



THE WORLD'S PREMIER

LIVING WALL BIOFILTER

NEDLAW
LIVING WALLS
Rejuvenate with science.™



Much more than a vertical plant wall – a Nedlaw Living Wall Biofilter is in a class of its own.

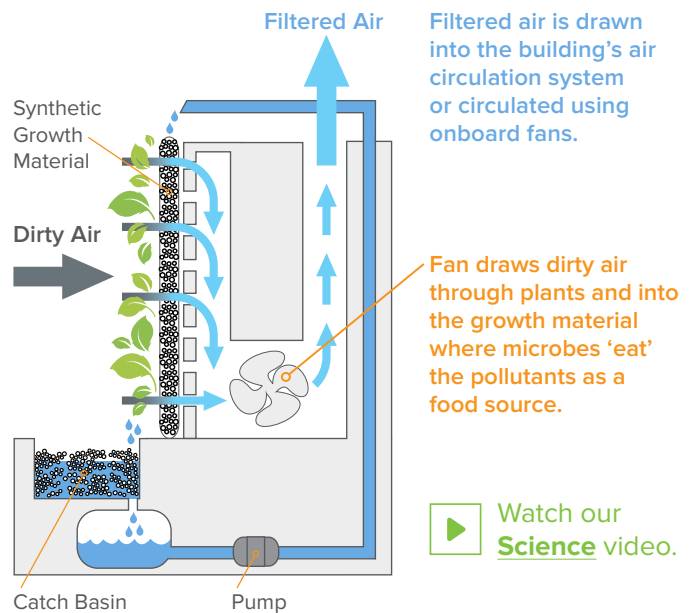


REJUVENATE

Putting Nature's Science to Work

Unlike static green plant walls, a Nedlaw Living Wall Biofilter is a working machine that draws dirty indoor air in, removes pollutants and returns clean air to the room or building. Beneficial microbes on the plant roots literally eat the contaminants as food. Our biofilter structure exposes the roots and feeds the microbes pollutants by actively moving the air.

Vertical Hydroponic Plant Wall



Our History: From the Laboratory to You

Using science originally developed for space habitation, our founder commercialized this biofilter system. Through years of research and system refinement, Nedlaw today offers a groundbreaking level of 'green' to a design community seeking biophilic design solutions and a building industry hungry for energy-saving technology. From humble beginnings as laboratory equipment, our system has evolved to a fully-integrated biofilter that efficiently, and entirely naturally, heals indoor spaces and carries a significant energy load.

WITH SCIENCE

Improve Indoor Air Quality

We spend up to 90% of our time indoors. For almost our entire life, we breathe indoor air in buildings that are sealed like airtight jars to provide a controlled environment.

Scientists have identified up to 200 different indoor air contaminants – a real toxic soup – emitted from furniture, carpets, walls, paint, machines, and human occupants. In 2000, the U.S. EPA ranked indoor air pollution in the top five threats to public health.

Only a Nedlaw Living Wall Biofilter can:

- Remove 90% of Volatile Organic Compounds (VOCs) from indoor air [▶ \(view our research\)](#)
- Create virtual outside air whether for a single area or an entire building
- Provide naturally cooled air in the summer and humidified air in winter

Improve Building Performance

Providing indoor air quality to satisfy the wellbeing of occupants can consume over 30% of a building's energy consumption. Our biofilters provide clean air at a fraction of the cost of traditional systems.

Because a Nedlaw biofilter provides clean air already at the right temperature and humidity, the air doesn't need to be heated or cooled. Essentially, the biofilter provides a replacement amount of conditioned air, saving the building significant energy costs, particularly in the heating and cooling seasons.

Only a Nedlaw Living Wall Biofilter can:

- Reduce building energy costs to provide a return on investment.
- Deliver return through lower energy usage whether a small or large installation.

Only Nedlaw Living Wall Biofilters can potentially pay for themselves by replacing or reducing HVAC equipment and by providing continuous energy savings.



