

A May 28, 2015



Earthsake

126 Sixteenth Street
Toronto, ON,

Attention: Mr. Peter McDonald

Dear Mr. McDonald:

Subject: Cathedral Court Co-op – 85 Henry Lane Terrace – Arborist Report

Further to my on-site inspection of Tuesday May 12, 2015 and as per your instructions, I am pleased to attach the following arborist report relative to the protection of a row of city-owned trees along the city road allowance at the subject address.

If you have any questions or require additional information, please contact me personally at 647-219-9057.

Sincerely,

BRUCE TREE EXPERT COMPANY LTD.

Ian W. Bruce, NPD, Senior Consultant

ISA Certified Arborist ON-0101-A
ASCA Registered Consulting Arborist
ISA TRAQ Qualification



Member of:



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ARBORIST REPORT

Relative to:

**Cathedral Court Co-op
85 Henry Lane Terrace
Toronto, ON**

**(Protection of a row of city-owned trees associated
with reconstruction of an adjacent retaining wall)**

Prepared for:

CATHEDRAL COURT CO-OP
85 Henry Lane Terrace
Toronto, ON

Prepared by:

BRUCE TREE EXPERT COMPANY LTD.
3-1750 The Queensway, Suite 1329
Toronto, ON M9C 5H5

May 28, 2015

Introduction:

Bruce Tree Expert Company Ltd. (**the arborist**) was retained by Mr. Peter McDonald of Earthsake (**the client**), on or about Tuesday May 12, 2015 to:

1. Meet Peter McDonald at 85 Henry Lane Terrace in Toronto (**the site**) to:
 - review the trees and the retaining wall that needs replacing,
 - provide preliminary recommendations for how to proceed with doing the work while ensuring the least possible impact to the trees.
2. Prepare an arborist report to accompany any applications or negotiations necessary to obtain City of Toronto municipal approvals necessary to proceed with the replacement of an aging and dilapidated timber retaining wall along the street frontage of the Cathedral Co-op at 85 Henry Lane Terrace.

Method:

1. The arborist met the client on-site on Tuesday May 12, 2015. At that time the client pointed out the row of city-owned trees and the aging timber retaining wall that proposed for replacement.
2. The client forwarded to the arborist photos of the row of trees, a construction detail proposed for the new wall, and photos of roots of exposed recently as part of the process of determining where roots were actually growing, how much damage may be expected as part of the project and therefore how to do the work with least impact to the trees.
3. The arborist suggested arranging a meeting with a representative from Urban Forestry Services TPPR, to discuss what that department would require.
4. The arborist met with Mr. Mark Ventresca, Supervisor of TPPR for the south district and Mr. Ventresca explained in detail what Urban Forestry Services would require and also provided guidance as to what Transportation Services would require.
5. The arborist conducted a second site inspection for the purpose of collecting data to prepare an inventory of the trees.
6. The arborist provided the details of the meeting with Mr. Ventresca in an email to the client and also requested the client prepare a tree location plan because the client already had the details on tree location.
7. Finally, the arborist prepared this arborist report based on information supplied by the client, information and guidance provided by Mr. Ventresca and the

requirements for tree protection as outlined in the TPPR document entitled “Policy and Specifications for Construction Near Trees”.

Observations - General:

