ENGINEERS
AUSTRALIA

River Murray Barrages

Award of

National Engineering Landmark

Unveiled on
28 September 2001

at Goolwa

Ceremony Report

by Nigel Ridgway
for Engineering Heritage South Australia
18 May 2009

CEREMONY ARRANGEMENT

The National Engineering Landmark was unveiled on 28 September during the Centenary of Federation year by the National Vice President of Engineers Australia Mr Peter Koukourou.

The plaque event was combined with a national water history conference *Water History – Lessons for the Future*, convened by SA Department of Natural Resources and SA Water at the Goolwa wharf, Paddle steamer Oscar W and the Signal Point River Murray Centre. The Chair of the conference was Bart van der Wel, a kind supporter of the plaque project.

The plaque is mounted at the Goolwa Barrages lookout point adjacent to existing plaques by the Murray Darling Basin Commission. Please find attached pictures of the plaques.

Approximately 200 people attended the plaquing ceremony which was incorporated in the conference program and afternoon tea was sponsored by SA Water. A copy of the speech by Engineers Australia is included as part of the record.

SPEECH BY NIGEL RIDGWAY

Chairman , Bart van der Wel, CEO Murray Darling Basin Commission, Dr Roy Green, National Vice President of the Institution of Engineers Australia, Peter Koukourou, representing the National President, Dr Martin Cole, Ladies and Gentleman.

The purpose of today's ceremony is to give recognition to the River Murray Barrages, an engineering project of national significance commissioned in 1940 as a direct result of post Federation cooperation between the States of NSW, Victoria , SA and the Federal Government. Recognition is also being given later in the year to the Hume Dam, Yarrawonga Weir and thirteen locks forming the Engineering Works of the River Murray, primarily built for the purposes of irrigation, domestic water supply, navigation and flood mitigation.

In the second half of the 19th century and the early years of the 20th century the River Murray was an important trade route navigated by paddle steamers, and the locks and weirs were necessary at the time to maintain a reliable river level. Today's transport systems are different but the romance of river travel remains as demonstrated by the

Centenary of Federation "Source to Sea" flotilla of boats expected in Goolwa tomorrow.

For the last 16 years the IE has been recognising significant engineering works through its historic engineering plaquing program. The objectives of the plaquing program are to increase public understanding of engineering and its impact on the development of Australia, to promote the conservation of historic engineering works, and to emphasise the importance of engineering infrastructure to society. Engineering Heritage Australia, as part of its Centenary of Federation program, is plaquing a number of national engineering projects this year, including the Trans Australian Railway and the East West telegraph.

The River Murray Barrages purpose is to separate fresh water from salt water and maintain lake level in the lower River Murray system. There are five main barrages , one located across the main channel upstream of the River Murray mouth and four in the shallow waterways that run between Lake Alexandrina and the northern end of the Coorong.They are named Mundoo, Boundary Creek, Ewe Island and Tauwitchere.

The barrages were designed and constructed by the Engineering and Water Supply Department of SA between 1935 and 1940, and funded by the Governments of the Commonwealth of Australia and the states of NSW, Vic and SA under the River Murray Waters Agreement.

They maintain fresh water in Lakes Alexandrina and Albert and stabilise water levels to allow irrigation of adjacent and upstream lands, whilst river floods pass through the concrete sluices and gate sections. Before the construction of the barrages, tidal effects and intrusion of sea water were felt up to 250 km upstream of the mouth. Without the barrages the growth of Adelaide and the supply of water from the lower river to the lower SE of the state would not have been feasible.

The Goolwa barrage is constructed of concrete and each of the others is an earth embankment with concrete sluices. The sluices consist of a footing slab supporting closely spaced piers and between the piers are gates or removable stoplogs to control the water level.

Several prominent engineers were involved in the first design and construction. Designs were prepared under the supervision of John Henry Oborn Eaton, Engineer in Chief of the E&WS Department and his successor Hughes Thomas Angwin. Elwyn Lawrie was the Engineer for

Construction and like Eaton they were both former Chairmen of the Institution of Engineers, SA Division.

The River Murray barrages are worthy of the Institutions highest award, the National Engineering Landmark, for several reasons. They are unique in Australia in terms of their size and scale and are associated with the formation of the River Murray Commission (now the Murray Darling Basin Commission) which controls one of the largest drainage basins in the world. The water has important recreational use and the barrages are listed on the Register of the National Estate.

