



# Works Approval

**Works approval number** W6918/2024/1

**Works approval holder** Northern Star (Thunderbox) Pty Ltd  
**ACN** 107 154 727  
**Registered business address** Level 4/500 Hay Street,  
Subiaco, 6008, WA  
**DWER file number** DER2024/000144

**Duration** 19/06/2024 to 18/06/2027

**Date of issue** 19/06/2024

**Premises details** Thunderbox Mining Operations  
Mining tenements M36/504 and M36/542  
As shown in Figure 1 of Schedule 1  
LEINSTER WA 6437

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i> )	Assessed production capacity
Category 6: Mine dewatering – premises on which water is extracted and discharged into the environment to allow mining of ore.	2,803,200 tonnes per annual period

This works approval is granted to the works approval holder, subject to the attached conditions, on 19 June 2024, by:

Timothy Moran  
**MANAGER, RESOURCE INDUSTRIES  
INDUSTRY REGULATION**  
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

## Works approval history

Date	Reference number	Summary of changes
19 June 2024	W6918/2024/1	Works approval granted.

## 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:
  - (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 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 the infrastructure and equipment;
  - (b) in accordance with the corresponding design and construction requirements; and
  - (c) at the corresponding infrastructure location; and
  - (d) within the corresponding timeframe,
- as set out in Table 1.

**Table 1: Design and construction requirements**

	Infrastructure	Design and construction requirements	Infrastructure location
1.	Process Water Pond	<ul style="list-style-type: none"> <li>• Dust suppression using water carts undertaken during construction;</li> <li>• Ensure that any process water used for dust suppression does not run-off into surrounding vegetation;</li> <li>• Storage capacity of 24,400 m<sup>3</sup>;</li> <li>• Constructed using downstream construction methods;</li> <li>• Installed with pond level sensors and automatic shut off valves on the feed water line;</li> <li>• Basin comprised of either reworked in situ material (minimum 200 mm depth) or imported low permeability fill material (minimum 300 mm depth), creating a compacted soil subgrade;</li> <li>• Pond to be lined with a 1.5 mm smooth HDPE geomembrane liner over the compacted soil subgrade and upstream embankment face;</li> <li>• Embankment and sump constructed as per design in Figure 5;</li> <li>• Abstraction system constructed as per design in Figure 3 and 5; and</li> <li>• Emergency Spillway constructed as per Figure 4</li> </ul>	As defined in Figure 3, 4 and 5 of Schedule 1.
2.	Return water pipelines	<ul style="list-style-type: none"> <li>• Process water sourced from Bannockburn Borefield; and</li> <li>• Designed with flowmeters, telemetry system and automatic shut off valves.</li> </ul>	As defined in Figure 4 of Schedule 1

#### Compliance reporting

2. The works approval holder must within 30 calendar days of an item of infrastructure

required by condition 1 being constructed:

- (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.
3. The Environmental Compliance Report required by condition 2, must include as a minimum the following:
- (a) certification by a suitably qualified engineer that the component(s) thereof, as specified in condition 1, have been constructed in accordance with the relevant requirements specified in condition 1;
  - (b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 1; and
  - (c) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

## Time limited operations phase

### Commencement and duration

- 4. The works approval holder may only commence time limited operations for an item of infrastructure identified in condition 1 where the Environmental Compliance Report as required by condition 2 has been submitted by the works approval holder for that item of infrastructure.
- 5. The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 1 (as applicable):
  - (a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 4 for that item of infrastructure; or
  - (b) until such time as a licence for that item of infrastructure is granted in accordance with Part V of the Environmental Protection Act 1986, if one is granted before the end of the period specified in condition 5(a).

### Time limited operation requirements

- 6. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 2 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 2.

**Table 2: Infrastructure requirements during time limited operations**

Infrastructure	Operational requirements	Infrastructure location
Process Water Pond	<ul style="list-style-type: none"> <li>• Maintain freeboard of at least 300 mm when operating.</li> <li>• Maintain integrity of HDPE liner</li> <li>• In the event of heavy rain, excess process water may be discharged to the Thunderbox Pit</li> <li>• Record volumes of process water discharged to Thunderbox Pit (in kilolitres)</li> </ul>	Figure 1, 2 and 3, Schedule 1: Maps

<p>Dewatering pipelines:</p> <p>Dewatering pipeline to Thunderbox pit and Process Plant</p> <p>Return water pipeline</p>	<ul style="list-style-type: none"> <li>Undertake visual inspection of pipeline and pipeline corridor at least once daily, when operating.</li> </ul>	<p>Figure 4, Schedule 1: Maps</p>
<p>Water carts using process water pond</p>	<ul style="list-style-type: none"> <li>Ensure that any process water used for dust suppression does not run-off into surrounding vegetation;</li> </ul>	<p>Within cleared areas within premises boundary</p>

### Authorised discharge point

- During time limited operations, the works approval holder must ensure that the emissions specified in Table 3, are discharged only from the corresponding emission point.

