

This document has been modified from the original Draft Outline provided to TFAC by staff. Comments from TFAC are seen in BOLD lettering. Comments may be interpreted by staff to be suggestions in relation to the above point; additions to a list of items to consider, or a general comment/question.

City of London Planting Strategy

Draft Outline

In September 2015 the TFAC recommended that staff submit a draft outline of the proposed planting strategy for review by the TFAC with a view to finalising the outline after consultation with the TFAC.

Items listed here may or may not appear in the final Planting Strategy.

PLANTING STRATEGY – DRAFT OUTLINE

1. Introduction

- Why a Planting Strategy is necessary
- Previous Council directive(s)
 - e.g. original replacement targets for EAB removals
- Known public expectations from UFS survey and other sources
- Emphasise long term, proactive approach to achieving goals and targets
- Goes hand in hand with protecting more and maintaining better
- Replacing and increasing tree canopy cover

2. Goals – linked to Urban Forest Strategy (see pages 25 - 28 of UFS)

- Achieve canopy cover targets (28% by 2035; 34% by 2065)
- Develop achievable tree canopy cover targets by Placetype (London Plan)
- Identify plantable space (public and private)
 - **What methodology will be employed for identifying plantable places?**
 - **Facilitate discussion around privately owned lands, as this represents the majority of property ownership**

- **Mitigation banking possibilities should be explored. Investigate other municipalities best practices and approaches to this**
 - **There often exist opportunities in new developments to have trees planted in areas other than street trees. For example, when buffers are dedicated to the city, often they are simply former farm fields and can be planted with trees.**
- Prioritise, and coordinate, community and other plantings across public and private lands
 - Revise City By-laws and policies to support tree canopy targets

Other goals not explicitly described in UFS recommendations but relating closely to them

- Develop criteria to guide or define “right tree, right place” – species/cultivar selection is a design – function decision process (*the largest stature tree possible for that location might not be the correct choice*)
 - **It should be noted that in order to achieve canopy cover goals, we must be planting the largest stature tree suitable to the situation. The trend towards tiny ornamental trees in London is troubling and may have serious long-term impacts on the viability of the Urban Forest Strategy.**
- Manage expectations and demand
- Support Million Tree Challenge
- Use Planting Strategy as a rationale for removing barriers to success (*barriers may be identified in the Planting Strategy, but the Solutions are beyond its scope; may take years to develop and implement the Solutions*)
 - **The Planting Strategy should be solutions based. Planting is almost certainly going to be the main solution to canopy cover goals. We’re unlikely to see such a dramatic increase in cover coming from existing natural areas alone.**
 - **A strategy is a plan to overcome barriers and have some level of success.**
- Identify planting preferences by geographic area (from Master Plans, etc.)
- Mitigate impacts of climate change and Urban Heat Island Effect
- Mitigate risk of human health concerns
 - e.g. shade trees reduce skin cancer and heat-related complaints; tree canopies reduce respiratory complaints
- **Develop a shade policy similar to Toronto’s an official part of the TPS.**
- Effective strengthening of City partnering and afforestation efforts with external stakeholders

General Notes (regarding goals of the TPS):

The strength of the Tree Planting Strategy will depend heavily on the methods for identifying and evaluating different planting opportunities. Without a clear and sound methodology, we will not be able to know if the options we are pursuing are best, nor have confidence that they will produce the canopy cover impacts anticipated. There should be some level of certainty that the strategy will get us the most bang for our buck.

The ability to monitor the effectiveness of all planting opportunities and methodologies must be integral to the long term vision of the plan. Cyclical studies like UFORE provide a means to quantify effectiveness provided specific areas are continually targeted for a higher level of scrutiny.

Monitoring should then be able to inform extrapolation of past data to model future outcomes to see if we are on target to achieve canopy goals as set out in the UFS previously adopted by council.

The strategy must have some level of flexibility to be able to adapt to sudden changes over the course of time. There is a need to develop a strategy to deal with ice storms for example which could unexpectedly have a significant negative impact upon our canopy cover.

