



**Licence Number** L4328/1989/10

**Licence Holder** Wodgina Lithium Pty Ltd

**ACN** 611 488 932

**File Number:** DER2013/001044-1

**Premises** Wodgina Operations

Mining tenements M45/50, M45/381, M45/382,  
M45/923, M45/925 and M45/1252

**Date of Amendment** 25/01/2019

## Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Licence in accordance with section 59 of the *Environmental Protection Act 1986* (EP Act) as set out in this Amendment Notice. This Amendment Notice constitutes written notice of the amendment in accordance with section 59B(9) of the EP Act.

**Louise Lavery**

**A/Manager, Resource Industries**

**Regulatory Services**

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

# Definitions and interpretation

## Definitions

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

**Table 1: Definitions**

Term	Definition
ACN	Australian Company Number
Amendment Notice	refers to this document
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>
Commission/ Commissioning	To bring infrastructure into working condition
Commissioning Period	Period nominated for commissioning as per the Works Approval Holder's Commissioning Plan
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.
DMIRS	Department of Mines, Industry Regulation and Safety
DWER	Department of Water and Environmental Regulation
EPA	Environmental Protection Authority
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
EWL	Eastern Waste Landform
Existing Licence	The Licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of and during this Review
HDPE	High density polyethylene
kg/annum	kilogram per annum

Licence Holder/Licensee	Wodgina Lithium Pty Ltd
mg/m <sup>3</sup>	milligrams per cubic metre
mg/Nm <sup>3</sup>	milligrams per standard cubic metre
mg/s	milligrams per second
Mtpa	million tonnes per annum
MW	megawatt
Noise Regulations	<i>Environmental Protection (Noise) Regulations 1997</i> (WA)
Occupier	has the same meaning given to that term under the EP Act.
PAF	potentially acid forming
Prescribed Premises	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report.
Risk Event	as described in <i>Guidance Statement: Risk Assessment</i>
Stack sampling	method of collecting representative samples of pollutant laden air/gases at the place of origin of pollutants to determine the total amount of pollutants emitted into the atmosphere from a given source in a given time
USEPA Method 7	US Environmental Protection Agency (2017) Code of Federal Regulations, Title 40, Part 60, Appendix A, Method 7: Determination of nitrogen oxide emissions from stationary sources. <a href="https://www.epa.gov/emc/method-7-nitrogen-oxide">https://www.epa.gov/emc/method-7-nitrogen-oxide</a>
USEPA Method 10	US Environmental Protection Agency (2017) Code of Federal Regulations, Title 40, Part 60, Appendix A, Method 10: Determination of carbon monoxide emissions from stationary sources. <a href="https://www.epa.gov/emc/method-10-carbon-monoxide-instrumental-analyzer">https://www.epa.gov/emc/method-10-carbon-monoxide-instrumental-analyzer</a>
USEPA Method 18	US Environmental Protection Agency (2016) Code of Federal Regulations, Title 40, Part 60, Appendix A, Method 18: Measurement of gaseous organic compound emission by gas chromatography. <a href="https://www.epa.gov/emc/method-18-volatile-organic-compounds-gas-chromatography">https://www.epa.gov/emc/method-18-volatile-organic-compounds-gas-chromatography</a>
USEPA Method 25	US Environmental Protection Agency (2016) Code of Federal Regulations, Title 40, Part 60, Appendix A, Method 25: Determination of total gaseous nonmethane organic emissions as carbon. <a href="https://www.epa.gov/emc/method-25-gaseous-nonmethane-organic-emissions">https://www.epa.gov/emc/method-25-gaseous-nonmethane-organic-emissions</a>
VOCs	Volatile Organic Compounds
WRL	waste rock landform

WWTF	Wastewater Treatment Facility
------	-------------------------------

## Amendment Notice

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the Licence issued under the EP Act for a prescribed premises as set out below. This notice of amendment is given under section 59B(9) of the EP Act.

This notice is limited to an amendment for Categories 5 and 89 and addition of category 52. No changes to the aspects of the original Licence relating to Category 54 have been requested by the Licence Holder. The amendment is to:

1. Include three additional mobile crushing and screening locations;
2. Install a temporary 13MW diesel power generator;
3. Increase tyre disposal quantity and authorise an expansion of the current waste or tyre disposal facility area;
4. Include an additional surface water monitoring point at the fixed screening plant; and
5. Include the Commissioning Plan. Table 1 describes the activities described in the Commissioning Plan (Ver. 3) that will be included in this amendment.

The following guidance statements have informed the decisions made on this amendment:

- *Guidance Statement: Setting Conditions (October 2015)*
- *Guidance Statement: Decision Making (February 2017)*
- *Guidance Statement: Risk Assessment (February 2017)*
- *Guidance Statement: Environmental Siting (November 2016)*

## Amendment description

Wodgina Lithium Pty Ltd (WLPL) is currently approved to operate crushing and screening and beneficiation plants at a combined throughput of 8.75 Mtpa of ore through Licence L4328/1989/10.

Under Works Approval W6132/2018/1, WLPL is authorised to construct a lithium beneficiation plant with design capacity of approximately 4.6 Mtpa – consisting of three 250,000 tpa beneficiation trains. Additionally the Works Approval authorized construction of an expansion to TSF3, construction of a 64 MW capacity gas fired power station and an upgrade to the existing wastewater treatment ponds.

An application for an amendment to the Licence L4328/1989/10 was received on 30 August 2018. In the application, WLPL requested the following changes to the Licence:

- Addition of category 52 for a temporary 13MW diesel power generator;
- Change in the disposal of coarse reject tailings stream from TSF3 to co-mingling with mine waste within the Eastern Waste Landform;
- A change to the crushing and screening locations;
- An increase in tyre disposal tonnages and expansion of the current waste disposal facility area;
- An administrative correction to add an additional surface water monitoring point at the fixed screening plant; and
- Commissioning: a plan was submitted with an overview of commissioning of the Lithium Beneficiation Plant, TSF3 expansion and Gas Power Station.

After discussions with the Department, WLPL requested to have the co-mingling disposal of coarse tailings from the beneficiation plant into the Eastern Waste Landform removed from this Licence Amendment.

A separate Licence amendment will be submitted to address the disposal of the coarse tailings fraction.

In accordance with s56 of the EP Act occupiers must be licensed for emissions, unless the emissions are in accordance with a works approval. W6132/2017/1 did not assess commissioning emissions.

**Table 1: List of activities included in the Commissioning Plan provided and proposed for assessment and inclusion in L4328/2018/1 Amendment 3.**

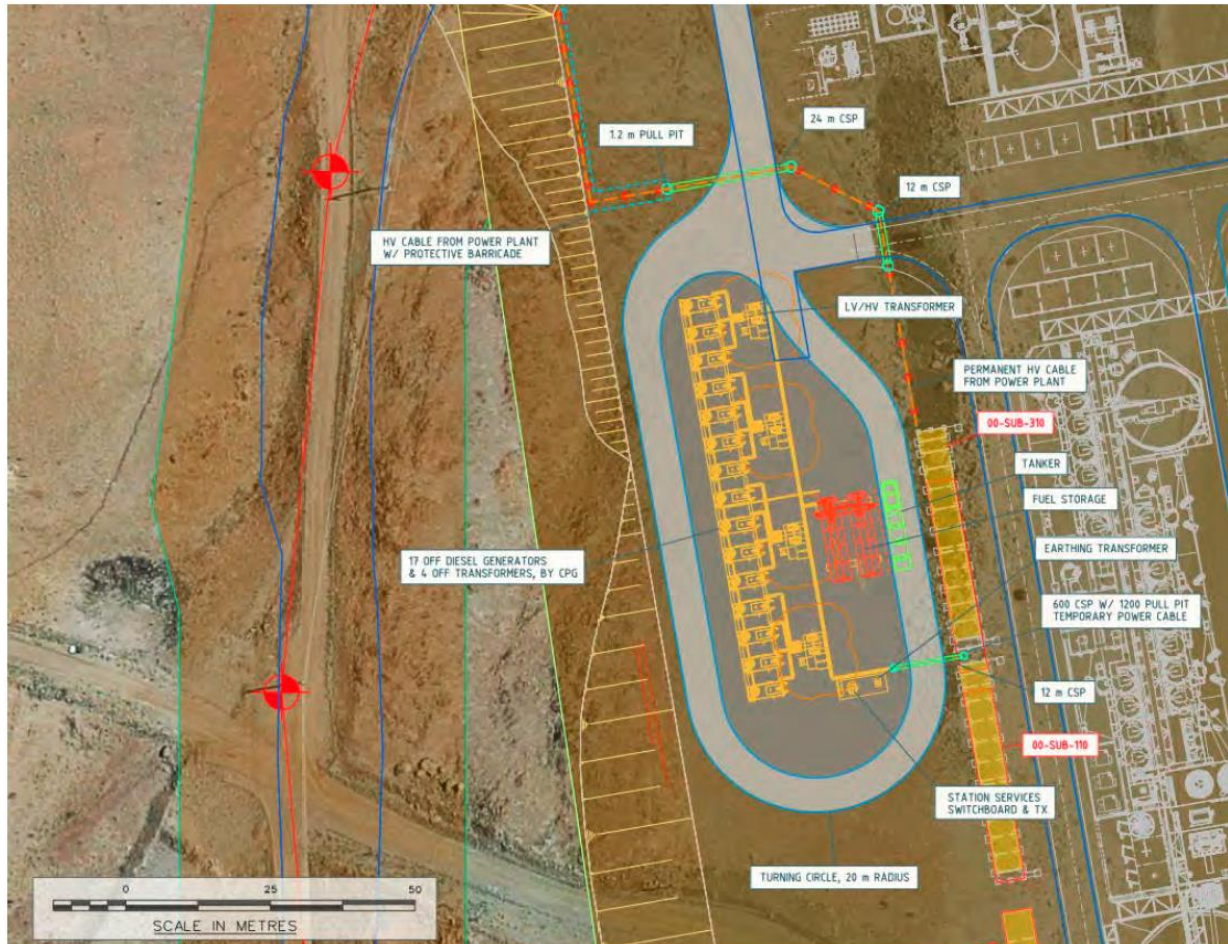
Facility	Activity	Licence Amendment 3	Rationale
Putrescible Landfill	Construction and Operation	Not included	Condition 3 of Works Approval W6132/2018/1 requires compliance document from the Engineering Project Manager for the putrescible landfill confirming each item of infrastructure or component of infrastructure specified in Column 1 Table 2 has been constructed with no material defects and to the requirements specified in Column 2 of Table 2.  This document has not been submitted to the Department.
Waste Water Treatment Plant (WWTP)	Construction and Operation	Included – subject to construction compliance report	In July 2018 WLPL committed to progressively line the existing evaporation ponds with HDPE liners with a hydraulic conductivity of $1 \times 10^{-9}$ m/s or less, as well as construct three new HDPE lined evaporation ponds adjacent to the existing ponds.
Gas Power Station	Commissioning	Commissioning Included (operation not applied for)	Construction Compliance document submitted.
Beneficiation Plant	Commissioning	Not included	Condition 3 of Works Approval W6132/2018/1 requires compliance document from the Engineering Project Manager for the Beneficiation Plant confirming each item of infrastructure or component of infrastructure specified in Column 1 Table 2 has been constructed with no material defects and to the requirements specified in Column 2 of Table 2.  This document has not been submitted to the Department.
TSF3 Expansion	Commissioning	Not included	Condition 3 of Works Approval W6132/2018/1 requires compliance document TSF designer or their geotechnical engineer confirming each item of infrastructure or component of infrastructure specified in Column 1 Table 2 has been constructed with no material defects and to the requirements specified in Column 2 of Table 2. This document has not been submitted to the Department.

