GreenShores Rating Matrix, Pilot Version 1, 2008

PREPARED BY: GREEN SHORES Technical Working Group, http://www.greenshores.ca
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		Dick Murphy Park
	Project Location:	**Campbell River, BC**
	New or Existing Development:	**New**
	Shore Protection Planned: Y / N	**No**
	Development Category: SF, MF, I, C, Mixed, Park, Other	**Park**
	Stage: conceptual, design, construction, complete	**Complete**
	Name of Project Assessor:	**Sarah Bonar (R.P. Bio), Jodi Harney (Ph.D.), Jim Mitchell (P.Eng); site visit 6 December 2008**

		Y/N/?	Credits	Score (# or N/A)	Elaboration on decision. What revision, if any, is required?	Discussion, Improvements to rating process
	All Submittals Received?	Y			The proponent submitted two CDs containing images, documents, and PowerPoint files for the various phases of the Dick Murphy Spit park project. Communication through emails and in person at the Green Shores workshop in Victoria improved the assessors' understanding of the project location, scope, and range of potential Green Shores credits. The advanced planning of the park development and site restoration was thorough, as shown by submitted documents and planning maps (such as the Construction Environmental Management Plan for Dick Murphy Park, authored by Streamline Consulting Ltd. and the Summary of Habitat Enhancements and Best Management Practise schematic authored by Harrison Basciano Landscape Architects). On site, the assessors were able to interview the proponent to reveal project details, understand full project scope, and assess each credit individually. The assessors found this interaction with the proponent to be a crucial part of the site evaluation. It also provided the opportunity to discuss what the proponent learned during the project and what suggestions the assessors h	On-site interview of proponent was essential to reveal project details, understand full project scope, and assess each credit individually. Submittal checklist needs to be improved for the benefit of both the proponent and the assessors.

		Y/N/?	Credits	Score	Elaboration on decision. What revision, if any, is required?	Discussion, Improvements to rating process
	All Reports by Qualified Professionals Received?	**Y**				

PROJECT AND BUILDING SITING		Y/N/?	Credits	Score	Elaboration on decision. What revision, if any, is required?	Discussion, Improvements to rating process
PBS1	**Siting of New Permanent Structures: requires 1, 2 and option A OR B**		**Prerequisite: 0,1**		No permanent structures in project.	Need to ensure that even without a building, a project has the opportunity to be Gold certified. Defining the number of points possible and the number of points achieved would enable the certification level to be applied based on a percentage of possible credits met. All things being equal, a project should not recieve a higher score because it has a building and can therefore receive more optional credits. Credits associated with buildings would most often include lighting and stormwater management. The way the manual is written, one would assume that a project with no permanent structures could not meet all the prerequisites and be disqualified. If you ament the manual to awarding the project the building siting prerequisite credit so that it still qualifies, it is still not likely to be eligible for the associated optional credits - this would likley eliminate 7 optional credits of the possible 20 leaving only 13 available credits. This ineffect gives projects with buildings an advantage of 7 available credits making it much easier to attain Gold.
	1) Setback =/> to what local / regional regulations require					
	2) Setback =/> Specified Flood Construction Levels					
	Option A: >/= 15m setback from natural boundary					
	If on bluff, setback > 3X vertical bluff height					
	Setback >/= 2m vertical elevation above natural boundary					
	Score (one prerequisite credit available) 0 or 1		**Prerequisite: 0,1**	**1**		
	Option B: Allows for 50 years of erosion without shore protection, with a report from Qualified Coastal Professional					
	Score (one prerequisite credit available) 0 or 1		**Prerequisite: 0,1**	**N/A**		

