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GreenShores Rating Matrix, Pilot Version 2-2, March 2009

<p>Project Name: Southeast False Creek Waterfront</p>	<p>Location: Southeast False Creek, Vancouver</p>
<p>New or Existing Development: Urban redevelopment of a brownfield site</p>	<p>Development Category: Multi-family, mixed residential/commercial and park</p>
<p>Shore Protection Planned: Yes (constructed)</p>	<p>Stage: Waterfront – construction complete Hinge Park – under construction</p>
<p>Date of site visit: 30 March 2009</p>	<p>Date assessment completed: 4 May 2009</p>
<p>Names/affiliations of Project Assessors:</p> <p>Susan Davidson, P.Eng., Sea Science Inc. Beryl Allen, M.Sc., MLArch., ASLA, Cypress Creek Design Katherine Dunster, RPBio., MBCSLA, Unfolding Landscapes</p>	

	PROJECT AND BUILDING SITING	Y/N/?	Submittals	Score	Elaboration on decision. What revision, if any, is required?
PBS1	Siting of New Permanent Structures: requires 1, 2 and option A OR B		Prerequisite: 0,1		
	1) Setback => to what local / regional regulations require	Y	<i>Site plan showing NB, ground elevation, setbacks, flood control heights for PS's.</i>		Floodplain covenant requires setback of 15 m from natural boundary
	2) Setback => Specified Flood Construction Levels	Y			Floodplain covenant requires min elevation of 3.5 m GSC for Area Used for Habitation and for installation of fixed equipment damageable by floodwater.
	Option A: >= 15m setback from natural boundary	Y		?	Surveyed natural boundary not shown adequately on supplied information Definition of natural boundary used in submission letter needs to be verified as appropriate (where is current legal boundary?)
	If on bluff, setback > 3X vertical bluff height	N/A			
	Setback >= 2m vertical elevation above natural boundary	Y		?	HHWLT is at 2.0 m GSC
	Option B: Allows for 50 years of erosion without shore protection, with a report from Qualified Coastal Professional	N	<i>QCP report – see pg 16</i>		
	Score (one prerequisite credit available) 0 or 1		Prerequisite: 0,1	(1)	(Provisional) Credit may be granted with submission of additional supporting information
PBS2	Siting of New Permanent Structures: Option A OR B	N/A	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:	N	<i>QCP report as per PBS1 Option B + projection of NB thru</i>	0	Previous shoreline was highly modified. Not clear if shore protection was provided along entire reach. Area is largely fill. Credit does not seem to apply to filled areas.

	PROJECT AND BUILDING SITING	Y/N/?	Submittals	Score	Elaboration on decision. What revision, if any, is required?
	2) Extra setback for predicted change in natural boundary in projected life		<i>Project's life, climate change impacts, etc. – see pg 20.</i>		.
	3) Extra allowance for required 5 meter riparian zone				
	4) Existing structures moved / removed to comply with above				New structures (piers, floats) are proposed for a second phase.
	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	N	See above		
	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.				
	Score		Optional: 0, 2	0	Not eligible – fill project
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 (needs definition) or park.	N	<i>Site plan showing: conserv'n area - widths, length; plan for protection; etc. – see pg 23</i>	0	Area does not appear to be a conservation area. No management plan given. Environmentally-sensitive features not defined in submission. 75% of shoreline does not meet criteria.
	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.	?		0	Without intertidal zone, 30 m average width requirement may not be met.

	PROJECT AND BUILDING SITING	Y/N/?	Submittals	Score	Elaboration on decision. What revision, if any, is required?
	Score		Optional: 1	0	Does not meet 75% criterion.
PBS4	Re-Development of Contaminated Sites (upland)		Optional: 1		
	Develop on a contaminated site and provide remediation as required by provincial or federal contaminated site standards.		<i>Letter from authority and report that remediation completed – pg.27</i>	0	Appropriate documentation not submitted (letters from regulatory agency and project engineer) However, the assessment team has been informed that the shoreline sediments at the site were formerly contaminated and have been remediated.
	Score		Optional: 1	(1)	Credit is provisionally awarded, contingent on appropriate documentation being supplied.

