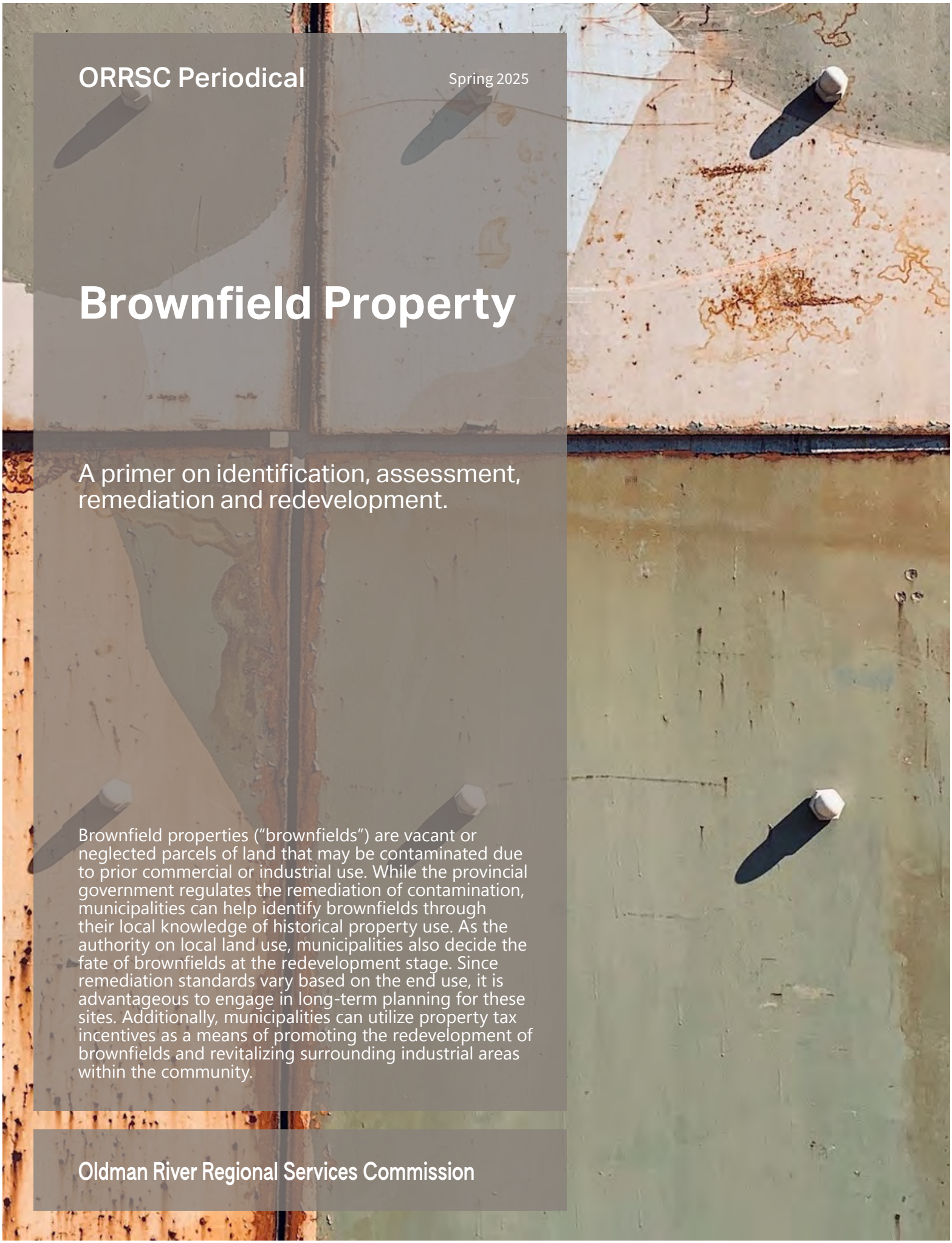

ORRSC Periodical

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Brownfield Property

A primer on identification, assessment, remediation and redevelopment.

