



<b>Licence Number</b>	L9058/2017/1
<b>Licence Holder</b>	Sandfire Resources NL
<b>ACN</b>	105 154 185
<b>Registered business address</b>	Level 1, 31 Ventnor Avenue West Perth, WA 6005
<b>File Number</b>	DER2017/000700-1
<b>Duration</b>	6/12/2018 to 29/3/2038
<b>Date of issue</b>	<b>5/12/2018</b>
<b>Prescribed Premises</b>	Category 6 Category 12
<b>Premises</b>	Monty Project  Mining tenements M52/1071 Shire of Meekatharra WA

This Licence is granted to the Licence Holder, subject to the following conditions, on 05 December 2018 by:

**Alana Kidd**

Manager, Resource Industries  
Regulatory Services – Environment  
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

## Explanatory notes

These explanatory notes do not form part of this Licence.

### Defined terms

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Definition of terms used in this Licence can be found at the start of this Licence. Terms which are defined have the first letter of each word capitalised throughout this Licence.

### Department of Water and Environmental Regulation

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The Department of Water and Environmental Regulation (DWER) is established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the *Environmental Protection Act 1986 (WA)* (EP Act). The Department also monitors and audits compliance with licences, takes enforcement action and develops and implements licensing and industry regulation policy.

### Licence

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Section 56 of the EP Act provides that an occupier of Prescribed Premises commits an offence if Emissions are caused or increased, or permitted to be caused or increased, or Waste, noise, odour or electromagnetic radiation is altered, or permitted to be altered, from Prescribed Premises, except in accordance with a works approval or licence.

Categories of Prescribed Premises are defined in Schedule 1 of the *Environment Protection Regulations 1987 (WA)* (EP Regulations).

This Licence does not authorise any activity which may be a breach of the requirements of another statutory authority including, but not limited to the following:

- conditions imposed by the Minister for Environment under Part IV of the EP Act;
- conditions imposed by DWER for the clearing of native vegetation under Part V, Division 2 of the EP Act;
- any requirements under the *Waste Avoidance and Resource Recovery Act 2007*;
- any requirements under the *Environmental Protection (Controlled Waste) Regulations 2004*; and
- any other requirements specified through State legislation.

It is the responsibility of the Licence Holder to ensure that any action or activity referred to in this Licence is permitted by, and is carried out in compliance with, other statutory requirements.

The Licence Holder must comply with the Licence. Contravening a Licence Condition is an offence under s.58 of the EP Act.

### Responsibilities of a Licence Holder

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Separate to the requirements of this Licence, general obligations of Licence Holders are set out in the EP Act and the regulations made under the EP Act. For example, the Licence Holder must comply with the following provisions of the EP Act:

- the duties of an occupier under section 61; and
- 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 (s.53).

Strict penalties apply for offences under the EP Act.

## Reporting of incidents

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The Licence Holder has a duty to report to DWER all discharges of waste that have caused or are likely to cause Pollution, Material Environmental Harm or Serious Environmental Harm, in accordance with s.72 of the EP Act.

## Offences and defences

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The EP Act and its regulations set out a number of offences, including:

- Offence of emitting an Unreasonable Emission from any Premises under s.49.
- Offence of causing Pollution under s.49.
- Offence of dumping Waste under s.49A.
- Offence of discharging Waste in circumstances likely to cause Pollution under s.50.
- Offence of causing Serious Environmental Harm (s.50A) or Material Environmental Harm (s.50B).
- Offence of causing Emissions which do not comply with prescribed standards (s.51).
- Offences relating to Emissions or Discharges under regulations prescribed under the EP Act, including materials discharged under the *Environmental Protection (Unauthorised Discharges) Regulations 2004 (WA)*.
- Offences relating to noise under the *Environmental Protection (Noise) Regulations 1997 (WA)*.

Section 53 of the EP Act provides that a Licence Holder commits an offence if Emissions are caused, or altered from a Prescribed Premises unless done in accordance with a Works Approval, Licence or the requirements of a Closure Notice or an Environmental Protection Notice.

