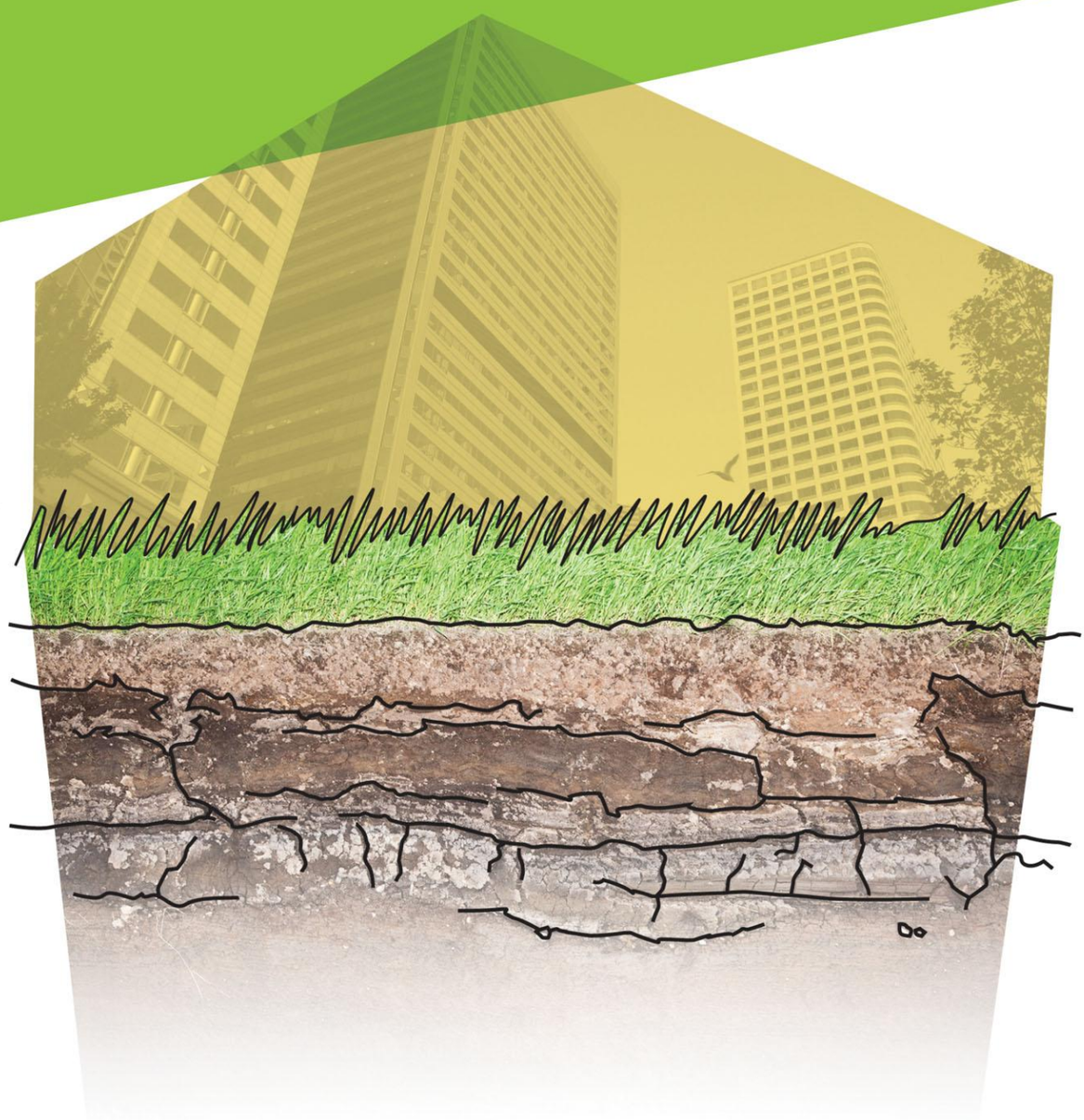
FEDERATION OF CANADIAN MUNICIPALITIES
FÉDÉRATION CANADIENNE DES MUNICIPALITÉS

GREEN MUNICIPAL FUND

Newfoundland and Labrador Brownfield Roadmap 2014



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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, and link each process 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:

- The generic brownfield redevelopment process — a description of the steps that are typically followed when redeveloping a brownfield site in Canada
- Provincial requirements — an overview 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

The roadmaps feature a flowchart that summarizes the main activities and milestones, illustrates where the steps are connected, and links 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.

This publication is available on the FCM Green Municipal Fund website at www.fcm.ca/gmf under "Resources."

