

**Site HCMB 23A:** Hantsport Rail Crossing

**Date Assessed:** 04/09/03,  
05/12/03

**GPS Coordinates:** N 44° 58' 03''  
W 64° 01' 35''

**Crossing Status:** Complete restriction.

**Rail Crossing:**

Main crossing is a 3 chambered aboiteau. Spillway has 6 drainage culverts with tide gates.

**Crossing Condition:**

The gates on each chamber of main crossing are dislocated and partially blocking culverts. Spillway is intact.

**Restriction Indicators:**

- Difference in water levels
- Turbulent water flow
- Differences in stream width
- Structure failure
- Vegetation differences
- Aboiteau/tide gate
- Scour pool
- Divergent channel
- Bank slumping



**Downstream of Crossing**

**Creek:** Approximately 20m wide with fast, turbulent flow. Inlet from the Avon River estuary.

**Land:** Mudflat, marsh channel and Minas Basin. Hantsport Dockyard to the left of crossing.

**Upstream of Crossing**

**Creek:** Approximately 20m wide with turbulent, swirling flow. Channel is divergent from original path and flows to crossings HCMB24B and HCMB22B

**Land:** area between railway and HCMB24B is predominantly tidal marsh.

**Comments:** Crossing originally designed to completely restrict tidal flow upstream but since failure of all 3 gates, tidal flow has been reaching upstream. If area is not going to be fully restored by replacement with a larger opening, the existing broken gates should be removed. This would improve hydrology to upland system however a larger opening would substantially improve river condition. Land use upstream of crossing HCMB24B would need to be assessed to determine impact and potential for habitat restoration or agricultural loss.



**Figure 1:** The extremely turbulent outflow through the comparatively small culvert.



**Figure 2:** Swirling and small eddies as the water is trying to drain through the upstream side of the culvert.



**Figure 3:** Downstream of the six overflow aboiteaux.



**Figure 4:** Upstream of the six overflow aboiteaux.



**Figure 5:** replacement or removal of broken gate would reduce the accumulation of debris

**Figure 6:** Bank scour downstream of aboiteaux



**Figure 7:** close up view of culvert

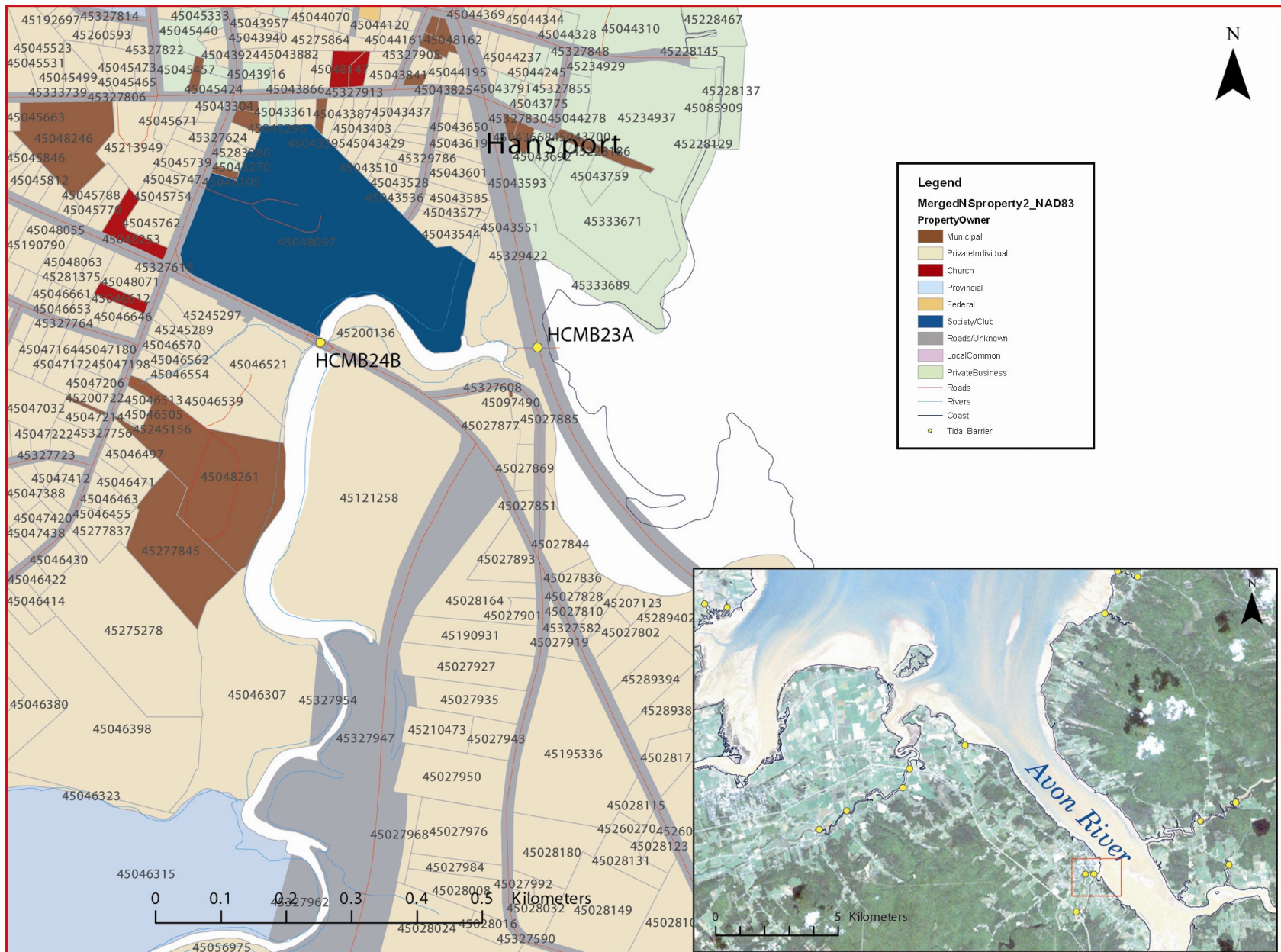


Figure 8: Property management and tidal barrier data for Nova Scotia (Service Nova Scotia, and Municipal Relations)



**Figure 9:** 2002 Aerial photograph containing tidal barrier data, (1: 10,000)