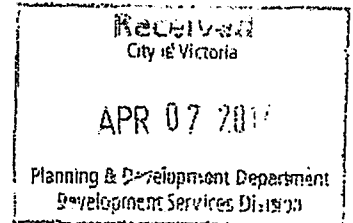




Talbot Mackenzie & Associates

Consulting Arborists



March 08, 2017

Turnbull Holdings Ltd.
1648 Wilmot Place
Victoria, BC V8R 5S4

Attention: Brad Schaffer

Re: Arborist report for 1358 and 1360 Thurlow Road

Assignment: Provide arborist services to:

- Examine and document the tree resource on the 1358/1360 Thurlow Road property and the municipal frontages of this property.
- Assess the potential impacts on the resource of bylaw-protected and municipal trees related to the proposed subdivision of the property into two lots.
- Outline mitigation strategies to reduce the impacts on the bylaw-protected and municipal trees during the subdivision and subsequent construction on these lots.

Tree resource: Of the 14 trees that were documented:

- Four are bylaw protected: Douglas-fir #96, 98 and 99 and one Western Red cedar #4.
- Five are located on the municipal frontages: two flowering cherries #1 and #2 are on the Thurlow Road frontage, and two Flowering plums #6 and 8 and one Horse chestnut #7 on the Durban Street Frontage.
- The five remaining trees are not protected under the municipal tree protection bylaw.

Potential Impacts: The proposal, as outlined in the plans that were supplied, is to construct a new single family house on each of the two strata lots. In our opinion, only five of the trees are located where they can be isolated from construction and where there is a reasonable expectation that they will survive these impacts:

- Western Red cedar #4 located on private property.
- Municipal Flowering cherry trees #1 and #2 on the Thurlow Road frontage.
- Horse chestnut #7 and Flowering plum #8 on the Durban Street frontage

One Flowering plum #6 is located within the proposed driveway access to Lot B. This tree is infected with a *Ganoderma* wood decay pathogen and is proposed to be removed and replaced.

In our opinion, the remainder of the trees are located where they will be too heavily impacted by the construction and where they cannot be retained.

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Tree Retention Guidelines and General recommendations: We recommend the following procedures be implemented to reduce the impacts on the bylaw-protected and municipal trees that are to be retained.

Barrier fencing: The areas, surrounding the one bylaw-protected tree and the municipal trees that are to be retained must be isolated from the construction activity by erecting protective barrier fencing. Where possible, this fencing should be erected at the edge of the critical root zones as defined in the tree resource spreadsheet, or in locations identified by the project arborist. In areas where the building and driveway footprints encroach within these defined zones, the fencing should be erected at a distance of 2 metres off the building footprint, or in a location defined by the project arborist, once the building and construction locations have been surveyed on the site.

- To protect Western Red cedar #4, the fencing must be erected on the property side of the trunk 5.5 metres from the property boundary and extend 7 metres out on each side of the tree or up to the garage footprint and extend up to the property boundary.
- The municipal trees must be protected by erecting barrier fencing that runs along the street and sidewalk edge on each side of the tree and extends out to the edge of the canopy spread on each side of the tree.

These fencing locations are indicated on the attached plans.

The barrier fencing to be erected must be a minimum of 4 feet in height, of solid frame construction that is attached to wooden or metal posts. A solid board or rail must run between the posts at the top and the bottom of the fencing. This solid frame can then be covered with plywood, or flexible snow fencing (see attached diagram). The fencing must be erected prior to the start of any construction activity on site (i.e. demolition, house relocation, excavation and construction), and remain in place through completion of the project. Signs must 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 removed or moved for any purpose. Solid bording material may also be required to protect the trunks of trees from mechanical injury where vehicles or machinery are permitted close to tree trunks.

Building footprints: The project arborist must supervise the excavation for the north side of the house footprint on Lot A, and the west side of the garage footprint on Lot B where they fall within the critical root zone of Western Red cedar #4. A patio area is shown on the north side of the building footprint for Lot A where it falls within the critical root zone of Western Red cedar #4. The patio should be constructed at a grade that permits it to float over the critical root structures, any excavation in this location must be supervised by the project arborist.

