



THE CLINTAR WHITE PAPER SERIES:

THE PROPERTY MANAGER'S GUIDE TO A SUSTAINABLE COMMERCIAL PROPERTY IN CANADA

IN COMMERCIAL LANDSCAPE MANAGEMENT,
RESPONSIBILITY MEANS MORE THAN
SHOWING UP ON TIME

Executive Summary

It's no longer enough that landscape maintenance crews show up on time and keep your commercial property looking clean and professional. To promote a public image that aligns with tenants' growing environmental consciousness, it's increasingly important for property management companies to hire landscape maintenance professionals who use more sustainable practices.

With 44% of Canadians making purchasing decisions based on ecological and socially responsible criteria, it's clear that the very conscience of consumers in Canada has changed. Environmentally responsible practices in landscape management have far-reaching implications in the commercial space.

There are four specific areas of impact that facilities managers and property managers should be paying close attention to:

1. Using smarter irrigation practices
2. Reducing emissions and carbon footprint
3. Practicing eco-friendly landscape design
4. Reconsidering how salt is used for ice management

Improving environmental responsibility in these areas can directly affect tenant satisfaction *and* reduce property maintenance expenses over time.



Introduction

Showing up on time to clear walkways, attention to detail when maintaining the grounds, ensuring the landscaping reflects the image of the building — what commercial facilities managers and property managers expect from their landscape management companies hasn't changed.

It's grown.

With an expanding environmental conscience in Canada, property managers are becoming more keenly aware of how their commercial properties are being maintained — and how those practices are being perceived by their tenants.

It's no longer enough that landscape maintenance crews keep the property looking clean and professional. Commercial landscape maintenance practices must align with the public image property owners want to portray to attract and retain the best tenants. And those practices must also align with business and consumer values that are being rapidly shaped by growing environmental awareness in Canada.



Public image and environmental consciousness are coming together in new ways in the commercial real estate space — and property managers and facilities managers are on the front lines of this evolution. The choices they make around commercial landscape management and the landscape maintenance companies they hire directly impact the environmental sustainability of their properties.

For commercial outdoor management companies, reliability and responsibility must be intricately woven if they want to continue to get contracts with forward-thinking property management companies.

In this white paper, we will explore this shift and what it means for commercial property managers. You'll learn about the four Impact Points that can make the biggest difference in the environments you manage — and can make the biggest impact on tenant satisfaction.


44% of Canadians make purchasing decisions based on ecological and socially responsible criteria.

Tenant Conscience and Public Image

Across the board, customers are demanding more from the companies they buy from — better quality, more responsive customer service, and most importantly, more responsible practices.

In recent studies, The Nielson Company found that 66% of global consumers say they're willing to pay more for sustainable brands. They also discovered that a whopping 73% of global Millennials are willing to pay extra for sustainable offerings.ⁱ Considering that Millennials are currently the largest portion of the Canadian workforce (over 35% according to the most recent reportsⁱⁱ), this is something all businesses should be paying strict attention to.

Zeroing in even further on the market in Canada, market intelligence company CROPⁱⁱⁱ recently found that 44% of Canadians make purchasing decisions based on ecological and socially responsible criteria.



Environmentally responsible practices have far-reaching implications in this space. They:

- Impact public image, painting companies as socially responsible market leaders.
- Improve owner and tenant satisfaction, because their personal moral values are being upheld.
- Give the business a competitive edge when it comes to attracting customers and investors.

This demand for sustainable practices has changed the very conscience of consumers in this country. Nowhere is this more evident than in commercial property management, where environmental responsibility reflects on the property owner, the facilities manager, *and* the tenants.

Around the globe, environmental responsibility is increasingly correlated with sales growth and cost savings. In a study from the *Journal of Business Ethics*, between 2006 and 2010 the top 100 sustainable global companies experienced significantly higher mean sales growth, return on assets, profit before taxation, and cash flows from operations than control companies.^{iv}

There are four specific areas of impact that facilities managers and property managers should be paying close attention to. Improving environmental responsibility in these areas can directly affect tenant satisfaction *and* reduce expenses over time.

