Ord River Dam

Historic Engineering Marker
Commemorative Plaque
Unveiling Ceremony

Kununurra - Western Australia

Saturday, 28th August 2004
Ord River Dam
HISTORIC ENGINEERING MARKER

Ord River Dam

The Public Works Department of Western Australia with Contractor Dravo Pty Ltd completed this dam in 1972. It opened up 76 000 hectares of land for irrigated agriculture and changed the economic and social structure of the region. The rockfill dam is 68 metres high and 355 metres long and originally impounded 5.8 million megalitres of water, then the largest reservoir in Australia. In 1996 the spillway was raised 6 metres, almost doubling its capacity. Construction engineers were challenged by enormous annual floods and the site’s remoteness.

The Institution of Engineers Australia and Water Corporation of Western Australia, 2004
Program

Welcome

Mr Ken Kelsall AM HonFIEAust CPEng
Former Chairman, WA Division
Engineers Australia

History

Mr Tony Moulds MIEAust CPEng
Chairman, Engineering Heritage Panel
Engineers Australia, WA Division

Unveiling of the Commemorative Plaque

Hon. Nick Griffiths MLC
Minister for Government Enterprises

Acceptance of the Commemorative Plaque

Mr Jim Brown FIEAust CPEng
General Manager
Water Corporation

Morning Tea
A Brief History

In the 1940s investigations were made into various sites for the main dam on the Ord River but, as the magnitude of the wet season discharges of the river became apparent, provision of adequate spillway capacity in the narrow gorge became a problem. Depth to foundation rock was also greater than expected. A submission to the Commonwealth Government for funding in 1956 for the whole scheme was unsuccessful but a five million pounds grant for northern development was offered by Canberra. In the same year Kimberley Research Station reported favourably about the establishment of irrigated agriculture and the Hawke State Government decided to develop Stage One of the scheme (the diversion dam, preparation of the irrigation area and the building of Kununurra) under the grant. Stage One was completed in 1963.

A rockfill dam with a thin impervious core was found to be more economical for the main dam than the type of mass concrete dam that had been proposed originally. It was initially planned to provide for a huge volume of the design flood level by means of a concrete-lined spillway cut through a saddle just downstream of the right abutment of the dam. An innovative alternative was found to be more economical. The spillway was relocated by cutting through rock at a saddle 8 km North-East of the dam. The height of the dam was raised so that it would be able to store major floodwaters and release them gradually over the spillway during the dry season.

The Commonwealth decided to provide a grant for the construction of the main dam in 1967 and the contractor for the works, Dravo Pty Ltd commenced work in April 1969. As work could not be carried out on the dam during the wet season the work was programmed to be carried out during three dry seasons (from April to November). Work was completed in 1971.

Commercial success of tropical agriculture and horticulture has been hard won on the Ord. In 1974 growing of the main crop, cotton, had to be suspended due to the increased resistance of the heliothis moth to insecticides. During the 1980s the growing of low-priced field crops, such as sorghum, ceased to be viable. In the 1990s a highly diversified pattern of horticulture and agriculture proved to be more resilient and profitable, especially those targeting niche markets during the southern winters.