Driveway footprints: The driveway access for Lot B on the Durban Street side of the property will require the removal of infected Flowering plum #6. The driveway footprints are located where they should not impact any of the other municipal or bylaw-protected trees. The driveway for Lot A may encroach within the root zone of the non-protected plum tree that is located on the adjacent property at 1346 Thurlow Road.

Servicing: We did not review the servicing plans for this site; however, it is our understanding that these service corridors will be located where they will not encroach within the root zone areas that will be protected with barrier fencing. The services may encroach within the root zone of the non-protected plum tree located on the adjacent property at 1346 Thurlow Road.

Work area and material storage: It is important that the issue of storage of excavated soil, construction material, and site parking be reviewed prior to the start of construction. All construction related activity and the storage of soil and other construction materials must be located outside of the critical root zones of the municipal trees that are to be retained. We recommend that all the construction staging and storage of construction materials be located on the east side of the property and the building footprints.

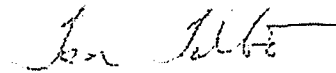
Clients responsibility: It is the responsibility of the client or his/her representative to contact the project arborist for the purpose of:

- Locating the barrier fencing
- Reviewing the arborist reports and retention plans with the project foreman or site supervisor
- Locating work zones, where required. Supervising excavation, blasting and other construction activities where they encroach within critical root zones of the bylaw-protected, municipal and other trees that are to be retained.

Please do not hesitate to call us at (250) 479-8733 should you have any further questions. Thank You.

Yours truly,

Talbot Mackenzie & Associates



Tom Talbot & Graham Mackenzie
ISA Certified, & Consulting Arborists

Enclosures: Tree resource spreadsheet, tree location and barrier fencing diagram

Disclosure Statement

Arborists are professionals who examine trees and use their training, knowledge and experience to recommend techniques and procedures that will improve the health and structure of individual trees or group of trees, or to mitigate associated risks.

Trees are living organisms, whose health and structure change, and are influenced by age, continued growth, climate, weather conditions, and insect and disease pathogens. Indicators of structural weakness and disease are often hidden within the tree structure or beneath the ground. It is not possible for an arborist to identify every flaw or condition that could result in failure nor can he/she guarantee that the tree will remain healthy and free of risk.

Remedial care and mitigation measures recommended are based on the visible and detectable indicators present at the time of the examination and cannot be guaranteed to alleviate all symptoms or to mitigate all risk posed.

Key to Headings in Resource Table

d.b.h. – **diameter at breast height** - diameter of trunk, measured in centimetres at 1.4 metres above ground level

CRZ – **critical root zone** - estimated optimal size of tree protection zone based on tree species, condition and age of specimen and the species tolerance to root disturbance. Indicates the radial distance from the trunk, measured in metres.

Crown spread – indicates the diameter of the crown spread measured in metres to the dripline of the longest limbs.

Condition health/structure –

- Good – no visible or minor health or structural flaw
- Fair – health or structural flaw present that can be corrected through normal arboricultural or horticultural care.
- Poor – significant health or structural defects that compromise the long-term survival or retention of the specimen.

Tree status – Planned status of tree retention within proposed development

- Retain – Retention of tree proposed
- Possible retain – Retention possible with precautions
- Remove – Removal required or recommended

Relative Tolerance – relative tolerance of the selected species to development impacts.

February 23, 2017

**TREE RESOURCE
for 1358 and 1360 Thurlow Road**

Tree #	d.b.h. (cm)	CRZ	Species	Crown Spread(m)	Condition Health	Condition Structure	Status	Relative Tolerance	Remarks / Recommendations
not tagged #1	22	3.0	Flowering cherry	5.0	Fair	Fair	Retain	Moderate	Located on the Thurlow Road municipal frontage.
not tagged #2	6	2.0	Flowering cherry	1.5	Good	Good	Retain	Moderate	Located on the Thurlow Road municipal frontage. Recently planted.
not tagged #3	Multiple stemmed	5.0	Flowering plum	9.0	Good	Poor	Retain	Moderate	Located on the adjacent property at 1346 Thurlow Road. Not bylaw-protected
not tagged #4	75	7.0	Western Red cedar	8.0	Good	Fair	Retain	Poor	Located along the property boundary with 414 Durban Street. Multiple stems. Bylaw-protected.
not tagged #5	Multiple stemmed	2.0	English holly	6.0	Good	Fair	Remove	Good	Not bylaw-protected. Multiple stems
not tagged #6	56	6.0	Flowering plum	8.0	Fair	Fair	Remove	Moderate	Located on the Durban Street municipal frontage and within the proposed driveway footprint. Infected with the <i>Ganoderma</i> wood decay pathogen
not tagged #7	56	5.0	Horse chestnut	13.0	Good	Good	Retain	Good	Located on the Durban Street municipal frontage.
not tagged #8	10	2.0	Flowering plum	3.0	Good	Good	Retain	Moderate	Located on the Durban Street municipal frontage

