

Sustainability Guide





Sustainability guidebook

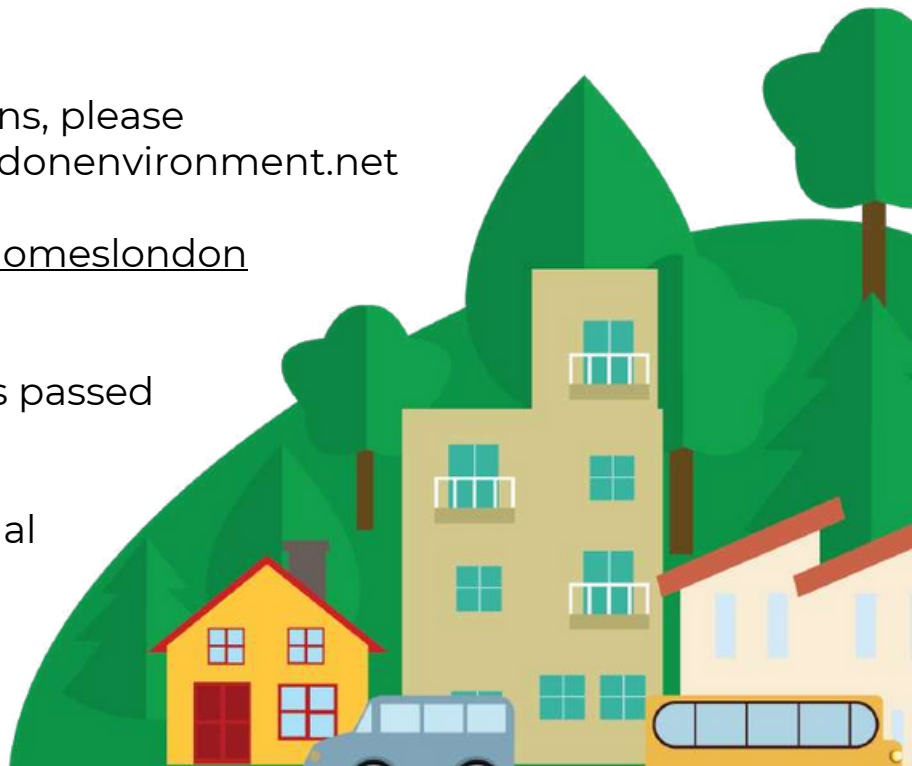
This guidebook is intended to provide suggestions to help you reduce the environmental impact of your home. The results are healthier for the environment, our neighbourhoods, and our City. This guide focuses on the six categories covered in your home visit: biodiversity & green infrastructure, water conservation, energy efficiency, waste reduction and transportation.

There is information on each of these topics to help you get started. By combining them with the custom report provided following your home visit, we hope you will implement some of the recommendations to help you save water and energy using greener, more natural methods.

If you have any additional questions, please contact us at greenerhomes@londonenvironment.net or visit our website londonenvironment.net/greenerhomeslondon

Reading this guide because it was passed to you by a friend or neighbour?

Contact us to book your own virtual Home Checkup or [EnerGuide Home Energy Assessment](#)



Ontario
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An agency of the Government of Ontario

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London
Environmental
Network

Energy Efficiency



Lighting your home

Install timers and motion detectors to help you reduce excessive outdoor lighting and energy usage. Also, install energy-efficient light bulbs in all your outdoor fixtures. And, opt to use solar lights in your outdoor spaces.



Appliances and Power Loads

“Phantom loads” are electronics that always run, regardless of whether they are being used or not.



Mechanical Systems

Did you know that an old lawnmower produces as much air pollution as 40 new cars while running? Retire your old gas-powered lawnmower and use a manual or an electrical mulching or reel mower to mow your grass.



Insulation

Insulation will help you keep the desired temperature in your house all year round. Insulation is also useful to reduce noise pollution. A well-insulated house is very energy efficient and will need very little additional heating and cooling.

Energy Efficiency

Insulation

Insulation ratings are measured in R-values per inch of thickness. R-value measures how well certain building insulation materials prevent the flow of heat into and out of the home. The higher the R-value, the greater the performance of the insulation. Be sure to consult a professional insulation contractor to decide which methods are best for your home.

Attic Insulation

An energy-efficient attic includes high levels of insulation, a continuous air and vapour barrier, and ventilation.

Icicles and ice damming on a roof are tell-tale signs of heat loss in the attic. Even if an attic is already insulated, there may still be an opportunity to improve the energy efficiency and soundness of the house through air sealing and ventilation.

Things to Consider

- Uncorrected moisture problems will reduce the effectiveness of insulation and can lead to structural damage. If there is mould, moisture, or rot, identify the cause and correct it before adding insulation
- Make sure that existing attic vents are working properly and not blocked by insulation, debris or other materials

Cost: \$500 to \$4,000 depending on project size



Energy Efficiency

Basement Insulation

Contrary to popular opinion, the earth is a poor insulator. Basements can account for about 20% of a home's total heat loss. This is due to the large, uninsulated surface area both above and below grade level.

There is also a lot of air leakage through the basement windows and at the top of the foundation wall. Many basements have little or no insulation, so there is a lot of potential for improvement. Insulating can often be tied in with other repairs or renovation work such as waterproofing, radon remediation or finishing the basement.

