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Urban Forestry & Forest Management Consulting

March 9, 2016

Mary Jarvis, MCIP RPP
Director of Planning, Land Development
Riverside South Development Corporation
2193 Arch Street
Ottawa, ON
K1G 2H5

Re: Revised Tree Conservation Report – Riverside South Phase 8 lands

Dear Mary,

As per your request this report provides a revised Tree Conservation Report (TCR) for the Proposed Riverside South Community – Phase 8. An initial TCR was prepared by *IFS Associates* on March 31, 2010 and an addendum was created on June 22, 2015. The purpose of the addendum was to update the species composition and size of the existing trees within Phase 8 to meet the requirements of the City of Ottawa's Urban Tree Conservation By-law (By-law no. 2009-200). The purpose of this revised TCR is to emphasize preserving the integrity of the forest edges of the wooded Urban Natural Feature (UNF) south of Phase 8. This was condition 99 of the City of Ottawa's Draft Plan of Subdivision Conditions. This revision also provides an update as to the status of the permit to remove the butternuts on site.

BACKGROUND

The Phase 8 lands are part of the larger Riverside South Development Corporation (RSDC) lands and are located east of Spratt Road and south of Earl Armstrong Road, adjacent to a proposed school ground and an existing fire station which are both directly east of the intersection of these two roads. In total the subject lands are 28 hectares in size. Approximately 176 single-detached houses, 257 townhouses and 146 stacked townhouses are proposed for construction within this phase.

TREE PROTECTION

The Tree Conservation Plan dated March 9th accompanying this report was prepared by Annis, O'Sullivan, Vollebekk Ltd. It shows the development boundaries, road and block layouts of Phase 8 overlaid on a recent aerial photograph. Highlighted on the plan is the location of protective fencing meant to protect the edges of the UNF. Of particular importance is the forested north edge of the urban natural feature east of the Thomas Gamble Municipal Drain between blocks 225 and 226 and the east-west ditch to the south which is located approximately 10m into the UNF. Most of the trees within the north

edge of the UNF are 30cm in diameter or less. As such, according to the City of Ottawa's guidelines, their critical root zones will extend to a maximum of 3m. As a result tree protective fencing will be installed at 3m from the property line. With a buffer of 3m and lots within blocks 225 and 226 being 35-36m deep, little impact from construction is anticipated. To further minimize disturbance within the trees' critical root zones the maximum grade raise within three metres of the rear property lines of these blocks will be limited to 25cm. To achieve such grade changes the protective tree fencing will be temporarily removed and replaced. This work will be done under the guidance of an ISA Certified Arborist. Once final grading is complete the protective fencing will be moved to the property line. This is consistent with the grading plan prepared by J.L. Richards dated February 3, 2016.

Elsewhere, west of the Thomas Gamble drain along the future Markdale Terrace, the protective fencing will be set at 1m from the property line. To the rear of the future Ralph Hennessy Avenue the protective fencing will be along the property line.

DITCH RE-ALIGNMENT

As shown in the grading plan G5 and highlighted in the Tree Conservation Plan accompanying this report, a 40m-long portion of the small ditch leading diagonally to the Thomas Gamble drain is going to be re-aligned. This work will occur in spring 2016 and is required in order to avoid the rear yards in block 225. The existing watercourse will be filled to match the final grades within the lot. This will cause water to flow straight into the drain via the existing east-west ditch which runs parallel to the property line approximately 10m from the northern edge of the UNF. If slight excavation is necessary to achieve flow this work will be done by hand to avoid disturbing existing trees. In order to further minimize the loss of vegetation all access will be from Larimar Circle. The tree protection fence along the rear of block 225 will be temporarily removed during operations and returned afterwards. This work will be done under the guidance of an ISA Certified Arborist. During the relocation work tree protection fencing will be installed in conjunction with the silt fencing that is required as per condition 9 of the Letter of Permission provided by the Rideau Valley Conservation Authority for this project. Like the silt fencing, the tree protection fencing will be in place before any site operations commence and will be monitored regularly. If deemed necessary, the installation, and temporary movement and monitoring of the protective fencing will all be checked by City of Ottawa foresters. Since no trees are to be lost as a result of the ditch re-alignment a tree compensation plan is not considered necessary at this time.

