

Riparian Areas Regulation: Assessment Report

Please refer to submission instructions and assessment report guidelines when completing this report.

Date 2019-09-11

I. Primary QEP Information

First Name	Thomas	Middle Name		
Last Name	Roy			
Designation	R.P. Bio	Company Cascadia Biological Services		
Registration #	1089	Email cascadiabiological@shaw.ca		
Address	772 Goldstream Avenue			
City	Victoria	Postal/Zip	V9B 5S4	Phone # 250 888-4864
Prov/state	BC	Country	Canada	

II. Secondary QEP Information (use Form 2 for other QEPs)

First Name		Middle Name		
Last Name				
Designation		Company		
Registration #		Email		
Address				
City		Postal/Zip		Phone #
Prov/state		Country		

III. Developer Information

First Name	Steve	Middle Name		
Last Name	Thomas			
Company	Centre Mountain Business Park (CMBP)			
Phone #	(250) 418-5344	Email steve@keycorp.ca		
Address	#116 -967 Langford Parkway			
City	Langford	Postal/Zip	V9B 0A5	
Prov/state	BC	Country	Canada	

IV. Development Information

Development Type	Other: Landscaping – Site Prep			
Area of Development (ha)	0.25	Riparian Length (m)	20	
Lot Area (ha)	0.37	Nature of Development	New	
Proposed Start Date	2019-09-30	Proposed End Date	2020-12-31	

V. Location of Proposed Development

Street Address (or nearest town)	City of Langford – 2965 Sooke Road			
Local Government	City of Langford	City	Victoria	
Stream Name	Bilston Creek			
Legal Description (PID)	030827345	Region	Capital	
Stream/River Type	Stream	DFO Area	South Coast	
Watershed Code	930-027500			
Latitude	48	25	18	Longitude 123 33 18

Completion of Database Information includes the Form 2 for the Additional QEPs, if needed.
Insert that form immediately after this page.

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Section 1. Description of Fisheries Resources Values and a Description of the Development proposal

(Provide as a minimum: Species present, type of fish habitat present, description of current riparian vegetation condition, connectivity to downstream habitats, nature of development, specific activities proposed, timelines)

The purpose of this report is to identify watercourses and associated RAR setbacks for a lot located at 2965 Sooke Road in the City of Langford. The owners of the property (Centre Mountain Business Park (CMBP), are in the process of selling the lot and require it to have a building pad area. This area will be located immediately outside of the SPEA. At the time of our assessment in September of 2018, there was one stream within the subject lots that met the definition of a watercourse as identified by the Fish-Stream Identification Guidebook (1998). The stream is gazetted as Bilston Creek.

The proposed delineated study area encompasses one larger 4th order watercourse named Bilston Creek. Please refer to select maps in Section 3 of this report for watercourse location. Bilston Creek runs along the northern border of the property from west to east. Bilston Creek is a moderately large stream ranging in width from 4-9m with an average gradient of 5% resulting in cascade-pool morphology. The designated Streamside Protection and Enhancement Area (SPEA) for this creek will be 17.67m.

Bilston Creek (WSC – 930-17600)

The linear length of the stream through the subject property is approximately 20m. At the time of the survey the stream had 100% connectivity and the stream provided both suitable spawning and rearing habitat. The stream is generally of a low-moderate gradient cascade-pool morphology type but has a short micro unit in the lower section of the reach through riffle-pool morphology. This reach has an average gradient is 5% and the average bankfull width (Wb) is 5.89 meters. The channel is through a historic floodplain along the left bank. The substrate is made up respectively of cobble, gravel and silt. The riparian zone is dominated for the most part by older second-generation Douglas fir and western red cedar with a few big leaf maple and noble fir. The near stream canopy consists more of Douglas fir and western red cedar. Canopy closure is approximately 65% through the upper two thirds of the property, however, drops from 10-20% in the lower parts of the reach as it nears the eastern boundary of the property. The understory plants are diverse due to a variation in moisture regimes, the colonization of cleared areas and the impact of non-native plants and weeds. Some of the dominant plant found in the understory area are, Oregon grape, ocean spray, pacific willow, red alder, salmon berry, sword fern, lady fern, braken fern, Nootka rose, Pacific nine-bark. Fish presence is known through Bilston Creek and includes several species of salmonids.

