

THE BASICS OF BROWNFIELD REDEVELOPMENT »

A GUIDE FOR LOCAL GOVERNMENTS IN BRITISH COLUMBIA



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This guide is designed to be used by local government staff, but can also be used by others involved in the brownfield remediation and redevelopment field in British Columbia. The Province of British Columbia has developed this guide as a general source of information on brownfield renewal and redevelopment.

The information contained in this guide is subject to change as the legislation, regulations and policies on which this information is based may change over time. This guide should not be relied upon as a substitute for legal or professional advice, and the Province recommends all users of this guide obtain independent legal and professional advice in relation to any brownfield project.

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WHAT ARE BROWNFIELDS?

Brownfield sites are defined by the National Round Table on the Environment and the Economy as “abandoned, vacant, derelict or underutilized commercial or industrial properties where past actions have resulted in actual or perceived contamination and where there is an active potential for redevelopment.”¹ Typical examples of brownfields include: old industrial waterfronts and manufacturing plants, abandoned mines, former railway yards, abandoned service stations and former drycleaners. There are an estimated 4,000–6,000 brownfield sites in British Columbia representing an untapped resource filled with opportunities for renewal and redevelopment.

It is estimated that there are approximately 7,900 properties in British Columbia with potentially contaminated sites. While this figure cannot be directly compared to the estimate of 4,000–6,000 brownfield sites in British Columbia, the statistics do shed additional light on the magnitude and distribution of the brownfields landscape in B.C.



WHY DO BROWNFIELDS MATTER IN BRITISH COLUMBIA?

British Columbia is a vast province that is physically constrained by its geography, population distribution and climate, resulting in very limited opportunities for land development. Of the over 92 million hectares that make up the province’s land base, a scant 6% is actually fit for our use. The remaining 94% is made up mostly of ice, rock, water and mountains. With increasing populations and calls for greater sustainability redeveloping our old industrial and commercial lands is more important than ever before.

Brownfield redevelopment presents a wide range of opportunities in British Columbia. Brownfield redevelopment projects can take many forms and can generate significant economic, social and environmental benefits, leading to more sustainable communities.

Along with commercial developments, brownfield properties can be redeveloped into parks and open civic spaces, community housing developments and places of recreation, or municipal transportation and infrastructure centres. Since brownfields are often found in central urban locations, their existing links to transportation and other forms of infrastructure provide opportunities for development that simply cannot be found elsewhere.



HOW CAN BROWNFIELDS NEGATIVELY IMPACT YOUR COMMUNITY?

Brownfields can have significant negative environmental, economic and social impacts on a community. For example, if left in their deteriorated state, brownfield sites can:

- » Potentially harm human health and the environment;
- » Attract vandals, open dumping and other illegal activity that can lead to “urban blight”;
- » Lower surrounding property values, contribute to neighbourhood deterioration and negatively impact the quality of life in a community;
- » Put strain on public resources such as policing and fire protection services;
- » Reduce local employment opportunities and tax revenues;
- » Limit economic opportunity and growth; and
- » Contribute to urban sprawl as businesses and residents relocate to farmland and open space outside existing urban areas, also known as “greenfields”.

Brownfield sites can be found in urban and rural municipalities across B.C. These properties can have significant negative impacts on the environmental, economic and social quality of life, even in communities with only a few brownfield sites, such as abandoned gas stations or manufacturing facilities. Just one large boarded up factory that sits idle can cost the local government and the Province hundreds of thousands of dollars each year in lost property tax revenues. Furthermore, the negative impacts of brownfields can be pervasive and increase over time, particularly if a stigma has developed around these brownfield sites.



WHAT ARE THE KEY CHALLENGES TO BROWNFIELD REDEVELOPMENT?

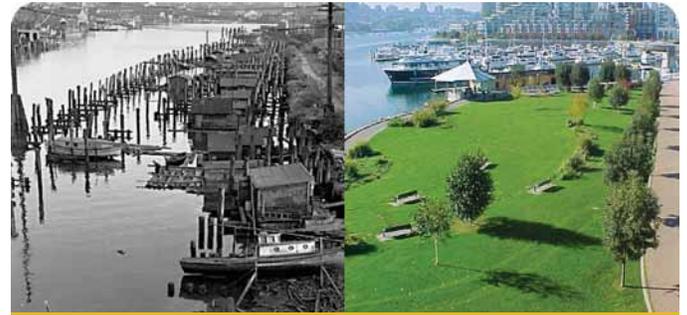
Brownfield sites where the clean value of the land exceeds the cost of remediation are known as positive cash value sites. These sites are usually in areas of high market demand and have low to moderate remediation costs. The real estate market deals efficiently with positive cash value sites as developers seek out and redevelop them.

However, most brownfield sites are either neutral or negative cash value sites. These are sites where the clean value of the land approximately equals the cost of remediation (neutral cash value) or the cost of remediation exceeds the clean value of the land (negative cash value). The main factors that determine whether a property has positive, neutral or negative cash value are local market demand/land values, location and remediation cost.

In general, developers have avoided potential brownfield redevelopment opportunities due to a number of key impediments that can easily increase costs. These challenges include:

- » The additional cost of funding required for environmental studies and site clean up;
- » Difficulty obtaining project financing from traditional sources of development capital;
- » Significant demolition and infrastructure upgrading costs;
- » Fear of regulatory (government) and civil liability due to environmental contamination that may remain on the site or may have spread off site;
- » Additional time, complexity and process uncertainty associated with the environmental and planning approval processes compared to greenfield development;
- » Community and neighbourhood concerns and opposition that can result in costly time delays; and
- » Limited local information, knowledge and capacity around brownfield redevelopment.