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	SHORE HABITAT AND COASTAL PROCESSES	Y/N/?	Submittals	Score	Elaboration on decision. What revision, if any, is required?
SHCP1	Conservation of Critical and Sensitive Habitats		<i>Plan of critical habitat; report indicating 'no net loss'/net gain; QEP certifying – pg. 19</i>		
	No net loss of critical or sensitive habitats within development shore zone. Off-site compensation for habitat losses cannot be used to meet this credit requirement.				Submitted information is incomplete. Missing baseline habitat mapping for intertidal zone. DFO has approved project, therefore it is assumed that no net loss criteria has been met at the design stage for fish habitat. Project requires marine monitoring for five years to confirm functionality of habitat. Needs letter from QEP certifying that habitat plan has been completed. Note that “No Net Loss” policy appears to have been met, but not exceeded for the intertidal zone. The “No Net Loss” policy appears to have been met and exceeded for the marine riparian area.
	Score		Prerequisite: 0,1	0	Baseline intertidal zone marine habitat information and confirmation of functionality of compensation fish habitat required to finish evaluation
SHCP2	Riparian Zone		<i>Site plan showing location relative to dev't; proof of protection/ designation; plan for protection – pg.31</i>		
	Conserve and restore riparian zone. 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.				Surveyed natural boundary not shown adequately on supplied information.
	Score		Prerequisite: 0,1	(1)	Provisionally awarded, contingent upon supply of missing documentation including location of new natural boundary and bathymetric contours.
SHCP3	Conservation of Coastal Sediment Processes		Prerequisite: 0,1		

	SHORE HABITAT AND COASTAL PROCESSES	Y/N/?	Submittals	Score	Elaboration on decision. What revision, if any, is required?
	<p>Shore Sediment Supply: A OR B</p> <p>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</p>		<i>QCP report of coastal sediment balance and pathways – see pg. 35</i>		Shore protection works have been constructed.
	<p>B) If shore protection works are required, provide a design that emulates natural sediment supply to the foreshore for a 50 year cycle of natural erosion of life of the project, whichever is greater. Texture and size of sacrificial material must be appropriate to the site.</p>				<p>Supporting documentation not submitted.</p> <p>Criteria should be expanded for low-energy environments.</p> <p>Intertidal and backshore slopes are much steeper than what would occur in a more natural environment – flatter slopes may not require extensive shore protection works.</p>
	Score		Prerequisite: 0,1	(1)	Credit is provisionally awarded, contingent on appropriate documentation being supplied.
SHCP4	Rehabilitation of Critical and Sensitive Habitats (Riparian or Foreshore)		Optional: 1		
	<p>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.</p>		<i>Rehabilitation plan prepared by QEP – see pg. 39</i>		<p>Pre-existing conditions not well documented in submission.</p> <p>Submission is incomplete (needs rehabilitation plan)</p> <p>Although pre-existing shoreline conditions were clearly degraded, it is not apparent that reconstructed areas meet supplied definition for critical/sensitive habitats</p>
	Score			0	Requires documentation including location of new natural boundary and bathymetric contours, and assessment of impacts of pier and float expansion.

	SHORE HABITAT AND COASTAL PROCESSES	Y/N/?	Submittals	Score	Elaboration on decision. What revision, if any, is required?
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.		<i>Foreshore rehabilitation plan by QEP – see pg. 41</i>		Requested information not supplied. Needs supporting documentation as outlined in Rating Credits document. While separation and reconstruction of the Columbia Street may improve both the physical habitat and the water quality at the site, monitoring is required to confirm that the level of contamination has been reduced.
	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.				
	Score		Optional: 1 or 2	0	Requires supporting documentation
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	<i>Site plan and letter/report by QEP; pre- and post photos – see pg. 43</i>		Surveyed natural boundary not shown adequately on supplied information
	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 – 1.5			
	Score		Optional 0.5 – 4	0	Requires submission of additional information
SHCP7	Light Pollution Reduction		Optional 1		
	Upland only 1. Document that no more than 5% of the total designed fixture lumens located above the natural boundary are				

	SHORE HABITAT AND COASTAL PROCESSES	Y/N/?	Submittals	Score	Elaboration on decision. What revision, if any, is required?
	emitted to areas below the natural boundary.				
	Score		Optional 1	(1)	Provisional Credit contingent on supplying all required documentation.
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	<i>QCP report in concert with SHCP 3 – see pg. 47</i>	0	Appropriate documentation as described in Rating Credits document was not supplied. Needs report from QCP, even for low-energy environments. Credit system needs more development for application to low-energy environments.
	For removal of bulkhead protection (seawalls, riprap) a bonus point is awarded if this strategy is employed to remediate coastal sediment processes.	1		0	
	Score		Optional 1-2	0	A report from a Qualified Coastal Professional is required in order to qualify for this credit.

