



Edibella Organic Landscapes Inc.

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March 10, 2017

Revision May 26, 2017

Revision June 7, 2017

Tree report for the City of Victoria,
re. development proposal of 750 Pemberton

Attn: Melanie Smith, (client)

This report has been prepared for the client by Michael Cowan of Edibella Organic Landscapes Inc. ISA Certified Arborist PN 5963-A

Trees are numbered here to relate to a corresponding site map

Tree protection zones are described below as well as illustrated on the attached site map

This document is to be used in conjunction with the City of Victoria's Tree Preservation By-Law. There are recommendations there which must be followed with regard to Tree Protection Zones, Permits, Replacement Trees, as well as Construction Practices,

Executive Summary:

This development will affect only a few trees on this large property. One non-by law protected tree, (#8), will have to be removed, as well as one nearly dead purple leaf plum, (#16). There will be some impacts on by-law protected trees, but the recommendations made herein will help to minimize any permanent damage. A large multistem elm tree will lose one of its stems, (which is already cabled and leaning heavily), the roots of this tree will also be impacted. The developer has made the building much smaller to maintain this tree. The neighbours Black Pine will have its



roots affected by the construction of Cottage 1. A Garry Oak (tree15), is not very healthy, unit 3 has been sited to avoid the roots of this tree, there will need to be some pruning to scaffold limbs to make way for the house and its construction. Provided the recommendations are followed; the existing trees on this site will not be adversely affected by this development.

The Details

Assignment: Prepare a report on the conditions of the existing trees on site and the potential impacts of this development proposal may have on the overall health and lifespan of these trees, as well as what can be done during the development process to mitigate any damage to the trees.

Methodology: There are a number of by-law protected trees on the property as well as the neighbouring properties, within 3 metres of the property line. Information such as size (DBH), Diameter at Breast Height, Protected Root Zone, (PRZ), Critical Root Zone, (CRZ), crown spread, health and structural condition, relative tolerance to construction impact and general remarks and recommendations recorded in the attached tree resource spreadsheet. CRZ, is determined by measuring the DBH and multiplying by 12.

Potential Impacts: the most likely impacts to the trees would be in the excavation and grade changes. The construction of Unit 1 will have the greatest impact on the neighbouring trees. Tree #7 Multi stem Elm, (considered a protected tree under the city of Victoria By-Law), and tree #8 the Red Oak. Tree #8 will need to be removed and tree #7 will need to have a large, (cabled and co-dominant), stem removed. A pruning permit will be required for this work. The excavation necessary for the building foundation will cause damage to the roots of tree #7. Exploratory digging will need to be done prior to excavation to determine the amount of potential damage to the roots of tree #7. I will need to know how much "over excavation" will necessary for the construction of the cottage 1. The building has been altered to accommodate the proposed changes. As well, the deck of the cottage should, (and according to the design this is what is being proposed), have its outer deck built on pillars to avoid the root zone of tree #7. The Pine tree, (Tree #12) on the neighbours property will also lose roots due to the excavation necessary, but will survive as it is only a small portion of the entire root zone. This pine will also need to have 2 to 3 lower scaffold limbs removed to the trunk to allow room for the cottage 1 to be built. A permit will need to be issued for the pruning on this tree as it is a by-law protected tree. The construction of Unit 3 SFD will slightly impact the PRZ of the Garry Oak, (Tree #16), and the Douglas Fir, (Tree #15), with careful excavation less than 10% of the PRZ would be impacted by this. Tree #16 will also need to have some scaffold limbs removed for the construction and siting of the house #3. A pruning permit will be required for this work.

The utilities: to service the new dwellings will all be going under the existing driveway and the only tree to have significant roots under the driveway would be Tree #8 which would be removed for the construction of the Unit 1 Family Cottage. Utilities for lot 3 should be routed on either side of the driveway. Fortis Gas line being added to the property will affect tree #1, so exploratory digging should be done prior to any excavation to determine potential root damage.

