

# CITY OF LONDON

## TREE PLANTING GUIDELINES

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### INTRODUCTION

Tree planting on the public right-of-way is a long term initiative. **What is done today can have a serious impact on street tree maintenance activities for years to come.** It is therefore imperative that tree planting be done with care and planning. Planning is critical to ensure that the final product is sustainable and aesthetically pleasing. Trees of similar shape but different species, if carefully selected, will provide the desired effect of tree arch over the street. The mix of species is essential to reduce the chances of insect epidemics, to guard against the spread of disease as trees are trimmed in efficient block treatments, to prevent widespread neighbourhood complaints and to eliminate extensive tree removal programs when single species plantings die (eg. Dutch elm disease on American elm, verticillium wilt on Norway Maples).

Designs should reflect patterns which show a use of random plantings of diversified species. Consideration should be given to adjacent lands where existing street trees may exist to ensure that continuous plantings are not created, in particular infill projects of limited frontage.

The City of London recognizes the difficulties in coordinating tree planting within the development process for new subdivisions. Trees are a living entity and, as such, cannot always be planted or inspected at convenient times. As well, difficulties with tree species availability, the seasonal nature of planting operations and administration make it more difficult to coordinate tree planting operations within the framework in place for assumption and end of warranty processes currently in place for new developments. The City of London, therefore, has instituted a 'cash-in-lieu' system whereby the developer will participate in providing a planting plan at time of assumption and the City will implement the tree planting.

# Policy

## At Development Agreement Stage

### Security

Security is required to ensure that funds are available in the event of default by the developer. Currently, this is a standard subdivision development requirement and will continue to be required in the amount of \$25.00 per linear metre of street frontage (both sides) within the plan of subdivision.

## At Time of Assumption Request by Developer

### Planting Plan

The developer will submit a planting plan showing actual planting locations (with all site amenities known and shown on the plan) and proposed species of trees (common and Latin names shown). **The services of an Ontario Registered Professional Forester or a member of the Ontario Association of Landscape Architects in good standing must be retained.** This will ensure that an appropriate planting plan is in place which considers species diversity, tree form, location and design. The planting plan must be **stamped by the R.P.F. or L.A.** and be shown on the standard plan of subdivision drawing or grading plan which shows lot dimensions (particularly frontages) as prepared by the consulting engineer. The plan will be reviewed and approved and approved by City Staff. The plan is to be submitted to the Coordinator, Forestry Programs, Planning Division, City Hall for review.

### Guidelines for Planting Plan Preparation

Trees should be shown approximately every 8 m. - 15 m. o.c. where practical and where growing space is available. Since large trees contribute more to the environment than small ones, the largest tree that fits the location is to be planted, considering eventual size at maturity. All trees are to be planted on City property.

The following guidelines will assist:

### Lot Width Considerations (See Figure 1)

**Consider the following in combination with figure 1.**

- ❖ Plant one tree per lot centred approximately in the green space between the side yard property boundaries.
- ❖ Where lot width is less than or equal to 9M (30ft), plant one tree per lot selecting an ornamental or medium shade, depending on spatial constraints, from the Approved Street Trees list (Appendix A).
- ❖ Where lot width is between 9M (30ft) and 15M (50ft), plant one tree per lot selecting a medium shade tree or Large shade tree species from the Approved Street Trees list (Appendix A).
- ❖ Where lot width is 15M (50 ft) or larger, plant one tree per lot selecting a large shade tree from the Approved Street Trees list (Appendix A).

Figure 1. Tree size in combination with lot width, boulevard width and other factors.