Use the following four Impact Points to guide your conversations with landscape maintenance companies — and make sure you're aligned on what environmentally sustainable practices make the most sense for the properties you manage.

Impact Point 1: Smart Irrigation

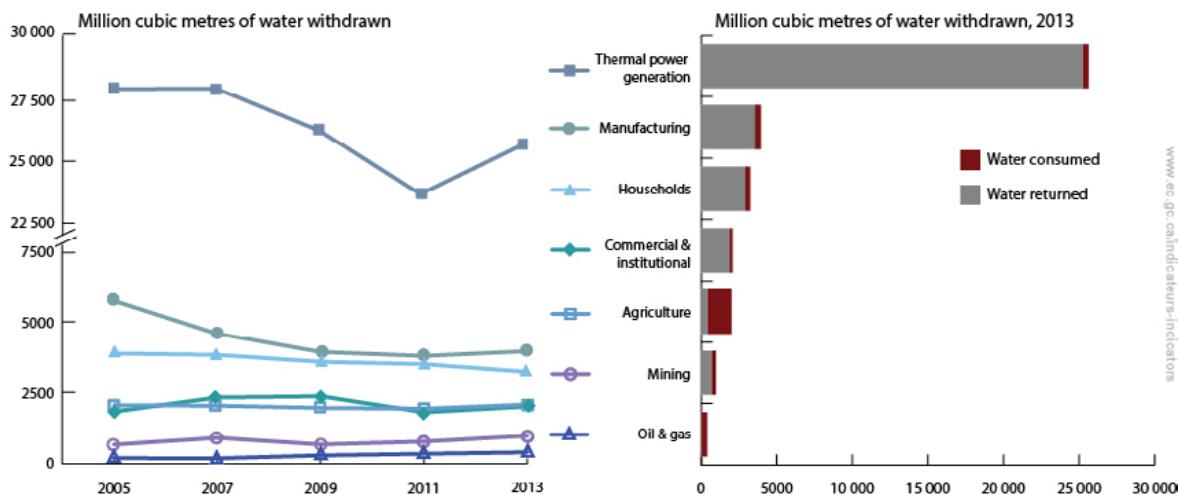
With a wealth of rivers, lakes, and even three oceans, there is no shortage of water in Canada. In fact, we're home to the largest freshwater lakes in the world. But that doesn't mean that every Canadian company uses this resource wisely.

The Conference Board of Canada^v reports that:

- Canada ranks 15th out of 16 peer countries and earns a "C" grade for water withdrawals.
- Canada's water withdrawals are nearly double that of the 16-country average.
- There is a lack of widespread water conservation practices, and water pricing does not promote efficiency.

Landscapes in Canada consume 25% of urban water and are over-watered by 30-300%.

Typical commercial landscapes are especially wasteful. Commercial and institutional water withdrawal in Canada consistently matches up with agricultural withdrawal.^{vi} Landscapes in Canada consume 25% of urban water and are over-watered by 30-300%. What's worse — as much as 50% of water used outdoors is wasted.^{vii}





Poor irrigation practices not only waste water, they can destroy commercial landscaping. Too little water creates brown spots and may reduce the market value of your commercial property. But too *much* water has an even bigger effect. It can:

- Drown sensitive vegetation or cause unwanted vegetation growth
- Turn the ground to mud, reducing the visual appeal of commercial property
- Cause soil erosion, which clogs drainage ditches and streams, harms aquatic habitats, and affects soil fertility
- Increase facilities costs for labour, pumping, and services to treat nutrient leaching or poisoning

It's not all doom and gloom, however. **With such vast natural resources at your disposal in Canada, plus new monitoring technology at your fingertips, smart irrigation practices that conserve both soil and water can have a transformational effect on your facilities and your budget.**

Proper, reliable irrigation is critical to a healthy, beautiful landscape. It also eliminates water waste, and for properties subject to water metering it can mean significant cost savings.



