

REQUEST TO APPEAR AS A DELEGATION

Please be advised that:

1. Committee and board meeting schedules are available at www.comoxvalleyrd.ca or by calling 250-334-6000. Delegations are scheduled at the beginning of meetings.
2. Delegation applications must be received at least one week prior to the requested meeting date.
3. Maximum presentation time is 10 minutes, unless previously approved.
4. Presenters are to address the board or committee, and not the audience.
5. Please ensure that your cell phone is turned OFF during the meeting.
6. Presentation materials are to be submitted to the legislative services department a minimum of one day before the meeting date.
7. Applications to appear as a delegation must complete this form and email it to administration@comoxvalleyrd.ca; mail to 600 Comox Road, Courtenay, B.C., V9N 3P6 or drop off in person at 600 Comox Road, Courtenay, B.C.

The personal information contained on this form is collected under the authority of the *Freedom of Information and Protection of Privacy Act*, the *Local Government Act* and *Comox Valley Regional District (CVRD)* bylaws. The information provided will become a matter of public record and will be published in meeting agendas and minutes and posted online with the exception the information provided in the contact purposes only box. For enquiries about the use of information on this form please contact the corporate legislative officer at 600 Comox Road, Courtenay, BC or at 250-334-6000 or email at administration@comoxvalleyrd.ca.

Name(s) of person(s) speaking: Rosemary Carnahan/ Phil MacLaren

Organization you are representing: Kin Beach Park Board

Primary purpose of the organization: operate and manage Class C Provincial Park Number of members: 5

Mailing address: 1025 Vega Rd

City: Comox Postal code: V9M 4B7

Contact Name: Rosemary Carnahan

Subject matter: Shoreline Restoration Project due to be implemented Dec 2016-Mar 2018

Specific request of the regional district, if any (i.e., letter of support, funding):

Letter of Support

Requested meeting date: November 2016

Audio-visual equipment required: _____

Date of Application: Oct 21,2016

Information for contact purposes only	
Tel: _____	Email: _____

<i>Internal Use Only</i>	
Service this delegation applies to:	_____
Committee delegation to go to:	_____
Cc delegation application to:	_____



KIN BEACH SHORELINE RESTORATION PROJECT

This information sheet is to inform the local residents and park visitors at Kin Beach Provincial Park of a two year shoreline restoration project that is being planned by the Kin Beach Park Board for winter 2016-2017 and spring of 2017.

KIN BEACH PROVINCIAL PARK

Kin Beach Provincial Park is located just north of the Town of Comox, BC. Being a Class C park, Kin Beach Provincial Park does not receive government funding, but is instead run by a group of local community members that form the Kin Beach Park Board. The park consists of approximately 2.9 hectares of sensitive sand backshore ecosystem and 330 meters of sandy coastline which is known to support spawning surf smelt and pacific sand lance populations as well as rearing habitat for pacific herring. The sensitive backshore areas of Kin Beach are also unique archeologically in that there is a large protected midden from a historical K'ómoks First Nation village site.

EROSION AND HABITAT DEGRADATION

Kin Beach has had issues with shoreline erosion for over 20 years. While zones of erosion, transport, and accretion are all part of the natural sediment balance along exposed sandy coastlines, the rate of erosion has increased at an unnatural rate owing to the addition of riprap armouring along neighbouring properties and past failed installations of hard surface armouring within the park. Erosion protection structures that currently exist along the Kin Beach shoreline include a 130 m long stretch of riprap and gabion baskets that were installed along the northwest end of the beach, and 3 rows of concrete jacks, each approximately 50 m long which radiate out into the intertidal areas of the beach (Figure 1).

According to a background wave analysis study completed at Kin Beach Provincial Park by Northwest Hydraulic Consultants in 2015, the existing armouring in the northwest corner of the beach is currently ineffective at protecting the beach from erosion and leading to a net negative effect on erosion as the riprap is being overtopped by waves during high storm surges and the beach is scouring in front of the riprap. Additionally, the concrete jacks were found to have little effect on erosion protection as they are situated too deep to have an effect on sediment transport at high tide when the majority of shoreline erosion occurs.

The remnants of these hard surface erosion protection measures at Kin Beach are therefore having a net negative effect on existing spawning habitat for surf smelt and pacific sand lance through increased beach scour, accelerated shoreline retreat and loss of shoreline vegetation. The observed shoreline destabilization at Kin Beach Provincial Park can impair forage fish embryo survival by way of mechanical harm from substrate movement as well as increased exposure to desiccation and extreme temperatures. In addition to the foreshore impacts, the backshore habitat is also retreating and the sensitive sand ecosystem is being impacted.

