

Annual Dam Safety Standards Report 2021



This report demonstrates the declared dam owner's compliance with the dam safety standards set out in the Dams Safety Regulation 2019 (the Regulation). It covers the named declared dam for the calendar year ending 31 December 2021.

The dam owner (the office holder at the end of this report) attests to the accuracy of the report.

A separate report for each declared dam must be lodged with Dams Safety NSW by 31 March 2022 for each declared dam.

Section 1 – Declared dam identification details

Dam name	Liddell Cooling Water Dam
Dam name owner	AGL Macquarie Pty Ltd

Section 2 – Dam safety standards

Consequence category – Regulation, Part 3

The dam consequence category is a rating of the impact that could potentially be caused if the dam failed. It must be assessed:

- within 6 months of the dam being declared
- at least once every 15 years
- after any significant change in the number of people likely to be affected by a dam failure
- or if required by Dams Safety NSW.

[Regulation, clause 7\(2\)](#)

Dam consequence category	Sunny Day Consequence - HIGH A Flood Consequence - HIGH B
Date of the last consequence category assessment by a competent person	23rd July 2021
Has the number of people likely to be affected by a dam failure changed since the last consequence category review?	No
How was this checked?	Review of significant changes to number of persons likely affected by the dam, including review of traffic data, mine operations personnel and downstream



For extreme and high consequence dams only

If the consequence category is Extreme, High A, High B, or High C, the consequence category assessment must be reviewed by an independent competent person - [Regulation, clause 7\(4\)](#)

Date of last independent review of the consequence category assessment	25th June 2021
Name of independent reviewer (must be a competent person)	Dr Rainer Berg Senior Technical Director: Hydrology, Storm water and Flooding GHD

Dam safety standard – Dam safety management system - Part 5

The dam safety management system provides a comprehensive and integrated system to manage all aspects of foreseeable risks relating to dam failure. It is designed to be used by the dam owner to ensure, as far as reasonably practicable, the safety of people and property is not put at risk from the dam.

- [Regulation Part 5](#)

Documenting the dam safety management system

Is the dam safety management system fully documented?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If not, what percentage of the dam safety management system documentation is complete?	100%
How did you confirm this percentage? (eg draft review, version approved)	AGL Macquarie Dam Safety Management System Document Version 1.1 - review of document that is approved for release.
Does the dam safety management system apply to more than one dam?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Documenting the dam safety management system

Is the dam safety management system fully implemented for this dam?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If not, what percentage of the dam safety management system is implemented?	100%
How did you confirm this percentage? (eg internal audit, key staff statements)	Internal review of the AGL Macquarie Dam Safety Management Document compared to the task lists generated for Dam Safety Management activities.



Dam safety management system review – Section 17

The declared dam owner must ensure the dam safety management system is reviewed each year to ensure it remains effective. [Regulation, Section 17](#)

Date of last safety management system review	30th October 2021
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Assessment of society and individual risk rating – Section 15

The owner of a declared dam (other than a proposed dam) must use the risk management framework to produce a written report on all foreseeable risks to the dam:

- at least once every 5 years
- when a major change to the dam is proposed, and
- when required by Dams Safety NSW.

[Regulation, clause 15 \(1\)](#)

Date of last risk report	9th November 2021
Individual risk rating of the dam	4.97E-06
Societal risk rating of the dam	3.32E-04
Date of next planned risk report	November 2026

Other safety requirements – Part 6

Incident reporting – Section 19

The declared dam owner must report incidents that happen at or in relation to the dam to Dams Safety NSW. [Regulation, Section 19](#)

Number of incidents during the 2021 calendar year	NIL
Topic/subject of each incident(s)	Not Applicable



Safety review – Section 20

The declared dam owner must ensure a competent person conducts a safety review at least once every 15 years, and as soon as practicable after:

- a deficiency or weakness in the dam is identified
- there is a change in the accepted technology or methods used in one of the relevant specialties or design criteria for dams
- the dam consequence category changes, or
- it is required by Dams Safety NSW.

