



# Dam Safety Management System Guideline

OCTOBER 2021

Section 2 Template is available free for members and non-members in Microsoft Word, to allow you to generate your own document. Download from [www.waterdirectorater.asn.au](http://www.waterdirectorater.asn.au) or contact [info@waterdirectorater.asn.au](mailto:info@waterdirectorater.asn.au) for a copy.

SECTION 1

**OVERVIEW AND  
GUIDANCE  
ON PREPARING  
A DSMS**

## DISCLAIMER

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### Version and Document Control

Version No.	Revision Description	Prepared/Revised By	Reviewed By	Approved By	Revision Date
1	Original	D McGregor	B. Guiney		Oct 2021

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### Acknowledgement

This Guideline has been prepared in consultation with Dams Safety NSW and the NSW Department of Planning Industry and Environment.

## HOW TO USE THIS DOCUMENT

Before referring to the Guideline, familiarise yourself with the Dams Safety Regulation (2019) which has been made under the *Dams Safety Act (2015)* which can be sourced at <https://www.legislation.nsw.gov.au/view/pdf/asmade/sl-2019-506>

You should also be familiar with ISO 55001 (Asset Management Standard). Relevant elements of ISO 55001 are included in tabular form in subsection 14 of Section 3 Template.

The Guidelines primarily comprise a Template to assist LWUs/Councils in developing their own Dam Safety Management System (DSMS) and a **Sample** DSMS Manual which is based on information provided by Dam Safety NSW.

**The Template (in Section 2) is available free as a standalone Word Document for ease of use. This can be downloaded from the Water Directorate website: [www.waterdirectorate.asn.au](http://www.waterdirectorate.asn.au)**

There are shaded areas throughout the document to assist users. These are:

- **Grey shading with red font** = reference clauses of the Dams Safety Regulation (2019) and clauses of the Global Asset Management Standard ISO 55001 (*'Reg.'* = *Dam Safety Regulation*; *'Std'* = *ISO 55001*)
- **Grey shading with blue font** = information to be inserted in the DSMS you create.

## Overview and Guidance on Preparing a DSMS

### GENERAL

This document is a dam safety management system (DSMS) Guideline and Template for Local Water Utilities (LWUs) who operate a declared dam(s) with a consequence category of 'Significant'. It is a requirement of the Dam Safety Regulation 2019 that owners of declared dams establish and implement a DSMS.

This document is presented in three sections:

1. Overview and guidance on preparing a dam safety management system (DSMS)
2. A blank 'template' DSMS for populating by the dam owner and customising to their local context. Section 3 is also available in Microsoft Word format for this purpose
3. A 'worked example' based on a hypothetical dam owner, Smith's Nursery.

Clause 13 (2)(b) of the Regulation stipulates that the DSMS document must:

- Deal with the safety matters that are identified in the Regulation.
- Contain a level of detail that is appropriate to the dam, having regard to (i) the nature, complexity and location of the dam, and (ii) the risks associated with the dam.
- Be readily understandable to the persons who use the manual.

Reference should be made to the *Dam Safety Act, 2015* and the *Dam Safety Regulation, 2019*.

The Regulation also requires the DSMS to be compliant with the Global Asset Management Standard, AS ISO 55001 (**'the Asset Management Standard'**).

Councils and Local Water Utilities (LWUs) are legally bound under the *Dams Safety Act 2015* (**'the Act'**) to meet the safety requirements that are outlined in the *Dam Safety Regulation 2019* (**'the Regulation'**).

Councils and Local Water Utilities must commit to implementing and continuously improving effective systems and procedures to meet the requirements of the Regulation.

In addition, Councils and Local Water Utilities shall incorporate this policy and its practical outworking within the organisation's business plan. The business plan will also acknowledge that a failure of the dam would involve potentially significant legal, commercial and reputational consequences.

## DAM SAFETY MANAGEMENT OBJECTIVES

**(Reg: Clauses 12, 13 and 14; Std: Clauses 4.1, 5.1, and 6.2.1)**

Dam safety management objectives shall be based on the Council's/LWU's dam safety policy and relevant parts of its business plan. As such, the objectives must meet the requirements of the Regulation. The objectives should also align with the aspects of the business plan that describe (or relate to) the dam's fundamental importance to the water supply provided to the Council's/LWU's customers.

The objectives shall be refined and finalised after feedback from the consulting engineer for the dam and a management systems auditor.

Council/LWU will review these objectives—and will circulate them to the individuals identified in Section 3: subsection 2.5 and 4.3 (or similarly qualified experts)—every three years as part of its dam safety management review.

The primary goal of dam safety management is to meet the requirements of the Regulation, as stated in the policy. As such, each of the objectives is to be formulated, and pursued, with reference to the Regulation.

The dam safety management objectives, are to:

- Identify, manage and document dam risks.
- Engage suitably competent persons to undertake dam safety related tasks.
- Report to the Regulator any incidents or significant modifications which may have material impact on the dam's safety.
- Establish and maintain a DSMS, including the plans, records and other documentation required.
- Ensure completion of all required reviews relating to the dam and the other DSMS elements within the mandated timeframes.

The DSMS shall incorporate the following elements:

- Physical aspects of the dam.
- Documents and records related to dam safety.
- Roles and functions related to dam safety (for example, a manager whose function is to conduct visual inspections of the dam).

See Figure 1 below and **(Regulation: Clause 13; Std: Clauses 4.3, 4.4 and 6.2.2)**

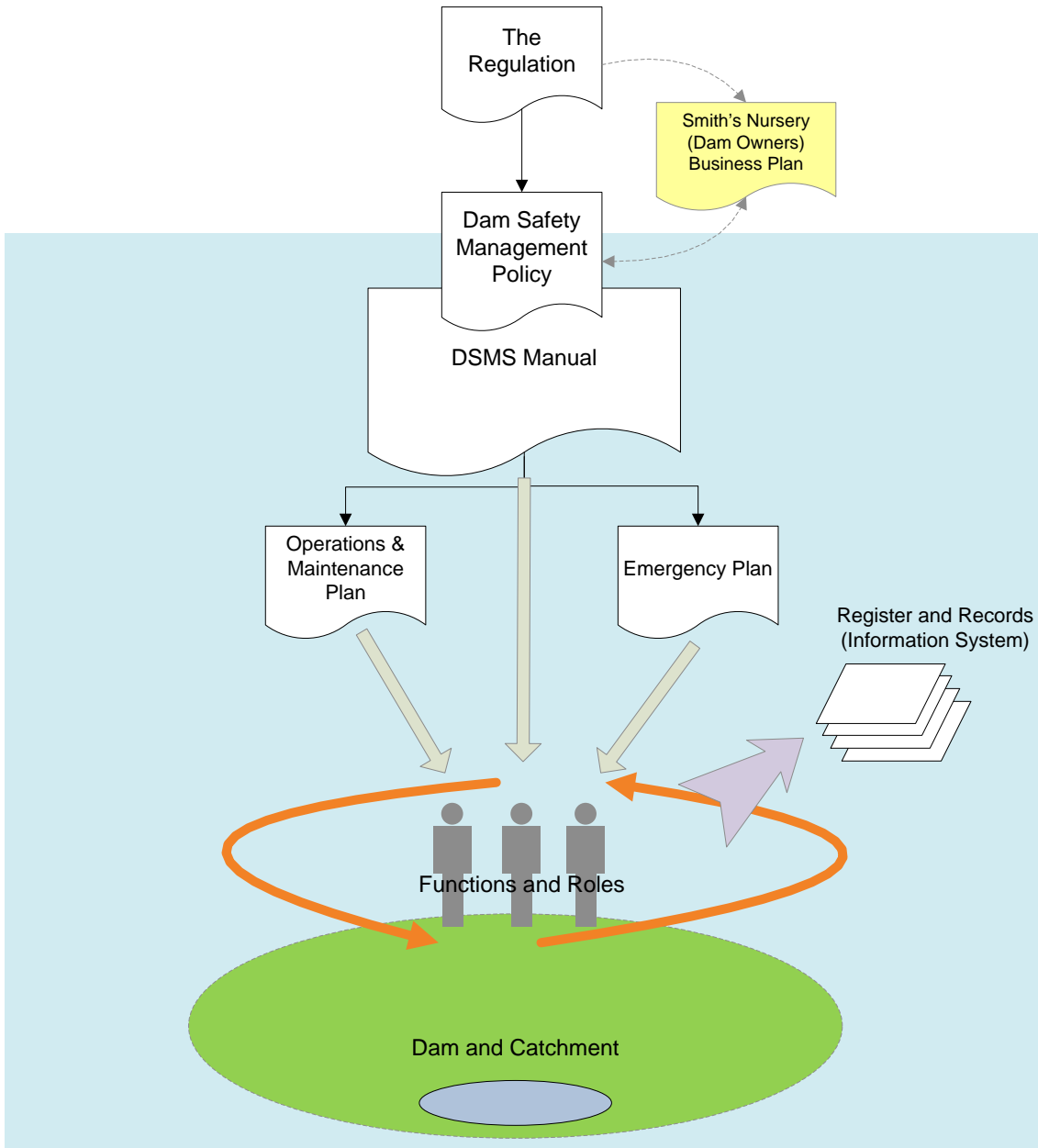


Figure 1: Dam Safety Management System, in-scope elements



SAMPLE DECLARATION FOR GM/CEO

This declaration needs to be customised for your LWU/Council and signed by the CEO/  
General Manager, for inclusion at the start of your DSMS.

**DAM SAFETY MANAGEMENT POLICY**

**(Std: Clauses 4.1, 4.2, 5.1, 5.2, 6.2.2, 7.1 and 8.1)**

Given the existence of a declared dam on its property, (Insert Council/LWU Name) is legally bound under the *Dams Safety Act 2015* (**‘the Act’**) to meet the safety requirements that are outlined in the Dam Safety Regulation 2019 (**‘the Regulation’**).

(Insert Council/LWU Name) is therefore committed to implementing and continuously improving effective systems and procedures to meet the requirements of the Regulation.

In addition, (Insert Council/LWU Name) will incorporate this policy and its practical outworking within the company business plan. The business plan will also acknowledge that a failure of the dam would involve potentially significant legal, commercial, and reputational consequences.

Signed: ..... (CEO/General Manager, Insert LWU)

Date: .....

SECTION 2

**DAM SAFETY  
MANAGEMENT  
SYSTEM  
TEMPLATE**

## TEMPLATE TO GENERATE DSMS MANUAL

NOTE: This template is available to Local Water Utilities that are members of the Water Directorate as a Word Document for ease of use. This is supplied in an accompanying document.

For typical responses, refer to the following **Section 3: Sample DSMS Manual**. Note throughout the Template 'Reg' refers to clauses in the Dam Safety Regulation and 'Std' refers to clauses in ISO 55001.

<b>1. INTRODUCTION</b>	<b>(Refer Std: Clauses 4.2, 4.4, 5.1 and 8.1)</b>
Water Utility/Council name	Insert your details throughout the template See 1 in Section 3 <b>Sample DSMS Manual</b> , for an example of wording
DSMS reference (Title, date, location)	
Acknowledgement that you are following the Global Asset Management Standard, AS ISO 55001 (' <b>the Asset Management Standard</b> ').	

