INTRODUCTION

The Federation of Canadian Municipalities’ (FCM) Green Municipal Fund™ (GMF) has produced this series of brownfield roadmaps to help municipalities and their private-sector partners better understand how to redevelop brownfields in their communities. The roadmaps provide a high-level overview of the brownfield redevelopment process in each province and territory, linking each step to relevant legislative requirements and potential sources of funding.

Developed in close consultation with provincial and territorial governments, each roadmap features an easy-to-follow path through three areas:

- an overview of the brownfield redevelopment process — a description of the steps typically followed when redeveloping a brownfield site in Canada
- provincial requirements — an outline of provincial legislation and policy requirements associated with each step in the process
- funding and incentive programs — a list of relevant resources, such as GMF, that are available to support municipalities and their partners as they undertake brownfield redevelopment

Each roadmap features a flowchart that summarizes the main activities and milestones, illustrates where the steps are connected, and refers to further details in the document.

Visit Revitalize Your Brownfields for additional tools, guidance and resources related to brownfield redevelopment.

The information presented is current to the publication date and may not capture all relevant programs. Please contact the responsible organizations to verify up-to-date information.

NOTE: This document summarizes current provincial legislation and must not be regarded as a formal legal interpretation. Please refer to the identified legislation for complete details on legislative requirements, and seek legal advice if necessary.

The Government of Canada endowed FCM with $550 million to establish the Green Municipal Fund™. The Fund supports partnerships and leveraging of both public and private-sector funding to reach higher standards of air, water and soil quality, and climate protection.
# British Columbia 2016 Brownfield Roadmap

## Brownfield Redevelopment Process

<table>
<thead>
<tr>
<th>Step</th>
<th>Process</th>
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</table>
| **1. Plan** | Conduct community-wide brownfield planning and engagement activities  
Standardize and streamline approval processes for redevelopment proposals  
Consider interim land use planning  
Compile inventory of brownfield sites  
Track and showcase redevelopment progress |
| **2. Study** | Develop sustainable remediation/redevelopment plan  
Complete environmental site assessments  
Complete risk assessment (if required)  
Determine remedial objective  
Conduct remediation or risk management studies/optimization  
Develop remedial/risk management action plan that includes sustainable approaches where possible |
| **3. Remediate** | Complete building demolition and recycle soil and waste where possible  
Remediate site or implement risk management strategies using sustainable approaches where possible  
Receive confirmation of compliance or contaminated site closure |
| **4. Redevelop** | Perform ongoing risk management and monitoring as required  
Design and construct site infrastructure |

## Provincial Requirements

<table>
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<th>Requirement</th>
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</table>
| Consider adding a brownfield planning component to the official community plan  
Implement revitalization tax exemptions, environmental protection and soil removal bylaws  
Identify contaminated sites in the community as per Public Sector Accounting Board standard PS 3260  
Seek local government approval for site redevelopment activities  
Submit site profile (if required)  
Perform site investigations (if required)  
Determine remediation standards for the site  
Perform human health and environmental health risk assessments if using risk-based standards  
Evaluate remediation options, prepare remediation plan and, if desired, seek Approval in Principle for the remediation plan  
Perform remediation independently or under Approval in Principle  
Submit Remediation Confirmation Report and apply for Certificate of Compliance (if required)  
Meet local government planning approval and permitting requirements  
Perform ongoing site management including monitoring, reporting, provision of security and registration of covenants (if required) |
# British Columbia 2016 Brownfield Roadmap