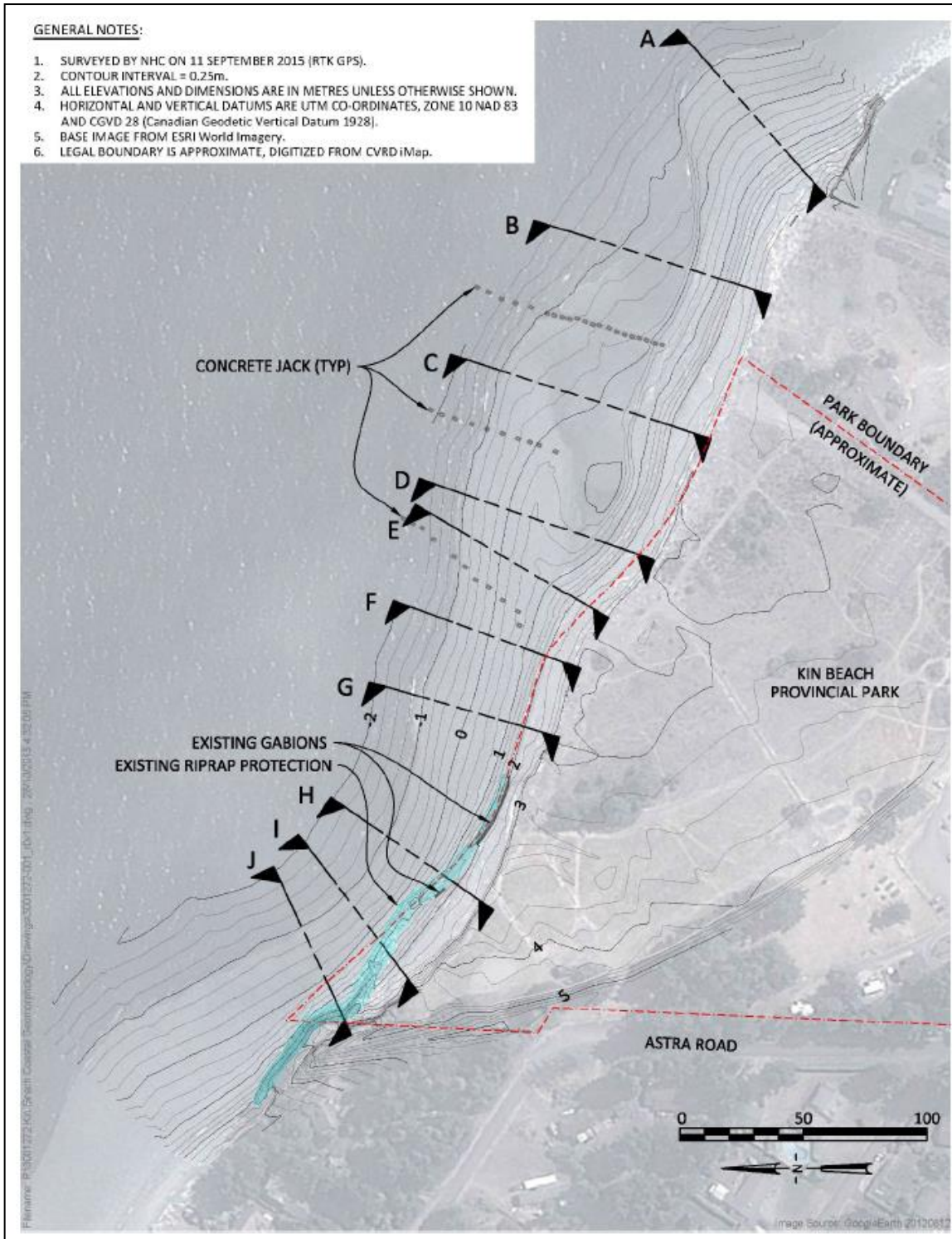


Figure 1. Figure from the 2015 NHC Wave Analysis report showing the location of the existing riprap, gabion baskets, and concrete jacks. The area in blue where the old armouring exists will be the focus of the new restoration project.

PROPOSED SHORELINE RESTORATION PROJECT

Given the long history of shoreline erosion at Kin Beach Provincial Park, and the growing popularity of the park, there is a need to take a proactive approach in restoring the natural sediment balance along the Kin Beach Provincial Park shoreline and mitigate further impacts to the foreshore and backshore habitat. The Kin Beach Park Board, a group of dedicated community members who manage this Class "C" provincial park, have been soliciting community support and funding for the past two years to support a large scale shoreline restoration project within the park. Many community members have come together to support this project, and major project funding has recently been awarded to the project from the Fisheries and Oceans Canada Recreational Fisheries Conservation Partnerships Program (RFCPP). The RFCPP grant has been awarded for two years of restoration at Kin Beach Provincial Park.