Things to Consider

- Consider indications of structural problems, insulation requirements (type and R values), wiring and plumbing upgrades, and finishing details
- Before starting the project, assess the basement for major water leaks, dampness, cracks, and radon. Resolve these issues before adding insulation
- Insulating on the outside is best, but it is often necessary to insulate from the inside for economical and practical reasons. Sometimes a combination of approaches is required

Cost: \$3,000 to \$8,000 depending on project size



Energy Efficiency

Wall Insulation

Walls can account for about 20% of heat loss in houses. In addition to heat loss through the walls, there are many cracks and penetrations that allow uncontrolled air leakage into and out of the house.

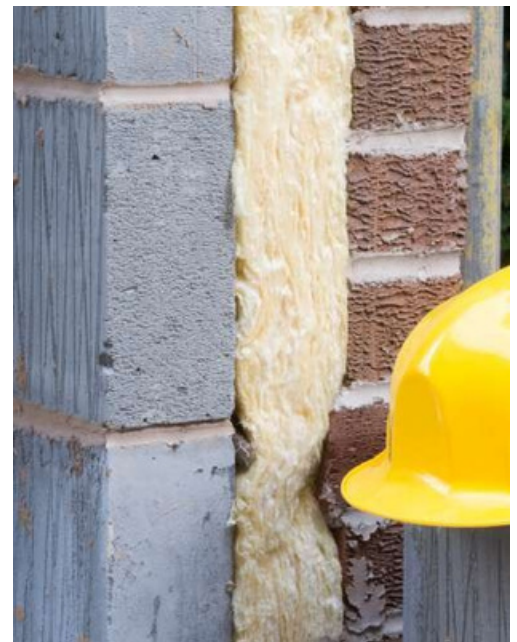
Using dense-pack insulation techniques, empty cavities and some partially insulated cavity frame walls can have insulation blown in through small holes. Make sure to verify with the contractor exactly how the holes will be sealed, patched and finished.

If completing a larger renovation project, it's also possible to rebuild an existing wall with proper insulation or build a new wall on the inside of an existing one.



Things to Consider

- Address any moisture or structural problems before insulating. This can include staining, mould growth, rot, and cracks on the inside and exterior wall finishes
- Choose your insulation product and installation method carefully
 - Consult closely with a contractor to obtain the best results
 - Consider both vapour barriers and air barriers when adding insulation to an existing wall



Cost: \$1,500 to \$6,500 depending on project size

Energy Efficiency

Innovative and Green Insulation Types



Cellulose fibre insulation is made of 80 to 85% recycled newsprint. It can be added to enclosed walls and unfinished attic floors as loose-fill, dense-packed or wet spray.



Denim insulation contains the same advantages as recycled paper, but it's made of scraps and clippings from denim manufacturing facilities.



Mineral wool insulation doesn't actually contain wool. Instead, it's created by spinning or drawing molten minerals, glass, industrial slag and rock until it becomes fibrous materials.



Wool insulation is not only VOC-free but the amino acids in the wool can irreversibly bond with formaldehyde and other pollutants to filter air and improve indoor air quality.



Rigid cork insulation is made of the outer bark of oak trees that are at least 18 years. It's 100% renewable, as removing bark doesn't harm the tree and it regenerates over time.



Mycelium insulation is similar to cork. It's a natural material — fungus — bonded together and providing an R-value of about 3 per inch.



Fibreglass is well-known in the building industry for being lightweight and durable. Made up of thin fibres of glass, it traps pockets of air, keeping spaces thermally regulated.

Energy Efficiency

Air-Source Heat Pumps

Space heating accounts for 60% of the energy used in the average Canadian home. For electrically heated homes, you may be able to reduce your heating costs by up to 50 percent if you install an all-electric air-source heat pump.

An air-source heat pump is an electrical device that uses the difference between outdoor air temperatures and indoor air temperatures to cool and heat your home.

Acting as a high-efficiency air conditioner in the summer, and a heater in the winter, an air-source heat pump uses a refrigerant that responds to temperature. Many homes can rely on these products to heat or cool their homes year-round since heat pumps are more efficient up to -25°C. It's also possible to use a hybrid model by integrating the use of a heat pump with your current heating system.

Things to Consider

- Pair with a smart thermostat, to better manage your home's energy use
- An ENERGY STAR® certified air-source heat pump which uses on average, 5% less energy than a standard model
- Before you buy, get an EnerGuide home energy evaluation and check with your municipality, utility or retailer to see if there are any rebates available

Cost: \$2,500 to more than \$5,000 per unit, including installation



Energy Efficiency

Windows

Heat gained or lost through inefficient windows can increase the energy used to heat and cool your home by 25 to 30 percent

Energy-efficient windows have:

- Special coatings (known as low emissivity coatings, or “low-E glass”) and insulated frames and sashes will reduce the cold transfer from outside and condensation on the glass
- More glazing (panes of glass) for better exterior noise reduction and even more energy savings
- Special inert gases between the glass panes rather than just air for better insulation
- A label on the product to indicate where the model is certified for use in Canada