Our biofilters contribute more LEED® points than other green walls because they improve air quality.

Boosted Biophilic Design

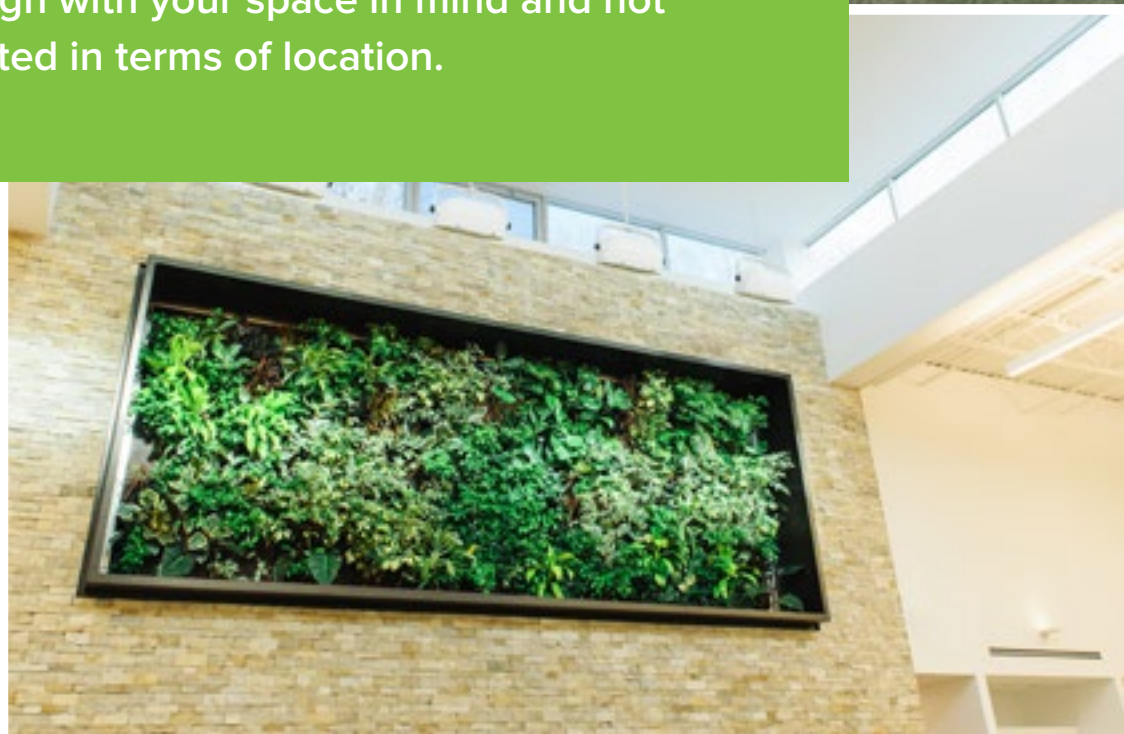
Living predominantly in man-made environments means less interaction with nature. The principles of biophilic design require incorporating nature into the spaces where we live, work and learn. Nedlaw takes biophilic design to a new level by providing actual fresh air in addition to a uniquely robust plant wall for immediate aesthetic and acoustic benefits.