[Regulation Section 20](#)

Date of last safety review (Regulation Clause 20(2))	9th November 2021
Planned date for next safety review	November 2036

For extreme and high consequence dams only

If the consequence category is Extreme, High A, High B, or High C, the safety review must be reviewed by an independent competent person - [Regulation, clause 20\(6\)](#)

Name of independent reviewer (must be a competent person)	Darren Pemberton Principal Engineer Facilities Closure Service Area Leader ATC Williams
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Notification of significant changes to the dam – Section 21

Before making any significant change to the configuration of the declared dam that may affect the safety of the dam, the dam owner must inform Dams Safety NSW of the proposed change in writing.

[Regulation Section 21](#)

Has any significant change to the configuration of the dam been made during the 2021 calendar year?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If yes, describe the change	Not applicable - No changes
Is any significant change to the configuration of the dam planned?	No
If yes, describe the change and when it is planned to happen?	Not applicable - No changes



Emergency exercises - Section 22

The declared dam owner must ensure that staff who are involved in the operation of the dam undertake emergency exercises at least once every 3 years. [Regulation Section 22](#)

Date of last 'theoretical classroom' emergency exercise (Regulation clause 22(1))	10th November 2021 - All dams earthquake scenario
Planned date of next 'theoretical classroom' emergency exercise	November 2024

For extreme or high consequence dams only

The declared dam owner must ensure that staff who are involved in operating the dam undertake practical emergency exercises at least once every 5 years, where possible including relevant agencies identified in the emergency plan. [Regulation Section 22, clauses \(3 & 4\)](#)

Date of last practical emergency exercise	30th November 2021 - Piping scenario
Planned date of next practical emergency exercise	November 2026

Section 3 – Design and construction

This section is for dams in the design/construction/commissioning/decommissioning phase

Dam safety management system for design and construction

Does the dam safety management system cover dam design and construction? Regulation, clause 12(3)	Not applicable - not in design / construction phase
Was the risk management framework used to prepare a risk report at the dam design stage? Regulation clause 15(2)	Not applicable - not in design / construction phase

Certain work must be carried out by a person subject to a quality management system

[Regulation clause 23\(1\)](#)

How have you ensured that design and construction are carried out by a person subject to an AS ISO 9001:2016 quality management system?	Not applicable - not in design / construction phase
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A competent person must check work involving dam design

[Regulation - Clause 24](#)

For extreme or high consequence dams, provide the name of the independent person who checked the design (Regulation clause 24)	Not applicable - not in design / construction phase
For dams still in an early design phase, have you planned independent competent person design checks/ reviews?	<input type="checkbox"/> Yes <input type="checkbox"/> No



Attestation

This attestation must be signed by the dam owner office holder as follows:

Dam owner	Attesting office holder(s)
Local council	General Manager
Company	<ul style="list-style-type: none"> • 2 directors, or • 1 director and 1 company secretary • The combined director and company secretary (Where there is only 1 director)
Statutory state-owned corporation	Chief Executive Officer or Managing Director responsible for managing the operation of the statutory state-owned corporation in accordance with the general policies and specific directions of the board
Statutory corporation	Corporation with 2 or more members: <ul style="list-style-type: none"> • President, chairperson or another principal officer of the corporation Sole corporation <ul style="list-style-type: none"> • The person who constituted the constitution • The person managing the affairs of the corporation
Government department	Secretary
Individual	Individual



Declared dam owner office holders attesting to the accuracy of this report

Name and signature of declared dam owner office holder(s) attesting to the accuracy of this report	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 
Position of the declared dam owner office holder(s) attesting to the accuracy of this report	Melinda Hunter Company Secretary
Name and signature of declared dam owner office holder(s) attesting to the accuracy of this report	
Position of the declared dam owner office holder(s) attesting to the accuracy of this report	John Fitzgerald Director