**Table 3: Authorised discharge points during time limited operations**

Emission	Discharge point	Discharge point location
<p>Water in the Process Water Pond</p>	<p>Discharge into Thunderbox Pit during and following a high rainfall event.</p>	<p>“Proposed Process Water Discharge Point” as defined in Figure 2, Schedule 1: Maps</p>

### Compliance reporting

- The works approval holder must submit to the CEO a report on the time limited operations within 30 calendar days of the completion date of time limited operations or 90 calendar days before the expiration date of the works approval, whichever is the sooner.
- The works approval holder must ensure the report required by condition 12 includes the following:
  - a summary of time limited operations, including timeframes and amount of process water received by the process water pond and Thunderbox Pit (if applicable);
  - a summary of the environmental performance of all infrastructure as constructed or installed;
  - a review of operational performance and compliance against the conditions of the works approval; and
  - where the manufacturer’s design specifications and the conditions of this works approval have not been met, what measures will the works approval holder take to meet them, and what timeframes will be required to implement those measures.

### Records and reporting

- 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 any other concerns or other issues raised; and
- (d) the complete details and dates of any action taken by the works approval holder to investigate or respond to any complaint.

**11.** 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 6;
- (c) complaints received under condition 10.

**12.** The books specified under condition 11 must:

be legible;

if amended, be amended in such a way that the original version(s) and any subsequent amendments remain legible and are capable of retrieval;

be retained by the works approval holder for the duration of the works approval; and

be available to be produced to an inspector or the CEO as required.

## Definitions

In this works approval, the terms in Table 4 have the meanings defined.

**Table 4: Definitions**

Term	Definition
annual period	a 12-month period commencing from 1 October until 30 September of the immediately following year.
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 has been constructed and in accordance with the works approval.
EP Act	<i>Environmental Protection Act 1986 (WA)</i> .
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i> .
HDPE	means high density poly-ethylene.
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.
time limited operations	refers to the operation of the infrastructure and equipment identified under this works approval that is authorised for that purpose, subject to the relevant conditions.
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 shown in the map below (Figure 1).



Figure 1 Works approval premises boundary



Figure 2 Process Water Pond emergency discharge point (Thunderbox Pit)