Section 2. Results of Riparian Assessment (SPEA width)

2. Results of Detailed Riparian Assessment

Refer to Chapter 3 of Assessment Methodology

Date: 2019-09-11

Description of Water bodies involved (number, type)

1 stream

Stream	1
Wetland	
Lake	
Ditch	

Number of reaches 1

Reach # 1

Channel width and slope and Channel Type (use only if water body is a stream or a ditch, and only provide widths if a ditch)

Channel Width(m)		Gradient (%)	
starting point	5.76		
upstream	7.78	3	
	7.56		
	6.23		
	9.34		
downstream	4.76		
	5.62		
	4.33		
	5.42		
	5.17		
	4.73		
Total: minus high /low	53.03		
mean	5.89		
	R/P	C/P	S/P
Channel Type		X	

I, Thomas Roy, hereby certify that:

- I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the *Fish Protection Act*;
- I am qualified to carry out this part of the assessment of the development proposal made by the developer CMBP ;
- I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and
- In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation.

Site Potential Vegetation Type (SPVT)

	Yes	No	
SPVT Polygons		X	Tick yes only if multiple polygons, if No then fill in one set of SPVT data boxes
			I, <u>Thomas Roy</u> , hereby certify that:
			a) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i> ;
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			d) In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation.
Polygon No:	1		Method employed if other than TR
	LC	SH	TR
SPVT Type			X
Polygon No:			Method employed if other than TR

FORM 1
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SPVT Type	LC	SH	TR				
	<input type="text"/>	<input type="text"/>	<input type="text"/>				
Polygon No:	<input type="text"/>				Method employed if other than TR		
SPVT Type	<input type="text"/>	<input type="text"/>	<input type="text"/>				

Zone of Sensitivity (ZOS) and resultant SPEA

Segment No:	1	If two sides of a stream involved, each side is a separate segment. For all waterbodies multiple segments occur where there are multiple SPVT polygons					
LWD, Bank and Channel Stability ZOS (m)		11.78					
Litter fall and insect drop ZOS (m)		15					
Shade ZOS (m) max		17.67	South bank	Yes	<input type="text"/>	No	X
Ditch	Justification description for classifying as a ditch (manmade, no significant headwaters or springs, seasonal flow)						
Ditch Fish Bearing	Yes	<input type="text"/>	No	<input type="text"/>	If non-fish bearing insert no fish bearing status report		
SPEA Maximum		17.67	(For ditch use table3-7)				

Segment No:		If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons					
LWD, Bank and Channel Stability ZOS (m)							
Litter fall and insect drop ZOS (m)							
Shade ZOS (m) max			South bank	Yes	<input type="text"/>	No	X
SPEA maximum			(For ditch use table3-7)				

Segment No:		If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons					
LWD, Bank and Channel Stability ZOS (m)							
Litter fall and insect drop ZOS (m)							
Shade ZOS (m) max			South bank	Yes	<input type="text"/>	No	
SPEA Maximum			(For ditch use table3-7)				

I, <u>Thomas Roy</u> , hereby certify that:							
a) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i> ;							
b) I am qualified to carry out this part of the assessment of the development proposal made by the developer ; <u>CMBP</u>							
c) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and							
d) In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation.							

Comments

Segment 1 represents the right bank facing downstream. Only 1 segment used for this assessment
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Withheld pursuant to/removed as

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Section 4. Measures to Protect and Maintain the SPEA

This section is required for detailed assessments. Attach text or document files, as need, for each element discussed in chapter 1.1.3 of Assessment Methodology. It is suggested that documents be converted to PDF before inserting into the assessment report. Use your "return" button on your keyboard after each line. You must address and sign off each measure. If a specific measure is not being recommended a justification must be provided.

