



**Works approval number** W6544/2021/1

**Works approval holder** Mortlock Malt

**Registered business address** 6013 Northam-Pithara Road  
KARRANADGIN WA 6460

**DWER file number** DER2021/000218

**Duration** 11/10/2021 to 10/10/2024

**Date of issue** 11/10/2021

**Premises details** Mortlock Malt  
6013 Northam-Pithara Road  
KARRANADGIN WA 6460  
Legal description -  
Lot 81 on Deposited Plan 68682  
Certificate of Title Volume 2773 Folio 699

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i> )	Assessed design capacity
Category 18: Food processing: premises (other than premises within category 24) — (a) on which vegetables are, or fruit or meat is, preserved, cooked, dried, canned, bottled or processed; and (b) from which liquid waste is or is to be discharged onto land or into waters.	Up to 400 tonnes per annual period.

This works approval is granted to the works approval holder, subject to the attached conditions, on 11/10/2021, by:

## MANAGER, PROCESS INDUSTRIES

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

## Works approval history

Date	Reference number	Summary of changes
11/10/2021	W6544/2021/1	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;as set out in Table 3 in Schedule 2.

#### Compliance reporting

2. The works approval holder must within 30 calendar days of constructing the infrastructure required by condition 1:
  - (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 qualified professional engineer that the items of infrastructure or 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 all items 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 contain 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 the infrastructure identified in condition 1 where the Environmental Compliance Report as required by condition 2 has been submitted by the works approval holder for the infrastructure.
5. The works approval holder may conduct time limited operations for the 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 2 for the infrastructure; or
  - (b) until such time as a licence for the 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 operations requirements

6. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 1 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 1.

**Table 1: Infrastructure and equipment requirements during time limited operations**

	Site infrastructure and equipment	Operational requirement	Infrastructure location as shown in Figure 2
1.	Malting shed	<ul style="list-style-type: none"> <li>Malting activities must only be undertaken in the malting shed.</li> <li>Grain must be transferred into germination vessels via an enclosed chain disk transfer system.</li> <li>Malting activities must only be undertaken when the dust extraction system is operational and doors are closed.</li> <li>The dust extraction system must direct dust into bags.</li> <li>Collected dust and solid waste must be stored in bags or enclosed vessels in the malting shed, prior to offsite disposal.</li> <li>Processed malt to be stored in bags within the malting shed.</li> <li>Wastewater from malting activities must be directed to the collection sump.</li> </ul>	Malting shed
2.	Grain silo	<ul style="list-style-type: none"> <li>Barley grain must be stored in the storage silos.</li> </ul>	Grain silo or malting shed
3.	Evaporation pond	<ul style="list-style-type: none"> <li>A minimum operational freeboard of 0.5 m must be maintained.</li> <li>Sediment removal campaigns must be undertaken in a manner which maintains the integrity of the evaporation pond liner.</li> <li>Sediments removed from the evaporation pond shall not be disposed on the premises.</li> </ul>	Evaporation pond
4.	Fuel oil storage tank	<ul style="list-style-type: none"> <li>Fuel oil must only be stored within the self-bunded fuel oil storage tank.</li> </ul>	Fuel storage tank
5.	Collection sump	<ul style="list-style-type: none"> <li>Must be maintained free of cracks or other damage.</li> <li>Must be maintained to prevent blockages and maintain flow rates in accordance with the manufacturer's specifications.</li> <li>Must be covered to prevent surface water inflow.</li> </ul>	Collection sump

## Compliance reporting

7. The works approval holder must submit to the CEO a report on the time limited operations within 60 calendar days of the completion date of time limited operations or 60 calendar days before the expiration date of the works approval, whichever is sooner.
8. The works approval holder must ensure the report required by condition 7 includes the following:
- a summary of the time limited operations, including timeframes and amount of malt produced;
  - a summary of the environmental performance of all infrastructure as constructed or installed (as applicable);
  - a review of performance and compliance against the conditions of the works approval; and

- (d) where the manufacturer's design specifications and the conditions of this works approval have not been met, what measures the works approval holder will take to meet them, and what timeframes will be required to implement those measures.

