



*High-end condominium with perennials and a drainage collection pond.*

# Sustainable Landscaping

By Nathan Helder

**THIS IS** a remarkable time in the history of landscaping. We can have a sustainable landscape that promotes environmental stewardship. What does sustainable landscaping mean? There are varying definitions, but sustainable landscaping should include



an attractive environment that is in balance with the local climate and requires minimal resource inputs. Effective implementations or ret-

rofits require partners who know and understand the principles of a sustainable landscape. These principles begin with an appropriate design that includes functional, cost effective, visually pleasing, environmentally friendly and maintainable areas. Sustainable landscapes should involve proper design, water conservation, native plants and turf, energy conservation and cooling, and maintenance.

## ■ Proper Design

Landscape design begins with an understanding of the future use of the property, to unify the building,

existing streetscape and the surrounding environment. It should mitigate the visual impacts of parking areas, loading docks, garbage areas, storage areas, etc. The landscape design should outline a 3- to 5-year plan; providing an aesthetically pleasing view from the street is essential for curb appeal and property value. Some guidelines to follow:

1. Preservation of existing trees, woodlots and features wherever possible.
2. Diversity of native plant material and naturalizing in appropriate areas.

3. Ensure integration with storm water management features.

4. Enhance the public perception or curb appeal of a proposed development in terms of aesthetic quality, comfort and convenience.

5. Provide ecological benefits

6. Include landscape lighting – reduce security risks and increase beauty.

7. Enhance habitat for wildlife, erect bird houses for nesting and shelter – create an ecosystem at your condo.

### ■ Water Conservation and Irrigation

Up to 40 per cent of the water used by a household each month is for outdoor landscaping. Many municipalities encounter water shortages during the summer and impose temporary restrictions on the use of water for landscaping. As the population of many cities continue to increase, the volume of water used for landscaping will become increasingly important. Water wise landscaping can reduce normal water use by  $\frac{2}{3}$  during the summer months. Some guidelines to follow:

1. Use a smart irrigation controller that uses real-time weather data to modify the watering schedule. Water during the coolest part of the day. Water thoroughly and less frequently.

2. Ensure that the irrigation design is efficient, different zones for different applications – use drip systems for plantings and urns, and sprinkler heads for lawn areas at the same time minimizing overlap and “concrete watering.”

3. Mulch (no more than 3-4” deep properly installed) used around the roots of shrubs and trees and in flowerbeds reduces evaporation and prevents the formation of weeds.

4. Choose drought tolerant plants.

5. Change your current lawn mix to a drought tolerant mix.

6. Use a container such as a rain barrel to capture rainwater from your eavestrough. This water can be used later for your landscape.

### ■ Water Conservation and Drainage/Runoff

The legal incentives to promote the

greening of the “desert” of roofs in a city are welcomed as they are so effective and beneficial to slow the “flood” conditions that the drains cause during rain events. Green roofs help capture, store and slow that drainage as it becomes bound up in the growing media and roots of the green roofs. As the green plants live and transpire, they also help cool the cityscapes.

Alter your property grading to trap and collect storm water runoff. Drainage collection ponds are also key in slowing the runoff and thereby helping to ensure the clarity of the water that enters the streams and waterways.

It is important to select the right plant for the right place in order for the plant to thrive.

### ■ Native Plants and Turf Selection

Plants that are not adapted to the local environment require more inputs than well-suited selections. Plants and turf placed in environmental conditions (lighting, moisture, temperature, etc.) that do not meet their requirements become stressed. Stressed plants and turf are more prone to pest problems and disease. Another commonly overlooked aspect of plant selection is the mature size of the plant; match the plant to the growing space. Native species are able to tolerate the local conditions where they evolved. Planting for the long term through the use of perennials is a characteristic of sustainable

landscapes. Include diverse plants to attract wildlife.

### ■ Energy Conservation and Cooling

If your home is not already shaded you can reduce your air conditioning costs by adding a well-planned landscape. This is accomplished by using trees and bushes to block the sun from windows and walls; reducing air temperatures outside the home with properly placed shade trees; and planting groundcovers, trees and shrubs to reduce the heat reflected from the ground to walls and windows. Shrubs and vines planted next to the house provide year-round insulation by creating an air space. Carefully positioned trees can reduce household energy consumption for heating and cooling by up to 25 per cent. Computer models from the U.S. Department of Energy estimate that three properly placed trees can save an average household between \$100 and \$250 in heating and cooling energy costs annually.

Living walls, which are also known as green walls and vertical gardens can help cut your heating and cooling bills, as well as improve air quality.

### ■ Maintenance of a Sustainable Landscape

When choosing landscape maintenance techniques, one must ask the question, “how will our actions impact the environment?”



*Diverse trees and shrubs are used throughout this condominium.*

1. Many organic yard waste materials can be composted including leaves, grass clippings, vegetable and flower plants and small amounts of woody material.

2. Most pest problems are directly related to the health of the plant or turf. Pests target stressed and weakened plants, therefore maintaining plant and turf health will prevent most pest problems. If pests are brought in, they are more likely to become established. Diversity with your landscape will help maintain beneficial organism populations, predators and parasites of plant pests. Incorporating different types of plants and diversity will discourage plant pests. If a problem occurs, diagnose the problem correctly. Be sure to obtain professional information on how the plant is to be cared for and to help the diagnosis process.

3. Incorporate an Environmental Turf Program for Healthy Lawns – aeration, top dress and seeding, fertilizers, etc.

## ■ Conclusion

In order to reach the goals you set, you will need able partners that share your vision and outlook. The landscape industry is active in promoting and encouraging sustainable landscape and as such has developed the Environmental Scorecard, a self-evaluation tool developed by Landscape Ontario's Environmental Stewardship Committee. By completing the Scorecard, landscape companies get a snapshot of their environmental scores, and a blueprint for progress. Using it as a tool, companies can measure their impact on air quality, waste management, water stewardship, greening their offices and use of horticultural best practices within their own areas of practice (landscape design, maintenance, garden centre, snow and ice management, irrigation, etc.) Working together as consumers and suppliers, we can commit and invest wisely to the benefit of the environment, enjoying it for generations to come. ■

*Nathan Helder is president of Jan Gelderman Landscaping, and Chair of Landscape Ontario's Environmental Stewardship Committee.*