<b>2. THE DAM &amp; ITS CONTEXT</b>	<b>(Refer Std: Clauses 4.1 and 4.2)</b>
<b>2.1 DAM CHARACTERISTICS</b>	See 2.1 in Section 3 <b>Sample DSMS Manual</b> for an example of wording
Name	
Location	
River/stream	
Owner	
Dam catchment	
Wall height:	
Storage volume:	
Material stored:	
Purpose:	
Type:	
Overtopping/overflow protection:	
Engineering/construction:	
<b>Consequence categories:</b> Sunny day consequence category Flood consequence category Note: Categories determined by Consulting Dams Engineer (see Section D below), as per Clauses 6 and 7 of Regulation.	Insert likely consequences (refer Section 3 for typical wording)  Insert likely consequences (refer to Section 3 for typical wording)  Insert Name of Consulting Dams Engineer

<b>2.2 HISTORY AND OWNERSHIP</b>	<p><b>(Std: Clause 8.2)</b></p> <p>Insert details See 2.2 in Section 3 <b>Sample DSMS Manual</b>, for an example of wording</p>
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<b>2.3 DAM'S STATUS</b>	<p><b>(Std: Clause 8.2)</b></p> <p>See 2.3 in Section 3 <b>Sample DSMS Manual</b>, for an example of wording</p>
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<b>2.4 STAKEHOLDERS</b>	<p><b>(Reg: Clauses 12, 13 and 14; Std: Clauses 4.2 and 9.1)</b></p> <p>See 2.4 in Section 3 <b>Sample DSMS Manual</b> for an example of wording</p>				
Type of Stakeholder	Stakeholder name	Location/ position	Number of stake holders	Potential impact	Contact type, frequency
Insert Council/ LWU Owner	Employees	Onsite	Insert no.	Bodily harm, private property	Verbal, annual N/A
	Council/ LWU name	Onsite		Commercial	
Residential	Neighbours (smallholdings)	Downstream	Insert no.	Bodily harm, private property	Email, annual
Small businesses	List businesses affected	Downstream	Insert no.	Bodily harm, commercial	Email, annual
Organisations	Regulator	Offsite	1	Legal	As per regulation
	Insert any downstream users (for example irrigators)	Downstream	Insert no.	Environmental	Email, annual
	Insert Council/LWU name	Owner	Insert no.	Legal	Email, annual

<b>2.5 REGULATORY ENVIRONMENT</b>	<b>Required dam safety review actions (Std: Clauses 4.2, 7.5 and 9.1)</b> See 2.5 in Section 3 <b>Sample DSMS Manual</b> for an example of wording			
<b>Area</b>	<b>Scope</b>	<b>Frequency</b>	<b>When</b> (Insert appropriate dates)	<b>By Whom</b> (Insert appropriate names)
DSMS review	Cl.17 and ISO 55001 – Cl.9.3	Annually	in June	Management and key staff
OM Plan – update	Cl.9	5 years		Competent dams engineer
EM Plan – update contact details	Cl.10(5)	Annually	in June	Management
EM Plan – general update	Cl.9	5 years		Management
EM Plan – Emergency exercise	Cl.22 (theoretical only)	3 years		Management

<b>3. DAM SAFETY MANAGEMENT OBJECTIVES</b>	<b>(Reg: Clauses 12, 13 and 14; Std: Clauses 4.1, 5.1, and 6.2.1)</b> See 3 in Section 3 <b>Sample DSMS Manual</b> for an example of wording
	Insert objectives outlined in Section 1: General Information

<p><b>4. DSMS SCOPE</b></p>	<p><b>(Reg: Clause 13; Std: Clauses 4.3, 4.4 and 6.2.2)</b></p> <p>See 4 in Section 3 <b>Sample DSMS Manual</b> for an example of wording</p>
<p><b>4.1 CRITERIA</b></p>	<p>Insert criteria as outlined in Section 1: General Information</p> <p>See 4.1 in Section 3 <b>Sample DSMS Manual</b> for an example of wording</p>
<p><b>4.2 THE DAM &amp; ITS IMMEDIATE ENVIRONMENT</b></p>	<p>Insert details of key components, including dam wall (including geographic components); spillway; catchment area including any rivers and/or creeks</p> <p>See 4.2 in Section 3 <b>Sample DSMS Manual</b> for an example of wording</p>
<p><b>4.3 ROLES &amp; FUNCTIONS</b></p>	<p><b>(Std: Clauses 5.3, 6.2.2, 7.1 and 10.2)</b></p> <p>Certify that all the people in key roles understand their roles and functions</p> <p>See 4.3 in Section 3 <b>Sample DSMS Manual</b> for an example of wording</p>
<p><b>Owner Council/LWU</b> (Insert name)</p>	<ul style="list-style-type: none"> <li>- Ensure that Regulation followed</li> <li>- Provide necessary funds/resources</li> <li>- Ensure dam manager has adequate DSMS skill set</li> <li>- Overall responsibility for O&amp;M Manual and Emergency Manual</li> <li>- Liaise with the Regulator</li> </ul>
<p><b>Manager</b> (Insert name)</p>	<ul style="list-style-type: none"> <li>- Enact O&amp;M manual</li> <li>- Conduct monthly visual inspections of dam</li> <li>- Ensure staff know/practice incident reporting requirements</li> <li>- Notify owner immediately of any significant problems/issues</li> <li>- Oversee dam maintenance</li> <li>- Provide access to inspectors/contractors</li> </ul>
<p><b>Consulting Dams Engineer</b> (Insert Name)</p>	<ul style="list-style-type: none"> <li>- Conduct inspections of dam as requested</li> <li>- Measure for significant changes/movement of structure</li> <li>- Report on an exception basis</li> </ul>
<p><b>Hired Experts</b> (Insert Names)</p>	<ul style="list-style-type: none"> <li>- Deliver reports as requested/specified by the LWU</li> <li>- Write O&amp;M and Emergency Manual</li> </ul>

<b>4.4 INFORMATION SYSTEMS</b>	<b>(Std: Clauses 6.1, 7.5, 7.6.1, 7.6.2, 7.6.3, 8.1 and 9.1)</b>
<p>Insert details of organisation’s information systems</p> <p>See 4.4 in Section 3 <b>Sample DSMS Manual</b> for an example of wording</p>	

<b>4.5 DOCUMENTARY ELEMENTS</b>	<b>(Std: Clauses 5.1 and 7.6.1)</b> Insert details of documents and procedures outlined below See 4.5 in Section 3 <b>Sample DSMS Manual</b> for an example of wording
<b>Documentary Element</b>	<b>Detail &amp; Regulatory Connection</b>
- Policy	Statement of practical commitment to meet requirements of Regulation
- O&M Plan	Record of O&M procedures required to meet the Regulation
- Emergency Plan	Documented dam information/procedures re potential failure of the dam (see Clause 10 of the Regulation).
- DSMS Manual	Master document describing DSMS.  DSMS’ purpose is to meet the overarching aims of the Act (see Clause 3) and the specific requirements set out in the Regulation.

**5. RISK MANAGEMENT** (Reg: Clauses 13–15; Std: Clauses 4.1, 6.2.2 and 8.1)

Refer to 5 in Section 3 **Sample DSMS Manual** in for information required in the strategy with respect to risk management.

**6. INCIDENT REPORTING** (Reg: Clause 19; Std: Clauses 6.2.2 and 8.1)

Refer to 6 In Section 3 for information required in the strategy with respect to incident reporting.

**7. SAFETY REVIEW** (Reg: Clauses 13 and 20; Std: Clauses 6.1, 6.2.2, 8.1, 9.1 and 10.2)

Refer to 7 in Section 3 for information required in the strategy with respect to the requirements for safety review.

**8. NOTIFICATION OF CHANGES** (Reg: Clause 21; Std: Clauses 6.2.2, 8.1 and 8.2)

Refer to 8 in Section 3 for information required in the strategy with respect to the requirements for notification of changes.

**9. COMPLIANCE WITH THE ASSET MANAGEMENT STANDARD—ISO 55001** (Reg: Clause 13; Std: Clauses 5.1, 6.2.2 and 8.1)

Refer to 9 in Section 3 for information required in the strategy with respect to the requirements for compliance with asset management standard ISO 55001.

**10. RESOURCES FOR DSMS** (Reg: Clauses 9, 10, 12 and 13; Std: Clauses 5.1, 5.3, 6.1, 6.2.2, 7.1, 7.3 and 7.4)

Refer to 10 in Section 3 for information required in the strategy with respect to the requirements for compliance with resources.

**11. COMPETENCE** (Std: Clause 7.1 and 8.1)

Refer to 11 in Section 3 information required in the strategy with respect to the requirements for compliance with competence.

**12. OUTSOURCED ACTIVITIES** (Std: Clause 8.3)

Refer to 12 in Section 3 for information required in the strategy with respect to the requirements for compliance with outsourced activities.

**13. PERFORMANCE EVALUATION & IMPROVEMENT** (Std: Clauses 6.1, 6.2.2, 9.1, 10.1, 10.2 and 10.3)

Refer to 13 in Section 3 for information required in the strategy with respect to the requirements for compliance with performance evaluation and improvement.



14. INTERNAL AUDIT CHECKLIST			
14.1: ISO 55001 ADVICE & COMPLIANCE REQUIREMENTS ISO 55001 (Asset Management Standard) Compliance Map		Note: 14.1 outlines the Clauses in ISO 55001 that LWUs are required to comply with - and is a checklist. Please also refer to Section 3 <b>Sample DSMS Model</b> to review the Section numbers presented in Column 2 below.	
ISO 55001 REQUIREMENTS		DSMS MANUAL COVERAGE REFERENCES (numbers refer to both the Template and the Sample DSMS Manual)	COMMENT
4.1	<b>Context of the organisation</b> <i>Understanding the organisation and its context</i>	Section 2.1 Dam's characteristics Section 5 Risk Management, Section 3 DSM Objectives, Policy	
4.2	<b>Context of the organisation</b> <i>Understanding the needs and expectations of stakeholders</i>	Policy; Section 1 Introduction; Section 2.4 Stakeholders	This is primarily adherence to the Regulation.
4.3	<b>Context of the organisation</b> <i>Determining the scope of the asset management system</i>	Section 4 DSMS Scope	
4.4	<b>Context of the organisation</b> <i>Asset management system</i>	Section 1 Introduction; Section 4 DSMS Scope	
5.1	<b>Leadership</b> <i>Leadership and commitment</i>	Policy; Section 1 Introduction; Section 3.2 Objectives; Section 4.5 Documentary Elements, Section 5 Risk Management, Section 9 Compliance with AS ISO 55001; Section 10 Resources for DSMS; Section 13 Performance Evaluation and Improvement	The DSMS Manual is the SAMP.
5.2	<b>Leadership</b> <i>Policy</i>	Policy; Section 13.4 Review of Management System	
5.3	<b>Leadership</b> <i>Organizational responsibilities and authorities</i>	Section 10 Resources for DSMS; Section 4.3 Roles and Functions	