Defences to certain offences may be available to a Licence Holder and these are set out in the EP Act. Section 74A(b)(iv) provides that it is a defence to an offence for causing Pollution, in respect of an Emission, or for causing Serious Environmental Harm or Material Environmental Harm, or for discharging or abandoning Waste in water to which the public has access, if the Licence Holder can prove that an Emission or Discharge occurred in accordance with a Licence.

This Licence specifies the Emissions and Discharges, and the limits and Conditions which must be satisfied in respect of Specified Emissions and Discharges, in order for the defence to offence provision to be available.

## Authorised Emissions and Discharges

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The Specified and General Emissions and Discharges from Primary Activities conducted on the Prescribed Premises are authorised to be conducted in accordance with the Conditions of this Licence.

Emissions and Discharges caused from other activities not related to the Primary Activities at the Premises have not been Conditioned in this Licence. Emissions and Discharges from other activities at the Premises are subject to the general provisions of the EP Act.

## Amendment of licence

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The Licence Holder can apply to amend the Conditions of this Licence under s.59 of the EP Act. An application form for this purpose is available from DWER.

The CEO may also amend the Conditions of this Licence at any time on the initiative of the CEO without an application being made.

Amendment Notices constitute written notice of the amendment in accordance with s.59B(9) of the EP Act.

### Duration of Licence

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The Licence will remain in force for the duration set out on the first page of this Licence or until it is surrendered, suspended or revoked in accordance with s.59A of the EP Act.

### Suspension or revocation

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The CEO may suspend or revoke this Licence in accordance with s.59A of the EP Act.

### Fees

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The Licence Holder must pay an annual licence fee. Late payment of annual licence fees may result in the licence ceasing to have effect.

## Definitions and interpretation

### Definitions

In this Licence, the terms in Table 1 have the meanings defined.

**Table 1: Definitions**

Term	Definition
AACR	Annual Audit Compliance Report
AER	Annual Environmental Report
ACN	Australian Company Number
Annual Period	means a 12 month period commencing from 1 January until 31 December.
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 <i>Water Quality – Sampling – Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples</i>
AS/NZS 5667.11	means the Australian Standard AS/NZS 5667.11 <i>Water Quality – Sampling- Guidance on the sampling of groundwaters</i>
Category/ Categories/ Cat.	Categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
Condition	means a condition to which this Licence is subject under s.62 of the EP Act.
Books	has the same meaning given to that term under the EP Act.
Category/ Categories/ Cat.	Categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
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 33 Cloisters Square PERTH WA 6850 <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
Compliance Report	means a report in a format approved by the CEO as presented by the Licence Holder or as specified by the CEO (guidelines and templates may be available on the Department's website).
Delegated Officer	an officer under section 20 of the EP Act.

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.
Department Request	means a request for Books or other sources of information to be produced, made by an Inspector or the CEO to the Licence Holder in writing and sent to the Licence Holder's address for notifications, as described at the front of this Licence, in relation to: <ul style="list-style-type: none"> <li>(a) compliance with the EP Act or this Licence;</li> <li>(b) the Books or other sources of information maintained in accordance with this Licence; or</li> <li>(c) the Books or other sources of information relating to Emissions from the Premises.</li> </ul>
Discharge	has the same meaning given to that term under the EP Act.
DWER	Department of Water and Environmental Regulation.
Emission	has the same meaning given to that term under the EP Act.
Environmental Harm	has the same meaning given to that term under the EP Act.
EP Act	means the <i>Environmental Protection Act 1986 (WA)</i> .
EP Regulations	means the <i>Environmental Protection Regulations 1987 (WA)</i> .
GPS	Global Positioning System
Implementation Agreement or Decision	has the same meaning given to that term under the EP Act.
Inspector	means an inspector appointed by the CEO in accordance with s.88 of the EP Act.
kL	Kilolitres
Licence	refers to this document, which evidences the grant of a Licence by the CEO under s.57 of the EP Act, subject to the Conditions.
Licence Holder	refers to the occupier of the premises being the person to whom this Licence has been granted, as specified at the front of this Licence.
Material Environmental Harm	has the same meaning given to that term under the EP Act.
mAHD	Metres Australian Height Datum

NATA	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
Pollution	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Licence applies, as specified at the front of this Licence and as shown on the map in Schedule 1 to this Licence.
Prescribed Premises	has the same meaning given to that term under the EP Act.
Primary Activities	refers to the Prescribed Premises activities listed on the front of this Licence as described in Schedule 2, at the locations shown in Schedule 1.
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
Serious Environmental Harm	has the same meaning given to that term under the EP Act.
Unreasonable Emission	has the same meaning given to that term under the EP Act.
Waste	has the same meaning given to that term under the EP Act.