Brownfield properties (“brownfields”) are vacant or neglected parcels of land that may be contaminated due to prior commercial or industrial use. While the provincial government regulates the remediation of contamination, municipalities can help identify brownfields through their local knowledge of historical property use. As the authority on local land use, municipalities also decide the fate of brownfields at the redevelopment stage. Since remediation standards vary based on the end use, it is advantageous to engage in long-term planning for these sites. Additionally, municipalities can utilize property tax incentives as a means of promoting the redevelopment of brownfields and revitalizing surrounding industrial areas within the community.

Oldman River Regional Services Commission

Introduction

A brownfield property is a site that previously accommodated a commercial or industrial use; is suspected of being contaminated; is vacant, derelict or underutilized; and has potential for redevelopment. While not explicitly stated in the *Municipal Government Act* (MGA) definition paraphrased above, in practice the term is most frequently used in relation to urban properties—particularly those near downtown cores and along transportation corridors.

Former uses associated with brownfields include gas and bulk fuel stations, auto repair shops, dry cleaners, car washes, landfills, rail yards, highway maintenance yards, refineries, and various heavy manufacturing operations. Common contaminants found on these properties include petroleum hydrocarbons, metals and polycyclic aromatic hydrocarbons. This periodical will canvass the regulatory context governing brownfields and explore how to identify, assess, remediate, and ultimately redevelop this property type.

Why brownfields matter

The municipal interest in brownfields stems from the mandate to maintain safe communities and foster the well-being of the environment under s. 3 of the MGA. Councils fulfill these purposes chiefly through the planning provisions in Part 17 of the Act. If a brownfield is redeveloped without proper remediation, the contamination may result in serious risks to human health and the environment. Volatile compounds in the soil may leach into underground aquifers. They can also migrate through the soil—upward and into the interior space of a building, or laterally to an off-site location. Contaminated groundwater can likewise infiltrate the soil.

Where the contamination on or under a brownfield property has been eliminated through remediation, redevelopment of the property can achieve a more efficient use of land by leveraging existing municipal infrastructure and preventing undue urban sprawl. Making brownfields a core focus of urban revitalization efforts—through an area redevelopment plan or a non-statutory community action plan—can help spur capital investment in the area, enhancing property values and strengthening the local tax base.

Adverse effects

Contamination management is regulated by Alberta Environment and Protected Areas, except for properties owned by the federal Crown. The provincial policy framework for the management of contaminated sites aims to prevent pollution, protect public health, and restore land to productive use.

The legislative scheme for remediation—the mitigation of contamination at a site—is set forth in Part 5 of the *Environmental Protection and Enhancement Act* (EPEA). Notably, the Act defines neither "brownfield property" nor

Brownfield site (former gas station) in the City of Lethbridge

The Government of Alberta sets the acceptable levels of contaminants, measured in parts per million (ppm). Under the Tier 1 guidelines, these thresholds are dependent on the soil texture. For example, in coarse textured soil, the maximum acceptable level of benzene for residentially redeveloped properties is 0.015 ppm and a commercially mitigated site can have up to 0.078 ppm. In comparison, the the maximum concentration in fine textured soil is 0.046 ppm for both land use categories.

Regulatory liability for historical contamination was recently considered by the provincial Environmental Appeals Board in the case of Sears Canada Inc. et al. v. Director, Regional Compliance, South Saskatchewan Region, Alberta Environment and Parks, 17-069-070 and 18-013-R, 2020 ABEAB 6 (CanLII). The property in question had hosted a service station that was originally operated by Sears (the landowner), who later outsourced operations to Suncor until the service station was closed. During decommissioning, it was revealed that a major leak from the underground storage tanks had contaminated the property and spread to a nearby neighborhood. Despite remediation efforts, contamination was still present when Sears initiated bankruptcy proceedings in 2017. In response, the Director issued an environmental protection order to Sears, Suncor, and the new owners who had purchased the property from Sears two years earlier. On appeal, the Board found Sears and Suncor responsible—but not the new owners. In the Board's view, the new owners had merely acted as a landlord and had not actively assumed management or control of the contaminant. Still, the Board cautioned that the new owners could be deemed responsible in the future should they engage in any ground disturbance associated with redeveloping the property.