TREE PROTECTION MEASURES

Trees located adjacent to the Phase 8 site must be protected during construction. As mentioned previously, in particular the protection of the edges of the adjacent UNF will be emphasized. To this end the following protection measures are recommended:

1. As shown in the accompanying Tree Conservation Plan erect a fence at or beyond the critical root zone¹ of trees within the UNF;
2. Do not place any material or equipment within the CRZ of trees;
3. Do not attach any signs, notices or posters to any tree;

4. Do not raise or lower the existing grade within the CRZ without approval from the City;
5. Do not tunnel or bore within the CRZ of trees without approval from the City;
6. Do not damage the root system, trunk or branches of any tree;
7. Ensure that exhaust fumes from all equipment are NOT directed towards any tree's canopy.

¹ The critical root zone is established as being 10 centimetres from the trunk of a tree for every centimetre of trunk Diameter at breast height (DBH). The CRZ is calculated as DBH x 10cm.

USE OF EXISTING VEGETATION

The majority of trees within the Phase 8 development zone are not of species or sizes worth retaining or preserving through transplanting. Ash and elm, the two most common species, are very prone to Emerald ash borer (*Agrilus planipennis*) and Dutch elm disease (*Ophiostoma ulmi*), respectively. Both of these threats are present on the subject property so the retention of these tree species cannot be justified. Further, silver maple, poplar, hawthorn, apple and basswood are unsuitable as urban plantings and should not be retained or planted in or around developments. Lastly, though desired for certain urban plantings, red maple, black cherry and bur oaks are difficult to transplant from natural settings and will not survive the associated stress, or 'transplant shock'. Given the low value of the most dominant species as urban plantings trees of more favourable species can easily be planted as replacements. If nothing else, the more desirable species now on the property can inform the species selection in the development's eventual landscape.

Due to the road and block layout proposed for construction no existing trees can be preserved within and in close proximity to the development zone. Instead, the focus of tree preservation will be the forested edge along the northern edge of the UNF. Here an approximately 10m-wide swath of trees will be fully retained and grading will be restricted to a maximum increase of 25cm within three metres of the rear property line so as to minimize vegetation removal.

Existing conditions of the forest edges south of the Phase 8 site are shown in Pictures 1 and 2 on pages 5 and 6. Existing stand conditions within the forested edge to be preserved between the south property limits of blocks 225 and 226 and ditch are shown in Pictures 3 and 4 on page 7. Again, it is the protection of the forested edges of the UNF which will be emphasized through fencing and reduced grading in order to retain the integrity of the existing trees and their roots.

ENDANGERED SPECIES

A total of 17 Butternuts (*Juglans cinerea*) were found on the subject property. This tree species is listed as endangered under the Province of Ontario's Endangered Species Act (ESA), (2007). The required paperwork for the removal/disturbance of these trees has been submitted to and approved by the Ontario Ministry of Natural Resources and Forestry. DST Consulting Engineers were responsible for obtaining these permits.

If you have any questions concerning this Tree Conservation Report please do not hesitate to contact me.

Yours,

Andrew Boyd

Andrew K. Boyd, B.Sc.F., R.P.F.
Consulting Urban Forester



Picture 1. Existing edge of wooded area south of Markdale Terrace in Phase 8 of RSDC lands.



Picture 2. Existing edge of wooded area east of lots 52-68 of Phase 8 of RSDC lands.



Picture 3. Portion of forested edge to be preserved between south property limits of blocks 225-226 and ditch approximately 10m from the northern edge of the UNF.



Picture 4. Portion of forested edge to be preserved between south property limits of blocks 225-226 and ditch approximately 10m from the northern edge of the UNF.