		LOT WIDTH		
		<9.0 m. (< 30')	9 - 15 m. (30 - 50')	> 15.0m. (> 50')
BLVD. WIDTH	> 2.0 m. (>6 ft)	Ornamental or Medium Shade	Medium or Large Shade	Large Shade
	1.5 – 2.0 m. (4' - 6')	Ornamental or Medium Shade	Medium Shade	Medium Shade
	1.5 m. (< 4')	<b>NO TREE</b>	<b>NO TREE</b>	<b>NO TREE</b>
NO SIDEWALK		Ornamental or Medium Shade	Medium Shade	Large Shade
OVERHEAD HYDRO PRESENT		Ornamental	Ornamental	Ornamental

**Curb To Property Line Considerations**

- ❖ Where no sidewalks exist or where sidewalk construction is not planned, trees are to be shown one meter outside the private property boundary on city property.
- ❖ Where a boulevard between curb and sidewalk exists, that is greater than 2.0 m. (6 ft), trees are to be shown in the centre of the boulevard - assuming no overhead utility.
- ❖ Where a boulevard between curb and sidewalk exists that is 1.5 m. (4 ft) to 2.0 m. (6 ft) ornamental or medium shade trees are to be shown in the centre of the boulevard.
- ❖ Trees are not to be planted on boulevards which are less that 1.5m (4 ft) wide.

**Site Considerations**

- ❖ Plant only ornamental tree varieties under **high voltage** overhead utility wires. Large and medium shade trees are permitted near single phase, street light cable and homeowner service cables. The leader of the tree should not be directly under such wires.
- ❖ No tree is to be shown closer than 2.0 m. (6.7 ft) to a driveway, lead sidewalk going into a property or underground hydro vault (transformer).
- ❖ No tree is to be shown closer than 15.0 m. (50 ft) to a stop sign or traffic signal light.
- ❖ No tree is to be shown closer than 6.0 m. (20 ft) to a street light pole or fire hydrant.
- ❖ Trees only are required for cul-de-sac island or roundabout areas and will be shown on the planting plan. The cost for any shrub or perennial plantings will be at the expense of the developer and will be shown on the planting plan for review and approval in accordance with City guidelines and specifications. Planting of shrubs and/or perennials should coincide with planting of trees. Should this be required in advance of scheduled planting operations by City staff (ie: for model homes, etc.), the developer should discuss the scheduling of this planting with City staff prior to work being carried out.
- ❖ Trees should not be shown in a direct line with the drainage swale between lots.

## Design Considerations

Uniform, mature street trees are the most visible and desirable component of our streetscapes. However, to increase resistance to insect and disease problems, tree species must be mixed to avoid a continuous mono-culture situation. Where several phases make up the M-Plan, the plan should reflect the character of plantings in adjacent phases.

- ❖ No more than five of any one species or variety is to be shown on one side of the street in a row. Trees should be matched one side of the street to the other (maximum of 10 matched trees) to provide a 'closed canopy' effect at maturity.
- ❖ At intersections, a maximum of 24 trees only may be shown in a 'block' (ie: 3 trees on each side of each corner).
- ❖ Where several phases make up the M-Plan, the plan should reflect the character of plantings in adjacent phases.
- ❖ In order to integrate species diversity into each plan, the species mix should endeavour to provide no more than 15% of any one species (percentage of the entire number of trees within the plan). Individual phases may diverge from this percentage if deemed reasonable (ie: cul-de-sac of 12 lots) so long as the overall objective of 15% species mix is maintained within the plan of subdivision.
- ❖ Trees with similar shape, (eg. vase, oval, upright) are to be selected to provide a closed canopy effect.
- ❖ No species other than those listed in Appendix B are to be shown on the planting plan without prior consultation with City of London staff. Other species may be considered within the context of the location chosen to place these trees. Take care to recognize all characteristics of the mature tree in making species selections.
- ❖ Trees with large or messy fruit may be planted only in limited situations; trees with large thorns are not permitted and species such as poplar and willow are banned by by-law for street tree planting. Coniferous needle-bearing trees or other species will not be planted on the right-of-way where they will cause sight line obstructions but may be considered if the location supports placement of this type of tree.
- ❖ Ash species shall make up not more than 5% of the species mix per plan – no exceptions.

## Post Assumption

### Planting

Once the planting plan is approved at time of assumption, the City of London will implement street tree planting before end of warranty of the subdivision through City of London tender processes and administration.

