Comments on the Parks Master Plan

Tree Conservation and Preservation – during the Planning, Construction and Post-construction (use by the people living there)

During the Public Advisory Group discussions, I suggested that tree seeds from the site be collected and planted out at the Ferguson Forest Centre and in stages, that they be brought back and planted on the site. Will that happen? There are a number of Butternut (*Juglans cinerea*) trees on the site – and not all of them will be retained and the others may eventually succumb to Butternut Canker. However, the Ferguson Forest Centre (FFC) is experimenting with grafting scions from presumed canker-resistant Butternut trees onto canker-resistant Black Walnut rootstocks. Scions from the healthiest trees on the site might be candidates for grafting and eventual planting out in the future if adequate protection could be assured. Or, some of the grafted trees that came from Butternuts elsewhere in the region could be used.
And, surrounding the giant Bur Oak (*Quercus macrocarpa*) are a large number of seedlings (6-12 inches high) that could be removed for growout at the FFC for eventual planting out on the site. That way, we could be assured that the stock is native to the area and pre-adapted to the site.

And in the context of conservation, to Parks and Recreation, my understanding is that 'naturalization' does not necessarily mean keeping the existing trees and surrounding vegetation and protecting them from construction and post-construction damage. Some additional clarification is needed in that regard. And information on what will be done to remove the invasive plant species such as Dog-strangling Vine and the two buckthorns and to replace them with native plants is also needed.

Buckthorn is rampant on the site and is especially prolific surrounding the large trees (such as the Bur Oaks, the White Pines (*Pinus strobus*), Sugar Maples (*Acer saccharum*) and Bitternut Hickories (*Carya cordiformis*). The buckthorns should be carefully removed with the work being done under the supervision of city forestry staff – using a bulldozer or other large mechanical devices would be harmful to the tree feeder roots.

Removal of trees on the edge of forests often causes some of the remaining trees to topple (windthrow). Planting new trees in the developed area as a buffer may help to alleviate this problem.

It is not clear why heated bunkers are needed in the some of the parks (Nos. 1, 2, 3, 10). If this is to keep the hoses from freezing during the winter for maintenance of the puddle rinks – why not have one central storage area for all of this equipment on the site. The storage bunkers I have seen built by Parks and Recreation are massive concrete structures that are not really compatible with a park and greenspace.

Are these rinks to be maintained by volunteers? Will the city be providing portable rink shacks as changing rooms such as are installed elsewhere in more developed parts of the city? Are these to be heated and lit as well?

Inevitably, people will drive to the parks. The streets should have permeable pavers at their edges, not only to ensure that cars do not drive into the park, but to ensure water filtration to the trees and grass etc. in the parks. Another alternate to high curbs is the mountable curb – these provide a gentle slope on the road edge and yet serve as a road-side edge.

I find that the General Policies outlined in chapter 2.0 of the Parks Master Plan document to be contradictory in places. In my opinion, the objectives of the Parks and Recreation Department are in conflict with the objective of greenspace conservation/preservation.

For instance, Policy 10 states that the "goal of the grading design and the implied functional design of each park concept" is to "…… create viable park amenities and programmable features – i.e. facilities such as sports fields are proposed with areas of relatively flat existing plateaus." Other goals such as 12 state that 'Site grading at each park shell maintain existing grades **where feasible**"…. My experience as a member and then Chair of the Ottawa Forests and Greenspace Advisory Committee was that if a sports or play amenity was desired, then the natural vegetation was removed. Often, even if the natural amenity was to be retained, the construction process meant that trees and shrubs were damaged; replanting with small and often not-native species was the norm and many existing and/or planted trees/shrubs did not survive.

I also think that the goals articulated in Numbers 11, 13 and 15 will be impossible to achieve – especially when viewed against a formal parks design process in accordance with City of Ottawa requirements (No. 18) to meet city of Ottawa requirements.

It is very difficult to relate the information on trees contained in the documents done prior to and while the discussions on the eventual CDP were occurring (Baker, McCready etc.) — to the documents produced later for CLC by other consultants and then to relate information about trees that should be retained for the future — with the city's own planning documents. The original environmental and tree documents referred to features and trees and referenced the old street names. Now that the pavement has been removed, the newer drawings do not contain these reference points. And so, within any of the development areas, it is not easy and sometimes impossible to relate tree locations to the new blocks and to locations within the blocks. The same is true of tree species' names

<u>The Parks and Parkette Master Plan – specific comments</u>
The percentage of the area of any Park or Parkette that is to be retained as naturalized may not, in some cases, be sufficient to protect the naturalized area for any length of time unless special protection measures are specified, implemented and monitored/maintained in perpetuity. The areas surrounding the feature trees should be fenced off at least in the first years (6-10?) so that the trees have time to adjust to the inevitable disruption that will occur during park creation. A fence will stop people from climbing the trees and will lessen root compaction.

Some park and development blocks should be shifted slightly in order to protect the high value trees. A more detailed set of drawings will be required to demonstrate clearly that the important trees will be protected during construction.

<u>Park No. 1</u>, 10.34 ha with 2.07 ha (20% - 2,070 sq. m) to be naturalized – but is that enough given that this will be a heavily-used site? Should there not be a buffer zone around each of the natural areas? And what is the area of each of the three natural features? Giving a total for the three internal zones is not enough. How will they be protected and maintained in the future, given that this will be a heavily used part of the site? How will people be prevented from driving their cars into the shade of the natural area adjacent to the parking lot on the western boundary?

