



**Works approval number** W6423/2020/1

**Works approval holder** Carbunup Pty Ltd  
**ACN** 085 745 697

**Registered business address** 15 Lyall Street  
South Perth WA

**DWER file number** DER2020/000233

**Duration** 12/01/2021 to 11/01/2024

**Date of issue** 12/01/2021

**Premises details** Credaro Family Estate Winery  
6634 Bussell Highway, CARBUNUP WA 6280  
Legal description  
Lot 3 on Deposited Plan 22024 and Lot 105 on Plan  
400462

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i> )	Assessed design capacity
Category 25: Alcoholic beverage manufacturing: remises on which an alcoholic beverage is manufactured and from which liquid water is or is to be discharged onto land or into waters	< 840 kL of alcoholic beverage produced per year

This works approval is granted to the works approval holder, subject to the attached conditions, on 12 January 2021, by:

**Melissa Chamberlain**  
**A/MANAGER PROCESS INDUSTRIES**  
**REGULATORY SERVICES**

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

## 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 and/or install the critical containment infrastructure;
  - (b) in accordance with the corresponding design and construction / installation ; 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 as shown in Schedule 1, Figure 2
1.	Evaporation pond	<p>Constructed in accordance with the pond design in Schedule 1, Figure 2 which includes:</p> <ul style="list-style-type: none"> <li>• maximum capacity of 5,700 m<sup>3</sup> , excluding the allowance for a 500 mm operating freeboard;</li> <li>• bund crest at RL 18.5 m;</li> <li>• crest width 3.0 m;</li> <li>• embankment slopes 1V:3H; and</li> <li>• base not less than 17.0 m RL</li> <li>• a settlement basin.</li> </ul> <p>Constructed with a compacted clay liner which is constructed in accordance with the requirements specified in Schedule 2.</p> <p>Constructed with an underdrainage system beneath the compacted clay liner comprising:</p> <ul style="list-style-type: none"> <li>• minimum 300 mm thick sandy drainage layer; and</li> <li>• 90 mm diameter slotted agdrain pipe.</li> </ul> <p>Constructed with two rock lined emergency spillways 5 m wide and 0.2 m deep on east wall of the pond.</p> <p>Spillways to be 75 m apart from each other each with a rock lined erosion protection on outside pond wall.</p> <p>Installed with a freeboard marker that enables the freeboard to be measured in millimeters and can be viewed by a person standing near the edge of the evaporation pond.</p> <p>Constructed 20 m west of the premises boundary.</p>	Effluent Evaporation Pond

2. 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 2.

**Table 2: Design and construction / installation requirements**

	Infrastructure	Design and construction / installation requirements	Infrastructure location as shown in Schedule 1
1.	Stormwater swales	To be constructed alongside the west and north embankments of the evaporation pond. Each swale shall be 3.0 m wide x 0.3 m deep Shall be at least 2 m from the toe of the evaporation pond embankments.	Stormwater Swale as shown in Figure 2.
2.	50 mm diameter polyethylene pipe connecting wastewater treatment plant to evaporation pond	Fitted with a pressure gauge and a flow meter.	Pipeline to Dam as shown in Figure 1.

### Compliance reporting

3. The works approval holder must within 30 calendar days of the critical containment infrastructure identified 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 a Critical Containment Infrastructure Report on that compliance.
4. The Critical Containment Infrastructure Report required by condition 3 must include as a minimum the following:
- (a) certification by a suitably qualified civil engineer that each item of critical containment infrastructure or component thereof, as specified in condition 1, has been built and installed in accordance with the requirements specified in condition 1;
  - (b) as constructed plans and a detailed site plan showing the location and dimensions for each item of critical containment infrastructure or component thereof, as specified in condition 1;
  - (c) photographic evidence of the installation of the infrastructure; and
  - (d) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.
5. The works approval holder must within 30 calendar days of the infrastructure identified by condition 2 being constructed and/or installed:
- (a) undertake an audit of their compliance with the requirements of condition 2; and

- (b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.
6. The Environmental Compliance Report required by condition 5 must include as a minimum the following:
- (a) certification by a person authorised to represent the works approval holder that each item of infrastructure or component thereof, as specified in condition 2, has been constructed in accordance with the relevant requirements specified in condition 2;
  - (b) as constructed plans and a detailed site plan for each item of infrastructure specified in condition 2; 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