Today it is recognised that the barrages negatively impact the biodiversity and ecological resilience of estuarine plant and animal species in the lower Coorong and the fish catch has declined in the remnant estuary. However at the time of the barrages construction the achievement was momentous and some 1.0 million people today in Adelaide and rural SA use the water and food production reliant on irrigation. In low rainfall years up to 90% of the water supply is from the River Murray for the Eyre Peninsula, Yorke Peninsula, Barossa and Onkaparinga areas.

Future improvements in the barrage control systems will minimise the environmental effects by conserving a full range of habitats.

I now invite Mr Peter Koukourou, representing the National President of the IEAust, to unveil the plaques and present them to SA Water and the Murray Darling Basin Commission.

Figure 1 River Murray Commission Plaque #1

Figure 2 River Murray Commission Plaque #2

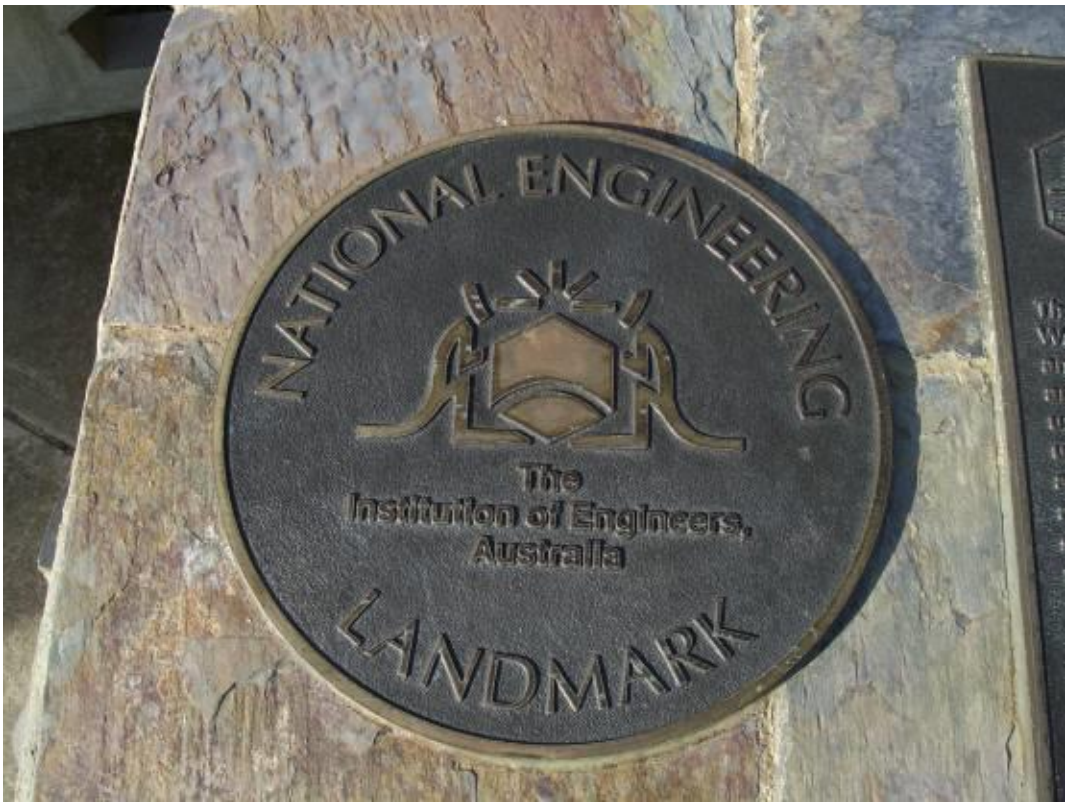

Figure 3 National Engineering Landmark

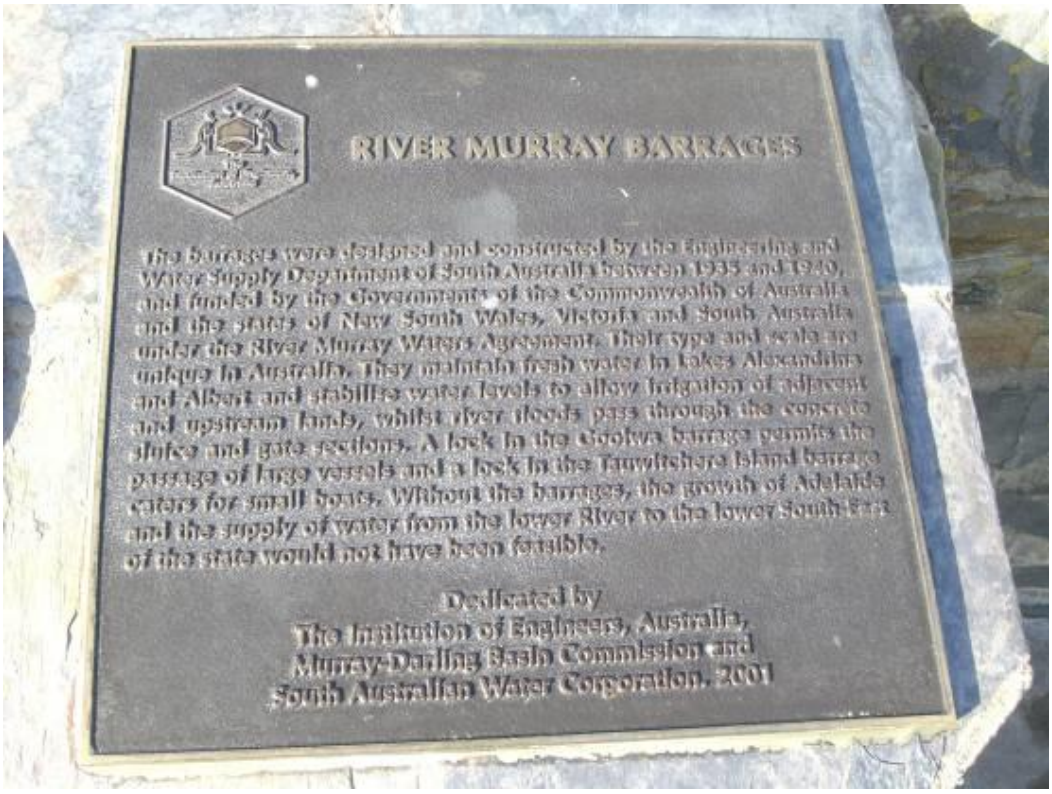

Figure 4 NEL information plaque

Figure 5 NEL overlooking sea

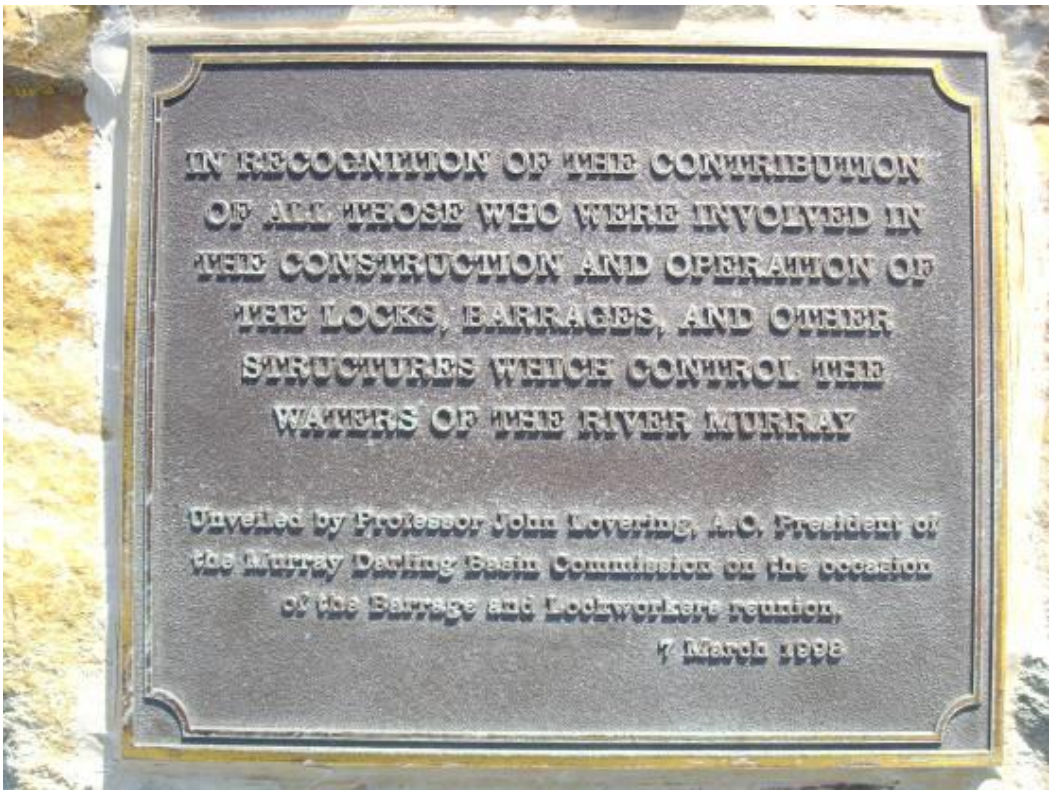

Figure 6 MDBC Plaque