

Brownfields and Brownfield Redevelopment

What is a brownfield?

Canada's National Round Table on the Environment and the Economy (NRTEE) defines brownfields as "abandoned, vacant, derelict or underutilized commercial and industrial properties where past actions have resulted in actual or perceived contamination and where there is an active potential for redevelopment".

Studies recognize potential harm

"Left as they are, brownfields can harm local economies and pose threats to human health and environmental quality. Redeveloped and returned to productive use, they can generate significant economic, environmental, and social benefits."

- Hara Associates, "Market Failures," 2003.

Where are brownfields located?

Brownfields are commonly located in or near established communities and can include decommissioned refineries, former railway yards, old industrial waterfronts and riverbanks, abandoned service stations, and former drycleaners. These locations offer convenient access to town centres and community infrastructure, which makes them of interest for redevelopment.

Is a brownfield a contaminated site?

Brownfields may be contaminated sites but not always. Some experts suggest that up to 30% of brownfield sites, once investigated, are found to be uncontaminated or marginally contaminated.

Further, not all contaminated sites are brownfields. The difference here lies in the redevelopment potential of the site. For example, an old mine site on Crown land may be a contaminated site, but it would not be a brownfield if it has no redevelopment potential.

Why haven't I heard of brownfields before?

"Brownfield" is still a relatively new concept in most of Canada, where the perception is that land is inexpensive and plentiful compared with the cost of remediating old industrial sites. Brownfields represent a "hidden asset" that most communities are only starting to realize they can use to their advantage.

If brownfields are a "hidden asset", why has it taken until now to start talking about their redevelopment?

To understand the challenges to brownfield redevelopment, it's important to consider that each site comes with its own unique combination of history, location, environmental condition and future potential. These factors can work for or against a brownfield's remediation and redevelopment potential.

The NRTEE has identified three "tiers" of brownfield, based on the likelihood of redevelopment:

Top tier – 15 to 20% of brownfield sites

- Market values greatly exceed the costs of remediation.
- Redevelopment is driven by market forces.
- Sites tend not to be left idle for long.
- Remediation requires little outside assistance.

Middle tier – 60 to 70% of brownfield sites

- Cleanup costs are high, but so is the potential for redevelopment.
- Sites typically are located in urban areas along transportation corridors with municipal services nearby.
- The market value of the land, once cleaned up, is close to the combined cost of unremediated land and cleanup.
- Some incentive may be required to move the development process forward.

Bottom tier – 15 to 20% of brownfield sites

- The cost of cleanup far exceeds the value of the land after remediation.
- High cleanup costs and uncertainty far outweigh any market interest.
- Sites often are located in rural or remote areas or in smaller urban areas.
- No realistic prospects for redevelopment are likely in the foreseeable future.

Of the above three tiers, it is the middle tier representing the majority of brownfield sites, which faces the greatest challenges but also offers the greatest opportunities for brownfield redevelopment in British Columbia.

Brownfields fill gaps in the community plan

Often brownfield sites are well situated within the community. When they are not redeveloped, the community plan is left with a gap. Originally chosen because they were close to transportation and the centre of a community, these sites continue to provide those benefits. In many cases the land is ideal for redevelopment from industrial activities to commercial, residential or park land uses.

How many brownfields are there in British Columbia?

Although no specific inventory exists today, it is estimated that British Columbia likely has between 4,000 and 6,000 brownfield sites. Using estimates from comparable-scale jurisdictions elsewhere, the number of brownfields in B.C. could be even higher.

Why are brownfield sites important?

Good environmental stewardship requires all levels of government, in cooperation with the private sector, to limit the amount of development on “greenfields”, which takes land out of the agricultural and resource base, and contributes to urban sprawl. Brownfields provide a socially and environmentally responsible land base for redevelopment. Brownfield redevelopment offers significant, sustainable benefits not only to municipal governments, but also to other levels of government and the public.

Developing brownfields makes fiscal sense

Through remediation and redevelopment, a brownfield site increases its land value and the value of neighbouring land as well. Increased land value helps the economy of the local community by raising property tax revenue, and by providing more options for economic development.

Brownfield remediation and redevelopment accomplishes a number of important goals including the following:

- Promotes regional economic development, particularly in large population centres, with accompanying urban redevelopment and job creation;
- Enhances quality of life through neighbourhood revitalization, reduced urban blight, and conservation of scarce green space;
- Reduces environmental contamination and site hazards, thereby improving public health and safety;

- Increases business opportunities in the private sector, particularly:
 - ⇒ Development, real estate
 - ⇒ lending/insurance; and
 - ⇒ new commercial/industrial employment.
- Enhances B.C.'s reputation as an environmentally progressive region.
- lack of access to capital and insurance protection;
- risk perception due to regulatory and civil liability; and
- lack of awareness/capacity in public and private sectors.

What provincial regulations apply?

Since the late 1980s, the Province of British Columbia has been a pioneer and leader in the development of a standards and approvals regime for contaminated sites including brownfields. B.C.'s contaminated sites legislation has provided increased certainty for person's wishing to redevelop brownfields in the Province.

Our *Environmental Management Act* contains comprehensive provisions regulating contaminated sites. Brought into force in July 2004 as an update to the former *Waste Management Act*, it establishes a framework for site identification, assessment, and cleanup ("remediation") as well as liability allocation. Associated details are set out in the *Contaminated Sites Regulation* and accompanying protocols, procedures and guidance. Further information on all aspects of the ministry's contaminated sites program may be found at: <http://www2.gov.bc.ca/gov/content/environment/air-land-water/site-remediation>.

What are the challenges to brownfield redevelopment?

The National Round Table on the Environment and the Economy identifies a number of barriers to brownfield redevelopment that can be grouped into the following three general areas:

The NRTEE has proposed a national strategy for brownfield redevelopment to address these barriers (http://www.nrtee-trnee.ca/Publications/HTML/SOD_Brownfield-Strategy_E.htm).

An opportunity not to be missed

Brownfield redevelopment is a proactive initiative that has significant potential to bring positive, triple bottom line results across the province. *Economic benefits* include increased tax revenues at all government levels, increased employment, and community-based economic development; *social benefits* include leverage of existing infrastructure, reduction of blight, and enhanced quality of life; *environmental benefits* include preservation of green space / reduction of sprawl, reduced transportation demand, contaminated site remediation, and protection of human health and the environment.

Brownfield redevelopment can be a key foundation for greener and more sustainable communities across British Columbia.

Note: This summary is solely for the convenience of the reader. The current legislation and regulations should be consulted for complete information.

For more information, contact the Environmental Management Branch at site@gov.bc.ca.