



Licence number	L9309/2021/1
Licence holder	Element 25 Limited
ACN	119 711 929
Registered business address	Level 1, Building B Garden Office Park Osborne Park WA 6017
DWER file number	DER2021/000518
Duration	5/04/2022 to 04/04//2042
Date of issue	04/04/2022
Premises details	Butcherbird Manganese Project Mining Tenement M52/1074 MEEKATHARRA WA 6642

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations</i> 1987)	Assessed production / design capacity
Category 5: Processing or beneficiation of metallic or non-metallic ore	1.6 million tonnes per annum (Mtpa) (dry) 1.75 Mtpa (wet)

This licence is granted to the licence holder, subject to the attached conditions, on 4 April 2022, by:

Alana Kidd

Manager, Resource Industries

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

Licence history

Date	Reference number	Summary of changes
14/12/2020	W6455/2020/1	Existing Works Approval that will transition to the current Licence L9309/2021/1.
04/04/2022	L9309/2021/1	Licence granted.

Interpretation

In this licence:

- (a) the words 'including', 'includes' and 'include' in conditions mean "including but not limited to", and similar, as appropriate;
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (c) where tables are used in a condition, each row in a table constitutes a separate condition;
- (d) any reference to an Australian or other standard, guideline, or code of practice in this licence:
 - (i) if dated, refers to that particular version; and
 - (ii) if not dated, refers to the latest version and therefore may be subject to change over time;
- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and
- (f) unless specified otherwise, all definitions are in accordance with the EP Act.

NOTE: This licence requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this licence.

Licence conditions

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

Infrastructure and equipment

Operation Requirements

1. The licence holder must ensure that the site infrastructure and equipment listed in Table 1 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 1.

Table 1: Infrastructure and equipment requirements

	Site infrastructure and equipment	Operational requirement	Infrastructure location
1.	Processing Plant	<ul style="list-style-type: none"> • Operate and maintain dust controls to manage dust emissions for processing and stockpiles; • Capacity of sumps is maintained; • Operate sump pumps to recover lost material back to the processing circuit; • Maintain stormwater drains installed adjacent to the raised hard stand areas to direct stormwater around the Processing Plant; • Record the volume of ore processed; and • Process not more than 1.6 Mtpa (dry) / 1.75 Mtpa (wet) of ore. 	Schedule 1: Figure 1 and 2
2.	TSF	<ul style="list-style-type: none"> • Freeboard able to store a 1 in 100-year 72-hour rainfall event, whilst maintaining 500 mm of freeboard to the crest; • Ensure visible freeboard markers are in place; • Operate decant pumping system to recover supernatant water; • Maintain surface water diversion drains and bunds to divert flood water flow away from the faces of the TSF; • Maintain flow meters for recording tailings and decant volumes; • Record the volume of tailings discharged; and • Record the volume of water recovered from the decant pond. 	Schedule 1: Figure 1 and 3
3.	Process Water Pond	<ul style="list-style-type: none"> • Freeboard able to contain a 1 in 100-year, 72-hour AEP rainfall event, whilst maintaining 500 mm of freeboard to the crest of the pond; • Ensure visible freeboard markers are in place; and • Record the volume of water reused for the Processing Plant. 	Schedule 1: Figure 1 and 2
4.	Tailings discharge pipeline and return water pipeline	<ul style="list-style-type: none"> • Inspect tailings discharge and return water pipelines daily when operational; • Inspect the discharge outlet daily when discharging; • Maintain pipeline flow meters; • 4 groundwater monitoring bores must be maintained around the TSF; and • Maintain pipeline bunding capacity to ensure any lost tailings are captured for a period equal to the time between routine inspections. 	Schedule 1: Figure 1 and 3