Today, green technology is making irrigation smarter and more efficient than ever.

Wireless moisture sensors such as UgMO (Underground Monitoring) solutions monitor moisture levels in real time, and alert landscape management teams to over- or under-watered sections. This technology enables facilities to optimise their water levels based on soil moisture and weather predictions, and communicates with irrigation controls to water only where and when necessary.

Modern smart irrigation technology is both accurate and incredibly efficient, creating measurable cost savings for property managers and owners. Advances in this technology, including UgMO, are spurring exciting reports of major water conservation results and related savings — recently 31-81% cost savings reported in Philadelphia and 43-52% savings reported in Michigan.^{viii}



Out of 119 countries around the world, Canada is in the top 10 when it comes to awareness of climate change.

Impact Point 2: Reducing Emissions and Carbon Footprint

Out of 119 countries around the world, Canada is in the top 10 when it comes to awareness of climate change.

For many developed nations, reducing environmental impact has become a way of life. Recycling, driving more fuel-efficient cars, using energy-efficient lightbulbs — these are everyday actions.

Consider what impression you're making on your tenants if your landscaping maintenance company is guzzling gas and spewing pollutants into the air with their machinery.

Cleaner and more reliable technologies for vehicles and mechanical equipment have made it easier for landscape professionals to make environmentally sustainable choices. There are three things your commercial landscaping company should be doing (or at least working toward) today to reduce emissions and their carbon footprint.

Decibel levels in context:

Gas-powered lawnmower:
106 decibels



Jet flyover at 1,000 feet:
103 decibels



Food blender: **86 decibels**



Battery-powered lawnmower:
83 decibels



1. Using battery-operated equipment

Even small engines such as lawnmowers, line trimmers, blowers and chainsaws produce air pollution. In fact, the U.S. Environmental Protection Agency^x found that lawnmower emissions contribute nearly 33 percent of the total pollution in metropolitan areas. The average lawnmower emits as much pollution in one hour as an average car *traveling almost 200 miles.*^x

The replacement of every 500 gas mowers with non-motorised mowers would free our air from:

- **212 pounds** of hydrocarbons
- **1.7 pounds** of nitrogen oxides
- **5.6 pounds** of irritating particles
- **1,724 pounds** of carbon dioxide

Battery-powered landscaping equipment reduces air pollution, but it also reduces noise pollution, causing less disruption for your tenants.

Battery-powered landscaping equipment has become more effective (e.g. more powerful) and more available in recent years. Not to mention, the running and maintenance costs are significantly lower for battery-powered equipment versus gas-powered — there is no gas to buy, oil filters to change, or spark plugs to switch out.



2. Driving hybrid vehicles for equipment transportation and site visits

Electric vehicle adoption has grown at an astonishing rate in Canada. Sales grew 68% in 2017, with a 120% increase in Ontario alone.^{xi}

Commercial fleets are only part of this growth — but with the major environmental benefits and cost savings over time, we hope to see many more companies investing in electric and hybrid vehicle technology in coming years.

Hybrid vehicles — a combination of electric motors and gasoline engines — have lower emissions, release fewer pollutants into the air, and use less gasoline.

