

## Riparian Assessment and Impact Assessment of Development without a Permit for 1905 Jennens Road, West Kelowna

### 1.0 Background

In summer 2019, I prepared a Riparian Assessment for 1905 Jennens Road in West Kelowna. The assessment followed the methods of the RAR and included surveys to determine the High Water Mark and setbacks. That assessment was prepared with respect to a proposed demolition of the existing house and landscaping. The report was not submitted as development plans were not finalized and the secondary QEP (Don Dobson, P.Eng.) had not completed the Measures section regarding Floodplain Concerns.



In August 2020, I was contacted by the agent for the owner that demolition of the structure had been in progress and a stop work order was put in place by the City of West Kelowna due to the lack of an Aquatic Development Permit (all other permits are in place). The current plan for the property includes a rebuild of the house on the original foundation. The site was visited on August 19 2020 with the agent for the owner and Don Dobson (P.Eng.). While there have been site disturbance and vegetation removal activities are within the 30m Riparian Assessment Area (default setback under the Fisheries Act), they have not resulted in a HADD (**harmful alteration, disruption or destruction of fish habitat**) under the Fisheries Act and would not have encroached into the SPEA setbacks that would have been in place if the original assessment had been submitted (considering areas of human disturbance).

Since November 2019, the RAR legislation has changed (now called the RAPR). The methods that would be used for this property have not changed except some terminology. **One change that is applicable to this property is that areas of invasive weed species are now considered an area of human disturbance so removal and replanting can take place without submission and approval of a RAPR assessment.** As before, the Province has no process to approve an assessment after development has taken place so the assessment now lies entirely with the City of West Kelowna.

Therefore, I am submitting the following in support of an Aquatic Development Permit:

1. RAPR assessment on new forms and conducted with respect to the current development proposal;
2. An impact assessment of the development without a permit;
3. Increased measures and monitoring for the duration of the project.

In summary, the development prior to being stopped:

1. Encroached in the 30m Riparian Assessment Area without having an approved Riparian Assessment Report;
2. Did not employ measures that would protect the riparian area from potential erosion and sediment transport, encroachment or tree damage; and
3. May have destroyed, damaged or disrupted nesting birds protected under the Federal Migratory Birds Convention Act by clearing trees and shrubs in June without a nesting activity assessment completed by a QEP (this would have been an additional measure in a standard riparian or environmental assessment with respect to any development that included clearing); and
4. The property has areas of previous unauthorized disturbance (vegetation removal) that have not been rehabilitated within the McDougall Creek SPEA.

## 2.0 Impacts of Development

1. **Removal of Shrubs and Trees within the Migratory Nesting Bird Window (2020):** The property originally had a shrubby area and at least 2 trees (one Ponderosa Pine <30cm dbh and one large non-native Oak tree) that were cleared in approximately June of 2020. No nests, and no persistent (eg., stick nests, platform nests) were observed in 2019 but there is a possibility that clearing resulted in disturbance or destruction of a migratory bird nest. There is no way of confidently determining this now as the cleared vegetation has been hauled away except for the stem of a large oak tree which is still on site.



Photo 1. Vegetation in 2019.





Photo 2. Vegetation in 2019.



Photo 3. Vegetation removed without a watercourse development permit and within the migratory bird nesting season.



2. **Encroachment:** In the absence of an approved riparian assessment, the default setback from a watercourse that is protected under the Fisheries Act is 30m. The site disturbance is not within the 30m setback from Okanagan Lake, but it is within the 30m setback from McDougall Creek. The resultant creek SPEA setback from the 2019 RAR assessment was 10.3m while the floodplain setback superseded the SPEA at 15m. The creek SPEA was encroached by the access trail used for demolition and site clearing. This access, however, was existing and is considered an existing area of human disturbance that is able to be grandfathered and can continued to be used in this way.



Photo 4. 2019 photo of access road; an existing area of human disturbance in the SPEA that can be maintained for the same use.

### **3.0 Outstanding Vegetation Removal prior to 2020**

CWK had documented unauthorized vegetation removal on the property along McDougall Creek in 2017. Replanting is an outstanding issue.



Photo 5. Area of vegetation removal documented in 2017 requiring replanting.

