

Report details Changes to Pr9821 – Specification for Reservoir Design and Construction

Report writer Infrastructure Standards & Assurance Manager

References Pr9821 – Specification for Reservoir Design and Construction

Summary of amendments to Pr9821 - Specification for Reservoir Design and Construction

Changes to Revision 15.0 February 2024 to Revision 16 September 2025 are shown in the table below. Only a summary of changes has been included. If the section or sub-section has not changed it is not included in the table.

Whole document changes:

Paragraph numbers have been removed from the document.

Revision 15 Section No. & Title	Revision 16 Section No. & Title	Comments
3. General Requirements	3. Planning	Name change & changes to sub-sections
3.2. Site Area	3.3. Site Area	Moved to 3.3
3.3. Site Selection	3.2 Site Selection	Moved to 3.2
	3.6 Deliverables from the Planning Stage	New
3.6. Road Access		moved to 4.5.5 Road Access
3.7. Perimeter Access		moved to 4.5.6 Perimeter Access
3.8. Landscaping		moved to 4.5.7 Landscaping
3.9. Safety Considerations		Removed
3.10. Quality Control		Removed
4. Materials and Workmanship		Subsections moved
4.1. Materials		Amended & moved to 4.9 Materials
4.2. Workmanship		Amended & moved to 4.10 Workmanship
4.3. Guarantees/Warranties		Removed
4.4. Steelwork		Removed
4.5. Aluminium Works		Removed
4.6. Pipes and Fittings		Removed
4.7. Support Brackets		moved to 6.1.3 Support Brackets
4.8. Thrust Restraint		moved to 6.1.1 Thrust Restraint

4.9. Gaskets		moved to 6.1.2 Gaskets
4.10. Bolts and Nuts, Washers and Masonry Anchors		Moved to 8.3 Bolts and Nuts, Washers and Masonry Anchors
5. Design	4.0 General Design	Renamed & renumbered
5.1. Design Scope	4.1 Design Scope	Renumbered
	4.2 Drawings	New
5.2. Safety in Design	4.3 Safety in Design	Renumbered & amended
	4.4 Design life	New
	4.5 Process, Civil & Mechanical Design	New
	4.5.1 Thermal Effects	Some sub-sections moved (unamended) from different sections
	4.5.2 Bushfire prone zones	
	4.5.3 Hydraulic Design	
	4.5.4 Loading considerations	
	4.5.5 Road access	
	4.5.6 Perimeter access	
	4.5.7 Landscaping	
	4.6 Electrical Design and Control System Design	New
5.3. Design Requirements		requirements added elsewhere in the clause
5.4. Whole-of-Life Costs	4.7 Whole-of-Life Costs	moved
	4.8 Design Deliverables	new
5.5. Design Report	4.8	included in 4.8 Design deliverables
5.6. Design Documentation	4.8	included in 4.8 Design deliverables
	4.9 Materials	Moved
	4.9.1 Compliance with AS/NZS 4020	
	4.9.2 Durability	
	4.10 Workmanship	
	4.10.1 Qualifications of operators & applicators for concrete surfacing	
	4.10.2 Qualifications of welders	New
	4.10.3 Independent Quality Control Inspector/Technical Support	New
	5 Types of Reservoirs	
	5.1 General	

	5.1.1 Reinforced Concrete Tanks	
	5.1.2 Post - tensioned concrete tanks	
	5.2 Finishes to Formed Concrete Surfaces	
	5.3 Tank walls	
	5.4 Tank floor	
	5.5 Joint Sealants and Fillers	
	6.1.1 Thrust Restraint	Moved
	6.1.2 Gaskets	Moved
	6.1.3 Support Brackets	Moved
	6.4 Combined Inlet/outlet Pipework	New
6.4 Bypass Pipework	6.5	Renumbered
6.5 Overflow Pipework	6.6	Renumbered
6.6 Scour Pipework	6.7	Renumbered
6.7 Under Floor Drainage (Slotted HDPE Pipe)	6.8	Renumbered
6.8 Reinforced Concrete Stormwater/Overflow/Scour Drainage Pipes and Fittings		Amended, moved & included in 6.12.1
	6.11 Washdown provisions	new
	6.12 Site drainage & stormwater	Amended
	6.12.1 Stormwater / Overflow / Scour Drainage Pipes and Fittings	Amended
8 Reservoir Roof		Amended
8.1 Design Objective		Dot points numbered
	8.3 Bolts and Nuts, Washers and Masonry Anchors	Sub-section moved
8.3 Aluminium Roof	8.3 Aluminium Roof	Amended & renumbered, also broken into subsections
	8.4.1 General	
	8.4.2 Roof cladding	
	8.4.3 Purlins and Bridging	
	8.4.4 Roof Flashings and Accessories	
	8.4.5 Roof Sealant	
8.4 Roof Flashings and Accessories		Moved to 8.4.4
8.5 Roof Sheetting Handling and Storage		included in 8.4