1. The row of trees and entire retaining wall are located within the city-owned road allowance along the length of the property.
2. The subject row of trees consists predominantly of mature Littleleaf Linden (*Tilia cordata*) growing in a raised planter along the entire frontage of the property known municipally as 85 Henry Lane Terrace. With the exception of tree #12, these trees all have straight, clean, sound trunks with no significant wounds. Minor instances of trunk girdling at ground level were observed and in most cases there was abnormal swelling of the trunk at ground level which suggests a graft incompatibility or poor graft issue of some other cause.
3. Individually the Lindens are in fair or fair to good biological condition and in reasonable structural condition. The only structurally limiting defects identified are related to inherent species pre-disposition to narrow-angled branch unions with included bark. In a small number of cases observed this condition is exacerbated by poor aspect ratio and over-extending of lower scaffolds.
4. The whole row of trees (minus the dead one) present as an attractive and continuous street-edge canopy, contributing to provide shade and relief from the otherwise linear harsh lines of the built form.
5. In their location in raised continuous planters, the trees escaped little exposure to mechanical wounding and they appear to have benefited greatly from the under-plantings and regular care provided by the residents of the co-op.
6. The retaining walls are generally dilapidated to the point of leaning into the sidewalk space and some are actually coming apart.
7. In addition to the row of Lindens, there is one very attractive Sugar Maple at the east end and one dead Sugar Maple at the west end and one very poor specimen of Ivory Silk Lilac in the centre of the row.
8. The row of trees is sporadically under-planted with herbaceous annual and perennial plants and spotted woody shrubs such as lilac and Serviceberry.
9. During the first inspection it was noted that sections of wall had been removed to determine extent of roots behind the wall and these exposed roots had been covered with burlap and were being watered to prevent desiccation of roots.
10. The row of Lindens have recently been pruned. It appears from the location of the cuts that the objective of the pruning was crown elevation. A number of the cuts

would be characterized as “flush cuts” and the client was informed of these. These cuts will compromise the future structural integrity of the affected trees.

Observations – Tree-by-tree:

| Tree # | Tree Species | DBH (cm.) | Condition Rating | Condition Comments | TPZ (m.) |
|---------------|---------------------|------------------|-------------------------|--|-----------------|
| 1 | Sugar Maple | 41 | Good | Nice tree; excellent form | 3.0 |
| 2 | Littleleaf Linden | 51 | Fair | Thinning upper crown; Lowest limb over street over-extending | 3.6 |
| 3 | Littleleaf Linden | 44 | Fair | Thinning lower crown | 3.0 |
| 4 | Littleleaf Linden | 54 | Good | Lowest limb over street over-extending | 3.6 |
| 5 | Littleleaf Linden | 46 | Good | Poor pruning cuts | 3.0 |
| 6 | Ivory Silk Lilac | 22 | Poor | Declining; extensive bark wounds to trunk an scaffolds; possibly sunscald | 1.8 |
| 7 | Littleleaf Linden | 50 | Fair <Good | | 3.0 |
| 8 | Littleleaf Linden | 52 | Fair <Good | | 3.6 |
| 9 | Littleleaf Linden | 50 | Fair <Good | | 3.0 |
| 10 | Littleleaf Linden | 49 | Fair | More small twiggy deadwood than most of the trees, mostly lower down in crown | 3.0 |
| 11 | Littleleaf Linden | 49 | Fair | More small deadwood that most of the trees | 3.0 |
| 12 | Littleleaf Linden | 51 | Good | Full crown of dense foliage; irregular bark and old linear wound to north face of main trunk | 3.6 |
| 13 | Littleleaf Linden | 56 | Fair <Good | | 3.6 |
| 14 | Sugar Maple | 7.5 | Dead | Full crown with mummified buds still present | n/a |

Additional Pertinent Facts:

1. From discussion with the client and documents prepared to date related to the proposed work, it is the arborist’s understanding that the work will be undertaken and supervised by the client and that every effort will be made to protect the trees, particularly tree roots and prevent tree injury during the construction, and that there will be no need to disturb in any way whatsoever the soil surface/root zone immediately behind the interface between the soil/root face and the retaining wall.