Monitoring

2. The licence holder must undertake ambient groundwater monitoring during operations in accordance with Table 2.

Table 2: Ambient groundwater monitoring during operations

Discharge point	Monitoring location	Parameter	Frequency	Averaging Period	Unit	Method	
						Sampling	Analysis
Seepage from TSF	Groundwater monitoring bores:	Standing water level (SWL)	Monthly (in field)	Spot sample	Metres below ground level (mbgl)	AS/NZS 5667.1	In field non-NATA accredited analysis permitted
Bores	VWP09 (MB01), MB02, MB03, and MB04	pH	Quarterly (NATA accredited laboratory)		pH units	AS/NZS 5667.11	
		Total dissolved solids (TDS)			mg/L		
	(as depicted in Figure 3)	Aluminium Arsenic Antimony Barium Boron Cadmium Chromium Cobalt Copper Iron Lead Manganese Mercury Molybdenum Nickel Selenium Tin Vanadium Zinc TDS	Quarterly				By a NATA accredited laboratory

3. The licence holder must monitor emissions during operations in accordance with Table 3.

Table 3: Emissions monitoring during operations

Discharge point	Monitoring location	Parameter	Frequency	Averaging Period	Unit	Method	
						Sampling	Analysis
Tailings to TSF in the decant pond Decant Pond via return water pipeline to Process Water Pond	Process Water Pond (as depicted in Figures 2 and 3)	pH	Quarterly	Spot sample	pH units		In field non-NATA accredited analysis permitted
		Aluminium Arsenic Antimony Barium Boron Cadmium Chromium Cobalt Copper Iron Lead Manganese Mercury Molybdenum Nickel Selenium			mg/L		By a NATA accredited laboratory

		Tin Vanadium Zinc					
		Total dissolved solids					

4. The licence holder must undertake monitoring of the water balance for the TSF each monthly period, and (as a minimum) record the following information:
- site rainfall;
 - evaporation rate;
 - decant water recovery volumes;
 - volume of tailings deposited;
 - volume of water reused for the Processing Plant; and
 - estimate of seepage losses.

Inspections

5. The licence holder must conduct visual inspections of the infrastructure in Table 4 during operations at the frequency specified Table 4.

Table 4: Inspections of infrastructure

Infrastructure (refer to Schedule 1 Premises figures)	Type of inspection	Frequency
Processing Plant	For visual leak and spillage detection Integrity / damage check of stormwater diversions / drains around the hardstand	daily
Tailings waste delivery pipelines	Integrity check / loss of containment	daily
Tailings decant water return pipelines	For visual leak detection	daily
TSF	To confirm required freeboard capacity is available Integrity / damage to the TSF embankment, surface diversion drains, and bunds To confirm supernatant water pond around the decant rock ring does not exceed 50 m	daily
Process Water Pond	To confirm required freeboard capacity is available Integrity / damage check of HDPE liner	daily

Records and reporting

6. The licence holder must maintain accurate and auditable books including the following records, information, reports, and data required by this licence:
- the calculation of fees payable in respect of this licence;

- (b) any maintenance of infrastructure that is performed in the course of complying with condition 1 of this licence;
 - (c) monitoring programmes undertaken in accordance with conditions 2 and 3 of this licence;
 - (d) inspections performed while complying with condition 5 of this licence; and
 - (e) complaints received under condition 8 of this licence.
- 7.** The books specified under condition 6 must:
- (a) be legible;
 - (b) if amended, be amended in such a way that the original version(s) and any subsequent amendments remain legible and are capable of retrieval;
 - (c) be retained by the licence holder for the duration of the licence; and
 - (d) be available to be produced to an inspector or the CEO as required.

Complaints Management

- 8.** The licence holder must record the following information in relation to complaints received by the licence holder (whether received directly from a complainant or forwarded to them by the Department or another party) about any alleged emissions from the premises:
- (a) the name and contact details of the complainant, (if provided);
 - (b) the time and date of the complaint;
 - (c) the complete details of the complaint and any other concerns or other issues raised; and
 - (d) the complete details and dates of any action taken by the licence holder to investigate or respond to any complaint.