### Category 52 – Diesel Power Generator

To accommodate the operational power requirements for commissioning of the Beneficiation Plant whilst the new 64MW gas fired power station is being constructed and commissioned, power for commissioning will be provided via a temporary 13MW diesel fed power station.

The diesel power station will be loaded progressively as the commissioning load increases. As of early 2019 it is anticipated that the gas fired permanent power station will begin commissioning, with subsequent loading of the temporary station gradually reducing at such time the permanent power plant is fully operational by the end of July 2019. The temporary station will then be decommissioned and removed from site.

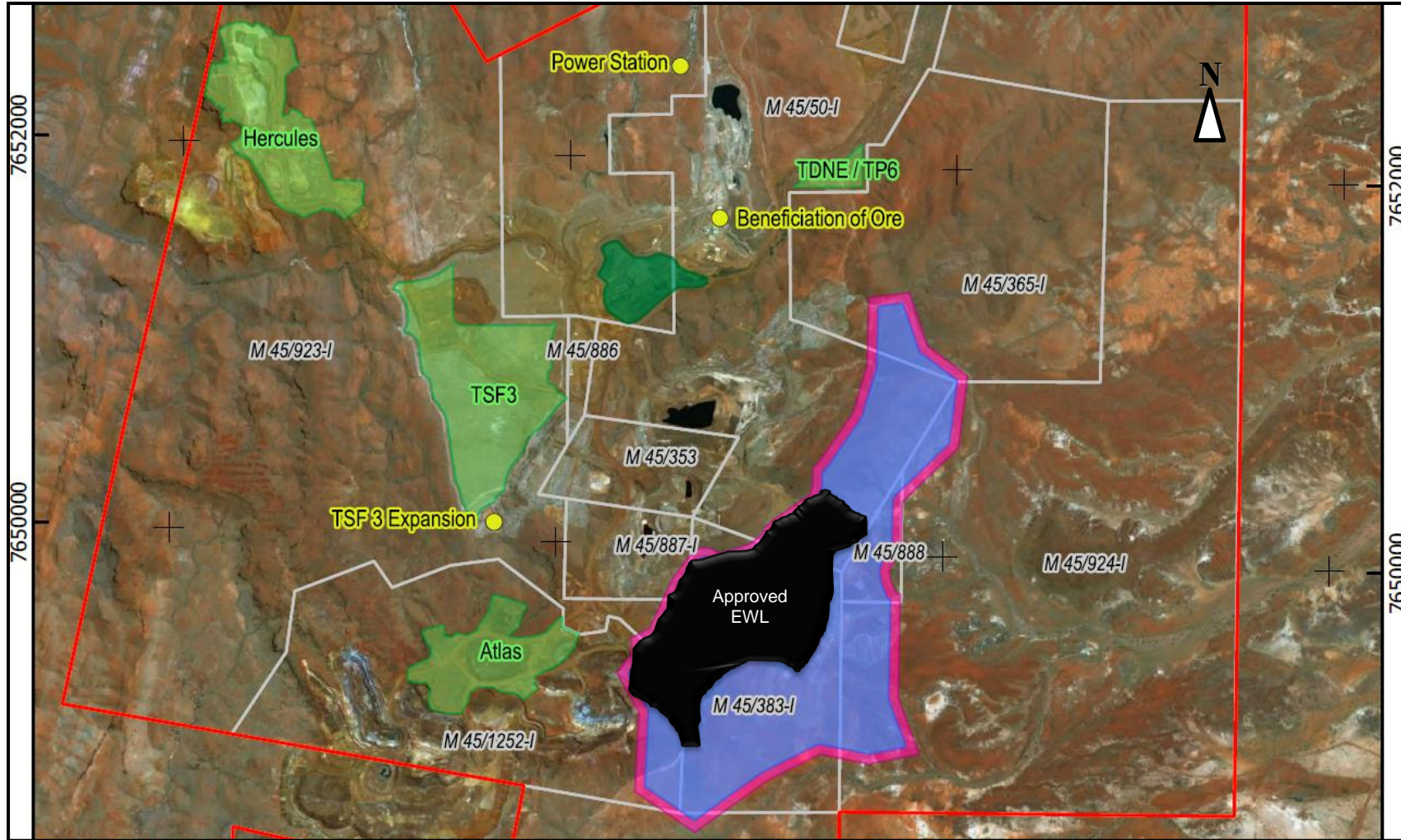
Power will be generated from 15 containerised Cummins model C1250 D2R generator units, with two standby units. The temporary plant will consist of two continuous concrete strip footings for the containerised units to be placed and bolted. A demountable type control room and two self-bundled diesel bulk fuel tanks will also be placed and connected to the gensets to allow for operation. No additional clearing of vegetation will be required as all infrastructure will be located within the footprint of the Beneficiation Plant (Figure 1).



**Figure 1: Temporary diesel generators layout.**

### Crushing and Screening

The Licence currently denotes locations for three mobile crushing and screening units. A change in the current location of mobile crushing operations at TSF3 and an additional three sites (within tenements M45/50, M45/923 and M45/1252) are required to produce an engineered fill for construction projects as well as for previously approved purposes. No changes to the number of plants or premise production capacity are required. The locations of the additional three sites are depicted in Figure 2.



- Fixed Crushing and Screening
- Inert Waste Facility
- Mobile Crushing and Screening
- Eastern Waste Landform

**Figure 2: New locations for crush and screening and expansion of inert landfill at EWL**



## Increase tyre disposal and expansion of Inert landfill waste disposal area at Eastern Waste Landform

Table 2 below outlines the proposed changes to the production or design capacity for Category 89.

**Table 2: Proposed production or design capacity changes**

Category	Current production or design capacity	Proposed production or design capacity	Description of proposed amendment
89	No more than 200 tonnes of waste tyres shall be disposed of at the tyre disposal areas per annual period.	No more than 500 tonnes of waste tyres shall be disposed of at the tyre disposal areas per annual period.	Increase from 200 to 500 tpa and an expansion of the current Inert Waste Landfill at the Eastern Waste Landform (EWL)

All currently approved requirements, volumes and landfill and fire hazard management techniques utilised at the existing locations will be employed at the expanded EWL site. The cells containing tyres will be:

- located outside of a designated PAF (potentially acid forming) encapsulation cell; and
- a minimum of 5 metres away from final outer slopes and the ultimate dump surface.

WLPL will notify DWER prior to the commissioning of a tyre disposal cell indicating the cell location (map and GIS coordinates) and proposed commissioning date. Figure 2 shows the location of the inert landfill area at EWL.

The EWL expansion will require clearing of native vegetation and a valid clearing permit. **Clearing of native vegetation has not been assessed or approved under this assessment.**

### Commissioning Plan

The existing Works Approval for the Wodgina Lithium Mine (W6132/2018/1) notes that no Commissioning Plan was submitted with the Works Approval application and hence commissioning could not be authorised under the Works Approval. Additionally further studies were required to be completed as part of the Works Approval in order to better characterise the risk to groundwater and surface water from operations, in particular, tailings deposition. The Decision Report for W6132 stated that commissioning would be required under the Licence (L4328/1989/10).

Consequently WLPL provided information in this Licence Amendment Application relating to commissioning and the sequencing of operational aspects. The Commissioning Plan is for the new Lithium beneficiation plant, expansion of TSF3 and a gas fired power station.

Commissioning information in the Application outlined:

- sequencing and timing of commissioning process for the lithium beneficiation plant, TSF3 expansion and gas fired power station;
- emissions and discharges expected during commissioning;
- emission controls;
- proposed emissions monitoring; and
- management of accidents.

WLPL excluded the Wastewater Treatment Facility (WWTF) from the Commissioning Plan. In July WLPL informed the Department that a review of the WLPL has been conducted and WLPL committed to progressively line the existing evaporation ponds with HDPE liners with a hydraulic

conductivity of  $1 \times 10^{-9}$  m/s or less, as well as construct three new HDPE lined evaporation ponds adjacent to the existing ponds. On 30 August 2018 the Department informed WLPL that the water balance study and the employment of the liners were satisfactory.

WLPL proposed emission controls for the commissioning phase are generally consistent with those considered for the operational phase (Licence) as per the Decision Report of the Works Approval.

## Other approvals

The Licence Holder has provided the following information relevant to this amendment relating to other approvals as outlined in Table 4.

**Table 4: Relevant approvals**

Legislation	Number	Approval
Mining Act 1978	Registration ID: 74070 <b><u>(Under Assessment)</u></b>	<ul style="list-style-type: none"> <li>Cassiterite Pit Expansion Stage 3</li> <li>Eastern Waste Landform Expansion</li> </ul>
Environmental Protection (Clearing of Native Vegetation) Regulations 2004	Application Number: CPS 8230 <b><u>(Under Assessment)</u></b>	<ul style="list-style-type: none"> <li>Expansion of Cassiterite pit</li> <li>Expansion of the Eastern Waste Landform (EWL)</li> <li>Construction of a new dry tailings storage facility to the north of Tailings Storage Facility 3 (TSF4).</li> </ul>

## Amendment history

Table 4 provides the amendment history for L4328/1989/10.

**Table 4: Licence amendments**

Instrument	Issued	Amendment
L4328/1989/10	12/12/2013	Licence amendment to amend submission date for Annual Environmental Report
L4328/1989/10	02/06/2016	Licence amendment for tyre disposal area
L4328/1989/10	07/02/2017	Licence transferred from Global Advanced Metals Wodgina Pty Ltd to Wodgina Lithium Pty Ltd. Administrative amendment undertaken in accordance with Departmental reform
L4328/1989/10	18/08/2017	Amendment Notice 1: Amendment to construct a new tyre disposal area and to increase the Category 89 capacity from 1,850 tonnes per annum to 3,350 tonnes per annum.
L4328/1989/10	12/03/2018	Amendment Notice 2: Construction and operation of secondary fixed processing plant and 3 mobile crushing and screening plants. Category 5 throughput increased to 8.75 Mtpa.
L4328/1989/10	25/01/2018	Amendment Notice 3: Addition of category 52 for a 13MW temporary diesel power plant, inclusion of three new locations for the mobile crushing and

		screening plants, increase in tyre disposal from 200 to 500 tpa and expansion of the current disposal facility area in EWL, administrative correction to add an additional surface water monitoring point at the fixed screening plant; and Commissioning Plan for Gas Power Station.
--	--	---

## Consultation

A letter of referral was sent to the Department of Mines, Industry Regulation and Safety (DMIRS) Environmental Branch on 4 December 2018.

### DMIRS Environmental Branch

The following comments were received from DMIRS Environmental Branch on 14 December 2018:

- DMIRS has not received, nor had discussions with WLPL relating to the submission of a Mining Proposal seeking approval for a temporary diesel power station, or amended crushing and screening at the locations presented in the proposed Prescribed Premise Boundary;
- Mining Proposal Reg ID 74361 seeking approval for extension of the Eastern Waste Rock Landform (WRL) is under assessment, awaiting further baseline geochemical and hydrological information from WLPL;
- DMIRS has further concerns that the tyre disposal may be located within the WRL such that they could become exposed during WRL reshaping as part of closure activities. DMIRS request that WLPL amend the tyre disposal area such that it is
  - a) outside the designated PAF encapsulation cell; and
  - b) at least 5 metres away from final slopes and the ultimate dump surface.