Numerous studies have shown that the costs to develop brownfields are greater than greenfields. However, positive experience and results in Canada and the U.S. have shown that the challenges to brownfield redevelopment can be overcome to produce a profit for the developer and significant economic, environmental and social community benefits.



WHY SHOULD LOCAL GOVERNMENTS CARE ABOUT BROWNFIELDS?

Most local governments are negatively impacted to some degree by the existence of brownfields. Even one or two brownfield sites can significantly impact municipalities. Local governments across Canada have begun to realize that responsible brownfield redevelopment can transform environmentally damaged properties into productive lands, which can result in the following environmental, economic and social community benefits:

- » Improvements in environmental quality (soil, air and ground water);
- » Improvements to human health;
- » Protection of groundwater resources, wetlands and wildlife habitats;
- » Reduction of urban sprawl as a result of using existing sewer, water and road infrastructure;
- » Economic growth, including the retention and creation of local jobs;
- » Increased property tax revenues;
- » Revitalization of neighbourhoods and employment areas; and
- » Increased affordable housing opportunities.

A recent study of brownfield redevelopment in Canada found that every \$1 spent in the Canadian economy on brownfield redevelopment generates approximately \$3.80 in total economic output in all industries.² This represents a significant economic multiplier in the Canadian context. The Northeast-Midwest Institute reviewed the results of eight studies on the economic impacts of brownfield redevelopment from across the U.S. and concluded that public investments in brownfields leverage total investments at a ratio of approximately \$1 of public investment to \$8 of total investment.³

Experience in the U.S. has demonstrated that brownfield cleanup and redevelopment often leads to property value increases of 5% to 15% in the area surrounding the site up to 1.2 km away. There are documented cases where “impact” projects, usually involving change from industrial use to parks or mixed use (residential/commercial), have had much higher impacts on property values, even exceeding 100%.⁴ Numerous other U.S. and Canadian studies have found brownfield redevelopment can increase neighbourhood property values.⁵

A recent U.S. study estimated that for every acre of brownfield land redeveloped, a minimum of 4.5 acres of greenfield land can be saved.⁶ Brownfields produce numerous cost-savings over greenfield sites. For example, the indirect costs related to transportation for greenfield development are about 3.5 times the cost of brownfield redevelopment.⁷

Brownfield redevelopment can also take a community approach by opening up options for non-commercial developments like parks, civic public spaces, affordable housing projects, transportation and municipal logistics centres and many other options. Due to the central proximity of most brownfield sites they present communities with redevelopment opportunities that would otherwise be impossible or impractical on greenfield land developments.

Brownfield redevelopment projects can also act as catalysts or linchpins to create a positive environment for additional private sector investment in brownfield redevelopment. This can lead to the transformation of entire neighbourhoods and districts.⁸ In summary, there are a myriad of significant and long lasting environmental, economic and social benefits that communities and local governments can take advantage of as a result of brownfield redevelopment.



WHAT ARE THE DIFFERENCES BETWEEN RURAL & URBAN BROWNFIELDS?

While brownfields are often thought of as an urban issue, many rural municipalities and small urban municipalities also have brownfields. However, the nature of brownfields and approaches to brownfield redevelopment differ between rural and urban areas and even between large and small urban areas.

For example, while contaminants such as petroleum hydrocarbons, metals, inorganic solvents, and hazardous and non hazardous solid wastes may be present in both urban and rural brownfields, rural brownfields are more likely to contain agricultural and mining related contaminants.⁹ Due to the nature of the operations that generated these contaminants, they may impact large areas of land and groundwater.

Rural communities have different ties to the natural environment than urban communities. For example, rural communities are usually more directly tied to natural resources such as forest, mineral and groundwater resources.

As a result, environmental issues related to brownfield sites in rural areas, and how these issues are addressed, are different and often more sensitive than in urban areas.¹⁰

Higher population densities in urban areas, especially in larger urban areas such as Vancouver and Victoria, create greater demand and competition for brownfield sites due to the proximity of these sites to existing residential and employment areas and existing public amenities and services.

In rural areas there is usually less demand for land and often ample greenfield land available, which results in less demand for brownfield redevelopment. It is also common in rural areas to find isolated brownfield sites with inadequate infrastructure compared to urban areas where brownfield sites are typically fully serviced and close to existing population and employment centres. Consequently, reuse options for brownfields are typically much more limited in rural areas.

Rural communities also face financial challenges when trying to provide economic incentives to spur private sector brownfield redevelopment. A smaller tax base in rural areas means less ability to provide tax abatement through the revitalization tax exemption program or other financial incentives. Rural and smaller urban local governments also cannot always afford infrastructure upgrades that may be required to permit brownfield development.

Rural local governments often have limited staffing and technical resources compared to large urban areas. Rural municipalities also usually have limited budgets to undertake environmental remediation or hire consultants to undertake environmental site assessments and prepare brownfield redevelopment strategies and land use plans.

Conversely, rural municipalities can often mobilize and react to brownfield redevelopment opportunities faster than urban municipalities due to their smaller size bureaucracy. Brownfields in rural areas also do not typically exhibit the scale of negative social impacts such as vandalism, physical deterioration, blight and crime sometimes associated with brownfields in urban areas.

However, at the same time these blighted sites tend to be more predominant in a rural setting, which can have a larger social impact on the residents themselves as the sites may be seen daily by almost an entire community.

Even though there are differences in brownfields between rural and urban areas, both rural and urban local governments of all sizes can achieve the environmental, economic and social benefits of brownfield redevelopment by adopting proactive, comprehensive and strategic approaches to promoting brownfield redevelopment. The balance of this guide discusses how local governments in B.C., both rural and urban, can help promote brownfield redevelopment.