		Y/N/?	Credits	Score	Elaboration on decision. What revision, if any, is required?	Discussion, Improvements to rating process
PBS2	**Siting of New Permanent Structures: Option A OR B**		**Optional: 0,2**			
	Option A: existing property is being re-developed or upgraded and shore protection exists along the shoreline: must meet requirements 1-4					
	1) Setback must be beyond where natural boundary location would be if there was no shore protection, plus the following requirements:					
	2) Extra setback for predicted change in natural boundary in					
	3) Extra allowance for required 5 meter riparian zone					
	4) Existing structures moved / removed to comply with above					
	Score		**Optional: 0, 2**	**N/A**		
	Option B: existing property is being re-developed or upgraded and where no shore protection exists along the shoreline:					
	1) Any new permanent structure shall be setback landward of the extrapolated position of the Natural Boundary plus the allowance for the required riparian zone (5m) over the projected life					
	2) Any existing structures seaward of the extrapolated position of the Natural Boundary will be moved or replaced with new to conform with (1) above.					
	3) Where a proposed development includes a public pathway or bike trial along the shoreline, provision is provided for the public access to be maintained, without shore protection landward of the extrapolated Natural Boundary (including the Riparian Allowance) over the projected life.					
	Score		**Optional: 0, 2**	**N/A**		
PBS3	**Site Design with Conservation of Shoreline: (For site plans and subdivision designs affecting a shore area.)**		**Optional: 1**			
	Minimum of 75% of the shoreline is a conservation area or park.					
	Average width of 30 m or greater, measured as the horizontal distance perpendicular to the natural boundary, with a minimum width of 7.5 m at any given point.					
	Score		**Optional: 1**	**N/A**		
PBS4	**Re-Development of Contaminated Sites (upland)**		**Optional: 1**			

		Y/N/?	Credits	Score	Elaboration on decision. What revision, if any, is required?	Discussion, Improvements to rating process
	Develop on a contaminated site and provide remediation as required by provincial or federal contaminated site standards.					Perhaps this should be amended to include the removal and redevelopment of industrial buildings, paved surfaces, etc. Although they may not be designated as contaminated, they are certainly a detriment to the environment. There are not that many proposed projects for designated contaminated sites, as the cost for clean up is exceedingly high.
	Score		**Optional: 1**	**N/A**		

		Y/N/?	Credits	Score	Elaboration on decision. What revision, if any, is required?	Discussion, Improvements to rating process
SHORE HABITAT AND COASTAL PROCESSES						
SHCP1	**Conservation of Critical and Sensitive Habitats**		**Prerequisite:0,1**			
	No net loss of critical or sensitive habitats within the development shore zone. Off site compensation for losses to critical/sensitive habitats cannot be used to meet this credit requirement.				No net loss of habitat. Improvements actually resulted in the addition of marine and estuarine habitats. 100% of the park's shoreline is natural following remediation and park development.	
	Score		**Prerequisite: 0,1**	**1**		
SHCP2	**Riparian Zone**		**Prerequisite: 0,1**			
	Conserve and/or restore a riparian zone for a minimum width of 5.0 m, measured as the horizontal distance perpendicular to the natural boundary, over a minimum of 50% of shore length. All development activities must occur outside the designated area.				On the marine side of the park, beach access pathways were installed at former boat ramp sites. Concrete sidewalks in the park are set back at least 5 m from the beach, with native plantings between the sidewalk and the beach. Sheep fencing currently protects vegetation (although there have been some complaints about this and no signage is posted to explain its presence). On the estuary side of the park, a wooden boardwalk provides access to a covered viewing platform.	Signage is crucial to inform people what has been done on the site and why. Many projects will not set aside funding for this in the planning stages. Projects with signage will help communicate Green Shores principles and promote market shift. Projects should be rewarded if such signage is posted on site. This issue may be partially addressed under outreach credits. Is the Green Shore Team developing a standardized plaque to be mounted at project sites once awarded accreditation?
	Where restoration is needed, a re-vegetation plan/design prepared by a registered professional biologist or certified landscape architect with experience in coastal riparian ecosystems is required.				Harrison and Basciano Landscape Architects submitted plans for and carried out revegetation of beach berms on the seaward side, riparian vegetation on the estuarine side, and a raingarden in the habitat area of the estuarine side. Native plantings appropriate for the environment were used. No revision is required, but recommendations for the proponent's future projects were discussed.	Provide a format in which the assessors may make suggestions to the proponent for further improvements at the site or for future projects. Even if Green Shores certification is awarded, there may be room for further creditation. The additional comments will provide guidance on future projects the proponent might undertake - constructive feedback is critical during the learning stage.
	Score		**Prerequisite: 0,1**	**1**		
SHCP3	**Conservation of Coastal Sediment Processes**		**Prerequisite: 0,1**			

