Licence

Licence number	L5529/1988/12
Licence holder	Mt Magnet Gold Pty Ltd
ACN (if applicable)	008 669 556
Registered business address	Level 1, 130 Royal Street, East Perth, WA, 6004
DWER file number	DER2016/001228-1
Duration	10/09/2015 to 09/09/2025
Date of amendment	11/09/2020
Premises details	Mt Magnet Gold M58/30, M58/121, M58/136, M58/172, M58/181, M58/185, M58/187, M58/191, M58/193, M58/202, M58/205 and M58/234 MOUNT MAGNET WA 6623 As defined in Schedule 1

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed production / design capacity**
Category 5: Processing or beneficiation of metallic or non-metallic ore	2,400,000 tonnes per annual period
Category 6: Mine dewatering	1,500,000 tonnes per annual period
Category 64: Class II putrescible landfill site	10,000 tonnes per annual period

This licence is granted to the licence holder, subject to the attached conditions, on 11 September 2020, by:

Lauren Fox

Digitally signed by Lauren Fox
Date: 2020.09.11 09:57:07 +08'00'

Lauren Fox

A/MANAGER – RESOURCE INDUSTRIES

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

Contents

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 regulates 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: https://www.legislation.wa.gov.au/legislation/statutes.nsf/default.html.

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

- *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

Mt Magnet Gold Pty Ltd operates the Mt Magnet Gold mine (MMG) which is located adjacent to the town of Mount Magnet in the Murchison Region of Western Australia. The area is highly disturbed and degraded due to 130 years of mining activities within this region.

Tenements for the mine cover an area of approximately 225 kilometers. Mining activities have been expanded from the Galaxy Project to Galaxy Cosmos Project (including Shannon underground mining), St George/Water Tank Hill Project and Eridanus Project.

The Checkers Mill (mill) is an existing 1.7 million tonne per annum (mtpa) conventional semi autogenous grinding (SAG) gold mill. The mill has previously been operated at a maximum capacity of 2.4mtpa and could be reconfigured if required. Mill tailings are deposited into the Checker Tailings Storage Facility Cell 3 (CTSF3). The plant is located approximately two kilometres from the Galaxy Project Area and ore haulage is via an existing haul road network including the Run of Mine (ROM) access road that runs parallel to Richardson Street public road.

Dewatering of groundwater occurs at MMG to allow the mining of ore. The dewatering effluent water is discharged into the disused mined Titan and Brown Hill pits, and the process water dam for storage to be later used in the processing facility and for dust suppression.

The landfill facility at MMG only accepts type 1 and 2 inert wastes, type 1 special wastes and putrescible wastes that are generated at the premises.

Mt Magnet Gold is powered from an offsite power generating facility located in the town of Mount Magnet. Mt Magnet Gold also has a 14 megawatt diesel power station located at the premises however, is only used as an emergency backup during power outages, and when the processing plant is restarted following shut downs.

The main emissions and discharges at MMG are dust from the crushing and screening circuit, tailings discharge into the TSF and dewatering effluent disposal into a dis-used mine pits.

DWER initiated amendment

The CEO initiated an amendment to the type and style of the licence during May/June 2020 and issued a revised licence consolidating changes made under Amendment Notices issued between 2016 to 2019 (as detailed in the instrument log below), where relevant. The obligations of the licence holder have not changed in making this amendment. During the consolidation of this amendment; DWER has not undertaken any additional risk assessment of the premises.

In consolidating the licence, the CEO has:

- updated the format and appearance of the Licence;
- deleted the redundant AACR form set out in schedule 1 of the previous licence and advised the licence holder to obtain the form from the Department's website; and
- revised licence condition's numbers, and removed any redundant conditions and realigned condition numbers for numerical consistency.

The licences and works approvals issued for the premises since 30/08/2010 are:

Instrument log		
Instrument	**Issued**	**Description**
W4695/2010/1	30/8/2010	Works Approval for the dewatering of pits.
L5529/1988/11	10/9/2010	Licence re-issue.
L5529/1988/11	07/02/2013	Licence amendment. Company name change and removal of condition referencing a dust management plan.
W5385/2013/1	08/08/2013	Tailings storage facility embankment lift.
L5529/1988/11	17/10/2013	Licence amendment following partial compliance with W4695/2010/1.
L5529/1988/11	09/01/2014	Licence amendment following partial compliance with W4695/2010/1.
L5529/1988/12	03/09/2015	Licence reissued.
L5529/1988/12	16/06/2016	Licence amendment for the removal of an obsolete groundwater monitoring bore and the replacement with new groundwater monitoring bores, update of Schedule 1 maps, change landfill category from 89 to 64 as a result of an increase in the throughput from 5,000 tpa to 10,000 tpa, and correction of monitoring reference in Table 3.4.1.
L5529/1988/12	30/06/2017	Amendment Notice 1: for the discharge of mine dewatering to Ruby Queen and Saturn Pits.
L5529/1988/12	18/09/2017	Amendment Notice 2 issued to include dewatering of Stellar, Stellar West, Milky Way and Shannon Pits, discharging via Frank Tower Pit and Ruby Queen Pit to Checker salt water dam. Premise boundary extended. AER submission dates aligned with the AACR.
L5529/1988/12	19/08/2019	Amendment notice 3 issued to increase annual dewatering throughput and authorise discharge of dewatering to O'Meara pit, Franks tower pit and Ruby Queen pit. Replacing of groundwater bore T3RB7 to T3RB01 and installation of a recovery bore T3RB4A. Removal of Saturn pit emission point for dewatering effluent.
L5529/1988/12	04/06/2020	Amalgamation of amendment notices and administrative corrections including updated Department's contacts. During this amalgamation no risk assessment of the premises was undertaken.

W6342/2020/1	17/7/2020	Works approval for embankment raises of Checkers Tailings Storage Facility 1,2 and 3.
L5529/1988/12	11/09/2020	Licence amendment to include additional dewatering activities, Milky Way Pit as emission point and reinstatement of rainwater drainage.

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:

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

'Anniversary Date' means 30 June of each year;

'Annual Audit Compliance Report' means a report in a format approved by the CEO as presented by the licence holder or as specified by the CEO from time to time and published on the Department's website;

'Annual Period' means the inclusive period from 1 July until 30 June in the following year;

'APHA' means the American Public Health Association: Standard Methods for the Examination of Water and Wastewater;

'AS/NZS 5667.1' means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples;*

'AS/NZS 5667.10' means the Australian Standard AS/NZS 5667.10 *Water Quality – Sampling – Guidance on sampling of waste waters;*

'AS/NZS 5667.11' means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on sampling of groundwaters;*

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

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

'CEO' for the purpose of correspondence means;

Chief Executive Officer
Department Administering the Environmental Protection Act 1986
Locked Bag 10
JOONDALUP DC WA 6027
Telephone: (08) 6367 7000
Facsimile: (08) 6367 7001
Email: info@dwer.wa.gov.au

'clean fill' has the meaning defined in the Landfill Definitions;

'Department' means the department established under s.35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Division 3 Part V of the *Environmental Protection Act 1986*;

'extreme rainfall event' means a 1 in 100 year rainfall event that has a duration greater than 72 hours;

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

'Inert Waste Type 1' has the meaning defined in the Landfill Definitions;

'Inert Waste Type 2' has the meaning defined in the Landfill Definitions;

'Landfill Definitions' means the document titled "Landfill Waste Classification and Waste Definitions 1996' published by the Chief Executive Officer of the Department of Environment Regulation as amended from time to time;

'Licence' means this Licence numbered L5529/1988/12 and issued under the Act;

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

'm bgl' means metres below ground level;

'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;

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

'Putrescible Waste' has the meaning defined in the Landfill Definitions;

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

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

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

'Special Waste Type 1' has the meaning defined in the Landfill Definitions;

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

'TSF' means Tailing Storage Facility; and

'WAD cyanide' means cyanide species liberated at moderate pH of 4.5.

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.

1.3 Premises operation

1.3.1 The licence holder shall record and investigate the exceedance of any descriptive or numerical limit in this section.

1.3.2 The licence holder shall only accept waste on to the landfill identified in Schedule 1 if:

(a) it is of a type listed in Table 1.3.1;
(b) the quantity accepted is below any quantity limit listed in Table 1.3.1;
(c) it meets any specification listed in Table 1.3.1; and
(d) it conforms to the description in the documentation supplied by the producer and holder.