## Location and receptors

Table 5 below lists the relevant sensitive land uses in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

**Table 5: Receptors and distance from activity boundary**

Residential and sensitive premises	Distance from Prescribed Premises
Kangan Homestead	19 km west north-west
Yandeyarra Aboriginal Community	32 km west south-west
Altura Mine Site camp subject of licence L8610/2011/1	Distance to the following site infrastructure: Premises boundary – more than 800 m. EWL landfill – 7.5km. WWTF – more than 4km. TSF3 expansion – more than 8km. Power station – more than 6.5km.

Table 6 below lists the relevant environmental receptors in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

**Table 6: Environmental receptors and distance from activity boundary**

Environmental receptors	Distance from Prescribed Premises
Threatened/Priority Flora	There are priority 2 flora species located on M45/381 with one species located approximately 230 m from the existing WWTF.

Threatened/Priority Fauna	There are numerous threatened and priority fauna species located within the Premises boundary.
---------------------------	--

Table 7 below lists the relevant groundwater and water sources in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

**Table 7: Groundwater and water sources and distance from Prescribed Premises boundary**

Groundwater and water sources	Distance from prescribed premises
Groundwater	<p>A geotechnical investigation states that most bores surrounding TSF3 are dry, with one bore indicating groundwater is 17 mbgl (Coffey, 2008). The TSF is currently not in use.</p> <p>Bores located within the vicinity of the operations are mostly for production and exploration purposes.</p>

W6132/2017/1 requires TSF3 expansion monitoring bores to be installed and compliance documentation and bore logs to be submitted to DWER within 60 days of installation. Compliance and bore logs have not yet been submitted.

## Risk assessment

Tables 8, 9 and 10 below describe the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. Both tables identify whether the emissions present a material risk to public health or the environment, requiring regulatory controls.

**Table 8: Identification of emissions, pathway and receptors during construction and mobilisation of mobile plant**

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts		
<b>Category 5</b>	Mobilisation of mobile crushing and screening plants	Noise/dust	Altura Mine camp	Air / wind dispersion	Health and amenity impacts	No	The closest sensitive receptor is the Altura mine camp, located more than 6km from all the crushing and screening activities. No sensitive receptor is likely to be impacted by construction activities.
<b>Category 52</b>	Construction, mobilisation and positioning of temporary diesel power station infrastructure	Noise	Altura Mine camp	Air / wind dispersion	Health and amenity impacts	No	The closest sensitive receptor is the Altura mine camp, located more than 6.6km from all construction activities. No sensitive receptor is likely to be impacted by construction activities.  The Delegated Officer has considered the location of the proposed temporary power station within the existing Premises, where noise and dust emissions from mining and ore handling activities occur on an ongoing basis.
<b>Category 52</b>	Construction, mobilisation and positioning of temporary diesel power station infrastructure	Dust	Altura Mine camp	Air/wind dispersion and then deposition	Health and amenity impacts	No	Noise and dust emissions during construction of the temporary power station will be temporary and localized, and unlikely to contribute significantly to noise and dust levels in the area.  The separation distance between the source and potential receptor is sufficient to prevent dust and noise impacts from occurring during construction.  No further assessment required.

**Table 9: Identification of emissions, pathway and receptors during commissioning**

Risk Events					Continue to detailed risk assessment	Reasoning
Sources/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts		
<b>Category 52</b>	Leaks and spills of hydrocarbons	Hydrocarbons	Surrounding soils, surface water system and underlying groundwater	Direct discharge Stormwater runoff/ infiltration	Localised contamination of soils. Stormwater run-off to surface water systems. Infiltration to groundwater.	No  The Delegated Officer considered that there are no aspects of commencing commissioning that would cause the risk profile of loss of containment and contaminated stormwater runoff to change from the previous assessment (Works Approval W6132/2018/1).  The types of controls determined in the Previous Assessment are adequate and appropriate to control the risk loss of containment and contaminated stormwater runoff during the commencement of operations.  No further assessment required.
	Air emissions	Emissions of Nitrogen oxides, sulfur oxides, carbon monoxide and volatile organic compounds	Altura Mine camp	Air/wind dispersion	None (sufficient separation distance)	No  The Delegated Officer considered that there are no aspects of commencing operations that would cause the risk profile for air emissions to change from the previous assessment (Works Approval W6132/2018/1).  The types of controls determined in the Previous Assessment are adequate and appropriate to control the risk air emissions during the commencement of operations.  The gas power station has been constructed as outlined in W6132/2017/1.  No further assessment required.

**Table 10: Risk assessment for proposed amendments during operation**

Risk Event						Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts					
<b>Cat 5</b> Processing or beneficiation of metallic or non-metallic ore	Operation of screening and crushing plant	Dust	Altura Mine camp	Air: Transport through air then deposition	Health and amenity impacts	Slight	Rare	Low	The closest residential receptor is the Altura Mine Site camp located between 7.5 km and 8.2km from the crush and screening sites. The Delegated Officer considers the distance to be too great for dust impacts to occur, therefore the risk is determined to be low. No further assessment required.
<b>Cat 5</b> Processing or beneficiation of metallic or non-metallic ore	Operation of crushing and screening plant	Noise	Altura Mine camp	Air	Amenity impacts	Slight	Rare	Low	The closest residential receptor is the Altura Mine Site camp located between 7.5 km and 8.2km from the crush and screening sites. The Delegated Officer considers the distance to be too great for noise impacts to occur, therefore the risk is determined to be low. No further assessment required.
		Spills and leaks of hydrocarbons	Surrounding soils, surface water system and underlying groundwater	Seepage of hydrocarbons Contamination of sheetflow	Groundwater quality Surface water quality	Slight	Unlikely	Low	No additional fuel or chemical storage is required for the mobile plants. Any spills or leaks will be from the fuel tanks of the plant only – low volume. No further assessment required.
<b>Cat 52</b> Electric power generation	Operation of the temporary, diesel fuel power station	Storm water from the power station and bulk fuel storage areas contaminated with hydrocarbons and/or sediment	Underlying soils, surface water systems and groundwater	Direct discharge  Run off/ infiltration	Localised contamination of soils. Stormwater run-off to surface water systems. Infiltration to groundwater	Slight	Rare	Low	Power will be generated from containerised generator units positioned on concrete strip. Diesel bulk fuel tanks are self banded. The Delegated Officer has determined that the risk of discharge of hydrocarbon contaminated stormwater to surface waters occurring will be minimal at a local scale. No further assessment required.

Cat 52 Electric power generation	Operation of the temporary, diesel fuel power station	Emissions of Nitrogen oxides, sulfur oxides, carbon monoxide and volatile organic compounds	Altura Mine camp	Air/wind dispersion	None (sufficient separation distance)	N/A	N/A	N/A	The nearest potential receptor is the Altura Mine Accommodation Camp, 6.6km from the temporary diesel plant. The Delegated Officer considers that the separation distance between the source and potential receptor is sufficient to prevent air emissions and noise impacts on the only potential residential sensitive receptor. The plant is also temporary and will be removed once the gas power station is fully operational.  No further assessment required
		Noise from operation of the power station	Altura Mine camp	Air/wind dispersion	None (sufficient separation distance)	N/A	N/A	N/A	



## Decision

Construction and operation of the temporary 13 MW diesel power station is authorised. Category 52 has been added to the licence to authorise this activity. The location and layout of the temporary power station has been included in Schedule 1 Maps.

Three additional locations for crushing and screening plants have been added to the licence and depicted in the new premises boundaries map.

The approved premises production capacity for Category 89 – tyre disposal has been increased from 200 tonnes to 500 tonnes to allow the disposal of an additional 300 tonnes of Inert Waste Type 2 (tyres only).

The disposal of tyres within the EWL footprint is authorised within tenements M45/50, M45/383, M45/365, M45/888, M45/923, M45/924 and M45/1252 (within the Premises boundary).

The map depicting the landfill footprint within the EWL structure has been replaced to ensure that any waste disposed within the EWL structure is only disposed within the Premises boundary.

Any clearing of native vegetation associated with the EWL landfill expansion will require a valid clearing permit under the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*.

Commissioning of the Gas Power Station has been included in the Licence amendment. Following commissioning WLPL will need to apply to DWER for ongoing operation of the Gas Power Station.

An additional surface water monitoring bore at the fixed screening plant has been added to the licence.

Schedule 2, Air Emissions Monitoring, has been included in the Licence to monitor the source emissions from the 64MW gas power generators.

This amendment does not remove the need for any necessary approvals from other statutory authorities.

## Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 24 December 2018. Comments received from the Licence Holder have been considered by the Delegated Officer as shown in Appendix 2.

## Amendment

1. The Prescribed Premises category is amended by the insertion of the bold text shown in underline below:

Category Number	Category description	Category production or design capacity	Approved premises production or design capacity
5	Processing or beneficiation of metallic or non-metallic ore	50,000 tonnes per year	8,750,000 tonnes per annual period
52	<b><u>Electric power generation</u></b>	<b><u>10 megawatts or more in aggregate (using fuel other than natural gas)</u></b>	<b><u>13 MW temporary diesel power station</u></b>
54	Sewage facility	100 cubic metres or more per day	210 cubic metres per day
89	Putrescible landfill site	More than 20 but less than 5,000 tonnes per year	3,350 tonnes per year

2. Condition 1.3.1 of the Licence is amended by the deletion of the text shown in strikethrough below and the insertion of the bold text shown in underline below:

*1.3.1 The Licensee shall ensure that where wastes produced on the Premises are not taken offsite for lawful use or disposal, they are managed in accordance with the requirements of Table 1.3.1.*

Facility	Waste type	Process(es)	Requirements
Putrescible Landfill site (as depicted on Premises map in Schedule 1)	Inert Waste Type 1	Receipt, handling and disposal of waste by landfilling	All waste types No more than 1650 tonnes of waste shall be disposed of at the putrescible landfill per annual period Disposal of waste by landfilling shall only take place within the landfill area shown on the Premises Map in Schedule 1 The separation distance between the base of the landfill and the highest groundwater level shall not be less than 2 m
	Putrescible Waste		
	Clean Fill		
Eastern Waste Landform tyre disposal area	Inert Waste Type 2 Inert Waste Type 2 (Tyres only)		No more than <del>200</del> <b>500</b> tonnes of waste tyres shall be disposed of at the tyre disposal areas per annual period. Tyres shall only be landfilled: i) in batches separated from each other by at least 100 mm of soil and each consisting of not more than 40 m <sup>3</sup> of tyres reduced to pieces; or ii) in batches separated from each other by at least 100 mm of soil and each consisting of not more than 1000 whole tyres
Eastern Waste Landform	Inert Waste Type 1 only		No more than 1500 tonnes of Inert Waste Type 1 to be disposed within the 5 metre compacted base layer of the Eastern Waste Landform within tenements M45/923 and/or M45/383
Wastewater treatment plant	Sewage	Biological and physical treatment	No more than 210 m <sup>3</sup> /day

*Note 1: 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.*

3. Condition 1.3.11, Table 1.3.5 of the Licence is amended by the deletion of the text shown in strikethrough and the insertion of the bold text shown in underline below.