## Interpretation

In this Licence:

- (a) the words 'including', 'includes' and 'include' will be read as if followed by the words 'without limitation';
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (c) where tables are used in a Condition, each row in a table constitutes a separate Condition;
- (d) any reference to an Australian or other standard, guideline or code of practice in this Licence means the version of the standard, guideline or code of practice in force at the time of granting of this Licence and includes any amendments to the standard, guideline or code of practice which may occur from time to time during the course of the Licence; and
- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act.

## Conditions

### Emissions

1. The Licence Holder must not cause any Emissions from the Primary Activities on the Premises except for specified Emissions and general Emissions described in Column 1 of Table 2 subject to the exclusions, limitations or requirements specified in Column 2 of Table 2.

**Table 2: Authorised Emissions table**

Column 1	Column 2
Emission type	Exclusions/Limitations/Requirements
<b>Specified Emissions</b>	
Mine dewater discharge	Subject to compliance with Conditions 2 to 16 on this Licence.
<b>General Emissions (excluding Specified Emissions)</b>	
Emissions which: <ul style="list-style-type: none"> <li>• arise from the Primary Activities set out in Schedule 2</li> </ul>	Emissions excluded from General Emissions are: <ul style="list-style-type: none"> <li>• Unreasonable Emissions; or</li> <li>• Emissions that result in, or are likely to result in, Pollution, Material Environmental Harm or Serious Environmental Harm; or</li> <li>• Discharges of Waste in circumstances likely to cause Pollution; or</li> <li>• Emissions that result, or are likely to result in, the Discharge or abandonment of Waste in water to which the public has access; or</li> <li>• Emissions or Discharges which do not comply with an Approved Policy; or</li> <li>• Emissions or Discharges which do not comply with a prescribed standard; or</li> <li>• Emissions or Discharges which do not comply with the conditions in an Implementation Agreement or Decision; or</li> <li>• Emissions or Discharges the subject of offences under regulations prescribed under the EP Act, including materials discharged under the Environmental Protection (<i>Unauthorised Discharges</i>) Regulations 2004.</li> </ul>

### Infrastructure and equipment

2. The Licence Holder must ensure that the infrastructure and equipment specified in Column 1 of Table 3 is maintained in good working order and operated in accordance with the requirements specified in Column 2 of Table 3.



**Table 3: Infrastructure and equipment controls table**

Column 1	Column 2
Site infrastructure and equipment	Operational requirements
<p>Two interconnected dewatering ponds:</p> <ul style="list-style-type: none"> <li>- 1.3 hectares, 3.5m high, 1V:3H batters</li> <li>- Constructed below/above ground using benign waste materials</li> <li>- Lined with impermeable 1.5mm HDPE liner</li> <li>- Interconnected spillway (between the two ponds) at 0.2m depth; external overflow spillway at 0.125m depth</li> <li>- 0.3 m freeboard from the crest</li> </ul>	<p>Dewatering ponds to maintain a minimum freeboard of 300mm</p> <p>Monitoring and removal of sediment build up as required to maintain functionality in accordance with the dewatering pond design.</p> <p>Water quality monitoring as specified in Conditions 8,9 and 10.</p>
HDPE dewater discharge pipeline	Weekly monitoring of pipeline integrity
Flow meter, leak detection sensors and isolation valves fitted to the discharge pipeline	Measurement of discharge rates as specified in Condition 8.
Discharge point erosion control (rock rip rap at discharge point)	Monthly monitoring of discharge outlet to monitor effectiveness of erosion control.