<b>6.1</b>	<b>Planning</b> <i>Actions to address risks and opportunities for the asset management system</i>	Section 4.4 Information Systems, Section 5 Risk Management, Section 6 Incident Reporting, Section 7 Safety Review, Section 10 Notification of changes, Section 13 Performance Evaluation and Improvement	
<b>6.2.1</b>	<b>Planning</b> <i>Asset management objectives and planning to achieve them - Asset Management Objectives</i>	Section 3 DSM Objectives, Section 13.4 Review of Management System	
<b>6.2.2</b>	<b>Planning</b> <i>Asset management objectives and planning to achieve them - Planning for asset management</i>	Comprehensive relevance throughout most of the DSMS Manual	Refer also to the Emergency Plan and Operations and Maintenance Plan which are the Asset Management Plans.
<b>7.1</b>	<b>Support</b> <i>Resources</i>	Policy; Section 4.3 Roles and Functions, Section 10 Resources for DSMS	Policy commitment translates to commitment that the resources will be provided.
<b>7.2</b>	<b>Support</b> <i>Competence</i>	Section 11 Competence, Section 13.4 Review of Management System.	
<b>7.3</b>	<b>Support</b> <i>Awareness</i>	Section 10 Resources for DSMS	
<b>7.4</b>	<b>Support</b> <i>Communication</i>	Section 10 Resources for DSMS	
<b>7.5</b>	<b>Support</b> <i>Information Requirements</i>	Section 2.5 Regulatory environment - required dam safety review actions, Section 4.4 Information Systems	Primarily as required by the Regulation; then as deemed suitable for recording in the Excel register. Technical information management detail stated in the Operations and Maintenance Plan. Consideration of information requirements is evident throughout DSMS Manual and Operations and Maintenance Plan.
<b>7.6.1</b>	<b>Support</b> <i>Documented Information - General</i>	Policy; Section 4.4 Information Systems, Section 4.5 Documentary Elements	
<b>7.6.2</b>	<b>Support</b> <i>Documented Information - Creating and Updating</i>	N/A	Formal procedures not warranted due to size of the organisation.
<b>7.6.3</b>	<b>Support</b> <i>Documented Information - Control of Documented Information</i>	Section 4.4 Information Systems, Section 13.4 Review of Management System	
<b>8.1</b>	<b>Operation</b> <i>Operational planning and control</i>	Comprehensive relevance throughout most of the DSMS Manual	Refer also to the Emergency Plan and Operations and Maintenance Plan.

<b>8.2</b>	<b>Operation</b> <i>Management of change</i>	Section 2.2 Dam's History, Section 2.3 Dam's status, Section 5 Risk Management, Section 7 Safety Review, Section 8 Notification of changes, Section 13.4 Management Review	
<b>8.3</b>	<b>Operation</b> <i>Outsourcing of asset management activities</i>	Section 12 Outsourced activities, Section 13.4 Review of Management System	Refer also to the Emergency Plan and Operations and Maintenance Plan for aspects such as Competence, Awareness and Documentation and control of the activities.
<b>9.1</b>	<b>Performance evaluation</b> <i>Monitoring, measurement, analysis and evaluation</i>	Section 2.4 Stakeholders, Section 2.5 Regulatory environment - required dam safety review actions; Section 4.4 Information Systems, Section 7 Safety Review; Section 13 Performance Evaluation and Improvement	Refer also to the Emergency Plan and Operations and Maintenance Plan.
<b>9.2</b>	<b>Performance evaluation</b> <i>Internal audit</i>	Section 13.3 Internal audit	
<b>9.3</b>	<b>Performance evaluation</b> <i>Management review</i>	Section 13.4 Review of Management System	Prescribed asset management requirements exist via the Regulation.
<b>10.1</b>	<b>Improvement</b> <i>Nonconformity and corrective action</i>	Section 13 Performance Evaluation and Improvement	
<b>10.2</b>	<b>Improvement</b> <i>Preventive action</i>	Section 7 Safety Review; Section 4.3 Roles and Functions, Section 13 Performance Evaluation and Improvement	
<b>10.3</b>	<b>Improvement</b> <i>Continual Improvement</i>	Section 13 Performance Evaluation and Improvement, Policy	

<b>14.2.1 DAM SAFETY INSPECTION AND REVIEW AUDIT CHECKLIST</b>	Note: Subsections 14.2.1 and 14.2.2 are presented in the formats suggested for inclusion in your DSMS.		
<b>Audit Question</b>	<b>Audit Findings</b> C- Compliant OFI - Opportunity for improvement, CAR – Corrective Action Required, NC- Non-conformity	<b>Audit Evidence – reference to documentation</b>	<b>Opportunity for Improvement - Suggestions</b>
Are competence requirements defined?		(Insert relevant information throughout)	
Is the person aware of competence requirements?			
Is person aware of their responsibility?			
Are inspection records retained?			
Is the current inspection checklist being used?			
Is person aware of specific requirements as detailed in the Operations and Maintenance Plan?			
Is person aware of what action to take if a problem is identified?			
Is person aware of what action to take if a questionable trend is noted?			

<b>14.2.2 DAM SAFETY MANAGEMENT SYSTEM AUDIT CHECKLIST</b>			
<b>Audit Question</b>	<b>Audit Findings</b> C- Compliant OFI - Opportunity for improvement, CAR – Corrective Action Required, NC- Non-conformity	<b>Audit Evidence – reference to documentation</b>	<b>Opportunity for Improvement - Suggestions</b>
Are key documents and records known and accessible?			
Has the Management System Review been carried out as planned?			
Are actions from the Management System Review being addressed in a timely and effective manner?			
Are records with the Excel Workbook up to date?			
Are competency requirements up to date?			
Is the stakeholder table reflective of current circumstances?			
Are identified risks being mitigated?			
If any incidents have occurred, were they reported in writing to the Regulator within 72 hours?			

<b>15. DSMS MANAGEMENT REVIEW MINUTES</b>	<p>(Insert relevant information)</p> <p>Refer to 15 in Section 3 for information required in the strategy with respect to the requirements for Management Review Minutes.</p>
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(Insert LWU) **DSMS Review Minutes** (Insert date)

**Reg: Clause 19; Std: ISO 55001**

**1 Status of actions from previous meeting**

Review of actions arising from meeting of (Insert date)
Review of minutes from meeting of (Insert date)

**2 Changes in external and internal environment/issues** (Insert details below)

Discussion			
Conclusion			
Action items	<input type="checkbox"/> None	Person Responsible	Deadline

**3 Information on the performance and effectiveness of the DSMS**

Discussion			
Conclusion			
<b>Action items</b>	<input type="checkbox"/> <b>None</b>	<b>Person Responsible</b>	<b>Deadline</b>

**4 Other actions required by the Asset Management Standard (AS ISO 55001)**

Discussion			
Conclusion			
<b>Action items</b>	<input type="checkbox"/> <b>None</b>	<b>Person Responsible</b>	<b>Deadline</b>

**NOTE:**

On the following page is a sample Declaration to be signed by the General Manger/CEO and included at the start of your DSMS.

## DAM SAFETY MANAGEMENT POLICY

**(Std: Clauses 4.1, 4.2, 5.1, 5.2, 6.2.2, 7.1 and 8.1)**

Given the existence of a declared dam on its property, **(Insert Council/LWU Name)** is legally bound under the *Dams Safety Act 2015* (**'the Act'**) to meet the safety requirements that are outlined in the Dam Safety Regulation 2019 (**'the Regulation'**).

**(Insert Council/LWU Name)** is therefore committed to implementing and continuously improving effective systems and procedures to meet the requirements of the Regulation.

In addition, **(Insert Council/LWU Name)** will incorporate this policy and its practical outworking within the company business plan. The business plan will also acknowledge that a failure of the dam would involve potentially significant legal, commercial, and reputational consequences.

Signed: ..... **(CEO/General Manager, Insert LWU)**

Date: .....



SECTION 3  
**SAMPLE  
DSMS  
MANUAL**

## SAMPLE DSMS MANUAL

### PRELIMINARY DRAFT – DSMS MANUAL – SAMPLE – SIMPLE DAM

*Note: This sample document contains additional items that are not found in the Template provided in Section 3.*

#### Sample case: Smith’s Nursery Pty Ltd

##### ABOUT THIS MANUAL

This document is a sample dam safety management system (DSMS) manual for a small business (Smith’s Nursery Pty Ltd) that is operating one declared dam with a consequence category of ‘Significant’. It is a requirement of the Dam Safety Regulation 2019 that owners of declared dams establish and implement a DSMS.

It is recognised that small businesses may face challenges doing so due to:

- Minimal resources (staff and/or finances).
- Difficulty interpreting and applying regulatory requirements.

The Regulation has been designed to be flexible enough to allow small businesses to create a DSMS that takes account of such limitations, while still meeting safety requirements. Clause 13 (2)(b) of the Regulation stipulates that the DSMS document must:

- Deal with the safety matters that are identified in the Regulation.
- Contain a level of detail that is appropriate to the dam, having regard to (i) the nature, complexity and location of the dam, and (ii) the risks associated with the dam.
- Be readily understandable to the persons who use the manual.

The example dam used in the following manual is a basic earth embankment dam. Likewise, the example business, ‘Smith’s Nursery’, is small operation in which a few people are required to undertake a wide variety of tasks—and in which recordkeeping and communications between staff members are straightforward and direct. Therefore, the simplicity of the dam and the business is reflected in the relatively simple nature of the sample DSMS manual. At the same time, the processes outlined in the manual are adequate to cover the requirements of the Regulation and the dam’s ‘Significant’ consequence category.

##### Note:

Larger organisations, operating more critical dams, may also benefit from the sample manual by adapting some of it for their own needs. However, caution should be exercised, given that not all features of the manual will be appropriate for entities responsible for ‘High’ or ‘Extreme’ consequence dams.

## DAM SAFETY MANAGEMENT POLICY

(Std: Clauses 4.1, 4.2, 5.1, 5.2, 6.2.2, 7.1 and 8.1)

Given the existence of a declared dam on its property, Smith’s Nursery Pty Ltd is legally bound under the Dams Safety Act 2015 (**‘the Act’**) to meet the safety requirements that are outlined in the Dam Safety Regulation 2019 (**‘the Regulation’**).

Smith’s Nursery is therefore committed to implementing and continuously improving effective systems and procedures to meet the requirements of the Regulation.

In addition, Smith’s Nursery will incorporate this policy and its practical outworking within the company business plan. The business plan will also acknowledge that a failure of the dam would involve potentially significant legal, commercial and reputational consequences.

Signed: ..... (Owner, Smith’s Nursery Pty Ltd)

Date: .....

## 1. INTRODUCTION (Std: Clauses 4.2, 4.4, 5.1 and 8.1)

The property of Smith's Nursery Pty Ltd includes a dam (**'the dam'**) that is a declared dam in terms of the Act.

In keeping with Clause 12 (4)(b) of Regulation, Smith's Nursery has established and implemented a Dam Safety Management System (**'DSMS'**).

The Regulation also requires the DSMS to be compliant with the global asset management standard, AS ISO 55001 (**'the Asset Management Standard'**).