**Table 1.3.5: Tyre disposal area infrastructure and equipment requirements**

<b>Infrastructure /Equipment</b>	<b>Requirements (design and construction)</b>	<b>Site plan reference</b>
Eastern Waste Landform tyre disposal areas	<ul style="list-style-type: none"> <li>Cells constructed on each bench as the Eastern Waste Landform is developed</li> <li>Capacity of <del>200</del> <b><u>500</u></b> tonnes per annual period</li> </ul>	Located within the landfilling area boundary depicted in the map of the inert waste landfilling area boundary

4. Table 1.3.6 of the Licence is amended by insertion of the bold text shown in underline below:

**Table 1.3.6: Infrastructure and equipment requirements table**

<b>Column 1 Infrastructure/Equipment</b>	<b>Column 2 Requirements (design and construction)</b>	<b>Column 3 Site plan reference</b>
Secondary fixed plant	Concrete catchment bunds under all lubricating vessels and hydrocarbon storage units. Sited on a flat stable pad. Graded site to direct stormwater towards the sumps/oil separators in the existing fixed plant location where water is then directed to the unlined retention pond. Plant area to be bunded to divert clean stormwater around operational areas.	Map of fixed processing plant layout and downstream monitoring bore location in Schedule 1 maps
3 mobile crush and screening plants	Located atop tailings storage facility <del>3</del> , <b><u>TDNE/TP6, within Atlas pit and Hercules pit.</u></b> All sited on a flat stable raised pad. All plant area(s) to be bunded and graded to ensure all stormwater is directed towards retention sump(s) within the footprint of all plants.	Map of mobile crushing and screening plants layout in Schedule 1 maps.
<b><u>17 containerised Cummins C1250 D2R diesel generators</u></b>	<b><u>Design and construction specifications of temporary power station pad in accordance with Attachment 3A – Proposed Activities -EL Amendment – Wodgina Lithium Pty - Containerised generators - Two self bunded diesel fuel tanks</u></b>	<b><u>Temporary power station general arrangement design drawing and typical layout in Schedule 1 maps</u></b>
<b><u>Waste Water Treatment Facility Evaporation Ponds</u></b>	<b><u>All treatment ponds lined using 1.5mm thick HDPE with hydraulic conductivity of 10<sup>-9</sup>m/s or less (some existing ponds may have the surface scraped and material disposed of in an existing licensed landfill to facilitate their lining). Maintenance of 300mm freeboard in the ponds. The treatment ponds designed to contain storm events of 1:100 year 72 hour event duration</u></b>	<b><u>Map of WWTF evaporation ponds plant layout in Schedule 1 maps</u></b>

5. The Licence is amended by the insertion of the following Condition 1.3.16:

**1.3.16 The Licensee must:**

- a) notify the DWER one week prior to the temporary diesel power station commencing operation; and**
- b) must operate the power station for a period of six (6) months only unless authorised by the CEO.**

6. The Licence is amended by the insertion of the following Condition 2.3.1 as shown in bold underline below:

**2.3.1 Point source emissions to air**

**2.3.1 The Licensee shall ensure that where waste is emitted to air from the emission points in Table 2.2.2 and identified on the map of emission points in Schedule 1 it is done so in accordance with the conditions of this Licence.**

<b><u>Table 2.2.2 Point Source emissions to air</u></b>	
<b><u>Emission point reference and location on Map of emission points</u></b>	<b><u>Source including abatement</u></b>
<b><u>13 MW temporary power station</u></b>	<b><u>Seventeen (17) containerised Cummins C1250 D2R diesel generator, or similar</u></b>

7. The Licence is amended by the insertion of the following Conditions 5.1.1 to 5.1.9 as shown below in bold underline:

**5 Commissioning**

**5.1.1 The Licensee must notify the CEO, at least 7 days prior to, the commencement date of Commissioning of the 62MW gas power station.**

**5.1.2 The Licensee must not Commission the 64MW Gas Power Station for a period exceeding 8 months from the date advised in 5.1.1.**

**5.1.3 Within 60 days of the end of the Commissioning Period, a Commissioning Report shall be submitted to the CEO detailing environmental performance during the period. A summary of all environmental incidents and resulting corrective actions shall be included in the Commissioning Report.**

**5.1.4 The Licence Holder must ensure the report required by Condition 5.1.3 includes:**

**(a) a list of any original monitoring reports prepared by third parties for the Commissioning period;**

**(b) a summary of the environmental performance of the all plant and equipment as installed, including but not limited to:**

**(i) pipelines and pump system functions testing.**

**(ii) commissioning of the process control system.**

**(c) a review of performance against the manufacturer's design specification; and**

**(d) where they have not been met, measures proposed to meet the manufacturer's design specification and/or Conditions of this Licence, together with timescales for implementing the proposed measures.**

**5.1.5 Stack sampling of the off-gas streams listed in Schedule 2, shall be completed in accord with the requirements in that Schedule, during the Commissioning Period. All non-continuous sampling and analysis shall be undertaken by a holder of NATA accreditation for the relevant methods of sampling and analysis.**

**5.1.6 The results of the stack sampling shall be compared to the emission design criteria as detailed in Column 2 of Table 5.1.1 and submitted to the CEO with the Commissioning Report. Any results that do not meet the design criteria must have a corresponding action plan for achieving compliance, with a timeframe for achieving compliance detailed.**

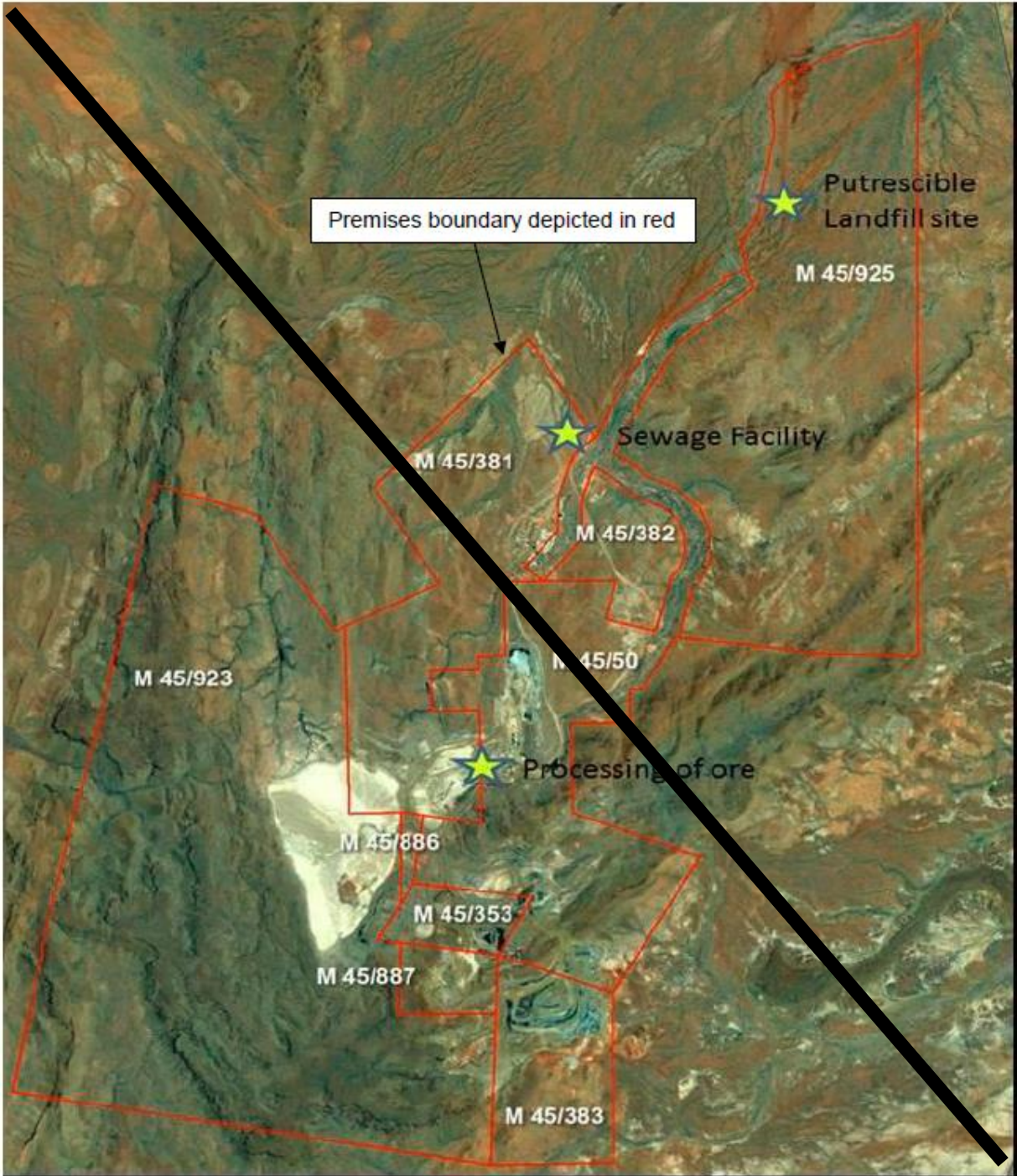
**Table 5.1.1: Gas Power Station Estimated Emissions**

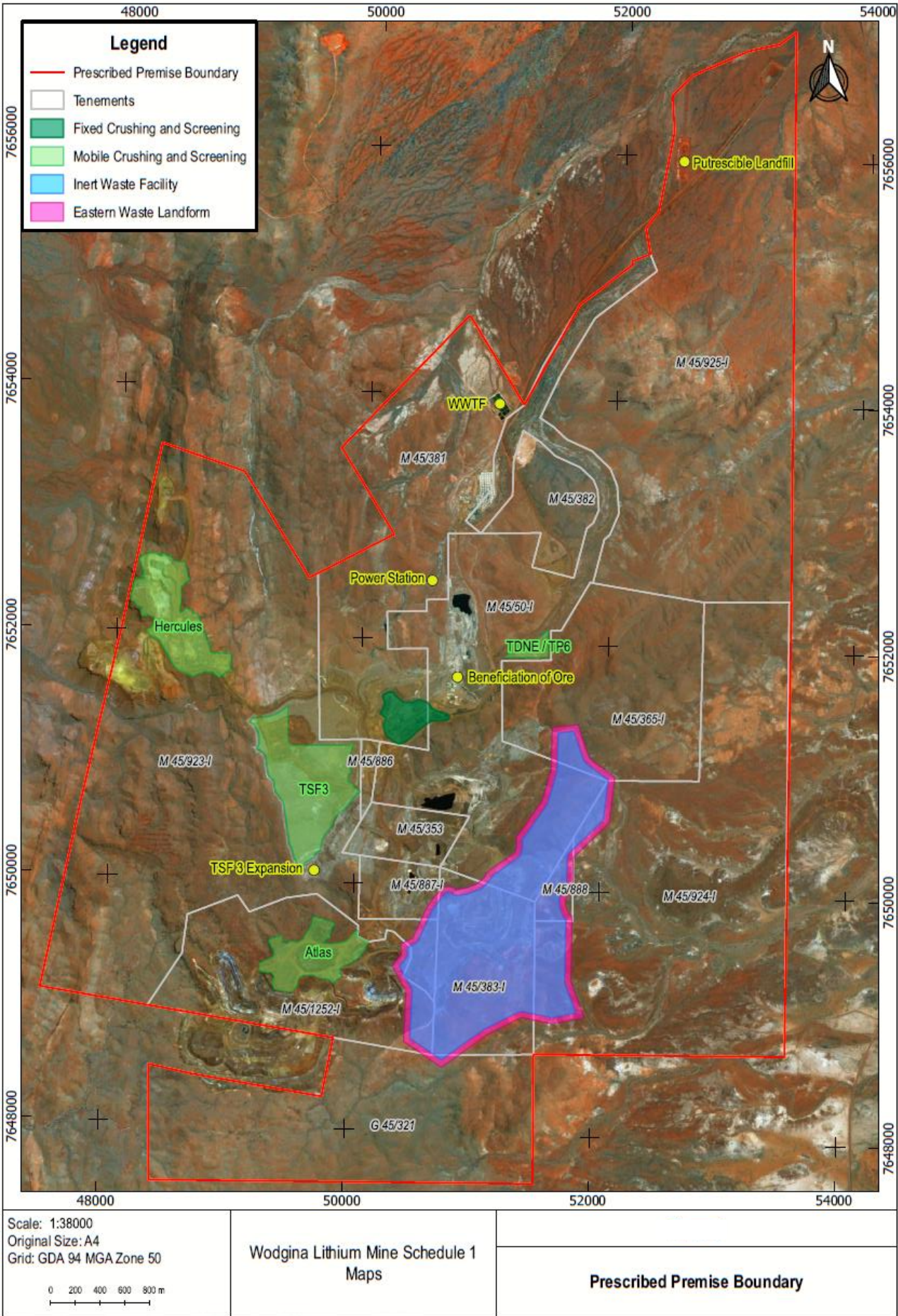
<u>Column 1</u>	<u>Column 2</u>	<u>Column 3</u>
<u>Emissions (90% rated load at 5%O<sub>2</sub>)</u>	<u>Per generator</u>	<u>Total Annual Emissions from 32 operating generators (64 MW)</u>
<u>Nitrogen oxides (NO<sub>x</sub>)</u>	<u>500 mg/Nm<sup>3</sup></u>	<u>60,401 kg/annum</u>
<u>Total hydrocarbon content</u>	<u>1,293 mg/Nm<sup>3</sup></u>	<u>156,196 kg/annum</u>
<u>Methane (CH<sub>4</sub>)</u>	<u>1,035 mg/Nm<sup>3</sup></u>	<u>125,030 kg/annum</u>
<u>Non-methane hydrocarbons</u>	<u>215 mg/Nm<sup>3</sup></u>	<u>25,972 kg/annum</u>
<u>Carbon Monoxide (CO)</u>	<u>1,038 mg/Nm<sup>3</sup></u>	<u>125,392 kg/annum</u>
<u>Carbon Dioxide (CO<sub>2</sub>)</u>	<u>178,169 mg/Nm<sup>3</sup></u>	<u>21,523,085 kg/annum</u>
<u>Volatile Organic Compounds (VOC)</u>	<u>53.1 mg/Nm<sup>3</sup></u>	<u>6,415 kg/annum</u>