## Emission Limits

3. The Licence Holder shall not discharge more than 800,000 tonnes of mine dewater per year.

## Monitoring

4. The Licence Holder must complete on-ground inspections of the dewater discharge zone as detailed in Table 4.

**Table 4: Dewater discharge zone inspection requirements.**

Monitoring Location	Inspection and record requirements	Frequency
Dewater discharge zone – originating from the discharge point identified in Figure 2	Record a description of the direction of dewater discharge and the furthest extremity of the discharge. Location of the furthest extremity must be recorded with a GPS device.	Quarterly

5. The Licence Holder must establish vegetation monitoring points within the dewater discharge zone (prescribed in Condition 4) within 6 months of the grant of the Licence. The location and number of vegetation monitoring points must be determined by the Licence Holder based on on-ground surveys of the observed and estimated discharge zone.
6. The Licence Holder must include allowance for the establishment of additional vegetation monitoring points (prescribed in Condition 5) in response to observed amplification of the discharge zone (prescribed in Condition 4).
7. The Licence Holder must complete visual monitoring of vegetation condition as detailed for the location, inspection requirements and frequency outlined in Table 5.

**Table 5: Vegetation monitoring requirements**

Location	Inspection and record requirements	Frequency
Vegetation monitoring points as required by Conditions 5 and 6.	<p>The monitoring points are to be set and recorded with a GPS device for repeated inspections at the same locations.</p> <p>Conduct a visual inspection and record a description of native vegetation condition, including tree, shrub and understory vegetation,</p> <p>Record a general description of environmental conditions.</p> <p>Maintain a photographic record of vegetation condition for the monitoring points.</p>	Biannual

8. The Licence Holder must monitor dewater effluent:
  - (a) from each monitoring location;
  - (b) for the corresponding parameter;
  - (c) in the corresponding unit;
  - (d) for the corresponding averaging period;
  - (e) at the corresponding frequency; and
  - (f) using the corresponding method
 as set out in Table 6.

**Table 6: Dewater effluent monitoring requirements**

Monitored item	Location	Parameter	Unit	Averaging period	Frequency	Method
Dewater discharge volume	Dewater discharge pipeline	Cumulative discharge volume	kL	Monthly	Continuous while discharging	Meter readings <sup>1</sup>
Dewatering pond inflow	Dewatering pond inflow pipeline <sup>3</sup>	pH	pH units	Spot sample	Monthly	<b>Field</b> analysis as described in Note 2 of Table 6;  AS/NZS 5667.1.
		Electrical conductivity	µS/cm			
		Temperature	°C			
		Total dissolved solids	mg/L			
		pH	pH units	Spot sample	Quarterly	<b>Laboratory</b> analysis;  AS/NZS 5667.1.
		Electrical conductivity	µS/cm			
		Total dissolved solids	mg/L			
		Total Alkalinity	mg/L			
Dewater discharge	Dewatering discharge pipeline <sup>3</sup>	pH	pH units	Spot sample	Monthly	<b>Field</b> analysis as described in Note 2 of Table 6;  AS/NZS 5667.1.
		Electrical conductivity	µS/cm			
		Temperature	°C			
		Total dissolved solids	mg/L			
		pH	pH units	Spot sample	Quarterly	<b>Laboratory</b> analysis - dissolved (filtered) for metals/metalloids;  AS/NZS 5667.1.
		Electrical conductivity	µS/cm			
		Total dissolved solids	mg/L			
		Total suspended solids	mg/L			
		Total Titratable Acidity	mg/L			
		Total Alkalinity	mg/L			

Monitored item	Location	Parameter	Unit	Averaging period	Frequency	Method
		Sulfate, SO <sub>4</sub>	mg/L			
		Chloride, Cl	mg/L			
		Sodium, Na	mg/L			
		Potassium, K	mg/L			
		Calcium, Ca	mg/L			
		Magnesium, Mg	mg/L			
		Bicarbonate, HCO <sub>3</sub>	mg/L			
		Aluminium, Al	µg/L			
		Arsenic, As	µg/L			
		Boron, B	µg/L			
		Chromium, Cr	µg/L			
		Cadmium, Cd	µg/L			
		Copper, Cu	µg/L			
		Iron, Fe	µg/L			
		Manganese, Mn	µg/L			
		Nickel, Ni	µg/L			
		Lead, Pb	µg/L			
		Selenium, Se	µg/L			
		Zinc, Zn	µg/L			

Note 1: The flow metering device must be maintained and calibrated in accordance with the manufacturer's specifications.

