

THE TRANSITION OF MILITARY BASES TO NEIGHBOURHOODS

Measuring Relative Sustainability of
Canada Lands Company Developments in
Alberta

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Executive Summary

Overview

This report examines two Canada Lands Company (CLC) developments and assesses their relative sustainability using two different sustainability assessment tools, Leadership in Energy and Environmental Design for Neighbourhood Development (LEED-ND) and von Hausen’s Scorecard. Data was collected during site visits, review of development plans, map studies, and census in the fall of 2023. By comparing results from each neighbourhood and tool, the research aims to address questions and formulate recommendations, contributing to an enhanced understanding of creating sustainable neighbourhoods.

Objective

This research evaluates the sustainability of neighbourhood developments and gain insights into their definition. The study focuses on assessing the sustainability of CLC-developed land, identifying contributing factors to its success, and exploring how various assessment tools delineate sustainability. This investigation is guided by the following questions:

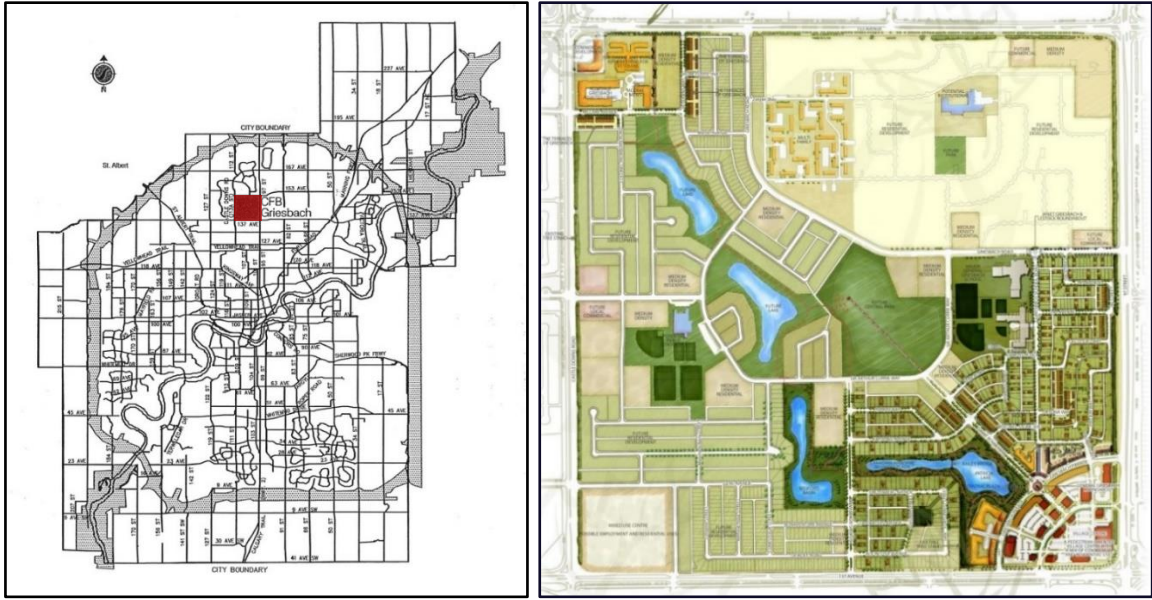
1. How do CLC neighbourhoods compare with respect to sustainability?
2. What factors support a sustainable CLC development?
3. How do sustainability scores differ when using different sustainability scorecards?

Research Methods

The comparative analysis focuses on two developments in Alberta, Griesbach in Edmonton, and Currie Barracks in Calgary, using LEED-ND and von Hausen’s Scorecard as evaluation metrics. These were selected based on differences in criteria, institutions that produced them, and complexity. The results of each assessment are compared to each other to answer the research questions. The case studies were selected based on similar geographic location, age, and developer to minimize external economic and policy influences. Data collection consisted of four parts: census data review; map study, public and private document review, and a site visit.