What to Look For

- A low U-value
 - The U-value is a measure of the
- Window’s insulation value
 - Look for windows in the range of 0.25 to 1.25, with 0.25 being the best
- Buy windows certified for installation in Canada
 - In Canada, all windows should be at least double-glazed – meaning two panes of glass
- Windows with more glazing (panes of glass) and low-E glass are the most efficient
- Hinged windows (casements, awnings, hoppers, tilt-turns) are more air-tight than sliders



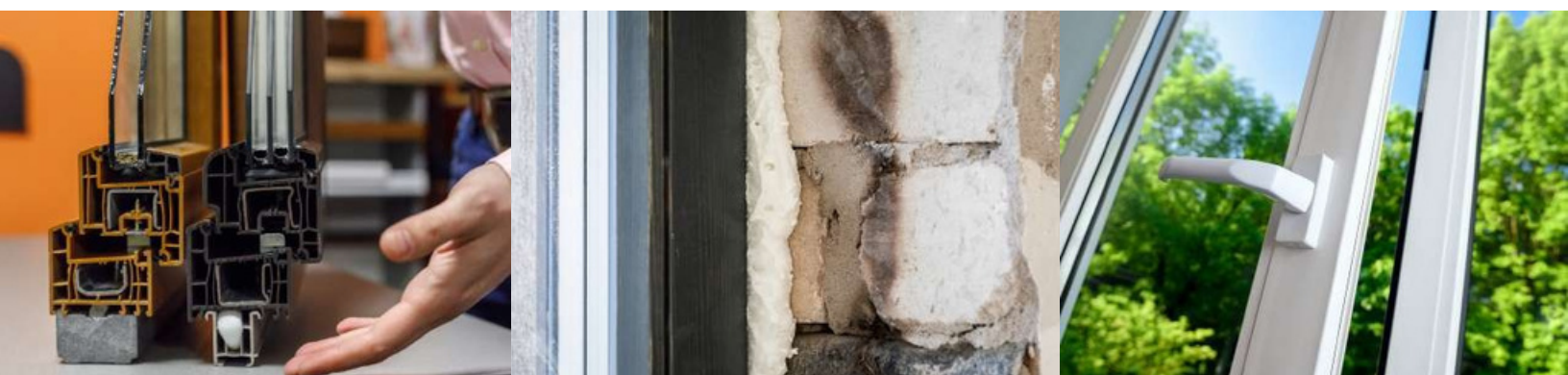
Energy Efficiency

Windows

Things to Consider

- Purchase ENERGY STAR® certified windows
- Windows that don't open are more energy-efficient, but floors with bedrooms require at least one window that opens for an emergency exit
- The window frame affects a window's insulation value, strength, maintenance and longevity
 - Wood and fibreglass frames are the most efficient
- Hire trained installers to ensure your windows and skylights will perform their best
- Window and supplier warranties vary be sure to compare options before you purchase
- Consider installing high insulation value windows on the east and north sides of your house to reduce heat loss
- Consider getting an EnerGuide home evaluation to help you understand how your home uses energy and identify improvement opportunities.
- Check with your utility or retailer to see if rebates are available.

Cost: \$300 to \$700+ per window, plus installation.



Energy Efficiency

Doors

In addition to providing security, energy-efficient doors prevent air and temperature leaks from the house. Doors come in a variety of materials, some of which reduce heat flow better than others.

Depending on the style and type of insulation, for example, metal-clad doors can be more efficient than solid wooden doors. No matter what the material, ill-fitting doors lose energy and can make your home drafty and uncomfortable.

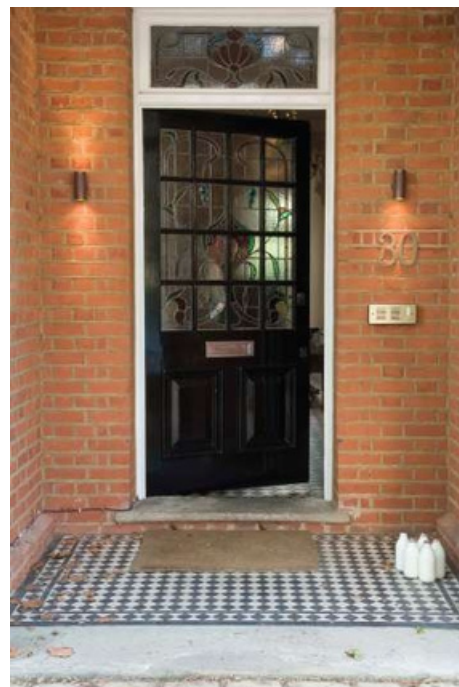
What to Look For

- Doors made of materials with high insulating values, such as fibreglass, vinyl, or steel
- Wood, vinyl or thermally broken metal frame
- Low air leakage rates (for pre-hung door systems)
- Maintenance-free framing materials
- A high energy efficiency rating or a minimum of double glazing with a 12 mm (half-inch) or greater air space

Things to Consider

- Make sure that windows, doors and skylights are ENERGY STAR® certified and hire a professional installer to ensure they perform their best
- Warranties differ from door supplier and type; compare before you purchase
- Check with your utility or retailer to see if there are any available incentives

Cost: \$200 or more per door



Energy Efficiency

Air Sealing / Draft Proofing

Air sealing is one of the most affordable and easy ways to improve the energy efficiency of a home. It's the single most important thing you can do to improve the energy efficiency of your home and should be the first step of any retrofit project. You can save up to 30 percent of your energy costs by air-sealing areas where energy loss occurs.