## 2. THE DAM AND ITS CONTEXT (Std: Clauses 4.1 and 4.2)

### 2.1 The Dam's Characteristics (Std: Clauses 4.1)

Dam specification	Detail
Name	Dam 1
Location	Upper Woodglen Heights (Latitude 151, Longitude 33, Elevation: approx. 260m).
River/stream	Unnamed creek.
Owner	John Smith, 2 Woodglen Rd, Upper Woodglen Heights.
Dam catchment	1.3km <sup>2</sup>
Wall height	5m
Storage volume	22ML
Material stored	Rain/reclaimed water.
Purpose	Nursery irrigation
Type	Earth fill (embankment) dam.
Overtopping/overflow protection	Rock-lined spillway, designed to withstand a 1 in 100-year flood.
Engineering/construction	Designed by Fred Jones, built in 1992 by Mike White.
Consequence categories	Sunny day consequence category—low (dam break will not reach houses on adjoining property)  Flood consequence category—significant (dam break may affect adjoining property during flood)  <u>Note</u> : consequence categories determined by Max Redmond, consulting dams engineer (see Section D), as per Clauses 6 and 7 of Regulation.

**2.2 History and Ownership (Std: Clause 8.2)**

The dam was originally used for crop irrigation and livestock purposes. In 1998, the area was subdivided and the current 20 acre property, including the dam, was purchased John Smith, who converted it to nursery use.

No modifications to the dam have been made by Smith.

**2.3 Dam's Status (Std: Clause 8.2)**

Smith's Nursery has no plans for structural changes to the dam and intends to continue using it in the current manner for the foreseeable future.

**2.4 Stakeholders (Reg: Clauses 12, 13 and 14; Std: Clauses 4.2 and 9.1)**

Group/type	Identity	Location	Number	Potential impact	Contact type, frequency
Smith's Nursery	Employees, family	Onsite	8	Bodily harm, private property	Verbal, annual N/A
	Nursery business	Onsite	1	Commercial	
Residential	Neighbours (smallholdings)	Downstream	10	Bodily harm, private property	Email, annual
Small businesses	Woodglen Village	Downstream	5	Bodily harm, commercial	Email, annual
Organisations	Regulator	Offsite	1	Legal	As per regulation
	Woodglen Bird Club	Downstream	1	Environmental	Email, annual
	Woodglen National Park	Downstream		Environmental	Email, annual
	Council	Woodglen District	1	Legal	Email, annual

**2.5 Regulatory environment—required dam safety review actions (Std: Clauses 4.2, 7.5 and 9.1)**

Area	Scope	Frequency	When	By Whom
DSMS review	Cl.17 and ISO55001 – Cl.9.3	Annually	in June	Management and key staff
OM Plan – update	Cl.9	5 years	2024	Competent dams engineer
EM Plan – update contact details	Cl.10(5)	Annually	in June	Management
EM Plan – general update	Cl.9	5 years	2025	Management
EM Plan – Emergency exercise	Cl.22 (theoretical only)	3 years	2023	Management
Risk assessment report	Cl.15	5 years	2024	Competent dams engineer
Internal audit	ISO55001 – Cl.9.2	Biannual	Biannual	Management
Safety Review	Cl.20	15 years or earlier, refer Cl.20	2022	Competent dams engineer
Consequence category assessment	Cl.7	15 years or earlier, refer Cl.7	2027	Competent dams engineer

**3. DAM SAFETY MANAGEMENT OBJECTIVES (Reg: Clauses 12, 13 and 14; Std: Clauses 4.1, 5.1, and 6.2.1)****3.1 The Policy and Dam Safety Management Objectives**

Smith Nursery's dam safety management objectives are based on its dam safety policy and relevant parts of its company business plan. As such, the objectives meet the requirements of the Regulation. The objectives also align with the aspects of the business plan that describe (or relate to) the dam's fundamental importance to the nursery business.

The objectives, as originally drafted, were refined and finalised after feedback from the consulting engineer for the dam and a management systems auditor.

Smith's Nursery will review the objectives—and will circulate them to the three individuals identified above (or similarly qualified experts)—every three years as part of its dam safety management review.

**3.2 Objectives**

The primary goal of Smith's Nursery's dam safety management is to meet the requirements of the Regulation, as stated in the policy. As such, each of the objectives has been formulated, and will be pursued, with reference to the Regulation.

Our dam safety management objectives, are to:

- Identify, manage and document dam risks.
- Engage suitably competent persons to undertake dam safety related tasks.

- Report to the Regulator any incidents or significant modifications which may have material impact on the dam's safety.
- Establish and maintain a DSMS, including the plans, records and other documentation required.

Ensure completion of all required reviews relating to the dam and the other DSMS elements within the mandated timeframes.

**4. DSMS SCOPE** (Reg: Clause 13; Std: Clauses 4.3, 4.4 and 6.2.2)

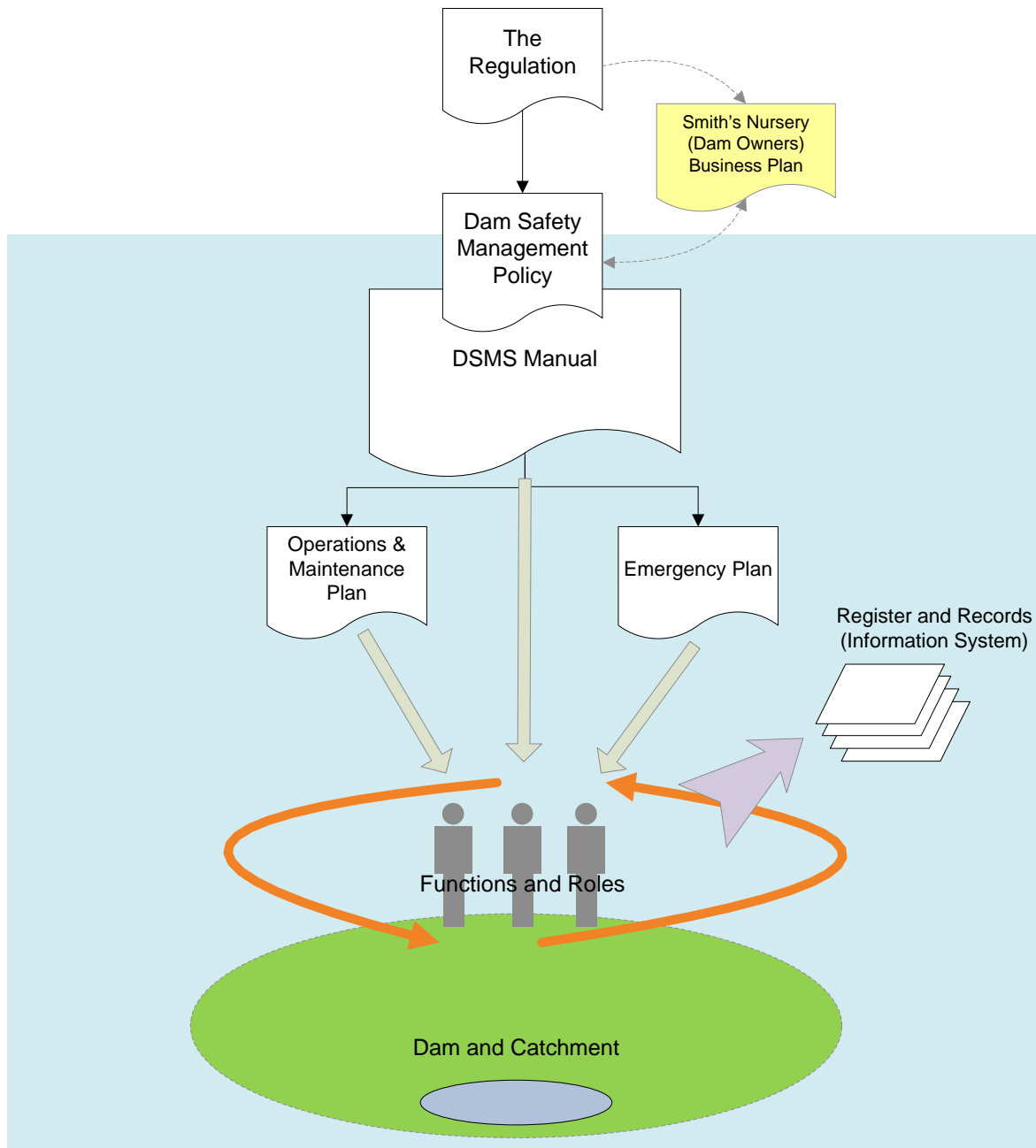


Figure 1 – Smith's Nursery Dam Safety Management System, in-scope elements

**4.1 Criteria**

The DSMS incorporates the following elements:

- Physical aspects of the dam.
- Documents and records related to dam safety.
- Roles and functions related to dam safety (for example, a manager whose function is to conduct visual inspections of the dam).



## 4.2 The Physical Asset (the Dam) and its Immediate Environment

Key components of the asset/dam include the:

- Dam wall (geographic coordinates—latitude 151, longitude 33).
- Spillway.
- Catchment area, including the creek (1.3km<sup>2</sup>, incorporating the elevated portion of the Smith's Nursery property).

## 4.3 Roles and Functions (Std: Clauses 5.3, 6.2.2, 7.1 and 10.2)

Role	Function
Nursery owner (John Smith)	<ul style="list-style-type: none"> <li>• Ensure that Regulation is followed</li> <li>• Provide necessary funds/resources</li> <li>• Ensure nursery manager has adequate DSMS skill set</li> <li>• Overall responsibility for O&amp;M Manual and Emergency Manual</li> <li>• Liaise with the Regulator</li> </ul>
Nursery Manager (Steve Kerrigan)	<ul style="list-style-type: none"> <li>• Enact O&amp;M manual</li> <li>• Conduct monthly visual inspections of dam</li> <li>• Ensure staff know/practice incident reporting requirements</li> <li>• Notify owner immediately of any significant problems/issues</li> <li>• Oversee dam maintenance</li> <li>• Provide access to inspectors/contractors</li> </ul>
Consulting Dams Engineer (Max Redmond)	<ul style="list-style-type: none"> <li>• Conduct inspections of dam as requested</li> <li>• Measure for significant changes/movement of structure</li> <li>• Report on an exceptions basis</li> </ul>
Hired experts	<ul style="list-style-type: none"> <li>• Deliver reports as requested/specified by owner</li> <li>• Write O&amp;M and Emergency Manual</li> </ul>

## 4.4 Information Systems (Std: Clauses 6.1, 7.5, 7.6.1, 7.6.2, 7.6.3, 8.1 and 9.1)

Smith's Nursery maintains all records required for the DSMS, including all actions arising and their tracking, within an Excel Workbook named 'Smith's Nursery Declared Dam Management' ('**the Excel Workbook**'). This Workbook is stored securely in the cloud on its Microsoft OneDrive, with a copy emailed to the owner and the nursery manager as a backup at the end of each month.

Any email correspondence relating to dam management is copied (Cc'd) to the email address [smiths-nursery-dam@outlook.com](mailto:smiths-nursery-dam@outlook.com). This practice ensures that a record of communication can be readily accessed by the owner, nursery manager or consultant engineer Max Redmond, who has web-based access to the email account as outlined in his contract with Smith's Nursery.