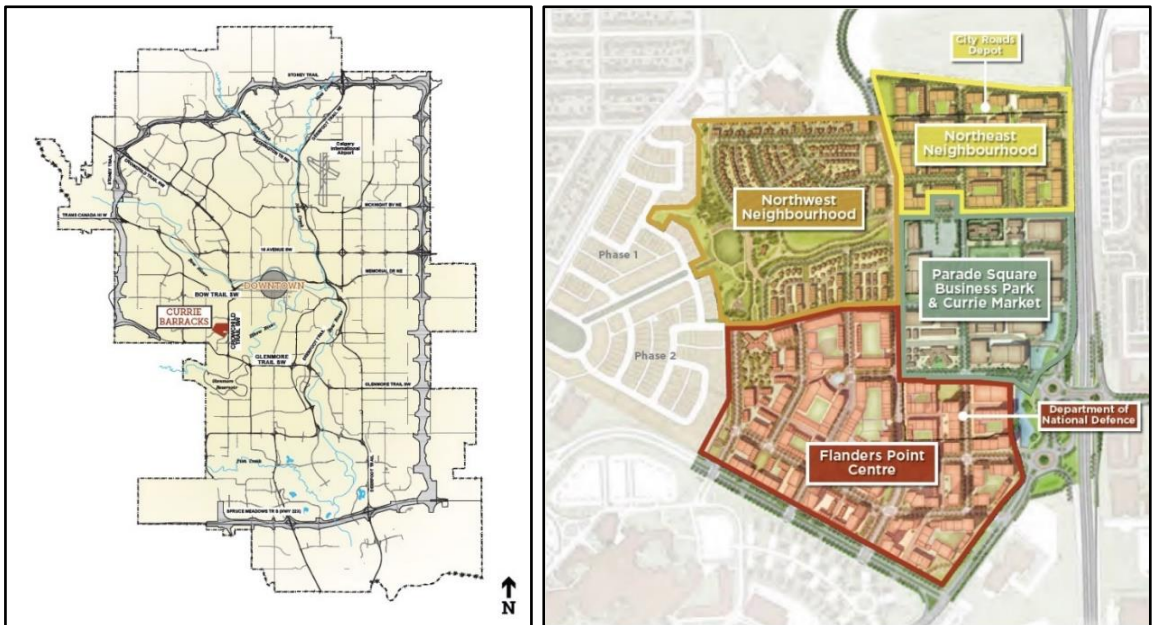
Case Studies	The Village at Griesbach	Currie Barracks
Location	Edmonton, AB	Calgary, AB
Total Area	256 ha	80.9 ha
Dwelling Units	6259	6374
Gross Density	24.4 du/ha	78.8 du/ha
Parks and Open Space	54.7 ha (23%)	9.7 ha (14%)
Initial Plan	2002	2000
Plan Author	Stantec	Brown & Associates
Design Character	Suburban transit-oriented development	Semi-urban 15-minute neighbourhood

Griesbach, situated north of downtown Edmonton, emerges as a master-planned development with military roots dating back to 1950. This neighbourhood is characterized by its well-designed walking trails, carefully planned open spaces, diverse housing options, and a respectful nod to its military heritage. It seamlessly integrates principles of traditional Canadian suburban planning with those of New Urbanism.



The Village at Griesbach, Edmonton, Alberta (Canada Lands Company, 2023)

Currie Barracks, located southwest of downtown Calgary, represents a complete neighbourhood development on the last parcel of land that was once Canadian Forces Base (CFB) Calgary, with military use tracing back to 1933. Its development plan prioritizes the creation of a distinct sense of place through the preservation of historic elements, safe streetscape design, and the provision of diverse housing options. Despite being a suburban infill, Currie Barracks transforms its surroundings into a semi-urban environment, guided by New Urbanist principles that incorporate a mixed-use community market district.



Currie Barracks, Calgary, Alberta (Brown & Associates, 2014)

Research Results

How do CLC neighbourhoods compare with respect to sustainability?

The research on relative sustainability reveals three key findings. Firstly, Currie Barracks outperforms in the LEED-ND assessment, while both are highly sustainable. Second, Griesbach excels in residential amenities and greenspace, while Currie Barracks focuses on denser development. Lastly, variation in results underlines the impact of assessment tools, reflecting the absence of a universal definition of urban sustainability. Both developments showed strong sustainability under LEED-ND but received average results with von Hausen's scorecard. This underscores the tools' role in shaping perceptions of sustainability.

What factors support a sustainable CLC development?

The sustainability of a CLC development is influenced by size and site geography, surrounding development, and the economy. The size of the development, illustrated by Griesbach and Currie Barracks, affects design detail and exposure to economic events. Smaller developments offer quicker adaptability to technology and policies. Surrounding development is crucial, defining sustainability through connectivity and population density. Finally, a strong economy supports condensed buildout times for sustainable developments during periods of economic strength.