Note 2: For field pH, EC, Temperature and TDS analyses - a serviced and calibrated water quality meter must be used. Calibration must be undertaken in accordance with manufacturer specifications with calibration records maintained.

Note 3: Dewater effluent sampling locations are shown in Figure 3.

**9.** The Licence Holder must ensure that:

- (a) all samples are collected and preserved in accordance with AS/NZS 5667.1; and
- (b) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured.

**10.** The Licence Holder must ensure that:

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

## Reporting

11. The Licence Holder must submit to the CEO, no later than **31 March of 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.
12. The Licence Holder must submit to the CEO, no later than **31 March of each year**, an AER for the preceding Annual Period.
13. The AER must include but not be limited to the following:
  - A description of the dewater discharge zone as surveyed during the annual period (as prescribed in Condition 4);
  - A summary of vegetation monitoring records (as prescribed in Conditions 5, 6 and 7);
  - Dewater discharge flow metering data (as prescribed in Condition 8);
  - Dewatering pond inflow and dewater discharge parameter data (as prescribed in Conditions 8, 9 and 10) reported in table and graphical format, and including a description of parameter trends; and
  - Details of any complaints received under Condition 15 of this Licence.

## Record-keeping

14. The Licence Holder must maintain accurate and auditable Books including the following records, information, reports and data required by this Licence:
  - a. the calculation of fees payable in respect of this Licence;
  - b. the maintenance of infrastructure required to ensure that it is kept in good working order in accordance with Condition 2 of this Licence;
  - c. monitoring undertaken in accordance with Conditions 4 to 10 of this Licence;
  - d. complaints received under Condition 15 of this Licence; andIn addition, the Books must:
  - e. be legible;
  - f. if amended, be amended in such a way that the original and subsequent amendments remain legible and are capable of retrieval;
  - g. be retained for at least 3 years from the date the Books were made; and
  - h. be available to be produced to an Inspector or the CEO.
15. The Licence Holder must record the number and details of any complaints received by the Licence Holder relating to its obligations under this Licence and its compliance with Part V of the EP Act at the Premises, and any action taken by the Licence Holder in response to the complaint. Details of complaints must include:
  - i. an accurate record of the concerns or issues raised, for example a copy of any written complaint or a written note of any verbal complaints made;
  - j. the name and contact details of the complainant, if provided by the complainant;
  - k. the date of the complaint; and

- I. the details and dates of the actions taken by the Licence Holder in response to the complaints.
- 16.** The Licence Holder must comply with a Department Request, within 14 days from the date of the Department Request or such other period as agreed to by the Inspector or the CEO.

# Schedule 1: Maps

## Premises map

The Premises are shown in the map below.

