tailings Storage" published by the Department of Minerals and Energy (1999);

'CEO' means Chief Executive Officer of the Department of Water and Environmental Regulation;

'CEO' for the purpose of correspondence means;

Director General
Department administering the Environmental Protection Act 1986
Locked Bag 10
Joondalup DC WA 6919
Email: info@dwer.wa.gov.au;

'dB(A)' means a noise reading in decibels obtained using the "A" frequency-weighting characteristic;

'Directional system' means multi-microphone sound measuring equipment compliant with the relevant sections of Schedule 4 of the *Environmental Protection (Noise) Regulations 1997* and capable of recording directional overall and one-third octave band equivalent A-weighted levels (L_{Aeq});

'freeboard' means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point;

' $L_{AS90,30min}$ ' and ' $L_{AS10,30min}$ ' means the A-weighted level exceeded for more than 90% and 10%, respectively, of the time over 30 minutes with the meter set to 'Slow' time weighting;

' $L_{Aeq(20Hz-500Hz),30min}$ ' means the A-weighted equivalent noise level between 20 Hz and 500 Hz (one-third octave bands inclusive) averaged over 30 minutes;

'Licence' means this Licence numbered L8739/2013/1 and issued under the Act;

'Licence Holder' means the person or organisation named as Licence Holder on page 1 of the Licence;

'Mining Operations' means the removal of overburden and excavation of ore, and subsequent in-pit screening, slurring and processing of mined ore;

'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;

'Non-directional system' means single microphone sound measuring equipment compliant with Schedule 4 of the *Environmental Protection (Noise) Regulations 1997* and capable of recording overall and one-third octave band statistical noise levels based on the A-weighted sound pressure level with 'Slow' time weighting (L_{AS});

'North Shore Tails' means trash mineral tailings from secondary processing at the company's licensed mineral separation plant at North Shore;

'PM' means total particulate matter including both solid fragments of material and miniscule droplets of liquid;

'**PM₁₀**' means particles with an aerodynamic diameter of less or equal to 10 µm;

'**Premises**' means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Licence;

'**Professional Engineer**' means a person holding current certification from the Institution of Engineers Australia (IEAust);

'**quarterly**' means the 4 inclusive periods from 1 January to 31 March, 1 April to 30 June, 1 July to 30 September and 1 October to 31 December in the same year;

'**Schedule 1**' means Schedule 1 of this Licence unless otherwise stated;

'**Schedule 2**' means Schedule 2 of this Licence unless otherwise stated;

'**spot sample**' means a discrete sample representative at the time and place at which the sample is taken;

'**TSP**' means total suspended particles each having an equivalent aerodynamic diameter of less than 50 micrometres;

'**µS/cm**' means microsiemens per centimetre; and

'**Water Management Plan**' means the document titled "Wonnerup Projects Groundwater Operating Strategy & Water Management Plan – Revision 3" prepared by Cristal Mining Australia Ltd and dated June 2015.

1.1.3 Any reference to an Australian or other standard in the Licence means the relevant parts of the standard in force from time to time during the term of this Licence.

1.1.4 Any reference to a guideline or code of practice in the Licence means the version of that guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guideline or code of practice made during the term of this Licence.

1.2 General conditions

Infrastructure and equipment

1.2.1 The Licence Holder must install and carry out the Works for the infrastructure and equipment relating to Wonnerup North stage 2, Phase B (on M70/569 and M70/360)

- (a) specified in Column 1;
 - (b) to the requirements specified in Column 2; and
 - (c) in the general location specified in Column 3;
- of Table 1.2.2 below.

- 1.2.3 The Licence Holder must not depart from the requirements specified in Column 2 of Table 1.2.2 except:
- (a) where such departure does not increase risks to public health, public amenity or the environment; and
 - (b) all other Conditions of the Existing Licence are still satisfied.
- 1.2.4 Subject to Condition 1.2.2, within 28 days of the completion of the Works specified in Column 1 of Table 1.2.2, the Licence Holder must provide to the CEO certification from a Professional Engineer confirming each item of infrastructure or component of infrastructure specified in Column 1 of Table 1.2.2 below has been constructed with no material defects and to the requirements specified in Column 2.
- 1.2.5 Where a departure from the requirements specified in Column 2 of Table 1.2.2 occurs and is of a type allowed by Condition 1.2.3, the Licence Holder must provide to the CEO a description of, and explanation for, the departure along with the report required by Condition 1.2.4.

Table 1.2.2: Works, infrastructure and equipment requirements table for the Wonnerup North site stage 2 Phase B (M70/569 and M70/360)