7. The works approval holder may only commence time limited operations for an item of critical containment infrastructure identified in condition 1:
- (a) where the CEO has notified the works approval holder that the Critical Containment Infrastructure Report for that item of infrastructure as required by condition 3 meets the requirements of that condition; or
  - (b) where at least 10 business days have passed after the Critical Containment Infrastructure Report for that item of infrastructure as required by condition 3 has been submitted to the CEO.
8. The works approval holder may only commence time limited operations for an item of infrastructure identified in condition 2:
- (a) where the Environmental Compliance Report for that item of infrastructure as required by condition 5 has been submitted by the works approval holder for that item of infrastructure.
9. The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 10 (as applicable):
- (a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 7 or 8 (as applicable) 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*;
- whichever occurs first.

### Time limited operational requirements

10. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 3 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 3.

**Table 3: Infrastructure and equipment requirements during time limited operations**

	Site infrastructure and equipment	Operational requirement	Infrastructure location as shown in Schedule 1
1.	Evaporation pond	<p>Shall only accept treated wastewater from winery operations via a pipeline from the wastewater treatment plant.</p> <p>A minimum operational freeboard of 500 millimeters shall be maintained.</p> <p>Sludge removed from the evaporation pond shall be disposed off site to a licensed facility.</p>	Effluent Evaporation Pond as shown in Figure 2.
2.	Pipeline from the wastewater treatment plant to the evaporation pond	Shall be operated with a pressure gauge and flow meter to detect leaks.	Pipeline to Dam as shown in Figure 1.
3.	Wastewater irrigation area (L1)	All wastewater irrigation infrastructure must be decommissioned before the end of the 180 calendar day time limited operations phase.	Not shown

### Compliance reporting

11. 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 30 calendar days before the expiration date of the works approval, whichever is the sooner.
12. The works approval holder must ensure the report required by condition 11 includes the following:
  - (a) a summary of the time limited operations, including timeframes and volume of treated wastewater discharged to the evaporation pond;
  - (b) a summary of the environmental performance of all infrastructure as constructed or installed (as applicable);
  - (c) a review of performance and compliance against the conditions of the works approval; and
  - (d) where 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 (general)

13. 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.
- 14.** 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 and condition 2
  - (b) any maintenance of infrastructure that is performed in the course of complying with conditions 1 and condition 2; and
  - (c) complaints received under condition 13.
- 15.** The books specified under condition 14 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.

## Definitions

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

**Table 4: Definitions**

Term	Definition
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>
critical containment infrastructure	means the items of infrastructure listed in condition 1.
Critical Containment Infrastructure Report	means a report to satisfy the CEO that works of critical containment infrastructure have been constructed in accordance with the works approval.
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 has been constructed in accordance with the works approval.
EP Act	<i>Environmental Protection Act 1986</i> (WA).
EP Regulations	<i>Environmental Protection Regulations 1987</i> (WA).
freeboard	means the distance between the maximum water surface elevations and the top of the spillways at their lowest point.
premises	the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map in Schedule 1 to this works approval.
prescribed premises	has the same meaning given to that term under the EP Act.
RL	means Relative Level (above sea level).



Term	Definition
suitably qualified civil engineer	a person who: <ul style="list-style-type: none"> <li>a) holds a Bachelor of Engineering; and</li> <li>b) has a minimum of five years of working experience in the area of civil engineering</li> </ul>
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.
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.
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.

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**END OF CONDITIONS**

## Schedule 1: Maps

### Premises map

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



Figure 1: Map of the boundary of the prescribed premises



The site location plan and evaporation pond design is shown in the plan below (Figure 2).