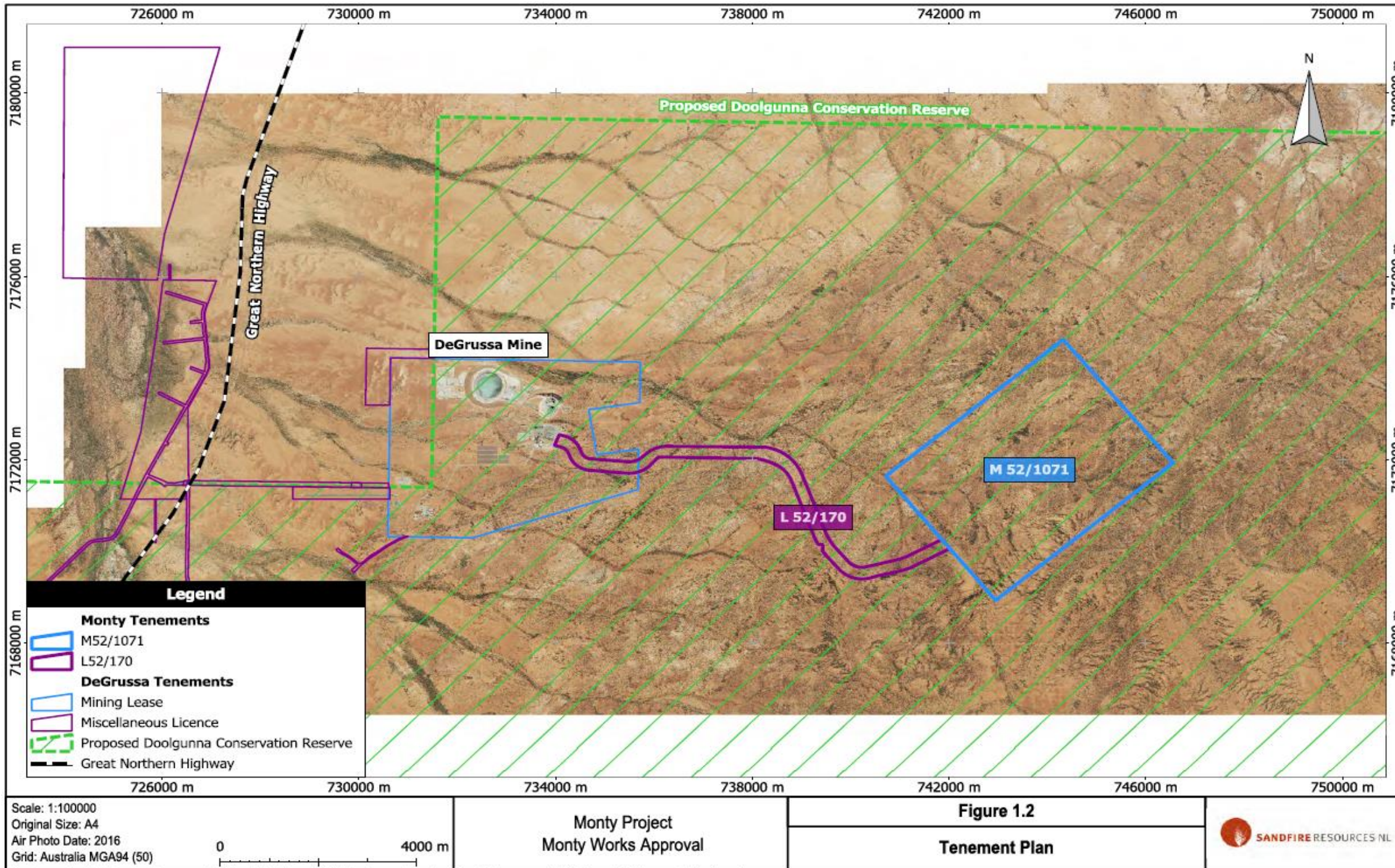


Figure 1: The Monty Project Premises - tenement M52/1071

## Site layout

The site layout is shown in the map below.

