

We would like to thank everyone who made the People's Place a green and sustainable project.

Municipality of the County of Antigonish
Town of Antigonish
Pictou-Antigonish Regional Library
Eco Nova Scotia
Community Access Program
Eastern Region Solid Waste Management Committee
Shear Wind Inc.
Government of Nova Scotia
Government of Canada
The People of Antigonish

A special thank you to Alan Syliboy, Anne Camozzi, and Kate Brown Georgallis for the use of their artwork, which can be discovered at the People's Place.

People's Place

Green Guide



Help Us Be Earth Friendly.

Please return this guide to the Circulation Desk.

Online guide is available at www.parl.ns.ca.



Pictou-Antigonish
Regional Library

Introduction

It was clear from the design consultations that you wanted a library that was green and environmentally conscious. We planned many elements, some large and some small, to achieve your goal. This guide is to explain a bit about them, how they work, and ask you to think about using some of these in your own projects.

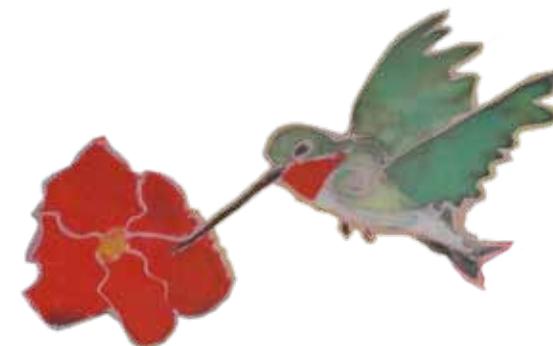
To start, we would recommend you ask for a free public library card. This card lets you borrow all of the materials the library has, then return them for someone else to use. Recycling at its best! And don't forget, the library has many books and other materials about being "green". Just check the online catalogue or ask any one of our staff.



Education

The Pictou-Antigonish Regional Library, ACALA (Antigonish County Adult Learning Association), and Health Connections are committed to helping citizens learn more about how to create a sustainable and healthy community. Through books, programs, and activities we pledge to help ensure a green future for everyone.

If you have any suggestions please feel free to share them with us. And please take time to learn more about your public library, the People's Place!



Other Features

Care was taken to source as many locally manufactured materials as possible, from furniture to steel. This not only helps the Nova Scotia economy but by moving materials a shorter distance less fuel is required, in turn helping Co2 emissions. An example are the study and bistro tables. These are made from Nova Scotian sourced birds eye maple by MacLean Bros. Woodworking of Antigonish. Good for the environment and good for the local economy.



Many of the products used in construction, such as the flooring, were made from recycled materials. As well, some materials such as the River Denys marble in the entry and circulation area are natural Nova Scotian materials that will last many lifetimes.

And from the bicycle rack to convenient, well lit sidewalks many of the design features encourage walking, cycling, and healthy living. Not only do they help your overall health they save energy. Please consider this when visiting the library, can I walk or cycle? If I do drive downtown can I park and walk from library to businesses without using my vehicle? Every bit helps.



Adaptive Reuse and Soil Improvement

The building you are standing in was built sometime in the 1940's and had several uses over the years. By renovating the existing building, rather than tearing it down, we saved a large amount of material from going to the landfill. This is called adaptive reuse and is important, especially when building in downtown areas. In addition, highly durable materials were used in construction, allowing this building to stand the test of time, diverting further materials from the landfill in the years to come.



As excavation proceeded on site we found a number of different soil conditions. Parts of the old theatre were buried in the late 1960's and an old oil tank, still with heating fuel, was found. Soil that could be used was left on site, while the remaining materials were disposed of properly at special landfill sites. Clean fill was then used, preventing contaminants from entering the Brierly Brook over time.



Greenhouse Gas Reduction

A critical issue in global warming is an excess of Carbon Dioxide (Co2) in the atmosphere. Co2, while necessary for life on earth, is a greenhouse gas in large concentrations. This excess comes primarily from the burning of fossil fuels such as coal, oil, and natural gas. In Nova Scotia, much of our electricity comes from coal fired generating stations. Reducing the amount of electricity consumed will directly reduce the amount of coal and other Co2 producing materials used in these generating stations. The library uses several methods to reduce its use of electricity from this source.

- Geothermal heating and cooling
- Insulation and high performance barriers
- Solar Power
- Occupancy sensors
- LED and low energy lighting
- Daylighting
- High performance glazing
- Energy Star rated appliances



Sustainable Landscaping

The landscaping surrounding the library was designed to be attractive but also to have less of an impact on the environment. Choosing species of plants that are native to the area can help in a number of ways. They are more drought tolerant and need less watering. They are less liable to be impacted by pests and will not require pesticide use. As you walk around the library you will notice grasses, cotoneasters, blueberries, and magnolias.



Waste Reduction and Recycling

Throughout the library you will notice several types of waste containers. The stainless steel ones are made in Lunenburg by ABCO Industries and were designed by Nova Scotia Community College students to meet Nova Scotia recycling rules. Also, the Eastern Region Solid Waste Management Committee provided several of the wire recycling units. Please help us, and your community, by sorting your waste while at the library and at home and work.