### 3.0 Measures

A riparian assessment includes measures to protect the SPEA. Considering this development (clearing, demolition, rebuilding of the house), the measures will be:

- a. **Permanently mark the SPEA:** this is a standard measure
- b. **Encroachment and Erosion/Sediment Control:** The boundaries of the construction site will have keyed-in silt fence; this fence will be further than the lake SPEA but inside of the creek SPEA considering the grandfathered access road.
- c. **Protection of Trees:** the maple tree outside of the SPEAs will have snowfencing at the perimeter of the drip line to protect the roots from damage during construction.
- d. **Additional measures:** additional to measures discussed in the riparian assessment methods, the following measures will be instated:
  - i. No staging of fuel or other hazardous materials within 30m of a watercourse
  - ii. No refueling or maintenance of machinery within 30m of a watercourse
  - iii. Machinery used within 30m of a watercourse must be clean and free of leaks.
  - iv. Spill kits for spills to water and land must be on site.

### 3.1 Replanting Plan

A November 26 2020 conference call with Brent Magnan (CWK Planning Manager), Kevin Barnett (General Contractor, Barnett Construction) and Karen Grainger (QEP), determined the scope of replanting as:

1. Equivalent to 60m x 10m (600m<sup>2</sup>) of area along McDougall Creek. This area (m<sup>2</sup>) was decided on during the conference call. On the ground it will be bounded by the property line, the lake high water mark, and the SPEA or access road as applicable.
2. With a replanting density of 1 shrub/m<sup>2</sup> will require 600 plants (mostly shrubs, will include a few Cottonwood at Brent's request).
3. The area will be above the HWM, within the SPEA and on the property (there are small portions of the SPEA on the neighboring property to the south).
4. Areas of existing invasive weed species will be prioritized. Invasive species that are removed will be disposed of at a landfill. Invasive species known within the SPEA include burdock, hound's tongue and nightshade. No native vegetation will be removed.
5. Planting material will be provided by an Okanagan nursery with native stock. Species will include those presently on site: willow, cottonwood, rose, red-osier dogwood, Douglas maple, snowberry and Oregon-grape. Species can include elderberry, ash, spirea, aspen, chokecherry, mock-orange and oceanspray.
6. Planting will be completed in May 2021 with conditions regarding monitoring and survivorship targets provided by the CWK in the development permit. If planting is done in April, a nesting assessment will be required to ensure nesting migratory birds are not disturbed as per the Migratory Birds Convention Act.
7. Exposed soils will be seeded with a native grass mix to prevent establishment of weeds.



Figure 1. Area of replanting is in red. Property lines are in blue. The area is red is approximately 500m<sup>2</sup>, which will allow for 500 shrubs/trees at the recommended spacing. The additional 100 plants will be used to replace invasive plants along the creek north of the planting area, respecting the need for access. There is no existing landscaping in the red polygon, which is a current combination of native plants and noxious weeds.

### 3.2 Planting Budget

A quote was provided by Sagebrush Nurseries of Oliver that includes some larger pot sizes and seeding with planting suggested for the end of March.

Sagebrush Quote	AMOUNT	COST
Shrubs/trees (fertilizers, grass seed )	600 @ \$6.5125	\$3,907.50
Planting	Lump sum	\$5,000.00
GST and PST (on plants)	5% on all, 7% on plants	\$ 718.91
<b>TOTAL</b>		<b>\$ 9,626.41</b>



#### 4.0 Monitoring

Activities are predicted to re-start in January 2021, outside of the breeding bird window so disturbance is not a consideration. Monitoring will be:

- a.** prior to restarting to ensure measures are in place;
- b.** Weekly during site works to monitor for erosion and sediment control risks, and staging/use of hazardous materials; and
- c.** Monthly during construction to monitor for encroachment.
- d.** Prior to planting to determine boundaries and invasive species removal procedures.
- e.** After planting for confirmation.

A post-development report will be submitted to the City of West Kelowna along with Conformance Statements from the QEPs.



Sagebrush Nursery

7556 Island Road  
 Oliver, BC V0H 1T7  
 Ph# 250.498.8898  
 Fax# 250.498.8892

# Estimate

Date	Estimate #
2020-12-01	816

Name / Address
Karen Grainger

Description	Qty	Rate	Total
1905 Jennens Road, West Kelowna			
1 gallon - Willow ssp.	100		
1 gallon - Dogwood	100		
2 gallon - Black Cottonwood - Populus trichocarpa	50		
1 gallon - Oregon Grape	50		
1 gallon - Woods Rose - Rosa Woodsii	100		
1 gallon - Snowberry	100		
1 gallon - Douglas Maple - Acer glabram	70		
1 gallon - Saskatoon	30		
Native Grass Seed Mix - To overseed around the plantings. Helps minimize the encroaching weedy species.	15		
Habitat Restoration - Planting the above trees and shrubs. All soil amendments, fertilizers and bonemeal. Spreading and raking in the grass seed.	1		
GST on sales			
PST (BC) on sales			
		<b>Total</b>	\$9,626.41