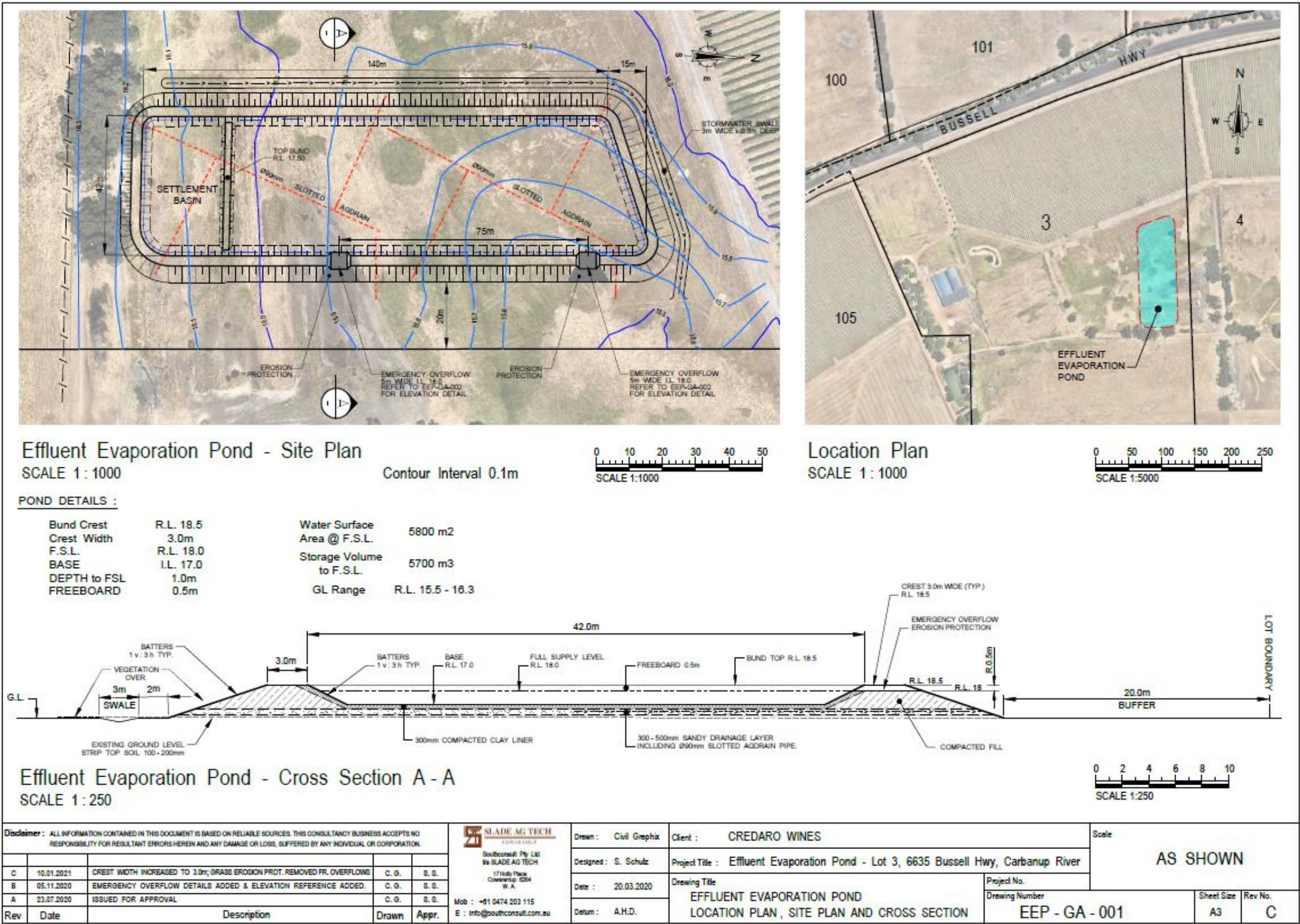
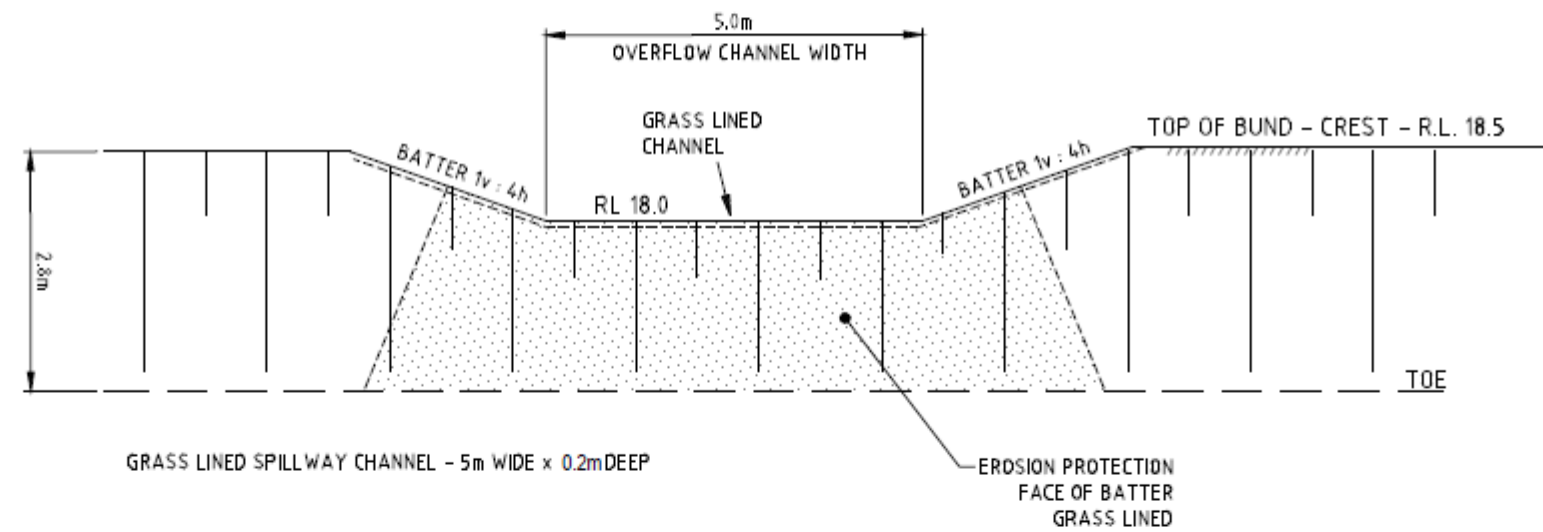