However, we must be careful to not monitor for the sake of monitoring. This can lead to less actual trees in the ground, exhaust existing staff resources. The monitoring in effect must be evaluated as time goes on as well.

As part of the strategy, the city must identify what projects it can initiate, control and manage effectively. Other privately organized groups (Reforest London, VMP etc) can have a significant impact on realizing our canopy targets without unduly burdening city resources. The UTRCA is also effective in engaging landowners in the rural settings, and also those adjacent to lands which are managed by them on behalf of the city.

3) Current Program and Budget

- What City does now, with what budget
- Planting statistics (years x to y; trends)
 - **We strongly support this: would like it to extend a few years before the “starting” year so we have an ability to see how the new planting strategy relates back to previous practices**

4) Issues – City land/programs

- Opportunities to plant on City lands likely to diminish over time

- **Would propose to use “will”, noting that unless the city actively acquires (that is, pays for) lands specifically for the purpose of planting.**
- Competition for space: Boulevard parking permits, encroachments, retrofitted sidewalks, street furniture, utilities, infrastructure renewal, road widening and rapid transit
 - **Could there be a policy group to look at policy reqs to support more planting? Wider boulevards, planting on the “inside” side of the sidewalk, underground hydro, etc.? (Perhaps that could explicitly be part of how TFAC could fit into all this)**
 - **Often urban design requirements conflict with street tree plantings. Buildings encouraged to be at the property line, leaving less and less room for trees to be visible by everyone**
- NIMBY
 - **City should anticipate the need for some PR dollars on this project**
- Budget
- Quality of stock
- Skilled labour
- Availability of species

Issues - private land/programs

- Existing City policies need revision to ensure and support greater tree retention, or significant tree planting on private lands
 - **It should be acknowledged that removing trees creates denser developments, and ultimately slows the outward growth of our built form. Saving every tree essentially causes us to grow out faster. Preservation of trees is not necessarily beneficial in terms of making best use of existing and planned infrastructure, along with developable lands.**
- NIMBY
- Property Standards By-law? Zoning By-law, Boulevard Tree By-law and Tree Conservation By-law, etc. need revision to ensure replacement tree(s) are required and planted
 - **I’d like to see more talk here focused on Commercial and Industrial challenges, as opposed to just Residential. These have proven the**

hardest two landuse sectors for anyone to crack into thus far, and the City is uniquely positioned to be able to help change that.

- Availability and accessibility
 - o Cost of trees, shovels, mulch; also related with disposable income
 - o Transit, transport, getting trees safely home
 - o Ill health, disability
- Education – what tree should be planted?
 - **I would like to see assisted migration being considered as part of the TPS, even if it is just noted that this is something we anticipate needing to begin incorporating in future years. Agree entirely – it is simply something we need to consider, even if it is just encouraging use of existing species native to the area that are currently at the northern limit of their range.**
- Low priority, relative to other household and quality-of-life decisions
- Positive note: demand (= willingness to plant) exceeds supply!
 - **So far. It's worth noting that the # of spots identified in roadways will run out mighty quick at 6,000 new caliper trees per year.**

5) How are we going to achieve goals?

- kick-start the early years: Parks – plant and maintain trees (e.g. \$100K in year 1)
- increase street tree planting significantly (e.g. 4500 trees in 2016) – and sustain these increased levels
 - **Over the long haul, we strongly doubt this will be the best bang for buck, especially given that potted stock catches up to them anyways. There be serious consideration to utilizing the biggest potted stock for plantings rather than defaulting to caliper trees. Can get 2 or 3 for the price of one and 5 years later, you are significantly ahead of the game. Cost benefit ratio here is good than caliper plantings perhaps, noting this is not necessarily the best option in all areas.**
- retro-plant City parking lots (more expensive, \$15k per tree?)
- identify plantable spots
- prioritise replacement of street trees that have already been removed and not replaced e.g. ash trees removed due to Emerald Ash Borer
- give away or subsidise trees

