

# Midland Brownfields

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## Goal of Our Research

The town of Midland wishes to make use of an abandoned oil gas station site. However, the land is currently under the ownership of Imperial Oil, a company that is only allowing the town to institute an interim solution for the property. For this research paper, the task was presented to see what other jurisdictions do by way of interim uses, specifically the policies surrounding the use of Brownfields.

## Introduction to Brownfields

A Brownfield site means property, the expansion, redevelopment, or reuse of; which may be complicated by the presence or potential presence of a hazardous pollutant or contaminant substance. It is a piece of land that has been developed for industrial purposes, polluted, then abandoned (Oxford dictionary). Essentially, a Brownfield is an empty space which used to contain buildings such as: factories, mills, gas stations, etc, that are now abandoned.

Many cities with the issue of abandoned sites such as these, want nothing more than to clean the forsaken site, and have their city look more appealing to tourists and locals alike. The environment however, does drastically benefit from the redevelopment of Brownfields, improving air, water, and soil quality. Many cities want a positive impact for this piece of land that is a better option than the current deserted strip of land no one is currently benefiting from (Municipal Affairs and Housing). Figures 1 and 2 show the lot in Midland that is searching for an interim solution.



Figure 1: Photograph of the studied Midland Brownfield site in October of 2011.

The current affected deserted gas station lot does not hold enough value to make redevelopment a worthwhile venture for prospective buyers. The gas station has been absent for eight years as of 2011 and all that remains on the land is gravel that Imperial Oil spread over the site originally. The old gas station was on the site for forty years, and before that a hotel was on the land for the rest of its developed history. The gas station was the only possible source to cause contamination of the land through its known history. Midland has three other abandoned gas station sites that are suspected to be possible Brownfields, but the town's current focus is

on the current research site. The land by the waterfront has since been redeveloped by a private contractor, who had the means to clean the land, develop it, and accommodate expensive homes. Thus, it can be said that the land was worth the price of remediation because of the amount of money the developer would gain, unlike the situation of the deserted gas station in question.



Figure 2: Photograph of the studied Midland Brownfield site in October of 2011.

## Policies and Regulations

When redeveloping Brownfields there are a number of rules and regulations that one must follow. In 2007 the government of Ontario announced their commitment towards redeveloping more brownfields for productive uses "while safeguarding the environment, public health and safety" (Municipal Affairs and Housing 220). To insure the balance of these reforms, the Ministry of the Environment "filed a series of regulatory amendments" in 2009. These amendments include "submitting a Record of Site Condition, streamlined risk assessment procedures, strengthened contaminant standards, and other complementary amendments" (Municipal Affairs and Housing 1513).