HOW CAN LOCAL GOVERNMENTS IN B.C. SUPPORT & PROMOTE BROWNFIELD REDEVELOPMENT?

Successful brownfield redevelopment in any jurisdiction is based on cooperation and partnerships between public and private sectors. In B.C., this includes the Province of British Columbia, local governments and private sector developers of brownfield sites, including various support professionals. By preparing and implementing a brownfield redevelopment strategy, local governments in B.C. can choose to play a number of roles when it comes to supporting and promoting brownfield redevelopment.

This section provides a framework for creating a “Brownfield Strategy” within a community. A Brownfield Strategy is not intended to be a stand-alone document, but rather an approach to dealing with these unique sites and will often be best placed within existing planning documents.

Traditionally, most local governments in B.C. and elsewhere have reacted to private sector development proposals on brownfield sites through their land development approvals process.

Increasingly, local governments in Canada and the U.S. are proactively supporting, planning for and promoting brownfield redevelopment by undertaking one or more of the following activities:

- » Processing development applications for brownfield sites and proactively planning for the redevelopment of large brownfield sites and areas;
- » Providing brownfield redevelopment information and resource links;
- » Facilitating and coordinating private and public brownfield redevelopment projects;
- » Providing financial incentives to the private sector for brownfield redevelopment;
- » Partnering with the private sector to undertake public-private brownfield redevelopment projects;
- » Proactively remediating and preparing brownfield sites owned by local government for redevelopment; and
- » Marketing publicly and privately held brownfield sites.

The five primary roles that local government can play (including general activities under each role) to support and promote brownfield redevelopment through a brownfield redevelopment strategy are:

- a) Building Capacity;
- b) Planning and Support;
- c) Leadership on Municipal Brownfields;
- d) Marketing and Promotion; and
- e) Monitoring.

A) BUILDING CAPACITY

The first step for any local government that wants to support and promote brownfield redevelopment is to build the capacity to do so within the community. This includes both internal capacity (local government staff and elected officials) and external capacity (developers, support professionals, community groups and the general public). The steps to building capacity include the following, as demonstrated in a number of North American jurisdictions.

Collect and Disseminate Information

There is an abundance of information and material available on brownfield redevelopment from various literature and web based sources. Local governments can assemble and customize information for distribution to local stakeholders including developers, real estate professionals, financial institutions, environmental and planning consultants and members of the general public.

This information can take the form of fact sheets, brochures, booklets, guides or other documents available both in hardcopy and electronically on the Internet. This information can be used to dispel common myths about brownfield redevelopment and to address a range of issues. This could include outlining the environmental and human health risks associated with brownfields, regulatory requirements, approaches to brownfield remediation, available technical and financial resources, and case studies on successful brownfield redevelopment projects.

As local governments develop and begin to implement strategies to support and promote brownfield redevelopment, they can also produce and disseminate information outlining these strategies and activities. All of these activities will raise awareness and promote education around brownfields in your community.

A list of references and recommended reading is included at the back of this guide. For more information on brownfield redevelopment in B.C. visit www.brownfieldrenewal.gov.bc.ca

Establish a Local Government Brownfields Team

Brownfield remediation and redevelopment is multidisciplinary and involves a myriad of support professionals and approvals processes. Brownfield redevelopment projects typically involve a number of local government departments from planning and building, to public works, legal, real estate and finance. Consequently, brownfield redevelopment efforts can be supported by a dedicated interdisciplinary staff team made up of representatives from various departments.

The primary role of this team would be to ensure streamlined and coordinated review and facilitation of development applications on brownfield sites. This team would also be responsible for building support for brownfield redevelopment with local government, key stakeholders and the community.

Finally, the members of this team would be responsible for providing and updating information on brownfields and brownfield redevelopment contained in publications and materials produced by the local government.

In addition to establishing an internal brownfields staff team, many municipalities have created a brownfield coordinator position. This person is the “face” of the municipality’s brownfield redevelopment policy and programming efforts, both internally and externally.

Internally, this person coordinates staff communication and responses to brownfield redevelopment projects by coordinating internal meetings and coordinating and leading meetings between municipal staff and the brownfield developer. Externally, the coordinator helps brownfield owners and developers with approval procedures and processes. This can include acting as a single window to the municipal approvals process.

Establish a Brownfields Stakeholder Advisory Group

When developing a brownfield strategy, many local governments will create an external working group or advisory group made up of key stakeholders from the local community who have experience with, or may be affected by, brownfields or brownfield redevelopment. This can include: brownfield owners, developers, support professionals and community organizations.

The role of this group is to provide input and feedback to the brownfield coordinator and the internal staff team with respect to the local government’s strategies and various activities designed to support brownfield redevelopment. The working group provides insights into the state of the local brownfield redevelopment industry, including potential obstacles. One of the major roles of the working group is to help build awareness and support for brownfield redevelopment with the public and industry.

Raise Brownfield Awareness and Education

Raising awareness and support for brownfield redevelopment among local government staff and elected officials is one of the key goals of the staff team and brownfield coordinator. This can include preparing information, education and training materials for delivery to elected officials and local government staff.

The brownfield coordinator would also lead preparation and coordination of presentations by local government staff to external organizations representing developers, and the real estate, consulting and financial sectors.

The role of the stakeholder advisory group in raising awareness and education around brownfield redevelopment should not be overlooked. This key group of individuals from various disciplines and organizations will have an extensive network of contacts. The members of this group can provide an efficient and effective conduit for the distribution of information on brownfields and also provide stakeholder feedback on local government programs to promote brownfield redevelopment.