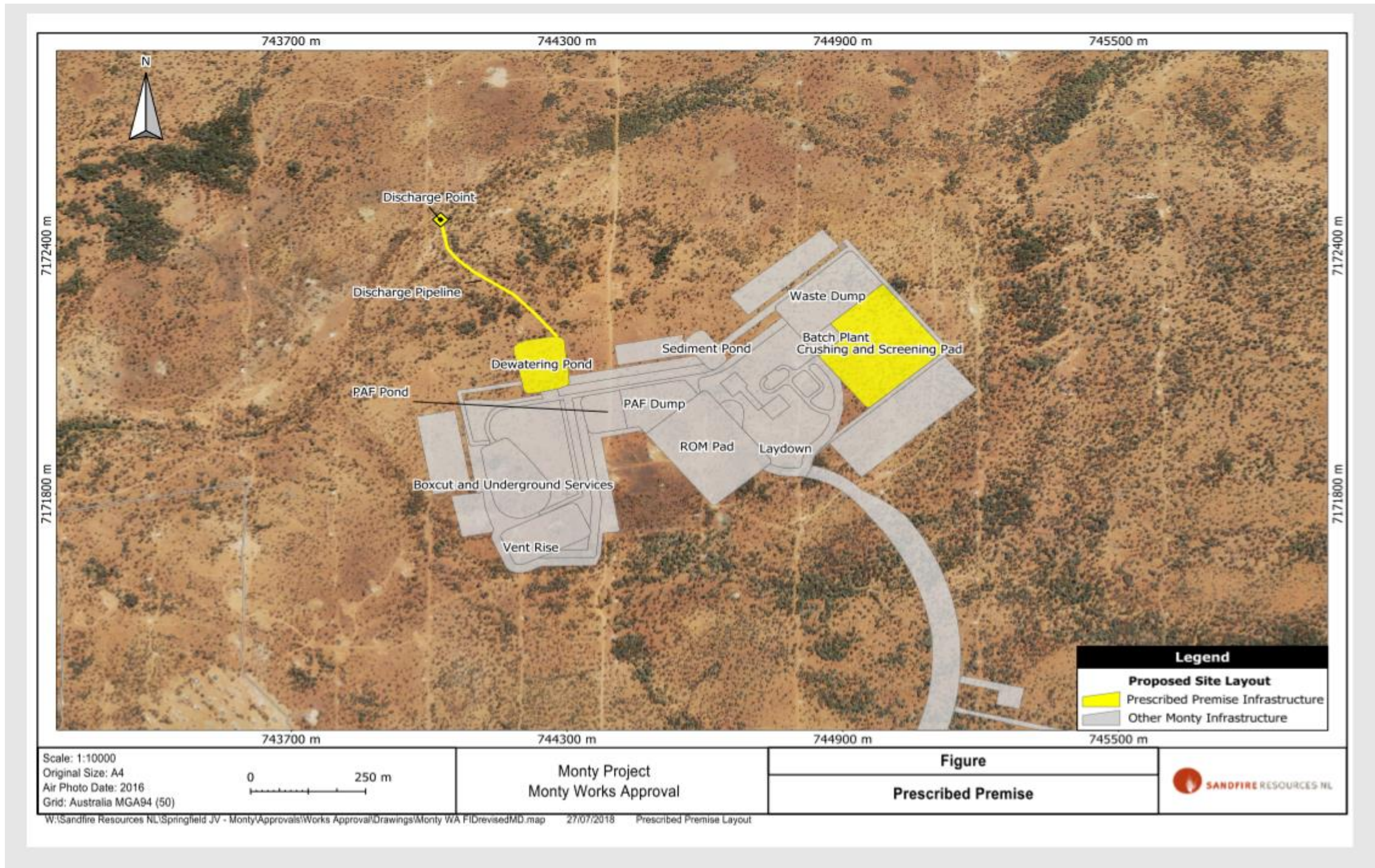


Figure 2: The Monty Project Premises site layout within tenement M52/1071





Figure 3 Dewater effluent monitoring locations

## Schedule 2: Primary Activities

At the time of assessment, Emissions and Discharges from the following Primary Activities were considered in the determination of the risk and related Conditions for the Premises.

The Primary Activities are listed in Table 7:

**Table 7: Primary Activities**

Primary Activity	Premises production or design capacity
<b>Category 6 Mine dewatering:</b> Premises on which water is extracted and discharged in to the environment to allow mining of ore	800,000 tonnes per year
<b>Category 12 Screening etc. of material:</b> Premises (other than premises within category 5, 8 or 9) on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated	130,000 tonnes per year

## Infrastructure and equipment

The Primary Activity infrastructure and equipment situated on the Premises is listed in Table 8.

**Table 8: Infrastructure and equipment**

Infrastructure and equipment	Plan reference
Pumps	Figure 2 site layout map - underground services and dewatering pond areas
HDPE lined dewatering ponds	Figure 2 site layout map
450m of 315mm diameter HDPE dewater discharge pipeline	Figure 2 site layout map
Flow meter, leak detection sensors and isolation valves fitted to the discharge pipeline	Figure 2 site layout map
Discharge point erosion control - rock rip rap at discharge point	Figure 2 site layout map
Jaw crusher; Vertical shaft impact crusher; Screening plant	Figure 2 site layout map – crushing and screening pad
Water carts for dust suppression; Loader.	Figure 2 site layout map – crushing and screening pad