Column 1	Column 1	Column 1
Infrastructure/ Equipment	Requirements (design and construction)	Site plan reference
Installation of initial pipelines carrying clay slimes, sand tailings and return water for Wonnerup North Stage 2, Phase B	<p>Constructed with:</p> <ul style="list-style-type: none"> • Automatic cut-outs in the event of a pipe failure; OR • Secondary containment sufficient to contain any spill for a period equal to the time between routine inspections; OR • Telemetry systems and pressure sensors along pipelines to allow detection of leaks and failures <p>River crossing services corridor to comply with design approved by the Australian Government Department of Agriculture, Water and the Environment (DAWE) in accordance with the Environmental Protection and Biodiversity Conservation Act approval 2014/7205.</p>	N/A
Ambient air quality monitoring stations AQ9 and AQ10	<p>Must be established:</p> <ul style="list-style-type: none"> • Prior to commencing earthworks north of the Abba River; and • Siting in accordance with AS 3580.1.1. 	'AQ9' and 'AQ10' monitoring point map in Schedule 1
Ambient noise monitoring station AN7	<p>Must be established:</p> <ul style="list-style-type: none"> • Prior to commencing earthworks north of the Abba River; and • Siting in accordance with AS 3580.1.1. 	'AN7' on monitoring point map in Schedule 1
Noise bunding for Wonnerup North stage 2 Phase B on M70/360	<ul style="list-style-type: none"> • Must construct a minimum 6 m high noise bund perpendicular to the direction of mining, such that mining for the first pit will be entirely within 30m of this bund. • Must construct at least the initial 150m, of a minimum 6 m high noise bund running in the 	Direction of mining and indicative locations of noise bunds shown in Schedule 1:

	direction of mining, either side of the initial mine pit. these are to join the previously described noise bund at approximately 90°. These will be extended during mining as per condition 2.5.1.	Maps of noise bunds for Wonnerup North Stage 2 Phase B
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Hours of operation

1.2.6 The Licence Holder must only carry out initial mine pit development works, including ongoing topsoil stripping and boundary bund construction, relating to the Wonnerup North site (M70/360 and M70/569) between the hours of 7:00 AM and 7:00 PM Monday to Saturday (excluding public holidays).

Emissions (general)

1.2.7 The Licence Holder must not cause any Emissions from the Works relating to the Wonnerup North site (M70/360) except for specified Emissions and general Emissions described in Column 1 of Table 2.1.1, and subject to the exclusions, limitations or requirements specified in Column 2 of Table 2.1.1.

Table 2.1.1: Authorised Emissions table for the Wonnerup North site (M70/360 and M70/569)

Column 1	Column 2
Emission type	Exclusions/Limitations/Requirements
Specified Emissions	
Disposal of mine tailings	Only to solar drying ponds or mine voids, and subject to compliance with Condition 1.3.1
Discharges to Air – fugitive dust	Subject to compliance with Conditions 2.4.1 – 2.4.3
Ambient noise	Subject to compliance with Condition 2.5.1
General Emissions	
Emissions which arise from undertaking the Works	<ul style="list-style-type: none"> • Unreasonable Emissions; or • Emissions that result in, or are likely to result in, Pollution, Material Environmental Harm or Series Environmental Harm; or • Discharges of Waste in circumstances likely to cause Pollution; or • Emissions that result, or are likely to result in, the Discharge or abandonment of Waste in water to which the public has access; or • Emissions or Discharges which do not comply with an Approved Policy, prescribed standard, or the conditions in an Implementation Agreement or Decision; or • Emissions or Discharges the subject of offences under regulations prescribed under the EP Act, including materials discharged under the Environmental Protection (Unauthorised Discharges) Regulations 2004

1.3 Premises operation

1.3.1 The Licence Holder shall ensure that materials listed in Table 1.3.1 are only discharged into the infrastructure detailed in that table.

Table 1.3.1: Containment infrastructure		
Infrastructure	Material	Infrastructure requirements
Solar evaporation ponds	Thickener underflow (clay fines)	<ul style="list-style-type: none"> • Pond floors to be constructed with a minimum slope of 1:300 • Ponds to be constructed with overburden material or sand tailings with angle of repose for the outer pond wall being no steeper than 1.0:1.5 (V:H) • Pond wall height not to exceed 5.0m above the natural ground level • Pond walls ≥ 2.5 m must be track rolled with a dozer • Decant overflow drains to the process water ponds; • A minimum top of embankment (total) freeboard of 500 mm is maintained on ponds with wall heights ≤ 2.5 m • A minimum top of embankment (total) freeboard of 1.0 m is maintained on ponds with wall heights ≥ 2.5 m
Process water ponds	Process water (dewater effluent, tails return water, fines decant, recycled process water), rainwater and harvested stormwater	<ul style="list-style-type: none"> • Weir boards on overflow points, to control flow and/or storage capacity (if required); • pH probe on overflow points; • Flow metering device on overflow points.

1.3.2 The Licence Holder shall:

- undertake inspections as detailed in Table 1.3.2;
- where any inspection identifies that an appropriate level of environmental protection is not being maintained, take corrective action to mitigate adverse environmental consequences as soon as practicable; and
- maintain a record of all inspections undertaken.

Table 1.3.2: Inspection of infrastructure		
Scope of inspection	Type of inspection	Frequency of inspection
Thickener underflow, tailings and return water pipelines	Visual integrity and leak assessment	Daily whilst operating, Monthly if not operating
Solar evaporation ponds	Visual to confirm required freeboard capacity is available	

1.3.3 The Licence Holder shall undertake an annual water balance for the Premises.

The water balance shall as a minimum consider the following:

- site rainfall;
- site evaporation;
- volumes of dewatering; and

(d) volume of water discharged from the Premises.

1.3.4 The Licence Holder shall ensure any ASS material disturbed on the Premises is managed in accordance with the parts of the document specified in Table 1.3.3.