In the Bistro Area you will notice a drinking water dispenser, sometimes known as a hydration station. It encourages the use of refillable bottles. The water is from the Town supply but is “polished” or filtered to remove chlorine and other odours. It encourages healthy activity (such as walking or jogging) and also counts how many bottles have been saved from the landfill. Note as well, there is a “hydration station” for your canine friend near the main library entrance.



... geothermal heating and cooling

Actually called a closed loop ground source heat pump system, the library takes heat from the ground in the winter and stores heat in the ground in the summer. Under the parking lot, directly behind the theatre, are thirteen 500 foot wells. These wells have loops of pipe in them, grouted to the sides, containing a glycol solution. In the winter the solution is pumped from the building through the wells, picking up heat as it goes. The heat is then transferred to the heating and cooling system of the building to be dispersed. In the summer, this is reversed. It is estimated the system will take care of all the cooling and about 75% of the heating for the building. Under the expanded parts of the library are in-floor radiant heat pipes that further reduce the heating need as the concrete floor slab is heated internally and acts as a large radiant heat source. As well, the ventilation system transfers heat from exhausted internal air to incoming fresh air, which will require less energy when raised to a desirable temperature.



... insulation and high performance barriers

Insulation is well known as an effective way of reducing heating costs and thereby electricity consumption. The insulation of the roof was significantly upgraded and a light grey colour asphalt material used for the final surface, reducing the energy absorbed from the sun during the summer months.



The entire library is wrapped in a high performance barrier membrane, in this case called Blueskin, which stops rain, air, and vapor from entering the space. This is a critical, but many times unnoticed, part of the energy efficiency strategy. Care was taken to ensure no gaps or holes were introduced into the membrane which is made of rubberized asphalt with a blue polyethylene film.



Water Conservation and Protection

Thousands of gallons of treated municipal water is used every year for “grey water” needs. Flushing toilets and watering lawns are a few examples. To reduce the use of treated municipal water, the library has a rainwater harvesting system. Rainfall flows off the roof into drains, then goes through a “vortex filter” to remove large impurities such as leaves and dirt. The vortex filter is quite simple, the water spins, like in a toilet bowl, forcing the solid materials out to the edges and away while the water spins through the centre. The water is stored underground in a large reservoir behind the library near College Street.



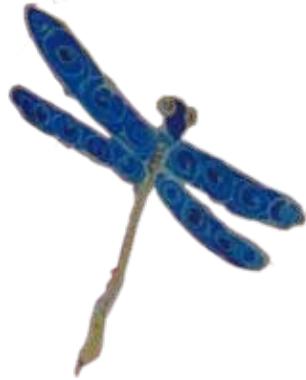
The water is then piped separately for the grey water uses mentioned above, first travelling past an ultraviolet light to kill any bacteria in case someone was to accidentally drink the water.



In the parking lot there is a special “Stormceptor” connected to the catchment drain. This traps and then prevents sediment and oil from flowing from the parking lot into Brierly Brook. The Stormceptor is buried in the ground directly behind the library under the laneway.

... occupancy sensors

Many of the spaces, such as washrooms and offices, have motion detectors (now commonly called occupancy sensors). When a person enters, the lights are turned on, then after a person leaves and no motion is detected, the lights will turn off. This saves a substantial amount of electricity each year.



... LED and low energy lighting

Throughout the building, including the exterior street lamps, are LED lights as well as low power consuming light tubes over the book stacks. Not only do these save electricity they also provide a natural light.



... daylighting

The library takes advantage of natural light. As luck would have it, the original building was built almost on a north – south axis. This allows the majority of windows and seating areas to face west and south, capturing the sun for light. There are seven skylights throughout the library providing interior lighting, the largest one with operating louvered windows just over the People's Place mural. The patio reading area will be a favorite spot on those long cold winter days. A great place to meet your friends or just relax with a good book.



... high performance glazing

The library uses a unique glass product made in Cape Breton by Advanced Glazings Ltd. called Solera. You can see this translucent glass throughout the library. Much thicker than an ordinary window this glazing has the same insulating value as most solid walls, which improves the overall efficiency of the building. If you look closely the glass contains a fibrous material which not only reduces the harsh mid-day sun but projects light further into the building.



... Energy Star rated appliances and equipment

As we selected appliances and equipment for the building, such as refrigerators, computers, and projectors, we were careful to select only Energy Star rated items. Energy Star is an international rating system that brands items as among the top energy efficient products available. It helps consumers confidently choose truly efficient products and encourages manufacturers to design for a sustainable future. Look for the Energy Star symbol as you choose your own appliances and equipment.



Even when we selected our computer network, we looked for a green solution. You will notice the computers have no traditional towers, rather small boxes mounted to the backs of the monitors. These are called zero or thin clients; where most of the computing is done at a central server then sent to the client. Each unit uses less than 3 watts of power. For the CAP site, this allows all the energy needs to be satisfied by the solar power system. Carbon neutral!



... solar power

There are two types of solar power used for the building. The first includes the three panels you see on the south section of the roof. They harvest the sun's energy and store the power in batteries located in the basement. This power is used to exclusively power the CAP site (lights, computers, and offices) as well as the meeting room. This makes this CAP site the first carbon neutral one in Canada! Carbon neutral refers to the fact that no Co2 is generated to power these items.



The second solar system energizes the hot water heating system. These two arrays are located on the north section of the roof and water is pumped through the vacuum tubes. Rebates are available for these hot water systems.