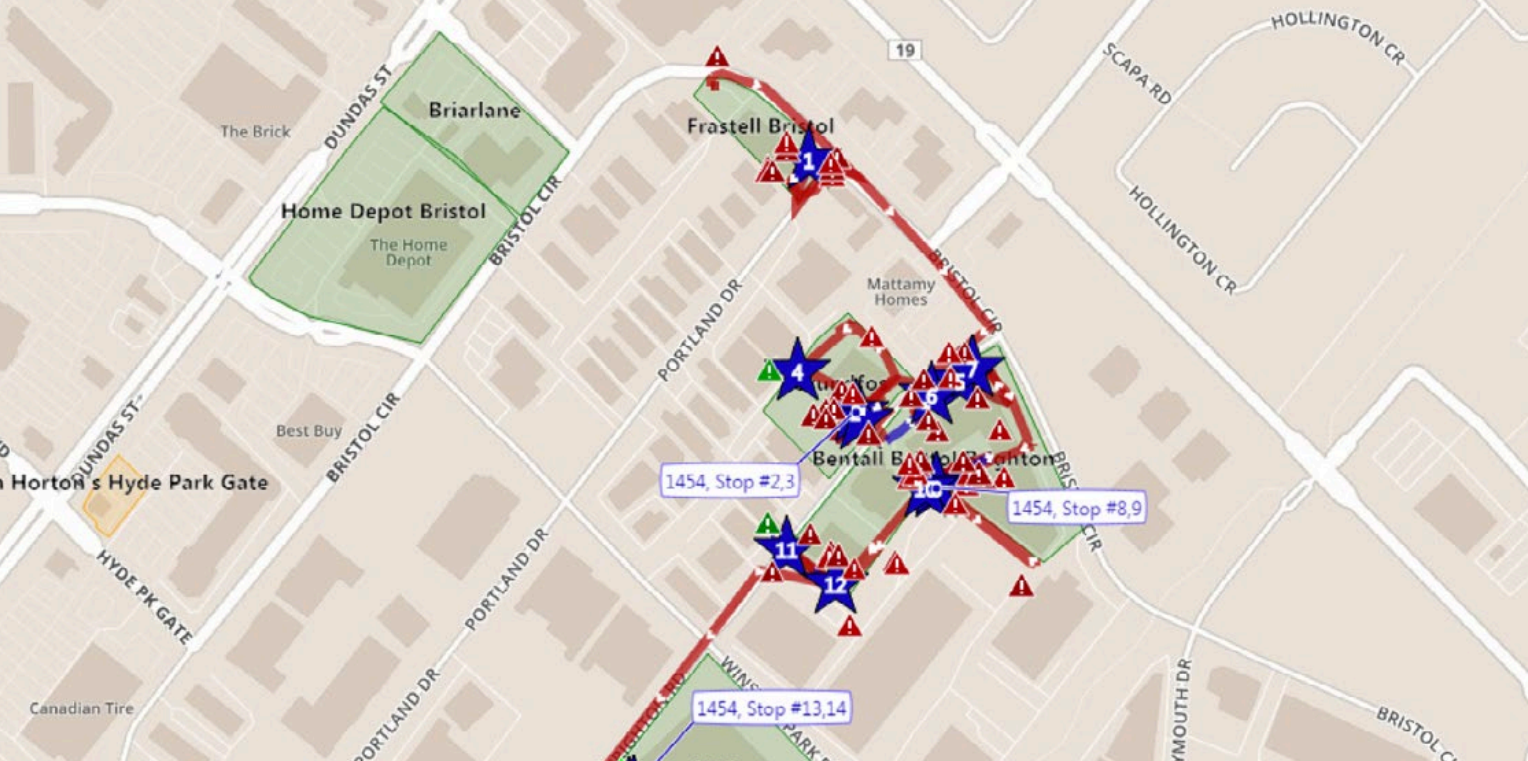
Though the initial investment may be higher, over time the cost savings are as substantial as the reduction in environmental impact.

Because hybrid vehicles make such a difference in the fight against global warming, some countries are beginning to make pledges to phase out internal combustion cars entirely. The United Kingdom has said it will ban the sale of gasoline- and diesel-powered cars starting in 2040.

When landscape management companies use hybrid vehicles, they eliminate trips to the gas station and reduce employee downtime. Reports have found that commercial fleets operating these vehicles experience higher employee satisfaction, improved performance, and better retention, too.^{xii} For facilities managers, the benefits will be better, more reliable service and cost stability.

The United Kingdom has said it will ban the sale of gasoline- and diesel-powered cars starting in 2040.