Table 1.3.3: Management plans		
Management plan reference	Parts	Date of document
Acid Sulfate Soils Management Plan	<ul style="list-style-type: none"> • 4.3.1 – Excavated materials • 4.3.2 – Process tails 	July 2014

1.3.5 The Licence Holder may construct, move and extend pipelines as required to carry clay slimes, sand tailings and return water within the authorised Wonnerup North stage 2 mining area on M70/569 and M70/360. Such pipelines must be constructed and maintained with:

- (e) Automatic cut-outs in the event of a pipe failure; OR
- (f) Secondary containment sufficient to contain any spill for a period equal to the time between routine inspections; OR
- (g) Telemetry systems and pressure sensors along pipelines to allow detection of leaks and failures

2 Emissions

2.1 General

2.1.1 The Licence Holder shall record and investigate the exceedance of any descriptive or numerical limit or target specified in any part of section 2 of this Licence.

2.2 Point source emissions to surface water

2.2.1 The License Holder must ensure that where waste is emitted to surface water from the emission points listed in Column 1 of Table 2.2.1 and identified on the map of emission points in Schedule 1, it is done so in accordance with the conditions of this Licence.

Table 2.2.1: Emission points to surface water		
Emission point reference	Description	Source including abatement
W1	Primary off-site discharge point to the Sabina River. Water is allowed to overflow via gravity from the process water ponds into an on-site drainage channel, which then flows off-site through a culvert under Sues Rd and into the river	Production water and contaminated stormwater, treated with flocculating and neutralising agent (where required to achieve discharge criterion listed in Table 2.2.2)
W2	Off-site discharge point to the Abba River. Water is pumped from the process water ponds through a lined overland flow path, which flows down a modified natural creek into the Abba River.	

2.2.2 The License Holder must not cause or allow point source emissions to surface water that do not meet the limits listed in Table 2.2.2.

Table 2.2.2: Point source emission limits to surface water			
Emission point reference	Parameter	Limit (including units)	Averaging period
W1 – W2	pH	5.5 (lower) 8.5 (upper)	Spot sample
	Electrical conductivity @ 25°C	2,500 µS/cm	
	Total dissolved solids	1,500 mg/L (upper)	
	Total suspended solids	80 mg/L (upper)	
	Total titratable acidity	65 mg/L (upper)	
	Total alkalinity	10 mg/L (lower)	

2.3 Emissions to land

2.3.1 The Licence Holder shall ensure that where waste is emitted to land from the emission points in Table 2.3.1 it is done so in accordance with the conditions of this Licence.

Table 2.3.1: Emission points to land		
Emission point reference	Description	Source including abatement
mine voids (as shown on the 'Premises map and map of emission points' in Schedule 1)	Disposal of mineral sands processing waste to mine voids	Sand tails from the wet concentrator plant
		Dried clay slimes from solar evaporation ponds
		North Shore Tails, blended with minesite concentrator sand tails for return to the mine void

2.4 Fugitive emissions

2.4.1 The Licence Holder shall not cause or allow the concentration of TSP or PM₁₀ from mining operations at the Premises to exceed the limit stated in condition 3.4.1 at the Premises boundary.

2.4.2 The Licence Holder is exempt from compliance with the limit specified in Condition 2.4.1 if in the case of an event in Table 2.4.1:

- (a) the corresponding management action is taken; and
- (b) there is sufficient evidence to demonstrate that the exceedance is not attributed to operations on the Premises.

Table 2.4.1: Management actions		
Monitoring point reference	Event	Management action
AQ1 - AQ3, AQ5 - AQ10	Exceedance of the limit specified in Condition 2.4.1	Undertake an investigation of the exceedance, including but not limited to: (a) the root cause analysis for the exceedance; and (b) any common or contributory factors for the exceedance.

2.4.3 The Licence Holder shall ensure fugitive emissions are minimised through the following management actions:

- (c) exposed or disturbed areas such as stockpiles and open areas will be stabilised through the use of suitable surface treatments;
- (d) the effectiveness of the above will be reviewed on a regular basis;
- (e) water carts will be used on trafficked areas where longer term soil stabilisation is not practical;
- (f) work instructions and training will be used to embed dust management practices; and
- (g) An air quality management plan will be maintained, containing management triggers to assess dust risk in the event of adverse weather forecasts, high dust generation activities or dust observations by staff or members of the public.

2.5 Noise

2.5.1 The Licence Holder must implement the noise controls specified in Table 2.5.1 whilst conducting Mining Operations.

Table 2.5.1: Noise controls table	
Control	Action/Requirements
Heavy earthmoving equipment	<ul style="list-style-type: none"> • Must use the quietest equipment reasonably available; • Must use broadband reversing alarms (squawkers or quackers) on all earthmoving fleet instead of beepers; • The Sound Power Level of in-pit front end loaders used on the Premises during night time Mining Operations must not exceed 107 dB(A)
Noise bunding and location of mining unit – Wonnerup North Stage 1	<ul style="list-style-type: none"> • Must maintain a 4 m high secondary noise bund along the southern boundary of M70/360 during Mining Operations on M70/360; • An effective 6 m high noise bund, measured from the base of the mining unit, must be constructed, as required, in order to maintain a minimum of 100 m of bund in advance of the mining unit between it and residences to the south, during Mining Operations on M70/360. The mining unit must be located within 30 m of this bund.
Noise bunding and location of mining unit – Wonnerup North Stage 2 Phase A	<ul style="list-style-type: none"> • An effective 6 m high noise bund, measured from the base of the mining unit, must be constructed and maintained, in order to maintain a minimum of 100 m of bund in advance of the mining unit between it and residences to the south, during mining operations on M70/569. The mining unit must be located within 30 m of this bund. • An effective 6 m high noise bund, measured from the base of the mining unit, must be constructed and maintained, in order to maintain a minimum of 100 m of bund in advance of the mining unit between it and residences to the north, during mining operations on M70/569. • Must construct the south eastern noise bunds shown in ‘Schedule 1: Map of noise bunds’ to a minimum height of 6m prior to commencing mining in the mining areas shown on that map as ‘North-south bunds required’. • Breaks in all noise bunds under powerlines are authorised as per ‘Map of noise bunds’ in Schedule 1.