## Records and reporting (general)

- 9. 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.
- 10. 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 and 6; and
  - (c) complaints received under condition 9.
- 11. The books specified under condition 10 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 2 have the meanings defined.

**Table 2: Definitions**

Term	Definition
annual period	a 12-month period commencing from 1 January until 31 December of the same year.
AS 1289.3.1.2	means <i>Australian Standard 1289.3.1.2: Methods of testing soils for engineering purposes. Soil classification tests - Determination of the liquid limit of a soil - one point Casagrande method (subsidiary method)</i>
AS 1289.3.2.1	means <i>Australian Standard 1289.3.2.1: Methods of testing soils for engineering purposes: method 3.2.1: soil classification tests - determination of the plastic limit of a soil - Standard method</i>
AS 1289.3.3.1	means <i>Australian Standard Method 1289.3.3.1: Soil classification tests—Calculation of the plasticity index of a soil</i>
AS 1289.3.4.1	means <i>Australian Standard Method 1289.3.4.1: Soil classification tests—Determination of the linear shrinkage of a soil—Standard method</i>
AS 1289.3.6.1	means <i>Australian Standard 1289.3.6.1-2009: Methods of testing soils for engineering purposes soil classification tests - Determination of the particle size distribution of a soil - Standard method of analysis by sieving</i>
AS 1289.3.8.1	means <i>Australian Standard 1289.3.8.1-2006: Methods of testing soils for engineering purposes - Method 3.8.1: Soil classification tests - Dispersion - Determination of Emerson class number of a soil</i>
AS 1289.5.1.1	means <i>Australian Standard 1289.5.1.1—2003: Methods of testing soils for engineering purposes Method 5.1.1: Soil compaction and density tests—Determination of the dry density/moisture content relation of a soil using standard compactive effort</i>
AS 1289.5.7.1	means <i>Australian Standard 1289.5.7.1—2006: Method 5.7.1: Soil compaction and density tests—Compaction control test—Hilf density ratio and Hilf moisture variation (rapid method)</i>
AS 1289.6.7.3	means <i>Australian Standard 1289.6.7.3:2016: Methods of testing soils for engineering purposes, Soil strength and consolidation tests - Determination of permeability of soil - Constant head method using a flexible wall permeameter</i>
AS 1726	means <i>Australian Standard 1726:2017: Geotechnical site investigations</i>
AS 1940-2004	means <i>Australian Standard 1940-2004: The storage and handling of flammable and combustible liquids</i>
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.

