

of the order of 15 m, approximately equal to the length of some of the private docks in the area. Groin locations should be such that they do not inhibit boat traffic but that they are still useful in trapping sand. The sand trapping role is clearly suggested by the T-groin tests in the model. However, the amount retained at each groin will depend on the rate at which sand is depleted from the feeder beach. Figure 7.1 shows suggested locations for the test groins. The groins must be examined periodically to evaluate their sand trapping role. At the end of a one year period their efficacy will become apparent. If not effective, they should be removed.

It is evident that concentrated flood currents, waves and boat wakes are responsible for the erosion problem along the north bank where sediment supply is restricted by the presence of the north jetty at the entrance. A possible solution is to protect the entire shoreline by rocks placed against the bulkhead (or natural shoreline where there is no bulkhead) as well as short rock groins of the type noted above, for sand retainment (assuming of course that the groins are effective for this purpose). These groins and the rocks against the shoreline would also serve to attenuate the erosive forces due to currents, waves and boat wakes so that, regardless of their sand retaining capabilities, they may be useful. Long groins on the other hand will undoubtedly cause some adverse effects updrift as well as downdrift.

A problem with this scheme, however, is that placement of rocks against the bulkhead will not necessarily protect poorly designed bulkheads, or bulkheads in poor state of repair, from failure due to erosive forces which can be mitigated but not eliminated. A strict enforcement of boat speed limits should somewhat contain the bulkhead