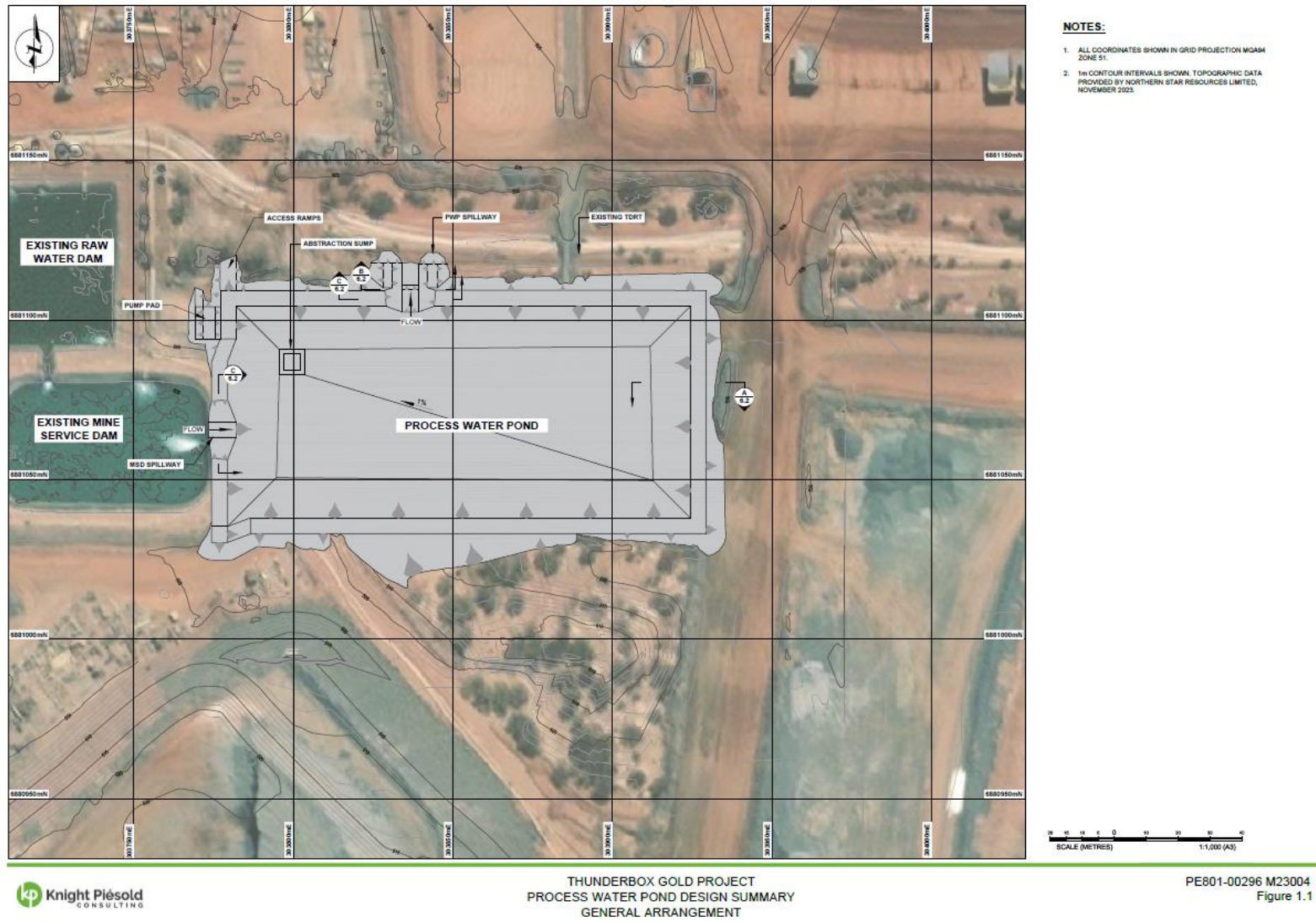


Figure 3: Process Water Pond design

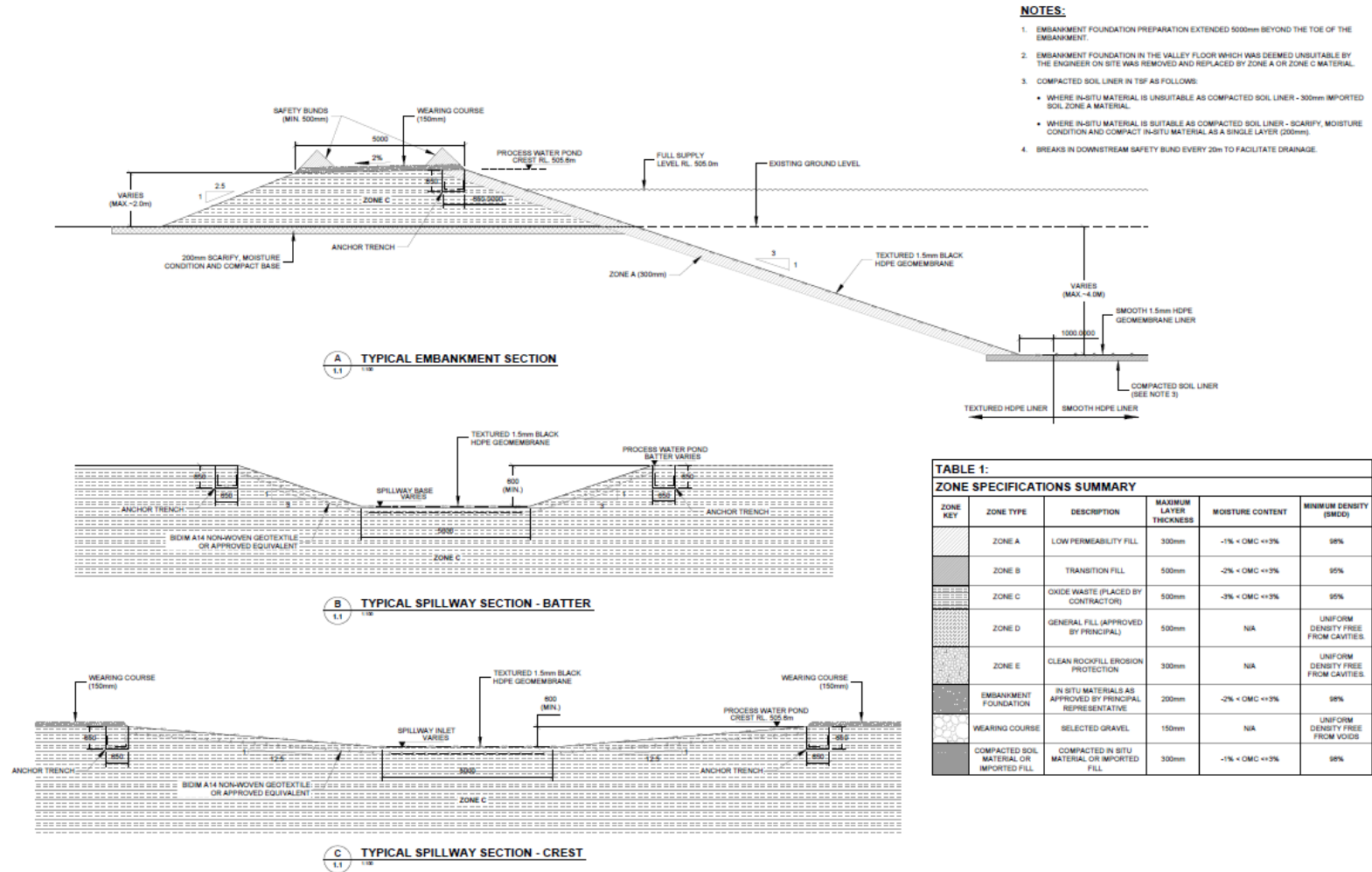


