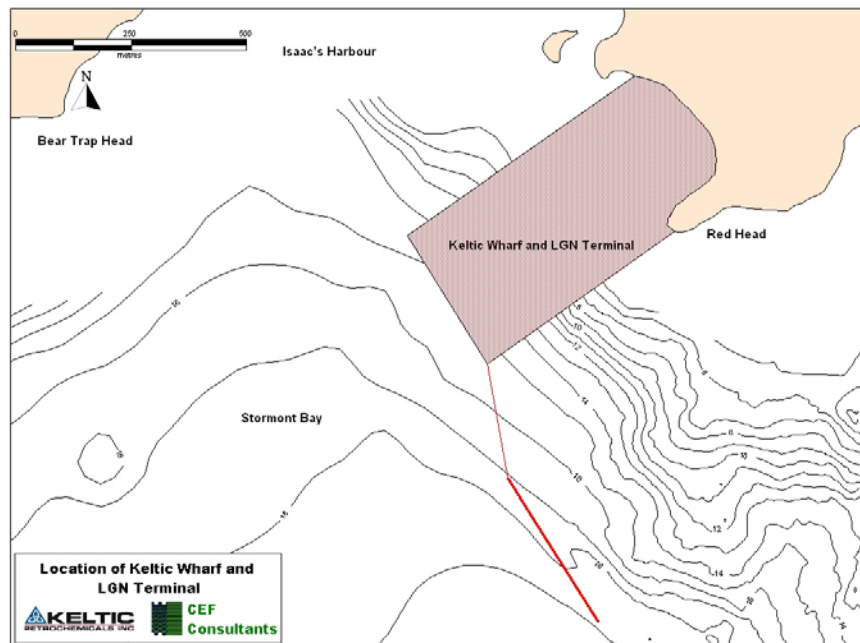


# Keltic Petrochemicals Inc. Habitat Creation Project

## Introduction

Keltic Petrochemical Ltd. has plans to construct a marginal wharf and LNG terminal at Red Head, near Goldboro, NS. The wharf will extend off Red Head into Stormont Bay and will connect to an LNG terminal running out to deeper water (Figure 1). Stormont Bay is relatively deep and open to the Atlantic Ocean, connecting the smaller harbours of Country Harbour and Isaacs Harbour.

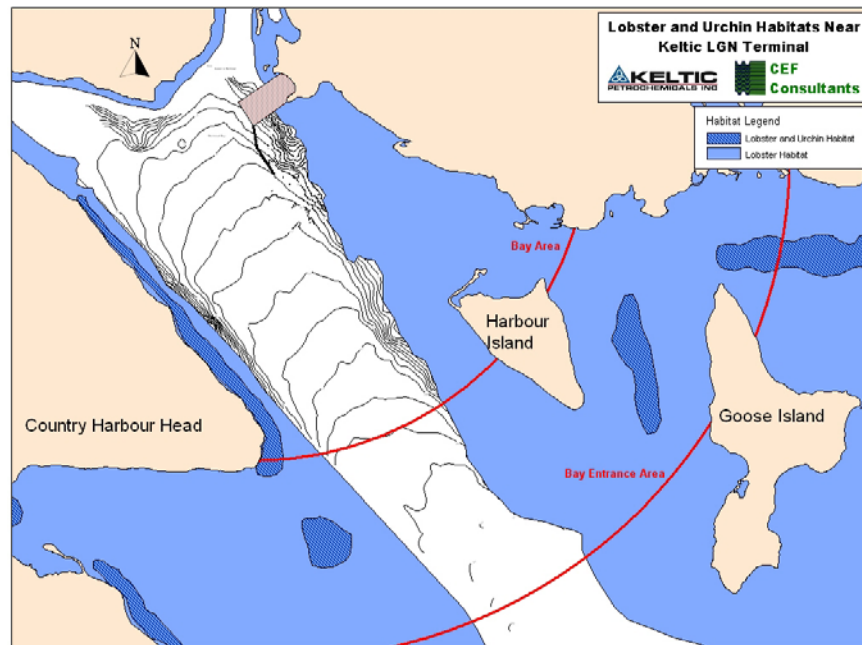


**Figure 1: Location of Keltic Petrochemical's Facilities**

The total area of the marginal wharf (Figure 1) is approximately 203,000 m<sup>2</sup>, calculated from the high water mark.

Fish habitat throughout Stormont Bay has been mapped by a number of initiatives since 1995. Figure 2 illustrates fish habitat in Stormont Bay based on the Guysborough County Coastal Resources Mapping Project (GCCMRP). Studies have shown that the lobster habitat in the eastern part of Stormont Bay is relatively consistent – a mix of rock, boulder, kelp, and patches of sand – between the proposed Keltic facilities and Harbour Island. In deeper areas, outside Country Harbour Head and past Harbour Island, habitat is patchier, related primarily to water depth and substrate.

If lobster habitat within the approaches to Stormont Bay are considered, the percent of habitat lost to construction of the wharf is only 0.45% of that available (Figure 2).



**Figure 2: Areas Used for Calculating Amounts of Habitat**

## Proposed Compensation Project

DFO has a preference for habitat compensation to be of a similar type and in the same general area as that lost. Construction of additional habitat within the bay is not practical because of the large area required and the presence of already suitable habitat in all nearshore areas. Therefore, a search was undertaken to find a suitable area consisting of predominately sand near the outer entrance to the bay.

The area outlined in red in Figure 3 is proposed as an area where lobster habitat, similar to that of the wharf area, can be created. Small rock piles about 0.5 m high (Figure 4) would be placed at 5 m intervals throughout the habitat creation area.