Compile an Inventory

A number of local governments with brownfield redevelopment strategies have compiled inventories of potential brownfield sites, often referred to as ‘historical land use inventories’ or ‘potential redevelopment opportunities inventories.’ These inventories are based on historical and current land uses and draw on publicly available information and records such as historical aerial photographs, topographic and geologic maps, fire and insurance plans, spill records, mapping of landfills and PCB storage sites, available environmental reports and visual inspection.

The properties and areas in these inventories can be prioritized by considering factors such as location, type and level of contamination, impact on the local community, viability of redevelopment, other local needs and desires (e.g. as identified in a community’s comprehensive plan) and local brownfield redevelopment goals and objectives. Such inventories can provide a useful tool to identify the size, scope and nature of the local brownfields problem. These inventories can also be used to market and track progress on redevelopment opportunities in a community.

B) PLANNING & SUPPORT

The second step for a local government that wants to support and promote brownfield redevelopment is to enhance its planning capacity for brownfield redevelopment. This usually involves introducing planning policies that are supportive of brownfield redevelopment and streamlining planning procedures in order to encourage brownfield redevelopment. Local governments can work with property owners, developers and the public early in the process so planning documents reflect the long term vision of an area and the types of land uses that will support that vision.¹¹

The local government can also provide major support for brownfield redevelopment by offering financial incentives designed to assist in offsetting the additional costs typically associated with brownfield redevelopment. These local government planning and financial support programs help to level the financial playing field between greenfield development and brownfield redevelopment.

Improve the Local Planning Approvals Process

The main impediments to brownfield redevelopment tend to be associated with policy, regulatory, tax and funding environments that do not fully encourage this behaviour. While the B.C. Brownfield Renewal Strategy is being implemented to address these issues, uncertainties still exist.

In support of broader provincial efforts, local governments can foster brownfield redevelopment by reviewing and potentially improving their planning review and approval processes for brownfield applications. This can include:

- » Developing and implementing standardized procedures for identifying and dealing with development proposals on brownfield sites;
- » Revising official community plans to be more supportive of brownfield redevelopment and the various forms it can take such as adaptive building reuse, intensification of existing buildings, infill development on vacant lots, and demolition of existing buildings and reconstruction;
- » Ensuring the local planning review and approvals process is efficiently integrated with the Province's regulatory approvals process and eliminating duplications;
- » Coordinating and expediting the review of development applications on brownfield sites;
- » Streamlining approvals process;
- » 'Up-zoning' brownfield sites;
- » Collaboration with private sector on publicly owned sites; and
- » Preparing redevelopment options and land use plans for publicly owned brownfield sites.

The brownfield coordinator, internal brownfields staff team and planning department staff can play an integral role in the above-noted activities.

Develop and Offer Financial Incentives

In addition to planning improvements, municipalities, governed under the *Community Charter*, can offer financial incentives to promote brownfield redevelopment. For example, section 226 of the *Community Charter* allows municipalities to exempt property from all or part of the municipal portion of property tax to encourage various types of revitalization (including brownfield redevelopment).

A number of municipalities in B.C. currently have revitalization tax exemption (RTE) program bylaws in place. Although virtually all of these bylaws seek to promote the revitalization and redevelopment of downtowns and commercial core areas, the RTE tool can be used by municipalities in B.C. to promote the revitalization and redevelopment of brownfield sites and areas, as municipal councils see fit. Municipalities may also use this exemption tool to help redevelop brownfields into public and civic spaces and for purposes other than commercial development.

To take advantage of the RTE tool under the *Community Charter*, a municipal council must pass a bylaw to establish a revitalization tax exemption program. Legislation sets out the requirements for RTE bylaws, which must include details such as the reason for the program, the types of properties eligible for the exemption, and the extent of the exemptions available. Additional factors to consider prior to establishing a RTE program include:

- » A municipal council must give public notice before adopting a RTE bylaw;
- » RTEs may be granted for up to 10 years and apply only to municipal property value taxes; and
- » The school portion of the property tax is not eligible for exemption, nor are other forms of property tax, such as parcel taxes.

* More details on the Revitalization Tax Exemption can be found at: www.cserv.gov.bc.ca/LGD/gov_structure/library/community_charter_revital_tax_exemptions.pdf

Once the RTE program is established, the municipal council can enter into an agreement with the owner of the property. This agreement specifies and governs the terms of the exemption and allows the municipality to establish specific terms and conditions that must be met by the property owner in order to receive the exemption.

The final step in the RTE process is the issuance of a tax exemption certificate. This certificate is issued for the subject property once all the requirements in the bylaw and the agreement have been met. This certificate must be issued no later than October 31st in the year before the tax exemption is to take place. BC Assessment then uses the tax exemption certificate during the calculation of the taxable value of the property. Tax exemption certificates are tied to the property, which means the exemption can be transferred to a new property owner at the discretion of the municipal council.

Revitalization Tax Exemption Program Application Administration Process

In May 2008, Bill 27, entitled the *Local Government (Green Communities) Statutes Amendment Act, 2008* was brought into effect. Among other positive changes to local governance statutes, Bill 27 provides local governments with a variety of tools to promote energy conservation, reduction of greenhouse gas emissions and water, including providing local governments with the ability to reduce development cost charges under certain circumstances, for development that will result in low greenhouse gas emissions and environmental impact. Brownfield redevelopment can make a number of positive 'Green Community' and greenhouse gas reduction contributions.

C) LEADERSHIP ON MUNICIPAL BROWNFIELDS

In addition to encouraging the private sector to invest in brownfield redevelopment, local governments can demonstrate leadership by taking steps to proactively acquire key strategic brownfield sites and prepare them for redevelopment.

Tax Sales for Municipalities

Municipalities can take action to proceed to tax sale on brownfield properties that have gone into tax arrears. A successful tax sale allows a brownfield property to pass into the hands of an owner who wants to remediate and redevelop the property.