## Funding and Incentive Programs

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Other Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Plan</td>
<td>Green Municipal Fund (GMF) grants are available for sustainable neighbourhood action plans or community brownfield action plans (50 per cent of eligible costs; grant maximum of $175,000)</td>
<td>BC Infrastructure Planning Grants, BC Revitalization Tax Exemptions</td>
</tr>
<tr>
<td>2. Study</td>
<td>GMF grants are available for feasibility studies (50 per cent of eligible costs; grant maximum of $175,000) and pilot projects (50 per cent of eligible costs; grant maximum of $350,000)</td>
<td>Sustainable Development Technology Canada offers innovative technology development funding (soil and water treatment, technology development and demonstration)</td>
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<tr>
<td>3. Remediate</td>
<td>GMF loans are available for brownfield capital projects (up to 80 per cent of eligible costs)</td>
<td>New Building Canada Fund (Remediation)</td>
</tr>
<tr>
<td>4. Redevelop</td>
<td>GMF loans and grants are available for capital projects in the energy, transportation, waste and water sectors (up to 80 per cent of eligible costs)</td>
<td>New Building Canada Fund (Redevelopment), Also, consider obtaining private funding from financial institutions and developers</td>
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</tbody>
</table>
This section outlines the steps typically undertaken in planning, assessing, remediating and redeveloping brownfield sites. Not all of the steps are required for every project. Some steps are suggested best practices and some steps can be performed concurrently. The process is described using universal site remediation terminology.

1. Plan

1.1 Community-wide brownfield planning activities

This step includes planning activities associated with brownfield redevelopment, such as stakeholder and community engagement and the creation of sustainable community plans, community improvement plans (CIPs), neighbourhood plans and brownfield redevelopment strategies. Parties typically involved: municipal planning department, planning consultants.

1.2 Standardized and streamlined approval processes for brownfield redevelopment proposals

Municipalities should standardize and streamline approval processes to ensure that brownfield redevelopment proposals are treated in an efficient, consistent and timely manner. Long approval processes can have a significant impact on a project’s bottom line and jeopardize its financial viability. The streamlining process should include consultations with stakeholders, such as the public and developers. Parties typically involved: municipal planning department, consultants.

1.3 Interim land use planning

Municipalities may consider interim land uses for sites that, for financial or other reasons, cannot be redeveloped immediately. In this case, rather than leaving sites vacant, temporary or interim uses (such as parking lots, community gardens or temporary commercial/industrial uses) could be more economically and socially beneficial to the community. However, the interim land use must conform to environmental legislation and should not increase risks to human health and the environment, nor should it impede future redevelopment to a desirable end use. Parties typically involved: municipal planning department, planning consultants.

1.4 Identification and inventorying of brownfield sites

In some provinces and territories, information related to brownfields or contaminated sites is compiled into databases or site registries. These inventories may be made available to the public. Municipalities can reference this
information to identify contaminated sites and create a municipal brownfield inventory. Municipalities can also use this information to showcase progress on brownfield redevelopment in their community.

Municipalities should also note that the Public Sector Accounting Board standard on liability for contaminated sites, Section PS 3260 in the CPA Canada Public Sector Accounting Handbook (Chartered Professional Accountants Canada), covers fiscal periods commencing on or after April 1, 2014. Section PS 3260 contains standards for municipalities on how to account for and report a liability associated with the remediation of contaminated sites for which they are responsible. Specifically, it establishes when to recognize and how to measure a liability for remediation. To properly estimate and track the associated liabilities, municipalities may need to develop an inventory of contaminated or potentially contaminated sites. Careful consideration should be given to the scope of Section PS 3260. A liability generally results from contamination at sites that are no longer in productive use or contamination arising from an unexpected event, such as a natural disaster. The standard does not apply to liabilities associated with retiring long-lived tangible capital assets in productive use (for example, an operating solid waste landfill site). For more information, contact CPA Canada. Parties typically involved: municipal treasury, property, planning, and engineering and works departments; auditors and provincial officials.

2. Study

2.1 Sustainable remediation and redevelopment

Sustainable remediation considers the full picture when making decisions about brownfield remediation and redevelopment projects. It ensures that all aspects of the project — from assessment to redevelopment — are managed in a way that optimizes and balances environmental, social and economic benefits. A range of remediation and risk management techniques may be considered, such as administrative controls (e.g. zoning and land use restrictions); physical barriers or ground covers (e.g. asphalt); in-situ techniques, which are applied in the ground or in water; and ex-situ techniques, which involve excavating contaminated soil or pumping out groundwater.