The driveways: The front entrance which is on city property. The Garry Oak, (Tree # 1), at the front of the property will be affected by the construction. I would recommend exploratory digging with the project arborist on site prior to any excavation. I would recommend the use of

an air spade or water flush excavation to necessary depth for a proper installation of the structural bedding material for the driveway. The exaction for parking spaces 1,2,3,4, will have an impact on the roots of tree #12; all of this work will need to be observed by the project arborist.

The sidewalks: The excavation depth necessary for sidewalk should not affect any of the trees on site except for the municipal trees, (Trees 1-4), which I addressed above in the driveways section

Mitigation of Impacts:

Barrier Fencing: Areas, surrounding the trees to be retained, should be isolated from constructions activity by erecting protective barrier fencing. Where possible, the fencing should be erected at the perimeter of the critical root zones. The barrier fencing to be erected must be a minimum of four feet in height and constructed of solid material or flexible safety fencing that is attached to wooden or metal posts. The fencing must be erected prior to the start of any construction activity on site, (i.e. demolition, excavation, construction), and remain in place through completion of the project. Signs should be posted around the protection zone to declare it off limits to all construction related activity. The project arborist must be consulted before this fencing is remove or move for any purpose. Solid hording material may also be required to protect the trunks of the trees from the mechanical injury if vehicles or machinery are permitted close to tree trunks and where blasting is required.

Building Footprints: The footprint of Unit 1 Family Cottage, will impact the rootzone of tree #8 so much that it is recommended that this tree be removed for the construction of the dwelling at its current location on the property. The pine tree on the neighbours property will have about 15% of its PRZ impacted by this dwelling as well. I recommend that the excavation for this Unit 1 be observed by the project arborist to ensure no major roots of neighbouring tree are affected by the excavation process. Strata lot A with its construction of a foundation will slightly impact the PRZ of trees #10, #11. Excavations should be observed by an arborist. The strata lot B had been well situated between the PRZ's of trees #'s 15 and 16. There is still the chance of root damage in the excavation process so I would recommend exploratory digging prior to the excavations and the excavation work be observed by an arborist.

Work areas and Material Storage: it is important that the issue of storage of excavated soil, material storage, and site parking be reviewed prior to the start of construction; where possible., these activities should be kept outside of the critical root zone. If there is insufficient room, (which should not be a problem on this development site), for onsite storage and working room, the arborist must determine a suitable working area within the critical root zone, and outline methods of mitigating the associated impacts, (i.e. mulch layer, bridging etc.).

Arborists Role: It is the responsibility of the client or his/her representative to contact the project arborist for the purpose of:

- Locating the barrier fencing
- Reviewing the report with the project foreman or site supervisor
- Locating work zones, where required

- Supervising excavation for the building footprint, driveway footprint and service corridor

Review and Site Meeting: Once the development receives approval, it is important that the project arborist and city parks arborist meet with the principals involved in the project to review the information contained herein. It is also important that the arborist meet with the site foreman or supervisor before any demolition, site clearing, or other construction activity occurs.

Please do not hesitate to call me at 250-818-0803 or email at michael@edibella.com should you have any questions.

Thank you

Michael Cowan
ISA Certified Arborist

1), 2), 3), and 4) Garry oaks on City Boulevard



1) 54cm DBH 2) 45cm DBH 3) 64cm DBH 4) 54cm DBH

All appear healthy. One, (tree #2) has significant decay at the base from previous, (15 years ago at least), large pruning wound. These trees are all well outside the construction zone and well inside the 13.6m front yard setback, however I would recommend a tree protection fence, starting at the northern edge of the driveway, 10.5m from the road and heading to the north property line.

5) Pear tree 'winter nelis'?



48cm DBH

Healthy and grafted.

