

Case Study

Project: **Troubridge Lighthouse Protection**
 Location: **Troubridge Island, South Australia**
 Client: **Dept. Of Environmental Heritage & Aboriginal Affairs**
 Contractor: **Operation Challenge Cadell Prison**
 Date: **February 2000**



ELCOROCK®

Troubridge Shoal was first mapped in 1802 by English explorer Matthew Flinders, the first European to sight York Peninsula. A number of shipwrecks occurred on the shoal over the subsequent 50 years and in view of the shipping hazard that the shoal posed, the construction of a lighthouse was recommended.

In 1852 funding was approved for the construction of the lighthouse and by August 1855 the lighthouse and cottage were complete.

Troubridge Island Lighthouse was the second to be built in South Australia and one of only three prefabricated cast iron lighthouses in Australia. The lighthouse still forms part of the national network of navigational aids maintained around Australia's coastline. The lighthouse and cottages are also an important part of the state maritime heritage.

Ongoing erosion of the Island since the 1940's has reduced the size of the island considerably, to such an extent that in 1999 the lighthouse and cottages were in danger of being washed away. ELCO Solutions Pty Ltd was approached to help provide environmentally friendly and cost effective protection to the structures.

A number of options were investigated with respect to protection works, the main criteria being ease of construction and low environmental impact. The ELCOROCK® solution met with all the stringent requirements.

- Ease of construction: the only material to be transported to site was the ELCOROCK® containers. Unskilled labour was used to fill and close containers. Filling frames and sewing machines to close containers were supplied by ELCO Solutions Pty Ltd.
- Environmentally friendly: ELCOROCK® containers were filled with sand from the beach. Hence no rocks brought onto a sand island. The containers are made of polyester and will not deteriorate or rust like concrete and steel. They can be easily removed if conditions warrant.
- Cost: the cost of the ELCOROCK® solutions was substantially less than to rebuild the structures, and proved competitive when compared to other protection options.



Transporting ELCOROCK® containers



Before construction – December 1998

To date the protection works have met with all expectations and a second phase of protection works using ELCOROCK® has been completed to ensure the long-term safety of Troubridge Island Lighthouse.



Troubridge Island restored – January 2001

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