



Shoreline armoring using conventional rip rap showing effects to neighboring property (top left) and restoration after using rooted tree revetment (top right). During Nov 24, 2011 storm (bottom left) and day after (bottom right).



Shoreline protection at Kitty Coleman Provincial Park using ballasted trees before treatment (top) and 2 years after installation (bottom). Since treatment this segment of shoreline has been exposed to 2 storm events on Jan 18, 2010 and Nov 24, 2011, both estimated to have a magnitude 5 year return period.





Shoreline protection at Kitty Coleman Provincial Park using ballasted trees before treatment (top left), during installation (top right) and after installation (above). During Nov 24, 2011 storm (above right) and day after (right).

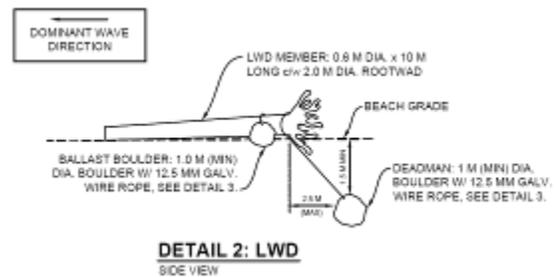
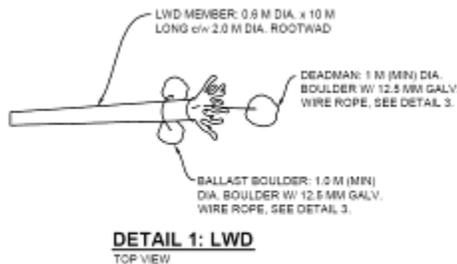
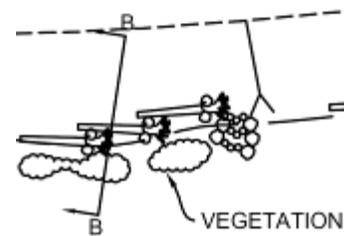


WHY WE DO IT

It has been shown that conventional rip rap armouring and other hard structures can amplify wave energy both at the treatment site as well as the adjacent untreated shoreline. Our rooted tree revetments are designed to stabilize the shoreline and attenuate wave energy without cumulative negative effects. These structures are readily accepted by DFO.

HOW WE DO IT

Older second growth conifer trees about 36' long are positioned in a shingle formation and anchored onto the beach near high water mark with intermittently spaced deadmen buried in the beach as shown in the figures below. Ballast rocks added at each overlap are tendoned with wire rope. The backshore and shoreline areas are planted with suitable native species to help further stabilize the shoreline.



WHEN WE DO IT

Mid to low tide cycles during the typical marine shoreline work window, which is between December 1- February 15 and June 1 – September 1 in a calendar year.

WHO IS INVOLVED

Wave energy predictions and material sizing have been calculated for shoreline restoration projects completed at Kitty Coleman Provincial Park and other locations by Dr D. McLean, coastal process engineer with Northwest Hydraulic Consultants. After verifying with Dr McLean the material specifications for the treatment site we notify DFO of the work. Our installation team consists of a machine operators, biologist, technicians and labour crew. For more complicated sites, Dr McLean would provide added technical support.



TIME AND COST

Time and cost can vary depending on beach access, material cost and other factors. After a site visit we can provide a preliminary estimate.