This tree is well outside the construction zone and well inside the 13.6m front yard set back
The tree protection fence mentioned above will include this pear tree

6) Apple tree 'Cox's Orange Pippin'

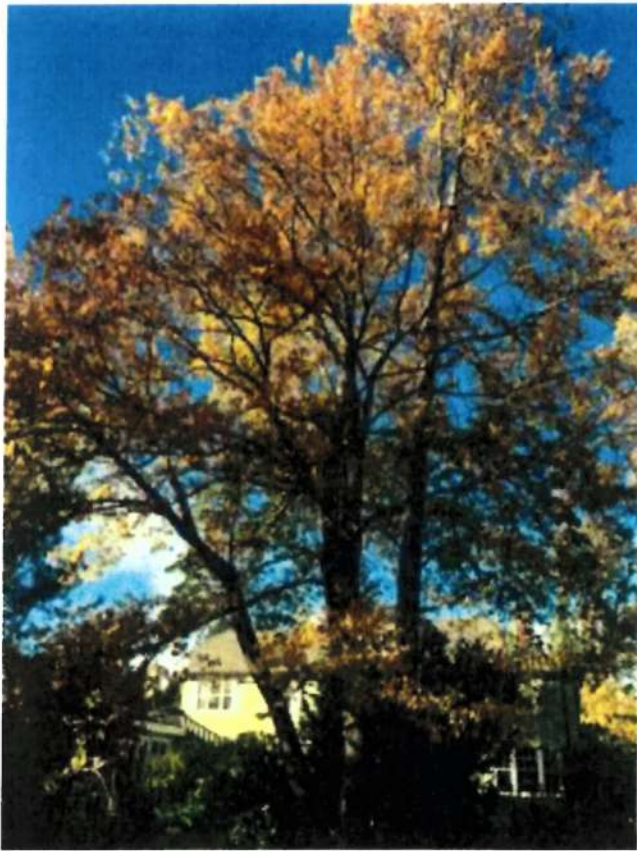


61cm DBH. Tree is well under 5m in height

Massive wound (51cm in diameter) at 8'

Lots of conks and wounds. Tree was likely planted at the time the original house was built. Common and favourite British apple at the time the tree was planted. Tree fruited well this year and though old, still shows signs of vigour, with shoots sprouting out of old wounds, not epicormic. This tree is nearing the end of its life, (150 years is the usual lifespan of an apple). This tree could be maintained but tree protection fence will need to be constructed at the dripline of the tree.

7) Elm tree(s) a multi stem tree



54cm, 54cm, 45.5cm, and 71cm DBH for each of the trunks equals a total DBH of 163cm
Four stems from the ground up. Only one/two stem are co-dominant w/ included bark. Very healthy looking tree

8) Red Oak



53cm DBH

Very healthy tree, but is too close to the cottage and will have hardscape all around its roots if it were to be maintained. I recommend this tree be removed for those reasons

9) American Ash near property line

2 stems 35.5cm and 33cm for a total DBH of 55.3

The coach house will be renovated and no excavation will take place near its roots. Some branches are touching the building which I recommend to be removed to prevent critters from accessing the building

10) and 11) American Ashes

45.5cm DBH and 20cm DBH

These trees are not in any building zone, and can be maintained.

12) Black Pine on neighbours property

12a) Large Garry Oak, this tree has now fallen and has been removed

89cm DBH right on the western property line. Tree has a large longitudinal crack/wound in the trunk, old decay of 20 plus years evident. Fence built around it (10 or so years ago) shows no signs of being moved or marred by any movement of the tree.

This tree is mainly on the neighbour's property and its roots are largely out of the construction zone. There is a large laurel hedge protecting trees 11,12, and 13 from damage so I do not see the need for a tree protection zone around these trees.

14) Pear tree 'Bartlett'

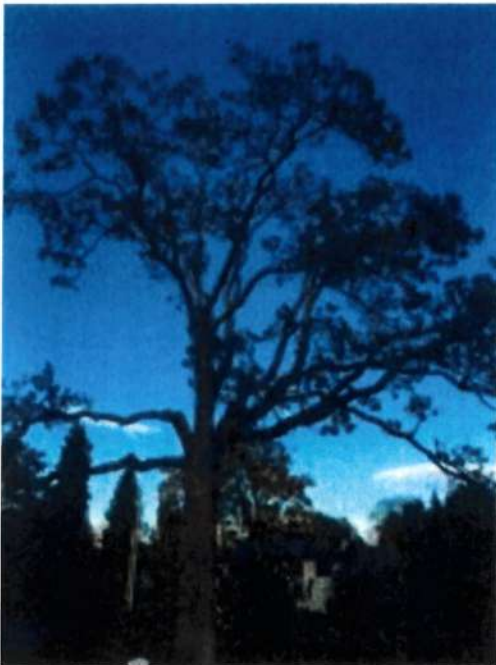
46cm DBH This tree is very healthy and has a great shape and signs of good vigour.

