

BC Snapshot:

**BUILT
ENVIRONMENT
SUSTAINABILITY**

TOPLINE FINDINGS JANUARY 2018



When we look at our communities as a system – what patterns do we see?

The built environment is a complex system containing many inter-related parts: housing, buildings, energy and infrastructure, transportation networks, and land use planning.

With help from planners, policy makers, and other built environment experts, the Real Estate Foundation of BC (REFBC) created an impact framework (outlined below) to measure province-wide progress on built environment sustainability. Our team identified 13 desired impacts, along with 10 impact measures. We've also made recommendations to improve data collection, reporting, and monitoring.

Impact Framework: Ambitious Goals



Healthy: residents have healthy lifestyles and enjoy good physical, emotional, spiritual, and mental health.



Livable: great public spaces and amenities that make communities satisfying, enjoyable, attractive, and contribute to a high quality of life.



Affordable: cost of living is within a resident's means and inequality subsides. Canadian inequality has risen substantially since 1980.



Cost-efficient: community infrastructure is maintained, built, and replaced, which reduces the tax burden on residents and businesses, and supports a financially healthy local government.



Environment and climate friendly: communities emit fewer greenhouse gases, reduce water use and risks, and improve natural systems.



Resilient: communities limit their exposure to hazards and recover quickly when disasters occur.



Economically robust: businesses support competitiveness, and attract and retain diverse labour pools.

Impact Framework: Desired Impacts & Impact Measures

- 1. Residents can access amenities within their neighbourhood or town.**
Measure: Average Walk Score
- 2. Residents can find suitable jobs close to home.**
Measure: Commute distance
- 3. Contained growth of towns and cities.**
Measure: Percentage of development within an urban containment boundary.
- 4. People in towns and cities have access to green and natural spaces.**
Measure: Percentage of households living within 400 m of public green space.
- 5. The diversity of housing options matches the needs of the community.**
Measure: N/A
- 6. Housing is affordable for all.**
Measure: Percentage living in Core Housing Need.
- 7. Infrastructure is efficient and cost-effective.**
Measure: N/A
- 8. All buildings are high-performance.**
Measure: Number of LEED certified buildings per 100,000 people.
- 9. All buildings are energy efficient.**
Measure: Percentage of local governments that adopt incentives and/or regulations for upper steps of the BC Step Code.
- 10. Transportation systems that support low impact trips.**
Measure: Percentage share of commute trips by mode (cycling, walking, transit, and automobile).
- 11. Transportation networks offer efficient and reliable access.**
Measure: N/A
- 12. No new development occurs in high-risk areas and protect existing development in high-risk locations.**
Measure: Percentage of developed land located in identified hazard areas.
- 13. Communities produce 80% fewer greenhouse gas (GHG) emissions than in 2007.**
Measure: Total community GHG emissions.

Noteworthy examples of community performance measurement include the Province's Community Energy and Emissions Inventory (CEEI) and secondary indicators.

Notable regional initiatives include the State of the Columbia Basin research framework by the Rural Development Institute at Selkirk College, and the Okanagan Valley Interregional Monitoring and Evaluation Framework.

City of Surrey's Sustainability Dashboard is an innovative municipal model.

Each precedent illustrates how accessible data can educate decision makers and the public.

Findings

Walk Score

35% of rated communities are somewhat / very walkable (Walk Score >50):

- 100% of large cities (3 out of 3 rated communities with populations over 200,000)
- 44% of small cities (7 out of 16 rated communities with populations between 50,000 and 200,00)
- 32% of large towns (12 out of 37 rated communities with populations between 10,000 and 50,000)
- 15% of small towns (2 out of 13 rated communities with populations between 5,000 and 10,000)

Commute distance

Average BC commute is 4.38 km:

- 6.00 km in large cities
- 5.61 km in small cities
- 3.79 km in large towns
- 2.10 km in small towns

Urban containment boundaries

Data for this measure is only provided for the Okanagan region.

Household access to green space

92% of Vancouver residents and 75% of Surrey residents live within 400m of green space. (Data only provided for Vancouver and Surrey)

Core housing need

More renters are found in BC than other parts of Canada. One-third of BC renters spend more than 30% of their pre-tax income on rent.

LEED buildings

There are more than 10 LEED-certified buildings per 100,000 people.

BC Energy Step Code uptake

Data not available.

Transportation mode share

11% of BC residents use or take transit, walk, or cycle to work or school:

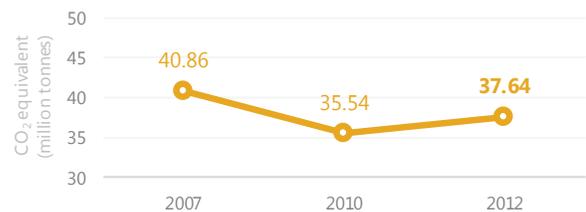
- 25% of residents in large cities
- 11% of residents in small cities
- 9% of residents in large towns
- 8% of residents in small towns

Developed land in hazardous areas

Data not available.

Community GHG emissions

Community GHG emissions decreased between 2007 and 2012, with emissions dropping steadily from 2007 to 2010, and rising slightly from 2010 to 2012 (perhaps due to changes in economic activity).



Desired impacts that require impact measures

- The diversity of housing options matches the needs of the community.
- Infrastructure is efficient and cost-effective.
- Transportation networks offer efficient and reliable access.

Opportunities for Improving Data

Good data leads to good decisions. Many of the data sets we accessed were dated, incomplete, or difficult to compare. The authors have made four general recommendations for improving data collection, monitoring, and reporting. Additional recommendations, related to specific impact measures, are included in the report.

Recommendations:

- Funders, including REFBC, could continue to champion the development of a shared measurement framework for the built environment.
- The Ministry of Municipal Affairs and Housing could invest in strengthening and extending the excellent work already done on supporting indicators for the Community Energy and Emissions Inventory.
- The Ministry of Municipal Affairs and Housing could work with local governments to strengthen and standardize data collection and sharing, particularly with respect to Geographic Information System (GIS) data. The Integrated Cadastral Information Society of BC could be an important partner in this effort.
- All levels of government could pursue “open data” initiatives, ideally using common standards, to enable third-party access to government data. These initiatives need to be designed to address privacy and other related concerns up-front.





Victoria, BC

REFBC's Commitment to Built Environment Sustainability

Communities of all sizes have a role to play in shaping a sustainable future for our province. That's why we've identified the built environment as a priority area for research and grant-making.

Through its grant program, the REFBC funds projects that support healthy, resilient communities and natural environments. Since 2013, REFBC has invested over \$4.8 million for built environment research, education, and policy reform.

REFBC's built environment research – including an examination of current trends, a public opinion poll, and consultation on strategies– is summarized in *Building Change*.

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