8. The Licence is amended by the replacement of the following maps in 'Schedule 1 Maps of the Licence' (deleted maps shown with strikethrough and replacements following):

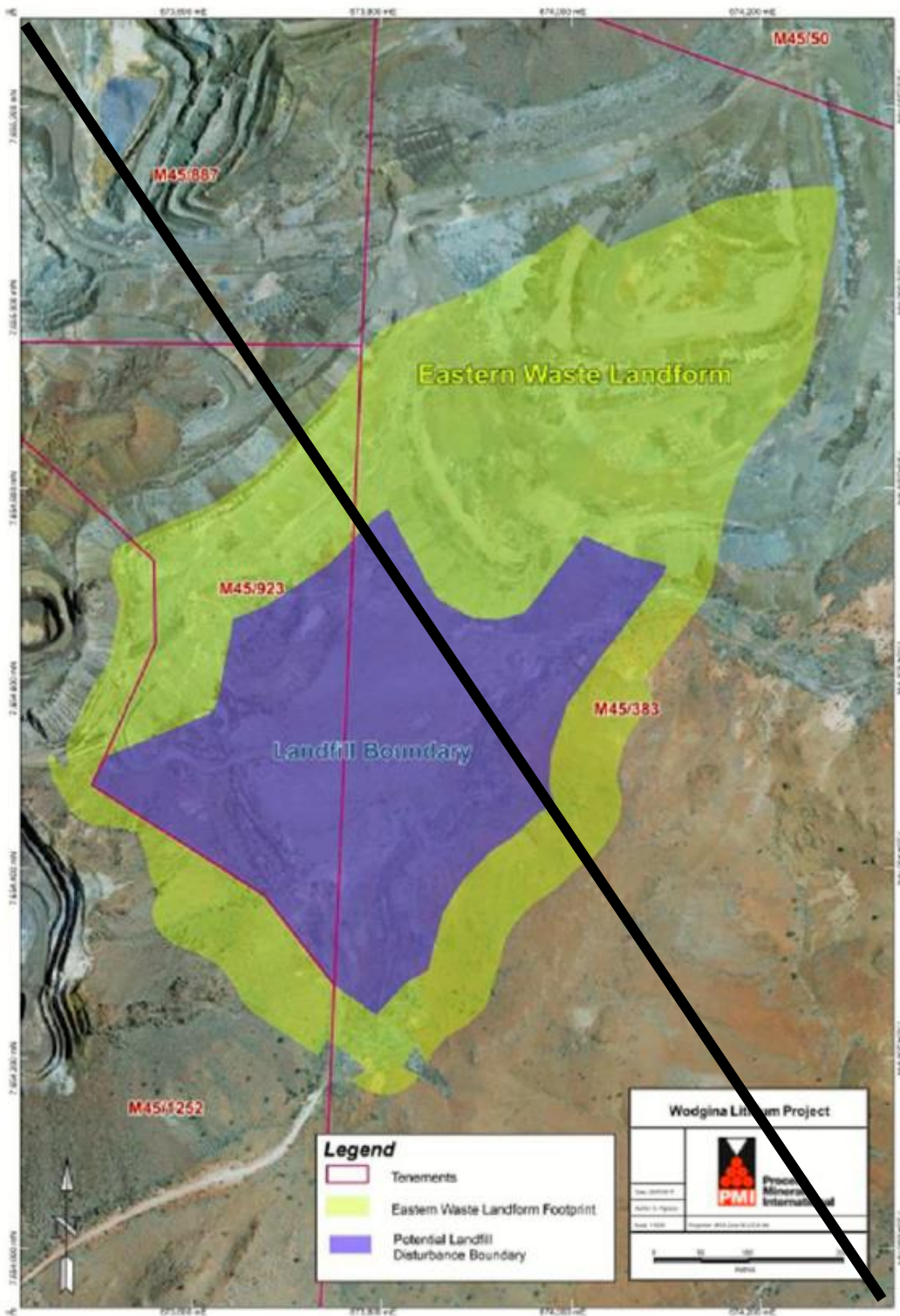
**Premises map**

The Premises is shown in the map below. The red line depicts the Premises boundary.