2. Due to preliminary lack of availability of a site survey, the client only became aware (after sections of the wall had been removed), that the row of trees and entire retaining wall are located within the city-owned road allowance along the length of the property.
3. The following information is taken from an email provided to the client following my preliminary discussion with TPPR Supervisor Mark Ventresca:
 - a.) There is no need to show the minimum TPZs for each tree or any indication of TPBs, on the tree location and protection plan as is the normal requirement. TPZs will be assumed to encompass the entire stretch of planting bed, and installation of TPBs would probably result in more cost and damage during installation than damage they would prevent under the circumstances of the project as proposed and described to me by you.
 - b.) As discussed you will prepare the tree location and construction detail plans and email them to me and I will prepare the arborist report with reference to the plans.
 - c.) You will have to explore the issue of whether or not there is a pre-existing encroachment or encumbrance agreement with Transportation Services at the city.
 - d.) If there is an existing agreement you will need to review it for details on your contractual obligations. If there isn't you will probably have to work with Transportation Services to prepare one and the client will probably want to run it by their legal counsel.
 - e.) You will also have to apply to Transportation Services for an access permit to allow you to occupy the street and sidewalk while the work is going on. However I would enquire as to whether or not an encroachment or encumbrance agreement precludes the need for this permit.
 - f.) Further to our discussion with respect to the necessity for obtaining approval of your detail plans, it may well be that it is not an issue as you are responsible in the encroachment agreement to maintain the wall in a safe condition.
 - g.) I would pursue approvals with both Parks and Forestry and Transportation Services concurrently as opposed to getting Transportation approvals out of the way first.
 - h.) Mark Ventresca indicated that he would have to review details on the species, size and condition of the trees and the nature and extent of work proposed, in order to determine the amount of the security deposit that the city will require you to provide.
4. The client informed the arborist that the wall will be constructed of 4x4 pressure-treated timbers anchored with vertical runs of re-bar and back-laid with mira-drain. This change from the existing 6x6's to use of 4x4's in the proposed detail may result in less damage to roots in the immediate vicinity of the back of the existing wall.

Tree Protection Measures:

- I. It is the arborist's understanding from the client that:

- a) the client will submit a tree location plan and retaining wall detail drawing with this report.
 - b) the retaining wall detail will include specific information about the materials to be used and the method for anchoring the wall units together.
 - c) In order to ensure no damage to roots of existing trees, no tie-backs will be used in the reconstruction of the retaining wall to prevent.
2. It is the arborist's assumption that due to the nature and extent of the work proposed, no power equipment will be required on this project that may reasonably be expected to expose the lower limbs or main trunk of the trees to any mechanical damage whatsoever.
 2. In the absence of any requirement for tree protection barriers, and with the exception of the grade change described below in #2, the client has agreed that there will be absolutely no project-related activity whatsoever within the entire collective TPZ of the row of trees, that may adversely impact tree health or structural stability.
 3. Prior to the commencement of any project-related works, the entire length of the raised planter bed will be sprinkler-watered long enough to provide adequate soil moisture to reduce desiccation of newly exposed roots.
 - 4.
 5. Due to soil settling and slump on the sloped surface of the raised bed, it will be necessary to make minor adjustments to the existing grade to match the grade of the new retaining wall. In any instance where it is necessary to add soil, only a very sandy loam blend will be added and the sand component will be sharp sand (course).
 6. The existing retaining wall will be removed and disposed of in such a manner as to prevent any disturbance of the roots of existing trees.
 7. Immediately upon removal of the wall, exposed tree roots will be covered with at least two layers of natural burlap that will be pinned tightly in place and kept watered daily until the new wall has been installed.
 8. Removal of roots to accommodate the construction of the wall is not anticipated and if any roots have to be removed no individual roots larger than 5 cm. diameter will be cut or removed and every effort will be made to avoid removal of mats of absorbing or fibrous roots.
 9. If fibrous roots mats are determined to be in the way of the new wall, preference should be given to carefully teasing or under-mining soil from behind the roots to permit the roots to be displaced into the void created.

10. In the event that roots larger than 5 cm. in diameter have to be cut the client will photograph the roots and text the photos to the arborist for an opinion.

11. Any back-fill behind the new wall will consist entirely of very sandy loam soil.

If you have any questions or need additional information, please contact me personally or text at cell 647-219-9057.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Ian W. Bruce', is centered on the page. The signature is fluid and cursive, with a large initial 'I' and 'W'.

BRUCE TREE EXPERT COMPANY LTD.

Ian W. Bruce, NPD

Senior Consultant

ISA Certified Arborist #ON-0101A
ASCA Registered Consulting Arborist #259
ISA Tree Risk Assessment Qualified