Air sealing impacts the building envelope of your home. The building envelope is the physical separator between the conditioned and unconditioned environment, including the resistance to air, water, heat, light, and noise transfer. Older homes typically have more air leaks, around windows and doors, electrical outlets, and cracks in the foundation and walls. You can seal air leaks in your home with weather stripping and caulking or by applying gaskets and tapes.

What to Look For

- Detect all sources of air leakage before you undertake your project
 - Assess your ventilation needs to ensure adequate indoor air quality
 - Each house will respond to the air sealing in its own way, so monitoring is important
 - Older homes may require remedial measures – such as mould or asbestos removal before comprehensive air sealing
 - Every time you insulate, install or upgrade the air barrier system, it's important to ensure that moisture does not enter the insulation or building envelope



Energy Efficiency

Air Sealing / Draft Proofing

Types of air sealing products include:

- Caulking, a putty-like substance best applied to non-moveable gaps like baseboards and wood trim
- Weather-stripping tapes and plastic forms
- Expandable spray foam which can be used for irregular-shaped gaps
- Shrink-wrap plastics which can be applied to the interior of windows
- For detailed advice on air sealing, contact a professional installer



Things to Consider:

- Be sure to check window glazing, thresholds and door/window frames and electrical outlets and switches as potential sources of air leakage
- Choose premium caulks for durability
- Practice running and smoothing beads before you do the actual job
- Check the size and colour of doors and windows before purchasing weather stripping to ensure you buy the right product
- Adhesive-backed foams and tapes can lose their effectiveness over time so you may need to replace them every few years
- Before you start your project, get an EnerGuide home evaluation and check with your utility or retailer to see if there are any rebates available

Cost: \$200 – \$1,500

Energy Efficiency

Thermostat

Heating and cooling account for about two-thirds of your home's energy use. A smart thermostat can keep your home comfortable and reduce your energy use by 8 percent or more.

A smart thermostat, also known as a connected thermostat makes it easy to monitor and control your home's heating and air conditioning systems using a smartphone, computer or tablet. You can also set a schedule to reduce heating and cooling when you're asleep or away from home.



What to Look for:

- Choose an ENERGY STAR-certified model that allows you to control your heating and cooling systems remotely through your smartphone, computer or tablet

Things to Consider:

- Before you purchase, make sure it will work with your home's HVAC and electrical systems. Many popular models have online compatibility checkers
- A smartphone, tablet, or computer is needed to get the most out of your smart thermostat's remote monitoring and control capabilities.
- Lower your thermostat at night and when you're away from home (16°C) in the winter and keep it at 20°C when at home. Set the temperature to 26°C in the summer
- Using fans to circulate air will help keep your home comfortable even at higher temperatures
- Check with your utility or retailer to see if any rebates are available

Cost: \$200 to \$500

Energy Efficiency

Renewable Energy Generation Potential

Generating your own renewable energy cuts your greenhouse gas emissions and your bills over the long-term. Solar panels can be installed on a rooftop, ground racking, or a tracker to create clean, renewable energy for your home. The amount of energy generated depends on the intensity of sunlight reaching the panel face, and contractors can help you determine the optimal position to place the panels.



Solar Electricity

Things to Consider

- When comparing solar PV systems, it is a good practice to value a system as to the cost per watt as system sizes vary based on the manufacturer
- It is best to have the PV panels facing due south to maximize energy production
 - Within a southeast southwest will result in a minor drop in performance
- The Ontario Building Code requires a building permit to be obtained for installations that have a panel surface area greater than 5 square metres (m²)
- Before you start your project, get an EnerGuide home evaluation to understand your home's energy efficiency and check with your utility or retailer to see if there are any rebates available

Cost: \$15,000 to \$30,000

Energy Efficiency

Solar Thermal

By taking advantage of solar energy, you can reduce your water heating bill by 60% every year. Water heating accounts for 20 to 25% of overall household energy use, so installing a solar water heater can reduce your consumption by 12% or more.

Solar collectors can be installed on your roof to absorb the sun's heat and transfer it to a food-grade fluid that is protected from freezing and boiling. The fluid carries the energy to a pumping system, where a heat exchanger transfers the heat to your water supply. The solar-heated water is stored in a water tank and pre-feeds into your existing water heater. Your existing water heater acts as a backup to ensure you always have hot water.

Cost: \$4,000 to \$6,000

Solar Pool Heating

The most economical way to heat your pool is with solar pool heating. Solar pool heating systems effectively replace a standard pool heater fuelled by natural gas, propane, electricity, or other fuels that emit greenhouse gasses and cost hundreds of dollars in utility bills.

Cost: \$3,000 and \$4,000



Energy Efficiency



Carbon Offsets

Carbon offsetting is the purchase of carbon credits, generally in an amount equivalent to the carbon emissions that your lifestyle has created. After making every effort to reduce your emissions as much as you can, purchasing carbon credits is a way to be accountable for your climate impact and take climate action beyond your own area of influence.