3. Planning their routes ahead of time

Vehicle routing makes a huge impact on property management — yet this isn't something many facilities managers give much thought to. You rely on your landscape management company to arrive early on snow-days to ensure the parking lot and walkways are clear when tenants arrive. You rely on them to communicate with you about their estimated time of arrival. And you rely on them to show up when the irrigation system goes haywire. Without proper route planning, none of that is possible.

The impact of efficient route planning doesn't stop at reliability, however. It also has environmental ramifications.

- Route planning can reduce unnecessary fuel consumption and driving time — which in turn reduces air pollutants and greenhouse gas emissions.
- It enables companies to optimise equipment loads, avoid redundancy and optimise the use of roads (e.g. drive when and where traffic is lighter).

GPS technology makes route planning so much easier today. But smart companies are being strategic in their scheduling as well, studying and mapping the most fuel-efficient routes.

To sum it up: Your commercial outdoor services company should be thinking ahead when it comes to getting to your property.

Impact Point 3: Eco-friendly Landscaping

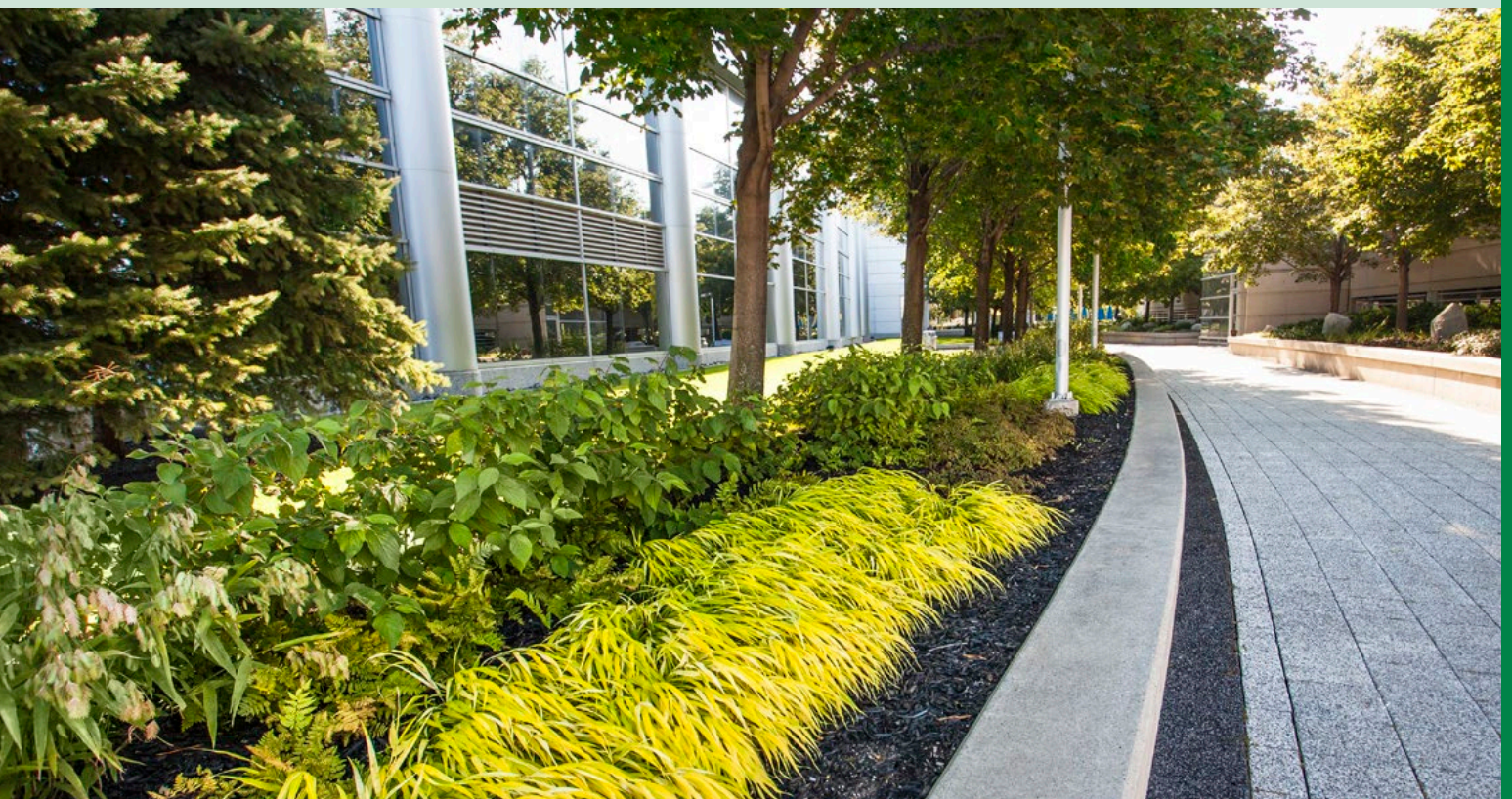
Commercial landscape design is one of the most overlooked areas of environmental responsibility, and yet it has some of the biggest impact.