<p>Noise bunding and location of mining unit – Wonnerup North Stage 2 Phase B (North of Abba River on M70/569)</p>	<ul style="list-style-type: none"> • An effective 6 m high noise bund, measured from the base of the mining unit, must be constructed and maintained, in order to maintain a minimum of 100 m of bund in advance of the mining unit between it and residences to the north, during mining operations north of the Abba River on M70/569. The mining unit must be located within 30 m south of this bund. • An effective 6 m high noise bund, measured from the base of the mining unit, must be constructed and maintained, in order to maintain a minimum of 100 m of bund in advance of the mining unit between it and residences to the south, during mining operations north of the Abba River on M70/569 • Breaks in all noise bunds under powerlines are authorised as per 'Maps of noise bunds' in Schedule 1.
<p>Noise bunding and location of mining unit – Wonnerup North Stage 2 Phase B (North of Abba River on M70/360)</p>	<ul style="list-style-type: none"> • For each mining pit, an effective 6 m high noise bund, measured from the base of the mining unit, must be constructed and maintained perpendicular to the direction of mining. The mining unit must only operate within 30m south of this bund. • An effective 6 m high noise bund, measured from the base of the mining unit, must be constructed and maintained perpendicular to the bund described above, either side of the mining pit. A minimum of 50m of bund in advance of and 100m behind the mining unit is required. • indicative bund positions and direction of mining are shown in 'Maps of noise bunds' in Schedule 1.
<p>Cessation of activities</p>	<ul style="list-style-type: none"> • Mining equipment must be relocated if noise monitoring indicates activities on the Premises are significantly contributing to noise levels that are likely to exceed the Noise Regulations at nearby receptor(s); • Mining Operations must be suspended if equipment relocation or adjustment fails to reduce the likelihood of noise non-compliance at nearby receptor(s) and an amenity agreement is not in place with the affected receptor(s)

3 Monitoring

3.1 General monitoring

3.1.1 The Licence Holder shall ensure that:

- (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;
- (b) all surface water sampling is conducted in accordance with AS/NZS 5667.6;
- (c) all noise measurements are carried out in accordance with Part 3 of the *Environmental Protection (Noise) Regulations 1997* (as applicable); and
- (d) 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.

3.1.2 The Licence Holder shall ensure that:

- (a) weekly monitoring is undertaken at least 5 days apart;
- (b) monthly monitoring is undertaken at least 15 days apart;
- (c) quarterly monitoring is undertaken at least 45 days apart; and
- (d) annual monitoring is undertaken at least 9 months apart.

3.1.3 The Licence Holder shall ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer’s specifications.

3.1.4 The Licence Holder shall, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.

3.2 Monitoring of point source emissions to surface water

3.2.1 The Licence Holder shall undertake the monitoring in Table 3.2.1 according to the specifications in that table.

Table 3.2.1: Monitoring of point source emissions to surface water			
Monitoring point reference	Parameter	Units	Frequency ¹
SW1 & SW2 – weir boxes on process water dams (magflow meters)	Volumetric flow rate	m ³ /d	Continuous whilst discharging ³
W1 - W2	pH ²	No unit	Weekly, whilst discharging
	Total dissolved solids ²	Mg/L	
	Total suspended solids ²		
	Total titratable acidity ²		Monthly, whilst discharging
	Total alkalinity ²		
	Sulfate		
Metals and metalloids: Aluminium, arsenic, chromium, copper, lead, manganese, nickel, zinc, total recoverable hydrocarbons, ammonium			

Note 1: Sampling shall occur on the first day of discharge for the season, then weekly/monthly thereafter.

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

Note 3: Availability ≥90% of the measurement intervals on a monthly basis.

3.3 Process monitoring

3.3.1 The Licence Holder shall undertake the monitoring in Table 3.3.1 according to the specifications in that table.

Table 3.3.1: Process monitoring					
Monitoring point reference	Process description	Parameter	Units	Frequency	Method
-	Processing of ore	Amount of ore processed	tonnes	Annual	None specified
-	Disposal of North Shore Tails	Amount of North Shore Tails disposed on the Premises		Monthly	

3.4 Ambient environmental quality monitoring

3.4.1 The Licence Holder shall undertake the monitoring in Tables 3.4.1 – 3.4.3 according to the specifications in those tables.

Monitoring point reference	Parameter	Sound measuring equipment	Units	Frequency
AN1 - AN3, AN5 – AN8 ³	L _{AS90,30min}	Non-directional system	dB	Continuous ¹
	L _{AS10,30min}			
	L _{Aeq(20Hz-500Hz),30min}			
	Audio recording ²		-	
AN2 - AN3, AN5 - AN6 ³	L _{Aeq,1min} one-third octave spectral data	Directional system	dB	

Note 1: Availability ≥90% of the measurement intervals on a monthly basis.

