



PLANNING FOR YOUR TREES

You've successfully planned your school ground greening project and now you're ready to choose your trees, order your nursery stock and plan for tree protection. Use the following information so your trees will thrive for decades.

CHOOSING YOUR TREES

Tree Location:

- Be sure to choose your tree species carefully so that they will grow within the available space and site conditions.
- Avoid planting in an area that will receive plowed snow or a lot of salt run-off such as the end of a parking lot or along the street. If you must plant in this area, build a raised bed or planter or choose a salt tolerant species.
- Nature study areas (no mows) are great places to start whips and tree seedlings.

Be sure to check out our School Ground Greening guide for canopy density guidelines to see what percentage of shade cover your new trees will provide. (<http://www.evergreen.ca/en/lg/lq-resources.html>)

Root ball Conditions and Sizes

Your trees can come in many root ball types and sizes. The chart below will help you understand your options. Trees are measured by trunk diameter (caliper) in millimetres (mm) or by height in centimetres (cm).



Native Plant Database
Check out our Recommended Lists for tree species on our website at: <http://evergreen.ca/nativeplants/>

Tree Planting Distances from Built Objects

Space Between Trees	5-7 m
Seating	2 m
Play Structure	2 m
School Building	7 m
Fence Lines	2 m
Walkways	2 m
Edge of Asphalt	2 m
Running Track	5 m
Fire Hydrants	6 m



Don't let this happen to you!

Whips (cm) or Seedlings	Bare Root (mm or cm)	Caliper (mm) Container, Ball and Burlap or Wire Basket
<p>BENEFITS</p> <ul style="list-style-type: none"> • Best for large planting areas. • Fast growing seedling trees can become very tall in five years. • Very easy to plant. • Grown from seed they promote a diverse gene bank. • Cheapest option. <p>CHALLENGES</p> <ul style="list-style-type: none"> • Easily vandalized. • Higher potential for mortality than the other options. • Competition from surrounding vegetation must be considered. <p>TECHNIQUE</p> <ul style="list-style-type: none"> • We recommended installing signage or fencing to protect the area from vandalism or accidental mowing. 	<p>BENEFITS</p> <ul style="list-style-type: none"> • Bare root trees adapt quickly and grow faster than other stock. • In a few years they can overtake the caliper trees. • Good size for individuals to plant. • Cheaper than caliper trees. <p>CHALLENGES</p> <ul style="list-style-type: none"> • Timing: They must be planted before they leaf out in the spring or after the leaves fall in the autumn. <p>TECHNIQUE</p> <ul style="list-style-type: none"> • Keep roots moist at all times. • Ensure that the root-trunk union is at ground level, not above or below. • Regular watering is essential. • Protection is necessary if located in areas of active play. 	<p>BENEFITS</p> <ul style="list-style-type: none"> • Immediate effect and instant gratification. • Survive best if vandalism is a problem i.e. 45 - 60 mm caliper at chest height. <p>CHALLENGES</p> <ul style="list-style-type: none"> • Take longer to become established. It takes one year for each inch of cut root to grow back, before growth occurs in the canopy. • Root ball is heavy and hard to maneuver, making it difficult for students and volunteers to plant. • More expensive than the other options. <p>TECHNIQUE</p> <ul style="list-style-type: none"> • If material is potted, gently remove root ball from container. If roots are circling or pot bound, gently separate and spread the root mass. • Peel back the burlap from the top of the root ball and cut with a sharp knife. Remove as much burlap as possible (at least half) without disturbing the roots. • Remove the top portion of the wire basket with wire cutters after the root ball is placed in the hole.



"The best time to plant a tree was twenty-five years ago and the second best time is now."
(Chinese proverb)



Weak branch structure
(u-shaped branch)



A healthy crown shape and good
branch structure.

Ordering Your Nursery Stock

- Source the lowest possible price by obtaining three quotes from nurseries before confirming a supplier. Verify the reputation of your supplier with your facilities department, Evergreen Associate or local arborist.
- Many nurseries will offer wholesale prices to school projects. The price is usually half the retail cost and comes *without* a guarantee of replacement.
- To ensure you get the sizes and species of plant material you want, give the nursery or supplier as much notice as possible, ideally two months in advance.
- When you confirm your final order with your supplier, organize a delivery date that corresponds with your planting date.

What To Look For When Accepting Your Plant Material

The following tips should help you identify good stock both at the nursery and when your plant material is delivered to your school ground.

- Do not accept delivery of sub-standard material.
- Do not accept substitutions that have not been agreed to.
- Look for branch unions that are Y-shaped. Narrow and broad branch unions are prone to splitting and indicate poor branch structure.
- Look for a healthy crown shape. A tree's natural structure is a wide crown with well spaced branches.
- Check that the roots are not girdling the main trunk of the tree. Girdling roots are roots that encircle the tree's stem and may lead to strangling.
- If there is damage to branches, make sure they are properly pruned before you buy them.

COMPACTION AND MAINTENANCE STRATEGIES

Whatever your project goal – planning for shade, creating a nature study area, developing plans for an arboretum or growing a windbreak – it's important to incorporate compaction and protection strategies when planning for your trees. Here are some examples:

Root Protection

- Spread tub ground mulch or wood mulch to the drip line 6 inches or 15 cm thick and maintain this depth on a seasonal basis.
- Avoid planting trees on the tops, sides, or at the base of hills or berms in active play areas.
- Plant the tree in a tree garden, raised bed, planter or in groves.
- Plant ground cover or a living fence (i.e. oats, wheat, rye, sunflowers, birdseed or corn) to keep feet off the roots.
- Weave a fence around the base, outside the drip line or block the area off with string.
- Build bench seating around newly planted trees. Design the seating so that there is room for the trunk to grow and feet are out past the drip line.
- Use turf stone for trees planted in hard surfaces.
- Install elements such as rocks and seating before planting trees to avoid disturbing the root system.
- Be sure to protect your existing trees from potential construction damage if you are having any work done on your school ground. Put up snow-fencing to the drip-line of your tree, as compaction will suffocate roots below the surface.



Protect native study areas by putting up snow fencing.



Use raised boxes to protect trees.



Wire cages are a great way to protect tree trunks.



What is compaction?
Compaction occurs when the soil over the tree roots is compressed making it difficult for trees to get the water and oxygen they require.

Trunk Protection

- Protect tree trunks from string trimmer and lawnmower damage that injure the trunk and can kill the trees. Use a mulch donut, wire mesh caging or woven tree baskets. Wire mesh caging is great for protection in active play areas if you are concerned about vandalism or wear and tear from children.
- Inform your school Principal about tree damage caused by lawnmowers and string trimmers. Contractors who do this damage should be held accountable and replace trees that they have harmed or killed.

Other resources

- See Tree protection at: www.evergreen.ca/en/lg/tdsb-guide.pdf, pages 80–82.