1. Danger Trees	No danger trees identified within the SPEA.
<p>I, <u>Thomas Roy</u>, hereby certify that:</p> <p>e) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>f) I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>CMBP</u>;</p> <p>g) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p>	
2. Windthrow	Windthrow is not a concern on this site due to the prevailing wind conditions
<p>I, <u>Thomas Roy</u>, hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>CMBP</u></p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p>	
3. Slope Stability	Banks are stable within the study area with no signs of previous slumpage
<p>I, <u>Thomas Roy</u>, hereby certify that:</p> <p>d. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>e. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>CMBP</u></p> <p>a. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p>	
4. Protection of Trees	To reduce the potential for tree damage into the SPEA, fencing (temporary) must be installed prior to the initiation of landscaping along the SPEA boundary. A split cedar rail or equivalent will be required along the SPEA boundary after landscaping works are completed
<p>I, <u>Thomas Roy</u>, hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>CMBP</u>;</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p>	
5. Encroachment	To reduce the potential for encroachment into the SPEA, fencing (temporary) must be installed prior to the initiation of landscaping activities when these activities are commenced within the RAA. The fencing will be placed by the designated QEP.
<p>I, <u>Thomas Roy</u>, hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>CMBP</u>;</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p>	
6. Sediment and Erosion Control	Sediment and erosion control measures will be implemented to reduce sediment ladden water from entering the stream during construction. These will include sediment fencing and hay bales placed along disturbed areas including all logging related

FORM 1
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	activities when they are proposed within the RAA and the SPEA boundary. The designated QEP will install the sediment controls.
<p>I, <u>Thomas Roy</u>, hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>CMBP</u>;</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p>	
7. Stormwater Management	Depending on the overall impervious area resulting from the proposed landscaping activities, a rock pit or equivalent mechanism capable of handling stormwater to acceptable levels will be required
<p>I, <u>Thomas Roy</u>, hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>CMBP</u>;</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p>	
8. Floodplain Concerns (highly mobile channel)	No concerns within the study area as proposed landscaping activities will result in a building platform greater than 2m in height above the active channel
<p>I, <u>Thomas Roy</u>, hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>CMBP</u>;</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p>	

Section 5. Environmental Monitoring

Attach text or document files explaining the monitoring regimen. Use your "return" button on your keyboard after each line. It is suggested that all document be converted to PDF *before* inserting into the PDF version of the assessment report. Include actions required, monitoring schedule, communications plan, and requirement for a post development report.

Specific Recommendations for Works within 30m of a Waterbody and Outside of Designated SPEA

2965 Sooke Road – Langford BC

Works Outside of SPEA However Within 30m RAR Assessment Area

- Prior to construction, a sediment and erosion control plan will be developed to prevent the discharge of sediment laden water into the SPEA or any watercourse
- No works shall be undertaken within areas designated as SPEA
- All works Scheduled Within 30m of a Watercourse and Outside of the SPEA will adhere to all recommendations as outlined in the Ministry of Environment's Develop with Care, *Environmental Guidelines for Urban and Rural Development in British Columbia*, 2012. As well:
 - Ensure construction will proceed smoothly without harmful alteration of habitat;
 - Provide long-term monitoring for disturbed sites until green-up is established and the soils at the site are stable.
- Heavy equipment (excavators etc.) working outside the SPEA will be monitored for leaks (oil, hydraulic fluid etc.).
- Sediment control measures will be installed (where necessary) along disturbed areas to minimize sediment inflow to the SPEA.
- Areas designated as the SPEA will be flagged with high visibility flagging tape and temporary fencing.
- Disturbed areas outside the SPEA and within 30m of a waterbody will be revegetated with native plants of a size that will quickly re-establish riparian cover when construction activities are deemed complete unless future uses such as building and parking locations are identified;
- Detailed direction to contractors will be given to ensure that no erosion

or sediment movement will occur and that no silt will be released to the SPEA during the proposed works and post construction phase.

- The site will be monitored by the designated QEP (once every two weeks or as required due to high rainfall events - >30mm/24 hour period) during the construction period. Any contraventions of the RAR will be communicated to the builder as well as local municipal staff and RAR staff.
- A post construction report generated by the designated QEP will be submitted to RAR and local municipal staff within four months of the end of the proposed activities.

Section 6. Photos

Plate #1 Typical view of riparian area facing upstream from Reach 1 of Bilston Creek



Plate #2 View of SPEA along existing road crossing



Plate #3

View of Bilston Creek facing downstream



Plate #4

View of stream 2 reach 1 canopy



Section 7. Professional Opinion

Assessment Report Professional Opinion on the Development Proposal's riparian area.