Table 1.3.1: Waste acceptance[1]

Waste	Quantity limit	Specification
Clean Fill	None specified	None specified
Inert Waste Type 1	10,000 tonnes per annual period	
Putrescible Waste		
Special Waste Type 1		
Inert Waste Type 2	100 used tyres are stored	Tyres and plastics only

Note 1: Additional requirements for the acceptance and landfilling of controlled waste are set out in the *Environmental Protection (Controlled Waste) Regulations 2004.*

1.3.3 The licence holder shall ensure that where waste does not meet the waste acceptance criteria set out in condition 1.3.2, it is stored in a quarantined storage area or container and removed from the premises to an appropriately authorised facility as soon as practicable.

1.3.4 The licence holder shall ensure that wastes accepted onto the premises are only subjected to the process(es) set out in Table 1.3.2 and in accordance with any process limits described in that Table.

Table 1.3.2: Waste processing		
Waste type	**Process(es)**	**Process limits[1, 2]**
Clean fill	Receipt, handling, associated storage and disposal of waste by landfilling	The licence holder shall: • ensure landfilling only takes place within a defined trench or within an area enclosed by earthen bunds; • manage the active landfill area such that at no time does landfilling result in the tipping face exceeding two metres in height; • ensure the tipping area is restricted to a linear length no greater than 30 metres; • ensure no asbestos waste or material containing asbestos waste is deposited within two metres of the final tipping surface of the landfill; and • ensure any existing asbestos waste or material containing asbestos deposited at the landfill remains undisturbed.
Inert Waste Type 1		
Inert Waste Type 2		
Putrescible waste		
Special Waste Type 1		

Note 1: Requirements for landfilling tyres are set out in Part 6 of the *Environmental Protection Regulations 1987*.
Note 2: Additional requirements for the acceptance and landfilling of controlled waste (including asbestos and tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004.*

1.3.5 The licence holder shall ensure that cover is applied to waste in the tipping area in accordance with Table 1.3.3 and that sufficient stockpiles of cover are maintained on site at all times.

Table 1.3.3: Cover requirements			
Waste type	**Material**	**Depth**	**Timescales**
Inert Waste Type 1	No cover required		
Inert Waste Type 2	Type 1 Inert Waste or Clean fill	100mm	Immediately once the number of disposed whole tyres reaches 100
Putrescible Waste		A minimum of 200 mm	Cover shall be applied fortnightly
Special Waste Type 1	Type 1 Inert Waste or Clean fill	A minimum of 1,000 mm	Immediately by supervised covering of the waste following deposition

1.3.6 The licence holder shall ensure that any waste that has been blown outside the active landfill area is collected and returned to the tipping area on a weekly basis.

1.3.7 The licence holder shall ensure that all pipelines containing environmentally hazardous substances are either:
(a) equipped with telemetry systems and pressure sensors along pipelines to allow the detection of leaks and failures;
(b) equipped with automatic cut-outs in the event of a pipe failure; or
(c) provided with secondary containment sufficient to contain any spill for a period equal to the time between routine inspections.

1.3.8 The licence holder shall ensure that waste materials are discharged into dams and pits with the relevant infrastructure requirements and at the location specified in Table 1.3.4 and identified in Schedule 1.

Table 1.3.4: Containment infrastructure		
Containment point reference	**Material**	**Infrastructure requirements**
CTSF3	Tailings	Measures to prevent or minimise dust generated from surface of the tailings storage facility installed A seepage interceptor drain is maintained immediately downstream of the external toe of the tailings dam to recover any liquid matter resulting from seepage or breach of the embankment Any matter collected in interceptor drain(s) shall be returned to either the tailings dam, an evaporation dam or used in the processing plant Seepage recovery bores T3RB1, T3RB2A, T3RB3, T3RB4, T3RB4A, T3RB6 and T3RB7 are maintained to recover any liquid matter resulting from seepage A minimum top of embankment freeboard of 300mm is maintained in order to accommodate an extreme rainfall event
Process Water Dam	Dewatering effluent water and seepage recovery water	A minimum top of embankment freeboard of 300mm is maintained Lined to achieve a permeability of 10^{-9} m/s or less.
Franks Tower pit	Dewatering effluent	A minimum freeboard of 2 m is maintained in order to accommodate an extreme rainfall event. (refer to Schedule 1: Maps Stellar and Milky way drain layout)
Ruby Queen pit		
O'Meara pit		
Blackcat South pit		
Milky Way pit	Dewatering effluent, surface water runoff from upper Milky Way catchment diversion drain	
Stellar pit	Surface water runoff from upper Lone Pine catchment	Pumping required Surface water only received by pit when actively pumped (refer to Schedule 1: Maps Stellar and Milky way drain layout)

1.3.9 The licence holder shall:

(a) undertake inspections as detailed in Table 1.3.5;

(b) 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

(c) maintain a record of all inspections undertaken.

Table 1.3.5: Inspection of infrastructure		
Scope of inspection	**Type of inspection**	**Frequency of inspection**
Tailings delivery pipelines	Visual integrity	Daily
Return water lines		
Dewatering pipelines		
Chemical storage areas		Weekly
Processing plant		
TSF Embankment freeboard	Visual to confirm required freeboard capacity is available	Daily
Franks Tower pit		
Ruby Queen pit		
O'Meara pit		
Blackcat South pit		
Milky Way pit		
Stellar pit		
	Pump integrity	

1.3.10 The licence holder shall ensure the limits specified in Table 1.3.6 are not exceeded.

Table 1.3.6: Production or design capacity limits		
Category[1]	**Category description[1]**	**Premises production or design capacity limit**
5	Processing or beneficiation of metallic or non-metallic ore	2,400,000 tonnes per annual period
6	Mine dewatering: premises on which water is extracted and discharged into the environment to allow mining of ore.	1,500,000 tonnes per annual period

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

1.3.11 The licence holder must install and undertake the Works for the infrastructure and equipment:
(a) specified in Column 1; and
(b) to the requirements specified in Column 2 of Table 1.3.7 below.

Table 1.3.7: Construction Requirements	
Column 1	**Column 2**
Infrastructure/Equipment	**Requirements (design and construction)**
Dewatering pipelines	• All joints are butt welded; • Fitted with flow meters; and • Located within a V-notch drain or by other methods to minimise movement of the pipeline.

1.3.12 The licence holder must submit a construction compliance report to the CEO, within one month following the construction of the Works and prior to operating the new Works at the premises, confirming that the Works have been completed in accordance with Condition 1.3.11.

1.3.13 The licence holder must design, construct, and install groundwater monitoring wells in accordance with the requirements specified in Table 1.3.8

Table 1.3.8: Infrastructure requirements- groundwater monitoring bores

Infrastructure	Design, construction, and installation requirements	Monitoring well location(s)	Timeframe
Monitoring well network for dewatering activities near emission points (Milky Way pit)	<u>Well design and construction:</u> Designed and constructed in accordance with *ASTM D5092/D5092M-16: Standard practice for design and installation of groundwater monitoring bores*. Well screens must target the part, or parts, of the aquifer most likely to be affected by contamination[1]. Where temporary/seasonal perched features are present, wells must be nested, and the perched features individually screened.	Western side to Milky Way pit to capture potential infiltration and migration of dewater effluent into groundwater and Public Drinking Water Source Areas (refer to Schedule 1: Maps, Water catchment areas)	Must be constructed, developed (purged), and determined to be operational within three months of this licence amendment being granted.
	<u>Logging of borehole:</u> Soil samples must be collected and logged during the installation of the monitoring wells. A record of the geology encountered during drilling must be described and classified in accordance with the Australian Standard Geotechnical Site Investigations AS1726. Any observations of staining / odours or other indications of contamination must be included in the bore log.		
	<u>Well construction log:</u> Well construction details must be documented within a well construction log to demonstrate compliance with *ASTM D5092/D5092M-16*. The construction logs shall include elevations of the top of casing position to be used as the reference point for water-level measurements, and the elevations of the ground surface protective installations.		
	<u>Well development:</u> All installed monitoring wells must be developed after drilling to remove fine sand, silt, clay and any drilling mud residues from around the well screen to ensure the hydraulic functioning of the well. A detailed record should be kept of well development activities and included in the well construction log.		