Annual Audit Compliance Report

- 9.** The licence holder must:
- (a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period; and
 - (b) prepare and submit to the CEO by no later than 30 days after the end of that annual period an Annual Audit Compliance Report (AACR) in the approved form.

Annual Environmental Report

- 10.** The licence holder must submit to the CEO no later than 30 days after the end of that annual period an Annual Environmental Report (AER) for that annual period for the conditions list in Table 5, and which provides information in accordance with the corresponding requirement set out in Table 5.

Table 5: Annual Environmental Report requirements

Condition (if relevant)	Requirement
-	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.
-	Any relevant information relating to the calibration of monitoring equipment, or reports comprising details of any modified calibration methods.
Condition 2, Table 2	<p>Ambient groundwater monitoring results during operations.</p> <p>Tabulated monitoring data results for each monitoring bore showing concentrations of all parameters.</p> <p>Time-series graphs in Microsoft Excel format for each monitoring location for standing water levels in mbgl.</p> <p>An interpretation of the monitoring data including comparison to historical trends and emission limits (where applicable).</p> <p>Copies of original monitoring, laboratory and analysis reports submitted to the Licence Holder by third parties.</p>
Condition 3, Table 3	<p>Emissions monitoring results during operations. Tabulated and compared to baseline groundwater data.</p> <p>Tabulated monitoring data results showing concentrations of all parameters.</p> <p>An interpretation of the monitoring data including comparison to historical trends and emission limits (where applicable).</p> <p>Copies of original monitoring, laboratory and analysis reports submitted to the Licence Holder by third parties.</p>
Condition 4	<p>Water balance monitoring results for the TSF each monthly period, and the following information:</p> <ul style="list-style-type: none"> • site rainfall; • evaporation rate; • decant water recovery volumes; • volume of tailings deposited • volume of water reused for the Processing Plant; and • estimate of seepage losses.
Condition 5, Table 4	Inspections of infrastructure of any failure or malfunction

Definitions

In this licence, the terms in Table 6 have the meanings defined.

Table 6: Definitions

Term	Definition
ACN	Australian Company Number.
AEP	means annual exceedance probability.
Annual Audit Compliance Report (AACR)	means a report submitted in a format approved by the CEO (relevant guidelines and templates may be available on the Department's website).
annual period	a 12-month period commencing from 1 December until 30 November of the immediately following year.
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 Water quality – sampling – Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples.
AS/NZS 5667.11	means the Australian Standard AS/NZS 5667.11 Water quality – sampling – guidance on sampling groundwater.
books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer of the Department. CEO for the purposes of notification means: Director General Department administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 Joondalup DC WA 6919 or: info@dwer.wa.gov.au
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of Part V Division 3 of the EP Act.
discharge	has the same meaning given to that term under the EP Act.
emission	has the same meaning given to that term under the EP Act.
EP Act	<i>Environmental Protection Act 1986</i> (WA)
EP Regulations	<i>Environmental Protection Regulations 1987</i> (WA)
HDPE	High-Density Polyethylene

Term	Definition
licence	refers to this document, which evidences the grant of a licence by the CEO under section 57 of the EP Act, subject to the specified conditions contained within.
licence holder	refers to the occupier of the premises, being the person specified on the front of the licence as the person to whom this licence has been granted.
mbgl	means metres below ground level
mg/L	means milligrams per litre
monthly period	means a one-month period commencing from first day of a month until last day of the same month.
Mtpa	Million tonnes per annum
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	refers to the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map (Figure 1) in Schedule 1 to this licence.
prescribed premises	has the same meaning given to that term under the EP Act.
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.
RL	means reduced level
SWL	Standing water level
TDS	Total Dissolved Solids
TSF	Means tailings storage facility
waste	has the same meaning given to that term under the EP Act.