DESIGN VERSATILITY

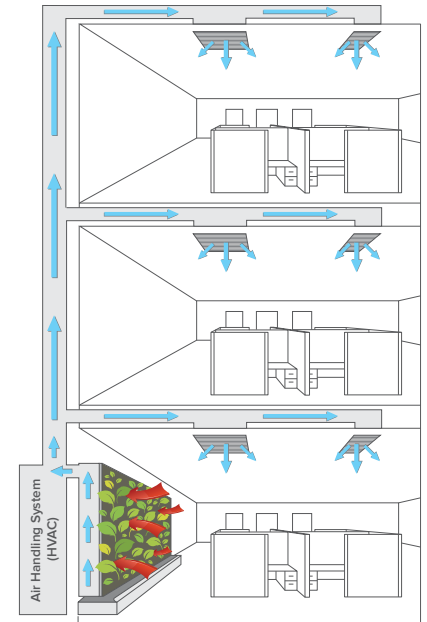
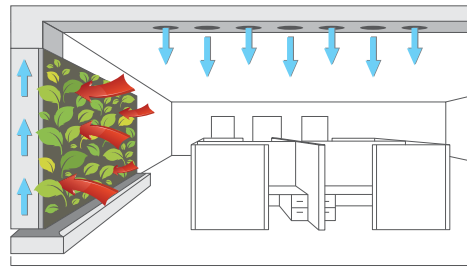
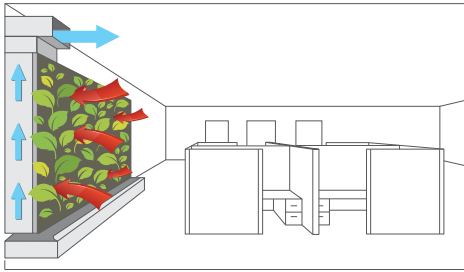
Our living wall biofilters can be designed for virtually any space. We work with you on the design and configuration. Large or small, the basic construction is consistent and inherently flexible.

Every Nedlaw Living Wall Biofilter requires a catch basin to support the hydroponic function. Basins can be sunken, built-up at floor level or elevated over doorways or vertically up a wall. This flexibility allows you to design with your space in mind and not be limited in terms of location.



INSTALLATION FLEXIBILITY

Every living wall biofilter we build provides clean air, but you have a choice of how the biofilter is incorporated into the air handling of your space or building.



Free Standing

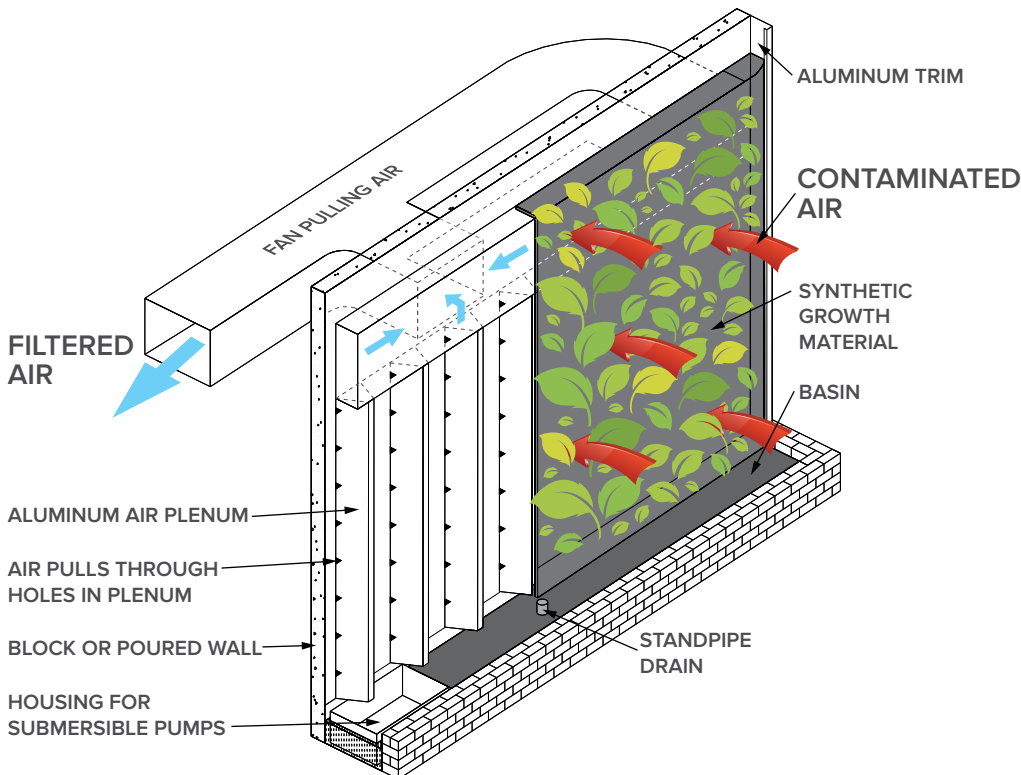
A free standing design is ideal for ‘room-sized’ applications such as smaller entranceways, boardrooms, waiting areas, offices, and residences. And because the free standing design can be added wherever you have power and water, it’s an ideal format for retrofitting into office buildings, schools, retail or commercial spaces for a quick and impactful upgrade.