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NEWFOUNDLAND AND LABRADOR
2014 Brownfield Roadmap

	Generic Brownfield Redevelopment Process	Provincial Requirements	Funding and Incentive Programs
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	• Consider including a brownfield component in community plans • Identify contaminated sites in the community as per Public Sector Accounting Board standard PS 3260	**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)
2 **Study** 	• Develop sustainable remediation/redevelopment plan • Complete Environmental Site Assessments • Complete risk assessment (if required) • Determine remedial objective • Conduct remediation/risk management studies/optimization • Develop remedial/risk management action plan that includes the use of sustainable approaches where possible	• Perform site assessment • Determine acceptable contaminant concentrations for the site • Develop Remedial Action Plan and submit to province	**GMF grants** are available for feasibility studies and field tests (50 per cent of eligible costs; grant maximum of $175,000) Other programs: Sustainable Development Technology Canada offers innovative technology development funding (soil and water treatment, technology development and demonstration)
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/contaminated site closure	• Implement Remedial Action Plan • Submit Closure Report and Record of Site Condition • Obtain site closure	**GMF loans** are available for brownfield capital projects (up to 80 per cent of eligible costs)
4 **Redevelop** 	• Perform ongoing risk management and monitoring as required • Design and construct site infrastructure	• Perform ongoing site management and monitoring • Meet local government permitting requirements	**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) Also, consider obtaining private funding from financial institutions, developers

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Generic Brownfield Redevelopment Process

This section outlines the steps that are typically undertaken in planning, assessing, remediating and redeveloping brownfield sites. Not all of the steps may be 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.

Plan

Community-wide brownfield planning activities

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

Standardize and streamline 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.

Interim land use planning

Municipalities may consider undertaking interim land uses for sites that cannot be redeveloped immediately — for financial or other reasons. 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 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.

Identification and inventories 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 standard on Liability for Contaminated Sites, Section PS 3260, contained in the Public Sector Accounting Handbook of Chartered Professional Accountants Canada, comes into effect for 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 (e.g. operation of a 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.

Study

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.

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 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) should be reviewed to determine the feasibility of meeting these objectives. In some provinces, remedial objectives are called remedial or remediation standards or criteria. **Parties typically involved:** municipal engineers and planners, environmental consultants.

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.

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.

Remediation/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.

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.

Remediate

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, 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.

Remediation/risk management implementation

In this step, the site remediation, 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.

Confirmation of compliance/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:

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

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

Redevelop

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.

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 Newfoundland and Labrador's brownfields legislation and policy positions related to each generic step.

Key legislation and sources of information[1]

For additional information about Newfoundland and Labrador's contaminated site legislation and guidelines please consult:

- Part VII "Contaminated Sites" of the *Environmental Protection Act* (Chapter E-14.2, Assented to May 22, 2002) which contains provisions related to sites that have been designated.
- The Newfoundland and Labrador Guidance Document for the Management of Impacted Sites (September 2005) which describes in detail the process for managing impacted sites (sites that are designated as contaminated under the *Environmental Protection Act* and non-designated sites). The outlined process is mandatory for designated sites. For non-designated sites, the guidance process should be followed as it greatly facilitates eventual site closure.

In Atlantic Canada, there has been considerable effort to harmonize the management of contaminated sites among the four provinces through the use of risk-based corrective action (RBCA or "Rebecca"). This harmonization has been overseen by the Atlantic Partnership in Risk Based Corrective Action Implementation (Atlantic PIRI). Atlantic PIRI has established a number of tools and information sources for use by all provinces, including detailed information and training programs on how to use and apply Atlantic RBCA procedures. All four Atlantic provinces are active members of PIRI and are continuing to work on harmonizing policies and developing appropriate tools and information sources.

[1] 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.

Plan

Consider including a brownfield component in community plans

The Newfoundland and Labrador *Urban and Rural Planning Act* (2000) contains provisions related to developing regional and municipal plans. Section 29 of the Act allows for creating development schemes that can be used to carry out local improvement schemes. Under Section 31, municipalities can also develop plans for specific areas within the community by designating a local planning area. Brownfield redevelopment planning could be incorporated into these planning mechanisms.

Identify contaminated sites within the community

As a result of the Standard on Liability for Contaminated Sites, Section PS 3260, 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 the Section PS 3260.

Understanding the extent of contaminated or potentially contaminated land within their community will also help municipalities to plan for brownfield redevelopment. The Province maintains an Environmental Sites Database that contains information on sites or properties that have been impacted, or potentially impacted by an environmental contaminant. Once a site has been investigated, an entry is placed in the database regardless of whether contamination was discovered or whether any confirmed contaminants have been remediated. Property owners (or those who have authorization from a property owner) can obtain information on sites in the database by contacting the Pollution Prevention Division of the Department of Environment and Conservation.