"contaminated site." While Division 2 of the Act does outline a mechanism for designating contaminated sites, the Environmental Law Centre estimates that this designation has only been applied five times since the Act came into force in 1993. Instead, the provincial ministry regulates contamination almost exclusively through the substance release provisions in EPEA Division 1. These provisions are triggered when a substance is released that may cause, is causing or has caused an adverse effect (i.e. impairment of, or damage to, the environment, human health or safety or property). The most common regulatory response to a substance release is the issuance of an environmental protection order, which is registered against the certificate of title to the affected property and requires the person responsible to take remedial measures. It is worth noting that the human health component of an adverse effect is understood to encompass physical health and mental health. In the case discussed in the sidebar, the Environmental Appeals Board affirmed the Director's finding that the adverse impacts included impacts on peace of mind and quality of life for residents of the nearby neighbourhood.

Regulatory liability

In relation to a substance release, the EPEA defines "person responsible" to include the owner and previous owner of the substance, along with anyone who has had management or control over it. One notable exemption embedded into the definition is that a municipality is not responsible for contamination on land that is either listed on its tax arrears list or that it acquired through the subdivision process as an environmental reserve, municipal reserve, school reserve, road, public utility lot, or public utility right-of-way. The municipal exemption only applies if there is no additional substance release and no aggravation of the adverse effects.

Where a municipality acquires land through an ordinary purchase, it could be liable for contaminants in the same way as if it had acquired the land as an individual or private corporation. Transfers of real property are subject to the rule of "buyer beware"—meaning that the risk of any deficiencies or liabilities rest with the buyer. The exception to this rule is where the seller fails to disclose defects that a buyer might not discover through exercising reasonable due diligence. It is therefore critical for a municipality to assess the baseline environmental condition of a property where there has been a history of commercial or industrial use. Including an indemnification clause in the purchase and sale agreement will protect a municipality against civil lawsuits but will not shield it from regulatory liability under the EPEA. And, as the case in the sidebar illustrates, a landowner can be held liable for any existing contaminants long after purchasing the property.

Identification and assessment

Information on the environmental condition of real property is dispersed across various governmental databases. Potentially contaminated federal land is catalogued in the Federal Contaminated Sites Inventory.

At the provincial level, information related to oil and gas contaminated sites can be accessed through the Alberta Energy Regulator's OneStop platform. Requests for historical information on storage tanks can be submitted through the Alberta Safety Codes Authority, except where a municipality is accredited to administer its own permitting and inspections for storage tanks. Regarding contaminated sites unrelated to oil and gas, the Environmental Site Assessment Repository (ESAR) helps municipalities, developers and the public identify brownfield properties for which an environmental site assessment (ESA) has been mandated by the provincial government. For brownfield properties not listed on ESAR, a municipality's local knowledge of historical commercial and industrial uses within its boundary can help bring awareness about potentially contaminated land. Maintaining an inventory of brownfields can be a beneficial practice to ensure environmental concerns are not overlooked at the development stage. For example, the Town of Magrath lists "Sites Containing Possible/Former Environmental Contamination" in its Municipal Development Plan.

Where no prior assessment has been undertaken in respect of a brownfield, a Phase 1 ESA is recommended to identify the likelihood, types and probable locations of substances that may be present on or under the land. A Phase 1 ESA involves reviewing the current and historic land uses and other available site records, interviewing relevant parties, and inspecting the site to identify areas of potential environmental concern. Common indicators of contamination include stressed vegetation, discoloured soil and offensive odours. The qualified professional undertaking the Phase 1 ESA will produce a report stating whether there is actual, suspected, or no contamination, and what further action is recommended.

