



<b>Works approval number</b>	W6339/2019/1
<b>Works approval holder</b>	BHP Billiton Nickel West Pty Ltd
<b>ACN</b>	004 184 598
<b>Registered business address</b>	Nickel West – Land Services PO Box 8301 PERTH BUSINESS CENTRE WA 6849
<b>DWER file number</b>	DER2019/000639
<b>Duration</b>	23/04/2020 to 22/04/2025
<b>Date of issue</b>	23/04/2020
<b>Date of Amendment</b>	1/09/2020
<b>Premises details</b>	Leinster Township Landfill Crown Reserve 46801 Lot 163 on Deposited Plan 30116 Leinster WA, Shire of Leonora

<b>Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)</b>	<b>Assessed design capacity</b>
Category 89 - Putrescible landfill Site	2,500 tonnes per year

This works approval is granted to the works approval holder, subject to the attached conditions, on 1/09/2020, by:

**Stephen Checker**

**MANAGER WASTE INDUSTRIES**

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

## Approval history

Date	Reference number	Summary of changes
11/12/1991	W737/1989/1	Works Approval issued to WMC Resources Ltd
21/06/1992	W814/1989/1	Works Approval issued to WMC Resources Ltd
24/05/1993	W814/1989/1	Works Approval issued to WMC Resources Ltd
16/05/1997	W1931/1989/1	Works Approval issued to WMC Resources Ltd
31/07/1997	W2045/1989/1	Works Approval issued to WMC Resources Ltd
26/02/1998	R943/1989/1	Premises Registration to WMC Resources Ltd
15/02/2000	W2960/1989/1	Works Approval issued to WMC Resources Ltd
17/03/2000	W2973/1989/1	Works Approval issued to WMC Resources Ltd
05/09/2000	W3133/1989/1	Works Approval issued to WMC Resources Ltd
04/12/2000	W3237/1989/1	Works Approval issued to WMC Resources Ltd
16/01/2001	W3317/1989/1	Works Approval issued to WMC Resources Ltd
22/09/2001	W3486/2001/1	Works Approval issued to WMC Resources Ltd
29/03/2004	W3929/1989/1	Works Approval issued to WMC Resources Ltd
17/05/2004	R1625/2004/1	Premises Registration amended to extend premises boundary and transfer ownership and BHP Billiton Nickel West
21/09/2006	R1625/2004/1	Registration amended
23/04/2020	W6339/2019/1	Works Approval Issued
01/09/2020	W6339/2019/1	Amended Works Approval issued

## Interpretation

In this works approval:

- (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 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;
- (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 works approval requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this works approval.

## Works approval conditions

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

### Construction phase

#### Infrastructure and equipment

1. The works approval holder must:
  - (a) construct and/or install the infrastructure and/or equipment;
  - (b) in accordance with the corresponding design and construction / installation requirements; and
  - (c) at the corresponding infrastructure location, as set out in Table 1.

**Table 1: Design and construction / installation requirements**

	Infrastructure	Design and construction / installation requirements	Infrastructure location
1.	Landfill perimeter bund walls for Cells D, E and F	<ul style="list-style-type: none"> <li>• Construct using general fill material (Gravelly, sandy, silty or clayey materials, free of organic matter/debris/waste, particle size ranging from 100mm to 200mm)</li> <li>• External bund batter slope – 1:2.5 (V:H)</li> <li>• Internal bund batter slope – 1:2.0 (V:H)</li> <li>• Ramps average grade – 1:10 (V:H)</li> <li>• 3 m width on top face of bund wall.</li> </ul>	Cells D, E and F as depicted in Schedule 1, Figure 2
2.	Drainage systems	<ul style="list-style-type: none"> <li>• Minimum depth of 0.8 m, slope of 1.5V:1H and total width of 2.4 m</li> </ul>	Perimeter of Cells D, E and F as depicted in Schedule 2, Figure 3 and 4
3.	Monitoring wells TLFMB4 and TLFMB6	<ul style="list-style-type: none"> <li>• Monitoring well TLFMB4 (as indicated in Schedule 1, Figure 2) to be recommissioned in accordance with the requirements specified in Schedule 3, Table 3</li> <li>• Monitoring well TLFMB6 to be constructed and commissioned in accordance with the requirements specified in Schedule 3, Table 3</li> </ul>	TLFMB6 to be installed down groundwater gradient, to the east of the landfill Cell E (as indicated in Schedule 1, Figure 2)
4.	Fencing	1.8 m high chain mesh fencing (with access gate) around perimeter of Cells (D, E, and F), depicted in Schedule 1, Figure 2, whilst actively being filled.	Landfill cells as depicted in Schedule 1, Figure 1: Premises map