The Kin Beach Park Board is partnering with Current Environmental Ltd., Fisheries and Oceans Canada (RFCPP program), BC Parks, Northwest Hydraulic Consultants, Ridgeline Excavating Ltd. and several other groups and organizations in the Comox Valley to complete this project. The majority of the proposed shoreline work will occur between December 1st, 2016 and February 15th, 2017 during the least risk timing window for fish. Shoreline planting and backshore restoration will occur in the spring and fall of 2017.

COMPONENTS OF THE SHORELINE RESTORATION PROJECT

There are several components involved with the proposed shoreline restoration project at Kin Beach Provincial Park which include the following:

1. Background Studies

The Kin Beach Park Board hired professionals to complete background studies at Kin Beach Provincial Park in order to inform a thorough options analysis for potential restoration at Kin Beach. These background studies have now been completed, and included a wave analysis study, an archeological overview, a plant inventory of native species found in the park and finally a design report for the proposed restoration at Kin Beach.

2. Tie-In to Existing Riprap at North End of Beach

While bio-engineering and greenshores were the preferred restoration method for Kin Beach, there is a 30 m stretch along the north end of the beach which will need to tie-in to the existing riprap armouring on the neighbouring properties. According to the background study and design report completed by Northwest Hydraulic Consultants, bio-engineering techniques would not be practical at this location to resist the wave energy that it being reflected by the riprap armouring to the north. Consequently, the proposal is to extend the riprap armouring for 30 m in the north end of the park so that this area can be tied in to the section of bio-engineering.

3. Bio-Engineering and Large Woody Debris Erosion Protection

Along the majority of the eroding shoreline between the riprap tie-in at the northern end of the beach and the southern limit of dune erosion, a bio-engineering technique is being proposed to restore the natural

beach profile, mitigate the retreating of the backshore sand dune and stabilize the shoreline. This technique involves anchoring and partially burying large diameter rooted logs in the beach and restoring a more gradual beach profile. These log structures will be placed in two rows along the beach and inter-connected in units of three logs with approximately two meters between each unit. There will be approximately eight units along this 130 m stretch of shoreline (Figure 2).

The final result of this log revetment will be a more gradual beach profile with a natural appearance which acts to absorb the energy from wave run-up, reducing the amount of scouring and erosion that is occurring at this location (Figure 4). This log revetment will be further strengthened with the restoration of backshore plants (described below).

4. Partial Removal and Re-Configuring of Existing Riprap in Front of LWD Revetment

The final part of the restoration plan at Kin Beach is to re-configure the existing riprap in the northern part of the beach. The proposed plan is to remove and re-purpose the existing riprap in the new 30 m long riprap tie-in, and as ballast rocks buried in with the log revetment. Once some of the existing rock is re-purposed in this way, the remainder of the rock will be repositioned to form three or four groyne structures in front of the log revetment to provide more scour protection and encourage accretion at this location (Figure 2).



As part of the background study, it was also assessed whether or not the existing concrete jacks should be removed from the foreshore. It was determined that these jacks, while not appearing to provide any added erosion protection, are also not causing any negative impacts, therefore they will be left undisturbed.

5. Backshore Plant Restoration

Finally, extensive backshore planting will be completed along the newly installed log revetment and in any of the other backshore areas that would benefit from enhancement. A plant list will be generated based on the detailed native plant inventory and ecosystem groups identified in one of the background studies. Fencing will be installed and new pathways will be established to help limit pedestrian traffic around the newly established vegetation. Finally, educational signs will be set up to help educate park visitors on topics such as the importance of vegetation in a sand ecosystem.