Date 2019-09-11

1. I/We Thomas
Roy

hereby certify that:

- a) I am/We are qualified environmental professional(s), as defined in the Riparian Areas Regulation made under the *Fish Protection Act*;
- b) I am/We are qualified to carry out the assessment of the proposal made by the developer CMBP, which proposal is described in section 3 of this Assessment Report (the "development proposal");
- c) I have/We have carried out an assessment of the development proposal and my/our assessment is set out in this Assessment Report; and
- d) In carrying out my/our assessment of the development proposal, I have/We have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation; AND

2. As qualified environmental professional(s), I/we hereby provide my/our professional opinion that:

- a) if the development is implemented as proposed by the development proposal there will be no harmful alteration, disruption or destruction of natural features, functions and conditions that support fish life processes in the riparian assessment area in which the development is proposed, **OR**
(Note: include local government flex letter, DFO Letter of Advice, or description of how DFO local variance protocol is being addressed)
- b) ☒ if the streamside protection and enhancement areas identified in this Assessment Report are protected from the development proposed by the development proposal and the measures identified in this Assessment Report as necessary to protect the integrity of those areas from the effects of the development are implemented by the developer, there will be no harmful alteration, disruption or destruction of natural features, functions and conditions that support fish life processes in the riparian assessment area in which the development is proposed.

[NOTE: "qualified environmental professional" means an applied scientist or technologist, acting alone or together with another qualified environmental professional, if

- (a) the individual is registered and in good standing in British Columbia with an appropriate professional organization constituted under an Act, acting under that association's code of ethics and subject to disciplinary action by that association,
- (b) the individual's area of expertise is recognized in the assessment methods as one that is acceptable for the purpose of providing all or part of an assessment report in respect of that development proposal, and
- (c) the individual is acting within that individual's area of expertise.]

Submission Instructions
Riparian Areas Regulation – Qualified Environmental Professional – Assessment Report
RAR-QEP-AR

Forms you will need to complete are

- Form 1 which has the database information, the description of the fisheries resources, development site plan, measures to protect and maintain the SPEA, and environmental monitoring.
- Form 2, if more QEPs are part of the project team.
- Either Form 3 the detailed assessment form(s) or Form 4 simple assessment form(s) which is for the results of the riparian assessment (SPEA width). Use enough copies of the form to complete the assessment of the site.
- Form 5 is the photo form(s). Duplicate for additional photos.

NB: See the Guidelines and the Assessment Methods for detailed instructions on the information required for completing the Assessment Report.

A complete Riparian Assessment Report based on the template forms must be converted to a *single* Portable Document Format PDF file prior to uploading onto the Notification System.

The Assessment Report must be complete, by submitting the information specified, and posted to provide notification to the local government, Ministry of Water, Land and Air Protection and the Department of Fisheries and Oceans Canada.

Tips for working with MS Word Template Forms

Using the forms

- Before beginning, print a hard copy of the form and the guidance files for reference
- Open the template
- Enter data into the shaded fields on the form
- Use TAB to move from one field to another; SHIFT-TAB to go in reverse
- Text and digital photos may be inserted from other applications
- The amount of text that can be entered in each box is limited and cannot be changed by the user; boxes with date information, for example, require input like: yyyy-mm-dd.

Saving the completed form

- Assign name to the completed form
- Save a word document (*.doc file)
- Do not overwrite the Template (*.dot file) with your completed form
- If you do overwrite the template, you can download a new copy from this web site

Riparian Areas Regulation: Assessment Report

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First Name	Thomas	Middle Name		
Last Name	Roy			
Designation	R.P. Bio	Company Cascadia Biological Services		
Registration #	1089	Email cascadiabiological@shaw.ca		
Address	772 Goldstream Avenue			
City	Victoria	Postal/Zip	V9B 5S4	Phone # 250 888-4864
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First Name		Middle Name		
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	4.33		
	5.42		
	5.17		
	4.73		
Total: minus high /low	53.03		
mean	5.89		
	R/P	C/P	S/P
Channel Type		X	

I, Thomas Roy, hereby certify that:

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- I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and
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Site Potential Vegetation Type (SPVT)

	Yes	No	
SPVT Polygons		X	Tick yes only if multiple polygons, if No then fill in one set of SPVT data boxes
			I, <u>Thomas Roy</u> , hereby certify that:
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Polygon No:	<input type="text"/>				Method employed if other than TR		
SPVT Type	<input type="text"/>	<input type="text"/>	<input type="text"/>				