2.2 Environmental site assessments

Known or suspected contaminated sites must be assessed to determine the type, concentration, location and extent of contamination. This information is gathered by using specific contaminated site assessment approaches, usually performed in phases and with more detailed information collected in each progressive phase. The phases are typically defined as follows:

- **Phase I Environmental Site Assessment**: a preliminary assessment to characterize a site by evaluating current and historical land uses or activities, potential areas of contamination, and surrounding land uses or activities
- **Phase II Environmental Site Assessment**: a preliminary assessment during which field samples are analyzed to determine contaminant types and concentrations
- **Detailed or Delineation Environmental Site Assessment**: in some cases, a more detailed assessment is performed to confirm contaminant types and concentrations, and to delineate contaminated areas

Following the site assessment, the generic provincial remedial objectives (i.e. the concentrations of contaminants allowed in the soil or groundwater based on the specific land use planned) should be reviewed to determine the feasibility of meeting these objectives. In some provinces, these remedial objectives are called remedial or remediation standards or criteria. Parties typically involved: municipal engineers and planners, environmental consultants.
2.3 Risk assessment

If, based on the site assessment results, it is not feasible to meet the generic provincial remedial objectives, there is an option in most provinces to perform a detailed risk assessment to develop site-specific or risk-based remediation objectives. The risk assessment must demonstrate that the site-specific objectives will protect both the environment and human health to the same extent as the generic objectives, if those objectives could have been met. Parties typically involved: municipal engineers and planners, environmental consultants, risk assessors.

2.4 Remedial objective determination

The final remedial objectives for the site are determined in this step. These could be either generic remedial objectives set by the province or territory, or the equally protective site-specific or risk-based remedial objectives. Parties typically involved: municipal engineers and planners, environmental consultants.

2.5 Remediation or risk management feasibility studies/optimization

In this step, remediation or risk management options for the site are evaluated. This could entail a study evaluating the feasibility of various options, based on available literature or based on past experience. It could also include an in-depth bench- or field-scale analysis to support the selection of a specific technology or method, or to optimize the operating parameters for a specific technology or method. Parties typically involved: municipal engineers and planners, environmental consultants, remediation contractors.

2.6 Remedial/risk management action planning

Based on the review of the remediation and risk management options applicable to and viable for the site, the final options are selected and a remedial action plan is developed to outline how these options will be implemented. Where possible, this plan should include the use of sustainable approaches. Parties typically involved: municipal engineers and planners, environmental consultants, remediation contractors.

3. Remediate

3.1 Building demolition and soil and waste recycling

This step involves building and infrastructure demolition and soil and waste removal (e.g. utilities, roads, above-ground or underground storage tanks). Where possible, and in accordance with environmental regulations or policies, soil and waste should be recycled on site or reused for other purposes. Parties typically involved: municipal engineers and planners, environmental consultants, remediation contractors, waste management contractors.

3.2 Remediation/risk management implementation

In this step, site remediation or risk management actions, or both, are carried out as described in the remedial action plan. Where possible, sustainable remediation or risk management approaches should be used. These activities are performed until the contamination is removed, altered, contained or destroyed to meet the provincial remedial objectives or the site-specific, risk-based objectives. Parties typically involved: municipal engineers and planners, environmental consultants, remediation contractors.
3.3 **Confirmation of compliance or contaminated site closure**

This step results in official verification that the site has met the established remediation or risk management objectives. The regulatory documentation required at this stage typically states three things:

- whether the site meets the regulatory requirements
- whether ongoing monitoring is required
- whether continued risk management is required

At this stage, the results of the remediation or risk management actions and the next steps for redevelopment are usually communicated to stakeholders and the community. **Parties typically involved:** municipal engineers and planners, environmental consultants, provincial officials.

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4. **Redevelop**

4.1 **Ongoing risk management and monitoring**

Once remediation is complete or risk management activities have been implemented, long-term monitoring or risk management may be required, depending on the restrictions placed on the site. This could involve periodic sampling of soil or groundwater, or other restrictions placed on the site (e.g. limitations on excavation or on land use, or access controls). **Parties typically involved:** municipal engineers and planners, environmental and planning consultants, developers, construction contractors.

4.2 **Design and construction of infrastructure**

This step involves redevelopment activities, including the design and construction of infrastructure on the site. **Parties typically involved:** municipal engineers and planners, environmental and planning consultants, developers, construction contractors.
Provincial Requirements

This section outlines the key pieces of British Columbia’s brownfields legislation and policy positions related to each brownfield redevelopment step.