Hybrid

A hybrid installation involves tying the biofilter’s fresh air return into the room circulation or air handling of a defined area. Good applications would be for an atrium or for one unit or floor of an office building, school or commercial space. This flexible installation allows you to maximize the air quality improvement when you don’t have access to the entire building’s HVAC system.

Fully Integrated

The fully integrated option involves complete tie in to the building’s HVAC system, so that clean air from the biofilter is distributed throughout the building. While this is an obvious fit for new construction, this installation is also feasible for retrofit designs. Our design team works with you to determine how this integration can work for your building.



Living Wall Biofilter Structure

This detailed diagram shows the components and layers of our living wall biofilter.

 You can also watch our [Construction](#) video.

DESIGN VERSATILITY

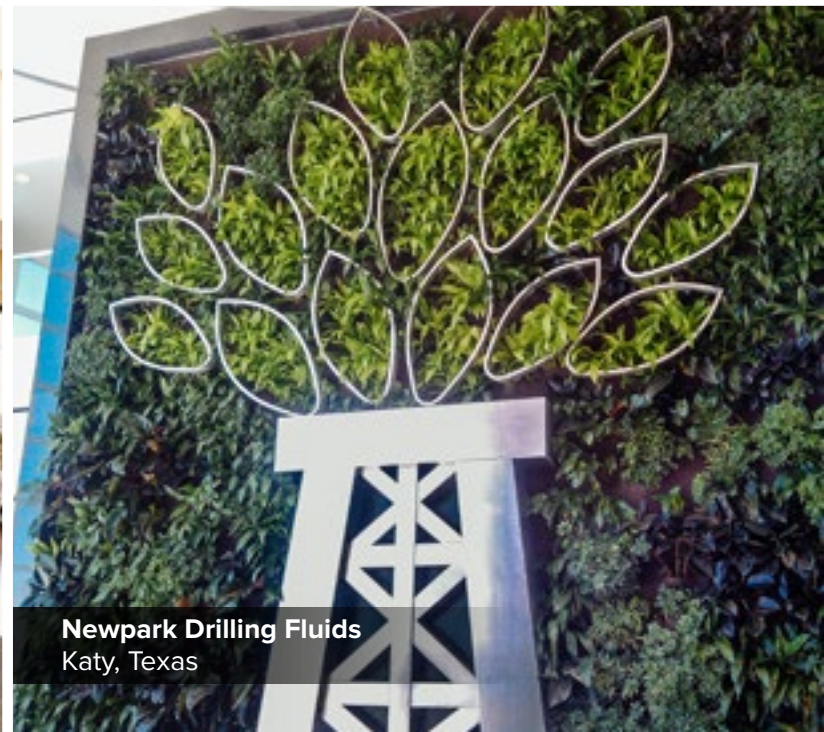
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Edmonton Federal Building
Edmonton, Alberta