Even where a tax sale fails, the municipality may elect to acquire and remediate the property in order to clean up the property and return it to the real estate market. If a municipality chooses this approach, it should ensure it has a policy in place for dealing with failed tax sale brownfield sites that addresses the issues of proper due diligence, liability and a proposed use and exit strategy for the property. A municipality may also choose to generate interest in a failed tax sale property through the request for proposals (RFP) process.

Leadership on Local Government Owned Brownfields

Local governments are often owners of brownfield properties such as current and former public works yards, and other brownfields that have come into local government possession through the tax sale process or direct acquisition. Many local governments do not have a proactive strategy to determine which sites can be deemed surplus and made available for development.

The first step on municipally owned brownfield sites is to conduct a site investigation to determine the presence or extent of contamination as well as the estimated costs of remediation. With this information in hand, the local government will be better equipped to decide if it should remediate the site prior to making it available for development, or if it should issue an RFP for the remediation and redevelopment of the site. With either approach, the municipality can determine the type(s) of development that will take place on the site.

By taking action on even one or two local government owned brownfield sites, local governments can demonstrate leadership to the private sector. This will help generate interest in brownfield redevelopment amongst local private sector developers. Where a local government owns several brownfield sites it is considering making available for development, a strategy to prioritize and phase the development of these sites should be developed.

D) MARKETING & PROMOTION

Once a local government has developed a strategy to support and promote brownfield redevelopment, there are a number of ways to market its brownfield redevelopment strategy and individual brownfield redevelopment opportunities.

In order to successfully implement a brownfield redevelopment strategy the municipality's plans for brownfield sites, incentive programs and public and privately owned brownfield redevelopment opportunities be communicated and marketed effectively to property owners, developers, potential end users, and support professionals.

The purpose of a municipal brownfields marketing strategy should be to:

- a) Market brownfield redevelopment programs and brownfield redevelopment opportunities;
- b) Provide information on getting assistance and advice from the municipality and the Province;

- c) Educate the public and other stakeholders on environmental site assessment and remediation processes;
- d) Dispel myths or stigma attached to brownfields; and
- e) Improve the image of the municipality as a place to invest, do business and develop land and buildings.

Tools that can be used by a municipality to market brownfield redevelopment, plans, programs and opportunities include:

- » Publications such as brochures, newsletters and fact sheets;
- » Website materials;
- » Presentations to brownfield stakeholders and support professionals;
- » Attendance at brownfield and green building conferences; and
- » Media releases.

Another marketing tool that has become popular is the preparation of a detailed marketing profile for individual brownfield sites. These profiles can be provided to developers and included in online searchable real estate databases to provide maximum exposure for brownfield properties that can be redeveloped.

E) MONITORING

Another often overlooked component of a successful brownfield redevelopment strategy is the monitoring of performance i.e., the economic, environmental and social impact of individual projects and the brownfield redevelopment strategy as a whole.

A range of variables can be monitored by a municipality on an individual project and cumulative basis. This can include quantitative measurements such as the amount of land remediated, amount of space constructed by type and increase in property tax revenues.

Monitoring can also include qualitative measurements such as environmental and health threats that are removed through the remediation and risk management of contaminated sites; as well as improvements in quality of life variables such as improved social conditions in neighbourhoods and the availability of open space.

In addition to monitoring the empirical results of individual brownfield projects and municipal incentive programs, it is also important to obtain feedback from key stakeholders regarding improvements that can be made to the municipal brownfield redevelopment strategy, including the planning approvals process, marketing materials and any incentive programs that are offered by the municipality.

These monitoring results can be used to provide regular reports to municipal councils and make adjustments to components of the municipal brownfield redevelopment strategy in order to maximize the effectiveness of the strategy.



HOW DOES THE CONTAMINATED SITES REGULATION INTERFACE WITH THE LOCAL GOVERNMENT PLANNING & PERMIT APPROVALS?

The site profile system is a mandatory process under the *Environmental Management Act* used to bring potentially contaminated sites to the attention of the ministry at a time when a property is conducive to investigation and remediation.

This system is used to determine if and when site investigation is required. Site profile submissions are triggered by certain applications for zoning of land, subdivision, development and development variance permits, soil removal and demolition permits. Site profiles must also be submitted for certain sites upon decommissioning and/or foreclosure.

