

# CROTTY DAM

**Location:** On the King River near Queenstown. Take the Mt Jukes Road south of Lynchford.

**Owner:** Hydro Tasmania

The plaque is located at a viewing point just upstream of the dam.

## Spillways

Spillways are vital for discharging flood waters to prevent overtopping and destruction of the dam embankment. They are usually placed on one abutment of the dam or over a convenient saddle.

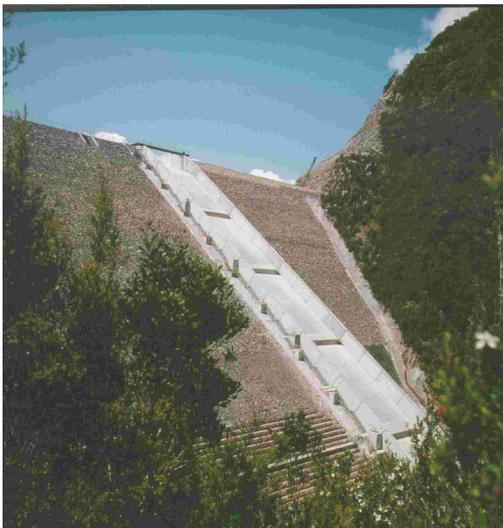
These options were difficult at Crotty because the abutments were so steep. The spillway chute was therefore placed on the embankment itself.

Special measures were needed to ensure its absolute integrity during floods. Embankment movements were reduced by incorporating a large proportion of river gravels in the fill. The reinforced concrete chute was divided into five sections separated by flexible joints, and each section was firmly anchored into the embankment fill.

The design team was supervised by Bill Tindall and Frank Kinstler.

## Surroundings

The dam is located in a very scenic area, adjacent to the World Heritage Area, with views of Frenchmans Cap. Great care was taken to minimise and revegetate construction scars. The extensive works areas for the dam and the tunnel are hidden under Lake Burbury, and the whole of the storage was cleared of trees.



**Crotty Dam and its spillway**

## HISTORIC ENGINEERING MARKER

### Crotty Dam

This concrete-faced rockfill dam was completed in 1991 by the Hydro-Electric Commission. The dam impounds Lake Burbury and is unusual in having a spillway chute on its downstream face. Flexible joints in the chute allow it to adjust to the long-term movements of the underlying fill without cracking. The chute can pass flood waters of up to 240 m<sup>3</sup>/s, thereby allowing time for the large valve in the diversion tunnel to be opened.

Dedicated by The Institution of Engineers, Australia 2001

The dam is near the site of Crotty Village which died overnight when the North Mt Lyell smelters at Crotty failed to produce copper metal in 1903.

### King River Power Development

From Lake Burbury water is carried through the West Coast Range in a 7 km long headrace and power tunnel to the power station. The John Butters Power Station has a single 163 MW Francis turbine which discharges back into the King River.

Heavy metals from the Mt Lyell copper mine were diverted away from Lake Burbury to create a good fishing habitat.

### Heritage Dams Project

Crotty Dam was one of the 25 dams selected in a national survey to find those dams with the highest heritage values.