Wellington Hospice
Guelph, Ontario



Newpark Drilling Fluids
Katy, Texas

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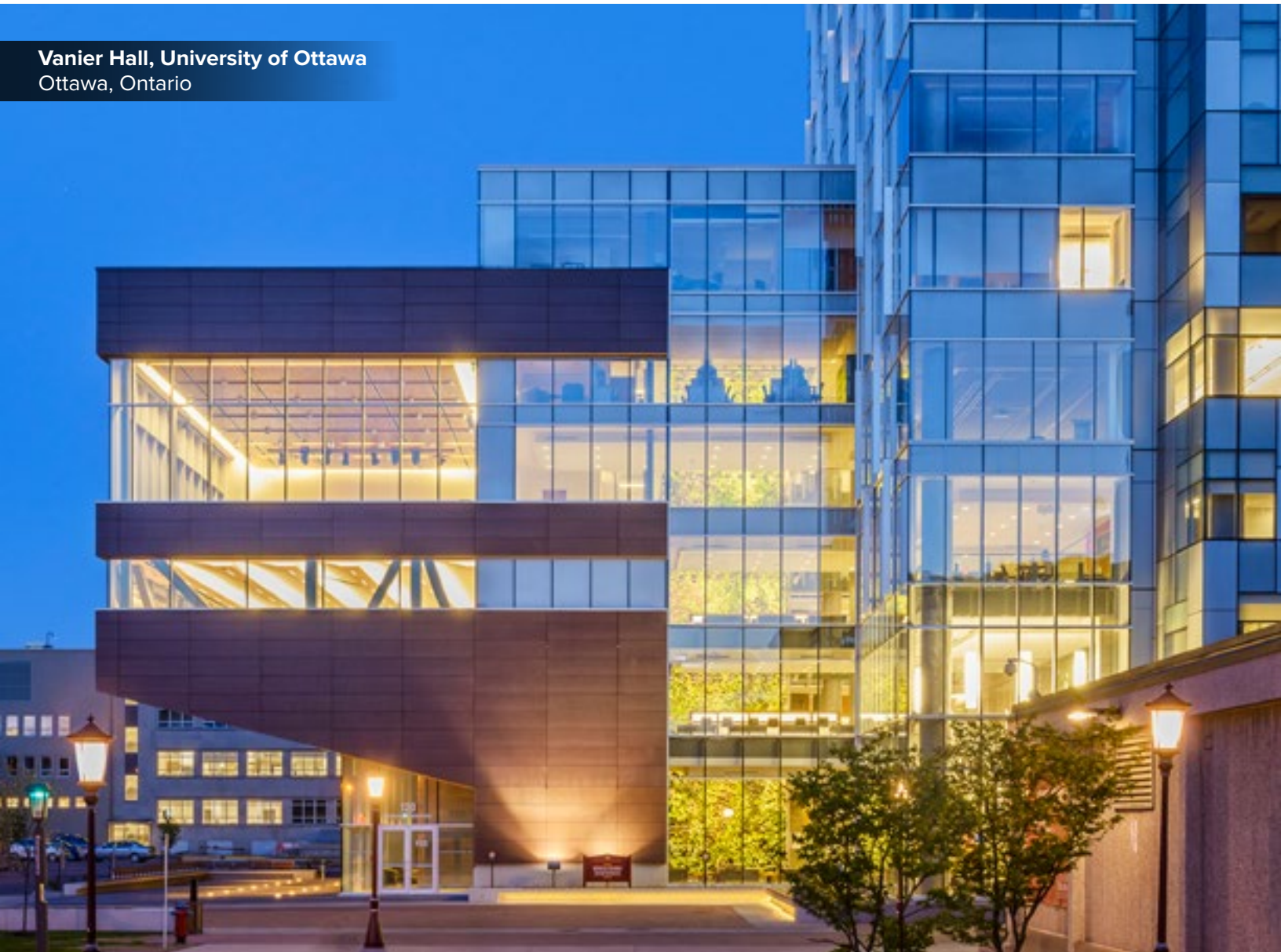
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Guelph, Ontario