### Species Substitutions

The City will implement the tree planting plan, as accurately as possible, with the tree species specified. Once the planting plan is prepared, substitutions will be done only as necessary and should not be a common occurrence, with pre-planning. Should species require substitution due to unforeseen circumstances, the City reserves the right to substitute with a suitable species without further consultation or approvals through the developer.

### Timely Planting

The City of London will commit to planting trees within one year of assumption. Any subdivisions assumed prior to October 1 of the current year would be incorporated into the Tender process for planting the following year. If assumptions are processed after that date, they could *possibly* be planted the following year, depending upon availability of plant material specific to the planting plan, but could not be guaranteed, depending upon when the Tender documents are distributed.

### Fee

There are several components which comprise the cash-in-lieu amount charged for street tree planting. The fee must cover all costs associated with implementing the program, including the cost to supply and install the tree, a two year replacement warranty policy and associated administration costs (planning, organizing and implementing of tree planting as well as surveying and compliance checks).

Once the trees are planted, the City will forward an invoice to the developer reflecting the actual cost of planting trees in that subdivision with an additional 10% administration fee (plus all applicable taxes).

## At End of Warranty

### Fee

Payment for tree planting as invoiced by the City of London is a requirement at time of end of warranty of the subdivision. If payment is not received, end of warranty will not be granted.

### Security

Once payment for street tree planting has been received (as invoiced), the developer will be released from all obligations in this regard and the City's Development Services office will be authorized to release all securities held for such.

## Public Relations

Should home owners inquire about tree planting operations, the developer will explain that trees will be planted post-assumption. Further inquiries may be directed to the City of London.

Coordinator, Forestry Programs  
City of London  
Planning Division, Room 609  
300 Dufferin Ave.  
P.O. Box 5035  
London, Ontario N6A 4L9

(519) 661-2500 ex. 4490

or 661-4980

## Procedure Summary

- ❖ The developer will submit security amount at time of development agreement;
- ❖ The developer will provide a planting plan for review and approval at time of assumption;
- ❖ City staff will plant trees between assumption and end of warranty of the subdivision;
- ❖ The City will invoice the developer for tree planting operations;
- ❖ The developer will forward payment as invoiced to the Finance Division, City Hall, 406;
- ❖ City staff will acknowledge receipt of payment and communicate to Development Services that all requirements with regards to tree planting have been met for the area being assumed;
- ❖ City staff will authorize release of securities held;
- ❖ **Payment for street tree planting is a requirement at end of warranty. If payment has not been received, end of warranty will not be awarded and securities will continue to be held until such time as payment is received.**

## APPROVED STREET TREES

## APPENDIX A

The selection of trees for individual locations is a difficult process. It must give careful consideration to the neighbourhood and the existing conditions including soil type, moisture, available growing space above ground, proximity to hard physical plant (hydro wires, gas, lighting, hydrants, vaults, sidewalks) and future rooting and growing space demands.

**In recommending the species in the table we recognize that they are not all suitable for all locations. Carefully select the species which possesses the characteristics which most closely meet the environmental conditions of each site. As well, not all cultivars of each species are listed. The design professional may suggest species not listed, and they will be reviewed by City staff through the approval process.**

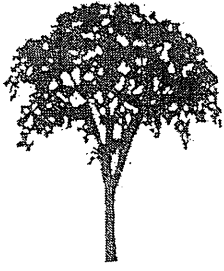
Other Considerations:

- |           |  |   |
|-----------|--|---|
| * STRESS  |  | Consider the tolerance to conditions such as compacted soil, diseases, drought, insects and road salt spray;  |
| *TIME     |  | Consider which species can be transplanted/moved at specific times in the year (eg. spring only for some species such as Oak and Red Maple);  |
| * NATIVE  |  | Consider the suitability of trees indigenous to this region where possible as site conditions allow;  |
| * FRUIT   |  | Consider the size and season and abundance of fruit produced by some species making them less desirable in specific locations;  |
| * DISEASE |  | Consider the potential for widespread mortality and costly removal and replacement programs generating public and political complaints with trees such as Norway maple (Verticillium wilt) American elm (Dutch Elm Disease) and Austrian Pine (Diplodia tip Blight). Avoid mass planting of single species. |
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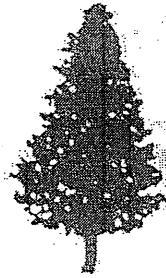
### VARIETY:

In an effort to promote long term sustainability, cost effective block trimming operations and increase ability to manage street tree risk management, we encourage a variety of tree species on each and every street. We also support aesthetically pleasing street tree designs and therefore encourage the planting of tree species mixtures which have similar form. Commonly recognized tree forms are as follows:

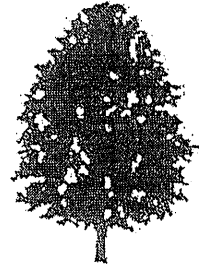
TREE FORMS:



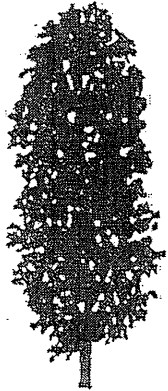
VASE



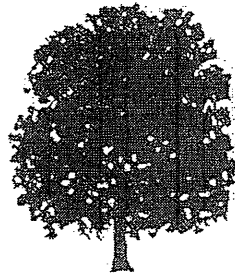
PYRAMIDAL



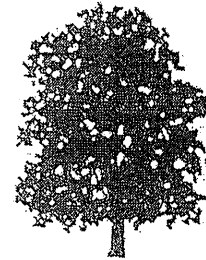
OVAL



COLUMNAR



ROUNDED



SPREADING

The landscape architect or registered professional forester is responsible for proper design and species selection taking the above points into consideration.

In an attempt to assist the design and species selection process, a list of recommended street trees is included. The list has been prepared using a number of references and you are encouraged to search these out and provide input with respect to other species for consideration. References include:

Dirr, M.A. 1990 Manual of Woody Landscape Plants

Farrar, J.L. 1995 Trees in Canada

Gerhold, H.D. et.al., 1989 Street Tree Factsheets

Himelick, E.B., 1981 Tree & Shrub Transplanting Manual

Poor, J.M. (Editor) 1984 Plants That Merit Attention Vol. 1

Rehder, A. 1940 Manual of Cultivated Trees & Shrubs

Sternberg, G, & J. Wilson 1995 Landscaping with Native Trees

Watson, G.W. 1992 Selecting and Planting Trees

# APPROVED STREET TREES

# APPENDIX B

TREE NAME	NATIVE	GENERAL COMMENTS	FORM	SIZE
<b>Acer campestre</b> Hedge Maple	Non-native	compact form/trunk suckers require extra maintenance/best on dry alkaline soil /yellow fall colour	Rounded	Medium
<b>Acer ginnala</b> Amur Maple (Single Stem only)	Non-native	Compact form/red & yellow face colour/lots of seeds/tends to sucker/specify single stem form	Rounded	Ornamental
<b>Acer nigrum</b> Black Maple	Native to Canada	Lots of seed for winter interest/rare/needs moist soil	Oval	Large
<b>Acer platanoides</b> Norway Maple	Non-native	Surface roots conflict with and turf/girdling roots/aphid and wilt problems. Not to be used near river corridors as seeding is heavy. <b>* Do not use near natural areas or Thames River and associated tributaries *</b>	Rounded	Medium
▪ 'Columnar'	Non-native	narrow form, 60' potential. For use where crown growing space is restricted.	Columnar	Medium
▪ 'Crimson King'	Non-native	Dark maroon foliage all season	Rounded	Medium
▪ 'Deborah'	Non-native	Red foliage in spring and fades to dark green by late summer/girdling roots	Rounded	Medium
▪ 'Emerald Queen'	Non-native	Excellent upright form	Rounded	Medium
▪ 'Olmsted'	Non-native	Good narrow form	Columnar	Medium
▪ 'Schwedleri'	Non-native	Red foliage in spring & fades to dark green by late summer	Rounded	Medium
▪ 'Erectum'	Non-native	Short lateral branches, very narrow form.	Columnar	Medium
▪ 'Superform'	Non-native	Excellent upright & tight form	Oval	Medium
<b>Acer pseudoplatanus</b> Sycamore Maple	Non-native	very pollution and salt tolerant/cankers cause high maintenance	Oval-Rounded	Large
<b>Acer rubrum</b> Red Maple ▪ 'October Glory' ▪ 'Red Sunset'	Native to Canada	Green summer foliage & yellow to red fall colour/tolerates wet soil	Oval-Rounded	Medium
<b>Acer saccharinum</b> Silver Maple	Native to Canada	Fast growing softwood maple; Maintenance issues as tree nears maturity due to weak wood. <b>* For use in limited circumstances</b>	Oval-Rounded	Large
<b>Acer saccharum</b> Sugar Maple	Native to Canada	Upright form/fall colour varies/prefers good drainage/shallow roots/salt sensitive	Oval-Rounded	Large
<b>Acer tataricum</b> Tatarian Maple (Single Stem Only)	Non-native	Good red & yellow fall colour/tends to sucker/lots of seeds	Rounded	Medium
<b>Aesculus glabra</b> Ohio Buckeye	Non-native	untested in London area and may suffer winter problems/likes moist soil. <b>* For use in limited circumstances</b>	Oval	Medium
<b>Aesculus hippocastanum</b> Horsechestnut ▪ 'Baumannii'	Non-native	Good spring flower with no fruit/limit use due to disease susceptibility	Rounded	Large
<b>Alnus glutinosa</b> European Alder (Single Stem Only)	Non-native	Showy flower & fruit/tolerant of wet & dry soil	Pyramidal	Medium

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TREE NAME	NATIVE	GENERAL COMMENTS	FORM	SIZE
<b>Amelanchier canadensis</b> Shadblow Serviceberry (Single Stem Only)	Native to Canada	Difficult to maintain single stem/4 season interest/tolerates moist soil	Rounded	Ornamental
<b>Aralia spinosa</b> Devil=s Walking stick	Non-native	thrives with neglect/suckers can be problem <b>* For use in limited circumstances</b>	Oval	Ornamental
<b>Carpinus betulus</b> ▪ 'Fastigiata' Fastigate European Hornbeam	Non-native	Oval/vase shaped tree/difficult to transplant/keep away from road salt & spray	Pyramidal-Oval	Medium
<b>Carpinus caroliniana</b> Blue beech or Muscledwood	Native to Canada	Difficult to transplant/keep away from road salt & spray/likes wet soil/thin bark and sculptured trunk	Rounded	Medium
<b>Celtis laevigata</b> Sugar Hackberry	Native to Canada	Compact form/good in moist soils	Vase	Large
<b>Celtis occidentalis</b> Common Hackberry	Native to Canada	Requires pruning for witches broom and general form/good substitute for elms	Vase	Large
<b>Cercidiphyllum japonicum</b> Katsura Tree (Single Stem Only)	Non-native	Difficult to transplant/orange fall colour/thin bark/needs supplemental water. <b>* For use in limited circumstances</b>	Rounded	Large
<b>Cladrastis kentukea (lutea)</b> Yellowwood (Single Stem Only)	Non-native	Few problems/use local seed sources or stock only/prune early	Rounded	Medium
<b>Cornus florida</b> Flowering dogwood (Single Stem Only)	Native to Canada	Use local winter hardy material only/good flower/specify single stem	Rounded	Ornamental
<b>Corylus colurna</b> Turkish Hazel	Non-native	Good form/difficult to transplant/winter interest/needs supplemental water	Pyramidal	Large
<b>Crataegus (varieties)</b> Hawthorns	Non-native	<u>thornless &amp; disease resistant</u> varieties only. <b>* For use in limited circumstances</b>	Rounded	Ornamental
<b>Fagus sylvatica</b> European Beech	Non-native	Needs moist soil/different leaf colours with varieties/sensitive to activity within root zone/leaves persist through winter/thin bark	Oval – Rounded	Large
<b>Fraxinus americana</b> White Ash	Native to Canada	<b>* Fraxinus species to be no more than 5% of any planting plan</b> * Large tree/tolerates dry soil/susceptible to die back & numerous insects. ('Manitoo' is an upright variety)	Rounded	Large
<b>Fraxinus pennsylvanica</b> Green Ash ▪ 'Marshall's Seedless' ▪ 'Patmore' ▪ 'Summit'	Native to Canada	<b>* Fraxinus species to be no more than 5% of any planting plan</b> * Fast growing/shiny, dark green leaves/five to nine leaflets/adaptable to poor/wet soils/susceptible to Emerald Ash Borer	Oval – Rounded	Medium
<b>Ginkgo biloba</b> Maidenhair tree (Male variety only)	Non-native	Good yellow fall colour/thin bark/tolerant of city conditions & pollution/slow growing but very large at maturity/virtually pest and disease free	- Pyramidal Spreading	Large