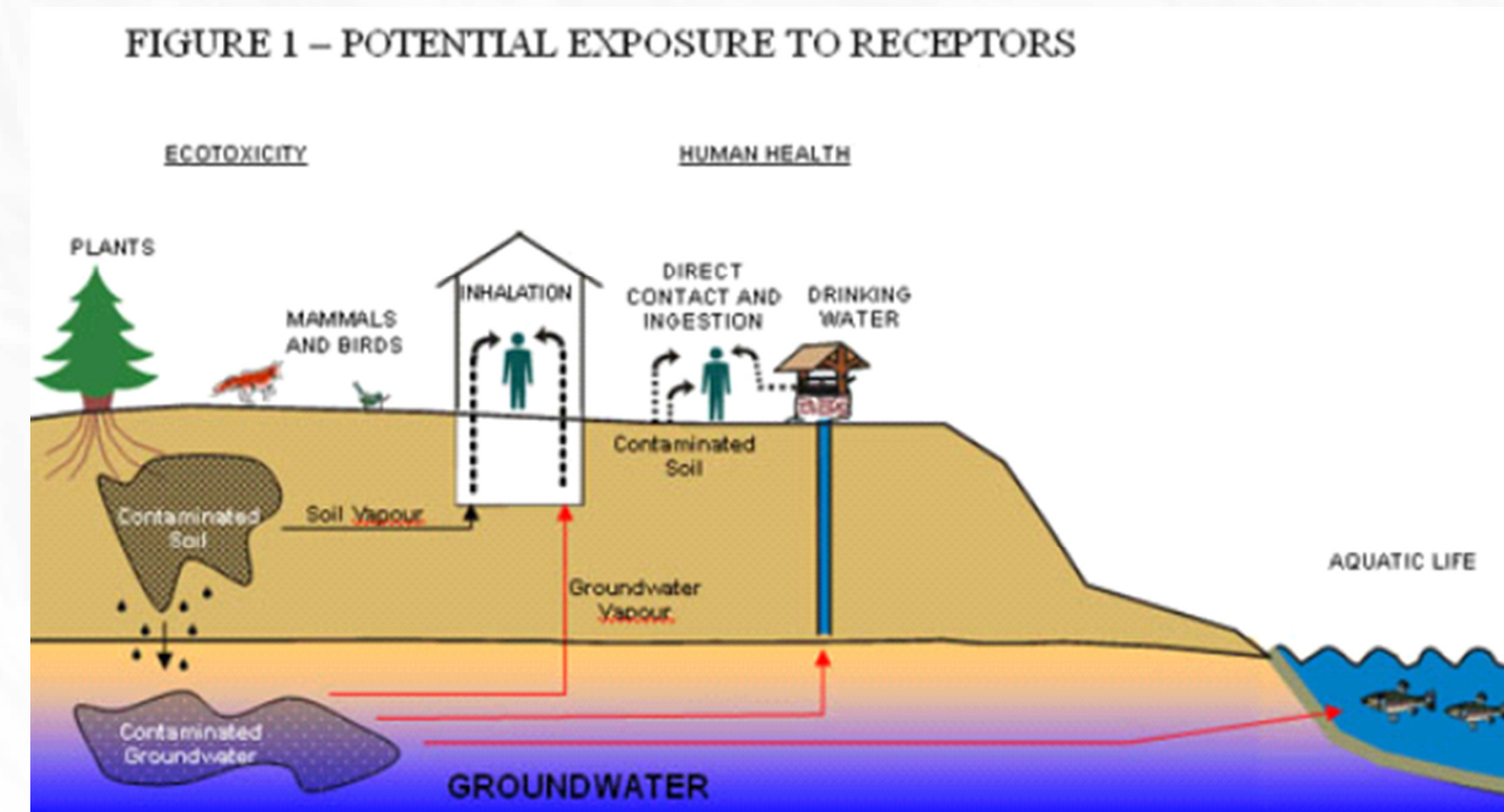


Figure 3: Diagram explaining the many ways that plants, animals, and humans can be exposed to pollution in Brownfields.

To figure out the appropriate clean up requirements for specific contaminants, there is a choice between two risk-based approaches: property-specific approach or generic approach. The generic approach takes into consideration the "overwhelming majority of potential risks at properties across Ontario," as where a property specific approach is based on specific properties affecting a particular site - also known as a risk assessment approach. (Municipal Affairs and Housing 1513). A Risk Assessment, "carefully examines the risk posed to humans, plants, wildlife and the natural environment from exposure to a contaminant." "Physical features and conditions at a property, such as soil particle size, organic carbon content, depth to groundwater, and proximity to a water body, can affect a contaminant's behavior as well as the types of exposures possible at a particular site" (Municipal Affairs and Housing 1513). Figure 3 demonstrates the many ways animals, plants, and humans can be effected by the pollution.

## Interim Solutions

An interim solution is a short term solution. The city of Midland is making the best use out of the land as possible - given the circumstances - for people while still being attentive to people's health issues and concerns. Midland's interim idea for this specific gas station site is to cap the site with walkways and grass to prevent any human accessibility to items that are right below the surface. On the site there would be allowed no permanent or enclosed buildings during interim use.

## Brownfields in British Columbia

In places like British Columbia somewhat strict rules have been amended concerning uses of Brownfields. They have made interim solutions more attainable for their towns that wish to pursue these options. British Columbia has been extremely active in trying to decontaminate and clean their Brownfields throughout the province. British Columbia has progressive Contaminated sites,

regulatory environments and a flexible local government to achieve such change. (Crown Land Restoration Branch). British Columbia's Brownfield Renewal Strategy is led by their Ministry of Agriculture and Lands. They constantly develop new policies concerning risk management and liability, to increase awareness about Brownfields and to encourage redevelopment of Brownfield sites across the province. They work with the Province of British Columbia to insure easier redevelopment; they do



Figure 4: Before and After False Creek - after an interim solution to a Brownfield in Vancouver, British Columbia.

this by implementing new policies, incentives, tools and resources for people to access. The Province believes redevelopment of Brownfields is beneficial for the triple-bottom-line; socially, economically and environmentally. Two examples of Brownfield redevelopment projects in British Columbia are Vancouver's Pacific Place and Victoria's Docks Green. These two have received National recognition. Docks Green is a 1.3 million square foot, waterfront community and Pacific Place is another advancement intended to house people downtown that was erected on a previous industrial land. Figure 4 shows a before and after picture of a Brownfield in Vancouver, after an interim solution had been applied to the land.

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\*For more resources regarding the information used in this poster, please refer to our research paper "Midland Brownfields."