Term	Definition
EP Act	<i>Environmental Protection Act 1986 (WA).</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA).</i>
m <sup>3</sup>	cubic metre
mbgl	metres below ground level
MDPE	medium-density polyethylene
m/s	metres per second
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.
Qualified professional engineer	means an engineer either registered, chartered or otherwise meeting the definition of a 'Professional Engineer' in accordance with definition provided by the Institute of Engineers Australia. ( <a href="http://www.engineersaustralia.org.au/engineering-registers">www.engineersaustralia.org.au/engineering-registers</a> )
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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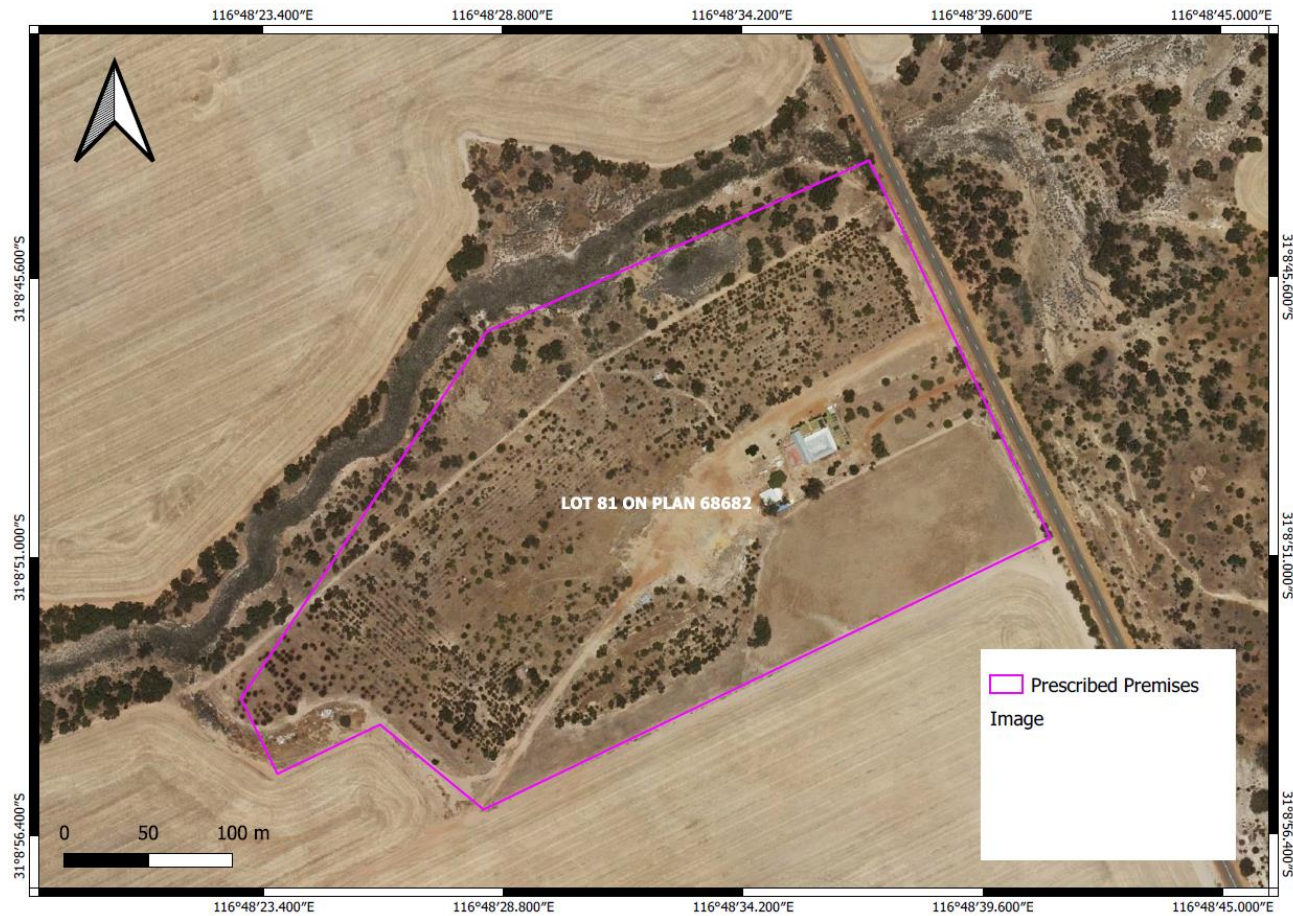
## END OF CONDITIONS