The right landscaping techniques will prevent runoff, reduce the chances that pollutants will enter the groundwater, and protect the soil. And natural horticultural methods reduce the need for fertilizer and pesticides. The end result is a beautiful landscape that property owners and tenants alike will enjoy, while making the environment a safer place for every living thing.

Eco-friendly or sustainable landscaping has other benefits, too. It:

- Costs less to maintain
- Uses water more efficiently
- Creates a pleasant outdoor environment for tenants
- Improves air quality
- Often provides shade that cools nearby structures and lowers energy costs
- Reduces the need for harmful chemicals (fertilizers, pesticides and herbicides)
- Prevents water pollution

When your commercial landscaping company uses environmentally responsible landscaping design and horticultural practices, everyone reaps the benefits. Here are the three biggest areas of impact for your commercial property:



1. Plant native species

Of the 829 known plant species in Banff National Park in Alberta, at least 70 of them are non-native (introduced) species.^{xiii} These plants degrade wildlife habitat and displace native plant species that stabilize soils.


Human-built landscapes are primary entry points for invasive non-native plants. For this reason alone, the park encourages property owners to remove non-native species from gardens.

What plants are being placed around your commercial property? If you don't know, it might be time to ask. Planting native species protects the local environment — but it also protects your facilities maintenance budget.

Native flowers, shrubs and trees are always going to grow best in your commercial landscape environment. They're naturally inclined to thrive with little help. This can have long-lasting effects on maintenance efforts, and reduce the cost of landscape management for your facility.

Native species are acclimated to the climate and soil type, so they use less water. They're also more resilient to native pests and browsing, while supporting local insect and animal diversity. Once native plants are established, they may also prevent the invasion of non-native plants on the property.

Native shade trees and shrubs offer the added benefit of shading buildings, which will lower your facility's energy costs. These trees also improve the air quality on your property and provide your tenants with a cool place to sit outside on warm days.



Human-built landscapes are primary entry points for invasive non-native plants.

2. Use ground cover

Soil erosion is a growing global concern. Global rates of soil erosion have been exceeding those of new soil formation by 10- and 20-fold on most continents in the few decades prior to 2005. And about 60% of displaced soil ends up in rivers.^{xiv}

The best way to prevent soil erosion is to keep the soil covered. Shrubs and grasses (especially native species) with long roots help the topsoil stay in place, but mulch can be an excellent soil stabilizer as well.

Mulch regulates soil temperature, increases moisture retention, and suppresses weed growth. With the addition of a few attractive flowering plants and shrubs, it can also create a beautiful landscape design element.

As mulch decomposes, it improves the soil quality and becomes an excellent source of nutrients for plant life. While wood chips are standard mulching material in almost every climate, landscape management companies that are truly leading the environmental charge use other natural materials like straw, leaves, grass clippings, twigs or old paper.





3. Add non-plant elements

Though the term “landscaping” brings to mind vegetation for the average person, sustainable landscape design also takes non-plant elements into consideration.