By supporting high-impact projects, you not only “offset” your emissions but can help communities on the front lines of climate change grow in a sustainable way.

The Gold Standard

The Gold Standard was established in 2003 by WWF and other international NGOs to ensure projects that reduced carbon emissions featured the highest levels of environmental integrity and also contributed to sustainable development. When you purchase carbon credits from them, 80% of the proceeds go back to the project developers to help them maintain and expand their projects and the remaining 20% is used to cover bank charges and the administration costs for maintaining the platform and transparently retiring the credits.

Prices are set using the Fairtrade carbon credit pricing model as the minimum starting point and are adjusted upwards according to the size, complexity and added benefits delivered beyond simply reducing carbon.

Energy Efficiency

Bullfrog Power

When you choose green energy, Bullfrog Power ensures the electricity or natural gas going on the grid or pipeline for your home comes from clean, renewable sources. You reduce your home's impact on the environment and help green our energy systems. They inject green electricity or green natural gas into the system to match the amount of power or gas your home or business uses.



Less.ca

Less.ca Emissions helps individuals and organizations mitigate travel emissions quickly, effectively and with the highest quality offsets in Canada. Less' international-based offsets are derived from Gold Standard-certified projects, as endorsed by leading environmental groups, including WWF International. Less' Canadian-based offsets are sourced from projects that have achieved certification under the internationally recognized ISO Methodologies.

For those emissions you can't reduce or eliminate, like your air travel-related emissions — count on Less to offset them. Their website has a calculator so you can determine the total emissions of your flight based on distance and altitude impacts.



Energy Efficiency



Tree placement

Strategically placing trees around your home can shade it from the hot summer and protect it from the cold in the winter. To shade your home in the summer plant deciduous (leafy) trees on the south and west side of your home, while coniferous (evergreen) trees on the north and east sides of your home will protect it from cold winter winds.

Keeping cool in the summer

Increase the efficiency of your air conditioner by up to 10% by properly shading it. Shade will keep the air around the unit cooler, resulting in less energy needed to cool your home. Remember to also clean or replace your air conditioning filter monthly. Dirty filters can restrict airflow and reduce your system's efficiency.

Turn off the tap

Conserving water can reduce the amount of energy needed for processes that include pumping, purifying, and treating drinking water, while also reducing the impact on the water source. Energy conservation includes all types of energy including energy used to pump, purify, and treat drinking water. An easy but effective way to conserve water is to install a moisture or rainfall sensor to ensure that your irrigation system is only watering when it is needed.



Water Conservation



Aerators

Easy to install and inexpensive, faucet aerators can reduce your water usage by up to 50%, while adding to your water pressure by adding air to the flow.

Aerators : \$7 per faucet.



Low flow toilets

Standard toilets use between 6 - 14L per flush, depending on the model. Installing low-flow toilets can reduce this to 3L per flush. You can also install water diverters and toilet tank banks to your existing model to save water. When purchasing a new toilet, look for the WaterSense Label and a MaP rating of at least 700 or greater, or any toilet that has a flush rate of 4.8L or less. Low flow Toilets: \$150 - \$500+ per fixture.



Shower Heads

If your showerhead uses 7.6 Lpm or more, replacing it with a WaterSense showerhead will save you money. This technology mixes the water with air, allowing your shower to still have the same or more pressure, but uses less water. Showerhead: \$30 - \$100+ per fixture.



Leak Detection

Check for leaks every 6 months to avoid wasting money and water or damage to your home. Dripping faucets are an obvious sign of leaks, but signs of mould or watermarks on floors, walls, or ceilings can also indicate pipe leaks. Consult with a professional to determine the best plan of action.

Water Conservation



Gardening

To decrease the amount of maintenance your property requires as well as the area needing to be watered, consider minimizing the amount of lawn on your property. A garden bed filled with native and other drought-tolerant plant species can diversify your yard making it more sustainable. Keep water from running to your property.

Mulch

Mulching is one of the easiest and most beneficial practices you can perform on your property whether it is in your garden or on your lawn. Organic mulches come in a variety of forms including leaves, tree trimmings, bark, grass clippings, peat moss, pine needles, sawdust, and wood chips. Mulch protects your soil from erosion and compaction after heavy rain events.



Irrigation

How you water your lawn is just as important as how often and how much you water your lawn. If you choose to use an irrigation system, be sure to choose the right system for your property and avoid using a lawn sprinkler (when possible). If you must use a sprinkler, install the most water efficient for the particular use such as a low-rise sprinkler head, soaker hose, or a micro and drip irrigation system.



Install a rain barrel

Rain barrels are an excellent way to conserve water and save money on your water bills. They are easy to install and relatively inexpensive.



Water Conservation



Permeable Pavers

Permeable pavers help stormwater infiltrate into the soil instead of collecting toxins and flooding the stormwater system, which will help reduce flooding. By helping to return rainfall and snowmelt back into the groundwater table, permeable pavers support sustainable urban drainage systems.

FOG Cups

Fat, Oil and Grease (FOG) cups are available at [Envirodepots](#), and London Public Libraries and are to be used to keep grease out of our sewer system and wastewater, which goes directly into the Thames River. When FOG hardens, you could end up flooding your basement or even your neighbour's. Instead, why not turn that waste into energy? One full FOG Cup can be turned into enough energy to power a refrigerator for a day. Refer to the instructions on the cups for proper use and disposal.



