



# Works Approval

<b>Works Approval Number</b>	W6220/2019/1
<b>Works Approval Holder</b>	BHP Billiton Nickel West Pty Ltd
<b>ACN</b>	ACN 004 184 598
<b>Registered business address</b>	Level 43, 125 St Georges Terrace PERTH WA 6000
<b>File Number</b>	DER2018/001687
<b>Duration</b>	08/03/2019 to 07/03/2022
<b>Date of issue</b>	07/03/2019
<b>Prescribed Premises</b>	Category 5 – Processing or beneficiation of metallic or non-metallic ore
<b>Premises</b>	Leinster Nickel Operation Mineral Lease ML255SA and Mining Tenement M36/230

This Works Approval is granted to the Works Approval Holder, subject to the following conditions, on 7 March 2019, by:

## **Manager Process Industries**

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

## Explanatory notes

These explanatory notes do not form part of this Works Approval.

### Defined terms

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

### Department of Water and Environmental Regulation

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

### Works Approval

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Section 52 of the EP Act provides that an occupier of any premises commits an offence if any work is undertaken on, or in relation to, the premises which causes the premises to become, or to become capable of being, Prescribed Premises, except in accordance with a works approval.

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

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

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

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

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

The Works Approval Holder must comply with the Works Approval. Contravening a Works Approval Condition is an offence under s.55 of the EP Act.

### Responsibilities of Works Approval Holder

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

- the duties of an occupier under s.61; and

- restrictions on making certain changes to Prescribed Premises unless the changes are in accordance with a Works Approval, Licence, closure notice or environmental protection notice (s.53).

Strict penalties apply for offences under the EP Act.

### Reporting of incidents

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The Works Approval Holder has a duty to report to the Department all Discharges of Waste that have caused or are likely to cause Pollution, Material Environmental Harm or Serious Environmental Harm, in accordance with s.72 of the EP Act.

### Offences and defences

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

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

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

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

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

### Authorised Emissions and Discharges

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The specified and general Emissions and Discharges from the Works authorised through this Works Approval are authorised to be conducted in accordance with the Conditions of this Works Approval.

### Amendment of Works Approval

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

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

### Duration of Works Approval

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

### Suspension or revocation

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

## Definitions and interpretation

### Definitions

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

**Table 1: Definitions**

Term	Definition
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 10 JOONDALUP DC WA 6919 <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
Condition	means a condition to which this Works Approval is subject under s.62 of the EP Act.
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
Department Request	means a request for Books or other sources of information to be produced, made by an Inspector or the CEO to the Works Approval Holder in writing and sent to the Works Approval's address for notifications, as described at the front of this Works Approval, in relation to: (a) compliance with the EP Act or this Works Approval; (b) the Books or other sources of information maintained in accordance with this Works Approval; or (c) the Books or other sources of information relating to Emissions from the Premises.
Discharge	has the same meaning given to that term under the EP Act.
DWER	Department of Water and Environmental Regulation
Emission	has the same meaning given to that term under the EP Act.
Environmental Harm	has the same meaning given to that term under the EP Act.
EP Act	means the <i>Environmental Protection Act 1986</i> (WA).
EP Regulations	means the <i>Environmental Protection Regulations 1987</i> (WA).
Implementation Agreement or Decision	has the same meaning given to that term under the EP Act.

Inspector	means an inspector appointed by the CEO in accordance with s.88 of the EP Act.
Material Environmental Harm	has the same meaning given to that term under the EP Act.
Pollution	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Works Approval applies, as specified at the front of this Works Approval and as shown on the map in Schedule 1 to this Works Approval.
Prescribed Premises	has the same meaning given to that term under the EP Act.
RL	Reduced level, a relative measurement of vertical distance between an assumed survey height reference point, and other survey data points
Serious Environmental Harm	has the same meaning given to that term under the EP Act.
TSF	Means Tailings Storage facility
Unreasonable Emission	has the same meaning given to that term under the EP Act.
Waste	has the same meaning given to that term under the EP Act.
Works	refers to the Works described in Schedule 2, at the locations shown in Schedule 1 of this Works Approval to be carried out at the Premises, subject to the Conditions.
Works Approval	refers to this document, which evidences the grant of the works approval by the CEO under s.54 of the EP Act, subject to the Conditions.
Works Approval Holder	refers to the occupier of the Premises being the person to whom this Works Approval has been granted, as specified at the front of this Works Approval.