These elements not only add dimension and beauty to the landscape, but they are long-lasting and require little to no maintenance:

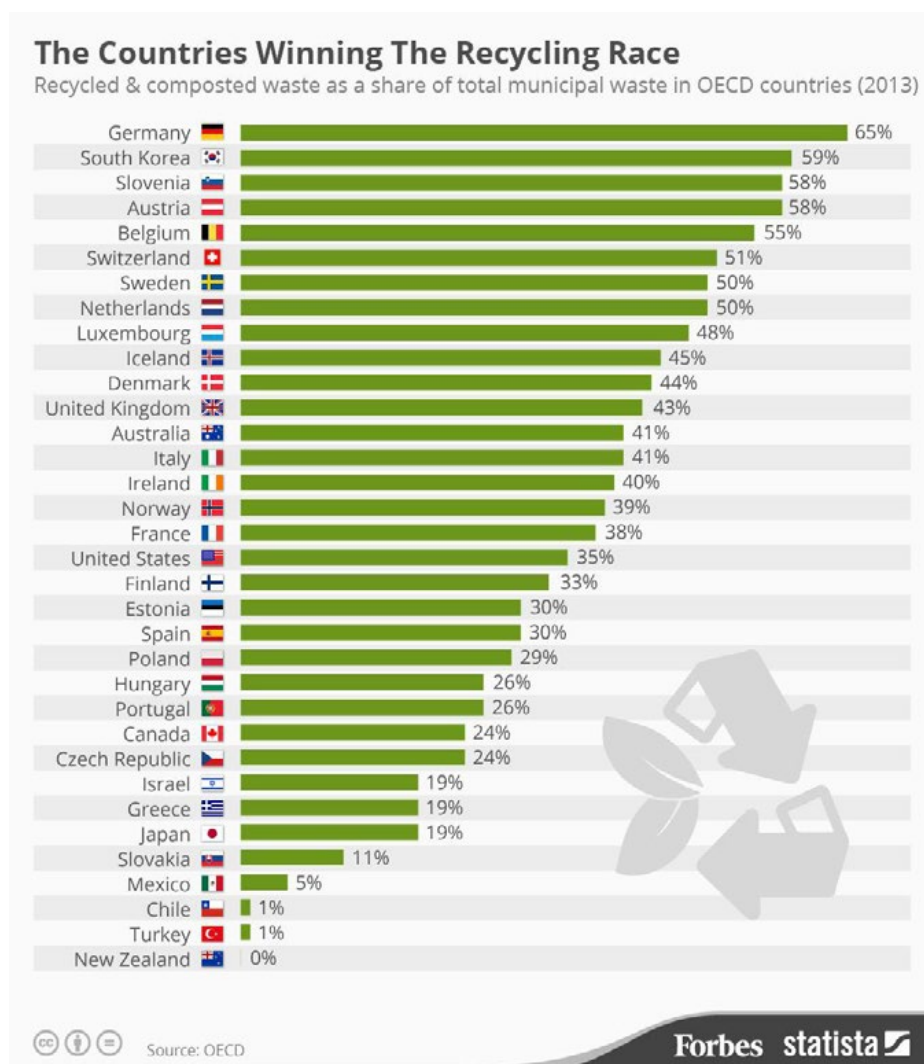
- Benches
- Statues
- Gravel
- Pavers
- Garden walls
- Retaining walls
- Water fountains or ponds that utilise the natural water features of the land

Some of those elements also have functional purpose, providing places for your tenants to walk and sit.

And let's not forget recycling!

We can't talk about eco-friendly landscape practices without mentioning recycling. By its very nature, commercial landscape maintenance results in a large amount of green waste.

Unfortunately, Canada doesn't have a great track record of recycling that waste. Recycled and composted waste accounts for only 24% of total municipal waste in this country.^{xv}



Source: <https://www.forbes.com/sites/niallmccarthy/2016/03/04/the-countries-winning-the-recycling-race-infographic/#944aa622b3da>

Most landscape companies put things like grass clippings and tree debris straight into a dumpster — but environmentally responsible companies (a growing number, thankfully) recycle that material. Green waste can easily be composted. It turns into mulch, which reduces waste, takes up less landfill space, and can lower the cost of mulching material for your facilities. Compost can be incorporated into soil on properties to improve planting beds.