Note 2: During internal target exceedances.

Note 3:

- Monitoring at AN1 only required when an operating mining unit is located west of AN5
- Monitoring at AN2 – AN3 only required when an operating mining unit is located the Wonnerup site (Lot 100).
- Monitoring at AN5 only required whilst an operating mining unit is located on the Wonnerup North site (M70/360), west of AN6
- Monitoring at AN6 only required whilst an operating mining unit is located on the Wonnerup North site (M70/360 and M70/569), south of the Abba River
- Monitoring at AN7 only required whilst an operating mining unit is located north of the Abba River, on M70/360.
- Monitoring at AN8 only required whilst an operating mining unit is located north of the Abba River, on M70/569

Monitoring point reference	Parameter	Units	Frequency ³	Sampling duration	Limit ²	Method
AQ1 - AQ3, AQ5 - AQ7	TSP	µg/m ³	Monthly	24 hours	260 µg/m ³ (24-hour average)	AS 3580.9.3
AQ1 - AQ3, AQ5 – AQ8	PM ₁₀		Minimum of 2 samples between 1 October and 31 May the following year	Minimum of 14 days continuous logging with 15 minute samples averages ¹	Target only: 50 µg/m ³ (24-hour average)	None specified
AQ9			Continuous logging with 15 minute samples averages, while mining or earthmoving occurs North of the Abba River ¹			
AQ10			Continuous logging with 15 minute samples averages, while mining or earthmoving occurs North of the Abba River on M70/ 569 ¹			
AQ7-10	Dust deposition	g/m ² /day Also reported as g/m ² /30 days	Continuous ¹ (replaced monthly)	Monthly	Target only: 4g/m ² /month	AS/NZS 3580.10.1

Note 1: Availability ≥90% of the measurement intervals on a monthly basis.

Note 2: Unless otherwise labelled as a target only

Note 3: Only starting from 1 October and ending 31 May the following year

Table 3.4.3: Monitoring of ambient surface water quality				
Monitoring point reference	Parameter	Units	Averaging period	Frequency
WQ1 – WQ10	pH ¹	-	Spot sample	Annual
	Electrical conductivity @ 25°C	µS/cm		
	Total dissolved solids	mg/L		
	Total suspended solids			
	Sulfate			

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

4 Information

4.1 Records

4.1.1 All information and records required by the Licence shall:

- (a) be legible;
- (b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
- (c) except for records listed in 4.1.1(d) and (e) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence;
- (d) for those following records, be retained until the expiry of the Licence and any subsequent licence:
 - (i) off-site environmental effects; or
 - (ii) matters which affect the condition of the land or waters; and
- (e) for noise data records, be retained for at least 12 months from the date the record was made.

4.1.2 The Licence Holder must submit to the CEO, no later than 31 March in each year, a Compliance Report indicating the extent to which the Licence Holder has complied with the Conditions in this Licence for the preceding Annual Period.

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

4.2 Reporting

4.2.1 The Licence Holder shall submit to the CEO at the Contact Address an annual environmental report by 31 March in each year. The report shall contain the information listed in Table 4.2.1 in the format or form specified in that table.

Table 4.2.1: Annual environmental report		
Condition or table (if relevant)	Parameter	Format or form ¹
-	Summary of any failure or malfunction of any pollution control equipment or any environmental incidents that have occurred during the year and any action taken	None specified
-	Amount of overburden removed, ore processed, HMC	

	produced, tails returned to mine voids, North Shore Tails returned to the mine for blending and disposal	
-	A copy of the annual groundwater monitoring results required by Licence to Take Water GWL173523	
1.3.3	Premises annual water balance	
4.1.3	Complaints summary	
Table 3.2.1	Monitoring of point source emissions to surface water	
Table 3.3.1	Process monitoring	
Table 3.4.1	Summary of ambient noise levels, assessed against the Noise Regulations	
Table 3.4.2	Monitoring of ambient air quality	
Table 3.4.3	Monitoring of ambient surface water quality	

Note 1: Forms are in Schedule 2.

4.2.2 The Licence Holder shall ensure that the annual environmental report also contains an assessment of the information contained within the report against previous monitoring results and Licence limits and targets.

4.2.3 The Licence Holder shall submit the information in Table 4.2.2 to the CEO at the Contact Address according to the specifications in that table.

Table 4.2.2: Non-annual reporting requirements				
Condition or table	Parameter	Reporting period	Reporting date (after end of the reporting period)	Format or form¹
-	Copies of original monitoring reports submitted to the Licence Holder by third parties	Not applicable	Within 14 days of the CEO's request	As received by the Licence Holder from third parties

Note 1: Forms are in Schedule 2.

Notification

4.2.4 The Licence Holder shall ensure that the parameters listed in Table 4.3.1 are notified to the CEO at the Contact Address and in accordance with the notification requirements of the table.