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TREE NAME	NATIVE	GENERAL COMMENTS	FORM	SIZE
<i>Gleditsia triacanthos</i> <i>Var. inermis</i> Thornless Honeylocust ▪ 'Shademaster' ▪ 'Skyline'	Non-native	Provides a filtered shade/susceptible to defoliation by leafhopper/susceptible to canker and other pests and diseases	Spreading	Medium
<i>Gymnocladus dioicus</i> Kentucky coffeetree	Native to Canada	interesting winter texture/open lawn setting/large leaves/male variety only <b>* For use in limited circumstances</b>	Oval	Large
<i>Halesia tetraptera</i> Carolina Silverbell	Native to Canada	Low branched tree with narrow head/broad, rounded crown/reserve for lawn areas	Rounded	Medium
<i>Juglans nigra</i> Black Walnut	Native to Canada	messy fruit/needs large area <b>* For use in limited circumstances</b>	Oval	Large
<i>Koelreuteria paniculata</i> Goldenraintree	Non-native	Good yellow flower & fruit/susceptible to winter damage/weak /Reserve for lawn areas/borderline hardiness	Rounded	Medium
<i>Laburnum (varieties)</i> Goldenchain tree	Non-native	yellow chain like flower/winter hardy local varieties only/borderline hardiness <b>* For use in limited circumstances</b>	Rounded	Ornamental
<i>Liriodendron tulipifera</i> Tuliptree	Native to Canada	Good flowers and yellow fall colour/local sources/moist well drained soil/very large tree most appropriate for lawn areas/somewhat weak wooded	Rounded	Large
<i>Maackia amurensis</i> Amur Maackia	Non-native	Small, round headed tree/slow growing/summer flowering/bronze coloured bark	Rounded	Ornamental
<i>Malus (most)</i> Flowering & Domestic Crab Apple	Non-native	good flowers/fruit usually maintenance problems/disease & insect problems/tolerates most soils, select fruitless or persistent fruit varieties Spring Snow, Sugar tyme, Snowdrift, Red Jewel, Harvest Gold, Centurion, Radiant, Brandywine, Prince Georges, Profusion, Red Snow, White Candle. <b>* For use in limited circumstances</b>	Rounded-Spreading	Ornamental
<i>Phellodendron amurense</i> Amur corktree	Non-native	Good winter texture in bark/lots of black berries/use in protected areas	Spreading	Medium
<i>Platanus x acerifolia</i> London Planetree	Non-native	Frost cracks on trunk/attractive peeling bark/fruit can cause problems/very large at maturity – reserve for large lots and lawn areas	Spreading	Large
<i>Prunus (varieties)</i> Oranmental Cherry/Columnar/ Sargent/Kkwanzan	Non-native	excellent flowers with no fruit/single stem to be specified/weeping cankers <b>* For use in limited circumstances</b>	Vase	Ornamental
<i>Prunus virginiana</i> Shubert cherry	Non-native	green spring foliage & red in summer/bark tends to split <b>* For use in limited circumstances</b>	Rounded	Ornamental
<i>Pyrus calleryana</i> Callery Pear ▪ 'Chanticleer'	Non-native	Good flowers/may have good fall colour/lush shinny leaves/fireblight problems	Pyramidal	Ornamental
<i>Quercus macrocarpa</i> Bur Oak	Native to Canada	Large size at maturity – reserve for large lots and lawn areas/fruit drop/difficult to transplant/requires good soils	Rounded	Large