## Interpretation

In this Works Approval:

- (a) the words 'including', 'includes' and 'include' will be read as if followed by the words 'without limitation';
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (c) where tables are used in a Condition, each row in a table constitutes a separate Condition;

- (d) any reference to an Australian or other standard, guideline or code of practice in this Works Approval means the version of the standard, guideline or code of practice in force at the time of granting of this Works Approval and includes any amendments to the standard, guideline or code of practice which may occur from time to time during the course of the Works Approval; and
- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act.

## Conditions

### Infrastructure and equipment

1. The Works Approval Holder must install and undertake the Works for the infrastructure and equipment:
  - (a) specified in Column 1;
  - (b) to the requirements specified in Column 2;
  - (c) of Table 2 below.

The Works Approval Holder must not depart from the requirements specified in Column 2 of

**2.** Table 2 except:

- (a) where such departure does not increase risks to public health, public amenity or the environment; and
- (b) all other Conditions in this Works Approval are still satisfied.

Subject to Condition 1, within 60 days of the completion of the Works specified in Column 1 of Table 2, the Works Approval Holder must provide to the CEO a compliance document from the TSF3 designer or their geotechnical engineering representative (TSF3 Cell E embankment raise) and from the Engineering Project Manager (tailings and decant pipeline and associated infrastructure) confirming each item of infrastructure or component of infrastructure specified in Column 1 of

3. Table 2 below has been constructed with no material defects and to the requirements specified in Column 2.
4. Where a departure from the requirements specified in Column 2 of Table 2 occurs and is of a type allowed by Condition 2, the Works Approval Holder must provide to the CEO a description of, and explanation for, the departure along with the certification required by Condition 2(b).

**Table 2: Infrastructure and equipment requirements table**

Column 1	Column 2
Infrastructure/ Equipment	Requirements (design and construction)
1	<p>TSF embankments</p> <ul style="list-style-type: none"> <li>• Phased removal of TSF3 Cell E tailings delivery lines and associated infrastructure</li> <li>• Phased bulk earthworks constructions of embankment lift of Cell TSF3 Cell E to RL 10547.5m</li> <li>• Embankments are to be constructed using in-situ soils and mine waste from a nearby waste dump (name), rolled and compacted to a minimum 95% of standard Maximum Dry Density and placed within a moisture content tolerance of within 2% (+/-) of its optimum moisture</li> <li>• Reinstallation of TSF3 Cell E tailings delivery lines and associated infrastructure;</li> <li>• Piezometers placed in array locations around the external perimeter embankment as shown in Schedule 2, Figure 5 to monitor the phreatic surface within the deposition mass.</li> <li>• Constructed to allow for minimum total freeboard of 300mm from the top of the tailings beach to the embankment crest</li> </ul>
2	<p><u>TSF decant tower</u></p> <ul style="list-style-type: none"> <li>• The centrally located decant tower and causeway will be raised to RL 10 547.5m</li> <li>• Recycled decant water will be recycled back into processing plant via the return water pond located to the north of TSF 3</li> </ul>
3	<p><u>TSF pipelines</u></p> <ul style="list-style-type: none"> <li>• Will be contained within bunded open trenches to contain leaks and spillages from pipe burst events</li> <li>• Will be fitted with automatic leak detection and shut off systems to minimise discharge and allow for maintenance and recovery of materials</li> </ul>
4	<p><u>Tailings deposition</u></p> <ul style="list-style-type: none"> <li>• Embankment perimeter wall fitted with a tailings deposition main ring that contains multiple spigot attachment valves located at nominal 40m intervals;</li> <li>• Multiple spigots used to discharge tailings sub-aerially on the upstream edge of the perimeter embankment; cycling between TSF Cells to facilitate thin layer and consolidation of tailings;</li> <li>• Tailings discharge at low velocity and spigot locations changed periodically to maximise tailings beach consolidation around the edge of the TSF and minimise the size and location of the decant pond towards the centre of the cell;</li> <li>• Tailings deposition will be managed to contain rainfall associated with a 1 in 100 year, 72 hour duration Average Recurrence Interval rainfall event.</li> </ul>

## Emissions

5. The Works Approval Holder must not cause any Emissions from the Works authorised through this Works Approval except for specified Emissions and general Emissions described in Column 1 of Table 3, subject to the exclusions, limitations or requirements specified in Column 2, of Table 3.