	Infrastructure	Design and construction / installation requirements	Infrastructure location
5.	Signage	<p>Must be installed and clearly visible at the premises identifying the following wastes that may be accepted;</p> <ul style="list-style-type: none"> <li>• wastes that are not accepted;</li> <li>• location/s for accepted wastes to be deposited;</li> <li>• no fires are to be lit; and</li> <li>• relevant contact details for the premises including an after-hours contact.</li> </ul>	Entrance to premises

## Emissions

2. The works approval holder must ensure that no visible dust generated by construction activities crosses the boundary of the premises.

## Compliance reporting

3. Subject to Condition 1, within 60 days of the commissioning of each Cell (D, E and F). The works approval holder must:
  - (a) Undertake an audit of their compliance with the requirements of condition 1; and
  - (b) Prepare and submit to the CEO an Environmental Compliance Report on that compliance
4. The Environmental Compliance Report required by condition 3, must include as a minimum the following:
  - (a) certification by a suitably qualified and experienced geotechnical engineer that the bund walls and drainage system or component(s) thereof, as specified in condition 1, have been constructed in accordance with the relevant requirements specified in condition 1;
  - (b) well construction logs for the installed groundwater monitoring wells; and
  - (c) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

## Records and reporting (general)

5. The works approval holder must record the following information in relation to complaints received by the works approval 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 other concerns or other issues raised; and

- (d) the complete details and dates of any action by the works approval holder to investigate or respond to any complaint.
- 6.** The works approval holder must maintain accurate and auditable books including the following records, information, reports, and data required by this works approval:
- (a) the works conducted in accordance with condition 1;
  - (b) any maintenance of infrastructure that is performed in the course of complying with condition 1;
  - (c) complaints received under condition 5.
- 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 works approval holder for the duration of the works approval; and
  - (d) be available to be produced to an inspector or the CEO as required.
- 8.** The works approval holder must immediately notify the CEO of:
- (a) any fire on the premises; and/or
  - (b) any accident, malfunction, or emergency which results or could result in the discharge of fire-fighting washwater or other wastes from the premises.

## Operations

- 9.** The works approval holder must ensure that works undertaken at the premises in accordance with this works approval only occur between the hours of 0600hrs – 1900hrs, Monday through to Sunday (including public holidays).

## Definitions

In this works approval, the terms in Table 2 have the meanings defined.

**Table 2: Definitions**

Term	Definition
ASTM D5092/D5092M-16	means the <i>ASTM international standard for Standard practice for design and installation of groundwater monitoring wells (Designation: ASTM D5092/D5092M-16)</i> (as amended)
books	has the same meaning given to that term under the EP Act.
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>
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.
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.
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure and/or equipment has been constructed and/or installed in accordance with the works approval.
EP Act	<i>Environmental Protection Act 1986 (WA)</i> .
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i> .
premises	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 works approval.
prescribed premises	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 approval	refers to this document, which evidences the grant of the works approval by the CEO under section 54 of the EP Act, subject to the conditions.

Term	Definition
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.

