

Canadian Brownfields Case Study

East Village Brownfield Remediation



Source: IBC Group Architects, DailyHive

East Village, Calgary, AB: Redevelopment model transforming Calgary's skyline.

PROJECT SUMMARY

The East Village is an award-winning brownfield neighbourhood redevelopment in Calgary, Alberta. East Village was awarded the Category 7, 2018 Brownie award for best small-scale project; known for its RiverWalk, public art, revitalized parks and streetscape, and construction of new homes and bridges¹. Before revitalization, East Village was a neglected neighbourhood that created a barrier between the downtown core and the Bow River that flows north to south through Calgary's core². As such, it was also an under-utilized plot of land with potential to revitalize the downtown core. That being said, a majority of the land was littered with contamination³. The City of Calgary co-ordinated with the Province to produce alternative financial measures to rejuvenate and spur growth in the area⁴. As a result, East Village is now home to more than 3,500 residents, a variety of retailers, and restored heritage buildings that contributes to the character of the community⁵.

When Calgary boomed in 1906, East Village was a vibrant community with a mix of residential, commercial, and industrial activity⁶. However, a gradual decline coupled with an influx of industrial businesses by 1941, caused the area to slowly decline⁷. As a result, the once booming community continued declining despite urban renewal schemes that began to spur development

throughout the city in the 1960s. Aside from a few construction sites of mid-rise towers, this neglect continued until 2007. It was at this point that the renewal of East Village was implemented and developed for execution by the Rivers District Community Revitalization Plan (2019). This plan is a public infrastructure program approved by the

QUICK FACTS

Location

Calgary, Alberta

Project type

Brownfield remediation

Site size

48.6 hectares (120 acres)

Land uses

Open space, recreation, public market

Keywords/special features

East Village, remediation, river walk, revitalization, redevelopment

Website

<https://www.evexperience.com/>

Project Address

Bounded by North: Bow River, East: Elbow River
South: 9th Avenue SE, West: 3rd Street SE

Brownfield Project Award(s)

2018 Brownie Award: Best Small Project

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Case studies were prepared as a course assignment by students enrolled in PLG845: Brownfield Reuse & Development, Cleaning up the Past and Building the Future, School of Urban and Regional Planning, Ryerson University (Winter 2019). Information for the case studies was obtained from online sources, available reports, and, in some cases, site visits and direct communication with stakeholders.

If you are aware of any errors or have updates to the case studies, please contact chris.desousa@ryerson.ca

The opinions expressed in this case study are those of the authors only and do not represent the opinions and views of either Ryerson University, the School of Urban and Regional Planning, or the Canadian Brownfields Network.



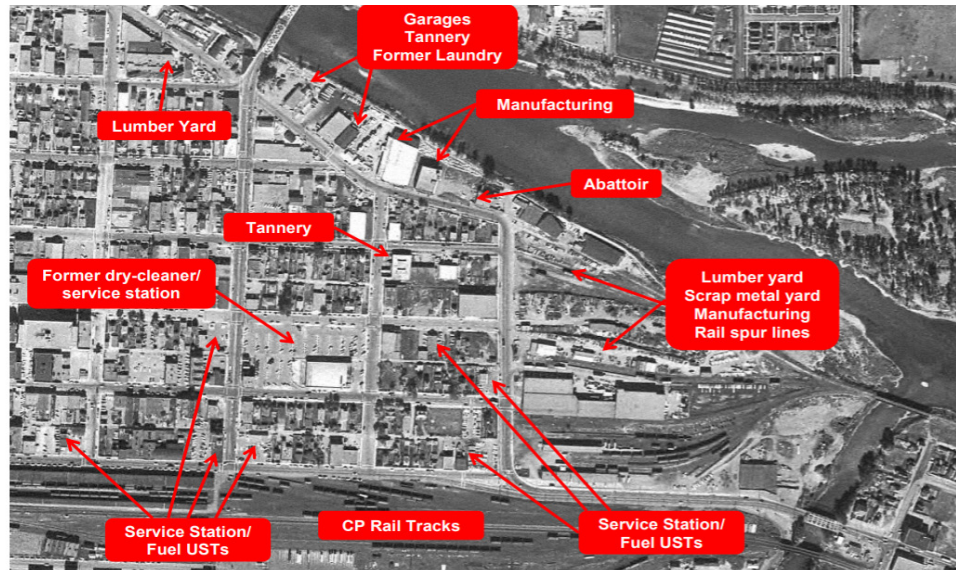
City of Calgary and supported by the Province of Alberta⁸. In 2007, the City of Calgary also created a subsidiary committee to take initiative of the East Village renewal through the Calgary Municipal Land Corporation (CMLC). The City created the CMLC to act as a “redevelopment arm” on behalf of the City to implement projects such as East Village⁹. The CMLC produced the Redevelopment East Village Master Plan in late 2009 and residential construction began by 2010¹⁰. The purpose of the Master Plan (2009) is to encourage private and public sector development in East Village. This Master Plan is currently 10 years into its 20 year development plan, with construction ongoing today.