**Table 3: Authorised Emissions table**

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

## Record-keeping

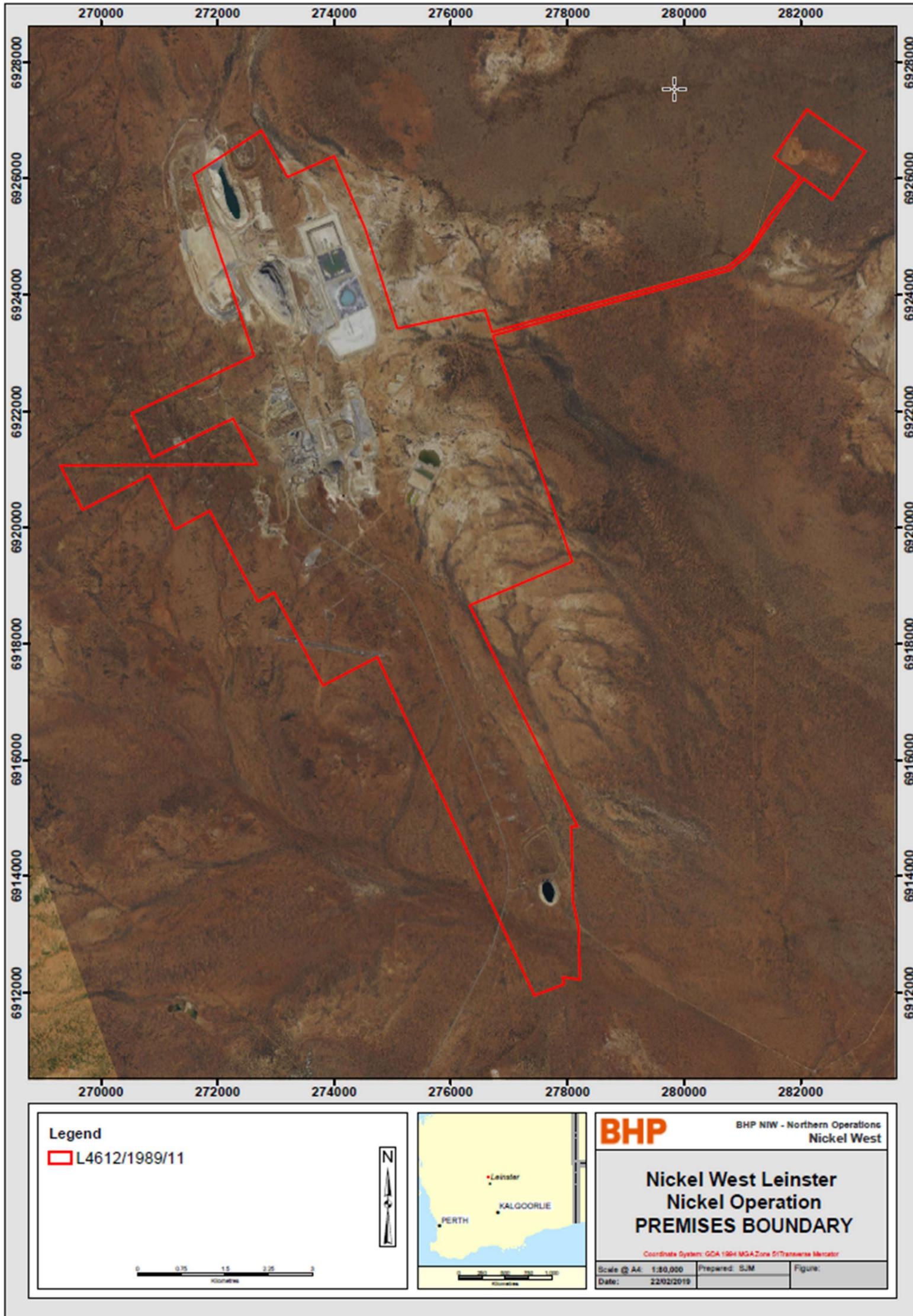
6. The Works Approval Holder must maintain accurate Books including information, reports and data in relation to the Works and the Books must:
- (a) be legible;

- (b) if amended, be amended in such a ways that the original and subsequent amendments remain legible or are capable of retrieval;
  - (c) be retained for at least 3 years from the date the Books were made;
  - (d) be available to be produced to an Inspector or the CEO.
- 7.** The Works Approval Holder must comply with a Department Request within 14 days from the date of the Department Request or such other period as agreed to by the Inspector or the CEO.