	STORMWATER MANAGEMENT	Y/N/?	Submittals	Score	Elaboration on decision. What revision, if any, is required?
SWM1	Integrated Stormwater Planning and Design		<i>Stormwater Management Plan by QP – see pg 49</i>		
	Minimum 20% of the development footprint – 1 Point or				Information needs to be summarized into format prescribed in Rating Credit document in order to confirm percentage.
	Minimum 40% of the development footprint – 2 Points or				
	Minimum 60% of the development footprint – 3 Points				
	Score		Optional: 1-3	(1-3)	Provisionally granted – the amount of credits granted contingent upon submittal information meeting the required submittal format.

	PROJECT DEVELOPMENT PROCESS	Y/N/?	Submittals	Score	Elaboration on decision. What revision, if any, is required?
PDP1	Environmental Management Plan		Prerequisite: 1		
	Develop and follow a site specific environmental management plan that includes:		<i>Copy of Environmental Management Plan with proof that it adheres to BMPs; copy of Environment Monitoring report (sample) – see pg. 53</i>		
	2. Appropriate shore construction timing windows.				
	3. Measures taken to prevent the risk of hazardous materials and contaminant spills, including oil, gas and hydraulic fluid.				Environmental plan has not been reviewed in detail (beyond scope of assessment)
	4. Response plan and equipment available in the event of an accidental spill of hazardous materials.				Reviewed only for general intent; assumed that this has been reviewed by client.
	5. On site briefing and reporting requirements for environmental monitoring by a Qualified Environmental Professional.				
	6. A post construction monitoring plan if applicable.				

	PROJECT DEVELOPMENT PROCESS	Y/N/?	Submittals	Score	Elaboration on decision. What revision, if any, is required?
	Score		Prerequisite: 0,1	(1)	Provisionally granted for submission. Additional monitoring will be required to determine performance credits.
	PDP2 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.		<i>Written rationale by QP, authorization by applicable authority – see pg. 55</i>		
	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,				The development provides a greater range of marine substrates than does the adjacent shoreline treatments in False Creek. However, many of these treatments are “hard edges” and represent standard design approaches to such. The shoreline and habitat island characteristics do not represent the natural characteristics that would have been present at an undisturbed site in False Creek.
	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..				
	Score		Optional: 1-2	0	
	PPD3 Outreach and Public Education		Optional: 1		
	Public signage on key shore issues, the project design concept and project performance or		<i>Written documentation, photos of examples – see</i>		The signage, site tour agenda, and articles were prepared by the proponent prior to familiarization with Green Shores objectives.
	Tours and interpretive walks				

	PROJECT DEVELOPMENT PROCESS	Y/N/?	Submittals	Score	Elaboration on decision. What revision, if any, is required?
	An on-going coastal stewardship program for owners, occupants and site users		pg. 57		
	Any other public outreach initiative that can be demonstrated to meet the credit objective.				
	Score		Optional: 1	0.5	Partial credit, How these enable the outreach and uptake of Green Shores design models requires additional documentation

Certification Summary

Prerequisite Credit Subtotal:		5 required	4	Pending appropriate documentation
Optional Credit Subtotal:		20 possible	3.5-6.5	Depending on number awarded to SWM1
Credit Total:				
Certification Level:				
Not Certified:	<input type="checkbox"/>			

Certified - All Prerequisites plus 3 Points

Silver Certified - All Prerequisites plus 6 Points

Gold Certified - All Prerequisites plus 10 Points

All Submittals Received?	
All Reports by Qualified Professionals Received?	