END OF CONDITIONS

Schedule 1: Maps

Premises map

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

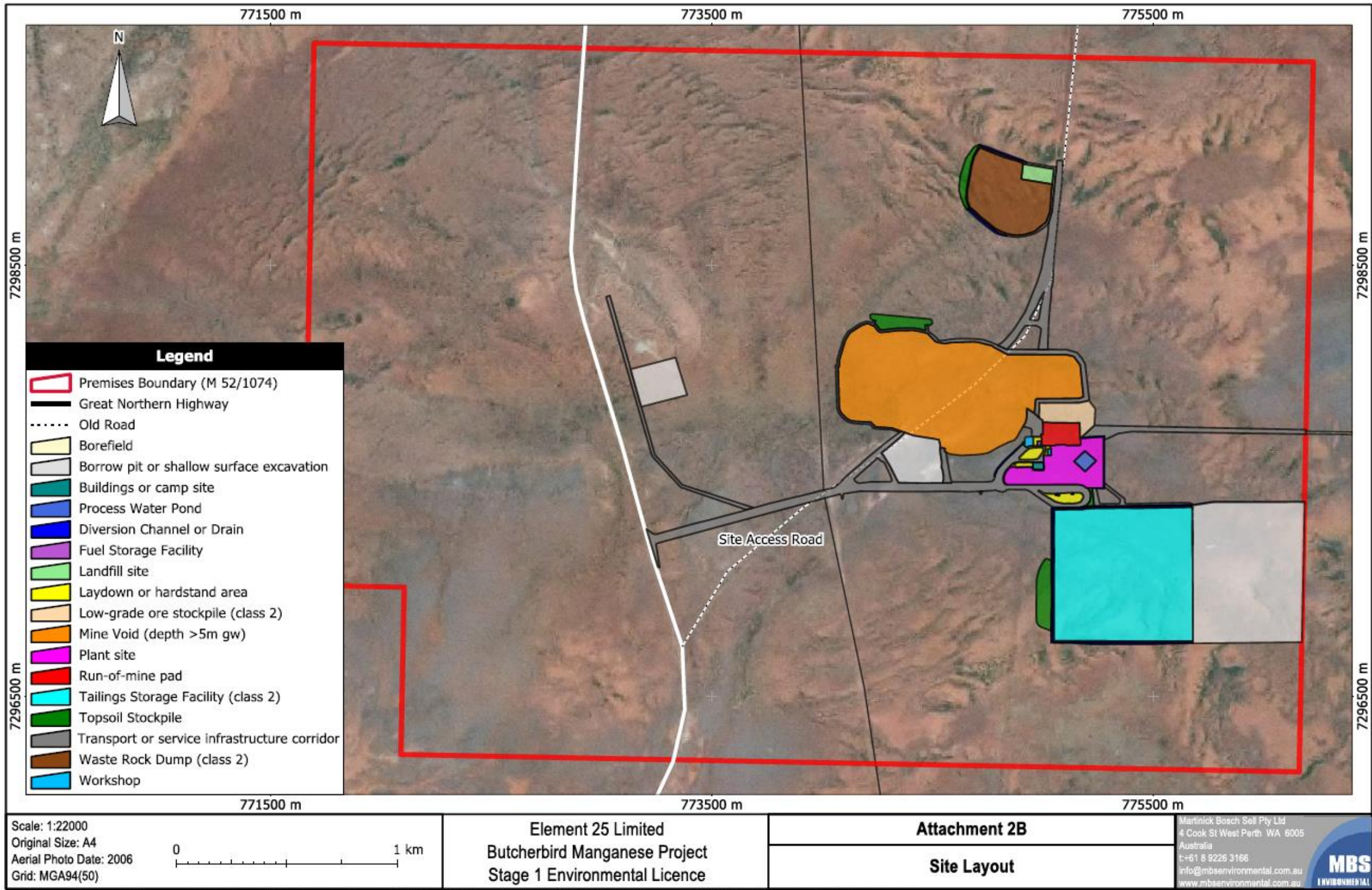