Figure 2: Evaporation pond location and design plan

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The spillway design is shown in the plan below (Figure 3).



**Emergency Overflow - Front Elevation**  
N. T. S.

NOTE : - All Embankment Material to be compacted to 98% SMDD  
at +0% to +3% optimum moisture content.

**Figure 3:Spillway design**



## Schedule 2: Clay Liner requirements

### Liner material:

1. Soils used for the lining must conform to a design specification for an effective water retaining structure. The soils must be free from plant roots and reactive, soluble and organic matter. The selected liner material must consist of an inert and insoluble blend of sand, clay and silt particles that meet the minimum criteria described in Table 5.

**Table 5: minimum criteria for soil liners**

Soil characteristic	Acceptability criterion	Test method
Percentage fines	> 25% passing a 75 µm sieve	Australian Standard (AS) 1289 3.6.1-2009
	> 15% passing a 2 µm sieve	
Liquid limit	30% to 70%	AS 1289 3.1.2- 2009
Plasticity index	> 15	AS 1289 3.3.1- 2009
Emerson class number	5 to 6	AS 1289 3.8.1- 2009

2. The liner material must be homogeneous in nature and properties, with no sandy patches exceeding the liner specification or rocks retained on a 37.5 mm sieve. Any non-conforming liner material must be removed and replaced with conforming soil. Where necessary, soils may be blended or have bentonite clay mixed in to achieve desired uniformity and geo-technical characteristics.
3. The liner material properties must not be altered by acidic or alkaline content of the contained waste.

### Liner construction

4. Liners must be installed in at least two layers of equal thickness to ensure adequate compaction is achieved and to minimise the risk of leakage. The liner material must be moisture-conditioned to achieve the maximum (in place) design soil density exceeding the 95 per cent maximum dry density (MDD) determined using AS 1289.5.2.1 (2003) and AS 1289 5.4.2 (2007).
5. The minimum thickness of the compacted soil liner must be 30 cm and construction tolerances must be within 5 cm.
6. The completed liner must uniformly cover both the base and perimeter of the evaporation pond to achieve one integrated holding facility.
7. Test cores must be taken from the completed evaporation pond as follows:
  - (a) Tests must be conducted based on a four-by-four grid equally spaced over the base of the evaporation pond; and
  - (b) One full depth core test per 30 lineal m of perimeter embankment.
  - (c) Each soil sample core must have its coefficient of permeability determined via an accredited soil testing laboratory in accordance with AS 1289.6.7.1 (2001). The maximum acceptable core coefficient of permeability is  $10^{-9}$  m/s when subjected to 1 m pressure head of water.

- (d) Core test holes must be filled with cement slurry, bentonite or other suitable sealant.
- 8.** The completed evaporation pond must be proof-tested to confirm the initial seepage from each containment module is less than 4 kL/ha/day of contained area under 1 m water pressure 24 hours after flooding.