Zone of Sensitivity (ZOS) and resultant SPEA

Segment No:	1	If two sides of a stream involved, each side is a separate segment. For all waterbodies multiple segments occur where there are multiple SPVT polygons					
LWD, Bank and Channel Stability ZOS (m)		11.78					
Litter fall and insect drop ZOS (m)		15					
Shade ZOS (m) max		17.67	South bank	Yes	<input type="text"/>	No	X
Ditch	Justification description for classifying as a ditch (manmade, no significant headwaters or springs, seasonal flow)						
Ditch Fish Bearing	Yes	<input type="text"/>	No	<input type="text"/>	If non-fish bearing insert no fish bearing status report		
SPEA Maximum		17.67	(For ditch use table3-7)				

Segment No:	<input type="text"/>	If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons					
LWD, Bank and Channel Stability ZOS (m)		<input type="text"/>					
Litter fall and insect drop ZOS (m)		<input type="text"/>					
Shade ZOS (m) max		<input type="text"/>	South bank	Yes	<input type="text"/>	No	X
SPEA maximum		<input type="text"/>	(For ditch use table3-7)				

Segment No:	<input type="text"/>	If two sides of a stream involved, each side is a separate segment. For all water bodies multiple segments occur where there are multiple SPVT polygons					
LWD, Bank and Channel Stability ZOS (m)		<input type="text"/>					
Litter fall and insect drop ZOS (m)		<input type="text"/>					
Shade ZOS (m) max		<input type="text"/>	South bank	Yes	<input type="text"/>	No	<input type="text"/>
SPEA Maximum		<input type="text"/>	(For ditch use table3-7)				

I, <u>Thomas Roy</u> , hereby certify that:							
a) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i> ;							
b) I am qualified to carry out this part of the assessment of the development proposal made by the developer ; <u>CMBP</u>							
c) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and							
d) In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation.							

Comments

Segment 1 represents the right bank facing downstream. Only 1 segment used for this assessment
--

Page 23 of 39 to/à Page 25 of 39

Withheld pursuant to/removed as

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Section 4. Measures to Protect and Maintain the SPEA

This section is required for detailed assessments. Attach text or document files, as need, for each element discussed in chapter 1.1.3 of Assessment Methodology. It is suggested that documents be converted to PDF before inserting into the assessment report. Use your "return" button on your keyboard after each line. You must address and sign off each measure. If a specific measure is not being recommended a justification must be provided.

1. Danger Trees	No danger trees identified within the SPEA.
<p>I, <u>Thomas Roy</u>, hereby certify that:</p> <p>e) I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>f) I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>CMBP</u>;</p> <p>g) I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p>	
2. Windthrow	Windthrow is not a concern on this site due to the prevailing wind conditions
<p>I, <u>Thomas Roy</u>, hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>CMBP</u></p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p>	
3. Slope Stability	Banks are stable within the study area with no signs of previous slumpage
<p>I, <u>Thomas Roy</u>, hereby certify that:</p> <p>d. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>e. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>CMBP</u></p> <p>a. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p>	
4. Protection of Trees	To reduce the potential for tree damage into the SPEA, fencing (temporary) must be installed prior to the initiation of landscaping along the SPEA boundary. A split cedar rail or equivalent will be required along the SPEA boundary after landscaping works are completed
<p>I, <u>Thomas Roy</u>, hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>CMBP</u>;</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p>	
5. Encroachment	To reduce the potential for encroachment into the SPEA, fencing (temporary) must be installed prior to the initiation of landscaping activities when these activities are commenced within the RAA. The fencing will be placed by the designated QEP.
<p>I, <u>Thomas Roy</u>, hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>CMBP</u>;</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p>	
6. Sediment and Erosion Control	Sediment and erosion control measures will be implemented to reduce sediment ladden water from entering the stream during construction. These will include sediment fencing and hay bales placed along disturbed areas including all logging related

FORM 1
Riparian Areas Regulation - Qualified Environmental Professional - Assessment Report

	activities when they are proposed within the RAA and the SPEA boundary. The designated QEP will install the sediment controls.
<p>I, <u>Thomas Roy</u>, hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>CMBP</u>;</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p>	
7. Stormwater Management	Depending on the overall impervious area resulting from the proposed landscaping activities, a rock pit or equivalent mechanism capable of handling stormwater to acceptable levels will be required
<p>I, <u>Thomas Roy</u>, hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>CMBP</u>;</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p>	
8. Floodplain Concerns (highly mobile channel)	No concerns within the study area as proposed landscaping activities will result in a building platform greater than 2m in height above the active channel
<p>I, <u>Thomas Roy</u>, hereby certify that:</p> <p>a. I am a qualified environmental professional, as defined in the Riparian Areas Regulation made under the <i>Fish Protection Act</i>;</p> <p>b. I am qualified to carry out this part of the assessment of the development proposal made by the developer <u>CMBP</u>;</p> <p>c. I have carried out an assessment of the development proposal and my assessment is set out in this Assessment Report; and In carrying out my assessment of the development proposal, I have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation</p>	