Manuals, plans and procedures, including those required under the Regulation such as this DSMS Manual are stored securely in the cloud on Smith's Nursery's Microsoft OneDrive and the version number is included in the file name.

#### 4.5 Documentary Elements (Std: Clauses 5.1 and 7.6.1)

Documentary element	Detail & regulatory connection
Policy	Statement of practical commitment to meet requirements of Regulation
O&M Plan	Record of O&M procedures required to meet the Regulation
Emergency Plan	Documented dam information/procedures re potential failure of the dam (see Clause 10 of the Regulation).
DSMS Manual	Master document describing Smith's Nursery DSMS.  DSMS purpose is to meet the overarching aims of the Act (see Clause 3) and the specific requirements set out in the Regulation.

#### 5. RISK MANAGEMENT (Reg: Clauses 13–15; Std: Clauses 4.1, 6.2.2 and 8.1)

Following is a summary of the risk management procedures:

- Smith's Nursery reviews dam safety risks at least once a year, in July, and more frequently if there has been a significant change to the dam's operating environment.
- Smith's Nursery records hazard identification, risk assessment and risk treatment in its risk register. The register consists of a worksheet labelled 'Risks' within the Excel Workbook.
- Every five years, or if a major change to the dam is proposed, Smith's Nursery produces a written report on all foreseeable risks to the dam.

#### 6. INCIDENT REPORTING (Reg: Clause 19; Std: Clauses 6.2.2 and 8.1)

Below is a summary of incident reporting requirements. See Clause 19 of Regulation for full/definitive description.

Smith's Nursery will telephone the Regulator as soon as possible if any of the following incidents or situations occur in relation to the dam:

- Failure of the dam (or spillway).
- Likely failure of the dam.
- Death or serious injury to a person.
- Significant damage to property or the environment.
- An incident that is reasonably likely to cause concern to a member of the public (this includes incidents that could become a subject of discussion among the public or could be reported by the public to authorities).

- A security incident (trespass, sabotage, vandalism, etc) that has, or could, affect the safety of the dam.
- A significant failure or shortcoming of the DSMS that could have caused death, injury, property/environmental damage.

Further action: after contacting the Regulator by phone, Smith's Nursery will follow up with a written report of the incident within three days (72 hours).

Smith's Nursery records all incidents and related details in its dam management Excel Workbook. Both aspects are entered on a worksheet labelled 'Incidents' in the workbook.

## **7. SAFETY REVIEW** (Reg: Clauses 13 and 20; Std: Clauses 6.1, 6.2.2, 8.1, 9.1 and 10.2)

Smith's Nursery will initiate a safety review for the following reasons:

- Mandatory schedule (every 15 years).
- Significant change to the dam.
- Instruction from the Regulator.

Smith's Nursery will check the competence of its safety reviewer by sighting evidence of his/her experience and qualifications, and by verifying those through an independent industry body or association approved by the Regulator.

Smith's Nursery will sign a contract with the safety reviewer prior to the review in order to ensure that the reviewer will provide an impartial opinion. The Nursery currently maintains such a contract with Max Redmonds, a qualified dams engineer ([www.redmonds-engineering.com.au/about-us](http://www.redmonds-engineering.com.au/about-us), [max@redmonds-engineering.com.au](mailto:max@redmonds-engineering.com.au), Ph. 0999 999 777).

## **8. NOTIFICATION OF CHANGES** (Reg: Clause 21; Std: Clauses 6.2.2, 8.1 and 8.2)

Smith's Nursery will notify Dams Safety NSW in writing of any plans to change the dam's structure—including the configuration of its spillway/overflow features—if such changes may affect the safety of the dam.

Any such notifications will be recorded in a worksheet labelled 'Notifications', which is part of the Excel Workbook.

## **9. COMPLIANCE WITH THE ASSET MANAGEMENT STANDARD—AS ISO 55001** (Reg: Clause 13; Std: Clauses 5.1, 6.2.2 and 8.1)

Smith's Nursery will meet the requirements of the Asset Management Standard by:

- Following guidance from the Regulator.
- Implementing the DSMS as described in this manual.
- Maintaining the DSMS.
- Creating and maintaining this DSMS Manual.

Subsection 14 includes detailed mapping of the DSMS manual against the AS ISO 55001 requirements.

**10. RESOURCES FOR DSMS** (Reg: Clauses 9, 10, 12 and 13; Std: Clauses 5.1, 5.3, 6.1, 6.2.2, 7.1, 7.3 and 7.4)

The owner will take responsibility for:

- Managing and maintaining the DSMS.
- Ensuring that relevant parties are suitably aware of the DSMS and their role in it.
- Determining and enacting internal and external communications about the DSMS and all elements within its scope as is required by the Regulation as a minimum and otherwise as is appropriate.

Smith's Nursery engaged a specialist technical writer to develop the O&M Plan and the Emergency Plan in conjunction with Max Redmond. The plans will be reviewed by Redmond if the owner requests it, and Redmond will be the first point of contact for any technical advice.

Smith's Nursery has a line item in its annual budget to cover expenses associated with managing and maintaining the DSMS.

**11. COMPETENCE** (Std: Clause 7.1 and 8.1)

SN identifies each role of people who work on the dam as unskilled, semi-skilled, skilled and specialist. The table below shows the competency requirements for each level.

Level of Role	Example	Requirement
Unskilled	General staff/ground maintenance person	Site safety induction (SSI) only
Semi-skilled	Owner/Manager with specific DSMS role, including routine visual inspections of dam	SSI + knowledge of 'Dams Common Problems' document by Regulator
Skilled	Backhoe operator	SSI + licence
Specialist	Dams Engineer	SSI + Professional affiliation + evidence of experience + contact a referee

The details of people's competencies will be recorded in a worksheet labelled 'Competencies', which is part of the Excel Workbook.

**12. OUTSOURCED ACTIVITY (Std: Clause 8.3)**

Smith's Nursery monitors and maintains oversight of contractors who work on/near the dam, as follows:

Service provider	Role	Contract/Documentation
M. Redmond	Dams engineer	Contract and Confidentiality agreement stored on OneDrive
Jim's Mowing	Grounds maintenance	T&C on company website

Outsourcing records are kept on a worksheet named 'Outsourcing' in the Excel Workbook.

**13. PERFORMANCE EVALUATION AND IMPROVEMENT (Std: Clauses 6.1, 6.2.2, 9.1, 10.1, 10.2 and 10.3)****13.1 Overview**

The sub-sections below cover performance evaluation and improvement for both the DSMS and the dam.

**13.2 Monitoring, Evaluation, and Related Record-keeping (Reg: Clauses 9, 20 and 27; Std: Clause 9.1)**

Task	Frequency	Person responsible	Documentation
Routine maintenance (clearing of spillway, vegetation, etc)	Monthly	Staff under supervision	Maintenance checklist + Excel Workbook
Visual inspection of dam	Monthly	Manager	Visual inspection checklist + Excel Workbook
Visual inspection + measurements & analysis	Every 6 months	Dams engineer	Visual inspection checklist + Excel Workbook
Safety review	Every 15 years	Dams engineer	Safety review checklist, final report

**Note:**

1. Details/checklists for routine maintenance, visual inspections and safety reviews are contained in the O&M Plan.
2. Checklists have categories for scheduled action, conformity/non-conformity, corrective action and improvement opportunity.
3. All data is entered on an Excel Worksheet named 'Inspection & Maintenance actions'. The actions are recorded to create accountability for their completion in an effective and timely way.

**13.3 Internal audit (Std: Clause 9.2)**

Smith's Nursery uses a risk-prioritised internal audit methodology.

During establishment of the Operations and Maintenance Plan, advice received from our competent dam engineer recommended our internal audit program should focus on the following aspects of that Plan:

Focus area	Frequency	Auditor	Documentation
<ul style="list-style-type: none"><li>• Routine maintenance</li><li>• Visual inspections</li></ul>	Twice a year	Owner, manager, staff member	Audit checklist (see subsection 14.2.1)

Further, internal audits of the DSMS will be carried out as follows:

Focus area	Frequency	Auditor	Documentation
<ul style="list-style-type: none"><li>• Selected DSMS sections</li></ul>	Twice a year	Owner, manager, staff member	Audit checklist (see subsection 14.2.2)

Note:

1. Audits are not to be carried out by the same person more than once a year.
2. Results of audits, including conformities/non-conformities, corrective actions and improvement opportunities will be recorded on a worksheet named 'Internal Audit' within the Excel Workbook, categorised as either Dam safety inspection and review (DSIR) or Dam Safety Management System (DSMS). Actions are recorded to create accountability for their completion in an effective and timely way.

#### **13.4 Review of Management System (Reg: Clause 17; Std: Clauses 5.1, 5.2, 6.2.1, 7.1, 7.6.2, 8.3 and 9.3)**

Smith's Nursery will review the DSMS at an annual meeting, during which it will hold discussions (and record minutes/actions) on following matters:

- Dam Safety Management Objectives
- Status of actions arising from previous review.
- Changes to external and internal environment issues/risks.
- Performance/effectiveness of DSMS.
- Performance/effectiveness of outsourced activities.
- Dam monitoring results.
- Competency needs.
- Audit results.
- Continual improvement opportunities.
- Others DSMS activities or actions required by the Asset Management Standard.

The results of each management review will also be recorded in a worksheet labelled 'Management System review Actions', which is part of the Excel Workbook, and creates accountability for actions to be completed in an effective and timely way.

Subsection 15 below provides an example/sample of DSMS management review minutes.