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February 23, 2017

TREE RESOURCE
for 1358 and 1360 Thurlow Road

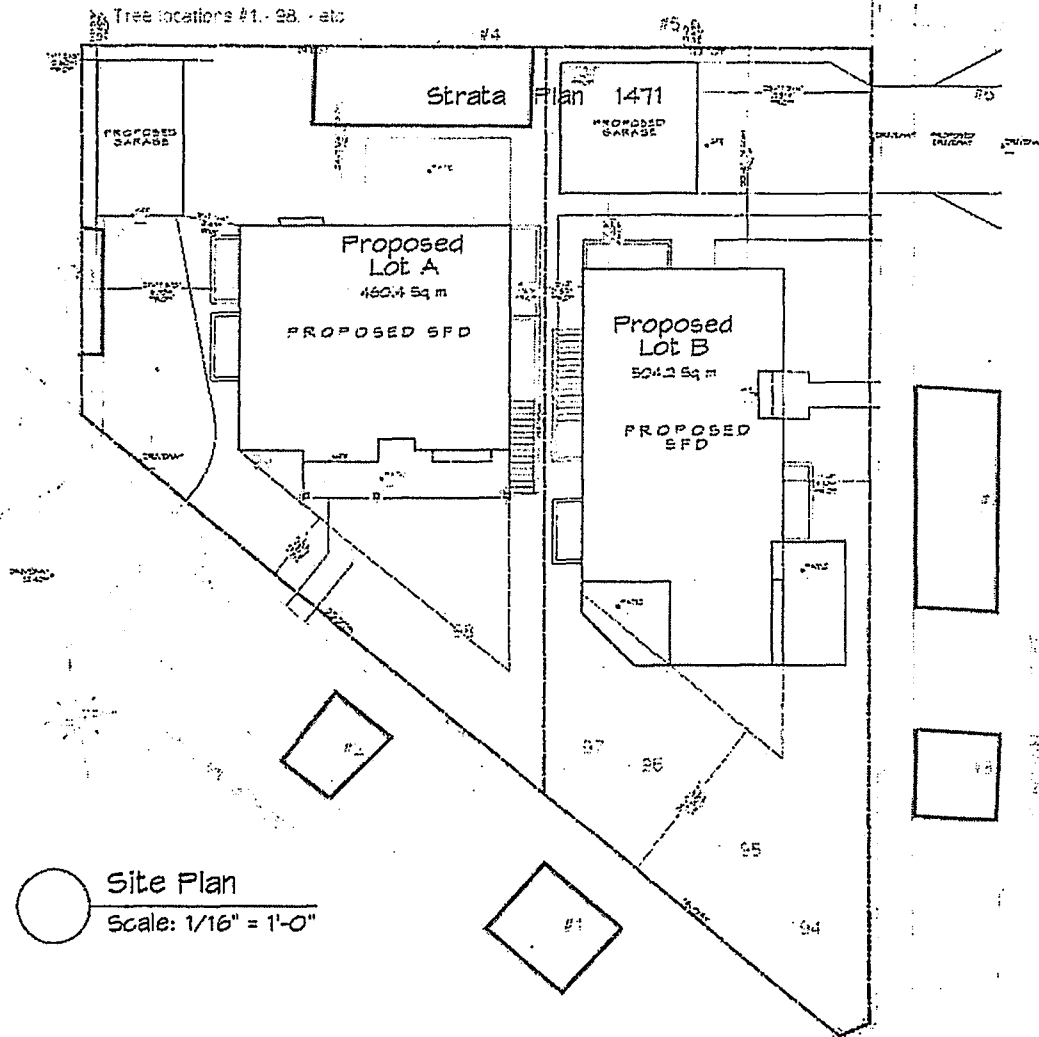
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Tree #	d.b.h. (cm)	CRZ	Species	Crown Spread(m)	Condition Health	Condition Structure	Status	Relative Tolerance	Remarks / Recommendations
94	55	6.0	Western Red cedar	10.0	Good	Good	Remove	Poor	Not bylaw-protected, Multiple stems
95	63	6.0	Austrian pine	12.0	Good	Fair	Remove	Good	Not bylaw-protected, Multiple stems
96	62	8.0	Douglas-fir	12.0	Good	Good	Remove	Poor	Bylaw-protected.
97	63	6.0	Austrian pine	13.0	Good	Fair	Remove	Good	Not bylaw-protected.
98	68	9.0	Douglas-fir	12.0	Good	Good	Remove	Poor	Bylaw-protected.
99	85	10.0	Douglas-fir	15.0	Fair	Fair	Remove	Poor	Bylaw-protected. Some stress visible in canopy. Long over-extended limbs.

