

Painkalac Reservoir Embankment and Spillway Upgrade, Painkalac, VIC.

Painkalac Dam is an earth fill embankment dam, located on Painkalac Creek, approximately 5 km upstream of the townships of Aireys Inlet and Fairhaven. The reservoir has a volume of 532 ML with water used for reticulated urban water supply. The dam and concrete spillway were built in 1978 with an embankment length of 125m and a maximum height of 8.6 m.

Barwon Water has arranged annual condition assessments and various dam safety investigations in accordance with the ANCOLD Dam Safety Management guidelines (2003a). These assessments and a number of subsequent dam safety investigations have identified a need for embankment and spillway upgrade works at the Painkalac Reservoir.

Works Include

Embankment Stability Upgrade

- Construction of the new downstream access road, box culverts and associated erosion protection.
- Embankment construction including installation of geogrid reinforcement layer.
- Construction of 2.5km single lane access road.
- Construction of top toe drainage system works and installation of standpipe piezometers.
- Construction of 2A and 2B filter protection layers including chimney filter.

Spillway Upgrade

- $\approx 1000\text{m}^3$ of concrete works.
- Construction of new spillway wall upto 6m high.
- Spillway removal and reinstatement.
- Shot creting and rock anchoring of spillway wall.
- Temporary works to protect the embankment and maintain spillway flow capacity.
- Removal of existing road access bridge.

Site Issues

- High rainfall zone.
- Coordinating delivery of large box culverts and link slabs.



Client:

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Barwon Water Alliance**

John Hollands Project Team:

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Project Design:

**SKM
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Contract Sum: \approx \$2.9M