		Y/N/?	Credits	Score	Elaboration on decision. What revision, if any, is required?	Discussion, Improvements to rating process
	Longshore Sediment Transport The proposed shore development must not alter the movement of sediment along the shore to such an extent that the risk of adverse impacts to adjacent properties, including erosion, is increased.				Removal of rip-rap and bulkheads actually restored coastal sediment processes in both Phase I and II. The Proponent surveyed the slope and sediment texture of an adjacent natural beach and used the information during construction of the restored beach areas. Some natural re-working has occurred on the beaches on the marine side, including the formation of subtidal ridges and runnels, lower intertidal bars of relatively coarse material (cobbles and pebbles overlying sand), and steepening of the upper intertidal just seaward of the restored log berm. Logs on the northern end of the beach are placed end-to-end and shore-parallel such that, in places where wave energy is higher, they act as a wooden bulkhead and cause the upper beach and storm berm to be steeper there than on adjacent sandy, lower-energy beaches. Presumably these more exposed sections will return to a more gently-sloping beach face during "summer" conditions. Less than a quarter of the restored beaches are showing this affect. A wide, sandy tidal flat extends offshore and represents	
	Shore Sediment Supply: A OR B A) Site development must be designed such that the need for shore protection works is not required over the life of the project or a 50 year cycle of natural erosion, whichever is greater or				No shore protection is needed or planned for this area.	
	B) If site features and development design do not allow (A) above to be met, and shore protection works are required, then provide a design that will emulate natural sediment supply to the foreshore for a 50 year cycle of natural erosion or the life of the project, whichever is greater. The texture and size of the sacrificial material must be appropriate to the site.				N/A	
	Score		**Prerequisite: 0,1**	**1**		

		Y/N/?	Credits	Score	Elaboration on decision. What revision, if any, is required?	Discussion, Improvements to rating process
SHCP4	**Rehabilitation of Critical and Sensitive Habitats (Riparian or Foreshore)**		**Optional: 1**			
	Develop and implement a critical/sensitive habitat rehabilitation plan for the development shore zone (creation of riparian or foreshore critical/sensitive habitat.) No minimal threshold area for this credit is specified, but the applicant needs to demonstrate that the rehabilitation plan has an 80% or greater success factor 12 months after construction or planting as measured by plant viability or area colonized.				The project restored habitat dominated by dune grass along the length of the Phase I and II Beach restoration sites, as well as the estuary shoreline site and in the rain garden. The plantings were at least 80% successful. Rhizomes were transplanted from adjacent beaches, and plants were purchased by the landscape architects. Plantings also included fescue and native rose copses that have been quite successful.	
	Score		**Optional: 1**	**1**		
SHCP5	**Rehabilitation of Degraded Habitats**		**Optional: 1 or 2**			
	Provide remediation of degraded foreshore within 1 km of the development site. The remediation plan should address a minimum of 50% of the targeted degraded area. If the remediation plan includes addressing contaminated sediments, then provincial or federal contaminated site standards or remediation levels specified by the local regulatory authority must be met.		1		Severe erosion had caused the partial collapse of bulkheads and concrete revetments along portions of the Dick Murphy Park shoreline near the south end of the park. The total length of restored shoreline (480 m) is nearly continuous, interrupted only in front of the Tyee Club. Natural beaches without artificial shore protection structures now extend along 100% of the Dick Murphy Park shoreline.	
	Given the technical difficulties associated with the removal of bulkhead protection (seawalls, riprap) a bonus point is awarded if this strategy is employed to remediate degraded habitats.		1		Rotted and failing wooden bulkheads, creosote pile wall, and riprap were removed from the shoreline.	
	Score		**Optional: 1 or 2**	**2**		
SHCP6	**Enhanced Riparian Zone**		**Optional 0.5 - 4**			
	For sites meeting the riparian prerequisite credit an additional 0.5 points will be given for extending the riparian conservation zone by:					
	A) each additional 15% of shoreline length to a maximum of 90% of the development property shoreline – to a maximum of 1.5 points.		0.5 - 1.5	1.5	100% of length of repaired shoreline was vegetated.	
	B) each additional 5m of riparian zone width to a maximum average width of 30 m – a maximum of 2.5 additional points.		0.5 - 2.5	1.5	Estuary shoreline and backshore area was revegated to a width of >30 m.	
	Score		**Optional 0.5 - 4**	**3**		