Vanier Hall, University of Ottawa
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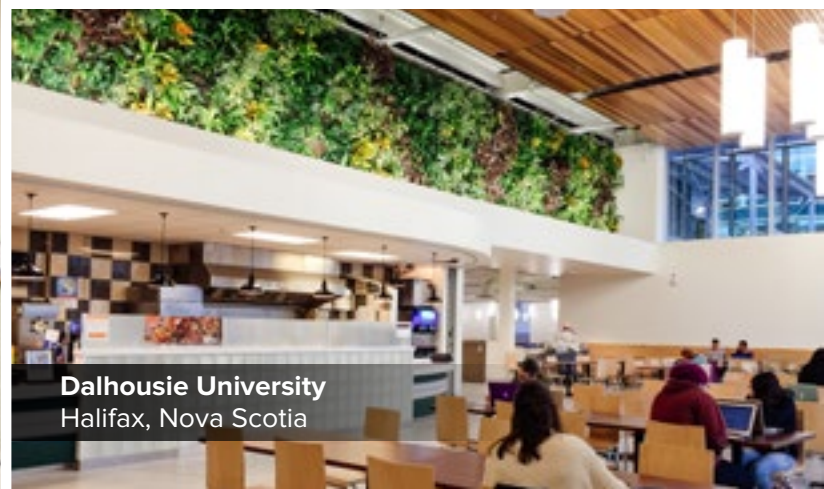
University of Waterloo
Waterloo, Ontario



Igerman Limited
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Mississauga, Ontario



Sheridan College, Davis Campus
Brampton, Ontario



Royal Botanical Gardens
Burlington, Ontario



Drexel University
Philadelphia, Pennsylvania

SYSTEM REQUIREMENTS

To help you put together the scope of your project, here are the basic installation requirements.

 You can also watch our [Installation Requirements](#) video.



Air Handling

You need to consider where you want the clean air from your biofilter to go. The air handling options are free standing, hybrid or fully integrated and we can consult on the best solution.



Water In & Out

- The system requires water supply for the biofilter. The system can tolerate a wide range of water sources; we have used rainwater (grey water), recovered water condensate and, of course, potable water.
- A sanitary drain is required for excess water.



Power Needs

- Power is needed for pumps to circulate water and for lights. While natural light is ideal for energy savings the biofilter can function on 100% artificial light. Budget for 100 watts per square metre of biofilter in terms of light energy.
- We recommend separating the power circuits.



System Weight

The only structural consideration is the weight of the wall.

- Wall: 110 lbs / 50 kg per square metre
- Basin: As little as 220 lbs / 100 kg per square metre depending on the design



Light

Our biofilters can use natural or artificial light – of course natural light is the greenest way to go. We will consult on your light requirements.



Finishing the Area

Plan for the area around your biofilter to be tolerant of moisture. Like any plant system, humidity is generated along with an occasional drip or splash of water.



Operating Cost

Clean air can be supplied to occupants for as little as 24 watts per person – which is a substantially reduced cost compared to traditional systems.

PRICING

Build/Install

We can custom build your living wall biofilter. Most projects are unique with specific requirements that need to be estimated individually. Of course, we can build multiple units at the same size or with varied specifications.

Please call or email us to discuss your project and request a detailed estimate.

519-648-9779 or
livingwalls@nedlaw.ca

Maintenance

We offer Maintenance Programs which keep your living wall biofilter operating and looking as good as new. Our specialists can provide a program suited to your project.



SCHEDULE

1

Consultation

Let's start with an open discussion about your space and your objectives. From the start, we will consider all the specification requirements to mitigate problems (and extra cost) that can arise later without this important step.

2

Design and Mechanical

Our experienced and creative team will work with you on the design and will illustrate how flexible and dynamic our systems can be. We'll provide detailed specifications and drawings for review, including all mechanical requirements you may need to put in place.

3

Build

1. The basin and wall preparation is done on-site and is the first step.
2. Our modular system is built in sections at our facility and then shipped to site.
3. Installation involves assembly of the aluminum system and applying the synthetic growth material, plus incorporating all necessary mechanical components.

4

Planting

The planting is a rapid event. A large wall can be planted and looking good in as little as a few days. Many people will be interested to witness the progress as your wall comes alive.

5

Maintenance

Once your living wall biofilter is installed it should be serviced every month.





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 Parish Toronto University of Guelph – Humber
 W.G. Johnson Pool Cambridge Longos Toronto
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We have several informative videos on our website.
 Please visit www.nedlawlivingwalls.com



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