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Approximate locations for
barrier fencing

Tree locations #1 - 28 - etc



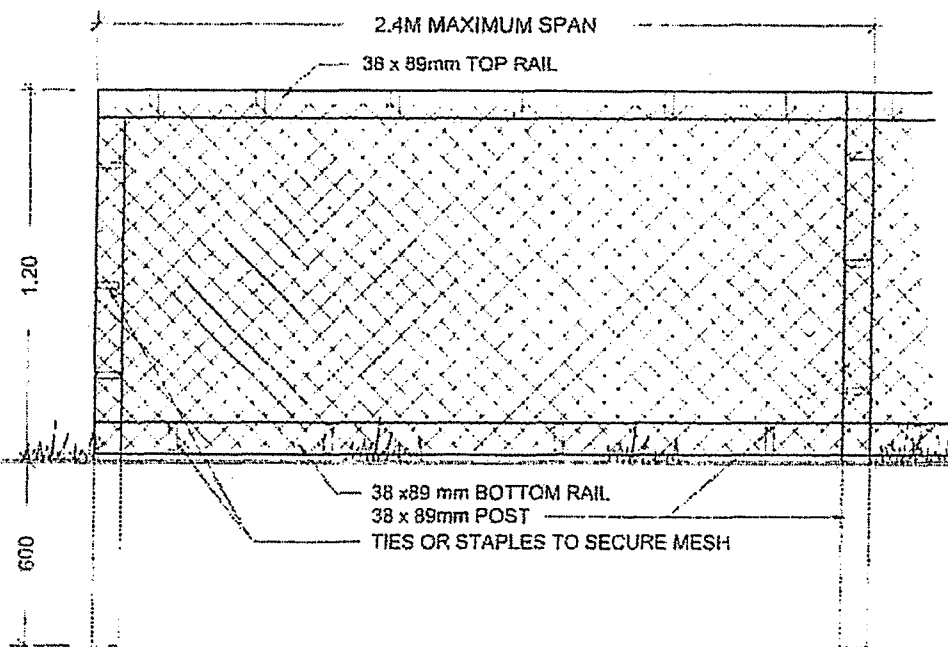
Site Plan
Scale: 1/16" = 1'-0"

Proposed Subdivision

1552/1560 Thurlow St., Victoria

Feb. 09, 2017





TREE PROTECTION FENCING
 FENCE WILL BE CONTRUCTED USING
 38 X 89 mm (2"X4") WOOD FRAME:
 TOP, BOTTOM AND POSTS. *
 USE ORANGE SNOW-FENCING MESH AND
 SECURE TO THE WOOD FRAME WITH
 "ZIP" TIES OR GALVANZIED STAPLES

* IN ROCKY AREAS, METAL POSTS (T-BAR
 OR REBAR) DRILLED INTO ROCK WILL BE
 ACCEPTED

DETAIL NAME:

TREE PROTECTION FENCING

DATE	Oct 30/07
DRAWN.	DM
APP'D.	RR
SCALE.	N.T.S.

E105

DRAWING