## Schedule 1: Maps

### Premises map

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



Source: Email from NiW dated 25/2/2019; DWER record A1768195

## Schedule 2: Works

At the time of assessment, Emissions and Discharges from the Works listed in Table 5 were considered in the determination of the risk and related Conditions for the Works Approval.

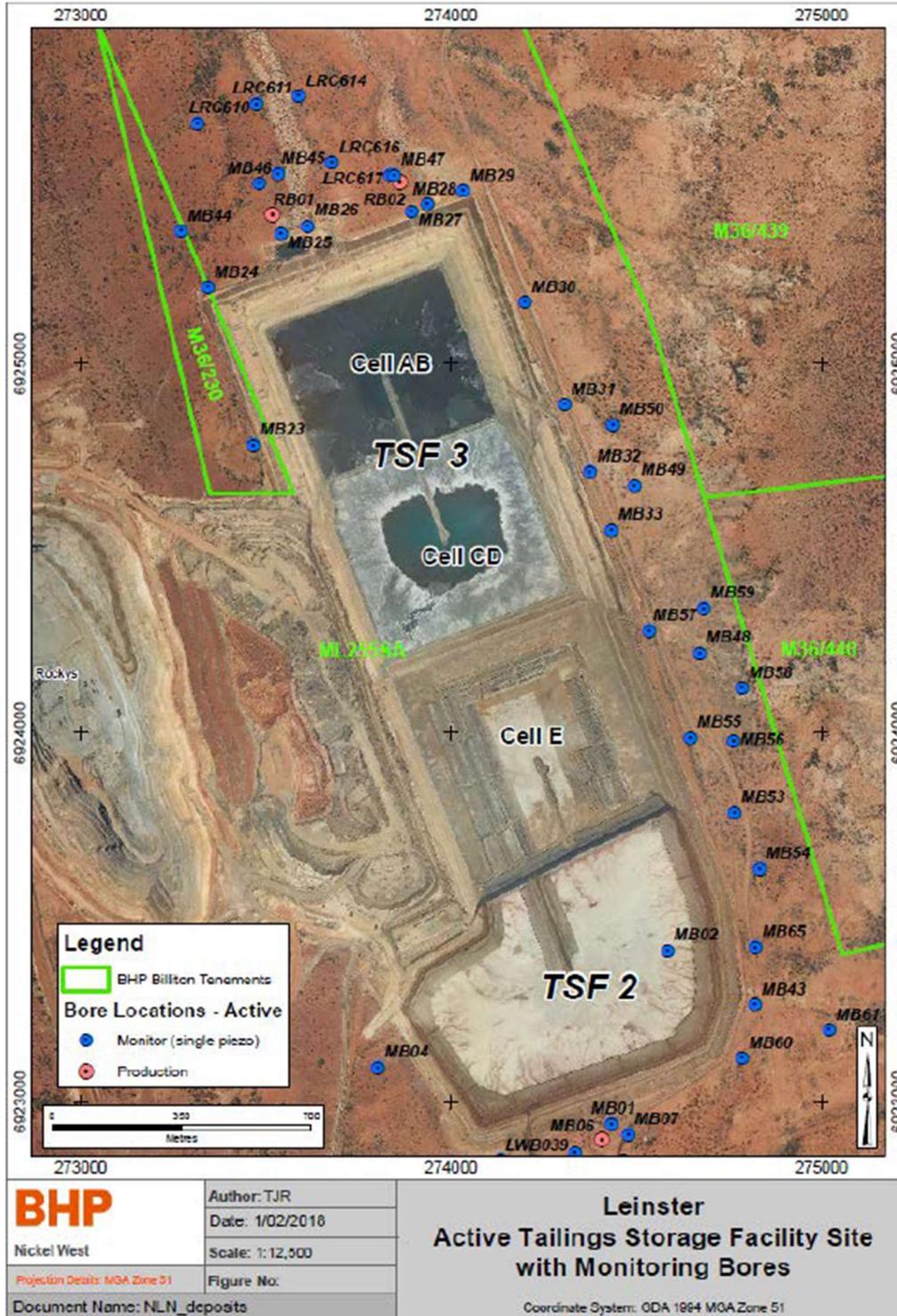
**Table 4: Authorised Works**

<b>Works</b>	<b>Specifications/Drawings</b>
Tailings Storage Facility 3 Cell E embankment raise to RL 10547.5m	Schedule 2 Figures 1, 2, 3 and 4.

## Site layout

The infrastructure and equipment are set out on the Premises in accordance with the site layout specified on the Premises map in Schedule 1.

**Figure 1: Location of TSF3 Cell E**



Source: TSF Cells CD Lift by 2.5m to RL 10,556.5m Nickel West Leinster DER Licence L4612/1989/11 (NiW, 2017)

# Key Infrastructure

## Figure 2: Locality Plan

Source: Nickel West Leinster (L4612/1989/11)- Works Approval Supplementary Information –TSF 3 Cell E embankment raise to RL 10547.5m (NiW, 2018)

