

Managing water at Rutherglen Battery

01 Regulatory Requirement

Federal, State and Local Governments set strict conditions to ensure that **Infrastructure Projects do not adversely impact water systems**, reflecting the importance of preserving Queensland's Great Barrier Reef, the Baffle Creek Catchment, and its connecting waterways

REQUIREMENT	WHAT IT COVERS
State Code 27 — Performance Outcomes	Minimise disturbance to acid sulfate soils (PO16), maintain water quality of receiving waters and wetlands (PO17), and prevent any release of contaminants to surface or groundwater in any incident (PO18).
Gladstone Regional Council Planning Scheme 2026	Water quality, drainage, groundwater and sediment control during construction.
GRC Flood Hazard Overlay Code	Electrical infrastructure must sit above — or mitigate — floodwater infiltration.
Australian Standards AS 1940:2017 · AS/NZS 5139:2019 · AS 2067:2016	Spill containment, battery safety and transformer containment.

02 Key Findings

Four reports were developed, including a geotechnical and soil testing report, a Risk Management Assessment Report, a flood study, and a Stormwater Management Plan (with containment), to ensure that all potential impacts to storm water systems are considered and avoided through project design.

WHAT WAS FOUND

- **Sensitive areas remain unaffected.** Project site avoids waterways, wetlands and drainage lines
- **Flooding does not reach the batteries.** Floodwaters stay within creek and overland flow corridors up to at least 1-in-500 year events, and key electrical equipment is safe even in this event - exceeding Council's requirement.
- **No change to drainage.** No change to flood levels, speeds or flows on or around the site, and natural drainage paths are maintained.
- **Soil testing.** No presence of any acid sulphate soils were identified
- **Environmental protections.** Development design will prevent erosion and sediment runoff
- **A single crossing of an overland flow path.** This is required for project access. This will be designed and built to maintain existing overland flows in accordance with council engineering requirements.
- **Effective containment systems.** All equipment will be located in bunded enclosures with 100% of firefighting water capacity. Downhill of this, detention and sedimentation ponds are designed to catch 100% of firefighting flows and overland flow from a simultaneous 1-in-10 year rainfall event. The 800m long, 2.7m high grassed berm will prevent any further excess water from entering creek systems or groundwater.

444
kL

Fire-fighting water containment required (incl. 15% margin)

9,830
kL

Basin 1 (north-western) minimum capacity

19,732
kL

24-hour rainfall runoff, 1-in-10 yr, both catchments

Basin 2 (western) minimum capacity

In plain terms: the basins are deliberately sized larger than the worst case - a fire or explosion during a major rain event, where large volumes of suppression water or chemicals mix with rainwater.



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03 Containment and management measures

Design of the Rutherglen Battery incorporates layered containment measures to ensure that the project is physically separate from local water systems - even in extreme emergency or weather events.

Oil-proof transformer bunds - Dedicated impermeable bunds, separate from the BESS, sized to hold 110% of transformer oil volume, plus a rainfall and fire-water allowance.

Secondary Containment method - Kept empty and designed to retain the full volume of fire-fighting water plus twenty-four hours of rainfall.

Earth berm is the tertiary containment method - Perimeter berm follows the topography to intercept and direct fire-fighting runoff to the detention basins.



Sealed, impervious battery bunds - Each BESS container is individually bundled and built to contain 100% of the total water volume for fire fighting.

Automated fail-safe bund valves - Automatically close on leak, heat or fire detection to isolate and retain contaminated liquids.

Two systems with one goal: keeping local waterways safe - Stormwater normally flows through detention ponds to local creeks. In an emergency, valves close to contain all water on site, with any contaminated water removed by licensed contractors.

04 Ongoing checks and management plans

Monitoring, evaluation and reporting against regulatory requirements to ensure no impact to natural water systems is a key part of the management plans that will be enforced and followed throughout the life of the project.

- **Water-quality monitoring** of nearby creeks, before development (as a baseline), and after heavy rain or any incident.
- **Safety-system testing** - heat and gas detectors and exhaust fans checked at least every six months; fan-failure alarms fitted.
- **Emergency Response Plan** addressing battery overheating, fire and explosion scenarios.
- **O&M plan** - monthly visual checks of liners, bunds, valves and containment infrastructure.
- **Contaminated-water disposal** using licensed waste contractors after any incident.