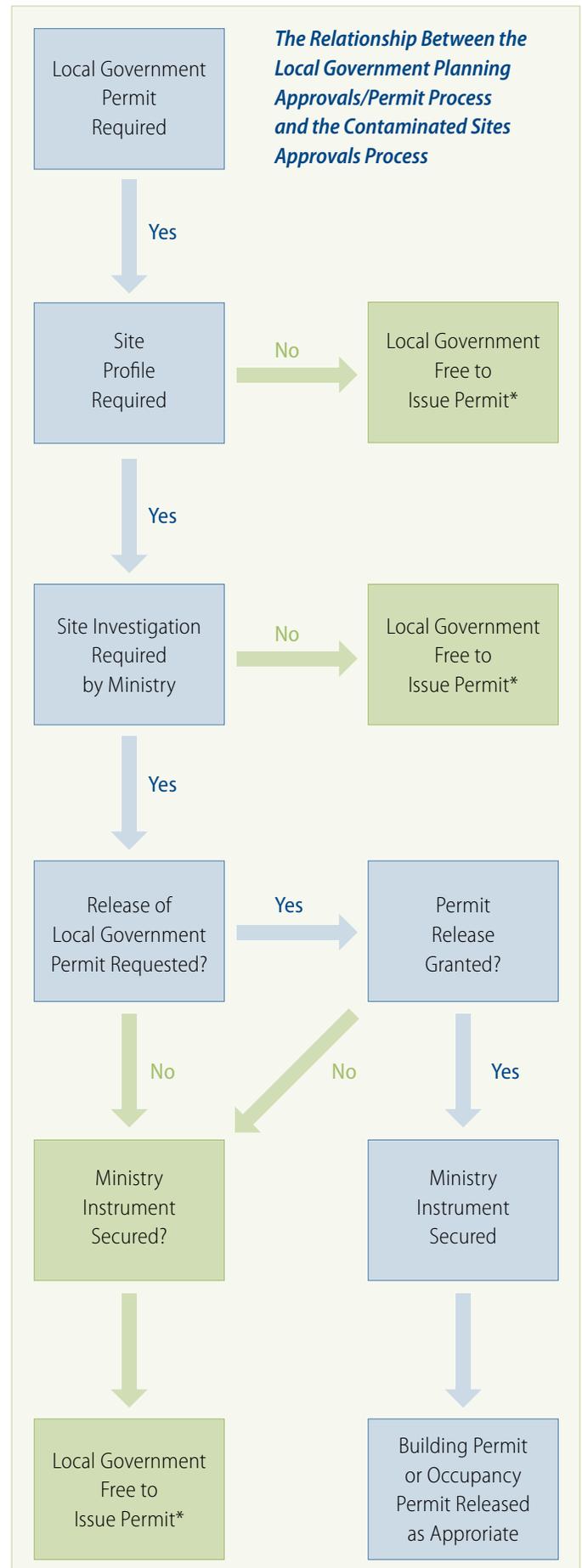
Similarly drafted provisions in various local government statutes provide that where a site profile is required, approving authorities are prohibited from approving specified applications (for example, in relation to zoning, development permits or subdivision) unless at least one of seven statutory conditions is met, several of which involve receiving notifications or determinations under the *Environmental Management Act*.

A principal objective of the site profile system is to ensure properties that have a potential to be contaminated due to past or present site activities are assessed and, where necessary, cleaned up prior to re-use.

A flow chart showing the relationship between the local government planning approvals/permit process and the contaminated sites approvals process is provided below.

Further information on the site profile system may be found in a number of Ministry of Environment fact sheets under the heading of Site Profiles.

This information along with additional information of particular interest to local governments may be found under the heading of Fact Sheets for Local Government. For more information please visit: www.env.gov.bc.ca/epd/remediation/fact_sheets/





HOW CAN GREEN DEVELOPMENT BE INCORPORATED INTO BROWNFIELD REDEVELOPMENT?

Brownfield redevelopment presents an excellent opportunity to build green communities. The remediation and return of brownfield sites to productive use has numerous benefits that address all three of the triple bottom line elements of environmental, social and economic qualifiers.

By its very nature, brownfield remediation and redevelopment mitigates adverse environmental impacts, minimizes or eliminates pollution at its source, and makes efficient use of natural resources, land and energy.

Brownfield redevelopment has also been shown to reduce energy used for transportation and the amount of land used for greenfield development. Brownfield redevelopment projects can be made even more sustainable by incorporating green planning and building approaches and green construction technologies, such as those included in Leadership in Energy and Environmental Design (LEED) certification. Attention to the environmental impacts of the project measures can be incorporated throughout the lifecycle of the development, from the demolition, deconstruction and remediation phase, through to the design, construction and ongoing use of the finished project. This will help to further reduce the environmental footprint of a brownfield redevelopment project. The table below describes the potential environmental, social and economic impacts of various brownfield redevelopment activities and types and also highlights opportunities for the greening of brownfield redevelopment.

Triple Bottom Line Impacts of Brownfield Redevelopment

CATEGORY	ENVIRONMENTAL	SOCIAL	ECONOMIC
Remediation of soil and groundwater	<ul style="list-style-type: none"> Reduces/eliminates threats to environmental health Improves environmental quality Bioremediation and other technologies can eliminate or reduce need for landfilling of contaminated soils/materials 	<ul style="list-style-type: none"> Risks to human health removed or significantly reduced 	<ul style="list-style-type: none"> Prepares site for redevelopment More attractive for private sector investment Mitigation of liability
Demolition of derelict buildings	<ul style="list-style-type: none"> Potential for materials recovery, reducing waste directed to landfill and extraction of new resources Removal of asbestos or other building hazards 	<ul style="list-style-type: none"> Reduces illegal activity at site Improves streetscape Reduces neighbourhood blight Risks to human health removed 	<ul style="list-style-type: none"> Prepares site for redevelopment Helps reduce site's negative impact on local property values Potential for material recovery of economic value Mitigation of liability
Restoration or adaptive reuse of existing buildings	<ul style="list-style-type: none"> Existing building stock recycled and restored, reducing use of virgin construction materials and energy costs for transportation of construction materials Reduces pressure to develop greenfields 	<ul style="list-style-type: none"> Preservation/enhancement of community heritage Restoration of the community's 'sense of place' Could become focal point for community events 	<ul style="list-style-type: none"> Increased property tax revenues Dependent upon heritage value, potential tourist or regional recreational value Potential for offshoot development such as restaurants Optimizes use of existing infrastructure
Industrial redevelopment	<ul style="list-style-type: none"> New industrial development creates opportunities for green buildings and eco-effective operations Reduces pressure to develop greenfields Brownfield site earns LEED point(s) 	<ul style="list-style-type: none"> Local job creation New industries could replace similar skilled labour jobs previously lost 	<ul style="list-style-type: none"> Increased property tax revenues Potential catalyst for further development Improves local economic growth Optimizes use of existing infrastructure
Commercial or institutional redevelopment	<ul style="list-style-type: none"> Reduces pressure to develop greenfields Brownfield site earns LEED point(s) 	<ul style="list-style-type: none"> Local job creation Provision of health and community services and facilities Improved local access to consumer goods 	<ul style="list-style-type: none"> Increased property tax revenues Potential catalyst for further development Improves local economic growth Optimizes use of existing infrastructure
Residential redevelopment	<ul style="list-style-type: none"> Reduces pressure to develop greenfields Provides opportunities for affordable housing Brownfield site earns LEED point(s) 	<ul style="list-style-type: none"> Reintroduction of residents to urban core areas Supports transit-oriented development 	<ul style="list-style-type: none"> Increased property tax revenues Increased population to support local businesses and community services Potential catalyst for further development Optimizes use of existing infrastructure
Urban mixed use redevelopment	<ul style="list-style-type: none"> Reduces pressure to develop greenfields Provides opportunities for affordable housing Brownfield site earns LEED point(s) 24-50% less greenhouse gas emissions compared to dispersed, single-use neighbourhoods 	<ul style="list-style-type: none"> Reintroduction of residents to urban core areas Supports transit-oriented development Provides live/work opportunities Local job creation 	<ul style="list-style-type: none"> Increased property tax revenues Potential catalyst for further development Optimizes use of existing infrastructure
Provision of public open space and green space	<ul style="list-style-type: none"> Potential for alternative stormwater management in urban settings Reduction of heat island effect and improved air quality through planting of trees and other plants 	<ul style="list-style-type: none"> Provides space for community events, recreation and other activities Provides opportunities for walking and cycling Could provide access to waterfront or natural features Improves quality of life 	<ul style="list-style-type: none"> Increases land values of nearby properties Potential catalyst for further development Potential offshoot development, both commercial and residential
Restoration and/or enhancement of ecological features	<ul style="list-style-type: none"> Environmental health and ecological functions improved Could help to re-establish regional ecosystems links 	<ul style="list-style-type: none"> Increased awareness of ecological functions, particularly in urban settings Healthier environment for community residents 	<ul style="list-style-type: none"> Mitigation of environmental risk Potential to avoid costly investment in infrastructure if urban development coexists with functioning ecosystems