Key legislation and sources of information

- **BC Ministry of Environment**
  - *Site Remediation*
  - *Site Remediation Fact Sheets*
  - *BC Environmental Management Act*
  - *BC Contaminated Sites Regulation*
  
  For more information:
  - **BC Ministry of Environment, Land Remediation Section**
  - 250-387-4441
  - site@gov.bc.ca

- **BC Brownfield Renewal**
  - *BC Brownfield Renewal website*
  
  For more information:
  - **BC Ministry of Environment, Land Remediation Section**
  - 250-387-4441
  - site@gov.bc.ca

- **Local Government Division, Ministry of Community, Sport and Cultural Development**
  - *Local Government Department*

1. Plan

1.1 Consider adding a brownfield planning component to the official community plan

Part 26 of the *Local Government Act* authorizes the development of *official community plans* (OCPs) in BC. An OCP is a local government bylaw that provides objectives and policies to guide decisions on planning and land use management within the area covered by the plan. OCPs are significant because, once adopted, all bylaws and works undertaken by a municipal council or board must be consistent with the plan. Other sections of the *Local Government Act* provide further direction and guidance for the content to be included in OCPs.

* NOTE: This document summarizes current provincial legislation and must not be regarded as a formal legal interpretation. Please refer to the identified legislation for complete details on legislative requirements, and seek legal advice if necessary.
1.2 Implement revitalization tax exemptions, environmental protection and soil removal bylaws
The BC Community Charter gives municipal councils powers (through bylaws, regulations, prohibitions, etc.) to set licensing, permitting and approval requirements for protecting the environment, buildings and other structures, soil removal and the deposit of soil or other materials on a property. Municipal councils may also develop revitalization tax exemptions.

1.3 Identify contaminated sites in the community
As a result of the standard on liability for contaminated sites (Section PS 3260 of the CPA Canada Public Sector Accounting Handbook), municipalities may need to develop an inventory of contaminated or potentially contaminated sites in order to estimate and track the liabilities associated with them. In developing the inventory, careful consideration should be given to the scope of Section PS 3260. Guidance and additional information on the application of PS 3260 in British Columbia can be found on the Government Finance Officers Association of British Columbia website.

Identifying contaminated, or potentially contaminated, land within the community will also help municipalities plan for brownfield redevelopment. The BC Environmental Management Act and Contaminated Sites Regulation provide legal definitions of contaminated sites. As well, the provincial Site Registry (created to meet requirements set out in the Environmental Management Act, Section 43) may have information that can help municipalities prepare brownfield inventories.

2. Study

2.1 Seek local government approval for site redevelopment activities
The first step in redeveloping a site typically involves submitting an application to the local government for approval. The types of applications reviewed by local governments or approving officers include:

- official community plan and zoning bylaw amendment applications
- development or development variance permits
- soil removal permits
- structure demolition permits
- subdivision applications

The BC Toolkit for Former Service Stations Process Guide provides an outline of the roles and responsibilities of each of the parties involved in the decommissioning and redevelopment of a site.

2.2 Submit site profile (if required)
Section 40 of the Environmental Management Act and Part 2 of the Contaminated Sites Regulation outline the specific situations in which a site profile is required. For example, a site profile may be required for one of the application types listed above if a commercial or industrial activity with the potential to cause contamination has occurred on the site.
After receiving a site profile, a ministry director may impose a site investigation requirement. This temporarily restricts the local government or official from approving the land use related application (freezing the application). This restriction on land use approvals will continue until one of several things occurs: the site is determined to be free of contamination; the remediation plan receives Approval in Principle; the site receives a Certificate of Compliance confirming site remediation; or a ministry director otherwise releases the freeze.

2.3 Perform site investigations (if required)

To determine the presence and extent of contamination, the following site investigation steps may be required:

Preliminary site investigation — Stage 1 (*Contaminated Sites Regulation*, Section 58(1)(a)): This stage is generally equivalent to the Phase I Environmental Site Assessment (see Overview section above). Details on how to find current or historical information on a site and its surrounding area can be found in *BC’s Toolkit for Former Service Stations, Site Information Resources*. If the site is not contaminated, the owner can apply for a determination, which removes the freeze on land use approvals and permits. For more information, see the *Site Profile Freeze and Release Provisions Fact Sheet*.