		Y/N/?	Credits	Score	Elaboration on decision. What revision, if any, is required?	Discussion, Improvements to rating process
SHCP7	**Light Pollution Reduction**		**Optional: 1**			
	Upland and Foreshore 1. Only light external areas of the site as required for safety and comfort. 2. Meet LEED for Neighbourhood requirements for light pollution reduction (GCT Credit 20).				No lighting is provided in the park. Existing light poles were removed during the project development.	
	Upland only 1. Document that no more than 5% of the total designed fixture lumens located above the natural boundary are emitted to areas below the natural boundary.				N/A	
	Score		**Optional: 1**	**1**		
SHCP8	**Remediation of Coastal Sediment Processes**		**Optional: 1-2**			
	Demonstrate the restoration of alongshore or across shore sediment processes, either through removal of existing structures, provision of sacrificial sediment materials or other means.		1		Placement of beach gravels to an 8:1 slope at Phase I & II Beach sites.	
	For removal of bulkhead protection (seawalls, riprap) a bonus point is awarded if this strategy is employed to remediate coastal sediment processes.		1		Removal of wood bulkheads and riprap along Phase I & II sites.	Removal of bulkheads is already awarded an extra point. Is awarding this point considered double-counting?
	Score		**Optional: 1-2**	**2**		

		Y/N/?	Credits	Score	Elaboration on decision. What revision, if any, is required?	Discussion, Improvements to rating process
STORMWATER MANAGEMENT						
SM1	**Integrated Stormwater Planning and Design**		**Optional: 1-3**			
	Implement a comprehensive stormwater management plan for the project that provides runoff treatment through infiltration, reuse, or evapotranspiration for a 25mm, 24 hour rainfall event from a percentage of the project's development footprint as listed below.				Stormwater within the project site is directed to rock-filled infiltration trenches. Overflows are directed through beach gravels within Phase II and associated parking area, Spit Tip area, estuary area, and into ground in the pervious paved parking area in centre.	
	Minimum 20% of the development footprint - 1 Point or		1			
	Minimum 40% of the development footprint - 2 Point or		2			
	Minimum 60% of the development footprint - 3 Point		3	3		
	Score		**Optional: 1-3**	**3**		
PROJECT DEVELOPMENT PROCESS						
PPD1	**Environmental Management Plan**		**Prerequisite: 1**			
	Develop and follow a site specific environmental management plan that includes:				A construction environmental management plan (CEMP) was developed for the project. The document was included in submittals. Best management practices during construction were met or exceeded.	Having the CEMP document was very useful in the assessment. It may not be a required submittal, but it behooves the proponent to include it.
	1. Sediment and erosion control including prevention of construction-related soil loss to runoff and storm water, reduction of sediment input to the receiving environment from construction-related run off and storm water.				Beach sediment for renourishment was clean (spawning rock), limiting runoff. Temporary infiltration measures were used during construction, including interceptor swales, gravel and straw berms, and specially-constructed overflow pipes in case of an emergency. No overflow occurred. Permanent stormwater drainage measures described above were emplaced early in the project. Details regarding sediment control are included in the CEMP submitted by proponent.	
	2. Appropriate shore construction timing windows.				Planning and construction were coordinated with fisheries for permitting. Appropriate authorizations were received.	
	3. Measures taken to prevent the risk of hazardous materials and contaminant spills, including oil, gas and hydraulic fluid.				Machinery was inspected daily. Practices were detailed in CEMP submitted by proponent.	
	4. Response plan and equipment available in the event of an accidental spill of hazardous materials.				Spill and emergency kits were on hand. Practices were detailed in CEMP submitted by proponent.	
	5. On site briefing and reporting requirements for environmental monitoring by a Qualified Environmental Professional.				Pat Harrison (landscape architect and qualified environmental professional for Campbell River) was on site and oversaw construction. An independent environmental monitor was also on site for all of Phase I.	