WHAT IS THE PROVINCE OF B.C. DOING TO PROMOTE BROWNFIELD REDEVELOPMENT?

While British Columbia has one of the most progressive contaminated sites regulatory environments and flexible local governance regimes in Canada, the Province has embarked on a Brownfield Renewal Strategy to further address the impediments to brownfield redevelopment and provide an even more favourable environment for the cleanup and redevelopment of brownfield sites. The B.C. Brownfield Renewal Strategy is a comprehensive strategy with coordinated action across several ministries that will develop and implement new initiatives designed to:

- » Strengthen public policy for environmental liability and risk management;
- » Apply strategic public investments to encourage the redevelopment of idle sites;
- » Build capacity and awareness of redevelopment tools and opportunities to enhance information about brownfields; and
- » Lead by example through the redevelopment of key Crown brownfield sites.

This booklet is an example of the Province's efforts to build capacity and awareness. The Brownfield Renewal Strategy will also be linked to the provincial government's proposed Green Communities Initiative to ensure the Brownfield Renewal Strategy also incorporates and helps promote triple bottom line results and green communities.



RESOURCES

B.C. Contaminated Sites Regulatory Approvals Process

For information on the contaminated sites regulatory approvals process in B.C. visit www.env.gov.bc.ca/epd/remediation/fact_sheets/pdf/fs01.pdf

Brownfield Renewal Strategy

For information on the Brownfield Renewal Strategy visit www.brownfieldrenewal.gov.bc.ca

REGULATORY RESOURCES

BC Ministry of Environment, Land Remediation

The Ministry is the governing regulatory body regarding land remediation in British Columbia. Their website includes information on environmental standards, regulations and regulatory process, as well as a comprehensive FAQ.

www.env.gov.bc.ca/epd/remediation/index.htm

POLICY & STRATEGY

Canadian Urban Institute

The Canadian Urban Institute, a non-profit organization dedicated to enhancing the quality of life in Canada's urban centres, hosts the annual Brownfields Canada conference, including the annual Brownie Awards recognizing excellence in leadership, innovation, and sustainable management of brownfields in Canada. The Canadian Urban Institute conducts seminars and workshops, as well as performs contracted policy research.

www.canurb.com

Fraser Basin Council, Smart Planning for Communities Initiative

The Smart Planning for Communities initiative aims to create sustainable communities in British Columbia through partnership building and knowledge capacity creation. Their website contains a series of tools and resources for local governments engaging in smart planning initiatives.

www.fraserbasin.bc.ca/programs/smart_planning.html

National Round Table on the Environment and the Economy, National Brownfield Redevelopment Strategy

The National Round Table on the Environment and the Economy (NRTEE) is a federally-funded research institute dedicated to "exploring new opportunities to integrate environmental conservation and economic development, in order to sustain Canada's prosperity and secure its future." Their 2003 report *Cleaning up the Past, Building the Future: A National Brownfield Redevelopment Strategy for Canada* has been instrumental in creating a vision for brownfield renewal in Canada. Visit their website to download their report.

www.nrtee-trnee.ca

Ontario Ministry of Municipal Affairs and Housing, Brownfields Ontario Program

The Brownfields Ontario website includes provides useful information for brownfield land developers, as well as stakeholders. Although their *Brownfields Remediation Toolbox* was specifically designed for Ontario Municipalities, it contains a collection of tools, reports, strategies, and processes relating to the brownfield renewal that can be applied in any jurisdiction.

www.mah.gov.on.ca/Page220.aspx

Union of British Columbia Municipalities

The Union of British Columbia Municipalities (UBCM) is a key stakeholder in the BC Brownfield Renewal Strategy. The UBCM represents municipal issues in British Columbia and their website features reports, statistical data, as well as legislative and policy information relating to community planning, which may be helpful in pursuing a brownfield redevelopment project.