## Schedule 1: Maps

### Premises map

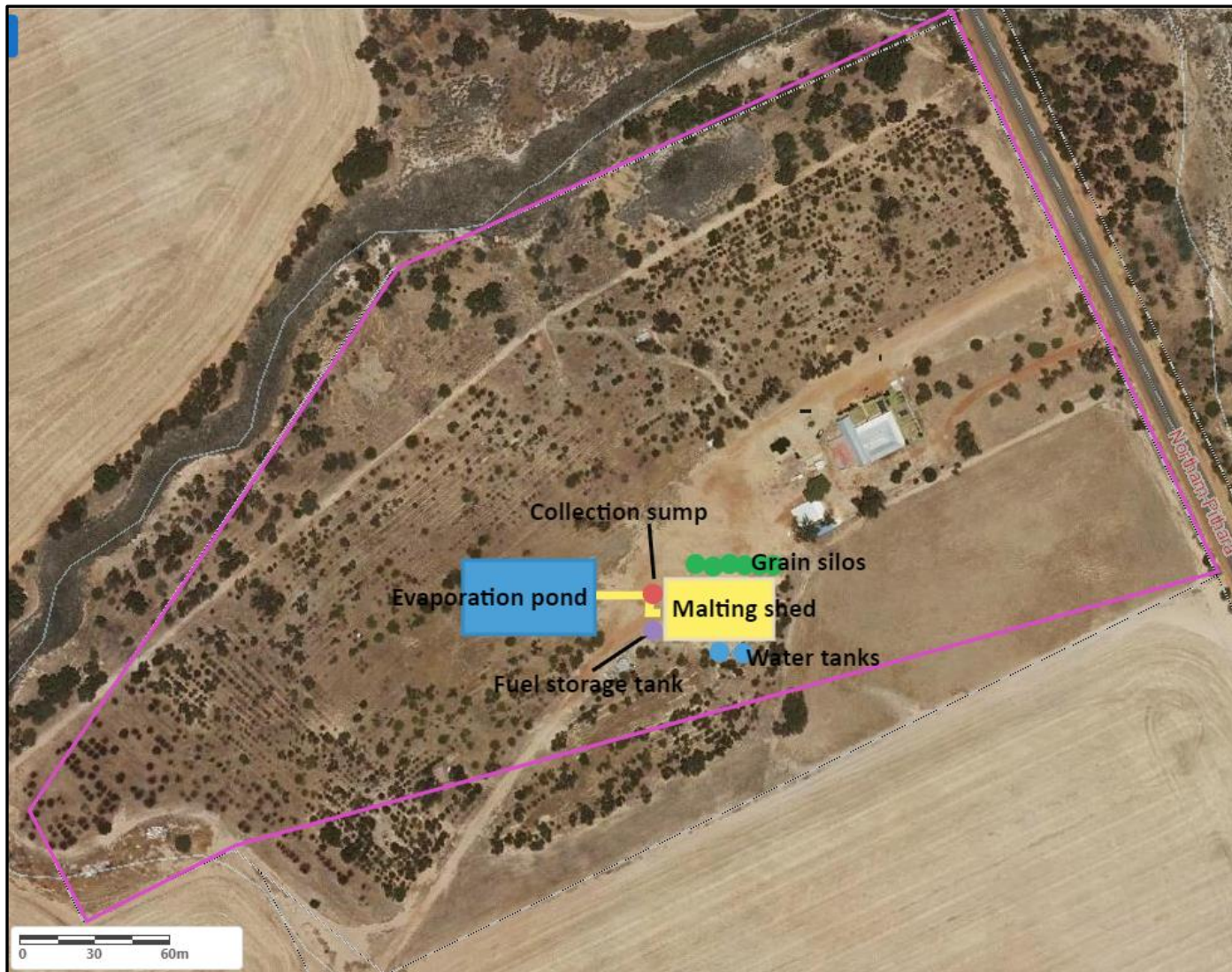
The boundary of the prescribed premises is shown in the map below (Figure 1).



**Figure 1: The prescribed premises boundary (shown in magenta). This boundary is consistent with the cadastral boundary for Lot 81 on Deposited Plan 68682.**



The layout of the proposed infrastructure is shown in the map below (Figure 2).



**Figure 2: The layout of the proposed infrastructure.**

## Schedule 2: Authorised works

The works to be undertaken at the premises are detailed in Table 3.