Section 5. Environmental Monitoring

Attach text or document files explaining the monitoring regimen. Use your "return" button on your keyboard after each line. It is suggested that all document be converted to PDF *before* inserting into the PDF version of the assessment report. Include actions required, monitoring schedule, communications plan, and requirement for a post development report.

Specific Recommendations for Works within 30m of a Waterbody and Outside of Designated SPEA

2965 Sooke Road – Langford BC

Works Outside of SPEA However Within 30m RAR Assessment Area

- Prior to construction, a sediment and erosion control plan will be developed to prevent the discharge of sediment laden water into the SPEA or any watercourse
- No works shall be undertaken within areas designated as SPEA
- All works Scheduled Within 30m of a Watercourse and Outside of the SPEA will adhere to all recommendations as outlined in the Ministry of Environment's Develop with Care, *Environmental Guidelines for Urban and Rural Development in British Columbia*, 2012. As well:
 - Ensure construction will proceed smoothly without harmful alteration of habitat;
 - Provide long-term monitoring for disturbed sites until green-up is established and the soils at the site are stable.
- Heavy equipment (excavators etc.) working outside the SPEA will be monitored for leaks (oil, hydraulic fluid etc.).
- Sediment control measures will be installed (where necessary) along disturbed areas to minimize sediment inflow to the SPEA.
- Areas designated as the SPEA will be flagged with high visibility flagging tape and temporary fencing.
- Disturbed areas outside the SPEA and within 30m of a waterbody will be revegetated with native plants of a size that will quickly re-establish riparian cover when construction activities are deemed complete unless future uses such as building and parking locations are identified;
- Detailed direction to contractors will be given to ensure that no erosion

or sediment movement will occur and that no silt will be released to the SPEA during the proposed works and post construction phase.

- The site will be monitored by the designated QEP (once every two weeks or as required due to high rainfall events - >30mm/24 hour period) during the construction period. Any contraventions of the RAR will be communicated to the builder as well as local municipal staff and RAR staff.
- A post construction report generated by the designated QEP will be submitted to RAR and local municipal staff within four months of the end of the proposed activities.

Section 6. Photos

Plate #1

Typical view of riparian area facing upstream from Reach 1 of Bilston Creek



Plate #2 View of SPEA along existing road crossing



Plate #3

View of Bilston Creek facing downstream



Plate #4

View of stream 2 reach 1 canopy



Section 7. Professional Opinion

Assessment Report Professional Opinion on the Development Proposal's riparian area.

Date 2019-09-11

1. I/We Thomas
Roy

hereby certify that:

- a) I am/We are qualified environmental professional(s), as defined in the Riparian Areas Regulation made under the *Fish Protection Act*;
- b) I am/We are qualified to carry out the assessment of the proposal made by the developer CMBP, which proposal is described in section 3 of this Assessment Report (the "development proposal");
- c) I have/We have carried out an assessment of the development proposal and my/our assessment is set out in this Assessment Report; and
- d) In carrying out my/our assessment of the development proposal, I have/We have followed the assessment methods set out in the Schedule to the Riparian Areas Regulation; AND

2. As qualified environmental professional(s), I/we hereby provide my/our professional opinion that:

- a) if the development is implemented as proposed by the development proposal there will be no harmful alteration, disruption or destruction of natural features, functions and conditions that support fish life processes in the riparian assessment area in which the development is proposed, **OR**

(Note: include local government flex letter, DFO Letter of Advice, or description of how DFO local variance protocol is being addressed)

- b) ☒ if the streamside protection and enhancement areas identified in this Assessment Report are protected from the development proposed by the development proposal and the measures identified in this Assessment Report as necessary to protect the integrity of those areas from the effects of the development are implemented by the developer, there will be no harmful alteration, disruption or destruction of natural features, functions and conditions that support fish life processes in the riparian assessment area in which the development is proposed.