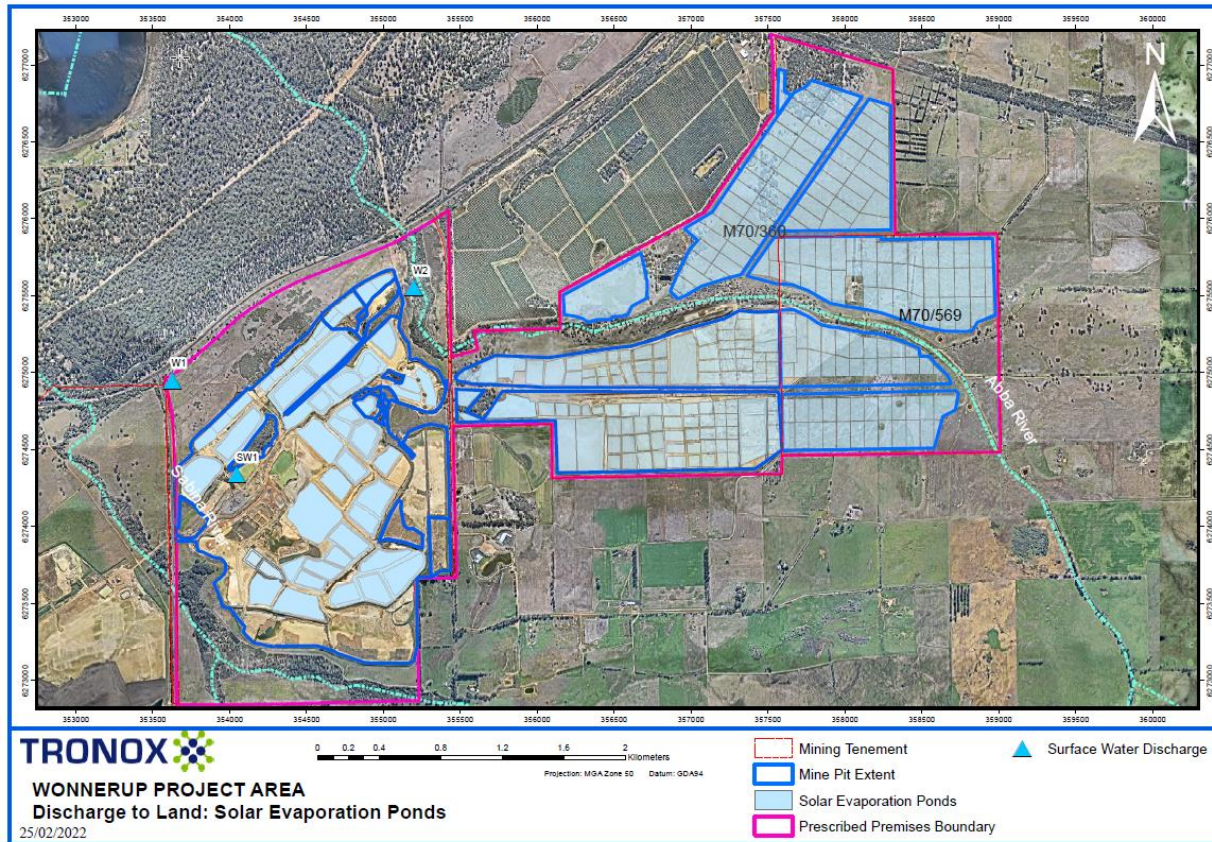
Table 4.3.1: Notification requirements			
Condition or table	Parameter	Notification requirement¹	Format or form²
Condition 2.1.1	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5PM of the next usual working day.	N1
		Part B: As soon as practicable	
Condition 3.1.4	Calibration report	As soon as practicable	None specified

Note 1: No notification requirement in the Licence shall negate the requirement to comply with s72 of the Act.