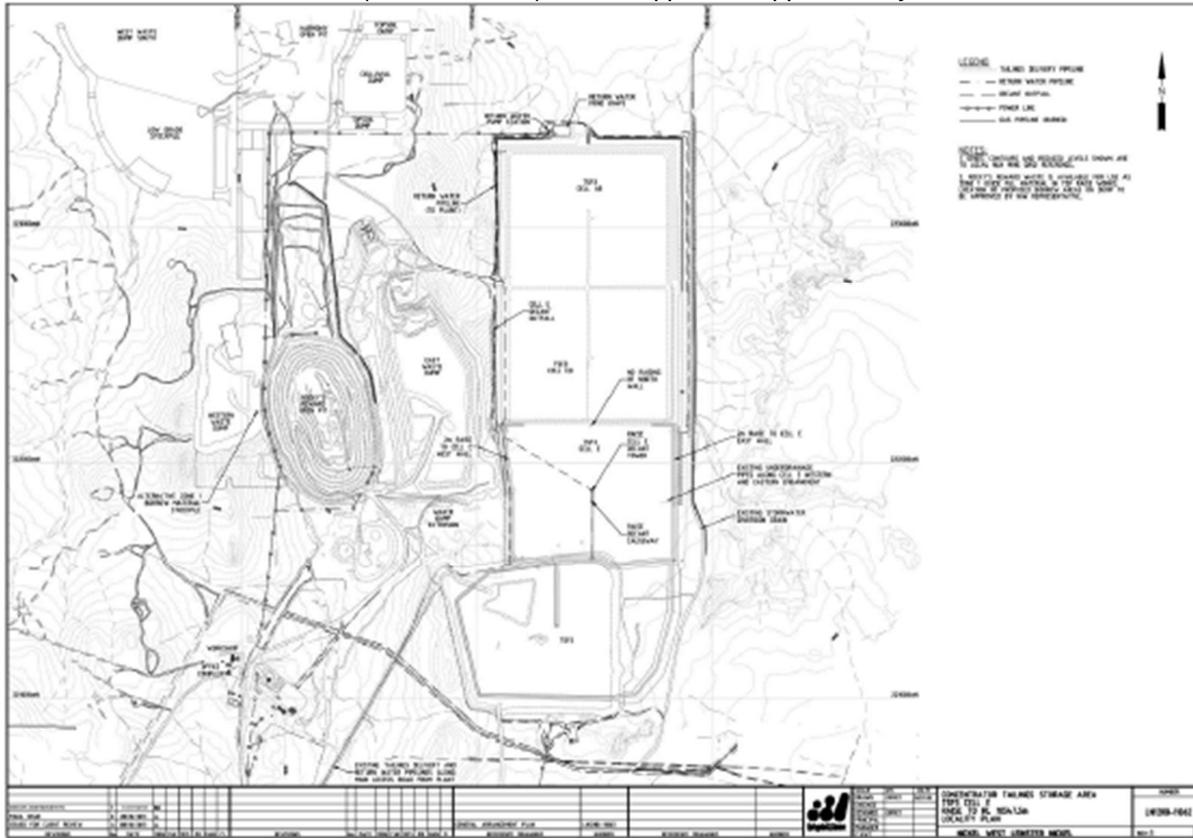
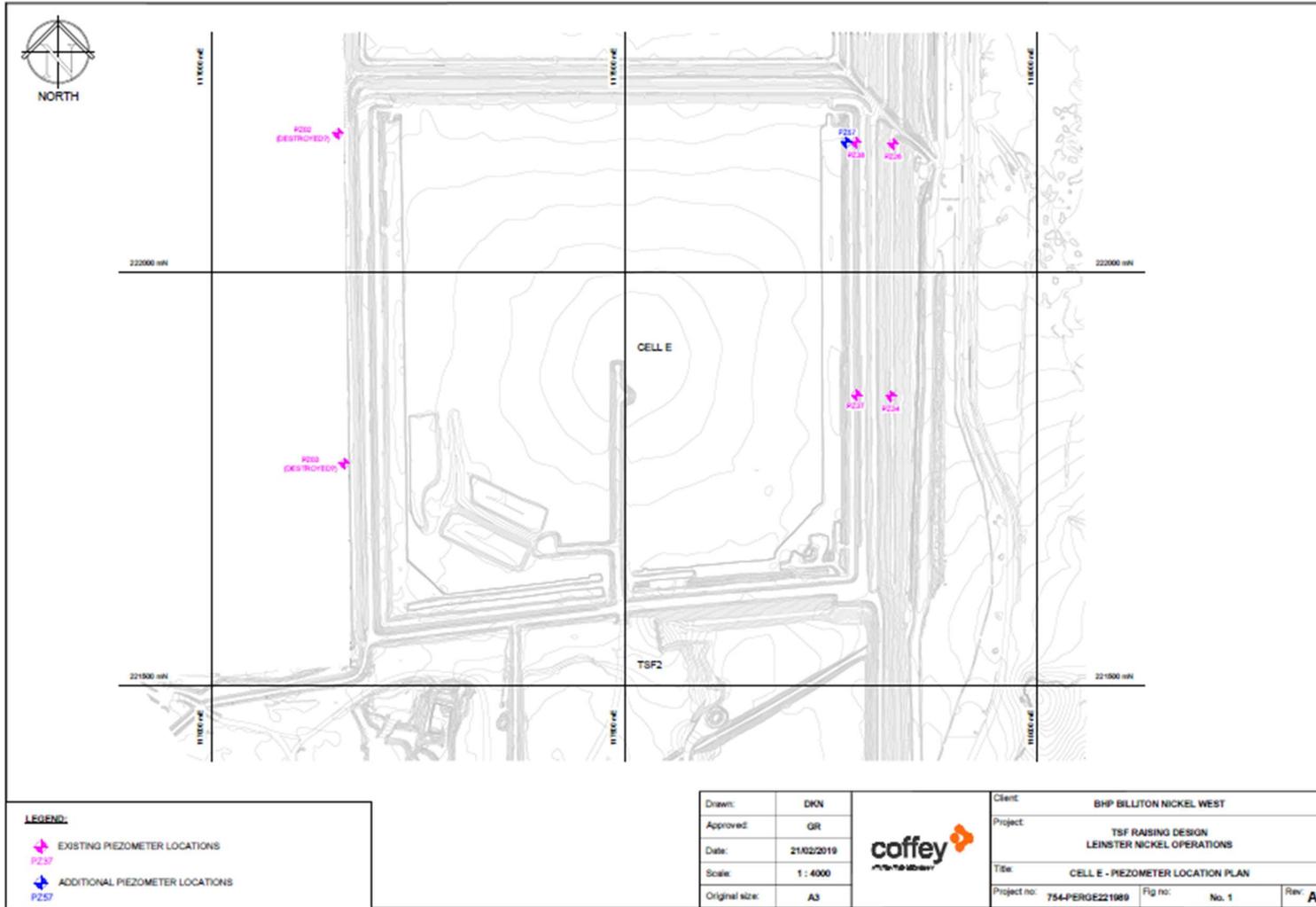






Figure 5: Cell E Piezometer Location Plan



Source: Email from NiW dated 25/2/2019; DWER record A1768195