What to Flush

Flushing certain household products, instead of tossing them in the trash, can clog drain pipes, contaminate the water system, and even cause environmental damage. Make sure you only flush the 3 P's (pee, poo, and paper) to keep our sewer system and environment clean.



Water Conservation



Hand-washing Toilet Systems

A sink-toilet combo can help you save money and water in your home. A sink is mounted on top of the toilet and the water used to wash your hands is then used to flush the toilet.

Touch-free water/space-saving adjustable toilet tanks that you can add to your existing toilet are available to purchase at hardware stores and online. You can complete the installation yourself in 10 minutes.

Cost: \$130 to \$170

Greyter Unit for New Builds

Homebuilders may want to consider installing a grey water recycling system to reuse clean water from baths and showers as toilet flushing water.

The system captures water from showers and bathtubs, treats it to a near-potable quality and provides clear, odour-free water to meet a home's toilet flushing demands. A Greyter Unit can save up to 25% of a household's water usage and costs.

Cost: \$5,000



Flood Prevention

Basement Flooding

Basement floods are more frequent during periods of snow melt and heavy rainfall.

Besides being an inconvenience, basement flooding can also cause serious damage to a home especially if there is a delay in response.

If you experience basement flooding, here are steps that you should follow:

Safety

- Shut off power around the area
- Remove the water as soon as possible
 - If there is a large amount of standing water, you may need the assistance of a professional cleanup company or restoration company
- Dry out the space using dehumidifiers and fans
 - This will move the air around discouraging the growth of mould and mildew.
- Retrieve possessions and dry them out in a well-ventilated area to prevent mould growth
- Regardless of the water source, protect yourself by wearing boots, gloves and a mask before you start to clean.



Flood Prevention



Inspection

- If you are able to, examine and clear gutters, downspouts and drains. Ensure that leaves, mud or twigs are not causing any blockages
- Determine the source of the water
- You may want to contact a plumber or wet basement company to help give you insight into the cause of the flooding



Report

- If you have flood insurance, contact your home insurance company
- Confirm your coverage, deductible amounts and claim procedures
- Contact the City of London to report the incident
- The City will then inspect the municipal sewer system to ensure that it is functioning properly



Flood Prevention

While cracks in the foundation plugged toilets and blocked sewer drains are the most common reasons for basement flooding, they are numerous reasons why a basement may flood.

By properly taking care of your home and your yard, you can reduce the potential for flooding.

Flood Systems and Devices

Weeping Tiles are pipes that are porous or made of piping with intentional holes placed in a trench around the home to collect water around the home and divert it away from the home. They are often connected to the city sewer system and require regular maintenance to ensure clogs, or breaks do not cause flooding.

Sump pumps function to remove excess water from your basement by physically pumping it to the exterior of your home, away from the foundation. Sump pumps work by being placed in a basin or tank below the basement of your home that collects water seeping through your foundation. After enough water is collected a switch is activated triggering the pump to discharge the water away from your home, until the water is gone, deactivating the pump once again.



Cost: The tiles on their own are approximately \$30 per foot.



Cost: The median price to replace a sump pump and have it installed is \$732.



Cost: \$36- \$180. Extending an existing downspout is another low-cost option.

Flood Prevention



Cost: backwater valve installation:
\$1,600 – \$2,600.

Catch Basin installation: \$2000-\$3000

Backwater valves can be installed on the internal or external plumbing of a home. They prevent water from backing up into a basement through the floor drain.

Catch Basins work very similarly to stormwater drains. They use a grate to collect water and debris, once the water reaches a certain level water travels from the inlet through a pipe to a new location, it can be connected to the city's infrastructure or to an area away from your home where water can saturate.



Cost: \$50.00 e/a.

Flood Sensors can be placed near high risk areas of the home such as water heaters, bathrooms, laundry rooms, or basements. If moisture is detected, the sensor will recognize it and notify you immediately through an app.



Cost: \$1000-\$10,000+

Low Impact Design or **Smart Design** can be used for overland flooding, or low areas of the yard that collect water during heavy rain events, or snow melt. This includes natural design elements such as burms, rain gardens, or stormwater ponds which can be an excellent backup resiliency measure to additional flood prevention tools around the home & property such as stormwater drains, and backwater valves. Rain gardens can hold up to 30% more water than traditional garden beds.

Tips

- Regularly check your drainage systems to make sure they are draining properly and have no blockages or leaks
- Frequently inspect your foundation for cracks and fill them
- During periods of heavy rainfall, avoid using too much water, such as for showers or laundry as that can potentially overload the sewer system while it is already working hard

Flood Prevention

Basement Flooding Grant Program

Provided by the City of London, this program provides financial assistance for homeowners so as to decrease the likelihood of basement flooding.

The program is designed to assist with the costs associated with disconnecting weeping tiles from the City's sewer systems as well as with the installation of a sump pit, sump pump and backwater valve.