www.citicnet.bc.ca

GUIDES, PUBLICATIONS & RESOURCES

AboutREMIATION

AboutREMIATION is an information resource for brownfield developers, remediation specialists, stakeholders, and civic officials with a number of tools and strategies for brownfield redevelopment. www.aboutREMIATION.com

International City/County Management Association, Brownfields Program

The ICMA is a professional organization for civic officials, planners and city managers around the world. They have published a number of guidebooks and reports on brownfield redevelopment that have solutions, which cross jurisdictions and borders.

www.icma.org

- » *Small Spaces, Special Places: Coordination of Rural Brownfields Development* is available for free download in PDF format at the ICMA website.
- » *Brownfields Redevelopment: A Guidebook for Local Governments and Communities, Second Edition* can be ordered at the ICMA website.

Northeast-Midwest Institute

The Northeast-Midwest Institute has published a brief study on energy consumption benefits associated with urban brownfield redevelopment in the United States using qualitative data modeling. *Energy Benefits of Urban Infill, Brownfields, and Sustainable Urban Redevelopment* is available online:

www.nemw.org/SustainableInfillBrownfieldsApril08.pdf

U.S. Environmental Protection Agency, Topic Brownfields

Information on brownfield basics, clean up and remediation processes, and U.S. federal programs targeted at energizing the redevelopment sector in America. Canadian users can find links to success stories on accomplished brownfield projects, as well as information on remediation technology and processes.

www.epa.gov/ebtpages/cleabrownfields.html

ADVOCACY

Canadian Brownfields Network

The Canadian Brownfields Network is an advocacy group representing the interest of brownfield developers and stakeholders. The Province of British Columbia supports the efforts of the Canadian Brownfields Network to promote brownfield renewal and redevelopment and help reduce the barriers to action on brownfields throughout Canada.

www.canadianbrownfieldsnetwork.com

National Brownfields Association

The National Brownfields Association (NBA) is a joint Canada-U.S. non-profit organization “dedicated to promoting sustainable development and encouraging green building on brownfield sites.” The NBA website features opportunities for education and training, as well as membership networking. There is a BC Chapter of the NBA, accessible from the main NBA website.

www.brownfieldsassociation.org

CASE STUDIES

Canadian Mortgage and Housing Corporation, Sustainable Community Planning

The Canadian Mortgage and Housing Corporation’s (CMHC) website contains many resources for property owners and individuals interested in the financing and liability aspects of brownfield redevelopment. CMHC publishes numerous reports, including analytical success stories of brownfield projects in Canada.

<http://cmhc.ca/en/inpr/su/sucopl/>

DOCUMENTS & REPORTS

These documents and reports provide useful background information on how brownfields are being developed in other jurisdictions, as well as success stories about completed brownfield redevelopment projects.

Government of Ontario

A Practical Guide to Brownfield Redevelopment in Ontario

Available at www.mah.gov.on.ca

Ministry of Community Development, Local Government Division

Revitalization Tax Exemptions: A Primer on the Provisions in the Community Charter www.cserv.gov.bc.ca/LGD/gov_structure/library/community_charter_revital_tax_exemptions.pdf

Canadian Mortgage and Housing Corporation

Brownfield Redevelopment for Housing in Canada - Case Studies

The articles on Brandt’s Creek Crossing in Kelowna, and London Landing in Richmond for examples of past BC brownfield successes are of particular interest.

www.cmhc-schl.gc.ca/en/inpr/su/sucopl/sucopl_004.cfm

Canadian Real Estate Association

Redeveloping Brownfields - Information for Realtors

www.mah.gov.on.ca/AssetFactory.aspx?did=5248

B.C. GOVERNMENT RESOURCES

Ministry of Agriculture and Lands

www.gov.bc.ca/al

Ministry of Community Development

www.gov.bc.ca/cd

Ministry of Environment

www.gov.bc.ca/env



- 1 National Round Table on the Environment and the Economy, "Cleaning up the Past, Building the Future: A National Brownfield Redevelopment Strategy for Canada", Ottawa: National Round Table on the Environment and the Economy, 2003.
- 2 Regional Analytics Inc., "A Preliminary Investigation into the Economic Impact of Brownfield Redevelopment Activities in Canada", Background Report prepared for the National Roundtable on the Environment and the Economy, 2002.
- 3 Northeast-Midwest Institute. Evans Paull. "The Environmental and Economic Impacts of Brownfields Redevelopment – A Working Draft for Distribution", July 2008.
- 4 Ibid.
- 5 See for example, Hara Associates, "Market Failures and Optimal Use of Brownfield Redevelopment Policy Instruments", Background Report prepared for the National Roundtable on the Environment and the Economy, 2003 and Environment Canada, "Rising Property Values on Hamilton's West Harbourfront", 1998.
- 6 George Washington University. Deason et.al., "Public Policies and Private Decisions Affecting the Redevelopment of Brownfields", 2001.
- 7 Northeast-Midwest Institute. Paull, Evans. "The Environmental and Economic Impacts of Brownfields Redevelopment – A Working Draft for Distribution", July 2008.
- 8 Northeast-Midwest Institute. Paull, Evans. "The Environmental and Economic Impacts of Brownfields Redevelopment – A Working Draft for Distribution", July 2008.
- 9 International City/County Management Association. Singer, Molly. "Small Spaces, Special Places: Coordination of Rural Brownfields Redevelopment.
- 10 Ibid.
- 11 Ontario Ministry of Municipal Affairs and Housing. "A Practical Guide to Brownfield Redevelopment in Ontario", Fall 2007.

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