Figure 4: Embankment and Spillway design

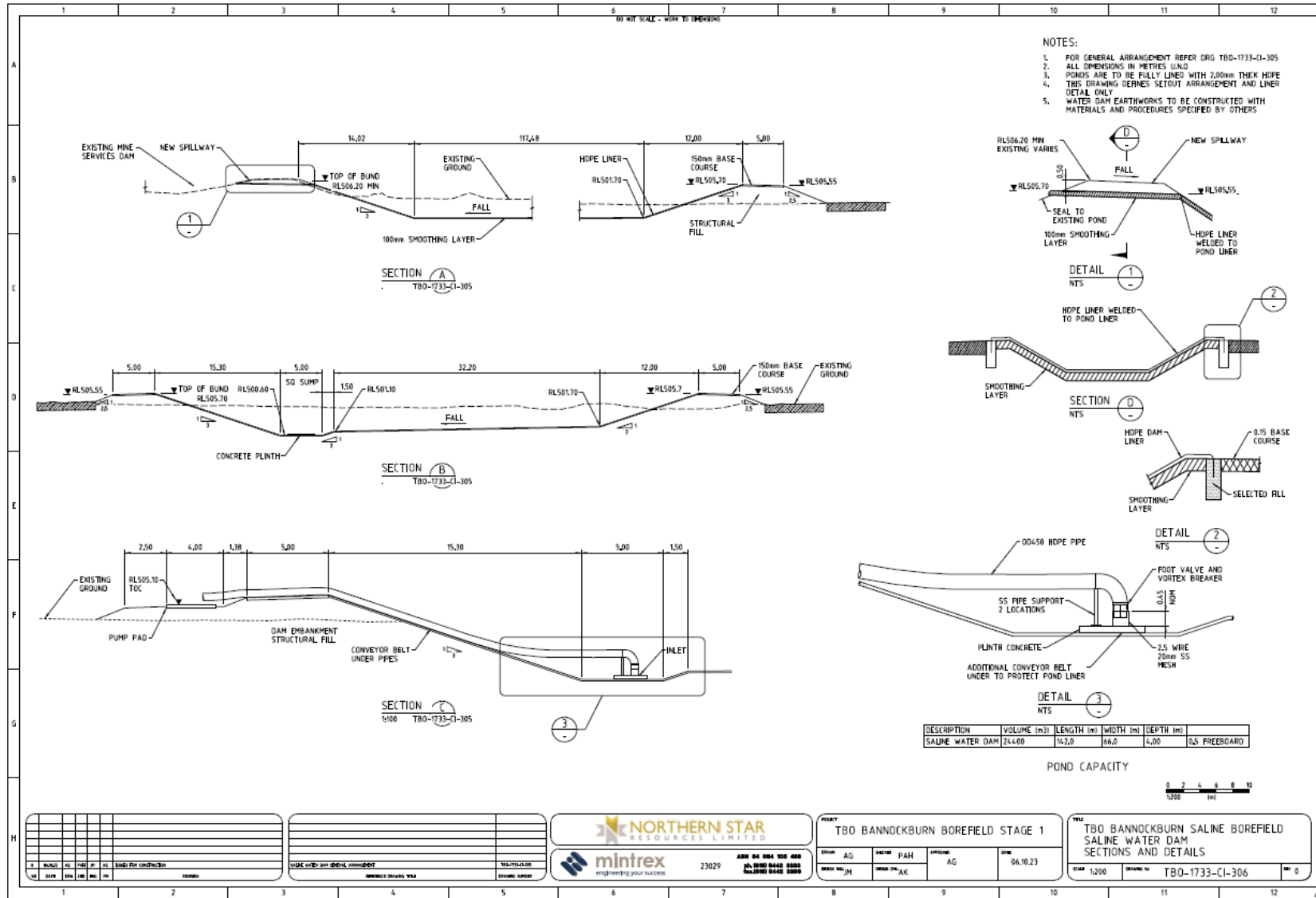


Figure 5: Embankment and Sump design