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TREE NAME	NATIVE	GENERAL COMMENTS	FORM	SIZE
<i>Quercus alba</i> White Oak	Native to Canada	Needs moist soil/fruit maintenance/needs large space at maturity	Rounded	Large
<i>Quercus robur</i> <b>'Fastigata'</b> Fastigate English Oak	Non-native	Needs well drained soil/holds leaves through the winter/difficult to transplant/very upright in form – reserve for sites with specific need for this form	Columnar	Large
<i>Quercus robur</i> English Oak	Non-native	Needs well drained soil/difficult to transplant/large size at maturity	Rounded	Large
<i>Quercus rubra</i> Red Oak	Native to Canada	Needs sandy loam soil/difficult to transplant/more salt tolerant and faster growing than other oaks	Rounded	Large
<i>Sophora japonica</i> Japanese Pagoda Tree	Non-native	Excellent white flower/green stem when young/limit use due to messy characteristics	Spreading	Large
<i>Sorbus aria</i> Whitebeam Mountain Ash	Non-native	Leathery, gray-green leaves/white flowers in May/fall colour varies from pale green to golden brown to reddish	Pyramidal-Oval	Medium
<i>Sorbus aucuparia</i> European Mountain Ash	Non-native	small flower & orange fruit/disease & insect problems/limit use due to fruit and other problems	Oval	Medium
<i>Sorbus x thuringiaca</i> Oakleaf Mountain Ash	Non-native	Forms a tight, rounded crown/White flowers/red fruit/Leathery dark green leaves	Rounded	Ornamental
<i>Syringa reticulata</i> Japanese Tree Lilac ▪ 'Ivory Silk'	Non-native	Good white summer flower/excellent small specimen	Rounded	Ornamental
<i>Tilia americana</i> Basswood	Native to Canada	Prefers deep moist fertile soil/will grow on drier heavier soil/needs large space	Oval	Large
<i>Tilia cordata</i> Littleleaf Linden ▪ 'Glenleven' ▪ 'Greenspire'	Non-native	Showy & fragrant flowers/ Greenglobe maybe used under hydro lines/aphid & borer problems/suckers from base/messy species/limit use	Pyramidal	Medium
<i>Tilia x euchlora</i> Crimean Linden	Non-native	showy & fragrant flowers/fruit messy/suckers from base/limit use. <b>* For use in limited circumstances</b>	Rounded	Medium
<i>Tilia tomentosa</i> Silver Linden	Non-native	Larger leaves than <i>Tilia cordata</i> – dark green above, silvery beneath/heat and drought tolerant	Pyramidal-Oval	Medium
<i>Ulmus carpinifolia</i> Smoothleaf Elm ▪ 'Homestead' ▪ 'Pioneer' ▪ 'Sapporo Autumn Gold'	Non-native	Aggressive species/arching form/elm leaf beetle susceptible/limit use due to dutch elm disease	Vase	Large
<i>Zelkova serrata</i> Japanese Zelkova ▪ 'Green Vase' ▪ 'Village Green'	Non-native	Rapid growth/narrow branch angles promote fork split/frost susceptibility when young	Vase	Large