- **Research how other communities deal with trees under hydro lines: what different options are available. If maybe 1/3 of London roads have hydro lines over them, there is potentially for a huge (negative) impact on canopy cover here as large trees that were trimmed before are replaced by small-stature species**
 - **revise policies and By-laws to support tree canopy conservation and expansion. We must be careful to not place undue burdens on property owners who need to maintain their existing trees – if something needs to come down, then remove barriers (as they may come up in private tree by-law)**
- plan ahead and better coordinate efforts with internal Divisions and external stakeholders e.g. Conservation Authorities, ReForest London, School Boards, Provincial/Federal Ministries and agencies with London offices or land, First Nations, development community, residents, special interest groups, community programs, industrial landlords and industry owners, commercial enterprises (e.g. through Chamber of Commerce) and agricultural (e.g. Farmers unions)

General notes regarding achieving our goals via assessment methodologies: considerations for projecting change in canopy cover should include (but not be limited to):

- 1) Assume existing natural areas are simply fixed in canopy cover. Natural areas must be presumed to not become larger if they are on table lands (developable lands). Only areas which are clearly in undevelopable areas (hazard lands, flood plain etc) can be reliably identified for increase in natural area tree canopy cover (think “woodland”)**
- 2) What the background rate of loss of canopy to development is expected to be. New plantings must shown (via modelling) to exceed this figure to achieve the increase in canopy cover as identified in the UFS.**
- 3) Recommend an assumed lifespan for all street trees of 60 years . Note that average lifespan of a tree depends heavily on it’s environment. Park/woodland trees would be expected to live much longer than a street tree in the downtown core.**
- 4) How size of tree (by species) will be factored in. Promote planting the largest tree possible as per “right tree right place” ideology. Model different outcomes for different strategies. For example, show the difference between bare root stock trees versus caliper trees. This could provide a very clear cost benefit evaluation.**

5) **There is also a question of “are the aerial photos for fact-checking projections or meant to be the be-all and end-all of assessing canopy cover?”**

6) **Stakeholder/Participation**

Key Persons – public and private sectors; their position, role in Planting Strategy

- strengthening relationships and removing bureaucratic and other barriers to the tree-planting community.
 - cross-Divisional support
 - commitment to long term budgets
 - seeking and securing grants
 - celebrate success
- **Developer participation – ensure that parkland dedications are made generous. If woodlands/trees are so valuable, why do developers often receive little in the way of compensation through the parkland dedication by-laws? Give 1:1 credit for valuable lands, not 1:27 or 1:16. Even for lands that are undevelopable (hazard lands)**

APPENDIX

Products and Actions (*italics*) – guided by UFS Implementation Plan Recommendations (numbered, bold) for Years 2015-2016 and 2017-2020

Short Term 2015-2016

PLANT MORE

1.1 Establish canopy targets

Action: Develop achievable tree canopy cover targets by Placetype (London Plan)

1.2 Increase parking lot shade trees

Action: Develop and implement parking lot planting plans for shade trees and stormwater management

Action: Retro-plant City parking lots

Action: Amend policies and By-laws (Site Plan process, Zoning By-law, etc.) so trees are required, planted, retained and maintained, and replanted.

1.3 Prepare a planting strategy

Action: This document

Action: Five-year strategic planting plan in detail, beyond 5 years in lesser detail

Action: Utilise existing species information or requirements from existing Secondary Plans, Heritage Conservation District Master Plans, other Master Plans etc. to develop and achieve area-specific goals (some Plans already describe preferred species, and UFS speaks to creating distinctive neighbourhood with trees e.g. size, shape, seasonal colour; existing Design Guidelines, tree planting guidelines, etc. may require revision to reflect these goals)

- ***I note that identifying spots to plant is only half the battle: choice of planting technique (seedling, potted, caliper, seed, etc.) funding and dividing up the work among the groups willing and able to help will be the other.***

1.4 Implement no net loss policy

Action: Create no net loss policy; revise policies, By-laws, standards, etc. to support no net loss policy

- ***This policy can only work if it is started from the “day after” we have done another analysis. Must be careful to not over-analyze, rather see this as an***

immediate goal, and create policies/strategies/initiatives to achieve this. One step is to compensate developers more fairly for the trees that are retained as noted above.