**14. INTERNAL AUDIT CHECKLIST****14.1. ISO 55001 Asset Management Standard Compliance Map**

ISO 55001 REQUIREMENTS		MANUAL COVERAGE REFERENCE/S	COMMENT
<b>4.1</b>	<b>Context of the organization</b> <i>Understanding the organization and its context</i>	Section 2.1 Dam's characteristics, Section 5 Risk Management, Section 3 DSM Objectives, Policy	
<b>4.2</b>	<b>Context of the organization</b> <i>Understanding the needs and expectations of stakeholders</i>	Policy; Section 1 Introduction; Section 2.4 Stakeholders	This is primarily adherence to the Regulation.
<b>4.3</b>	<b>Context of the organization</b> <i>Determining the scope of the asset management system</i>	Section 4 DSMS Scope	
<b>4.4</b>	<b>Context of the organization</b> <i>Asset management system</i>	Section 1 Introduction; Section 4 DSMS Scope	
<b>5.1</b>	<b>Leadership</b> <i>Leadership and commitment</i>	Policy; Section 1 Introduction; Section 3.2 Objectives; Section 4.5 Documentary Elements, Section 5 Risk Management, Section 9 Compliance with AS ISO 55001; Section 10 Resources for DSMS; Section 13 Performance Evaluation and Improvement	The DSMS Manual is the SAMP.
<b>5.2</b>	<b>Leadership</b> <i>Policy</i>	Policy; Section 13.4 Review of Management System	
<b>5.3</b>	<b>Leadership</b> <i>Organizational roles, responsibilities and authorities</i>	Section 10 Resources for DSMS; Section 4.3 Roles and Functions	
<b>6.1</b>	<b>Planning</b> <i>Actions to address risks and opportunities for the asset management system</i>	Section 4.4 Information Systems, Section 5 Risk Management, Section 6 Incident Reporting, Section 7 Safety Review, Section 10 Notification of changes,	

		Section 13 Performance Evaluation and Improvement	
<b>6.2.1</b>	<b>Planning</b> <i>Asset management objectives and planning to achieve them - Asset Management Objectives</i>	Section 3 DSM Objectives, Section 13.4 Review of Management System	
<b>6.2.2</b>	<b>Planning</b> <i>Asset management objectives and planning to achieve them - Planning for asset management</i>	Comprehensive relevance throughout most of the DSMS Manual	Refer also to the Emergency Plan and Operations and Maintenance Plan which are the Asset Management Plans.
<b>7.1</b>	<b>Support</b> <i>Resources</i>	Policy; Section 4.3 Roles and Functions, Section 10 Resources for DSMS	Policy commitment translates to commitment that the resources will be provided.
<b>7.2</b>	<b>Support</b> <i>Competence</i>	Section 11 Competence, Section 13.4 Review of Management System.	
<b>7.3</b>	<b>Support</b> <i>Awareness</i>	Section 10 Resources for DSMS	
<b>7.4</b>	<b>Support</b> <i>Communication</i>	Section 10 Resources for DSMS	
<b>7.5</b>	<b>Support</b> <i>Information Requirements</i>	Section 2.5 Regulatory environment - required dam safety review actions, Section 4.4 Information Systems	Primarily as required by the Regulation; then as deemed suitable for recording in the Excel register. Technical information management detail stated in the Operations and Maintenance Plan. Consideration of information requirements is evident throughout DSMS Manual and Operations and Maintenance Plan.
<b>7.6.1</b>	<b>Support</b> <i>Documented Information - General</i>	Policy; Section 4.4 Information Systems, Section 4.5 Documentary Elements	
<b>7.6.2</b>	<b>Support</b> <i>Documented Information - Creating and Updating</i>	N/A	Formal procedures not warranted due to size of the organisation.
<b>7.6.3</b>	<b>Support</b> <i>Documented Information - Control of Documented Information</i>	Section 4.4 Information Systems, Section 13.4 Review of Management System	
<b>8.1</b>	<b>Operation</b> <i>Operational planning and control</i>	Comprehensive relevance throughout most of the DSMS Manual	Refer also to the Emergency Plan and Operations and Maintenance Plan.



<b>8.2</b>	<b>Operation</b> <i>Management of change</i>	Section 2.2 Dam's History, Section 2.3 Dam's status, Section 5 Risk Management, Section 7 Safety Review, Section 8 Notification of changes, Section 13.4 Management Review	
<b>8.3</b>	<b>Operation</b> <i>Outsourcing of asset management activities</i>	Section 12 Outsourced activities, Section 13.4 Review of Management System	Refer also to the Emergency Plan and Operations and Maintenance Plan for aspects such as Competence, Awareness and Documentation and control of the activities.
<b>9.1</b>	<b>Performance evaluation</b> <i>Monitoring, measurement, analysis and evaluation</i>	Section 2.4 Stakeholders, Section 2.5 Regulatory environment - required dam safety review actions; Section 4.4 Information Systems, Section 7 Safety Review; Section 13 Performance Evaluation and Improvement	Refer also to the Emergency Plan and Operations and Maintenance Plan.
<b>9.2</b>	<b>Performance evaluation</b> <i>Internal audit</i>	Section 13.3 Internal audit	
<b>9.3</b>	<b>Performance evaluation</b> <i>Management review</i>	Section 13.4 Review of Management System	Prescribed asset management requirements exist via the Regulation.
<b>10.1</b>	<b>Improvement</b> <i>Nonconformity and corrective action</i>	Section 13 Performance Evaluation and Improvement	
<b>10.2</b>	<b>Improvement</b> <i>Preventive action</i>	Section 7 Safety Review; Section 4.3 Roles and Functions, Section 13 Performance Evaluation and Improvement	
<b>10.3</b>	<b>Improvement</b> <i>Continual Improvement</i>	Section 13 Performance Evaluation and Improvement, Policy	

**14.2 Sample Internal Audit checklists****14.2.1 Dam safety inspection and review audit checklist**

<b>Audit Question</b>	<b>Audit Findings</b> C- Compliant OFI - Opportunity for improvement, CAR – Corrective Action Required, NC- Non-conformity	<b>Audit Evidence – reference to documentation</b>	<b>Opportunity for Improvement - Suggestions</b>
Are competence requirements defined?			
Is the person aware of competence requirements?			
Is person aware of their responsibility?			
Are inspection records retained?			
Is the current inspection checklist being used?			
Is person aware of specific requirements as detailed in the Operations and Maintenance Plan?			
Is person aware of what action to take if a problem is identified?			
Is person aware of what action to take if a questionable trend is noted?			

**14.2.2 Dam Safety Management System audit checklist**

Audit Question	Audit Findings C- Compliant OFI - Opportunity for improvement, CAR – Corrective Action Required, NC- Non-conformity	Audit Evidence – reference to documentation	Opportunity for Improvement - Suggestions
Are key documents and records known and accessible?			
Has the Management System Review been carried out as planned?			
Are actions from the Management System Review being addressed in a timely and effective manner?			
Are records with the Excel Workbook up to date?			
Are competency requirements up to date?			
Is the stakeholder table reflective of current circumstances?			
Are identified risks being mitigated?			
If any incidents have occurred, were they reported in writing to the Regulator within 72 hours?			

## 15. SAMPLE DSMS MANAGEMENT REVIEW MINUTES

### Smith's Nursery DSMS Review Minutes, 12 Feb. 2021

Ref. Clause 19 of Regulation, ISO 55001

#### 1 Status of actions from previous meeting

Review of actions arising from meeting of 12 February 2020
Review of minutes from meeting of 12 February 2020

#### 2 Changes in external and internal environment/issues

Discussion			
Conclusion			
Action items	<input type="checkbox"/> None	Person Responsible	Deadline

#### 3 Information on the performance and effectiveness of the DSMS

Discussion			
Conclusion			
Action items	<input type="checkbox"/> None	Person Responsible	Deadline


**4 Other actions required by the Asset Management Standard (AS ISO 55001)**

Discussion			
Conclusion			
<b>Action items</b>	<input type="checkbox"/> <b>None</b>	<b>Person Responsible</b>	<b>Deadline</b>

## **APPENDIX A: NSW DECLARED DAMS**

(at 20 September 2020)

Dam Owner	Dam Name	Consequence Category
AGL Macquarie Ltd	Liddell Cooling Water	High B
AGL Macquarie Ltd	Plashett	High C
AGL Macquarie Ltd	Bayswater Brine Decant	Low
AGL Macquarie Ltd	Bayswater Ash	Significant
AGL Macquarie Ltd	Bayswater Cooling Makeup	Significant
AGL Macquarie Ltd	Liddell Ash Disposal	Significant
AGL Macquarie Ltd	Liddell Water Supply	Significant
AGL Macquarie Ltd	Ravensworth Void 5	Significant
AKSoake	El Klaros	Low
Albury City Council	Hamilton Valley Retarding Basin 5B	High C
Albury City Council	Hamilton Valley Retention Basin 5A	High C
Allied Coal Pty Ltd	South Bulli Basin 1	Significant
Anglo Coal (Dartbrook Management) P/L	Dartbrook Mine Water	Significant
Armidale Regional Council	Dumaresq	High C
Armidale Regional Council	Malpas	High C
Ashton Coal Operations Pty Ltd	Ashton Coal Clean Water Dam 1	Significant
Ashton Coal Operations Pty Ltd	Ravensworth Void 4 East Tailings - Saddle Dam	Significant
Aurelia metals Limited	Hera Tailings	Significant
Austar Coal Mine Pty Ltd	Kalingo	High C
Bathurst Regional Council	Chifley	Extreme
Bathurst Regional Council	Winburndale	High C
Bega Valley Shire Council	Ben Boyd	High A
Bega Valley Shire Council	Yellow Pinch	High A
Bega Valley Shire Council	Tilba	High C
Bengalla Mining Company	Bengalla CW1	High C
Bengalla Mining Company	Bengalla DW1	Significant
BHP Billiton	Bayswater Main	Low
BHP Billiton - Mt Arthur Coal	Mt Arthur North Environmental	Low
BHP Mt Arthur	MacDonalds Dam	Significant
Blacktown City Council	Pied Piper Playground Detention Basin	High C
Blacktown City Council	DEP Retarding Basin	Significant
Blacktown City Council	Fox Hills Retarding Basin	Significant
Bloomfield Collieries Pty Ltd	Bloomfield U Cut Tailings Dam	Significant
Bloomfield Collieries Pty Ltd	Camberwell Tailings 2	Significant
Bloomfield Collieries Pty Ltd	Possum Skin Dam	Significant
Blue Mountains City Council	Wentworth Falls Lake	High C
Broken Hill Operations Pty Ltd	Blackwood Pit TSF	High A
Broula King Joint Venture Pty Ltd	Broula King Gold Mine Tailings 1	Low
Bulga Coal Management Pty Ltd	Bulga CHPP Dam	High C
Bulga Coal Management Pty Ltd	Bulga Mine Water	Significant

## WATER DIRECTORATE OCTOBER 2021

Bulga Coal Management Pty Ltd	Bulga North Inpit Tailings Storage	Significant
Bulga Coal Management Pty Ltd	Bulga Northern Tailings Dam A	Significant
Bulga Coal Management Pty Ltd	Bulga Old Tailings	Significant
<b>Dam Owner</b>	<b>Dam Name</b>	<b>Consequence Category</b>
Burraborang Valley Coal Pty Limited	Wollondilly Washery 1	Significant
Cabonne Shire Council	Molong Creek	High A
Cabonne Shire Council	Borenore Creek	Very Low
Cadia Holdings Pty Ltd	Cadia Southern Tailings Storage Facility	High B
Cadia Holdings Pty Ltd	Upper Rodds Creek	High B
Cadia Holdings Pty Ltd	Cadiangullong	High C
Cadia Holdings Pty Ltd	Cadia North Waste Dump Detention	Low
Cadia Holdings Pty Ltd	Cadia Tailings	Significant
Camden Council	Mt Annan Wetland No 1	High C
Campbelltown City Council	Campbelltown, North Detention Basin	High C
Campbelltown City Council	Camden Valley Way Detention Basin	Significant
Campbelltown City Council	Campbelltown Link Area Basin 1	Significant
Campbelltown City Council	Smiths Creek Ret Basin 1	Significant
Campbelltown City Council	Smiths Creek Ret Basin 2	Significant
Campbelltown City Council	Smiths Creek Ret Basin 3	Significant
Castle Hill Country Club	Castle Hill Country Club Pond B	Significant
Celestino Pty Ltd	The Gables Lake and Basin	Significant
Centennial Newstan	Newstan Southern REA Main Tailings	High A
Central Coast Council	Mangrove Creek	High A
Central Coast Council	Emma James Basin	High C
Central Coast Council	Mooney Upper	High C
Central Coast Council	Wyong Road Detention Basin	Significant
Central Tablelands Water	Lake Rowlands	High C
Cessnock City Council	Mount View Detention Basin	High C
Challenger Mines Pty Ltd	Adelong Tailings	Significant
City of Parramatta Council	Epping West Park Basin	Significant
Clarence Valley Council	Shannon Creek	Extreme
Clarence Valley Council	Rushford Road 100ML Reservoir	Significant
Clean TeQ Sunrise Pty Ltd	Sunrise Mine TSF Cell 2	High C
Clean TeQ Sunrise Pty Ltd	Sunrise Mine Water Storage Dam	Significant
Coal Allied Operations Pty Limited	Mount Pleasant MWD	High C
Coal Allied Operations Pty Limited	Mount Pleasant Tailings	High C
Coal Allied Operations Pty Limited	Lidcombe Basin No. 6	Significant
Coal Allied Operations Pty Limited	Mount Pleasant Environmental Dam 3	Significant
Coffs Harbour City Council	Karangi	High A
Coffs Harbour City Council	Spagnolos Road Detention Basin, Coffs Harbour	High A
Coffs Harbour City Council	Bakers Road Detention Basin	High C
Coffs Harbour City Council	Boambee Newport Creeka Detention Basin	High C
Coffs Harbour City Council	Upper Shephards Lane Detention Basin	High C