Cleanup

Prior to the formation of the CMLC, the City began Phase 1 of an Environmental Site Assessment (ESA) in 2004 by assessing 42 city-owned and unoccupied properties¹¹. The regulatory process involved communication with the regulatory authorities of Alberta Environment, the City of Calgary, and Alberta Health Services¹². This phase identified environmental concerns such as existing rail lines, lumber yards, automotive garages, gas stations, dry-cleaners, garbage incinerators and manufacturing operations (glass, battery and metal contaminants)¹³. Phase 2 of the ESA was conducted in 2004 and 2005; assessing 32 out of the 42 City-owned properties¹⁴. This phase was conducted through the use of 100 boreholes and monitoring wells, designed to gather both soil and groundwater samples, which could then be analyzed¹⁵.

This phase identified fill material in the soil at varying depths and debris pockets. The soil samples contained an excess amount of PAHs, metal components, salinity parameters, and low levels of PHCs in soil while the groundwater samples contained low levels of PHCs, VOCs, and PAHs¹⁶.

The results of Phase 1 and 2 of the ESA findings impacted fill materials and debris on-site¹⁷. To deal with the PAHs and metal in the soil, 34,000 m³ of soil had to be excavated. 4,400 m³ of the soil was re-used on site and 16,500 m³ was used as landfill cover material¹⁸. 58,500 m³ of water was simultaneously sent to a sanitary sewer in response to the groundwater contamination¹⁹. The development objectives associated with this cleanup consisted of practical solutions for the management of impacted soil and groundwater. They also focused on protecting workers during construction and mitigating risk for future users of the site²⁰.



Source: Stantec, (Chan) CMLC, ESAA

Initial Environmental Assessments of East Village.

Financing

To aid the financing of East Village mandated through the Rivers District Revitalization Plan, the project utilized a new financing mechanism, the Community Revitalization Levy (CRL)²¹. This public financing method – similar to TIFs used in the United States – is used as a subsidy for redevelopment, infrastructure, and other community improvement projects²². It provides a means to segregate property tax revenue that results from redevelopment in the Rivers District into a separate fund for infrastructure improvements; enabling the City to leverage this contribution to fund redevelopment²³.

The Rivers District Revitalization Plan (2009) requires the City borrow the costs of the initial projects and revenues generated from the CRL are used to repay the borrowing. The result is that

this mechanism does not require a tax increase to cover the costs of borrowing. The Province of Alberta has agreed to forgo a portion of their property tax revenues for project funding²⁵.

The City of Calgary receives payments through the CRL and redistributes the funds to the CMLC to aid the implementation of East Village. To date, the CMLC has invested \$396 million for infrastructure and have a planned private investment of approximately \$3 billion²⁶. These costs for development are the highest in Calgary because the sites are located in a flood plain and many buildings sites are still contaminated despite ongoing remediation efforts²⁷.

Design Interventions

The design of East Village is mandated through the East Village Area Redevelopment Plan (2017).



Source: CMLC, CBC

Revitalization plan for East Village.