Figure 1: Prescribed premises boundary and infrastructure layout

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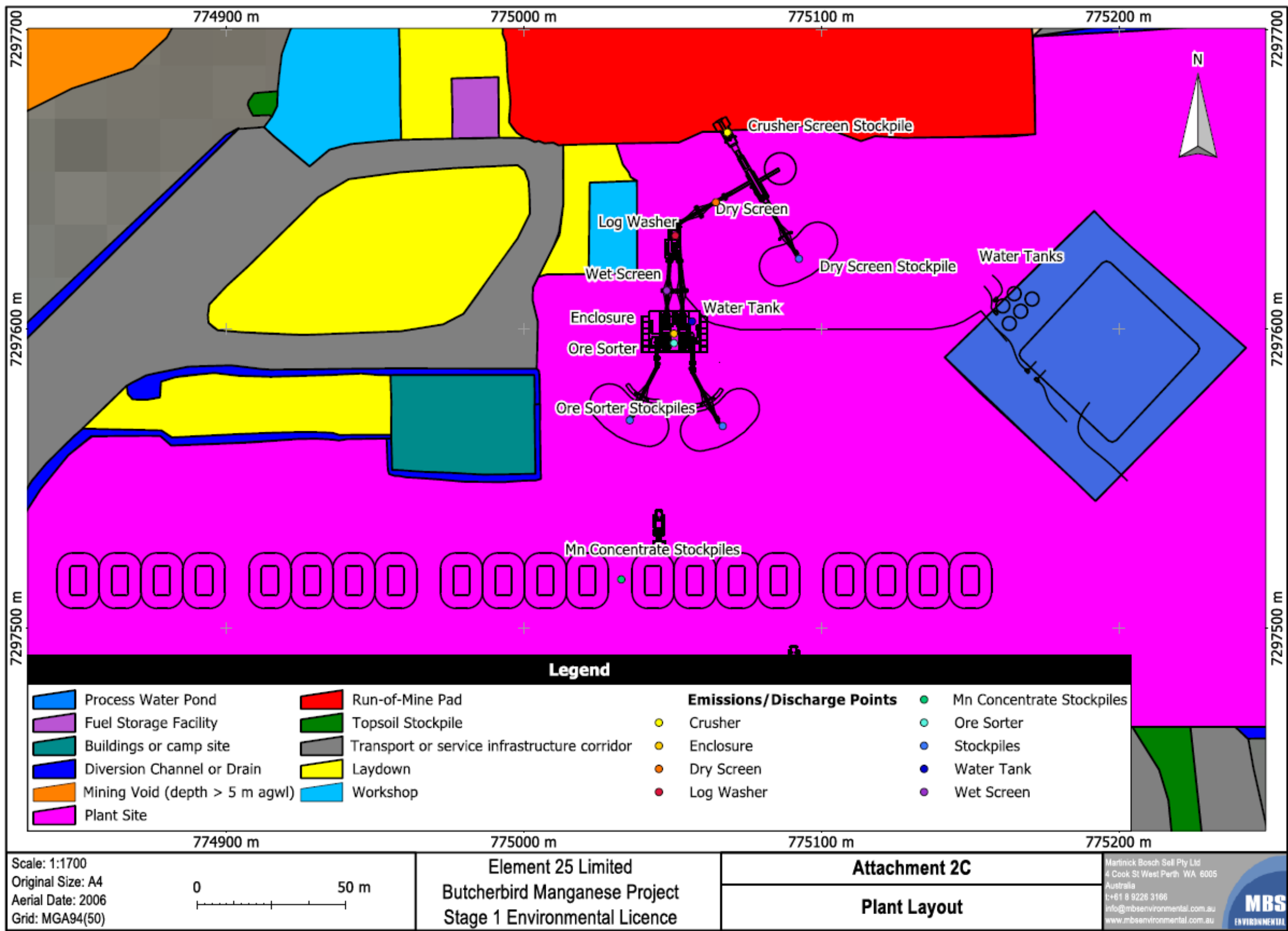