Table 1.3.8: Infrastructure requirements- groundwater monitoring bores			
Infrastructure	**Design, construction, and installation requirements**	**Monitoring well location(s)**	**Timeframe**
	Installation survey: the vertical (top of casing) and horizontal position of each monitoring well must be surveyed and subsequently mapped by a suitably qualified surveyor.		
	Well network map: a well location map (using aerial image overlay) must be prepared and include the location of all monitoring wells in the monitoring network and their respective identification numbers.		

Note1: refer to Section 8 of Schedule B2 of the *Assessment of Site Contamination NEPM* for guidance on well screen depth and length.

1.3.14 The licence holder must within 30 days of an item of infrastructure required by condition 1.3.13 constructed and/or installed, prepare and submit to the CEO a construction compliance report, including:

(a) certification by a suitably qualified hydrogeologist, with a minimum of three years relevant experience, that the infrastructure or component(s) thereof, as specified in condition 1.3.13, have been constructed in accordance with the relevant requirements specified in condition 1.3.13;

(b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 1.3.13;

(c) a hydrogeological assessment describing potential pathways of emissions to the Public Drinking Water Source Areas and justification of the number and location of constructed monitoring bores;

2 Emissions

2.1 General

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

2.2.1 Point source emissions to groundwater

2.2.1 The licence holder shall ensure that where waste is emitted to groundwater from the emission point in 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 groundwater		
Emission point reference	**Description**	**Source including abatement**
Franks Tower pit	Dewatering waste water discharge into disused mine pits.	Water from dewatering of Stellar, Stellar West, Milky Way pits, the Shannon underground (Cosmos project), Eridanus, Lone Pine and O'Meara
Ruby Queen pit		Water from dewatering of the Blackcat South, Morning Star and Franks Tower pit.
O'Meara pit		Water from dewatering the Lone Pine pit and Eridanus underground
Blackcat South pit		Water from dewatering the St George/Water Tank Hill and Hill 60 underground pits
Milky Way pit		Water from dewatering of Eridanus, Lone Pine and O'Meara Surface water runoff from upper Milky Way catchment diversion drain
Stellar pit	Surface water runoff	Surface water runoff from upper Lone Pine catchment

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) groundwater samples for the monitoring of WAD cyanide are collected and preserved in accordance with APHA;
- (c) all wastewater sampling is conducted in accordance with AS/NZS 5667.10;
- (d) all groundwater sampling is conducted in accordance with AS/NZS 5667.11;
- (e) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured unless indicated otherwise in the relevant table.

3.1.2 The licence holder shall ensure that:
- (a) quarterly monitoring is undertaken at least 45 days apart; and
- (b) 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 and the requirements of the Licence.

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 groundwater

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 groundwater				
Emission point reference as located in Schedule 1	**Parameter**	**Units**	**Averaging Period**	**Frequency**
Dewatering discharge outlets into the O'Meara, Blackcat South, Franks Tower, Ruby Queen, Milky Way pits	Volumetric flow rate	m^3/day	Monthly	Continuous
	Aluminium Arsenic Cadmium Chromium Cobalt Copper Iron Lead Manganese Mercury Molybdenum Nickel Selenium Total recoverable hydrocarbons; and Zinc	mg/L	Spot sample	Annually
	Standing water level in pits	mbgl		Quarterly
	Total dissolved solids and Total Nitrogen	mg/L		
	pH[1]	-		

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

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**
CTSF3	-	Volumes of tailings deposited into the CTSF3	m^3	Continuous	None specified
	-	Volumes of water recovered from the CTSF3	m^3	Continuous	None specified

3.4 Ambient environmental quality monitoring

3.4.1 The licence holder shall undertake the monitoring in Table 3.4.1 according to the specifications in that table and record and investigate results that do not meet any limit specified.

Table 3.4.1: Monitoring of ambient groundwater quality					
Monitoring point reference and location	**Parameter**	**Limit**	**Units**	**Averaging period**	**Frequency**
Monitoring bores constructed as required in condition 1.3.13 CTDP2D, TRB001,T3MB1, T3MB2, T3MB4, T3MB5, T3MB6, T3RB01, T3MB8, T3MB9 and T3MB10	Aluminium	5.0	mg/L	Spot sample	Annually
	Arsenic	0.5			
	Cadmium	0.08			
	Chromium (+6)	1.0			
	Cobalt	1.4			
	Copper	0.5			
	Lead	0.4			
	Mercury	0.11			
	Molybdenum	0.05			
	Nickel	1.0			
	Selenium	0.08			
	Zinc	20.0			
	Electrical conductivity	-	mg/L		Quarterly
	Standing water level (SWL)[1]				
	Total dissolved solids				
	pH[1]	6.0 to 9.0			
CTDP2D, TRB001,T3MB1, T3MB2, T3MB4, T3MB5, T3MB6, T3RB01, T3MB8, T3MB9 and T3MB10	Total cyanide		mg/L -		
	Weak acid dissociable cyanide (WAD cyanide)	0.5			
PHMB3 and PHMB4	Total recoverable hydrocarbons	-	mg/L		

Note 1: In-field non-NATA accredited analysis permitted. SWL shall be determined prior to collection of other water samples.

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) 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; and
(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.

4.1.2 The licence holder must submit to the CEO within 90 days after the Anniversary Date, an Annual Audit Compliance Report indicating the extent to which the licence holder has complied with the Conditions of this Licence for the 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 an Annual Environmental Report within 90 calendar days after the end of the annual period. 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
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
-	Brief overview of the premises and its processes and a current plan of the premises	None specified
Table 3.2.1	Specified monitoring of point source to groundwater	None specified
Table 3.3.1	Volumes of tailings deposited into the CTSF3 and volumes of water recovered from the CTSF3	None specified
Table 3.4.1	Monitoring of ambient groundwater quality	None specified
4.1.2	Compliance	Annual Audit Compliance Report (AACR)
4.1.3	Complaints summary	None specified

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.

4.2.3 The licence holder shall submit the information in Table 4.2.2 to the CEO according to the specifications in that table.

Table 4.2.2: Non-annual reporting requirements

Condition or table (if relevant)	Parameter	Reporting period	Reporting date (after end of the reporting period)	Format or form
-	Copies of original monitoring reports submitted to the licence holder by third parties	Not Applicable	Within 14 days of the CEOs request	As received by the licence holder from third parties

4.3 Notification

4.3.1 The licence holder shall ensure that the parameters listed in Table 4.3.1 are notified to the CEO in accordance with the notification requirements of the table.