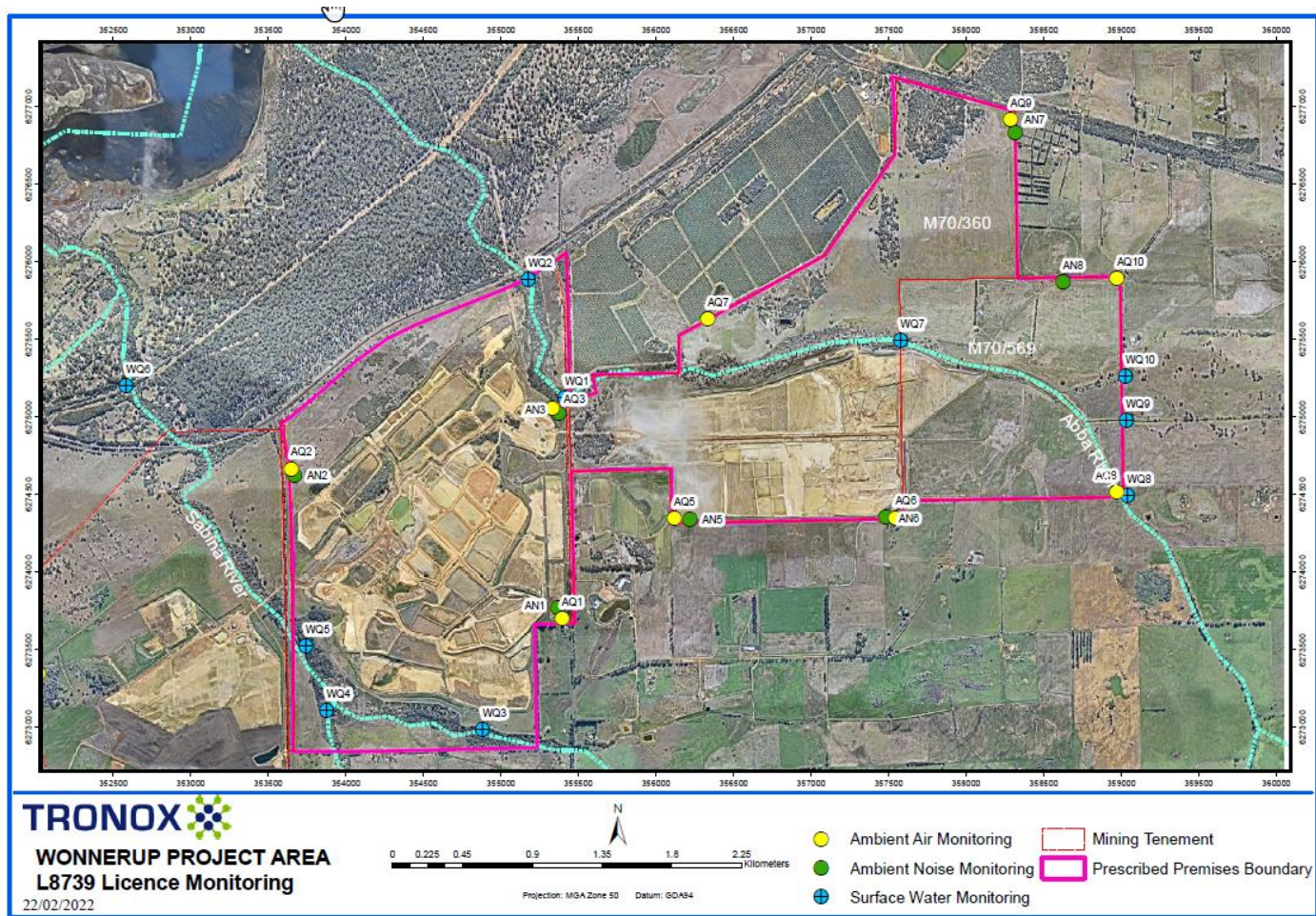
Note 2: Forms are in Schedule 2

Schedule 1: Maps

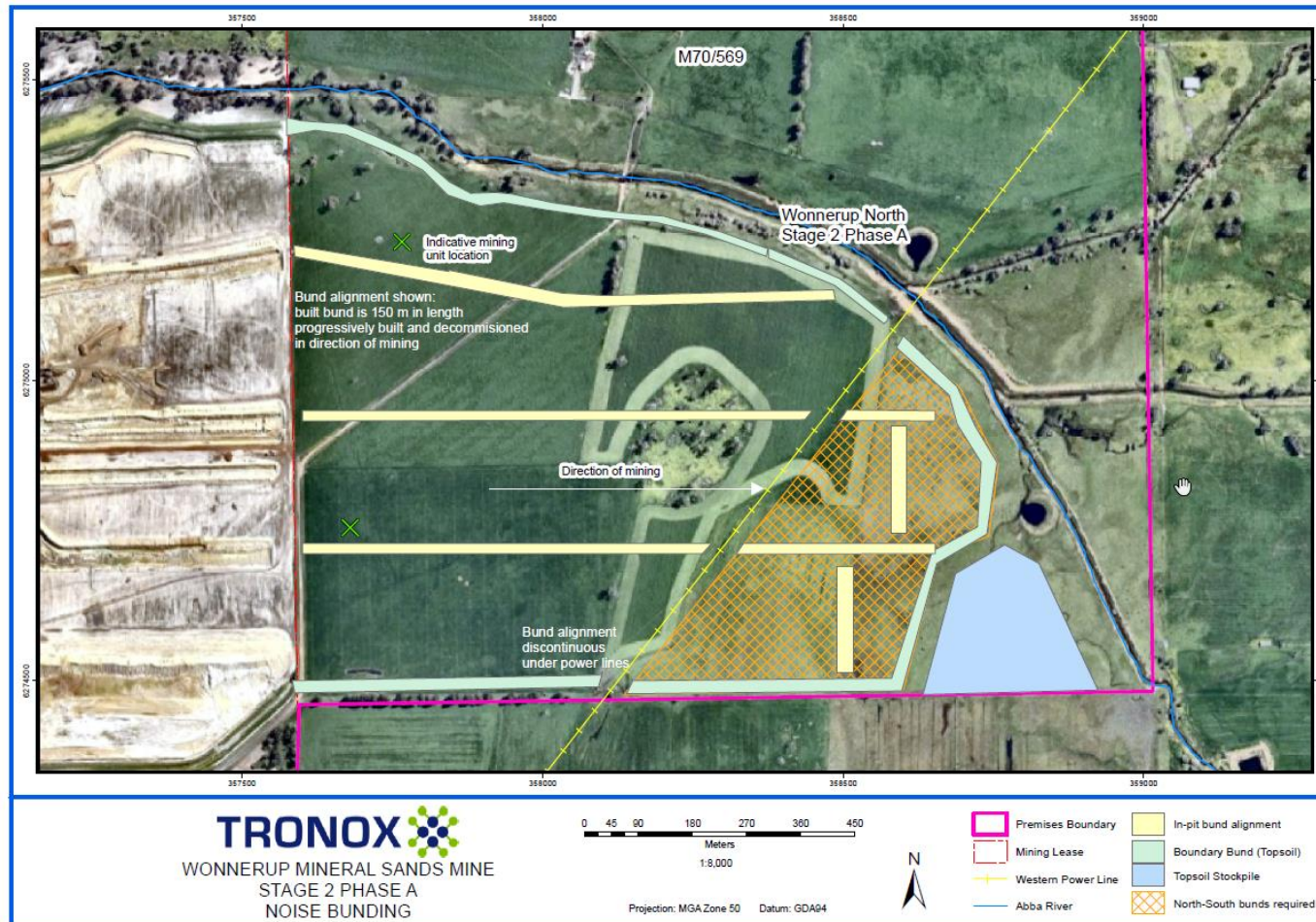
Premises map and map of emission points - The figure below depicts the Premises boundary, and the location of the emission points defined in Tables 2.3.1 and 2.2.1. The 'solar evaporation ponds' are mine voids to be backfilled with processing wastes.