8.6 Concrete Roof	8.5 Concrete roof	Amended & renumbered
8.7 Roof Support Columns	8.6 Roof Support Columns	Amended & renumbered
8.8 Roof Stormwater and Overflow/Scour Management	8.7 Roof Stormwater and Overflow/Scour Management	Amended & renumbered
8.9 Roof Sealant		Amended & moved to 8.4.5
8.9 Roof Ventilation	8.8 Roof Ventilation	Amended
9 Roof Access	9 Access	Renamed
	9.1 General	New
9.1 Roof Access Platform		Amended & moved to 9.3 Roof Access Platform
9.2 Roof Access Hatch		Amended & moved to 9.4 Roof Access Hatch
9.3 External Reservoir Roof Access		Amended & moved to 9.2 External Reservoir Roof Access
9.4 Internal Reservoir Access by Ladder		Amended & moved to 9.5 Internal Reservoir Access by Ladder
10.1 Mixing/Circulation Arrangement		Amended
10.2 Re-Chlorination	10.2 Chemical dosing facilities	Amended & renamed
11 Concrete Works		included in 5 Types of Reservoirs
11.1 General		included in 5.1 General
11.2 Finishes to Formed Concrete Surfaces		moved to 5.2 Finishes to Formed Concrete Surfaces
11.3 Materials and Coatings		included in 5 Types of Reservoirs
11.4 Construction		included in 5 Types of Reservoirs
12 Painting and Corrosion Protection	11 Painting & Corrosion Protection	
12.1 General		included in 11
12.2 Pipework Protective Coatings		Removed
13 Joint Sealants and Fillers		Moved to 5.5 Joint Sealants and Fillers
13.1 General		Moved to 5.5 Joint Sealants and Fillers
14 Electrical/Telemetry	12 Electrical/Telemetry	Renumbered
14.1 General Requirements	12.1	Amended & renumbered
14.2 Power supply	12.2	Amended & renumbered
14.3 Switchboard	12.3	Amended & renumbered

14.4 Telemetry and Instrumentation Cubicle	12.4	Amended & renumbered
14.5 Radio Path Survey	12.5	Amended & renumbered
14.6 Site Lighting	12.6	Amended & renumbered
14.7 Site GPOs	12.7	Amended & renumbered
14.8 Lightning Protection	12.8	Amended & renumbered
15 Instrumentation	13 Instrumentation	Renumbered
15.1 Level Sensor	13.1	Amended & renumbered
15.2 Level Floats	13.2	Amended & renumbered
15.3 Electromagnetic Flow Meters	13.3	Amended & renumbered
16 Telecommunications (3rd Party)	14 Telecommunications (3rd Party)	Amended & renumbered
	14.1 Power supply to third parties	New
17 Site Security Requirements	15 Site Security Requirements	
17.1 Perimeter Fencing	15.1	Amended & renumbered
17.2 Perimeter Fencing Entry Points	15.2	Amended & renumbered
17.3 Security Signage	15.3	Amended & renumbered
17.4 External Security Lighting		included in 12.6
17.5 Intruder Alarm and Access Control System	15.4	Amended & renumbered
17.6 Key System	15.5	Amended & renumbered
17.7 Locking	15.6	Amended & renumbered
18 Signage and Labelling	16 Signage and Labelling	Renumbered
18.1 Safety Signage	16.1	Renumbered
18.2 Labelling	16.2	Renumbered
18.3 Piping Identification	16.3	Renumbered
19 Site Workmanship		Removed
20 Testing, Commissioning and Post Construction Documentation	17 Testing, Commissioning and Post Construction Documentation	Renumbered
	17.1 Commissioning	New
20.1 Hydrostatic Pressure Testing	17.2 Hydrostatic Pressure Testing 17.2.1 Hydrostatic Test	Amended & renumbered
20.2 Commissioning		Amended & moved to 17.1
20.3 Water Quality Testing	17.3 Water Quality Testing 17.3.1 Water Quality Results	Amended & renumbered
	17.4 Civil & Mechanical Inspection and Testing	new

	17.5 Building Certification	new
	17.6 Electrical and Control System Inspection and Testing	new
20.4 Post Construction Documentation and Practical Completion	18 Handover requirements	
	18.1 Project completion	new
20.5 As Constructed Information	18.2 As Constructed Information	Amended & renumbered
20.6 Asset Manuals	18.3 Asset Manuals	Amended & renumbered
Appendix A – Definitions/Acronyms		Amended
Appendix B – References		Amended
	Appendix C - Sample Outline for Drinking Water Quality Protection Plan	new
	Appendix D - Computational Fluid Dynamics	new
	Appendix E – Preferred Equipment List	new