Should the Phase 1 ESA recommend further investigation, a Phase 2 ESA will be completed to confirm the presence of contaminants and ascertain their nature and extent. This process includes surveying, drilling boreholes, and analyzing soil and groundwater samples. A Phase 2 ESA report will clearly outline the environmental condition of the property and any potential concerns from on-site and off-site sources, along with recommendations for remediation. Phase 2 ESAs are also used to evaluate residual contamination upon removal of substances from a property. The Alberta Environmental Site Assessment Standard specifies the minimum requirements for Phase 1 and Phase 2 ESAs and guides the planning, implementation and reporting of these studies in conjunction with CSA Standard Z768.

Remediation and exposure control

Remediation is typically undertaken subsequent to a Phase 2 ESA. Sites that are remediated to the Alberta Tier 1 or Tier 2 guidelines are eligible to obtain a remediation certificate under the *Remediation Regulation.*

The Tier 1 guidelines set broad targets for five generic land use categories: natural areas, agricultural, residential/parkland, commercial and industrial. Within the residential/parkland land use category, parkland is understood

CSA Standard Z768 assists in planning, implementing and interpreting the results of Phase I ESAs. The document provides specific guidance on site characterization methods and is to be used in conjunction with the Alberta Environmental Site Assessment Standard.

Whereas BC and Ontario have obligations for reporting on the environmental condition of a property prior to effecting a change in use, no equivalent province-wide requirements exist in Alberta. As such, it is good practice to proactively ensure that redesignation applications are subject to environmental review. In the City of Edmonton, any proposed redesignation from industrial, commercial, agricultural or direct control districts must be accompanied by a Phase I ESA that establishes the baseline environmental condition of the land.

Where the zoning for a brownfield is already in place but no Phase 1 ESA was undertaken, redesignating the property to Direct Control (DC) is an option. Relying on a conventional zoning district comes with some risk that the development of a permitted use might proceed without the benefit of proper remediation. To mitigate this risk, most ORRSC land use bylaws contain administrative provisions that confer power to the Development Authority for contaminated sites, and these provisions are operable even for permitted uses.

The R.W. Lindholm Service Station in Cloquet, Minnesota is the only gas station ever constructed from the designs of Frank Lloyd Wright. While the suspended overhead fuel lines had to be kiboshed due to non-compliance with local safety code regulations, the final design did include a soaring canopy and first-class observation lounge on the upper level. The significance of the building in the development of gas station architecture in America led to its inclusion in the National Register of Historic Places.

Where a brownfield property in Alberta contains a historical building that possesses significant character-defining elements, a municipality may decide that these elements warrant preservation as part of the scheme for remediation and redevelopment. In such circumstances, the municipality can designate the property as a Municipal Historic Resource pursuant to s. 26 of the Historical Resources Act. Under this statutory mechanism, the municipality adopts a bylaw designating the Municipal Historic Resource, and a copy of the bylaw is then registered against the certificate of title.

to include urban parks as well as recreational uses like campgrounds. In selecting the land use category for Tier 1 application, the appropriate category is the one that most closely aligns with the range of allowable uses provided for in the pertinent district of the municipal land use bylaw. It is not only the current land use that must be considered but also potential changes to more sensitive uses. Such potential changes are not limited to situations where a proposed land use redesignation has been initiated; they also include scenarios where a change is reasonably foreseeable. For example, it would generally not be appropriate to apply the natural areas land use category to a site that abuts the boundary of an urban municipality or that has been identified in a local statutory plan as a growth node. Also, where a brownfield abuts a property that fits into a more sensitive Tier 1 land use category, the standards for the more sensitive use must be applied to the portion of the brownfield located within 30 metres of the abutting property. Similarly, if the owner of a remediated site wishes to redistrict the land to accommodate a more sensitive use, additional remediation will be required to meet the standards applicable to that use. Adjustment of the Tier 1 guidelines according to site-specific conditions yields the Tier 2 guidelines.