Figure 2: Processing Plant layout

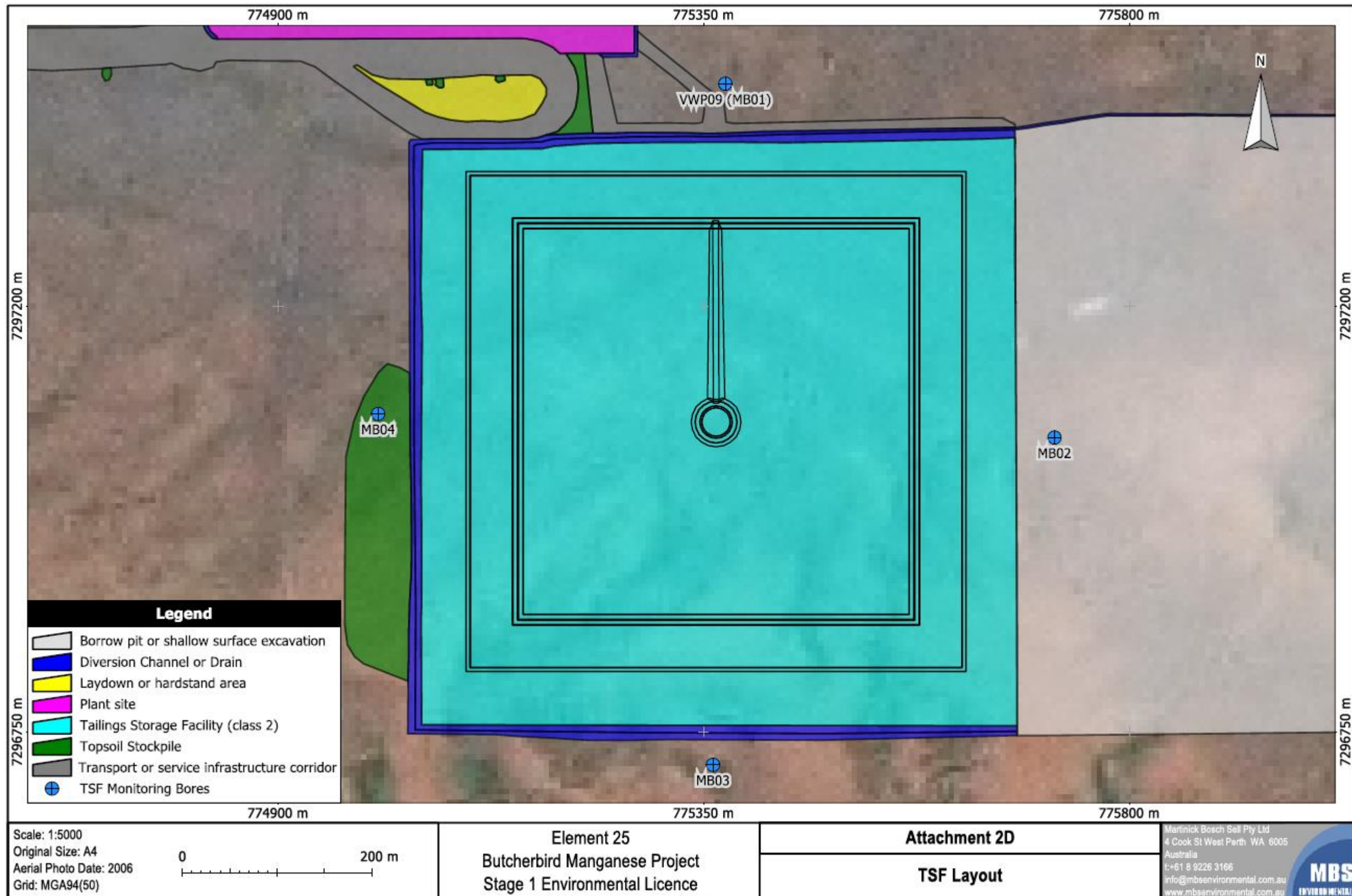


Figure 3: TSF layout including monitoring bore locations

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IR-T06 Licence template (v7.0) (February 2020)