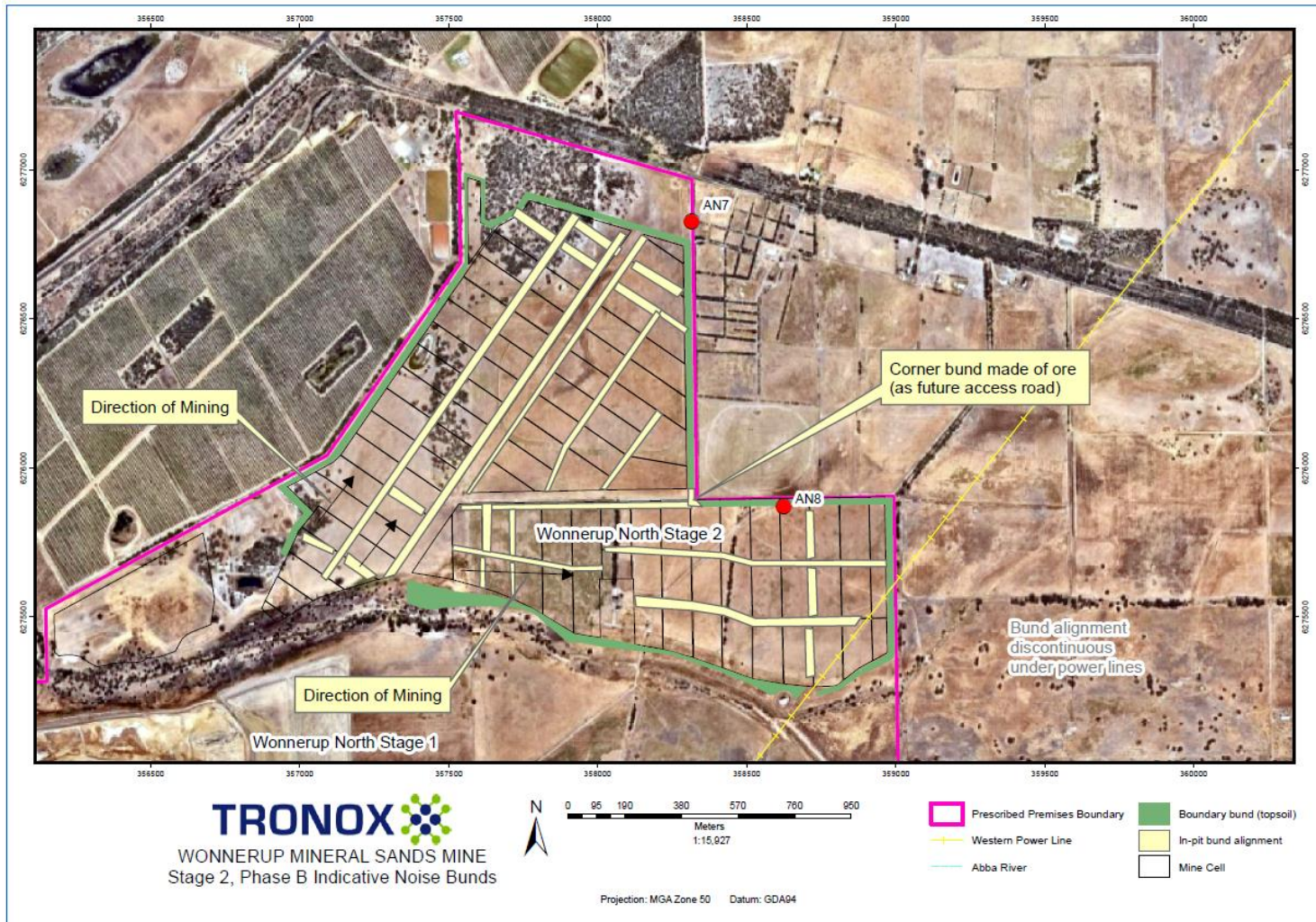


Map of monitoring points - The location of the monitoring points defined in Tables 3.2.1, 3.4.1, 3.4.2, 3.4.3 are shown below.



Maps of noise bunds - as specified in Table 1.2.2 and Table 2.5.1.





Schedule 2: Notification & Forms

Licence: L8739/2013/1 Licence Holder: Cable Sands (W.A.) Pty Ltd
 Form: N1 Date of breach:

Notification of detection of the breach of a limit.

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

Part A

Licence Number	
Name of operator	
Location of Premises	
Time and date of the detection	
Notification requirements for the breach of a limit	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Part B

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

Name	
Position	
Signature on behalf of Cable Sands (W.A.) Pty Ltd	
Date	