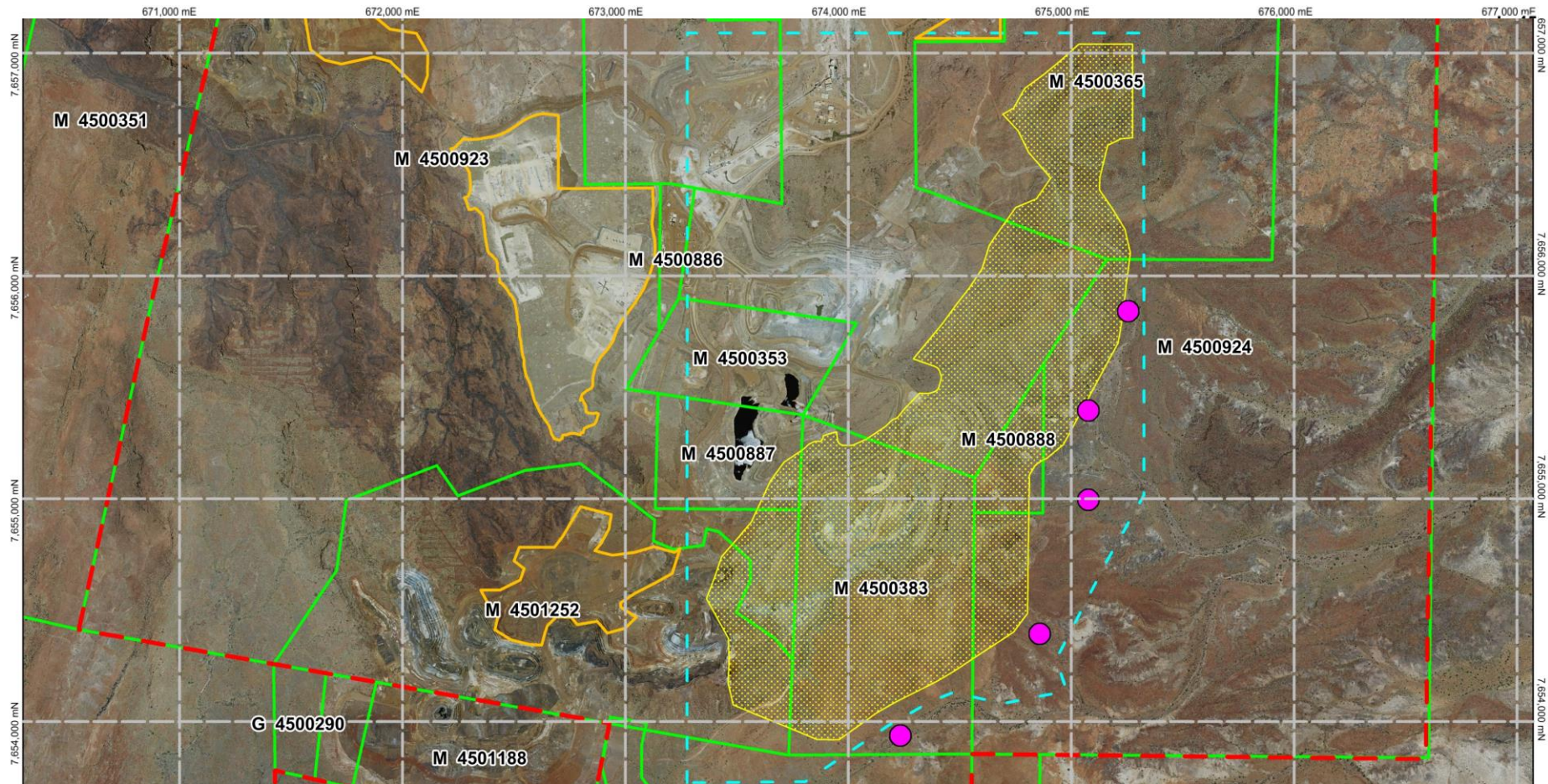




**Map of the inert waste landfilling area boundary**





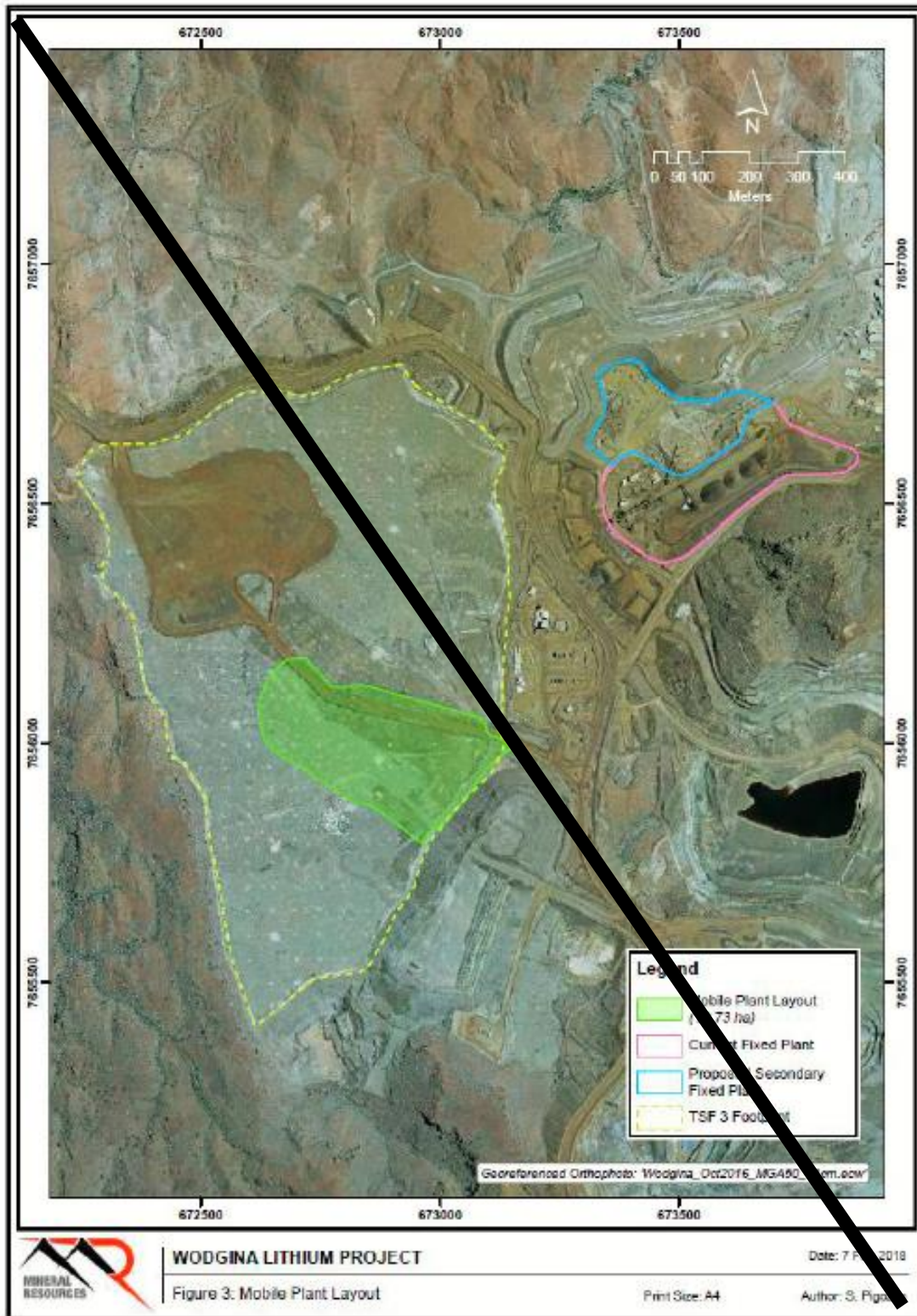


**Legend**

- Current WLPL Tenements
- Pending WLPL Tenements
- NVCP CPS 8230/1 Envelope
- Eastern Waste Landform Disturbance/Tyre Disposal
- Conceptual Eastern Waste Landform Monitoring Bores
- Crushing & Screening Locations
- WLPL Prescribed Premises Bdy

9. The Licence is amended by the replacement of the Map of mobile crushing and screening plant footprint in 'Schedule 1 Maps of the Licence' (as shown below in strikethrough), with the four replacement maps following:

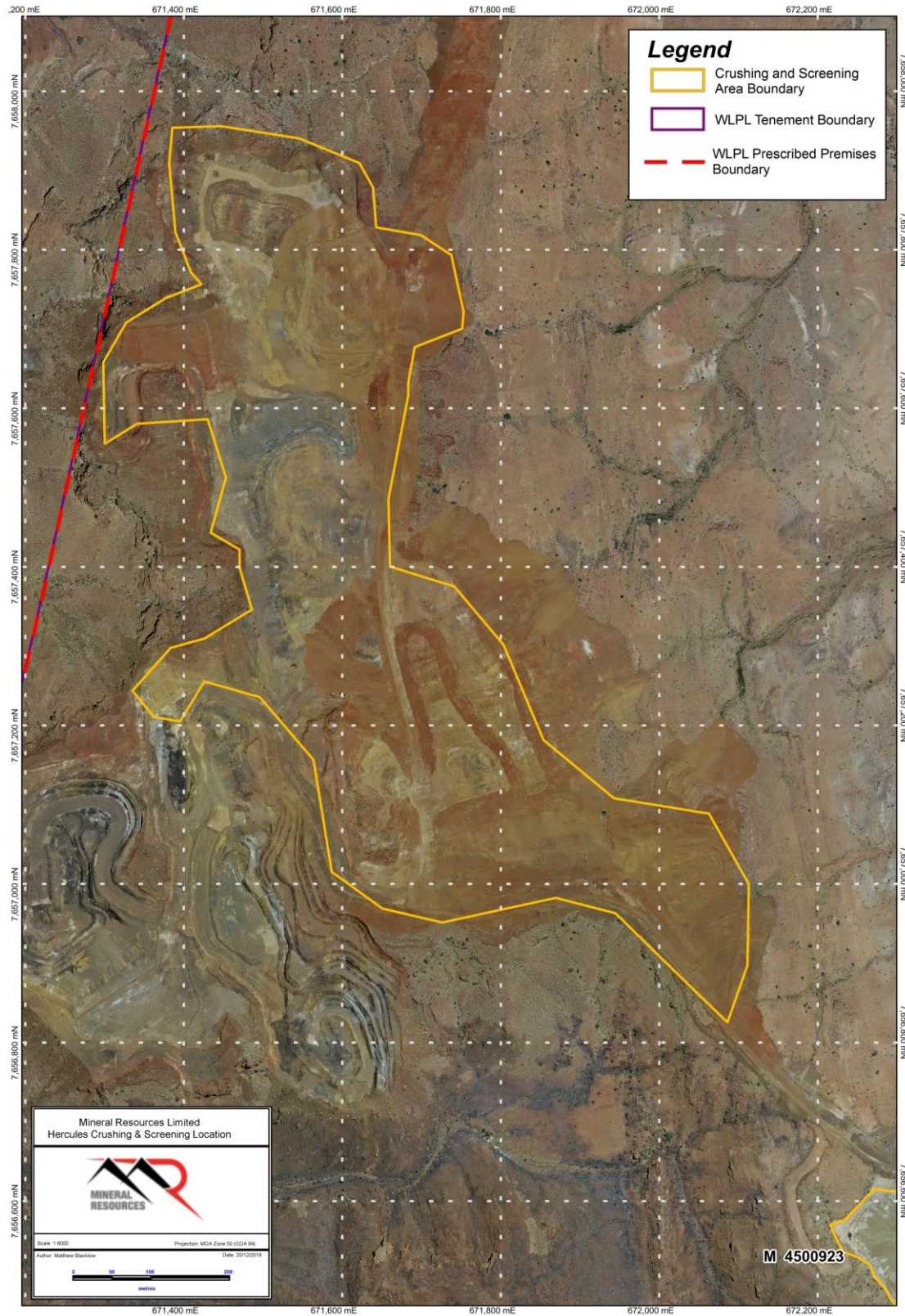
### Map of mobile crushing and screening plant footprint



# Map of mobile crushing and screening plant footprint – TSF3



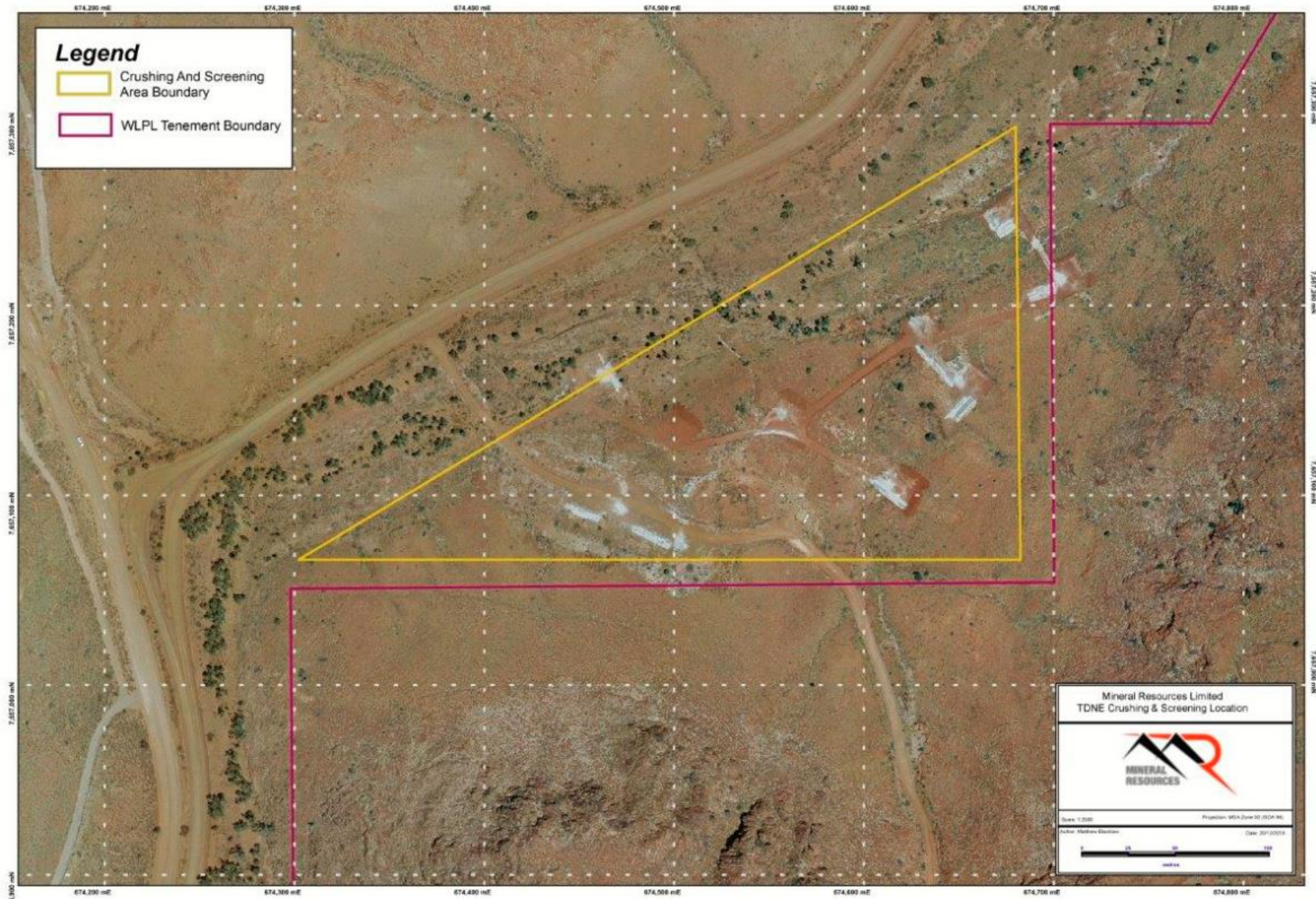
# Map of mobile crushing and screening plant footprint – Hercules