<u>Park No. 2 – 4.95 ha with 0.495 ha (4,950 sq. m) to be naturalized</u>

Care should be taken to ensure the continued ecological integrity of the protected area – perhaps by suitable fencing. And, as this is to be a major recreation site, ensure that cars do not drive out of the parking area seeking shade on a hot afternoon.

Park No 3 – 2.01 ha with 0.2 ha (2,010 sq. m) to be naturalized

This is the area with what is the most significant tree on the site – a Bur Oak (*Quercus macrocarpa*) with a diameter (DBH) of almost 136.7 cm in 2013 (Baker) and an approximate height of 22 m (66 ft.). Using the ISA and city's tree protection guideline, its critical root zone (CRZ) should be protected out from the edge of the trunk by 10 cm for every centimetre of trunk DBH (a minimum of 1.4 m from the trunk edge. Baker (2013) indicates a crown radius of 10.5 m from the centre of the tree so using his value would indicate that an area of 346 sq. m. should be allocated to protect this one tree. Given that the root hairs probably extend beyond the dripline and Critical Root Zone (CRZ) by at least 50 cm, a minimum protection zone might be 380 sq m with an additional buffer to allow for future growth. The diagram for this park does not indicate which one of the four trees is the Bur Oak, nor does it give any indication of the proposed use for the centre area of the park in which the four trees are located. Will it be fenced off to prevent root zone trampling? I anticipate that the puddle rink will damage the vegetation and if it extends into the CRZ of the feature trees, that feeder root damage will occur. What species and how big are the other three significant trees? Is the planting of additional conifers (of what species and ultimate size) conducive to long-term protection of these four significant trees? Is a heated bunker truly needed – the ones I have seen are massive concrete structures that are not really compatible with a park and greenspace.

Park No 4 – 2.58 ha with 0.774 ha (7740 sq. m to be naturalized)

Although there are three significant tree groupings, the text seems to indicate that only some (most?) are not proposed for retention. Clarification is needed. The major ecological feature of this park will be a manufactured stormwater management pond, not the significant trees. I do not think that the playground for children of all ages will result in the long-term retention of the natural grasses and other vegetation that currently exists on the site.

Park No 5 – 0.90 ha with 0.09 ha (900 sq. m to be naturalized)

What species of coniferous trees to be planted? Native species should be selected.

Park No 6 –0.55 ha with 0.055 ha (550 sq. m to be naturalized)

It does not appear that there are significant trees in this area so this would be an opportunity to plant native species from seeds collected on the site and grown out at the Ferguson Forest Centre. Bitternut Hickory (*Carya cordiformis*) is one suggestion as there are specimens on the site and one near this Parkette.

Park No 7 – 0.40 ha with 0.04 ha (400 sq. m to be naturalized)

Here again there will be an opportunity to plant trees grown from seeds collected on site.

Park No. 8 – 0.82 ha with 0% to be naturalized.

There should be at least four trees that will eventually reach a significant size – one on each corner. Bitternut Hickory which grows tall and does not take up a lot of space, would be an option. Hackberry (*Celtis occidentalis*) is another suggestion.

Park No 9 – 0.39 ha with 0.039 ha (390 sq. m to be naturalized)

The species name for the significant tree is not given but it is good that it is proposed for retention. How will its root zone be protected from trampling and what is the nature of the protective measures to be implemented? There are opportunities to plant other trees to provide shade in this park. An artificial shade structure is fine but a tree is better.

Park No. 10 -0.59 ha with 0.059 ha 590 sq. m to be naturalized)
What is the tree species that is to be retained and will others be planted as well? Is a heated bunker really needed.

RECOMMENDATIONS

1. Define 'naturalization' and in areas with high value trees, plant only native species in the existing vegetation is exotic and/or invasive. Trees to be planted should be native species of northern stock – available at the Ferguson Forest Centre in Kemptville.
2. Indicate locations, species and size of all the feature/special/high value trees, along with their most recent assigned tree number from the 2015 TCR so that further information on them can be accessed if desired.
3. Fence off the most significant trees in the parks, at least until the construction period is over by several years.
4. Ensure that if or when grass is planted in the parks, that the base of all trees at ground level are guarded against whipper-snipper/weed-whacker damage.
5. Re-think the need to have heated bunkers for equipment storage – consider one central location for hoses etc.
6. Remove the invasive species on site – Common Buckthorn (*Rhammus cathartica*) and probably also Glossy Buckthorn (*Frangula alnus*) taking care not to damage the trees to be retained. Monitor and remove the invasives until no more appear. This should also be done in the UNAs adjacent to the site.
7. Use permeable paving wherever possible in the parks and on park edges.
8. Park No 3 – Remove the puddle rink.
9. Park No 3 – Enlarge the protected area around the Bur Oak and encompass the large White Pine in the protected zone.
10. Park No. 3 – Collect young Bur Oak seedlings and have them grown out for planting on site in several years. Collect acorns from the giant Bur Oak (number 1 in Baker, 2013 and the TCR 2015) and a nearby Bur Oak (No 24 Baker 2013; Rosenberg 2013, TCR 2015) for growing out at the FFC and later to transplant on the site.and ensure that this latter tree is retained so that some cross pollination occurs.
11. Collect Bitternut Hickory nuts and Sugar Maple samaras from the best trees on site and grow them out for future planting on site.

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