Table 4.3.1: Notification requirements

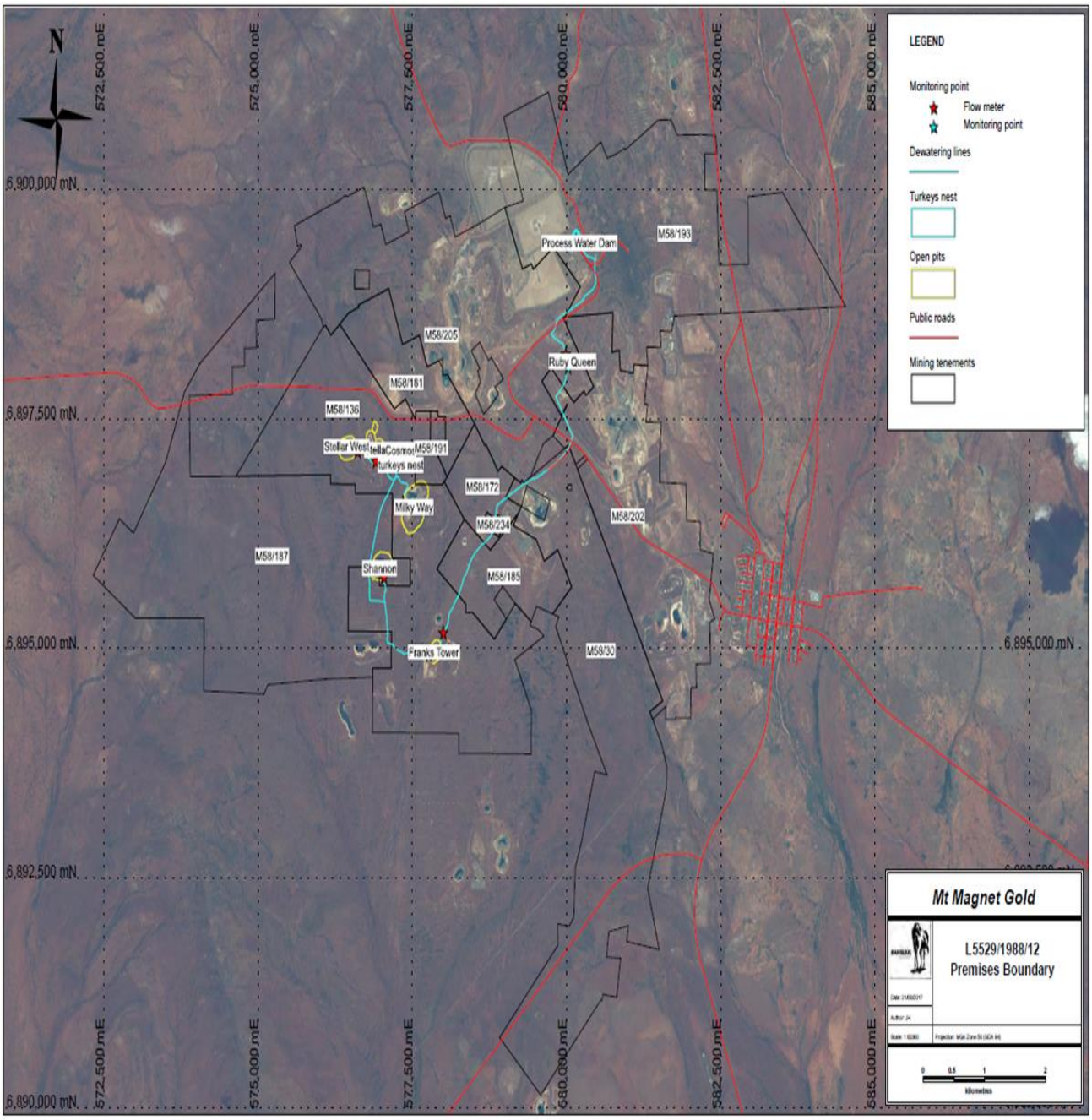
Condition or table (if relevant)	Parameter	Notification requirement[1]	Format or form[2]
2.1.1 and 3.4.1	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5pm of the next usual working day Part B: As soon as practicable	N1

Note 1: Notification requirements in the Licence shall not negate the requirement to comply with s72 of the Act
Note 2: Forms are in Schedule 2

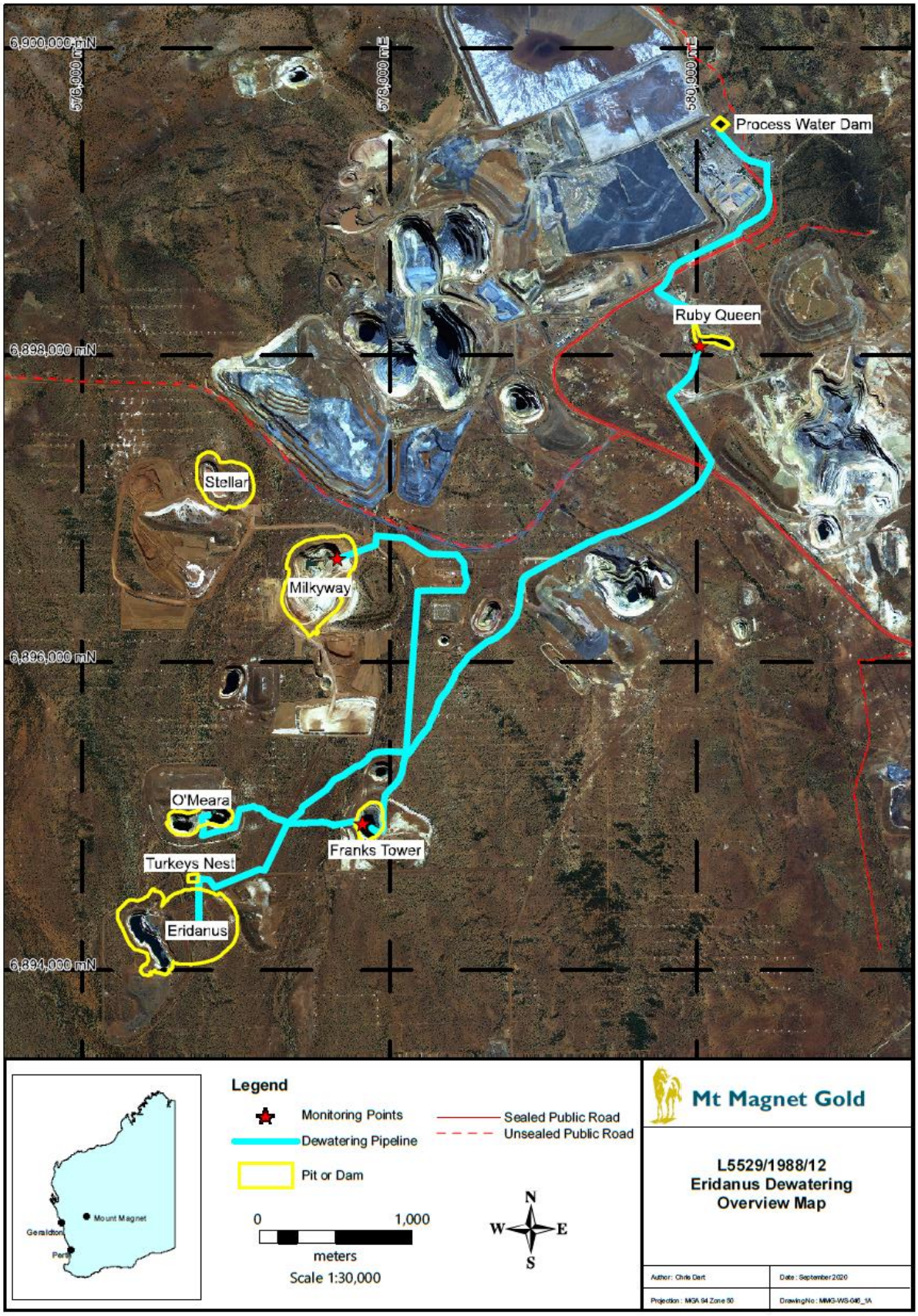
Schedule 1: Maps

Premises map

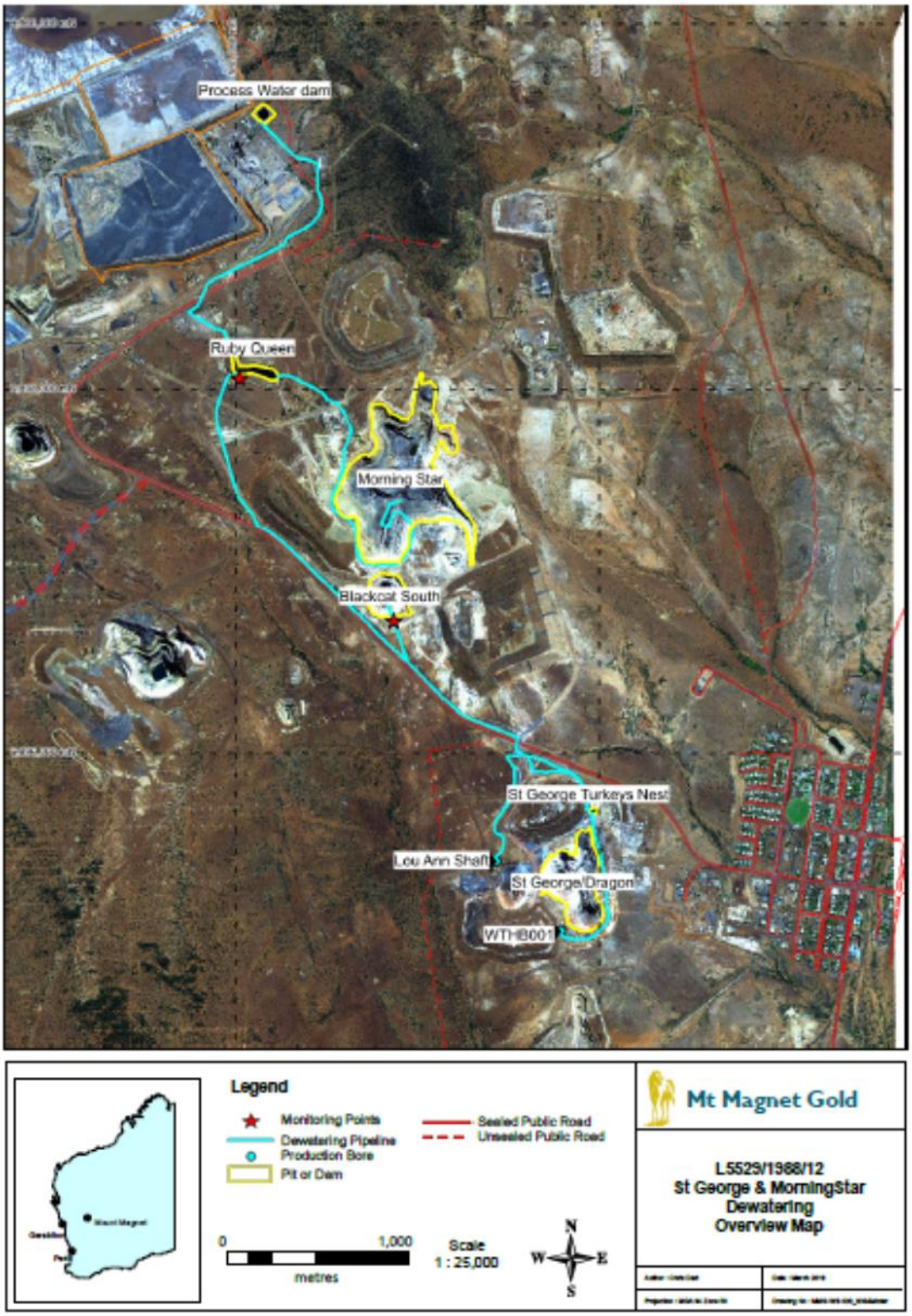
The boundary of the prescribed premises is shown in the map below. The black lines depict the Premises boundary