---

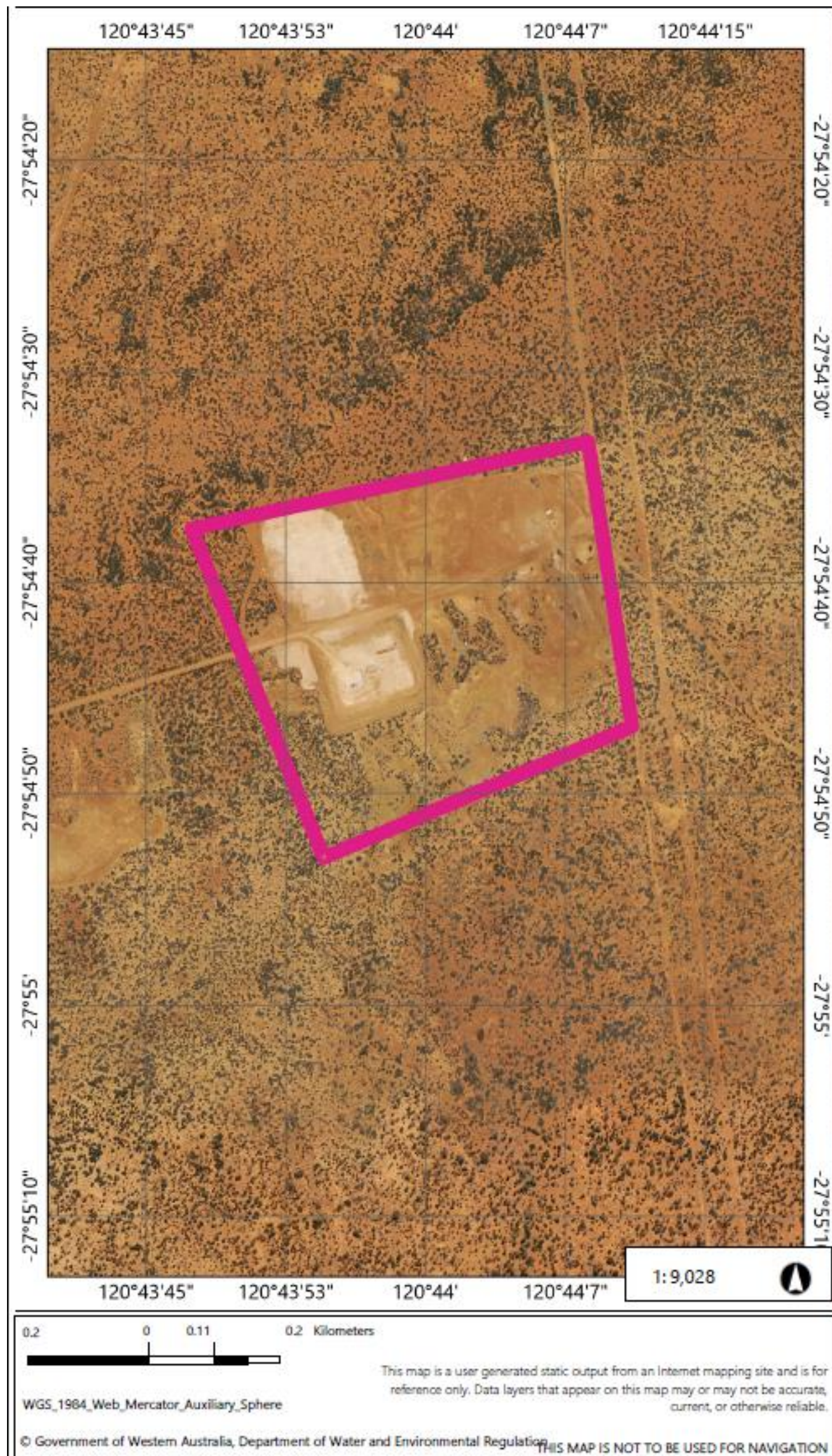
**END OF CONDITIONS**



## Schedule 1: Maps

### Premises map

The boundary of the prescribed premises is demarcated in pink in **Figure 1** below.