2.1 Identify plantable space opportunities

Action: Identify plantable spots – private and public

Note: some is already being done through staff, and ReForest London community Tree Captains

Action: Five-year plan in detail, beyond five years in lesser detail

Action: City Natural Areas – plan to expand, and link

Action: Mapping, prioritising of tree vacancy plans – by geographic grid/watershed/park/neighbourhood/street

- **Mitigation Banking possibilities and policy development**

2.2 Develop planting standards

Action: Revise policies and By-laws to support tree canopy conservation and expansion – private and public sectors

Action: Revise planting standards to include other related management requirements

e.g. inspection of public planting locations and not less than annual inspections during warranty period, and an aftercare program (structural pruning, weeding, watering, mulching, fertilising, timely removal of ties, stakes, guards, etc.)

- **Support a condensed (more frequent) trim cycle to reduce loss of trees from rot in limbs cut when they were already quite large.**

2.4 Prepare 5 year community planting plan

Action: Five-year strategic planting plan in detail, beyond five years in lesser detail

3.9 Ensure suitable species for harsh conditions

Action: Develop protocol and species lists, and consider climate change preparedness (urban areas will be even warmer due to urban heat island effect)

Action: Consider soil quality and quantity (also tied with right tree, right place - cheaper to use what you have than amend to what you need)

I would move right to “Update soil specifications” as a policy task – I understand the province has a new set in the works expected to be updated this year

Action: Commitment/support to green industries – nurseries, growers, landscapes, arborists etc. (predicting of demand) – contract growing

- ***If City looks into contract growing, CAs and NGOs might be interested in “piggybacking” – if we each have a set of targets for the sectors we focus on, maybe we could put in for one big request?***
- **Action: Enforce contracts – e.g. accept no substitutes**

Action: Work with all stakeholders to disseminate and apply scientific knowledge to better select species for site and environmental constraints

Action: Establish protocols or criteria for use of exotics or native species based on vulnerability and related risk assessments

- ***Should see “invasives” specifically mentioned and address. If I recall correctly, it isn’t even covered in the UFS and it is a substantial short coming.***

PROTECT MORE

6.1 Revise policy to better use topsoil for planting sites

Action: Consider soil quality and quantity (also tied with right tree, right place - cheaper to use what you have than amend to what you need)

Action: Develop protocol and species lists, and consider climate change preparedness (urban areas will be even warmer due to urban heat island effect)

Action: Revise policies and By-laws

11.1 Conduct plantable space analysis

Action: Identify plantable spots – private and public

Action: Collate all available data by geographic area (census, orthophotos, etc)

Action: Prioritising tool for public and private lands

- may be an algorithm e.g. inverse income x human population x tree vacancy x inverse existing tree canopy cover. Priority must mean priority (for City initiatives at least) – especially with limited resources - recognising competing interests and requests

15.1 Develop incentives for private tree planting

Action: give away or subsidise trees e.g. free tree or voucher program – possibly working with realtors and City Divisions that welcome newcomers to London and work with low income families

Action: Consider Toronto’s LEAF and similar programs to plant trees for free on private lands including rear and front yards and City-owned boulevard/front yard

- **NOTE: ReForest London would have an interest in this: LEAF is a fellow member of the Urban Forest Stewardship Network**

Action: Existing City policies and By-laws need revision to ensure and support significant tree planting on private lands or by private persons on City lands

Action: Rewards program (recognition of outstanding achievements under the Strategy)

Action: remove barriers especially cost

- trees are a low priority and too costly for new homeowners, young families, immigrants, disabled, sick, etc. but these are the target sectors in the community that will reap the most benefits

Action: develop incentives with stakeholders interested in expansion of local nut and fruit orchards

- e.g. Ferrero Rocher, Ministry of Agriculture, Food and Rural Affairs, farmers, farmers markets and small businesses producing value-added products

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17.5 Develop a comprehensive communications strategy

Action: Roll out public communication/education strategy

Medium Term 2017-2020

PLANT MORE

1.6 Develop creative design solutions to include trees

Action: Develop and implement City parking lot planting plans for shade trees and stormwater management

Action: retro-plant City parking lots

Action: Institutional – follow Toronto’s shade tree example for schools (skin cancer threat to young persons); work with MLHU and others to achieve target canopy cover and/or forest immersion zones for hospitals, hospices and shelters (a shade policy)

Action: Consider Neighbourhood landscape character. Reflect historic significance of names e.g. Sherwood Forest?

