



THE GOLDEN PIPELINE
A NATIONAL TRUST PROJECT

MUNDARING WEIR



Building the weir wall showing 'plums' in the concrete 1900

BL 000804D

Mundaring Weir was built between 1898 and 1902 to store water to be pumped to the arid Eastern Goldfields as part of the original Goldfields Water Supply Scheme, designed and constructed under the direction of CY O'Connor. Today, Mundaring Weir still supplies water to the Wheatbelt agricultural areas and the Goldfields.

CHOOSING THE SITE

O'Connor's assistant TC Hodgson considered 17 sites for a reservoir before choosing the current one on the Helena River in the Darling Range near Perth. Investigation revealed all the requirements for a dam - a river in a narrow valley with steep sides, foundations of bedrock, and a large catchment area of reliable rainfall.

BUILDING THE WEIR

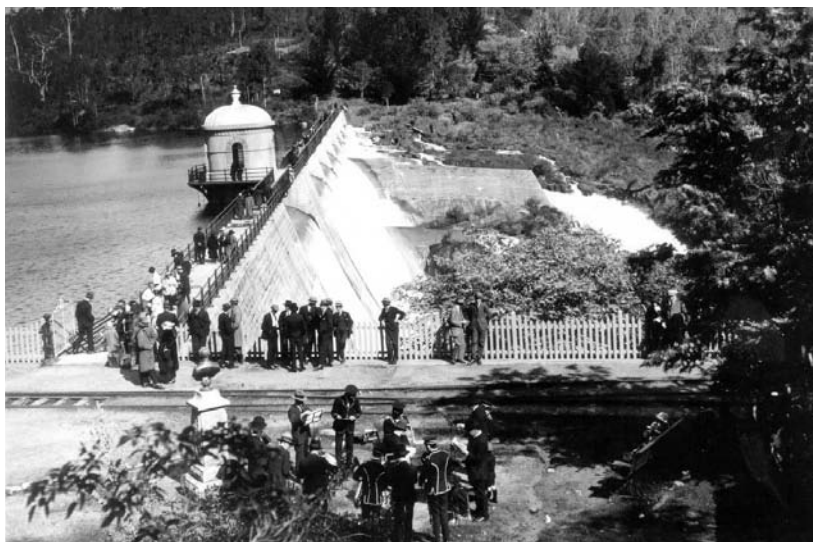
Firstly a branch railway line was built from Mundaring to the weir site to transport the materials required for building the weir.

Next, trees were cleared and excavation of the foundations began. In one section, what was thought to be bedrock was a large boulder. When it was removed a deep fault in the bedrock was found. Fixing both of these problems delayed construction for one year. To help overcome the delay, eight electric arc lamps were installed on the site. This allowed the hours of work to be extended.

Work began on the wall in February 1900. Concrete was prepared at the site and transported to the wall in wheelbarrows or on a conveyor. As the height of the wall grew, a steam crane was used to move the concrete in skips. Large granite rocks called 'plums' were inserted into the concrete as the wall was built to provide stability and to save on the amount of concrete required. Tragically, a labourer named William Aldridge was killed when he fell while working on the wall in February 1901.

Two valve houses were built for the valves that regulated the flow of water from the weir. It took one thousand turns of the valve wheel to fully open or close one of these valves.

The weir wall was completed in June 1902. It was 100 feet (30.5 m) high, 755 feet (230 m) wide and the storage capacity of the reservoir was 4 655 million gallons (21.16 million cubic metres). This is equivalent to the water in 10 000 olympic-sized swimming pools!



Overflow c. 1923

BL 12142P

CHANGES TO THE WEIR

The weir's storage capacity was trebled when the wall was raised 10 m (completed in 1951) as part of a post-war scheme (Comprehensive Water Supply Scheme) promoting further agricultural expansion into inland areas.

As part of raising the weir wall, the upper valve house was dismantled from the original wall and re-erected on the raised one to preserve the appearance of the original wall.

The southern side of the wall had a series of openings to allow for overflows. In 1959 steel gates were installed to block the openings when required. In effect, this raised the wall and allowed for more water to be stored. The gates were hardly used due to low water levels in the dam and for safety reasons were removed in 1997.

WEIR WORKFORCE

Over 300 people were involved in the original weir construction between 1898 and 1902. Men flocked to the site for work - many were newly arrived to Western Australia - and a camp quickly sprang up near the weir. Families often joined the men at the camp and a school opened in November 1898 with 48 students.

In 1951, displaced persons from war-torn Eastern Europe were employed for the raising of the weir wall. Many of these workers lived in a construction camp located on almost the same site as the original camp.

WEIR OVERFLOW

Mundaring Weir attracted hundreds of sightseers when it first overflowed in 1903 and has been a tourist attraction ever since. The Weir last overflowed between September and October 1996 and drew large crowds. An overflow of this kind is unusual now as the Water Corporation manages the storage of water between dams throughout the State.

FURTHER INFORMATION GO TO

GOLDEN PIPELINE WEBSITE:
www.goldenpipeline.com.au
 WATER CORPORATION WEBSITE:
www.watercorporation.com.au

READ

Ian Elliot, *Mundaring: A History of the Shire*, Shire of Mundaring, 1983

Edward Quicke, *Mundaring Weir Among the Hills*, Mundaring and Hills Historical Society Inc, 1996

National Trust, *The Golden Pipeline Heritage Trail Guide*, 2002

J Lefroy, D Frylinck and M Duke, *The Pipeline CY O'Connor Built*, Fremantle Arts Centre Press, Western Australia, 2003

VISIT

Golden Pipeline Heritage Trail, Other Dams: Canning Dam, Churchman Brook Dam, Serpentine Dam

The National Trust promotes the value of heritage and uses its heritage assets to build a better future for Western Australia. The National Trust seeks to encourage and educate the community about the appreciation, enjoyment and use of its unique cultural and natural heritage, and to provide long-term social, economic and environmental benefit to all Western Australians.

FOR MORE INFORMATION REGARDING MEMBERSHIP AND VOLUNTEERING CONTACT:

The National Trust of Australia (Western Australia)
 PO Box 1162
 West Perth
 Western Australia 6872
 Telephone 08 9321 6088
 Facsimile 08 9324 1571
 Email trust@ntwa.com.au
 Website www.ntwa.com.au