The Plan provides context-specific policies for a high-quality built environment that recognizes the history and character of the area while contributing to a comfortable pedestrian on the ground level²⁹.

East Village's geological boundary of the Bow River hazard areas and overland overflow³⁰. Development that is located in these flood hazard areas are subject to municipal building design requirements, flood proofing and setbacks³¹. As a result, the Redevelopment Plan (2017) has allocated a public thorough-fare zone along the River front, where buildings are prohibited.

Excluding the public through-fare zone, residential development is supported throughout East Village including grade level units³². Designation, will also affect the type of design at grade level, increasing privacy for residential units and encouraging setbacks to better support the transition from public streets to the private realm³³. Although setbacks are not required, they help contribute to the overall streetscape's character³⁴. The area is also focused on integrating planing mediums and open spaces as a means to enhance the aesthetics of the space while supporting active uses and pedestrian movement³⁵.

Planning and Development

East Village is a connecting point to different amenities and activities in the surrounding area. East Village's redevelopment has provided a new Central Library, an Elbow River Pedestrian Bridge (connecting East Village to Bridgeland), as well as plans to rejuvenate and expand the Calgary Zoo³⁶. This spark for development was initiated by Pointe

of View Developments, who were the first to obtain development permits by the City of Calgary³⁷. Development by Pointe of View, prompted many other development firms in the area, who had previously been hesitant to commence building, to obtain development permits and contribute to the rejuvenation of the East Village³⁸.

East Village has since restored several historical buildings in the area as a means to represent and remember the industrial history of the community. Among these buildings includes the Simmons Building; now used as a hub of community activity³⁹.

Sustainable Development

Sustainable measures have been taken in the development of East Village. Each measure has impacted the community's design, livability and history. To promote a healthy and active lifestyle, two bridges have been constructed to connect East Village to surrounding neighbourhoods. The George C. King Bridge was opened in 2014, connecting East Village and the downtown core to the community of Bridgeland located north of the Bow River⁴⁰. The second bridge, the Elbow River Traverse⁴¹ connects East Village to the south (connecting Inglewood and Ramsay communities). These bridges have allowed for a daily stream of cyclists, runners, and everyday users to safely cross the Elbow River and avoid the currently underutilized bridge that is typically consumed with vehicular traffic⁴².

East Village has also developed the East Village Junction, an innovative shipping container

shopping hub. This Junction consists of 12 retail shops, or outdoor retail hive for public gathering and events. It is also the first shipping containers designed for local retail⁴³. In collaboration with local artists, the Junctions has developed a retail strip within the community, attracting residents with their colourful and unique design, while adding to the industrial roots of the neighbourhood. For this development the CMLC worked with C-Can Store Inc. and Springboard Performance to customize the containers and design them into art pieces⁴⁴.

A second gathering space or meeting area also exists on East Village's 5th Street Square. This neighbourhood plaza provides a multi-purpose space that hosts vibrant community gatherings; including food truck events, seniors' programs, and holiday festivals⁴⁵. The space is littered with benches and natural features; integrating people into the natural environment.

Lessons Learned

East Village overcame the obstacles presented by the brownfield sites through the cooperative regulation of several bodies. The City of Calgary's initiative to use the CMLC and CRL as additional arms to levy financial support and promote the development of infrastructure to create a vibrant community demonstrates the City's prerogative to obtain alternative methods of funding. This opportunity has allowed the City to keep ownership without having to sell off land and turn a profit. Without the aid of the CMLC and CRL, East Village's financial viability would not be where it needs to in order to promote the community.

Due to the large-scale of the project, the re-use of soil on site demonstrates sustainable measures and economic savings from mandatory excavation. This innovative measure turned a challenge in the redevelopment process into a key benefit by providing landfill where applicable. By continuing to explore innovative alternatives to approach brownfield sites, we can optimize the economic costs of development and attract residents and local retailers.



Source: EY Experience

A 2019 future development demonstrating the residential use near the Riverwalk with connections across the Bow and Elbow River.

Endnotes

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