**Figure 1: Prescribed premises boundary**



Figure 2: Landfill cell and monitoring bore locations

# Schedule 2: Works

## Design drawings

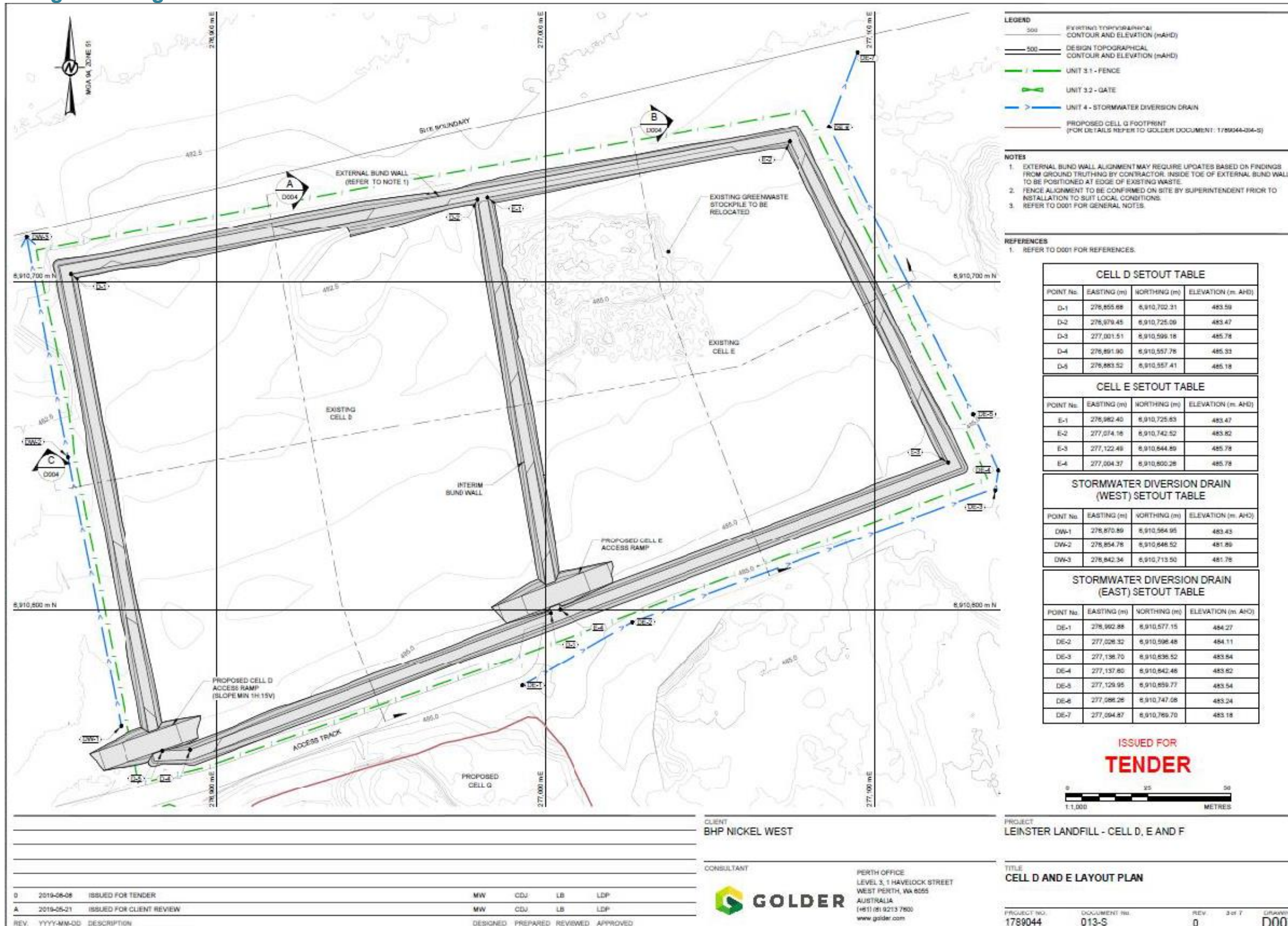


Figure 3: Cell D and E design

Environmental Protection Act 1986  
Works Approval number: W6339/2019/1 (01/09/2020)  
File number: DER2019/000639