Action: Consider individual streets. Reflect historic significance of names e.g. Dufferin Avenue used to be Maple Avenue; but Palmtree Avenue is probably a misnomer!

2.5 Enhance plantable space in urban hot spots

Action: Existing City policies need revision to ensure and support greater tree retention, or significant tree planting on private lands

Action: retro-plant City parking lots

Action: urgently replace street trees that have already been removed and not replaced e.g. Emerald Ash Borer ash trees

- ***We should be exploring what North American species will be resistant to Asian Long Horn Beetle if it comes, too.***

Action: Commercial/Industrial – incent and require retro-planting of hardscapes to achieve tree canopy targets where no other planting option exists

2.6 Improve plantable space in City infrastructures

Action: Develop and implement City parking lot planting plans for shade trees and stormwater management

Action: retro-plant City parking lots

Action: Revise policies and By-laws to support tree canopy conservation and expansion

2.7 Increase tree planting to meet targets

Action: This document and implementation thereof

3.1 Move to multi-year growing contracts

Action: Commitment/support to green industries – nurseries, growers, landscapes, arborists etc. (predicting of demand) – contract growing

3.3 Develop a native seed project

Action: Commitment/support to green industries – nurseries, growers, landscapes, arborists etc. (predicting of demand) – contract growing

- ***Perhaps this is unlikely to make a lot sense in the face of climate change: the predicted change for this century for Canada (even if we meet Paris commitments) is just too drastic (5.4 °C), unless the thought is that we make seed available for our more northern counterparts and ask folks to the south to do the same for us. (A better strategy, from my perspective). Look at assisted species migration as discussed at TFAC previously.***

3.4 Encourage food bearing trees in community gardens

Action: Commitment/support to green industries – nurseries, growers, landscapes, arborists etc. (predicting of demand) – contract growing

Action: Five-year strategic planting plan in detail, beyond five years in lesser detail

Action: remove barriers especially cost

See 2.4 and 9.3

9.3 Provide annual funds for community plantings

Action: remove barriers especially cost

Action: Promote and expand TreeMe grant and consider revisions to eligibility

PROTECT MORE

4.2 Manage natural areas to enhance biodiversity

Action: Identify plantable spots

Action: Develop protocol and species lists, and consider climate change preparedness (urban areas will be even warmer due to urban heat island effect)

Action: Revise policies and By-laws to support tree canopy conservation and expansion – private and public - include inspection of public planting locations and not less than annual inspections during warranty period, and an aftercare program (structural pruning, weeding, watering, mulching, fertilising, timely removal of ties, stakes, guards, etc.)

MAINTAIN BETTER

9.4 Reduce turf grass with more trees and less mowing

Action: Revise policies and By-laws to support tree canopy conservation and expansion – private and public - include inspection of public planting locations and not less than annual inspections during warranty period, and an aftercare program (structural pruning, weeding, watering, mulching, fertilising, timely removal of ties, stakes, guards, etc.)

Action: City Parks – prioritise and maximise tree planting in planned use/park design, ensure planted trees survive and thrive

Action: Enforce contractual warranty, guarantees and achieve satisfactory survival rate

Action: Remove barriers to success e.g. tracking, monitoring and reporting system (adaptive management) and measure success in achieving goals - to include measuring mortality rate –

Action: Community programs: Develop and implement aftercare program and replacement planting to achieve satisfactory survival rate

10.5 Estimate mortality rates and project losses

Action: Remove barriers to success e.g. tracking, monitoring and reporting system (adaptive management) to measure success in achieving goals - to include mortality rate

11.4 Model canopy growth to refine planting goals

Action: Issue Request for Proposal for modelling of canopy growth

- ***We need to be able to model canopy cover impacts of different ideas being proposed for the strategy before we can decide which ones are best.***