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Coffs Harbour City Council	Woolgoolga	Significant
Coffs Harbour City Council	Bennetts Road Detention Basin	Very Low
Consolidated Pastoral Company P/L	Aldridges Creek	High C
Cowal Gold Mine	Cowal Integrated Waste Landform	Significant
<b>Dam Owner</b>	<b>Dam Name</b>	<b>Consequence Category</b>
Cowal Gold Mine	Cowal Northern Tailings Dam	Significant
Cowal Gold Mine	Cowal Southern Tailings Dam	Significant
Cowra Shire Council	Valley View Detention Basin	High C
Cristal Mine	Atlas Off-path Tailings	Significant
Delta Electricity	Cochrane	Significant
Delta Electricity	Colongra Creek Ash	Significant
Delta Electricity	Mannering Creek Ash	Significant
Delta Electricity	Vales Point Ash	Significant
Department of Industry	Orange Research Station	Significant
Department of Industry - Lands	Moore Creek	High C
Divall's Earthmoving & Bulk Haulage	Narranbulla	Significant
Diversified Minerals	Dargues Reef Gold Project Tailings	High C
DPI - Lands, Department of Industry	Cowarra	High B
DPI - Lands, Department of Industry	Junction Reefs	Very Low
Drayton Coal (Drayton Mngmt) Pty Ltd	Liddell Ash Levee	High C
Drayton Coal (Drayton Mngmt) Pty Ltd	Drayton Water Supply	Significant
Elanora Country Club	Elanora Country Club Main Dam	High C
EMC Metals Australia Pty Ltd	NynganPond	High B
EMC Metals Australia Pty Ltd	NynganTSF	High B
Endeavor Operations Pty Ltd	Elura Tailings	Significant
EnergyAustralia NSW	Thompsons Creek	Extreme
EnergyAustralia NSW	Lyell	High A
EnergyAustralia NSW	Wallerawang	High A
EnergyAustralia NSW	Sawyers Swamp Creek Ash	High C
Essential Water	Imperial Lake	Significant
Essential Water	Stephens Creek	High C
Essential Water	Umberumberka	Significant
Eurobodalla Shire Council	Eurobodalla Southern Storage	High C
Eurobodalla Shire Council	George Bass Drive Det. Basin	High C
Eurobodalla Shire Council	Deep Creek	Significant
Evolution Mining	Cowal Gold Mine Reservoir D9	Significant
Fairfield City Council	Fairfield Golf Course Basin	High A
Fairfield City Council	Clear Paddock Creek Basin C	High C
Fairfield City Council	Clear Paddock Creek Basin W2	High C
Fairfield City Council	Clear Paddock Creek Basin W3	High C
Fairfield City Council	Comin Place Detention Basin	High C
Fairfield City Council	Mimosa Road Basin	High C
Fairfield City Council	Bosnjak Park US	Significant
Fairfield City Council	Emerson Street Reserve	Significant

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Fairfield City Council	King Park Basin	Significant
Fairfield City Council	Knight Park,	Significant
Fairfield City Council	Springvale Reject Emplacement Area	Significant
Fairfield City Council	St Josephs School Retarding Basin	Significant
Fairfield City Council	Stockdale Basin	Significant
<b>Dam Owner</b>	<b>Dam Name</b>	<b>Consequence Category</b>
Forest Grove Community Association	Kanahooka Retention Basin	Significant
Glen Innes Severn Council	Beardy Waters	Significant
Glencore - CSA Mine	CSA South Tailings	Significant
Glencore Mt Owen Pty Limited	Mount Owen North Void Tailings	Significant
Glencore Mt Owen Pty Limited	Mount Owen Rail Loop Tailings	Significant
Gosford City Council	Palm Tree Grove Retarding Basin	High C
Gosford City Council	Sarah Fahey Park Retarding Basin	High C
Gosford City Council	Pecan Close Retarding Basin	Significant
Goulburn Mulwaree Council	Sooley	Extreme
Goulburn Mulwaree Council	Pejar	High A
Heron Resources Limited	Woodlawn West Tailings	High C
Hillsgrove Mines Pty Ltd	Hillgrove Tailings No. 1	High B
Hillsgrove Mines Pty Ltd	Hillgrove Tailings No. 2	High B
Hillsgrove Mines Pty Ltd	Hillgrove Eleanora	Significant
Hilltops Council	Boorowa	Significant
Hunter Valley Energy Coal Pty Ltd	Mt Arthur Tailings Storage Facility	High A
Hunter Valley Mines Operations	Hunter Valley Operations Lake James	Significant
Hunter Water Corporation	Grahamstown	Extreme
Hunter Water Corporation	Chichester	High A
Hunter Water Corporation	Winding Creek 3 Retarding Basin	Significant
Hunter Water Corporation	Winding Creek 5 Retarding Basin	Significant
Icon Water Limited	Googong	Extreme
Illawarra Coke Company	Coalcliff	Significant
Inner West Council	Marrickville Oval Retarding Basin	High C
Inverell Shire Council	Lake Inverell	High A
J. Nixon	Nixon	Low
John Holland Rail	Tallong Railway	Significant
KBL Mining Limited	Mineral Hill Southern Tailings	Significant
KBL Mining Limited	Mineral Hill Tailings	Low
Kempsey Shire Council	Steuart McIntyre Dam	High B
Kiama Municipal Council	Fountaindale	High C
Killara Golf Club Ltd	Honeysuckle Creek	High C
Ku-ring-gai Council	North Turramurra Golf Course	High C
Kyogle Council	Petrochilos	High B
Lake Macquarie City Council	Edmondson Park - Jardine Drive - Basin 12	High C
Lake Macquarie City Council	Floraville Road Det. Basin	Significant
Lake Macquarie City Council	Garden Suburb Det. Basin No. 2	Significant

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Lend Lease Communities (Wilton)	Bingara Gorge Pond 1	Significant
Liddell Coal Operations Pty Ltd	Antiene Lease Tailings	Low
Lithgow City Council	Lithgow No. 1	High A
Lithgow City Council	Lithgow No. 2	High A
Liverpool City Council	Banks Rd Basin	High B
Liverpool City Council	Cecil Hills Basin 100	High B
<b>Dam Owner</b>	<b>Dam Name</b>	<b>Consequence Category</b>
Liverpool City Council	Cecil Park Basin 3A	High B
Liverpool City Council	Daruk Park Retarding Basin	High B
Liverpool City Council	Greenway Drive Retarding Basin 10 A-B	High B
Liverpool City Council	Hoxton Park Basin 6	High B
Liverpool City Council	Whitford Road Retarding Basin	High B
Liverpool City Council	Cecil Park Basin 3B	High C
Liverpool City Council	Horningsea Park Detention Basin	High C
Liverpool Plains Shire Council	Quipolly	High C
Liverpool Plains Shire Council	Old Quipolly	Low
Local Land Services	Loyalty Road Retarding Basin	Extreme
Macquarie Coal Joint Venture	Stockton Borehole Tailings	Significant
Maitland City Council	Diamond Circuit Detention Basin	Very Low
Mangoola Coal Operations Pty Ltd	Mangoola Pit Water Dam	High C
Mangoola Coal Operations Pty Ltd	Mangoola Start-up Tailings Dam	High C
Mangoola Coal Operations Pty Ltd	Mangoola Coal Raw Water	Significant
Maryland Development Company p/l	Jordan Springs Village Lake	High C
Matt Crossingham	Bucklands Retarding Basin	Significant
Maules Creek Coal Pty Ltd	Maules Creek Mine - MWD2	Significant
Maules Creek Coal Pty Ltd	Maules Creek Mine - RWD2	Significant
Maxwell Ventures (Management) Pty Ltd	Houston	Significant
Midcoast Water	Bootawa	High C
Mid-Western Regional Council	Rylstone	High C
Muirfield Golf Club Limited	Muirfield Golf Club	Significant
Murray-Darling Basin Authority	Hume	Extreme
Murray-Darling Basin Authority	Yarrowonga Weir	High B
Nambucca Shire Council	Bowra	High A
Narrabri Coal Operations	Narrabri Coal Rail Loop Dams	Significant
Newcastle City Council	Minmi Road Detention Basin	High C
Norske-Skog Paper Mills (Australia) Ltd	Lake Ettamogah Winter Storage	High A
Northparkes Mines	Northparkes E27 - Estcourt Tailings	High C
Northparkes Mines	Northparkes Infill Tailings Storage Facility	High C
Northparkes Mines	Northparkes Rosedale Tailings Storage Facility	High C
Northparkes Mines	Northparkes Tailings	High C
Northparkes Mines	Northparkes Tailings Dam 2	High C