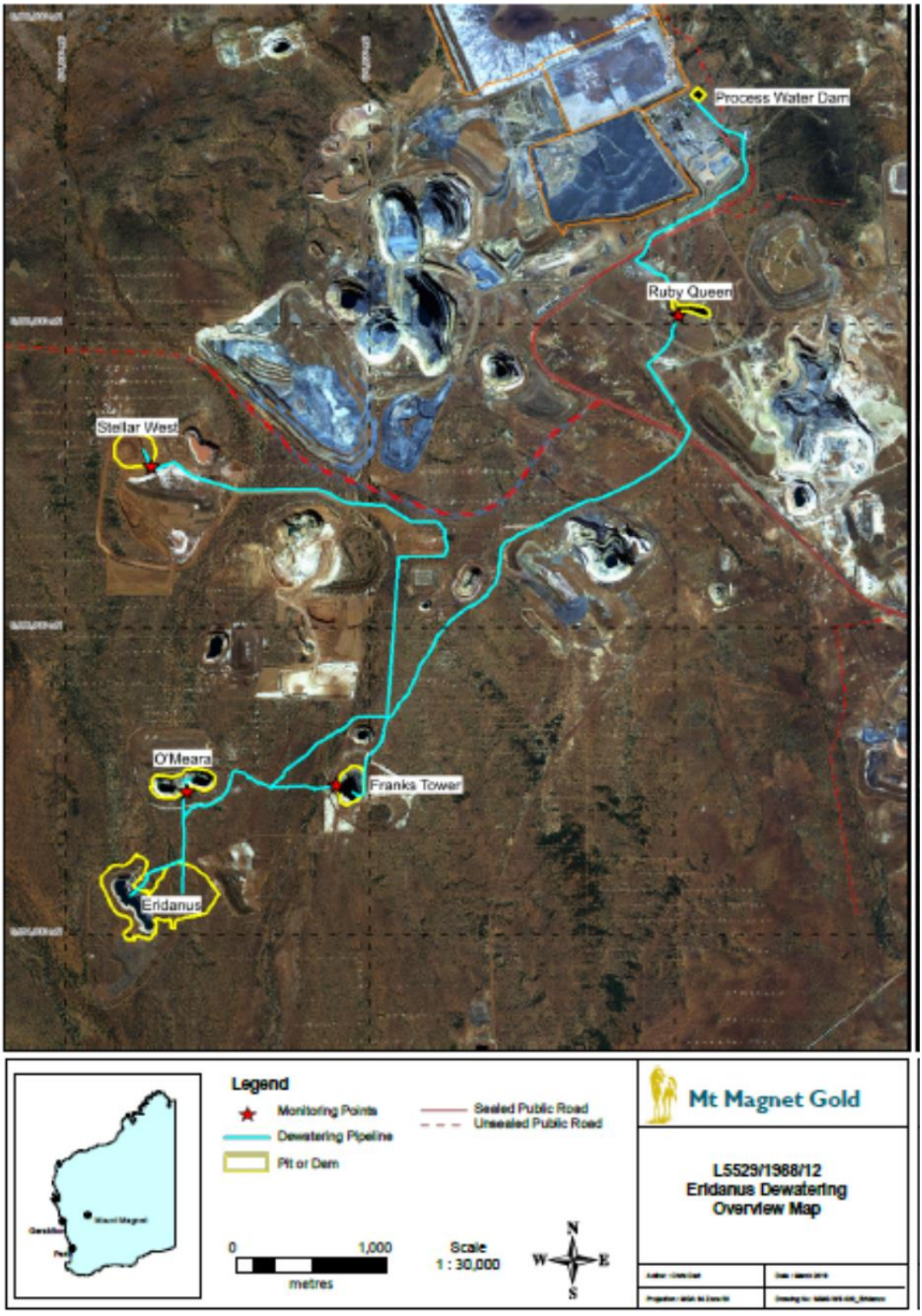
Maps of emission points



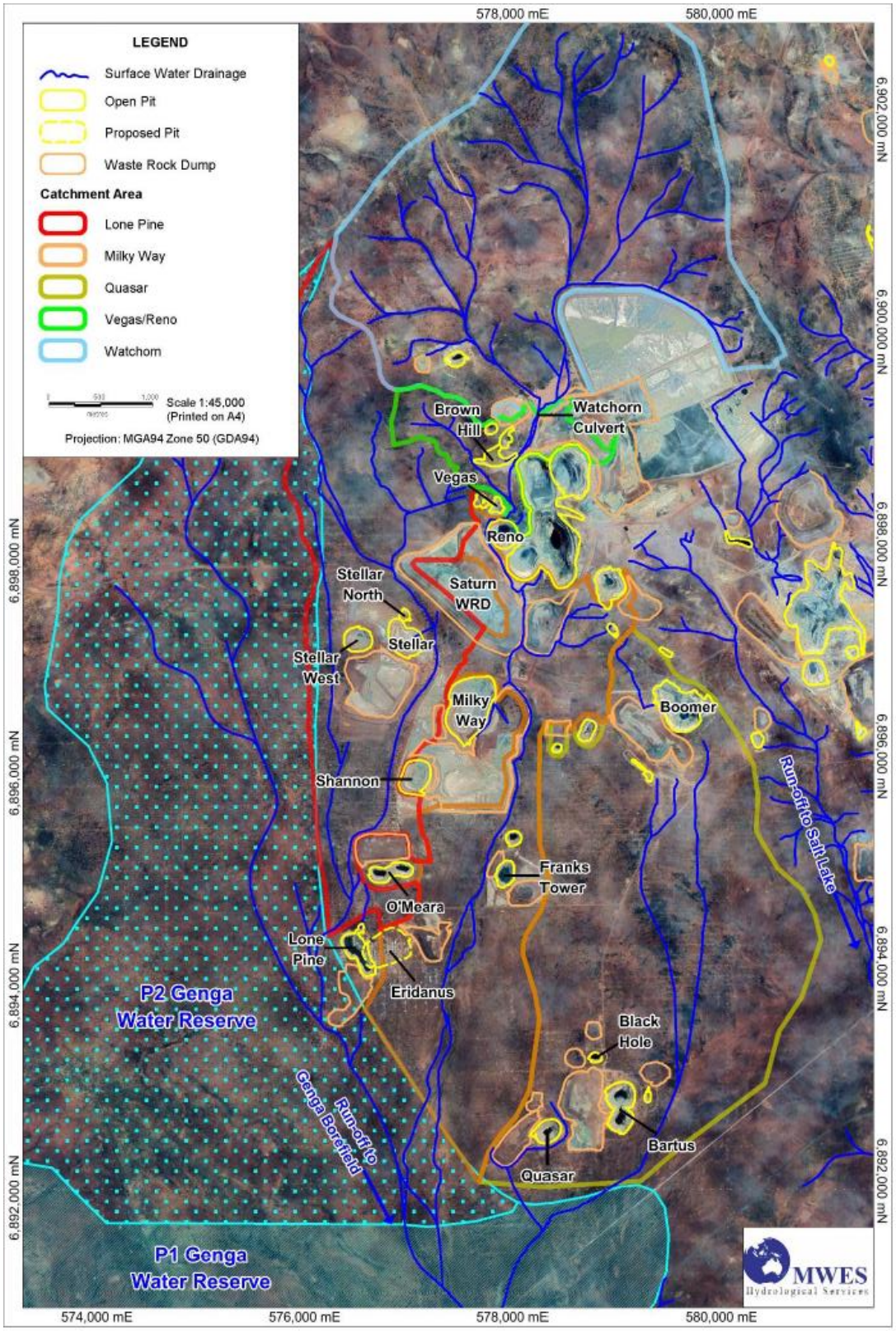
Blackcat South emission point



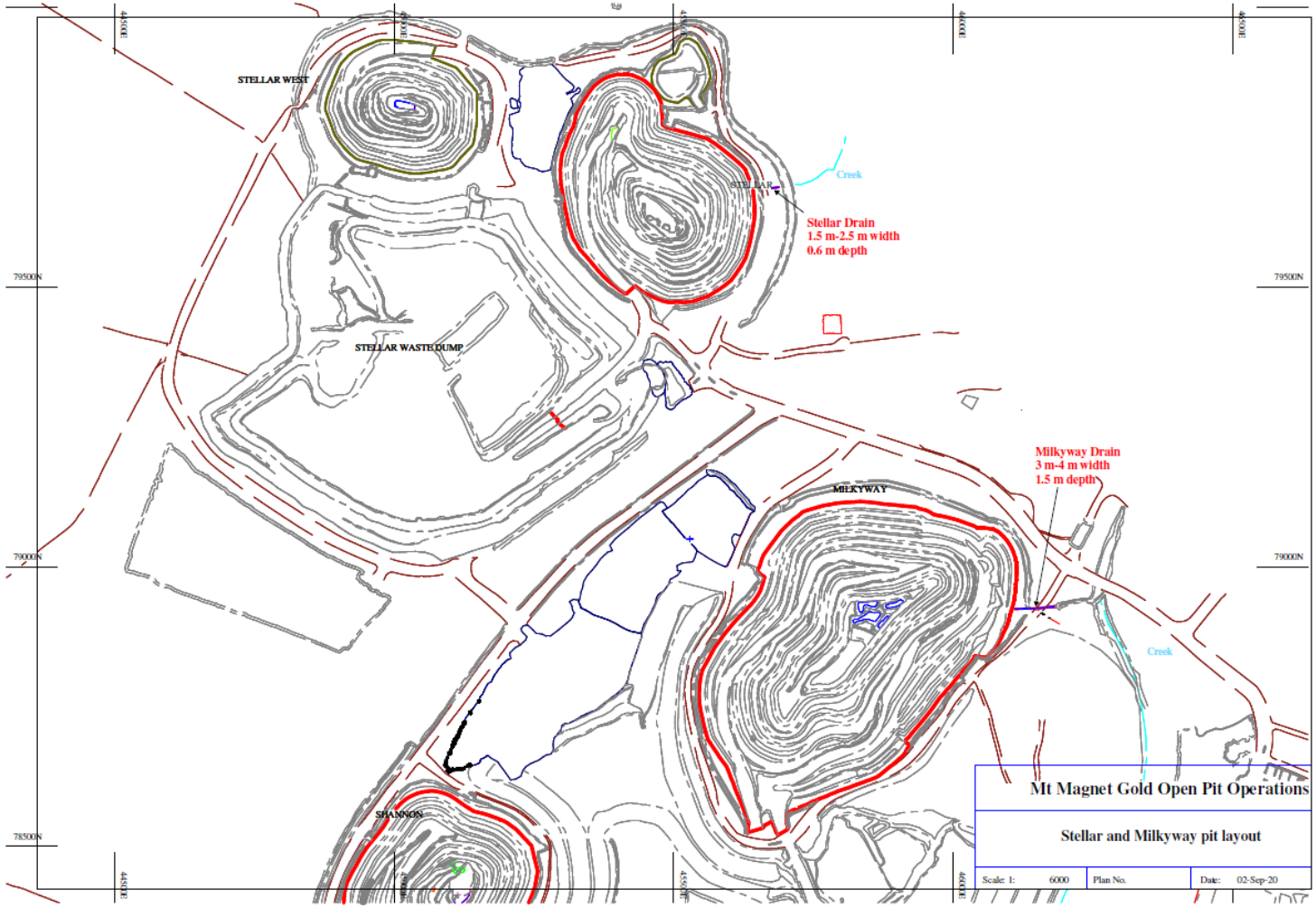
O'Meara emission point



Water catchment areas