A 3m square tree protection fence should be constructed around the trunk of the tree during the construction period.

15) Large Doug fir on Neighbours property

Tree's trunk is on the neighbours property so I couldn't measure the trunk, but the tree is large and likely over to 80 years old. This tree is very healthy looking. The tree is close enough to the property line to warrant a tree protection fence constructed 7m x 3m along the eastern property line.

16) Large Garry Oak on eastern property line.



96.5cm DBH. Large tree, the crown was not as full as I would expect from a tree that size, a lot of past pruning has been done on this tree but the wounds had healed over well.

An 8m x 8m Tree protection zone should be constructed around the tree from the property line outward with the trunk at the center. A 15cm layer of coarse bark/wood shavings should be laid

from the outside edge of the fence to the edge of the drip line to prevent compaction from excavators and other machinery.

17) Pissardi Plum in front of main house

This tree should be removed, there is major crown die back (over 50%), broken hanging limbs fungal growth at the base and on the trunk. This tree is barely hanging on and now presents something of a hazard.

Other Recommendations

All excavations on the site should be observed by an ISA Certified Arborist. Any root damage should be attended to per the City of Victoria's Tree By-Law. Any machinery driven under the drip line of the trees should only be done so on a 15cm layer of coarse bark mulch or wood chip.

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Tree #	d.b.h. cm	PRZ m	CRZ m	Species	Crown Spread	Condition Health	Condition Structure	Relative Tolerance	Remarks/Recommendations
1	54	10.8	5.28	Garry Oak	8	Good	Good	Good	Municipal Tree, Well outside of construction zone
2	45	9	5.4	Garry Oak	8	Good	Poor	Good	Municipal Tree, Well outside of construction zone, Large wound at the base see photo
3	64	12.8	7.68	Garry Oak	10	Good	Good	Good	Municipal Tree, Well Outside of construction zone
4	54	10.8	5.28	Garry Oak	8	Good	Good	Good	Municipal Tree, Well outside of construction zone
5	48	4	5.76	Pear tree	5	Good	Good	Good	A healthy 'Winter Nelis' pear tree
6	61	7	7.32	Apple Tree	5	Poor	Poor	Good	Old, damaged Cox Orange Pippin Apple, likely planted with original house
7	54,54,4	11.2	6.72	Elm tree (multi stem	15	Good	Good	Good	Multi Stem tree, one co-dom, w/included bark. Very healthy tree
8	53	10.6	6.36	Red Oak	13	V.Good	V.Good	Good	Very Healthy Red Oak Tree, full canopy no defects
9	55.3	11.6	6.6	American Ash	10	Good	Good	Good	2 stems, healthy, likely a seedling or weed tree
10	45.5	9.1	5.4	American Ash	6	Good	Good	Good	Healthy tree, likely a seedling or weed tree
11	20	4	2.4	American Ash	5	Good	Good	Good	Healthy tree, likely a seedling or weed tree
12	84	10	7.44	Black Pine	10	Good	Good	Good	On neighbours property (North),
13				Garry Oak		Fair	Poor		This tree has now fallen and has been removed from site
14	46	6	5.52	Pear tree (Bartlett)	6	Good	Good	Good	A healthy 'Bartlett' pear tree

15	100?	20	12	Douglas Fir	10	V.Good	V.Good	Fair	A very healthy Douglas Fir few visible defects, On neighbours property
16	96.5	19.3	11.52	Garry Oak	15	Fair	Good	Good	A sparse canopy for tree of that size, a lot of previous pruning but wounds have healed well.
17	50?	10	6	Pissardi Plum	8	Poor	Poor		This tree is on death's door and should be removed before falls and creates a mess.