Eligibility Criteria

You may qualify for this program if your home has either:

- Weeping tiles that are directly connected to the sanitary system or storm system
- Evident sump pump discharge issues which cause the icing of City sidewalks and/or streets

Resources

[The City of London Basement Flooding Guide](#)
[City of London's website](#)
[Report Flooding in London](#)

Phone: 519-661-2489 ext. 5489
Email: Sewers@london.ca
Visit City Hall, Sewer Engineering, 9th Floor



Waste Reduction

Refuse, Reduce, Reuse, Recycle, Rot

Before considering how to dispose of a product, think about whether you need to purchase it or not in the first place. Say no to freebies that you don't need and create less waste in the first place. Then, consider how to handle the waste you do have.

Reducing Food Waste

The average London household throws out 2.4 kg/week of food that could've been eaten. Use these tips to decrease your food waste:

- Only buy what you need. Buying in bulk may seem like you're getting a discount, but when you're purchasing more perishable items than you need your food and savings are wasted
- Try going grocery shopping more frequently throughout the week and buying less each time
- Store food properly, improper storage can lead to premature ripening and rotten produce
- Review [Canada's Safe Food Storage Guide](#) for more tips
- Buy 'ugly' fruit and vegetables to reduce the amount of food wasted at the grocery store
 - Many stores have a discounted produce section, or you can buy produce from FoodFund



Waste Reduction



Recycle

Reduce the amount of waste your home sends to the landfill by recycling. Remember to properly dispose of not only your paper and plastics but other materials such as electronics. For information please visit the [City of London's website at london.ca/recycle](http://london.ca/recycle).



Leave your grass clippings

Grass clippings contain valuable nutrients that your lawn needs to grow. The grass clippings act as a natural fertilizer that helps to replenish soil nutrients. Leaving the clippings on the lawn also helps to shade the soil thereby keeping the roots cooler and reducing moisture loss.



Compost your yard & kitchen waste

Composting can reduce the weight of your curbside garbage by 40% or more. Materials that are rich in nitrogen include kitchen scraps such as vegetables and fruit, crushed egg shells, tea bags, coffee grounds with filters, and paper towels. Whereas, materials such as dry leaves, bread, pasta, rice, sawdust and shavings, finely ground wood chips, shredded paper, shredded egg cartons and cardboard are rich in carbon.

Waste Reduction

There are many ways for Londoners to divert as much waste from landfill and recycling facilities as possible. To find out what items are recyclable the City of London has an app called [Recycle Coach](#) or [ReCollect](#) where users can search for specific items and find more information. The easiest way is to reduce the use of everyday plastics; from reusable coffee mugs, containers, and bags, or shopping at zero-waste stores like Reimagine Co.

[Reimagine Co.](#) uses zero single-use packagings; asking shoppers to bring their own sanitized containers and reusable bags.

Check out [On The Move Organics](#) which brings fresh, local, organic produce to London with the goal of developing a more sustainable food system in London.



There are many locations in London to drop off and recycle old devices including local [EnviroDepots](#). Working electronics can also be donated to Goodwill Donation Centres, Salvation Army Thrift Store, Talize, or Value Village. To learn more about recycling and reusing technology visit Ontario Electronic Stewardship.



Other sustainable, waste-conscious purchases can include Forest Stewardship Council (FSC) printer paper, post-consumer recycled toilet paper, or bamboo toilet paper, locally made, earth-friendly cleaning products, upcycled furniture, and gently used clothing.



Biodiversity & Green Infrastructure



Plant a tree

Trees provide many benefits to your family and to your community. Trees are a natural filter, absorbing carbon dioxide, dust, particulates, carbon monoxide, sulphur dioxide and other pollutants from our air. Trees can also provide an increase in property value and a safer and healthier community. Visit [ReForest London](#) for more information or a free tree for any Londoner that wants one.

Create a pollinator garden

A pollinator garden is both a beautiful and beneficial accent to your yard that doesn't require a lot of space. With only a few flowers, you can attract beneficial bees, butterflies, and other creatures to the area. Pollinator gardens often have a multitude of grasses, trees, shrubs, and wildflowers. Pollinator Pathways is an organization trying to create a network of pollinator gardens throughout London.



Bird shelters

Place wildlife shelters, such as birdhouses or bat boxes around your yard. Birds and bats eat bugs, therefore reducing potentially harmful insects in your garden. Having a birdhouse in your yard lets you watch our feathered friends raise their young as well.

Biodiversity & Green Infrastructure

Plant native plants



London is located within the Carolinian zone of Southern Ontario is a very specific area where certain plants and animals naturally exist. By reflecting on the region's unique vegetation in our yards and open spaces, we are more in tune with nature and reap the benefits of those resources. Also, many native species are drought-tolerant plants that require less water and are better suited for London's local climate. Carolinian Canada provides free online garden guides to support you in growing plants that support wildlife and biodiversity in our region.

Grow your own produce

Growing your own fruits and vegetables is much simpler than it sounds. All you need is some dedicated yard space, a water source such as a rain barrel, and a little time. Backyard gardening has many environmental benefits such as reducing the air and water pollution that is created by commercial agriculture that uses herbicides and insecticides. You will also help reduce the number of fossil fuels used and the resulting greenhouse gases emitted to produce and transport produce from all over the world to your local supermarket.