Study

Perform site assessment

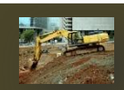
Section 28 of the *Environmental Protection Act* requires that environmental site assessments of designated contaminated sites be submitted to the Department of the Environment and Conservation for review and approval. As outlined in the Guidance Document for the Management of Impacted Sites and depending on the complexity of the site, the Province may determine that the environmental site assessment must be performed by a site professional who meets the requirements in the Guidelines. The assessment must also meet the minimum requirements set out in the Atlantic RBCA Guidance Documentation.

Determine acceptable contaminant concentration levels for the site

According to the Guidance Document for the Management of Impacted Sites, the selection of acceptable levels of contaminant concentrations for a site can be performed using a Tier I, Tier II or Tier III method. In Tier I, the acceptable clean-up criteria are selected from the Tier I Risk-Based Screening Level Table in the Atlantic RBCA Guidance Documentation (for petroleum hydrocarbons) or from the Canadian Council of the Ministers of the Environment Environmental Quality Guidelines (for other contaminants). Tier II uses accepted risk assessment models, established protocols and modified Tier I assumptions to develop site-specific target levels as outlined in the Guidelines. Tier III is used when Tier I or II methods are not applicable or viable, and may require the selection of site-specific target levels or the implementation of risk management techniques to reduce or eliminate exposure to the identified contaminants.

Develop and submit a Remedial Action Plan

Section 28 of the *Environmental Protection Act* requires Remedial Action Plans for designated contaminated sites to be submitted to the Minister of the Environment for review and approval. As per the Guidance Document for the Management of Impacted Sites, if Tier I screening levels are proposed, the Province will review the plan and, if it is approved, will inform the party responsible for the site in writing that the plan can be implemented. If Tier II or III site-specific target levels are proposed, the Province will review the file and may require a peer review by an independent site professional (performed at the expense of the person responsible).



Remediate

Implement Remedial Action Plan

The site must be remediated or risk managed as outlined in the approved Remedial Action Plan. As per the Guidance Document for the Management of Impacted Sites, any impacted soil or groundwater not treated on site must be sent to a provincially approved treatment or disposal site. Any deviation in the method or schedule outlined in the Remedial Action Plan must be reported in writing to the Province by the person responsible.

Submit Closure Report and Record of Site Condition

Upon completion of the actions outlined in the Remedial Action Plan, the site professional must complete a Record of Site Condition and submit it with a Closure Report to the Province; demonstrating that all work in the plan has been completed and that the site meets the selected clean-up criteria. If the Province agrees that the work has been completed in accordance with the guidance document, these documents are acknowledged by the Department of Environment and Conservation.

Redevelop

Obtain site closure

Upon acceptance of the closure documentation, the Province has two options for designating site closure:

- Unconditional closure can be achieved by demonstrating (through an environmental site assessment, risk assessment, closure report, or confirmatory sampling or monitoring) that the applicable Tier I, II or III criteria have been met. This type of closure usually permits unrestricted future development or use within the particular land use designation (agricultural, residential, commercial or industrial).
- Conditional closure, which is often given if a risk management approach is used, requires ongoing site management using engineered controls, institutional controls, or periodic monitoring to ensure adequate protection of human and environmental health for the designated land use.

Perform ongoing site management and monitoring

If the site has received a conditional closure, responsibility must be assigned for the long-term site management and monitoring. This may be through assignment of responsibility to subsequent property owners, bonding or other financial guarantors. Once monitoring demonstrates stable site conditions to the Province's satisfaction, the person responsible can submit a second Record of Site Condition for final (or unconditional) closure.

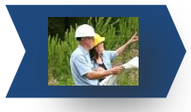
Meet local government planning approval and permitting requirements

Site owners or developers should refer to the local municipality for building and other permitting requirements.

Funding and Incentive Programs

This section details funding and incentive programs shown in the flowchart on page 1:

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



Plan

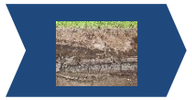
GMF grants for plans

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



Study

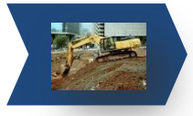
GMF grants for feasibility studies and field tests

Through GMF, FCM provides grants for feasibility studies (including Phase II environmental site assessments and remedial action planning) and field tests for remediation techniques. 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

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
Screening and Evaluations Manager
613-234-6313
For more information: Sustainable Development Technology Canada



Remediate

GMF loans for brownfield capital projects

Through GMF, FCM provides loans for remediation and risk management activities at a brownfield site. 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 capital projects

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 $10 million, and the grant amount is set at up to 20 per cent of the loan to a maximum of $1 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

Private funding from financial institutions, developers

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