[NOTE: "qualified environmental professional" means an applied scientist or technologist, acting alone or together with another qualified environmental professional, if

- (a) the individual is registered and in good standing in British Columbia with an appropriate professional organization constituted under an Act, acting under that association's code of ethics and subject to disciplinary action by that association,
- (b) the individual's area of expertise is recognized in the assessment methods as one that is acceptable for the purpose of providing all or part of an assessment report in respect of that development proposal, and
- (c) the individual is acting within that individual's area of expertise.]

Submission Instructions
Riparian Areas Regulation – Qualified Environmental Professional – Assessment Report
RAR-QEP-AR

Forms you will need to complete are

- Form 1 which has the database information, the description of the fisheries resources, development site plan, measures to protect and maintain the SPEA, and environmental monitoring.
- Form 2, if more QEPs are part of the project team.
- Either Form 3 the detailed assessment form(s) or Form 4 simple assessment form(s) which is for the results of the riparian assessment (SPEA width). Use enough copies of the form to complete the assessment of the site.
- Form 5 is the photo form(s). Duplicate for additional photos.

NB: See the Guidelines and the Assessment Methods for detailed instructions on the information required for completing the Assessment Report.

A complete Riparian Assessment Report based on the template forms must be converted to a *single* Portable Document Format PDF file prior to uploading onto the Notification System.

The Assessment Report must be complete, by submitting the information specified, and posted to provide notification to the local government, Ministry of Water, Land and Air Protection and the Department of Fisheries and Oceans Canada.

Tips for working with MS Word Template Forms

Using the forms

- Before beginning, print a hard copy of the form and the guidance files for reference
- Open the template
- Enter data into the shaded fields on the form
- Use TAB to move from one field to another; SHIFT-TAB to go in reverse
- Text and digital photos may be inserted from other applications
- The amount of text that can be entered in each box is limited and cannot be changed by the user; boxes with date information, for example, require input like: yyyy-mm-dd.

Saving the completed form

- Assign name to the completed form
- Save a word document (*.doc file)
- Do not overwrite the Template (*.dot file) with your completed form
- If you do overwrite the template, you can download a new copy from this web site

From: [Riparian Areas FLNR:EX](#)
To: [CASCADIA BIOLOGICAL](#)
Subject: RE: Assessment #5892A has been reviewed
Date: November 26, 2019 12:03:00 PM

Hello Thomas,

The updated report has been reviewed and meets the standards of the RAPR.

Regards,

Nick

From: CASCADIA BIOLOGICAL <cascadiabiological@shaw.ca>
Sent: November 25, 2019 11:10 PM
To: Riparian Areas FLNR:EX <RiparianAreas@Victoria1.gov.bc.ca>
Subject: Fwd: Assessment #5892A has been reviewed

I submitted a second report on this file several months ago. In it I added detail as requested. Could I please get an update.

Regards

Thomas

From: "Riparian Areas FLNR, EX" <RiparianAreas@Victoria1.gov.bc.ca>
To: "Riparian Areas FLNR, EX" <RiparianAreas@Victoria1.gov.bc.ca>, "Thomas Roy" <cascadiabiological@shaw.ca>, "Riparian Areas, Region 1 FLNR:EX" <RARReg1@gov.bc.ca>, "DFO EPMP" <DFO_EPMP@PAC.DFO-MPO.GC.CA>, "Matthew Baldwin" <MBALDWIN@CITYOFLANGFORD.CA>, "Matthew Baldwin" <MBALDWIN@CITYOFLANGFORD.CA>
Sent: Thursday, October 17, 2019 4:19:00 PM
Subject: Assessment #5892A has been reviewed

RAR Assessment report #5892A has been reviewed by the Ministry of Forests, Lands, Natural Resource Operations and Rural Development. The Ministry hereby provides notice that this report requires amendments to meet the assessment and reporting criteria of the RAR. Please re-submit once deficiencies in the assessment report (noted below) have been addressed. For more information please see comments/questions below. **If there are further questions please contact** RiparianAreas@Victoria1.gov.bc.ca

Report Number	5892A	

Date: 2019-10-17

Reviewed By: Nicholas Schwetz

Keystone Data

Report Number	5892A
QEP	Thomas Roy
Local Government	Langford, City of
Location of Proposed Development (Address)	2965 Sooke Road
PID	030-827-345
Legal Description	
Stream	Name Bilston Creek
	Type Stream
	Comments