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Norwest Association Limited	Norbrik Detention Pond	High C
Old Sydney Town	The Cove	Significant
Orange City Council	Spring Creek	High A
Orange City Council	Suma Park	High A
Orange City Council	Gosling Creek	High C
Orange City Council	Lake Canobolas	High C
Origin Energy	Eraring Ash	High A
<b>Dam Owner</b>	<b>Dam Name</b>	<b>Consequence Category</b>
Origin Energy	Eraring Attemperating Cooling Water	High A
Parkes Shire Council	Lake Endeavour	Significant
Parkes Shire Council	Beargamil	Low
Parramatta City Council	Lake Parramatta	Extreme
Parramatta City Council	McCoy Park Retarding Basin	High C
Peabody Energy	Wambo Hunter Pit Tails Dam	High C
Peabody Energy	Montrose	Significant
Peabody Energy	Wambo South Water	Significant
Peabody Energy	Wambo Tailings	Significant
Peak Gold Mines	Peak Gold Mine Tailings	Significant
Penrith City Council	Glenmore Park Retarding Basin 4	Significant
Penrith City Council	School House Creek Basin	Significant
Perilya Broken Hill Limited	Site D Tailings	Significant
Pittwater Council	Howell Close Retarding Basin	High C
Port Macquarie Hastings Council	Port Macquarie	High A
Port Macquarie Hastings Council	Cowarra Creek Tailings	Significant
Port Stephens Council	Bagnalls Beach Road Basin	High C
PPB Advisory	Wonawinta Tailings	Significant
Pymble Golf Course	Pymble Golf Course Dam	Significant
Queanbeyan-Palerang Regional Council	Captains Flat	High A
Ravensworth Operations	Cumnock Tailings Storage Facility	Significant
Ravensworth Operations	Cumnock Tailings Storage Facility 3	Significant
Ravensworth Operations	Ravensworth Inpit Storage	Significant
Ravensworth Operations	Ravensworth South Tailings	Significant
Redbank Communities	Redbank Dam 13, North Richmond	High B
Redbank Communities	Redbank Dam 14, North Richmond	Significant
Rio Tinto Coal Australia Pty Ltd	Mt Thorley Abbey Green South TSF	High C
Rio Tinto Coal Australia Pty Ltd	Mt Thorley Central Ramp Tailings	High C
Rio Tinto Coal Australia Pty Ltd	Warkworth North Pit Tailings	High C
Rio Tinto Coal Australia Pty Ltd	Mt Thorley South Out Of Pit Water	Significant
Rio Tinto Coal Australia Pty Ltd	Parnells Creek MWD	Significant
Rio Tinto Coal Australia Pty Ltd	Warkworth Main Water - Dam 1N	Significant
RMS (Roads & Maritime Services)	East West Road	Significant
Roche Group	Hungerford Hill	Significant
Rous County Council	Emigrant Creek	High C

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RTCA Hunter Valley Operations	Rocky Creek	High C
RTCA Hunter Valley Operations	SE Tailings Storage	Low
RTCA Hunter Valley Operations	Riverview Void In-pit Water Storage	Significant
Shaolin Temple Foundation (Australia) Ltd	Comberton Grange Ret. Basin	Significant
Shellharbour City Council	Blackbutt Reserve	High A
Shellharbour City Council	Green Meadows Retarding Basin	Significant
Shellharbour City Council	Shellcove Estate Detention Basin 1	Significant
Shellharbour City Council	Shellharbour City Centre Basin	Significant
<b>Dam Owner</b>	<b>Dam Name</b>	<b>Consequence Category</b>
Shoalhaven City Council	Bamarang	High A
Shoalhaven City Council	Danjera	Low
Shoalhaven City Council	Cambewarra	Significant
Shoalhaven City Council	Porters Creek	Significant
Snowy Hydro Limited	Eucumbene (#)	Extreme
Snowy Hydro Limited	Talbingo	Extreme
Snowy Hydro Limited	Tantangra Dam	High A
Snowy Hydro Limited	Jindabyne	High B
Snowy Hydro Limited	Tumut 3	High B
Snowy Hydro Limited	Geehi	High C
Snowy Hydro Limited	Tooma	High C
Snowy Hydro Limited	Deep Creek Snowy	Low
Snowy Hydro Limited	Island Bend	Low
Snowy Hydro Limited	Jounama	Low
Snowy Hydro Limited	Murray 2	Low
Snowy Hydro Limited	Guthega	Significant
Snowy Hydro Limited	Khancoban	Significant
Snowy Hydro Limited	Tumut 2	Significant
Snowy Hydro Limited	Tumut Pond	Significant
Snowy Monaro Regional Council - Bombala Branch	Delegate Flood Retarding Basin	High C
Snowy Valley Council - Murray	Tumbarumba	High C
South32 - Illawarra Coal Pty Ltd	Brennans Creek	Significant
Stockland	CSIRO Retarding Basin	Significant
Straits Tritton Mines	Tritton Tailings Dam	Significant
Strata Plus	Widemere Detention Basin	High A
Stratford Coal	Duralie Coal Auxiliary Dam No. 2	High C
Stratford Coal	Duralie Coal Mine Water	High C
Stratford Coal	Duralie Coal Auxiliary Dam No. 1	Significant
Sutherland Shire Council	Barden Ridge Lower	Low
Sydney Water	Manly	Extreme
Sydney Water	Dover Heights Reservoir	High A
Sydney Water	Killara Reservoir	High A
Sydney Water	Maroubra Reservoir	High A
Sydney Water	Oak Flats Reservoir	High A

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Sydney Water	Potts Hill Res. 2	High A
Sydney Water	Thornleigh Reservoir	High A
Sydney Water	Warringah Reservoir	High A
Sydney Water	Waverley Reservoir WS133	High A
Sydney Water	Rouse Hill Retarding Basin 13	High C
Sydney Water	Centennial Pk Res No. 1	Significant
Sydney Water	Centennial Pk Res No. 2	Significant
Sydney Water	Rouse Hill Retarding Basin 16 AB	Significant
Sydney Water	Rouse Hill Retarding Basin 5	Significant
<b>Dam Owner</b>	<b>Dam Name</b>	<b>Consequence Category</b>
Sydney Water	Rouse Hill Retarding Basin 9	Significant
Sydney Water	Rouse Hill Retarding Basin 9B	Significant
Tamworth Regional Council	Dungowan	High A
Tamworth Regional Council	Calala Raw Water Storage	High C
Tamworth Regional Council	Connors Creek Dam	Low
Tarago Operations Pty Ltd	Woodlwan Tailings Storage Facility 4	High B
Tarago Operations Pty Ltd	Woodlawn Mine Evaporation No. 1	High C
Tarago Operations Pty Ltd	Woodlawn Mine Evaporation No. 2	High C
Tarago Operations Pty Ltd	Woodlawn North Tailings	High C
Tarago Operations Pty Ltd	Woodlawn South Tailings	High C
Tenterfield Shire Council	Tenterfield Creek	High B
The Hills Shire Council	Gooden Reserve Detention Basin	High C
The Hills Shire Council	Muirfield Golf Course Detention Basin	High C
The Hills Shire Council	Northmead Reserve Detention Basin	High C
The Hills Shire Council	Georgia Terrace Detention Basin	Low
The Hills Shire Council	Sierra Place Detention Basin	Significant
Tomingley Gold Operations Pty Ltd	Tomingley Residue Storage Facility	Significant
Tomingley Gold Operations Pty Ltd	Wyoming Central Dam	Significant
Transport for NSW	Kensington Centennial Park Pond	High A
Transport for NSW	Schofields North Rail Facility	Significant
Transport for NSW	Schofields South Rail Facility	Significant
Transport for NSW	Brooklyn Retarding Basin	High C
Tweed Shire Council	Clarrie Hall	High A
Tweed Shire Council	Korrumbyn Creek	Significant
United Collieries Pty Ltd	United Colliery Tailings Dam 2	Significant
University of New England	Leewood Ponds	Significant
University of New South Wales	Freislichs	Significant
Upper Hunter Shire Council	Murrurundi	Significant
Upper Lachlan Shire Council	Crookwell	Significant
Uralla Shire Council	Kentucky Creek	Significant
Visy Pulp & Paper	Tumut Paper Mill Freshwater	Significant
Visy Pulp & Paper	Tumut Paper Mill Wastewater	Significant
Vitalharvest Ltd	Corindi, Kathleen Drive	Significant
Warrumbungle Shire Council	Timor	High C

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WaterNSW	Avon	Extreme
WaterNSW	Bendeela Pondage	Extreme
WaterNSW	Blowering	Extreme
WaterNSW	Brogo	Extreme
WaterNSW	Broughton's Pass Weir	Extreme
WaterNSW	Burrundong	Extreme
WaterNSW	Burrinjuck	Extreme
WaterNSW	Carcoar	Extreme
WaterNSW	Cascade 1	Extreme
WaterNSW	Cascade 2	Extreme
<b>Dam Owner</b>	<b>Dam Name</b>	<b>Consequence Category</b>
WaterNSW	Cascade 3	Extreme
WaterNSW	Cataract	Extreme
WaterNSW	Chaffey	Extreme
WaterNSW	Copeton	Extreme
WaterNSW	Cordeaux	Extreme
WaterNSW	Fitzroy Falls	Extreme
WaterNSW	Glenbawn	Extreme
WaterNSW	Glennies Creek	Extreme
WaterNSW	Glenquarry Cut Control Structure	High A
WaterNSW	Greaves Creek	High A
WaterNSW	Kangaroo Pipeline Control Structure	High A
WaterNSW	Keepit	High A
WaterNSW	Lake Medlow	High B
WaterNSW	Lostock	High B
WaterNSW	Menindee Lakes Storage	High B
WaterNSW	Nepean	High C
WaterNSW	Oberon	High C
WaterNSW	Pindari	High C
WaterNSW	Prospect	Low
WaterNSW	Rydal	Significant
WaterNSW	Split Rock	Significant
WaterNSW	Tallowa	Significant
WaterNSW	Toonumbar	Significant
WaterNSW	Upper Cordeaux 2	Significant
WaterNSW	Warragamba	Significant
WaterNSW	Windamere	Significant
WaterNSW	Wingecarribee	Significant
WaterNSW	Woodford Creek	Significant
WaterNSW	Woronora	Very Low
WaterNSW	Wyangala	Very Low
Weddin Shire Council	Company	High A
Werris Creek Coal Pty Ltd	Werris Creek Void Water Dam 1	Significant
Werris Creek Coal Pty Ltd	Werris Creek Void Water Dam 3	Significant

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Werris Creek Coal Pty Ltd	Werris Creek Void Water Dam 4	Significant
WestConnex Transurban	St Peters 9SWB01 Basin	High C
Western Sydney Parklands Trust	Abbotsbury Park Pond 2	Significant
White Rock Minerals Ltd	Humphries Creek	High C
White Rock Minerals Ltd	Humphries Creek Tailings	Significant
Whitehaven Coal Limited	Tarrawonga Clean Water Dam	Significant
Wilpinjong Coal Pty Ltd	Wilpinjong TD2	Significant
Wilpinjong Coal Pty Ltd	Wilpinjong TD6	Significant
Wingecarribee Shire Council	Bundanoon	Significant
Wingecarribee Shire Council	Medway	Significant
Wollongong City Council	Brokers Road Retarding Basin	High C
<b>Dam Owner</b>	<b>Dam Name</b>	<b>Consequence Category</b>
Wollongong City Council	Foothills Estate Ret. Basin 1	High C
Wollongong City Council	Foothills Estate Ret. Basin 3	High C
Wollongong City Council	Foothills Rd Basin	High C
Wollongong City Council	Barina Park Detention Basin	Significant
Wollongong City Council	Edegeworth DB	Significant
Wollongong City Council	Edgewood Detention Basin	Significant
Wollongong City Council	Gannet Place Retarding Basin	Significant
Wollongong City Council	Gunyah Park Basin	Significant
Wollongong City Council	Nyrang Park Retarding Basin	Significant
Wollongong Coal Limited	South Bulli Stormwater	High B
Wyong Shire Council	Mardi	Extreme
Yass Valley Council	Yass	High A



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