



EVERGREEN
COMMON GROUNDS

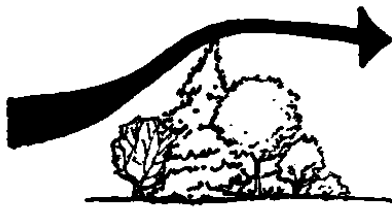
Bringing Nature to Our Cities

Common Grounds
Fact Sheet #5

Windbreaks, Corridors, Hedgerows & Living Fences

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Windbreaks



Given the harshness of Canadian climates, windbreaks are an important consideration for community projects. Just as trees are critical for providing shade during hot spring and fall days, protection is also needed during the cold winter months. During winter months, wind chill can decrease the temperature by more than double, depending on wind speed. A windbreak will reduce wind speed for a distance of as much as 10 times the windbreak's height! Windbreaks help to reduce drifting snow and soil erosion on exposed sites.

Designing Your Windbreak

- Use several rows (one to five) of defense to create your windbreak. Make it at least seven metres wide.
- Plant your rows in a line perpendicular to the prevailing wind and upwind from the space or building you want to protect. Check with your local weather station to find out the direction of prevailing winds in your area.
- Design your windbreak as three parts: the windward, centre and leeward. The windward row is what the wind hits first and should be made up of dense, fast growing trees and shrubs that prevent snow from piling up in the centre. This also helps to prevent moisture accumulation in the spring in areas where snow is trapped and is not melted by the sun. The middle row should be made up of tall, fast-growing trees and shrubs that force winds to rise up over the windbreak. Finally, the leeward row should be made up of dense-growing trees and shrubs.
- Use both evergreen and deciduous species to provide a variety of food and shelter for wildlife.

did you know...

Windbreaks planted on the north and west sides of a building can reduce heating costs by up to 30 per cent.



This fact sheet is part of a series that provides community groups with practical hands-on information for naturalizing parks and other public spaces. The fact sheets are a companion to Evergreen's guidebook, *No Plot is Too Small: A Community's Guide to Restoring Public Landscapes*, which provides the tools to plan, implement and sustain a successful greening project.

The fact sheets in this series include:

1. *Tips and Techniques for the Naturalized Garden*
2. *Prairie and Meadow Communities*
3. *Woodland Communities*
4. *Pond and Wetland Habitats*
5. *Windbreaks, Corridors, Hedgerows and Living Fences*
6. *Community Gardening - Themes and Ideas*
7. *Designing Community Spaces*

Corridors

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Rapid urbanization has resulted in fragmented natural areas that no longer provide sufficient wildlife habitat. Creating corridors, that link existing woodlots, wetlands and other key habitats, provides areas for wildlife travel, food and shelter.

Designing Your Corridor

- ☛ Select a site that connects existing natural areas or expands an existing hedgerow or small corridor. Think about innovative ways to develop natural corridors, such as along abandoned rail lines and hydro corridors.
- ☛ Plant trees and shrubs to create a corridor that is at least three metres wide. A width of 10 to 30 metres is ideal to create interior habitat, but even narrow corridors can provide a safe passageway for many birds and small mammals.



Don Valley, Toronto, Ontario



Hedgerows & Living Fences

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Hedgerows and living fences are rows of trees, shrubs and vines. They offer a more aesthetically pleasing alternative to standard chain link fences and provide wildlife habitat, visual screens and boundaries for different use areas.

Designing Your Hedgerow or Living Fence

- ☛ Make use of existing built features on the site, like fences, arbors, trellises and pergolas to provide support for vines and to define a boundary for your project. Or, zigzag split rail fencing through your hedgerow or living fence to provide resting and perching sites for wildlife.
- ☛ Use a variety of plant types (coniferous and deciduous) and sizes of trees, shrubs, vines or wildflowers.
- ☛ Prepare an area at least 60 centimetres wide for planting shrubs and trees, or 15 centimetres wide for vines to grow along your fence.
- ☛ Plant shrubs 50 to 60 centimetres apart and trees one to 1.5 metres apart.
- ☛ Group and stagger shrubs and trees by height to create multiple vertical layers for your hedgerow. This will add visual interest as well as provide shelter for a variety of wildlife species.