Preliminary site investigation — Stage 2 (*Contaminated Sites Regulation*, Section 58(1)(b)): This stage is generally equivalent to the Phase II Environmental Site Assessment (see Overview section above).

- If the site is not contaminated, the owner can apply for a determination, which removes the freeze on land use approvals and permits. For more information, see the *Site Profile Freeze and Release Provisions Fact Sheet*.
- If the site is contaminated, the owner must perform a detailed site investigation, which is generally equivalent to the Detailed or Delineation Environmental Site Assessment (see Overview section above).

2.4 Determine remediation standards for the site

The *Contaminated Sites Regulation* outlines numerical and risk-based standards for contaminated site remediation in BC. For more information, see the *Environmental Quality Standards Fact Sheet*.

2.5 Perform human health and environmental health risk assessment (if desired)

If the site owner has decided to use risk-based standards, a human health and environmental health risk assessment is undertaken as per the *Contaminated Sites Regulation*, Section 18, and the Ministry of Environment resource, *Supplemental Guidance for Risk Assessments*.

2.6 Evaluate remediation options, prepare remediation plan, and seek Approval in Principle (if desired)

Remedial options are considered and selected in keeping with the *Environmental Management Act*, Section 56. The site owner may apply for Approval in Principle of the remediation plan, if desired. An Approval in Principle will allow local governments to release any freeze on land use approvals or permits for contaminated sites. For more information, see the *Site Profile Freeze and Release Provisions Fact Sheet*. 
3. Remediates

3.1 Perform remediation independently or under Approval in Principle

Remediation work is carried out as per the remediation plan and, if applicable, the Approval in Principle as per the Environmental Management Act, sections 53 and 54, and the Contaminated Sites Regulation, parts 9 and 13.

3.2 Submit Remediation Confirmation Report and apply for Certificate of Compliance

Once the remediation and any risk management steps are completed, the site owner may submit a Remediation Confirmation Report indicating that the site was remediated as per the remediation plan. The site owner may also apply at this time for a Certificate of Compliance as per the Environmental Management Act, Section 53(3) and the Contaminated Sites Regulation, Section 49. A Certificate of Compliance will allow local governments to release any freeze on land use approvals or permits, or to issue an occupancy permit. For more information, see the Site Profile Freeze and Release Provisions Fact Sheet.

4. Redevelop

4.1 Meet local government building permitting requirements

Refer to the local government for building and other permitting requirements.

4.2 Perform ongoing site management, including monitoring, reporting, provision of security and registration of covenants (if required)

If a risk assessment was performed and risk management activities were undertaken, any or all of these activities may be required, as per the Environmental Management Act, section 53, and the Contaminated Sites Regulation, section 48.
This section details funding and incentive programs shown in the flowchart on page one:

- FCM’s Green Municipal Fund (GMF) brownfield funding opportunities
- Federal programs that fund some aspect of brownfield redevelopment
- Provincial programs that fund some aspect of brownfield redevelopment

1. Plan

GMF grants for plans

Through GMF, FCM provides grants for plans, including community brownfield action plans (e.g. community brownfield strategies, community improvement plans or revitalization plans). FCM will provide up to 50 per cent of eligible project costs to a maximum of $175,000. In most cases, GMF funding can be combined with federal and provincial funding.

Status: Currently accepting applications

Contact:
- Federation of Canadian Municipalities
  Green Municipal Fund
  1-877-997-9926 • gmf@fcm.ca

For more information: FCM’s Green Municipal Fund

BC Infrastructure Planning Grants

This program offers grants to support local governments in projects related to sustainable community infrastructure planning. Grants of up to $10,000 are available to help improve or develop long-term comprehensive plans, which may include brownfield redevelopment. Grants can be used for a range of activities related to assessing the technical, environmental and economic feasibility of municipal infrastructure projects.

Status: Currently accepting applications

Contact:
- Infrastructure and Finance Division
  Ministry of Community, Sport and Cultural Development
  250-387-4060

For more information: Infrastructure Planning Grant Program
BC Revitalization Tax Exemptions

Section 226 of the BC Community Charter provides the authority to exempt property from municipal property value taxes. To use this authority, a council must take several steps:

- establish a revitalization program with defined reasons and objectives
- enter into agreements with property owners
- exempt the property from taxation once all program and agreement conditions have been met

Exemptions may apply to the value of land or improvements, or both. Councils are free to specify the amount and extent of tax exemptions available.