# Map of mobile crushing and screening plant footprint – Atlas



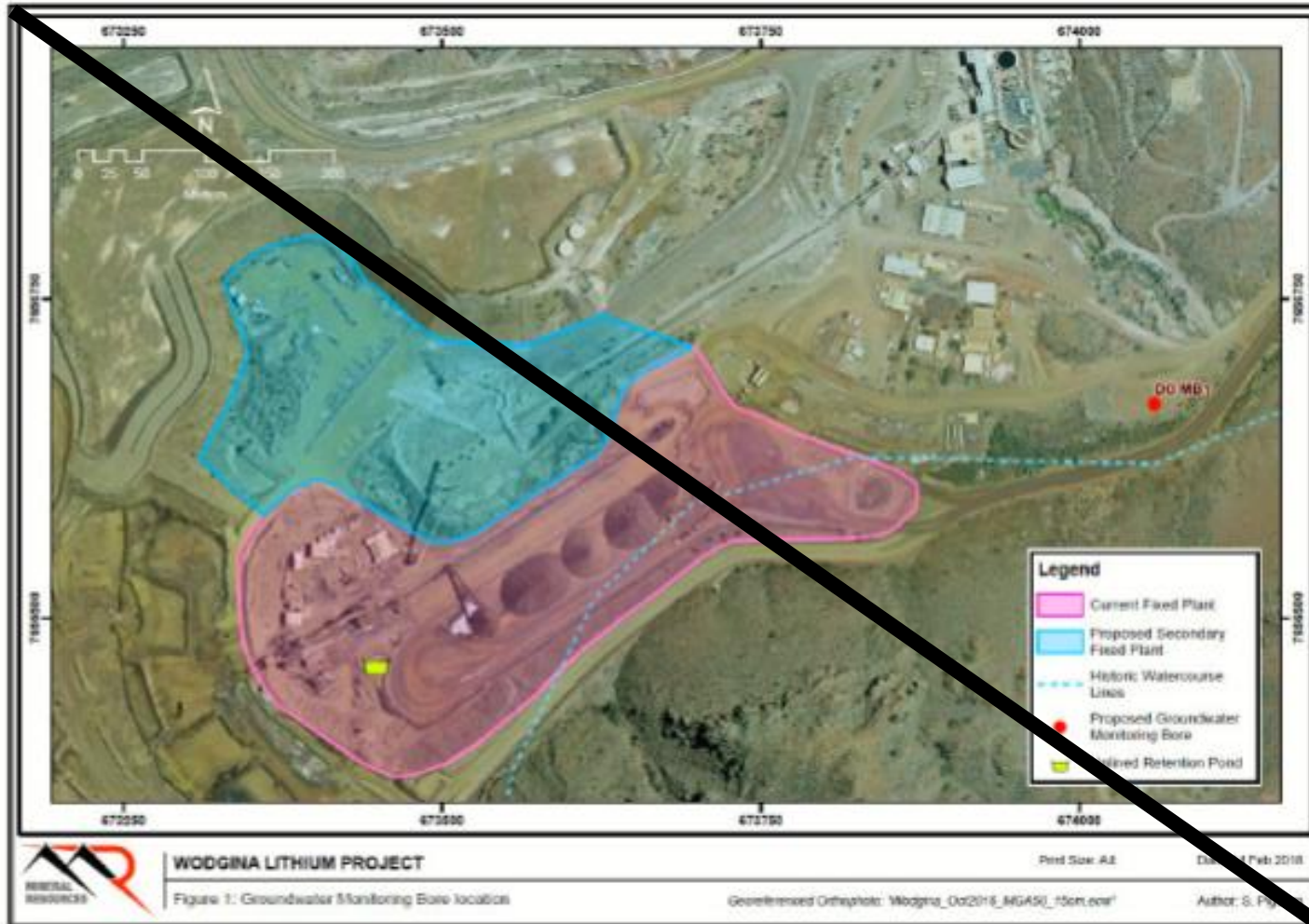
# Map of mobile crushing and screening plant footprint – TDNE/TP6

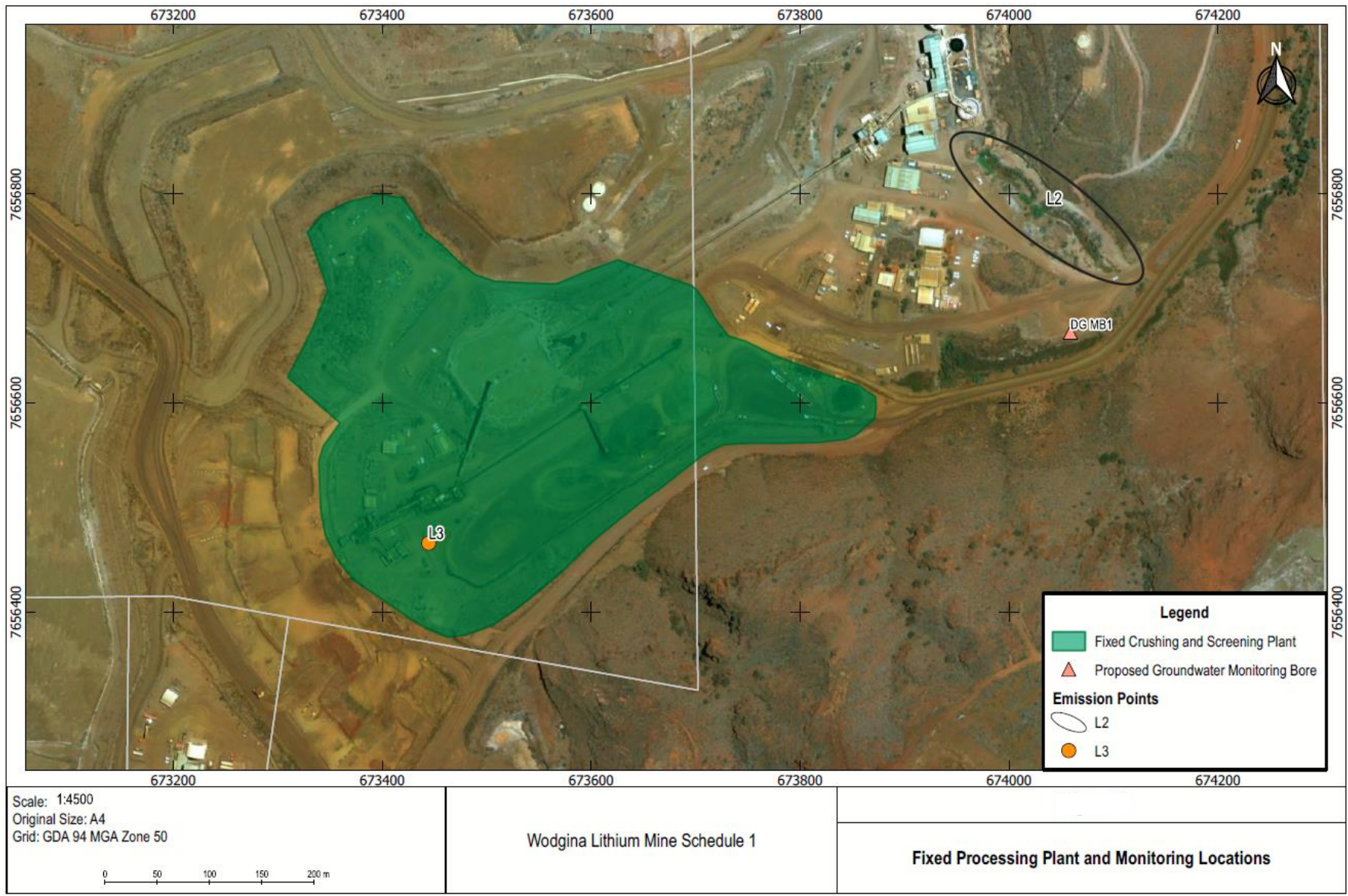


10. The Licence is amended by the replacement of the Map of fixed processing plant layout and downstream monitoring bore location in 'Schedule 1 Maps of the Licence' (as shown below in strikethrough), with the replacement map following:

**Map of fixed processing plant layout and downstream monitoring bore location**

Map depicting the footprint of the current fixed plant and proposed secondary fixed plant in addition to the downstream groundwater monitoring bore (DG MB1 I).