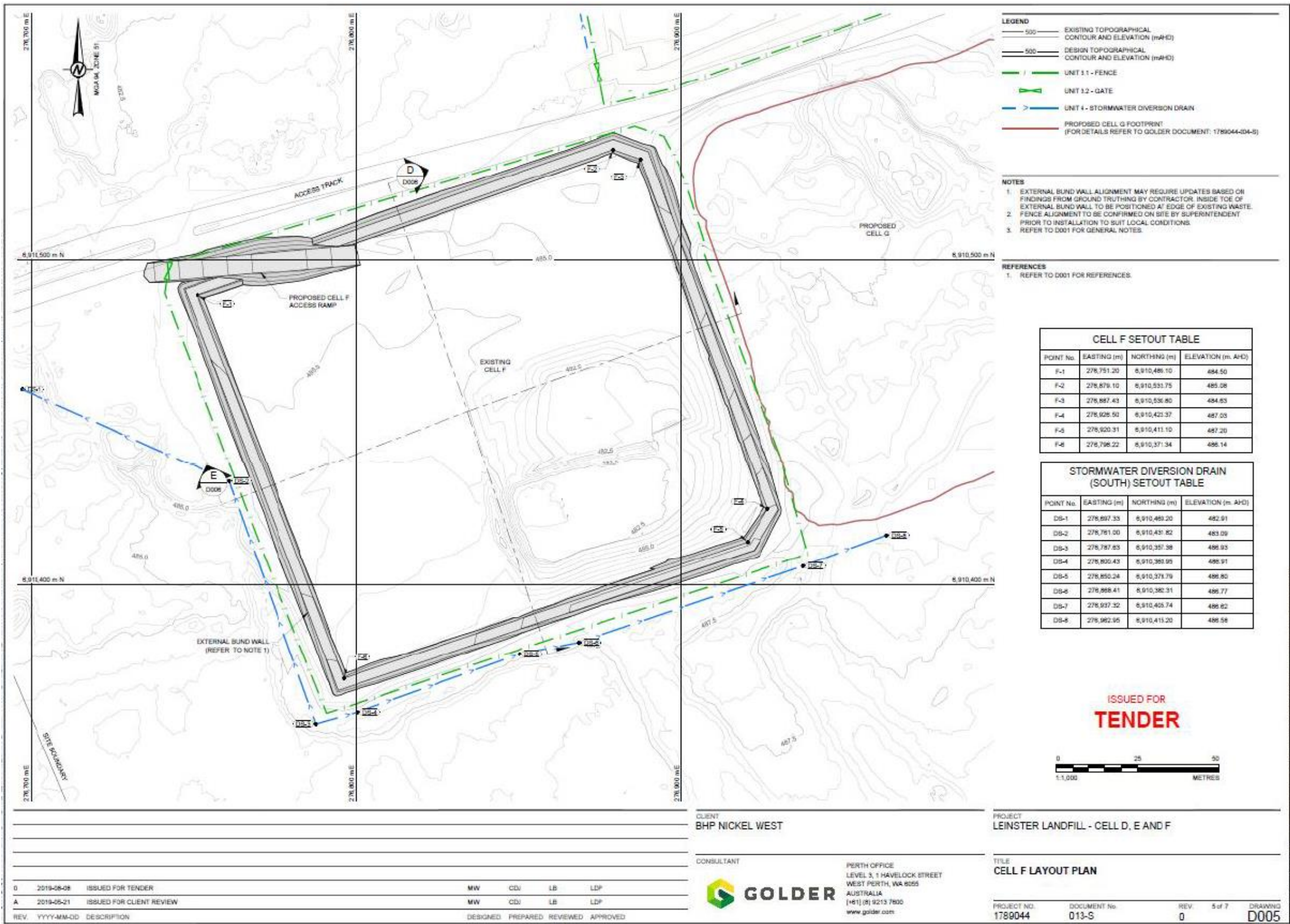


Figure 4: Cell F design

Environmental Protection Act 1986  
Works Approval number: W6339/2019/1 (01/09/2020)  
File number: DER2019/000639

**Schedule 3: Groundwater monitoring well construction**

The works approval holder must construct the infrastructure detailed in Row 1 of Table 1, in accordance with the construction requirements listed in Row 1 of Table 3, by the timeframes listed in Row 1 of Table 3.

**Table 3: infrastructure construction requirements - groundwater monitoring wells**

	Infrastructure	Requirements (Design, and Construction)	Timeframe
1.	Construction of groundwater monitoring well TLFMB6 as depicted in Schedule 1, Figure 2: Monitoring bore locations	<p><u>Well design and construction:</u> designed and constructed according to ASTM D5092/D5092M-16; Standard practice for design and installation of groundwater monitoring wells. Wells must be constructed with a screened interval from the water table to a depth of 2m below the water table and 1 m above the water table.</p> <p><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 should be described and classified in accordance with the Australian Standard Geotechnical Site Investigations AS 1726. Any observations of staining/odours or other indications of contamination must be included in the bore log.</p> <p><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.</p> <p><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.</p> <p><u>Installation survey:</u> the vertical (top of casing) and horizontal position of each monitoring well must be surveyed and subsequently mapped by a suitably qualified surveyor.</p> <p><u>Well network map:</u> 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.</p>	Must be constructed, developed (purged) and determined to be operational within 60 days post the commissioning of the works granted under this approval.