		Y/N/?	Credits	Score	Elaboration on decision. What revision, if any, is required?	Discussion, Improvements to rating process
	6. A post construction monitoring plan if applicable.				Periodic site visits and observations have occurred since project completion. Adaptive management practices have been utilized, and repair and maintenance have occurred as necessary.	
	Score		**Prerequisite: 0,1**	**1**		

		Y/N/?	Credits	Score	Elaboration on decision. What revision, if any, is required?	Discussion, Improvements to rating process
PPD2	**Innovation**		**Optional: 1-2**			
	1) For credits with a specific performance measure – designs and techniques that (A) exceed the specified performance measure by 50% or (B) demonstrate a novel method of meeting the specified performance measure.		**1 to 2**			
	2) For credits without a specific performance measure or a performance measure that cannot be exceeded (e.g. "conserve 100% of…") - demonstrate a novel method of meeting the credit or,		**1 to 2**			
	3) Demonstration that the project design has addressed a specific issue or situation not covered by any GREEN SHORES credit, but which addresses GREEN SHORES principles.		**1 to 2**	**1**	Park furnishings (benches and tables) are all made from recycled materials with handicapped access, promoting park use and sustainable development practices.	
	Score		**Optional: 1-2**	**1**		
PPD3	**Outreach and Public Education**		**Optional: 1**			
	Incorporate a GREEN SHORES educational component into the project design, construction or post construction phases that includes one or more of the initiatives outlined below. The outreach and educational component should provide public information on a medium to long term basis (greater than one year) and the size of the target audience should be stated. The applicant must be willing to publicly profile the project and design elements on the GREEN SHORES website.				Hope to have participation in Green Shores Pilot Program noted on Green Shores web site. Web site for Dick Murphy Park and city of Campbell River may also post Green Shores certification announcement. Project signage is desired; need to find funding to pay for production.	
	Public signage on key shore issues, the project design concept and project performance or				Planned, needs funding. The city is looking into finding a funding partnership with the local Land Trust - Greenways.	
	Tours and interpretive walks					
	An on-going coastal stewardship program for owners, occupants and site users					
	Any other public outreach initiative that can be demonstrated to meet the credit objective.					
	Score		**Optional: 1**	**1**		

		Y/N/?	Credits	Score	Elaboration on decision. What revision, if any, is required?	Discussion, Improvements to rating process
	Prerequisite Credit Subtotal:		**5 required**	**5**		Score of 5 includes the pre-requisisite credit even though there is no permanent structure. The lack of permanent structure is an automatic disqualification - completely unfair. If the project is awarded the credit for permanent structure it gets Gold. It's my understanding that the prerequisites are all awarded, but this should be made clearer. Better yet, allow assessors to identify the number of possible points, the number of points achieved, and the Green Shores rating is assigned on the basis of a % score.
	Optional Credit Subtotal:		**20 possible**	**14**		
	Credit Total:			**19**		**0**
	Certification Level:					
	GREEN SHORES Certified - All Prerequisites plus 3 Points					
	Silver Certified - All Prerequisites plus 6 Points					
	Gold Certified - All Prerequisites plus 10 Points	**X**				
	Not Certified:					
	Summary of revisions or/and submittals or reports required:					
	Green Shores Certification Effort Survey	**Hours**	**Rate / hour**	**Cost $$**		
	Proponents:					
	Time expended by proponent for rating process					
	Extra costs incurred by proponent for rating process					
	Assessors:					
	Time expended by assessor for rating process					
	Expenses incurred for rating process					