**Table 3: Design and construction requirements**

	Infrastructure	Design and construction requirements	Infrastructure location (as shown in Figure 2)
1.	Malting shed	<ul style="list-style-type: none"> <li>• Must be an enclosed building with a concrete floor.</li> <li>• Must be fitted with a dust extraction system capable of directing dust into bags for collection.</li> <li>• Must include an enclosed chain-disk transfer system for delivery of grain to the germination vessels.</li> <li>• All germination vessels must be installed within the malting shed.</li> <li>• A false floor comprised of mesh with a 1.8mm or less aperture must be situated inside all the germination vessels.</li> <li>• The germination vessels must be connected to the collection sump by pipe work for transfer of wastewater.</li> </ul>	Malting shed
2.	Grain storage	<ul style="list-style-type: none"> <li>• No more than six grain storage silos, each with a maximum storage capacity of 100 tonnes, are to be established.</li> </ul>	Grain silos
3.	Water tanks	<ul style="list-style-type: none"> <li>• No more than two polyethylene water storage tanks, each with a maximum storage capacity of 100,000 litres, are to be established.</li> </ul>	Water tanks
4.	Fuel oil storage	<ul style="list-style-type: none"> <li>• One self-bunded storage tank with a maximum capacity of 13,500 litres that meets the requirements of AS 1940-2004.</li> </ul>	Fuel storage tank
5.	Collection sump	<ul style="list-style-type: none"> <li>• Must construct a collection sump constructed of MDPE, with a minimum capacity of 0.2 m<sup>3</sup>.</li> <li>• Must incorporate a silt basket designed to remove at least 99% of particles &gt;3 mm in size.</li> <li>• Must have a treatable flow rate of at least 5 litres per second.</li> <li>• Must be fitted with a cover to prevent surface water inflow.</li> <li>• Outlet must be connected to the evaporation pond by pipework for transfer of wastewater.</li> </ul>	Collection sump
6.	Evaporation pond	<ul style="list-style-type: none"> <li>• Must construct an evaporation pond with a minimum storage capacity of 754 m<sup>3</sup>, excluding freeboard.</li> <li>• Pond embankments must have a minimum height of 0.5 m above ground level, a minimum width of 2 m and achieve a minimum operational freeboard 0.5 m.</li> <li>• Pond must be constructed with a minimum width of 43 m, when measured from toe to toe of the opposite embankments.</li> <li>• The floor of the evaporation pond must be a minimum width of 35 m and must not be more than 1 mbgl at its lowest point.</li> <li>• The walls of the evaporation pond must have an internal angle of no more than 27 degrees.</li> <li>• The pond floor and walls must be constructed with a compacted clay liner with a minimum thickness of 300 mm (constructed in two layers of 150 mm following compaction) which is able to achieve a permeability of 1 x 10<sup>-9</sup> m/s or less.</li> <li>• Both the clay liner source material and the constructed clay liner must be demonstrated by geotechnical testing conducted by a professional engineer to meet the acceptance criteria contained in Table 4 in Schedule 3.</li> </ul>	Evaporation pond

## Schedule 3: Clay liner acceptance criteria

The acceptance criteria for the evaporation pond clay liner source material and the constructed clay liner is contained in Table 4.

**Table 4: Evaporation pond clay liner source material and constructed clay liner testing and acceptance criteria**

Item	Test method	Pre-qualification testing frequency	Frequency of field compliance testing	Acceptance criteria
Particle size distribution	AS 1289 3.6.1	3 per material source	3 per pond liner	As provided below
Particles passing 53 mm sieve	AS 1289 3.6.1			100%
Particles passing 19 mm sieve	AS 1289.3.6.1			>90%
Particles passing 2.36 mm sieve	AS 1289 3.6.1			>70%
Particles passing 0.075 mm sieve	AS 1289 3.6.1			>30%
Maximum particle size	AS 1289 3.6.1			40mm
Atterberg limits	AS 1289 3.1.2 AS 1289 3.2.1 AS 1289 3.3.1 AS 1289 3.4.1	3 per material source	3 per pond liner	As provided above
Plasticity Index	AS 1289 3.3.1			≥10% and above casagrande A line
Liquid limit	AS 1289 3.1.2			30-60%
Permeability (remoulded)	AS 1289 6.7.3	2 tests per material source		≤ 1 x 10 <sup>-9</sup> m/sec (300 mm thick clay pad liner)
Permeability on undisturbed tube samples collected from the completed pad liner	AS 1289 6.7.3		2 tests per constructed pad liner	≤ 1 x 10 <sup>-9</sup> m/sec (300 mm thick clay pad liner)
Emerson class number	AS 1289 3.8.1	3 per pad liner	3 per pad liner	>4
Calcium carbonate content	USEPA	3 per pad liner	3 per pad liner	<15%
Dry density	AS 1289 5.1.1; or AS 1289 5.7.1	N/A	As provided in Table 8.1 of AS 3798-2007	Minimum dry density ratio of 95% relative to standard or a minimum Half density ratio of 95% standard.
Moisture content				0% to +3% of the Standard Optimum Moisture Content (SOMC) or within a half moisture variation of 0% to +3%

Taken from the *South Australian EPA Guideline: Wastewater lagoon construction* (Appendix 4A).