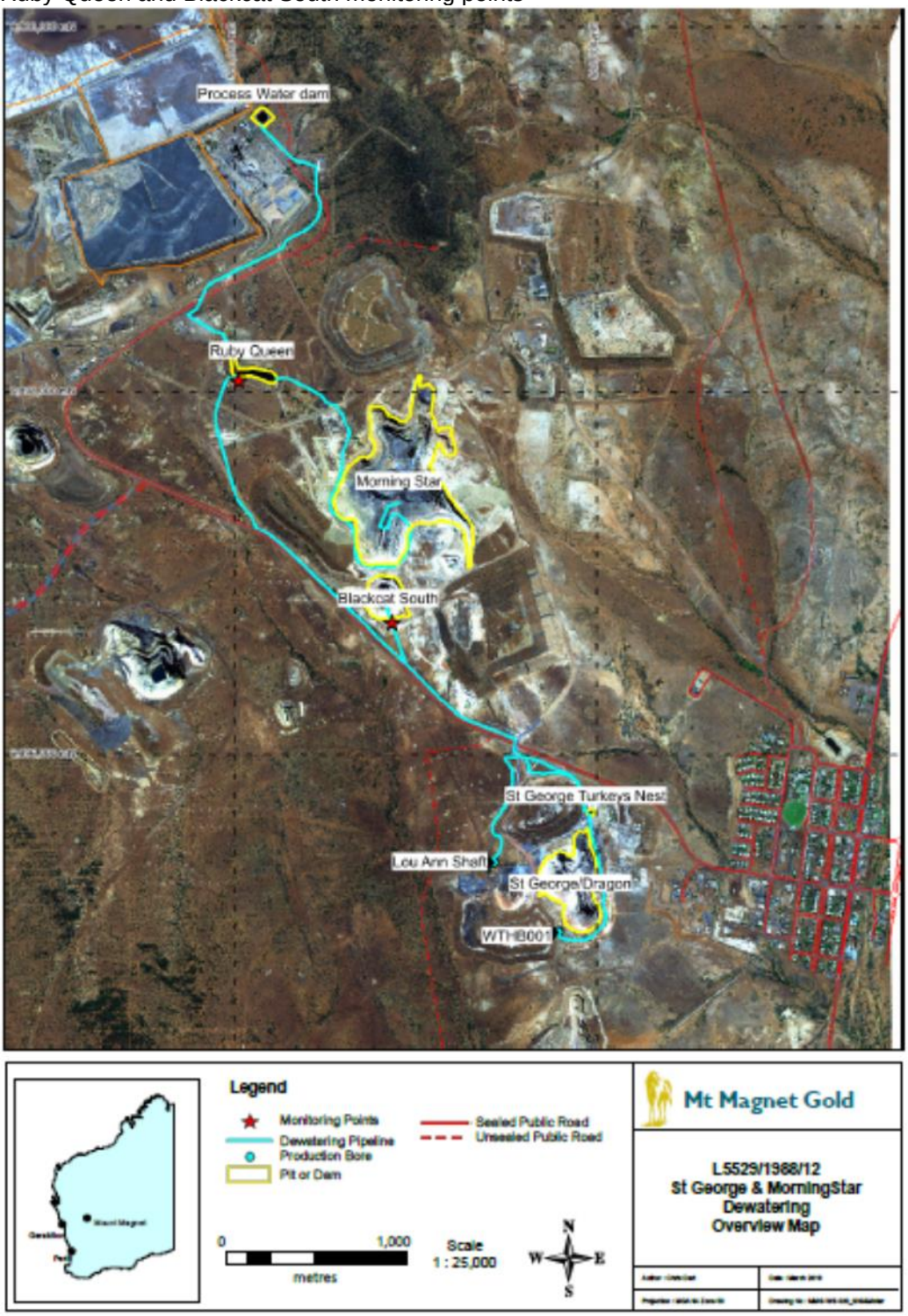
Stellar and Milky Way drain layout



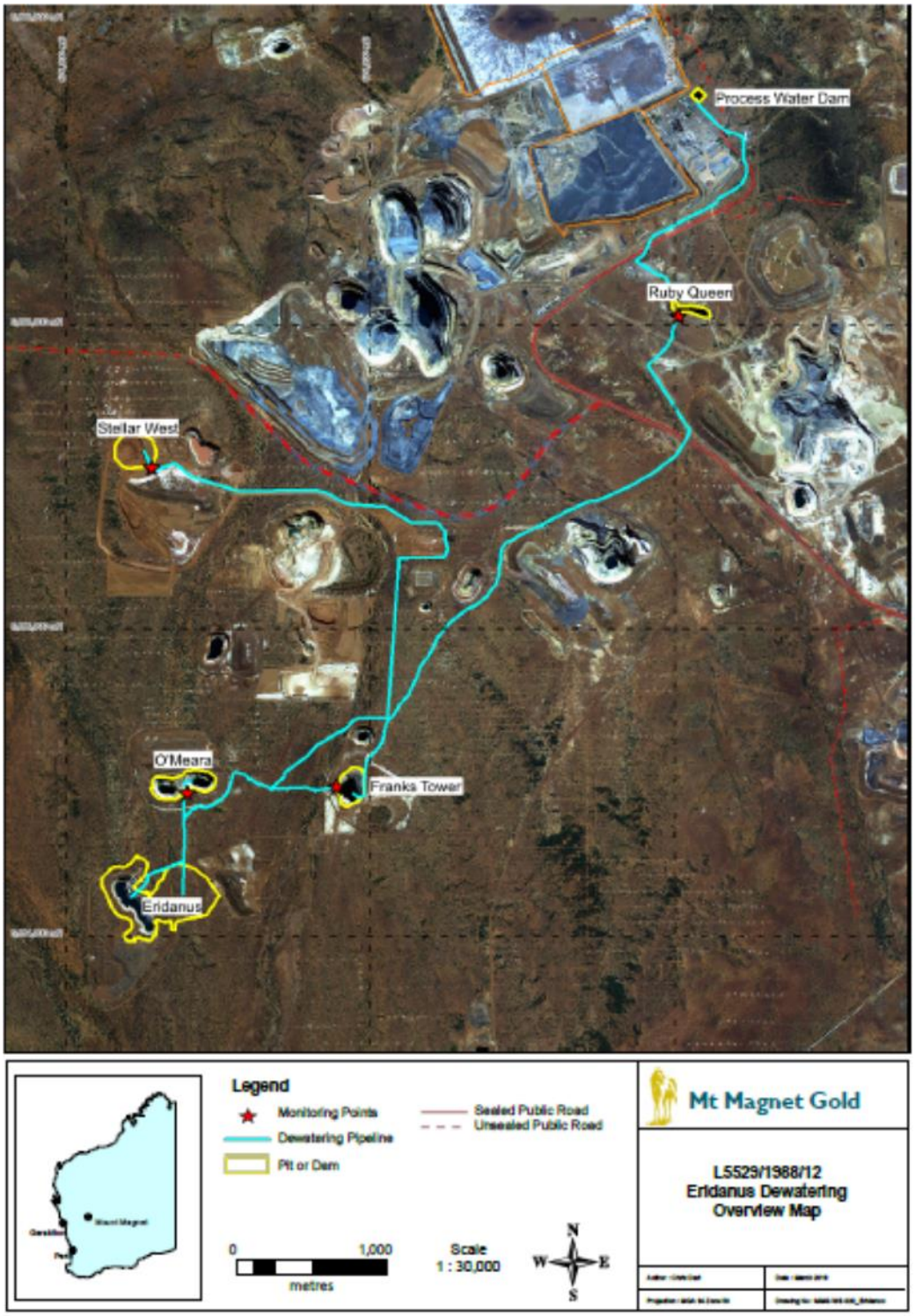
Map of monitoring locations

The locations of the monitoring points defined in Table 3.2.1 are shown below.