**Status:** Ongoing

**Contact:**
Local Government Department, Ministry of Community, Sport and Cultural Development

**For more information:**
- Revitalization Tax Exemptions — A Primer on the Provisions in the Community Charter
- Revitalization Tax Exemptions
- Information on the Community Charter
- Community Charter

2. Study

GMF grants for feasibility studies and pilot projects

Through GMF, FCM provides grants for feasibility studies (including Phase II environmental site assessments and remedial action planning) and pilot projects (including testing remediation techniques). FCM will provide up to 50 per cent of eligible project costs to a maximum of $175,000 for feasibility studies and $350,000 for pilot projects. In most cases, GMF funding can be combined with federal and provincial funding.

**Status:** Currently accepting applications

**Contact:**
Federation of Canadian Municipalities
Green Municipal Fund
1-877-997-9926 • gmf@fcm.ca

**For more information:** FCM’s Green Municipal Fund

**Sustainable Development Technology Canada — innovative technology development funding**

Sustainable Development Technology Canada (SDTC) is a federally funded, not-for-profit foundation. SDTC finances and supports the development and demonstration of clean technologies that provide solutions to issues of climate change, clean air, water quality and soil, and deliver economic, environmental and health benefits to Canadians. On average, SDTC funds 33–50 per cent of eligible project costs.

**Status:** Currently accepting applications

**Contact:**
Sustainable Development Technology Canada
613-234-6313 • info@sdtc.ca

**For more information:** Sustainable Development Technology Canada
3. Remediate

GMF loans for brownfield capital projects

Through GMF, FCM provides loans for remediation and risk management activities at brownfield sites. Up to 80 per cent of eligible project costs are covered. In most cases, GMF funding can be combined with federal and provincial funding.

**Status**: Currently accepting applications

**Contact**:
Federation of Canadian Municipalities
Green Municipal Fund
1-877-997-9926 • gmf@fcm.ca

For more information: FCM’s Green Municipal Fund — Brownfields Sector Funding

New Building Canada Fund

The $10-billion Provincial–Territorial Infrastructure Component (PTIC) of the New Building Canada Fund (NBCF) is intended to support infrastructure projects of national, regional and local significance that contribute to economic growth, a clean environment and stronger communities. The PTIC is divided into two sub-components:

- $9 billion for national and regional projects
- $1 billion for projects located in communities of fewer than 100,000 residents, through the Small Communities Fund

These 10-year funding programs run from 2014 to 2024 and will operate concurrently with the federal Gas Tax Fund. Brownfield redevelopment projects are eligible under these programs. Specifically, the programs will fund the remediation or decontamination and the redevelopment of a brownfield site within municipal boundaries, where the redevelopment includes at least one of the following components:

- the construction of public infrastructure as identified in the context of any category under the NBCF
- the construction of municipal-use public parks and affordable housing

**Status**: Currently accepting applications

**Contact**:
Infrastructure Canada
613-948-1148 • info@inf.c.gc.ca

For more information: Infrastructure Canada’s New Building Canada Fund website
4. Redevelop

**GMF loans and grants for redevelopment capital projects**

Through GMF, FCM provides loans and grants for redevelopment activities related to energy, water, waste and transportation. Funding is provided for up to 80 per cent of eligible project costs. The loan maximum is $5 million, and grants are available for up to 15 per cent of the loan. Applicants with high-ranking projects may be eligible for a loan of up to $10 million combined with a grant for 15 per cent of the loan amount, to a maximum of $1.5 million. In most cases, GMF funding can be combined with federal and provincial funding.

**Status:** Currently accepting applications

**Contact:**
- Federation of Canadian Municipalities
  Green Municipal Fund
  1-877-997-9926 • gmf@fcm.ca

**For more information:** [FCM’s Green Municipal Fund](#)

**New Building Canada Fund**

See Remediation section above.

**Private funding from financial institutions and developers**

Municipalities should also seek information on private funding sources to assist with brownfield redevelopment activities.