RAR Assessment

	Assess	Comments
SPVT Correct	Yes	
ZOS' Correct	Yes	
SPEA Correct	Yes	17.67 m on south side of stream.
Site Plan	yes	The Study Area is outlined and shaded in red in the Site Plan. Is this the surveyed lot boundary? A background review of the CRD's online mapping tool suggests the lot is much larger than the study area delineated in this report. Will there be any development proposed north of the stream? It is suggested only the south side of the stream will have development (i.e. the building pad). The SPEA must be delineated on the Site Plan as well as the development footprint.
HWM/TOB	Yes	
RAA	Yes	
ZOS's	Yes	
SPEA	No	
Building Envelope	No	
Development within SPEA	Unclear	The QEP has stated that a building pad is required for the sale of the lot. The building pad will be located immediately outside of the SPEA. The building pad footprint, and all associated site disturbances must be included in this RAR report.
Measures Appropriate	No	The QEP has stated that "this area [the building pad] will be located immediately outside of the SPEA". Measures to protect the SPEA may include areas outside of the SPEA. Therefore, the building pad footprint must be illustrated on the Site Plan and measures to protect the SPEA from the construction of the building pad must be clearly outlined.

Professional Opinion

	Assess	Comments
Section 7 (a) Signed	No	
Section 7 (b) Signed	Yes	
QEP Reduced SPEA?	No	

Applied Methodology Correctly?	No
Comments <p>Photo 2 suggests road improvement works have already begun. Please verify. The QEP has stated that only a building pad will be built prior to sale. Works within and about a stream may require authorization under the Water Sustainability Act (WSA). Please verify if any works qualify under WSA and if WSA authorization(s) have been sought. See previous comments.</p>	

From: RiparianAreas@Victoria1.gov.bc.ca <RiparianAreas@Victoria1.gov.bc.ca>

Sent: September 12, 2019 10:44 PM

To: cascadiabiological@shaw.ca; Riparian Areas, Region 1 FLNR:EX <RARReg1@gov.bc.ca>; Riparian Areas FLNR:EX <RiparianAreas@Victoria1.gov.bc.ca>; DFO_EPMP@PAC.DFO-MPO.GC.CA; MBALDWIN@CITYOFLANGFORD.CA; MBALDWIN@CITYOFLANGFORD.CA

Subject: Assesment 5892 has been created

This assessment has been created. This notification is sent to you, Fisheries and Oceans Canada (DFO), the BC Ministry of Environment, and the appropriate local government(s).
Details of this assessment are included in this notification.

Assessment Details

Assessment ID:: 5892 **Creation Date:** 2019-09-12

Status: created **Last Modified:** 2019-09-12

Development Details

Development Type:	Landscaping, including fencing, retaining wall and parking lots	Proposed Start Date:	2019-09-30
Area of Development (hectares):	.250	Proposed End Date:	2020-12-31
Lot Area (hectares):	.370	Nature of Development:	New
Riparian Length:	20.00	Section 9 Part 7 Activities:	N

Location Details

Local Government:	Langford, City of	DFO Area:	South Coast Area
Region:	Vancouver Island	Stream/River Type:	Stream
Parcel Identification (PID)/ Parcel Identification Number (PIN):	030827345	Stream/River Name:	Bilston Creek
Address Line 1:		Watershed Code:	930-027500
Address Line 2:		Postal Code:	
Latitude:	48°25'18"	Longitude:	123°33'18"

Developer Details

Contact First Name: Steve **Address Line 1:** 116-967 Langford Parkway

Contact Middle Name:		Address Line 2:	
Contact Last Name:	Thomas	City:	victoria
Province/State:	bc	Postal/Zip Code:	v9b0a5
Email Address:	steve@keycorp.ca	Country:	canada
Company Name:	Centre Mtn Business Park	Phone #:	

Primary QEP Details

Contact First Name:	Thomas	Address Line 1:	772 goldstream ave
Contact Middle Name:		Address Line 2:	PO Box 27034
Contact Last Name:	roy	City:	victoria
Designation:	Biologist	Province/State:	bc
Registration #:	1089	Postal/Zip Code:	v9b 5s4
Email Address:	cascadiabiological@shaw.ca	Country:	canada
Company Name:	Cascadia Biological	Phone #:	

Secondary QEP Details

Name:	Company	Address	Email	Phone
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