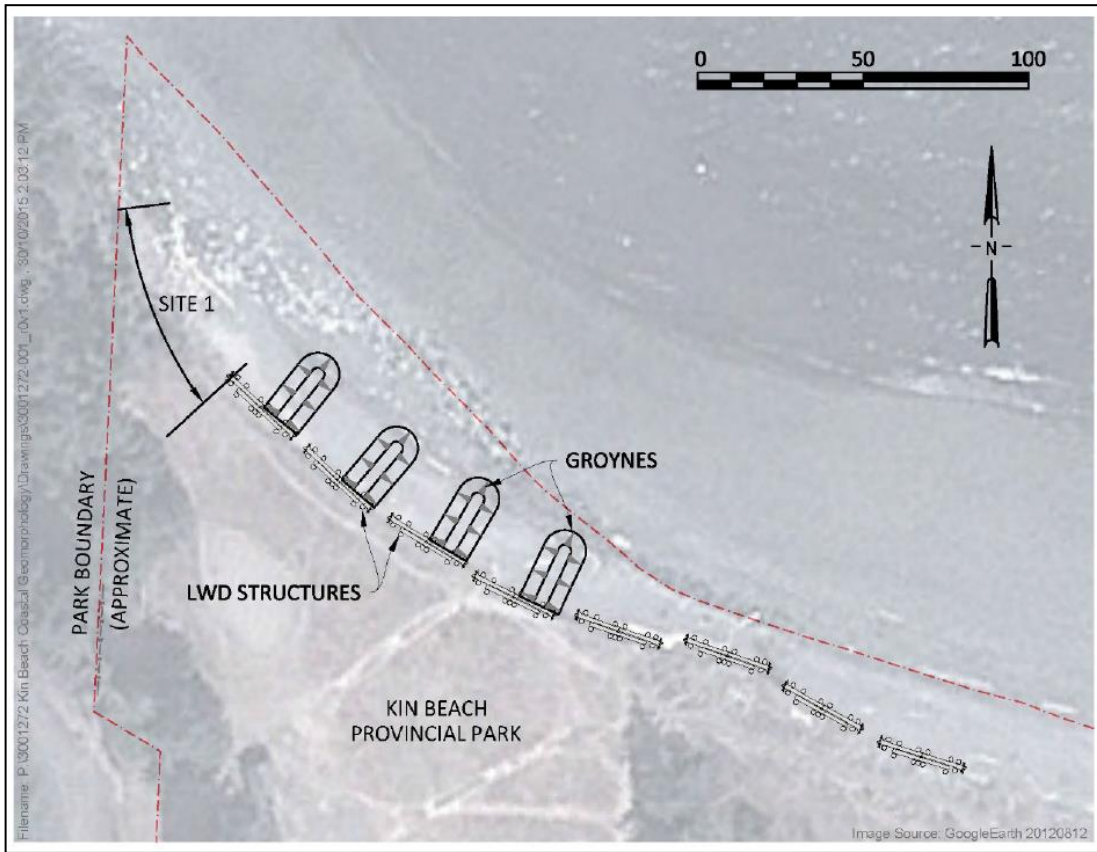


Figure 2. Proposed restoration plan for Kin Beach. Site 1 represents the area where the Large Woody Debris bio-engineering will be tied-in to the existing rip rap armouring. Source: NHC Report 2015



Figure 3. Picture of the erosion at the northern end of Kin Beach.



Figure 4. Example of installed Large Woody Debris revetment along another shoreline in the Comox Valley.



The Beacon Kin Beach Park Newsletter

ISSUE: SEPTEMBER 2016

Coming Soon!

Beach Erosion Project

Beach Erosion

For the past two years, the Kin Beach Park Board has been working on funding proposals to secure federal funding to assist with the remediation of the shoreline at the northwest end of the park. We are happy to announce that funding for a green shores remediation project has been achieved.

Preliminary work included a wave analysis study, design report, an archeological overview and a plant inventory of native species found in the park.

Meetings are set with the BC Parks staff, K'omoks First Nations and Current Environmental.

We have been working with local residents and a number of groups and businesses in the Comox Valley.

Home Depot staff installed a temporary fence at the shoreline this spring to prevent further erosion to the sandy bank. A big thank you to Home Depot for the fencing and all the volunteers!!!

Due to restrictions on beach access, construction will be carried out over the winter months (Dec 2016-Feb 2017)



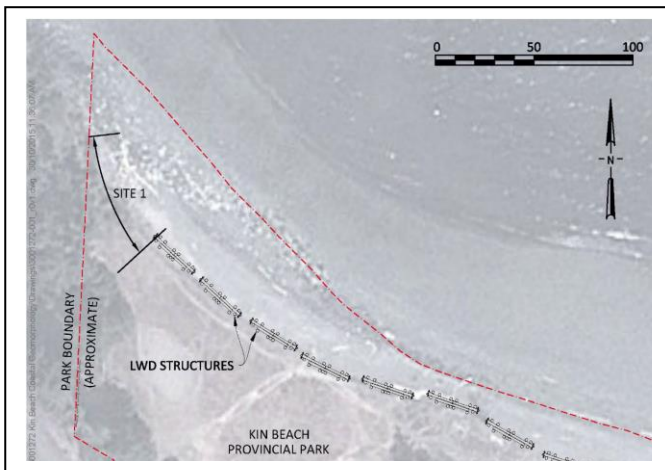
Beach Erosion continued

A local resident, Leigh Holmes, has donated some logs, Island Valley and Autumn Hills Farms have donated large ballast rock for securing the large woody debris.

We are very grateful to all our donors for their support and assistance.

We are still looking for 24" diameter trees that are 30 feet in length with root balls.

The goal of this project is to mitigate the shoreline erosion and plant natural vegetation to enhance the environment for spawning fish species and preserve the native plant species in this fragile sand ecosystem.



Artist rendition of Rathtreavor Beach

Logs with rootballs are to be anchored with large boulders and cables. These will be aligned along the beach to absorb wave energy.

Split rail fencing and the planting of native species is in Phase 2 of the project.

Fencing and walkways will be constructed to guide the public in accessing the beach front and parkland while preserving the natural plant vegetation.

For Information: Contact us at: 250-339-2386
(Phil MacLaren)