Make your yard wildlife friendly

- Bird-friendly windows (either dots on the windows, or hanging strings)
- Keep pets on leashes outside (dogs and cats)
- Cover window wells and open pipes
- Leave leaf litter over winter and only cleanup in May and plant native species for habitat
- Turn outdoor lights off at night or have them on motion sensors, and direct them to the ground

Transportation

Taking the bus



The key goal is to provide more attractive travel choices for those who live, work and play in London by 2030.

To achieve this there will have to be significant improvements in transit service and support for walking, cycling and carpooling. The reduction of individual commuting this will reduce the need for costly and disruptive widening projects and overall environmental benefits.

Electric Vehicle



EV's (also known as plug-in electric vehicles) derive all or part of their power from electricity supplied by the electric grid. They include AEVs and PHEVs.

AEV's (all-electric vehicles) are powered by one or more electric motors. They receive electricity by plugging into the grid and store it in batteries.

Cycle



London has many enjoyable routes to bike on, including the Thames Valley Parkway, quiet side streets and some protected bike lanes across the city. Electric bikes are another great way to reduce your carbon impact, while still being able to travel long distances quickly. If we want to reduce our greenhouse gas emissions, increasing rates of cycling is an integral part of the solution.

Transportation

Map of Downtown Loop Construction Phasing



London Transit

Provides accessible transit throughout the city. There is a plan to make transit attractive by developing a Bus Rapid Transit Network which consists of two corridors: north-south along Richmond & Wellington, and east-west along Oxford & Dundas.

London Electrical Vehicle Association

LEVA promotes and advocates the use of Electric vehicles for their use as a cleaner mode of transportation.

London Cycle Link

London Cycle Link works to make cycling safe and convenient for all. They operate the Squeaky Wheel Bike Co-op in Old East where you can learn how to fix your bike or buy a refurbished bike.

Big Bike Giveaway

Big Bike Giveaway collect and repair bicycles and give them away for free on one day each year. Since 2014 over 1,000 bikes have been given to members of the community, for free!



Incentives & Links

Incentives

- **Federal Greener Homes Canada Grant** — up to \$5,000 to make energy-efficient improvements, supported by an EnerGuide evaluation
 - The Federal Government also now has a loan program of up to \$40,000, interest-free, with a payback period of ten years, provided by the Canadian Housing and Mortgage Council
- **Enbridge Home Efficiency Rebate** — up to \$5,000 in financial incentives to install energy efficiency retrofit measures
- **City of London Basement Flooding Grant Program** — financial assistance to disconnect weeping tiles from the City's sewer systems and to install a sump pit and sump pump, and backwater valve
- **Federal Incentives for New Zero-Emission Vehicles** — up to \$5,000 for eligible purchases or leases of battery-electric, hydrogen fuel cell, and longer-range plug-in hybrid vehicles
- **Plug N Drive Used Electric Vehicle Incentive** — \$1,000 toward the purchase of a used fully electric vehicle from Plug'N Drive.

Next Steps

- Review your suggestions pages and identify which projects are feasible for you
- If you need help implementing these projects, reach out to your Greener Homes London rep to book a follow-up call
- After 6 months of receiving this report, a GHM rep will reach out to you to see if you need any support or have any success sharing
- Sign up for and complete your Project Neutral questionnaire for more details on your carbon footprint and how to reduce it
- Complete your MyHeat solar potential online questionnaire to determine if a solar array is right for your home
- Visit our website for updates on incentives, contractor contact information, events and tips and if you haven't already, sign up for our Greener Homes London Newsletter to stay connected to this community



Low Income Programs

[Enbridge Home Winterproofing Program](#)

Through the Home Winterproofing Program, you may be eligible to receive free home retrofit improvements, including improved insulation and a smart thermostat. Check the chart on the right to see if you qualify!

[Save on Energy- Energy Affordability Program](#)

The Save on Energy Home Assistance Program offers free energy-efficiency upgrades for homeowners and tenants, and social housing providers. Check the chart on the right to see if you qualify!

Number of people in the home	Before-tax household income
1	\$36,578
2	\$51,729
3	\$63,354
4	\$73,157
5	\$81,791
6	\$89,598
7+	\$96,775

Household Income After Tax	Number of People Living in Household						
	1	2	3	4	5	6	7+
\$28,000 or less	\$45	\$45	\$51	\$57	\$63	\$75	\$75
\$28,001 – \$39,000		\$40	\$45	\$51	\$57	\$63	\$75
\$39,001 – \$48,000			\$35	\$40	\$45	\$51	\$57
\$48,001 – \$52,000					\$35	\$40	\$45

Household Income After Tax	Number of People Living in Household						
	1	2	3	4	5	6	7+
\$28,000 or less	✓	✓	✓	✓	✓	✓	✓
\$28,001 – \$39,000			✓	✓	✓	✓	✓
\$39,001 – \$48,000					✓	✓	✓
\$48,001 – \$52,000							✓

[Ontario Electricity Support Program \(OESP\)](#)

The Ontario Electricity Support Program provides a monthly credit to eligible customers. Check the chart on the left to see if you qualify! Note: larger credits are given to energy-intensive households (ie. electric heating)

[Low-income Energy Assistance Program \(LEAP\)](#)

The Low-income Energy Assistance Program supports eligible customers who are behind on paying for their energy bills. Check the chart on the left to see if you qualify!