The habitat creation area is located in Fisherman's Harbour between two shoal areas where rocks protrude at low tide. Depths range from 10 to 14 metres within the habitat creation area, and the substrate is consistently silty-sand with sand dollars.

The area does not serve as a navigation channel for Port Bickerton, Country Harbour or Isaacs Harbour ports. Following habitat creation, water depths would be reduced by less than one metre.

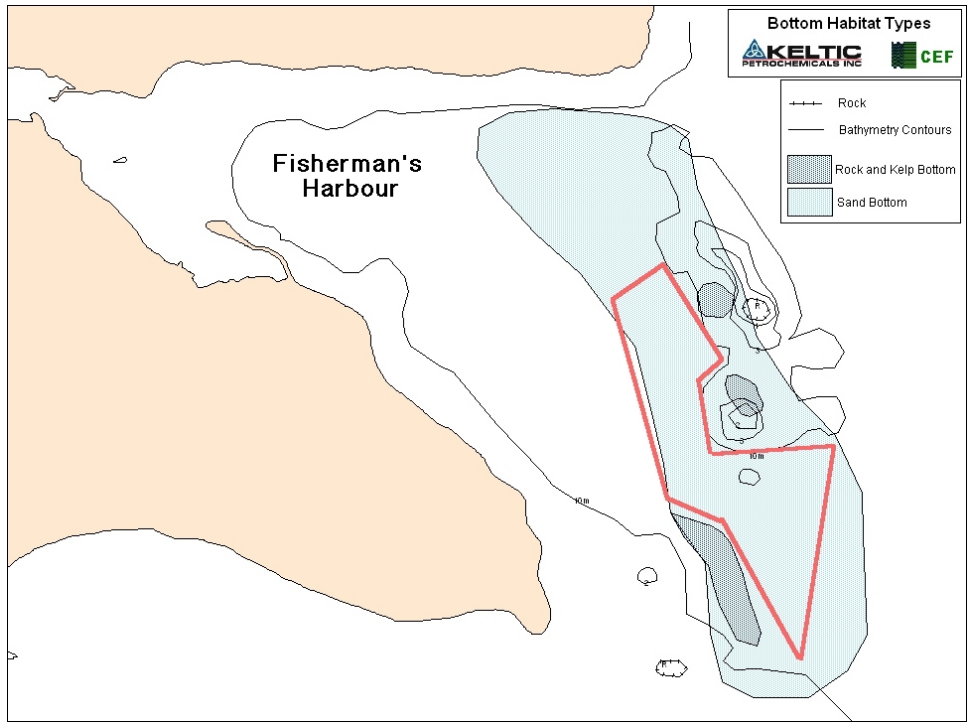


Figure 3: Area Proposed for Habitat Creation

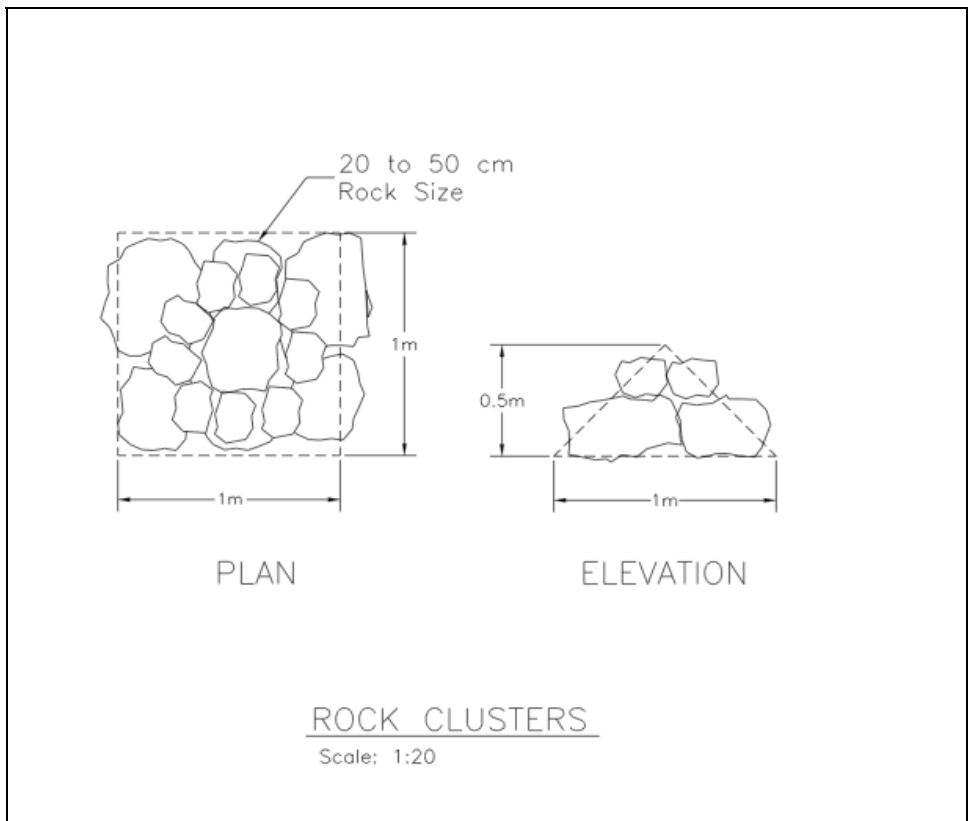


Figure 4: Proposed Rock Clusters for Habitat Creation