Ruby Queen and Blackcat South monitoring points

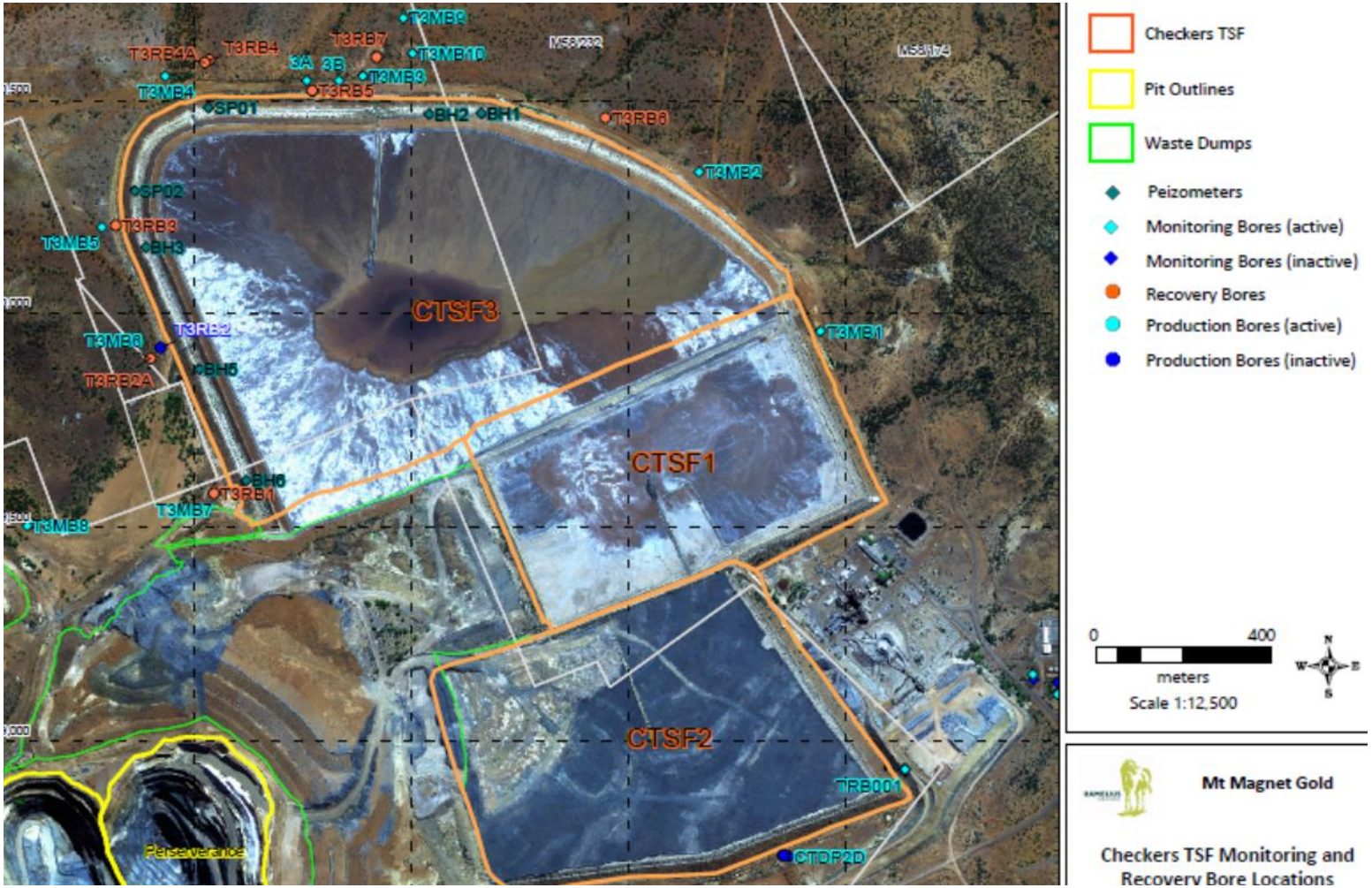


O'Meara and Franks Tower monitoring points as per Table 3.2.1



CTSF3 Groundwater monitoring locations

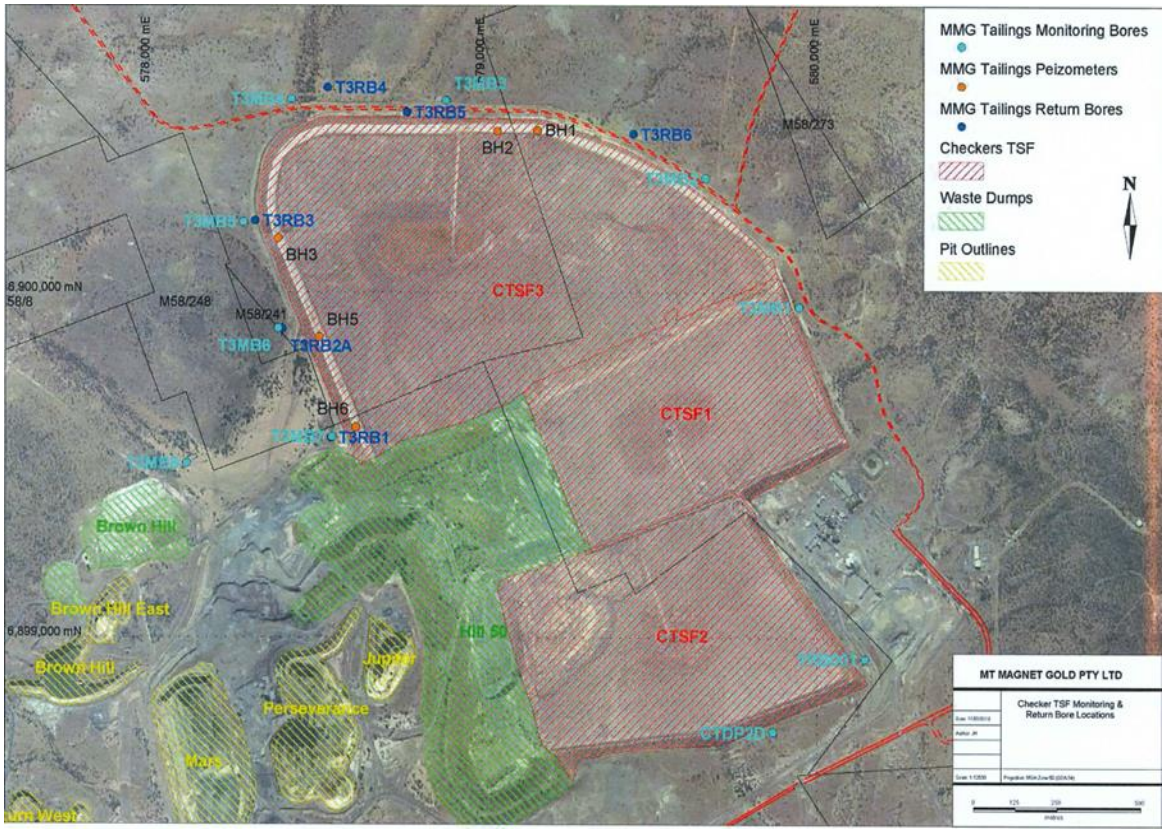
The locations of the monitoring points defined in Tables 3.3.1 and 3.4.1 are shown below.



Map of storage locations

The location of the storage areas defined in Table 1.3.4 are shown below.

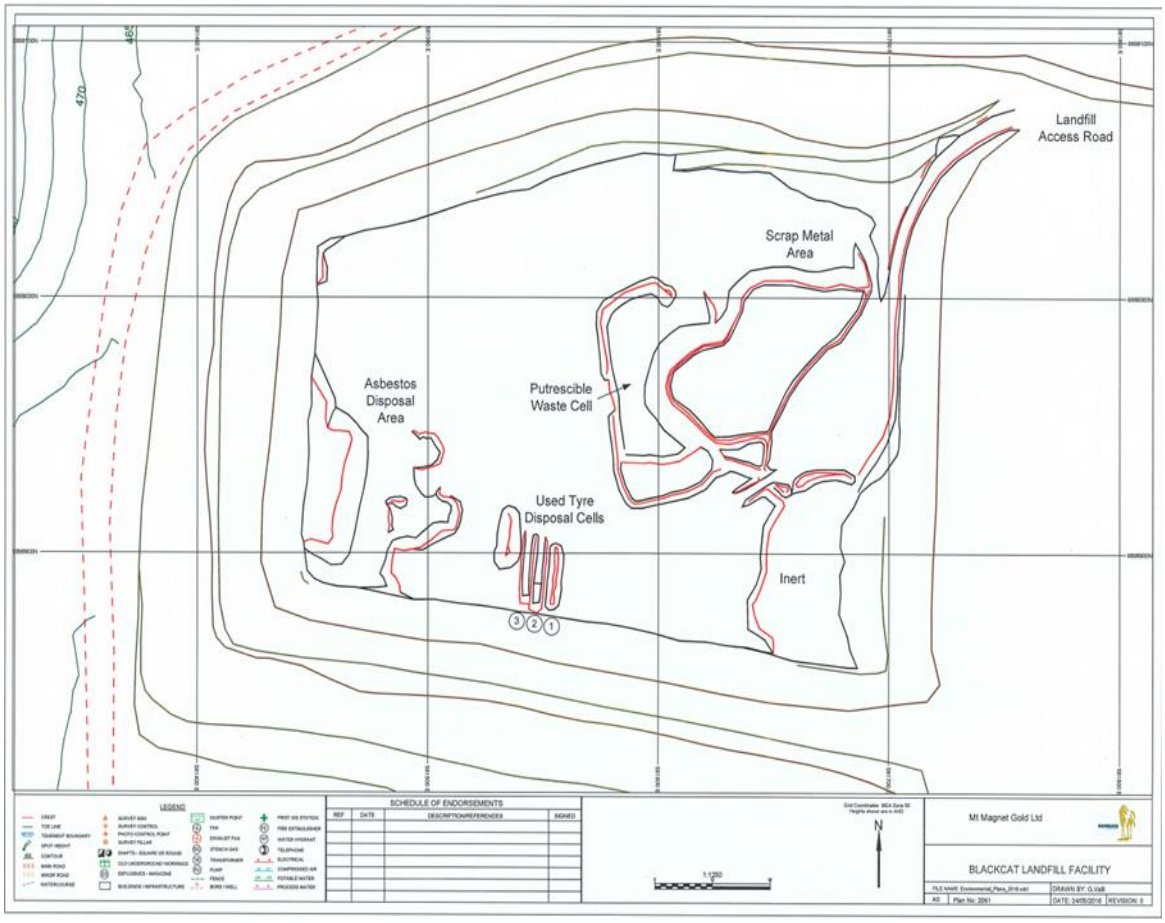
CTSF3



Process water dam

Landfill Area Map

The areas in which the disposal of waste by landfilling may take place is show in the map below.



Schedule 2: Notification and forms

Licence: L5529/1988/12 Licence holder: Mt Magnet Gold Pty Ltd
Form: GR1 Period :

Name: Monitoring of point source emissions to groundwater

Emission point	Parameter	Result	Averaging period	Sample date & times
Dewatering discharge into [specify which outlet]	Volumetric flow rate	m^3/day	Monthly	
	Standing water level	mbgl	Spot sample	
	pH	-		
	Arsenic	mg/L		
	Aluminium	mg/L		
	Cadmium	mg/L		
	Chromium	mg/L		
	Copper	mg/L		
	Iron	mg/L		
	Lead	mg/L		
	Manganese	mg/L		
	Mercury	mg/L		
	Molybdenum	mg/L		
	Nickel	mg/L		
	Selenium	mg/L		
	Total dissolved solids	mg/L		
	Total nitrogen	mg/L		
	Total recoverable hydrocarbons	mg/L		
	Zinc	mg/L		

Signed on behalf of Mt Magnet Gold Pty Ltd: …….. Date:

Licence: L5529/1988/12 licence holder: Mt Magnet Gold 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	
Post	
Signature on behalf of Mt Magnet Gold Pty Ltd	
Date	