

Raising the Darwin River Dam full supply level (embankment and spillway works)

Frequently asked questions



What are we doing?

Power and Water is raising the full supply level of the Darwin River Dam by 1.3 meters.

Why are we doing it?

The Darwin River Dam is the main potable water supply source for Darwin and surrounding areas. To support a growing population, Power and Water will raise the height of the spillway by 1.3 meters. This is the optimum height to maximise water yield from the dam at the lowest cost and would give an extra 20 per cent storage capacity.

How are we doing it?

Engineering works will consist of installing concrete structures on the existing concrete weir of the spillway, extending filter layers to keep moisture away from the dam core and replacing fill and rock protection.

Embankment works will include:

- Downstream filter extended to the dam crest
- Filter supplemented to improve transmissivity
- Additional erosion protection on downstream face



- 0.75m wave wall
- Crest capping reinstated
- Additional rip rap protection at the crest upstream of wave wall provided for erosion protection

Spillway works will include the installation of ogee crested concrete spillway (1.3 meters).

Intake tower modifications will also be undertaken.

Public access to the dam will be closed for the duration of the works as there will be heavy earthmoving equipment over the site.

What preliminary studies were completed?

A series of investigations and reports covering engineering, cost, heritage and environmental impact studies have been completed which supports the raising of the dam's full supply level by 1.3 metres:

- Yield Assessment (SKM) – for various full supply level scenarios
- Darwin River Dam Raising Preliminary Technical Investigations and Cost Benefit Analysis (SMEC)
- Potential Water Quality Impacts Associated with Raising Darwin River Dam (TWS & HLA-E)
- Archaeological Survey (ESHS)
- Assessment of Biodiversity Impacts (EcOz)
- Downstream Flood Estimation (SMEC)

The Raising Darwin River Dam Main Embankment and Spillway project won the Planning Investigation category of the 2008 Engineering and Excellence Award for Reports Procedures and Systems.

Darwin River Dam quick facts

- Constructed in 1972
- Provides approximately 90 per cent of Darwin's total supply
- Yield 40,000ML/annum
- Closed catchment
- Minimal water treatment (chlorination)
- Zoned earth-fill embankment
- Maximum embankment height..... 27.4m
- Crest length.....518m
- Spillway crest length260m
- Spillway design capacity 2080m³/s
- Catchment area 205km²
- Reservoir area 40km²
- Full supply volume265,000ML

More information

For more information visit powerwater.com.au or call 1800 245 092.