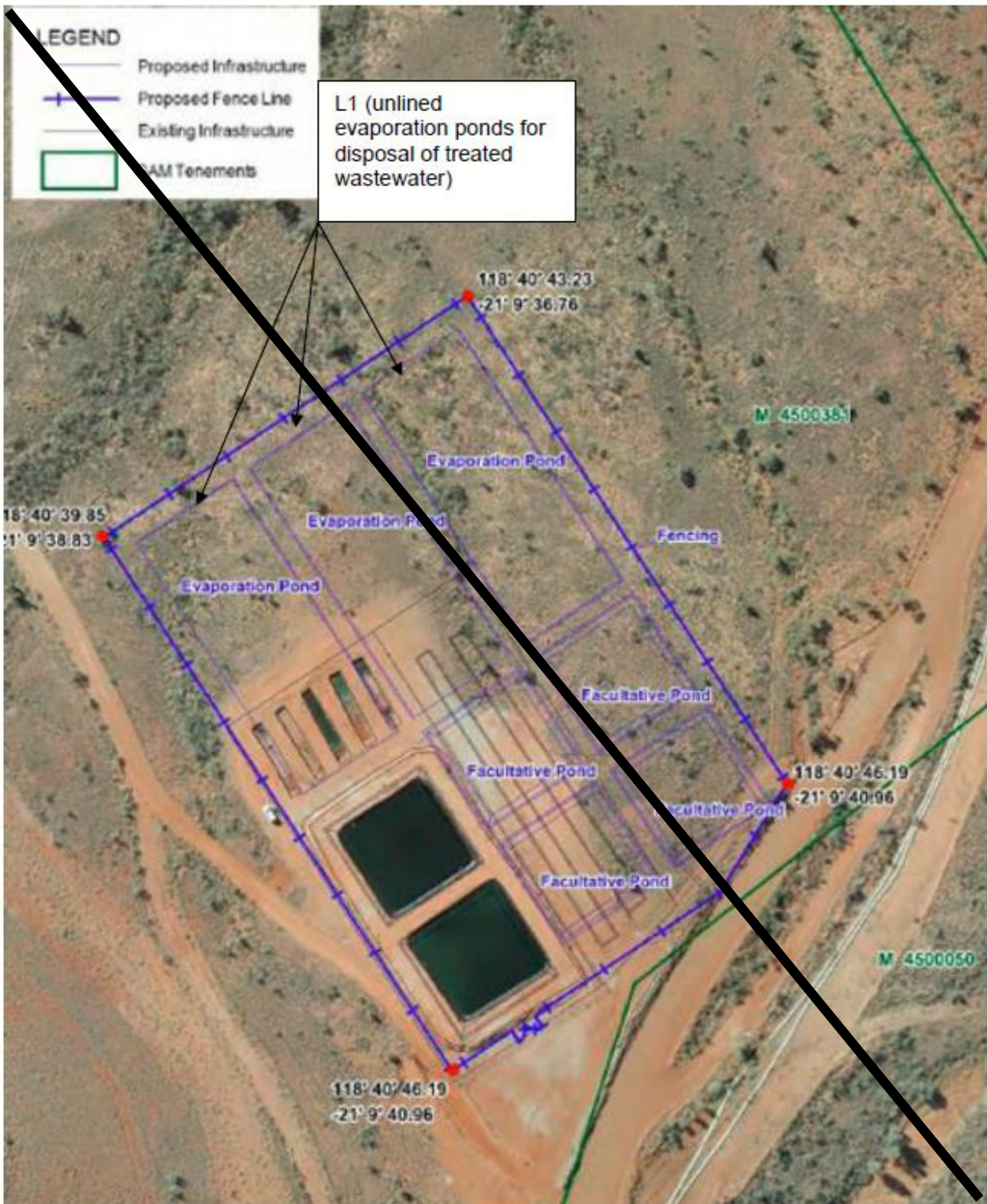


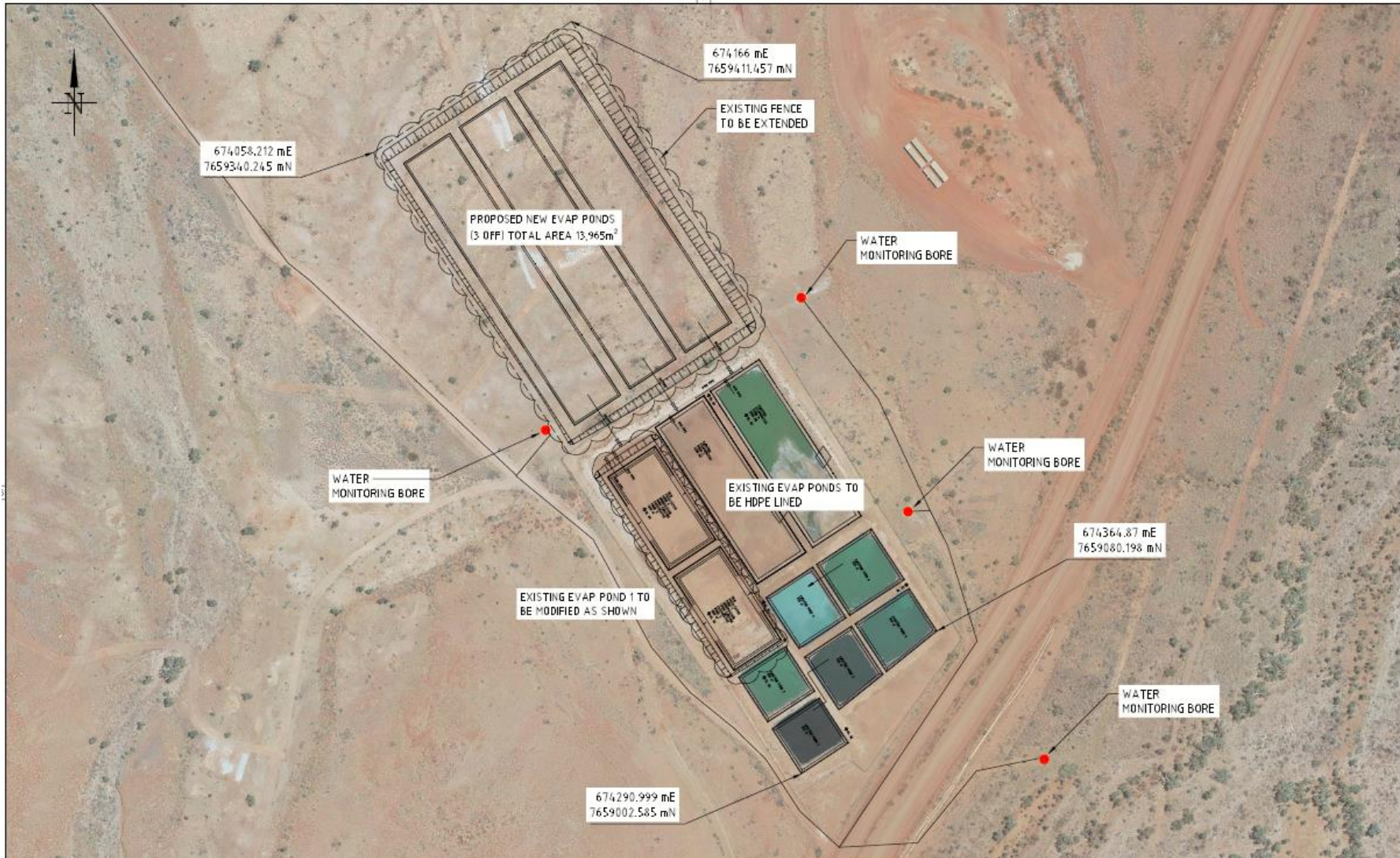



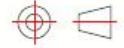


11. The Licence is amended by the replacement of the Map of emission points in 'Schedule 1 Maps of the Licence' (as shown below in strikethrough), with the replacement map following:

**Map of emission points**

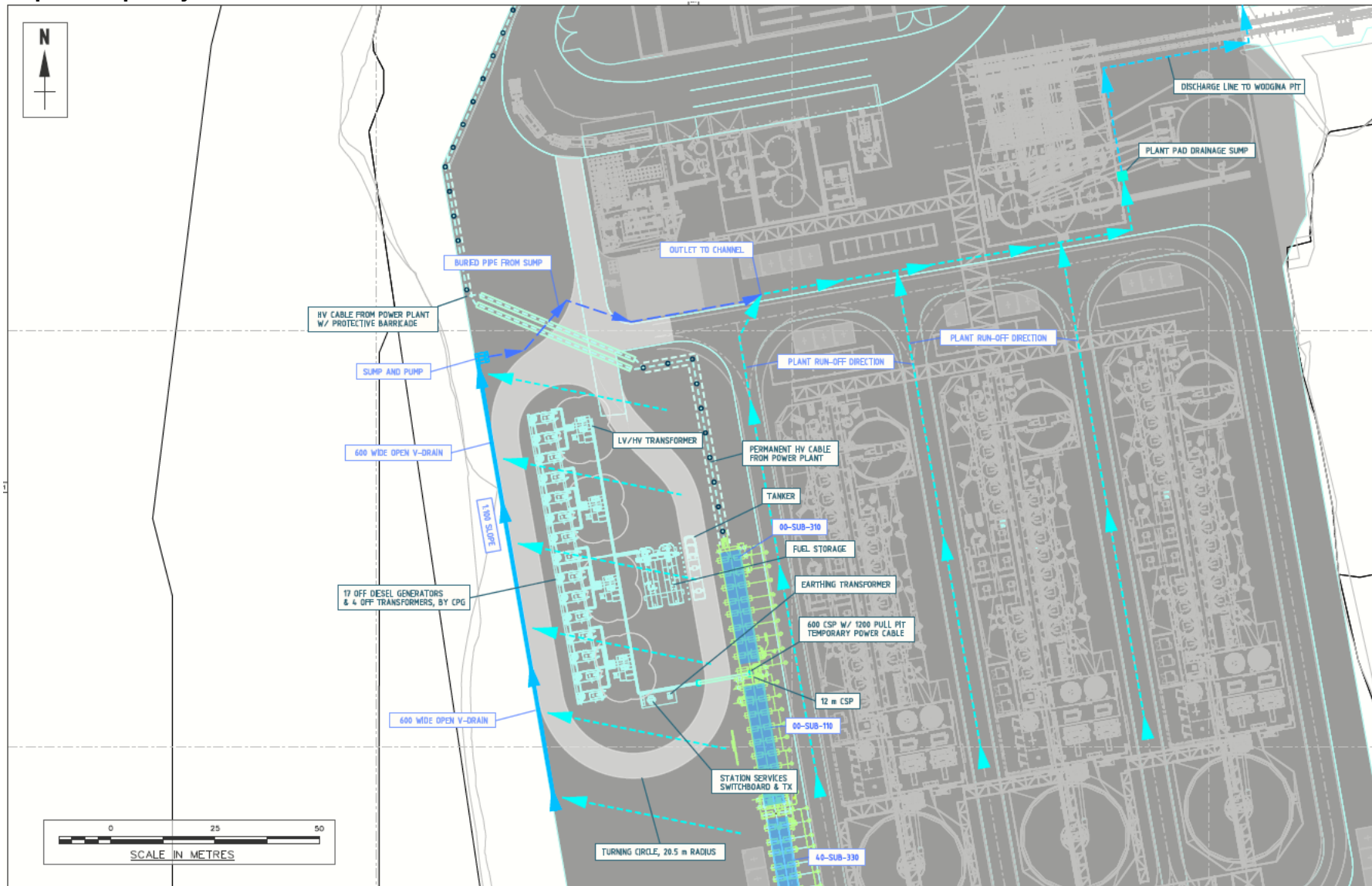




				<b>CRUSHING SERVICES INTERNATIONAL PTY LTD</b>  1 SLEAT ROAD APFELCKROSS WESTERN AUSTRALIA, 6153 TELEPHONE (08) 9529 3400 FACSIMILE (08) 9529 3401 CRUSHING & SCREENING MANUFACTURERS & DESIGNERS				Do NOT SCALE PRINT 		<b>PROJECT B&amp;31 - WODGINA LITHIUM PROJECT</b> <b>TITLE AREA 05 - AMENITIES</b> <b>WWTF - EVAPORATION POND UPGRADE</b> <b>GENERAL ARRANGEMENT</b>	
				SCALE: NTS: DRAWN: JHiggs DATE: 27.06.16		BRG No: B&31-0005-GA-0010 CHECKED: ENGINEER APPROVED: PROJECT MANAGER:					
CONCRETE GENERAL NOTES: CSI-GA-DWG-0000-0001 STRUCTURAL GENERAL NOTES: CSI-ST-DWG-0000-0001 REFERENCE DRAWINGS:				C LAYOUT UPDATED, COORDINATES ADDED 16.12.16 JH TB B WATER MONITORING BORE LOCATIONS ADDED 10.06.16 JH DH A ISSUED FOR INFORMATION 27.06.16 JH DH				REV C A3			
REV	DESCRIPTION	DATE	DEN	CHK	APP						

12. The Licence is amended by insertion of a new map depicting the temporary 13MW diesel power plant into 'Schedule 1 Maps of the Licence', as shown below:

**Map of temporary 13MW Diesel Power Plant**



## Schedule 2:

### Air Emissions Monitoring

The Licence Holder must monitor the Emissions specified in Column 2 from the locations specified in Column 1 of Table 5. Emissions must be calculated as an average over the period specified in Column 4, and in accordance with the method specified in Column 5. The monitoring program shall take place during the Commissioning period.

**Table 6.1: Point source emissions to air monitoring table**

Column 1	Column 2	Column 3	Column 4	Column 5
Emission point	Parameter	Units	Minimum sampling time (minutes) per run	Method
All gas generator exhausts	Carbon monoxide	mg/m <sup>3</sup> and g/s	Minimum 60 minutes	USEPA Method 10
	Nitrogen oxides			USEPA Method 7D or USEPA Method 7E
	Volatile organic compounds			USEPA Method 18 or USEPA Method 25A

## Appendix 1: Key documents

	Document title	In text ref	Availability
1	Licence L4328/1989/10 Wodgina Operations	L4328/1989/10	accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
2	Works Approval W6132/2018/1– Wodgina Operations	W6132/2018/1	accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
3	Wodgina Lithium Pty Ltd - Licence amendment application 30/08/2018		DWER records (A1715909)
4	WLPL Letter – Wodgina Lithium Pty Ltd – Licence Amendment (L4328/1989/10): Removal of co-mingling strategy of coarse reject material from current amendment.		DWER records (A1737848)
5	MBS Environmental, January 2019. Wodgina lithium Pty Ltd - Commissioning plan for infrastructure as per W6132/2018/1 - Revision 4.		DWER records (A1755638)
6	DWER Compliance Letter – Completion of conditions 10 and 11 of Works Approval W6132/2018/1		DWER records (DWERDT89401)
7	Direct Interest Stakeholder – DMIRS letter		DWER records (A1757756)

## Appendix 2: Summary of Licence Holder comments

The Licence Holder was provided with the draft Amendment Notice on 24 December 2018 for review and comment. The Licence Holder responded on 15 January waiving the remaining comment period. The following comments were received on the draft Amendment Notice.

Condition/Detail	Summary of Licence Holder comment	DWER response
-	Noted typos	Corrected
Tyre Cell locations	Confirmed location will comply with DMIRS requirements as noted in their correspondence to DWER	Noted
EWL	Missing two tenements	Corrected
Additional maps required for new crushing and screening plant locations, groundwater monitoring bore, tyre cell	Provided	Included in amendment notice.
Provide expected VOC/CO emissions from power plant	Provided	Noted
WLPL to provide detail on Waste Water Treatment Facility (WWTF) upgrades completed to date and definite timeframe for completion of all works	Clearing for the WWTF expansion area has been completed, with the procurement of the liner and installation currently occurring. A staged plan has been developed to ensure that each new pond is lined, commissioned and tested prior to bring on line, while ensuring the capacity is maintained for current operational activities. The new WWTF is due to be completed by May 2019	Noted. New map depicting the WWTF has been added to the Licence.