Summary of revisions, submittals and/or reports required:

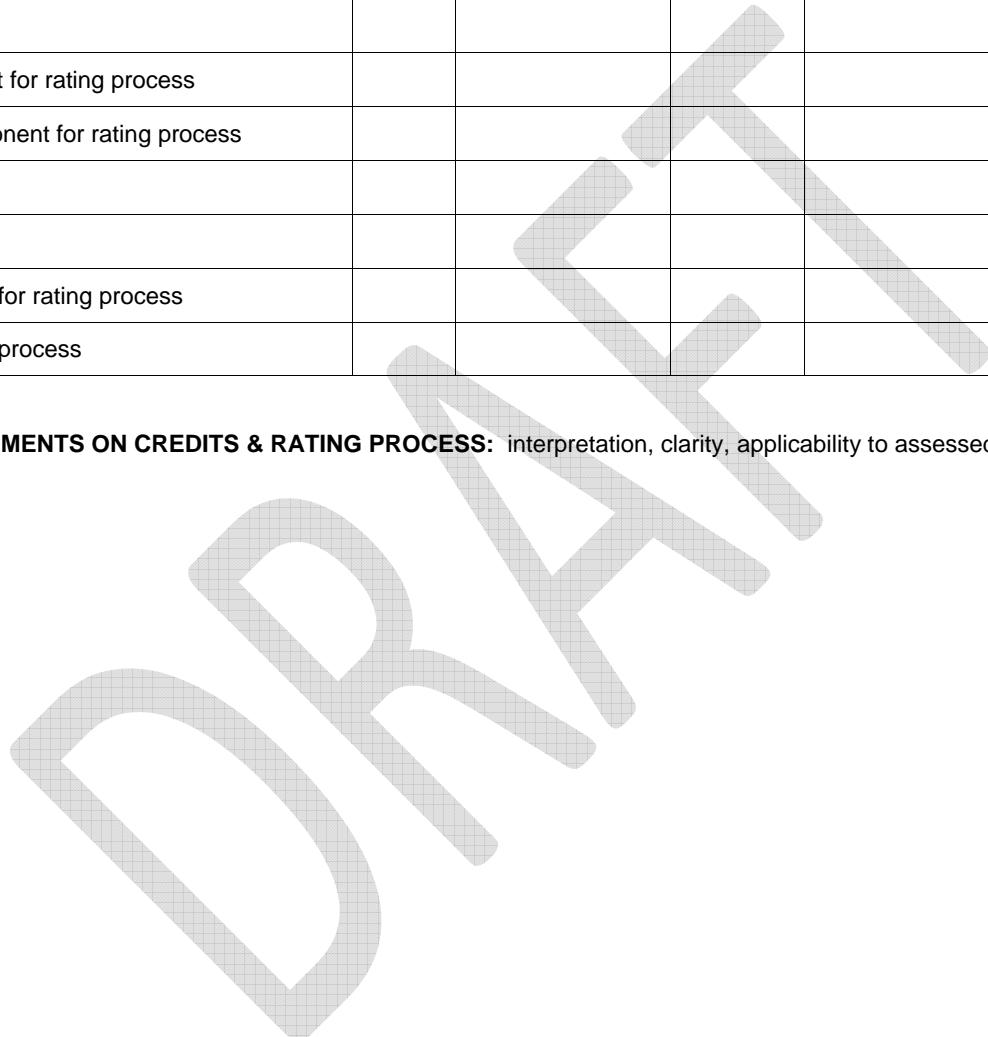
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Green Shores Certification Effort Survey

	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				

COMMENTS ON CREDITS & RATING PROCESS: interpretation, clarity, applicability to assessed project, etc.etc.

General:



BY Credit:

PBS1 (prerequisite)	
PBS2 (optional)	
PBS3 (optional)	
PBS4 (optional)	
SHCP1 (prerequisite)	
SHCP2 (prerequisite)	
SHCP3 (prerequisite)	
SHCP4 (prerequisite)	
SHCP5 (optional)	
SHCP6 (optional)	
SHCP7 (optional)	
SHCP8 (optional)	
SM1 (optional)	
PDP1 (prerequisite)	
PDP2 (optional)	
PDP3 (optional)	

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