Hedgerows and living fences are also useful for shading sidewalks and buildings. They help reduce the heat that is reflected off asphalt surfaces, and because cool air settles near the ground, air temperatures directly under trees can be as much as 14-degrees cooler than air temperatures above asphalt.

Selecting Species For Your Hedgerow or Living Fence

- ☛ Select fast growing tree species (i.e. maple, ash, cedar, serviceberry and chokecherry) and dense shrub species (i.e. buffaloberry, dogwood and viburnums).
- ☛ Include spring flowering shrubs and wildflowers; trees and shrubs with coloured berries; trees, shrubs, and vines with fall colour; deciduous shrubs with coloured bark for winter interest; and shrubs that have seed pods throughout the winter for seasonal interest.
- ☛ Use vines (i.e. Virginia creeper, American bittersweet, wild grape, virgin's bower and honeysuckle) and perennials that will climb along a fence, trellis or wall.
- ☛ Use native roses and dense shrubs spaced in double rows to create nesting habitat.

Variations

Clumps and Thickets

Clumps and thickets can provide shelter and wildlife habitat in small corners or sections of your site. Strategically place them to provide stopping places for wildlife between hedgerows, corridors or windbreaks.

- ☛ Cluster groups of small trees and shrubs (i.e. willow, viburnums, birch) to create a clump.
- ☛ Use dense bushes (i.e. buffaloberry and dogwood) grown close together to create a thicket.

Fencerows

Fencerows are borders with a fence. Typically grass is mown right up to fences, providing little visual interest or wildlife habitat. If you have an existing fence around your local park you may want to work with the Parks Department to stop mowing the grass along the fence and let native grasses and wildflowers naturally regenerate the area.

- ☛ Intersperse clumps of dense trees or shrubs (i.e. cedar) along the fencerow to add more interest and cover for birds.

Forest Buffers

Your group may have the opportunity to enhance an existing wooded area by planting a buffer of native trees and shrubs. Buffers achieve two goals: protecting the integrity and health of the interior woodland and increasing the edge habitat for songbirds and other edge species. Work with your municipal Parks Department to determine which species and what area should be planted.

- ☛ Layer the border with a taller section of trees next to the existing woodland, followed by a strip of small trees and shrubs and an open meadow to provide a transition to the woodland community.



did YOU know...

Naturalizing parks increases community use and interest. Greater use results in decreased vandalism and safer places.

Codes and Safety Standards

The use of landscape design elements such as windbreaks, corridors and hedgerows in public spaces may raise safety concerns resulting from reduced site lines and restricted movement.

- ☛ Include trails to increase use and visibility in planted areas.
- ☛ Use lighter density plantings and complete regular pruning and maintenance practices to ensure low branches are removed in areas where visibility is a concern.
- ☛ Select species that have a high branch structure (2.5 metres) so there is a distinction between the tree canopy and under-story species.
- ☛ Include lighting in planted areas so they are not dark and inviting hiding places.
- ☛ Involve the community in watching over the site for any signs of vandalism or misuse. Also, a well maintained site will help discourage vandalism.



Where to *go* from here?



Sources for this fact sheet

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Example projects

Mount Pleasant Community Fence, Vancouver, British Columbia: (604) 875-9516

Published by Evergreen

Evergreen is a national non-profit environmental organization with a mandate to bring nature to our cities through naturalization projects. Evergreen motivates people to create and sustain healthy, natural outdoor spaces and gives them practical working tools to be successful through its three core programs: **Learning Grounds** (transforming school grounds), **Common Grounds** (working on publicly accessible lands) and **Home Grounds** (for the home landscape). We believe that local stewardship creates vibrant neighbourhoods, a healthy natural environment and a sustainable society for all.

Evergreen's Common Grounds Program

Common Grounds brings land-use planners, landscape architects and community members together to restore public land. By supporting community greening initiatives, Common Grounds enriches ecological diversity, fosters healthy, sustainable communities and increases environmental awareness.

Part of the Tool Shed Series

The Tool Shed is an integrated collection of resources designed to inspire, educate and guide students, teachers, planners, community groups and individuals through all stages of a school, community or home naturalization project. The Tool Shed series includes guide books, instructional and inspirational videos, fact sheets, case studies, newsletters, research reports and an on-line registry. For the latest information on Evergreen's Tool Shed resources, check out our website at www.evergreen.ca.

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