Some commercial landscape management companies take green waste recycling even further, donating the mulch to non-profits for use in their landscaping or food gardens.

Impact Point 4: Snow Removal Without Salt Damage

Salt is a hot-button topic in landscape maintenance.

On the one hand, tenant safety is a property manager's top priority — and salt is an incredibly effective de-icer, especially in a cold northern climate like Canada.

On the other hand, salt is environmentally destructive. It kills plants, harms wildlife, affects water quality, damages concrete and corrodes vehicles.

While brine solutions are more environmentally responsible, they're also not as effective in low temperatures. Because environmental sustainability and tenant safety are two of our most important values here at Clintar, we've thought long and hard about the right approach.

A combination of both salt and brine can offer both effectiveness and eco-friendliness. As a pre-treatment for ice control and prevention on sidewalks and roadways, brine stimulates the early melting of snow. In addition to reducing the amount of salt needed, this also makes the snow-removal process quicker.



When the property maintenance budget or an extreme climate doesn't allow for the salt/brine combo approach, here are other ways your landscape maintenance team can reduce salt usage on your commercial property:

- Using ice-melters — such as calcium chloride, magnesium chloride or potassium chloride — instead of rock salt can protect property and plant material and reduce salt use up to 25%.
- If they have advanced notice of a winter storm approaching, your landscape maintenance company can pre-treat surfaces with about half the normal amount of salt. This will help prevent ice from bonding to surfaces.
- Spreaders are great for covering larger areas and distributing salt evenly — but they should be avoided in narrow, small sections of the landscape. Using spreaders in these spaces will apply salt where it's not needed.



Conclusion

How your properties' landscapes are designed and maintained reflect directly on your property management company and the property owner. It leaves an impression that impacts public image and tenant satisfaction. More importantly, however, environmentally sustainable landscape management practices help keep the environment healthy for generations to come.

Give your property a competitive edge and choose a landscape maintenance company that uses sustainable practices whenever possible.

Call or email Clintar to learn more about how your property management organization can benefit from sustainable commercial landscaping practices, and discuss all the options available in your region.

Phone: 1-800-361-3542

Email: info@clintar.com

ⁱ <http://www.nielsen.com/us/en/insights/reports/2015/the-sustainability-imperative.html>

ⁱⁱ <http://www.canadianbusiness.com/innovation/the-millennial-majority-workforce/>

ⁱⁱⁱ <https://www.crop.ca/en/blog/2017/190/>

^{iv} <https://link.springer.com/article/10.1007/s10551-011-1063-y>

^v <http://www.conferenceboard.ca/hcp/details/environment/water-consumption.aspx?AspxAutoDetectCookieSupport=1>

^{vi} <https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/water-withdrawal-consumption-sector.html>

^{vii} <https://www.clintar.com/blog/2017/01/16/clintar-canadian-distributor/>

^{viii} <https://www.clintar.com/blog/2017/01/16/clintar-canadian-distributor/>

^{ix} <https://www.epa.gov/sites/production/files/2015-09/documents/banks.pdf>

^x https://www.ucsusa.org/sites/default/files/legacy/assets/documents/food_and_agriculture/climate-friendly-gardener.pdf

^{xi} <https://electrek.co/2018/02/09/report-electric-vehicle-sales-canada>

^{xii} <http://www.midwestevolve.org/advantages-of-evs/fleet-advantages>

^{xiii} <http://www.wildsmart.ca/pdf/files/recommendedplantspecies.pdf>

^{xiv} <https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/soil-erosion>

^{xv} <https://www.forbes.com/sites/niallmccarthy/2016/03/04/the-countries-winning-the-recycling-race-infographic/#944aa622b3da>



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