Remediation to Tier 1 or Tier 2 guidelines is mandatory for sites that fit into the agricultural or natural land use categories, and for sites in the residential/parkland category where new development is being proposed. For sites that fit into the commercial or industrial category, and for existing residential properties that have been impacted by contamination, risk-managing the site through exposure control may be an acceptable alternative where remediation to an acceptable land use endpoint is not feasible. Exposure control entails the ongoing application of physical or engineered barriers coupled with administrative controls and long-term environmental monitoring. Administrative controls relevant to municipal planning include restrictions on land use and the siting of buildings. Exposure control can also be employed as a temporary measure in situations where remediation is the ultimate goal but has yet to be carried out to completion.

Redevelopment

Once contaminant levels are reduced through remediation to meet the regulatory thresholds, a brownfield property has the potential to be redeveloped, subject to local planning policies and development regulations.

The financial feasibility of redeveloping brownfields is often frustrated by high remediation costs, which can result in parcels remaining vacant for prolonged periods. By utilizing the brownfield tax incentives under Part 10 of the MGA, municipalities can help expedite the redevelopment timeline. To implement the tax incentives, a municipality can adopt a bylaw under s. 364.1(2) to exempt (fully or partially) brownfield properties from taxation or defer tax collection on brownfield properties. A bylaw under s. 364.1(2):

- must identify the brownfield properties eligible for exemption or deferral;
- may set criteria that a property must meet to qualify;

- must specify the applicable taxation year(s); and
- must outline any conditions of the exemption or deferral.

Before adopting the bylaw, the Council must hold a public hearing. Once the bylaw is in place, property owners can apply to the municipality for the incentive and the designated officer will assess eligibility. Alternatively, rather than adopting a bylaw under s. 364.1(2), a municipality can enter into an agreement with a brownfield property owner under s. 364.1(11) to exempt the property from tax or defer tax collection.

Another source of capital for brownfields is the Green Municipal Fund, a revolving fund administered by the Federation of Canadian Municipalities. At least 30% of the funding available through this program is reserved for proposals focused on the remediation and redevelopment of brownfields.

Before brownfield properties are fully remediated, they may be suitable for interim uses depending on the nature and extent of contamination. These interim uses could include parking lots, outdoor storage, public parks, spaces for pop-up retail, or renewable energy development. For instance, in the Town of Vulcan, a site formerly occupied by two bulk fuel stations was repurposed into a park after the contaminated soil was moved off-site. The park features a solar installation, with panels mounted on elevator-shaped metal structures as a tribute to the Town's history as a key grain shipping hub. Ongoing monitoring ensures that any residual contamination does not migrate to the land surface or to neighbouring properties. While this 23-kilowatt project was primarily aimed at educating the community about emerging technologies, a 120-kilowatt solar array at the Village of Hill Spring's irrigation pump house on land formerly used in association with the railway helps offset the municipality's annual electricity expenses. Similar revenue-generating opportunities could exist for other municipalities in southern Alberta seeking to deploy low-cost energy on brownfields, as these properties tend to be located in areas that are both adequately separated from residential neighbourhoods and serviced with existing electric distribution infrastructure. The term "brightfields" has been gaining traction to describe this emerging strategy for returning brownfields to productive use. Of course, given the ground disturbance involved in installing the pile foundations that support solar energy structures, stringent environmental monitoring would be required during development and throughout a project's operational stage.

Concluding remarks

Brownfield properties present both challenges and opportunities to municipalities. Proactively identifying these sites is critical in understanding their associated liability risk and in planning desired end uses. Once identified, brownfields warrant careful assessment and remediation to safeguard human health and the environment. The ultimate aim is to return these properties to productive use. By introducing property tax incentives, a municipality can spearhead the revitalization of underutilized areas by helping to alleviate the financial burden of redeveloping brownfields.

Solar Park, Town of Vulcan

Hill Spring Irrigation Pump House Solar PV, Village of Hill Spring

For more information on this topic contact admin@orrsc.com or visit our website at orrsc.com.

ORRSC
3105 16 Ave N
Lethbridge AB T1H 5E8

phone: 403.329.1344
toll-free: 844.279.8760
e-mail: admin@orrsc.com

orrsc.com