



PROJECT DESCRIPTION

Basin Head is a tidal inlet situated in the Northumberland Strait on the northeast coast of Prince Edward Island. Breaching of this inlet occurred in December, 2004 as a result of a sequence of storms. These storms resulted in significant deposition of sediments into the Basin Head estuary as well as heavy damage to the wharf structure, and the destruction of the outer wharves. The Basin Head estuary has just been designated as a Marine Protected Area. The integrity and stability of the entrance is a concern for the long-term health and management of this estuary.

The aim of this project was to assess present conditions at the site and develop an approach that would not only protect the site, but would address three related issues. First, the approach would have to minimize the potential for a second channel to form immediately alongside the east wharf. Second, it should prevent blowout of the dune system in this area. Third, and in some ways most importantly, the repairs had to preserve swimming in 'the run' - jumping off the bridge into the inlet to be carried out by tidal currents is an island tradition.

PROJECT APPROACH

Based on the objectives of the study, the following tasks were identified and performed:

- assessment of conditions prior the breaching of the tidal inlet and the destruction of the outer wharves;
- development of conceptual design for coastal engineering works at the wharves and adjacent east beach;
- provision of recommendations for the repair and ongoing maintenance of the wharf facilities;
- provision of recommendations for construction of a buried revetment barrier to prevent further breaching;
- provision of recommendations for the alignment and expected wave loading conditions on the wharf facilities, and;
- provision of recommendations for dune restoration.

CLIENT

Prince Edward Island
Transportation & Infrastructure
Renewal

LOCATION

Basin Head, PEI

DATE

2005