Action: Identify plantable spots

Action: Develop achievable tree canopy cover targets by Placetype (London Plan)

ENGAGE THE COMMUNITY

14.1 Establish a nursery growing contract for tree supply

Action: Commitment/support to green industries – nurseries, growers, landscapes, arborists etc. (predicting of demand) – contract growing

15.2 Develop neighbourhood tree plans

Action: Consider Neighbourhood landscape character; research and reflect heritage significance of names

- ***What value does this actually bring? Typically neighbourhood names do not necessarily reflect anything in particular other than what the developer wanted to call it.***

e.g. Oak Park, Oakridge

Action: Identify plantable spots

Action: Five-year strategic planting plan in detail, beyond five years in lesser detail

Action: remove barriers especially cost

Action: Promote and expand TreeMe grant and consider revisions to eligibility

Action: Develop protocol and species lists, and consider climate change preparedness (urban areas will be even warmer due to urban heat island effect)

Action: Community programs: Develop and implement aftercare program and replacement planting to achieve satisfactory survival rate

Action: Roll out public communication/education strategy

See 2.4 and 9.3

General note: I have seen the term “remove barriers” a lot, in particular reference to “cost”. The cost will never go away, rather it will simply be shifted around. It may be great to “remove” the cost from an individual, but it will be shifted to the tax base. This may be in the city’s best interest if it facilitates more plantings, but needs to be understood and quantified so it can be adequately budgeted for. DECISION MAKING PROCESS

- **It would likely be helpful to know how and when the City will decide each year what planting initiatives to seek funding for via business cases, or if the plan is to do 5 years all at once (as seems to be implied here). It may make sense for the City plantings to be planned for 5 years straight, and for resources to be made available to other planting partners on an annual basis (so we can modify programs as needed, for example, to match other grants we may receive). This general approach would seem to fit better with multi-year budgeting.**

EXAMPLE SCENARIOS:

- **For the sake of understanding how the canopy cover targets in the UFS were reached, I would love to see one or two scenarios which would show year by year (for example), how many trees you want to plant (e.g., in a caliper-tree exclusive program) and how that would impact canopy cover over time. A second scenario could deal with naturalizations, third could be hybrid, etc. (This is a bit of a wish-list item, but what I want is scenarios that help councillors understand A) the impacts of delaying planting and that B) there are different ways to get where we want to go. So, in that sense, another good example would be one that shows what happens if we only plant half as much as we need to for the first ten years). While I agree in general with this, we must be careful to not over-analyze (diminishing returns). Do there exist other studies which show differences in tree canopy cover by utilising different plantings (caliper versus bare root stock?) which we can apply in a general sense? This must come with the provision that the existing studies come from climates similar to ours of course.**

- **If included, it may make sense to put this early in the document, to say “there are many ways planting could be used to help reach our canopy target goals. Here are a few different examples of possible strategies.”**

SOFTWARE & DATA MANAGEMENT CONSIDERATIONS

- **What do you need to track the data required to do these analyses? Does the City have this software already, or does it need to purchase it? What staff resources will need to be dedicated to updating the strategy and canopy cover projections?**
- **I have heard recently that the City may not actually know how many trees are cut down (by the City’s contractors) every year. I can’t believe this is accurate (as your tree canopy inventory would suffer some very serious errors!), but if it is, this needs to be rectified immediately. I am not personally convinced estimates of tree canopy growth in street trees is going to be accurate without knowing this piece of data, as it is possible a greater number of trees are cut down in roadways than are planted each year. There is also the question of impact of planting smaller species of trees.**
- **Canopy cover estimates for street trees should assume street trees achieve less than 100% canopy cover at maturity, due to the extent of street tree trimming, which often removes several major branches, leaving a fairly spotty canopy. Agree, but trimming/pruning would presumably be less so in areas where the utilities are buried as there are no overhead conflicts.**
- **It would be good to see an appendix with a table showing past planting and cutting numbers, and then an annual update each year (similar to the MTC “dashboard”), to help TPS participants and stakeholders understand progress over time.**