How do sustainability ratings differ when using different assessment tools?

LEED-ND and von Hausen's Scorecard differ in emphasis, depth, and flexibility, leading to distinct evaluations of sustainable development. LEED-ND focuses on specific aspects, while von Hausen's approach is broader. LEED-ND is more detailed but time-intensive, while von Hausen's tool provides a quicker overview. LEED-ND allows more scaling across development sizes, while von Hausen's approach is internally adaptable. Understanding these nuances is crucial for effectively applying each tool to evaluate sustainable development.

Recommendations

Planners – Leverage Surroundings. Prioritize infill near existing services and transit hubs. A major contributing factor in the assessment of sustainability present in both tools was connectivity, access to services, and public transportation. By placing developments next to these existing elements, there is no reliance on developers to incorporate them into their designs and then wait for the market to eventually fill that need.

Developers – Divide and Conquer. Prioritize smaller-scale developments or phase by character areas. Based on the findings, developing a smaller area of land can contribute significantly to designing a sustainable neighbourhood. The extended timelines and potential exposure to economic events experienced by larger developments underscore the benefits of smaller projects.

Governments – Know Your Tools. Understand the advantages and which pillar(s) of sustainability (*economic, social, environmental, cultural*) the assessment tool emphasizes because the results will reflect the assessment tool. Additionally, each tool possesses unique strengths, making it suitable for different applications. If a municipality seeks to promote sustainable development, it may consider offering incentives, but the financial benefits to developers should outweigh assessment costs.

Governments – Foster Sustainable Development. Active facilitation of sustainable development should be encouraged until it becomes mainstream. The relatively low occurrence of LEED certifications in Canada, especially in comparison to the number of new developments, suggests developers are hesitant to offer sustainable projects or LEED certification is cost-prohibitive. Governments at all levels should assess their policies to ensure they incentivize sustainable development.

Planners & Governments – Preserving Our Past. Connection to the former land use adds character and preserves history as cities evolve. For a relatively low cost to developers and municipalities, commemorative plaques or architecture and landscaping that honours the heritage of an area will preserve great cultural value for generations. Master plans for cultural elements like plaques or monuments should be considered to facilitate this.

Conclusion

This research will assist planners in understanding the impact of private or crown development. It will also benefit municipalities by providing a tool to justify the release of federal lands. Finally, it provides CLC insights in its approach to sustainability, identifying areas of strength and possible improvement.

Scorecard Results

	<i>The Village at Griesbach</i>	<i>Currie Barracks</i>
LEEN-ND	41	46
Smart Location and Linkage	19	19
<i>Preferred Locations</i>	7	7
<i>Brownfield Remediation</i>	2	2
<i>Access to Quality Transit</i>	7	7
<i>Bicycle Facilities</i>	2	2
<i>Housing and Jobs Proximity</i>	1	1
<i>Steep Slope Protection</i>	0	0
<i>Design for Habitat or Water Body Conservation</i>	0	0
<i>Restoration of Habitat or Wetlands and Water Bodies</i>	0	0
<i>Long-Term Conservation of Habitat or Water Bodies</i>	0	0
Neighbourhood Pattern and Design	22	27
<i>Walkable Streets</i>	9	8
<i>Compact Development</i>	1	2
<i>Mixed-Use Neighbourhoods</i>	4	3
<i>Housing Types and Affordability</i>	1	3
<i>Reduced Parking Footprint</i>	0	1
<i>Connected and Open Community</i>	0	2
<i>Transit Facilities</i>	1	1
<i>Transportation Demand Management</i>	0	1
<i>Access to Civic and Public Space</i>	1	1
<i>Access to Recreation Facilities</i>	1	1
<i>Visitability and Universal Design</i>	0	0
<i>Community Outreach and Involvement</i>	2	2
<i>Local Food Production</i>	0	0
<i>Tree-Lined and Shaded Treescapes</i>	1	1
<i>Neighbourhood Schools</i>	1	1
von Hausen’s Scorecard	Average	Average
<i>Carbon, Transport, Land Use</i>	Average	Above Average
<i>Materials, Waste, Energy</i>	Very Weak	Very Weak
<i>Water, Food, Natural Habitat</i>	Below Average	Weak
<i>Well-Being, Equity, Culture</i>	Strong	Very Strong