

# TOWARD AN OPEN DATABASE OF PUBLIC LAND OWNERSHIP: A KEY TO ADDRESSING HOUSING AFFORDABILITY CHALLENGES IN CANADIAN CITIES

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#### **ABSTRACT**

Canada's capacity to develop an equitable response to the current housing affordability crisis depends to a high degree on having access to information about public lands. However, the haphazard data infrastructure associated with public lands in Canada is a considerable barrier that has been at least four decades in the making. Through intensive partnership with 13 localities across Canada, we found that a complete database of public lands was only possible in two. Further, a case study of the Greater Toronto Area found that, even after exhaustive freedom of information requests, only 5 of 30 jurisdictions could produce public lands data sufficient for planning purposes. We conclude that there are few instances of truly open and accessible data on public lands across Canada, and this circumstance is a serious hinderance to constructing new affordable housing infrastructure reliant on free or low-cost land. We provide four recommendations for addressing this challenge.

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# INTRODUCTION: LINKING PUBLIC LANDS WITH HOUSING AFFORDABILITY IN CANADIAN CITIES

The haphazard data infrastructure associated with public lands in Canada, which has developed in its current form since the 1980s, is a barrier to equitably expanding housing infrastructure. Low- or nocost land provided by the public sector was crucial for the success of prior efforts to generate new affordable or non-market housing in Canada from the 1940s to the 1980s, and it remains a key element of affordable housing land policy around the world. Indeed, recent efforts to launch an historic expansion of housing in Canada have highlighted the necessity of leveraging public lands, but so far have been stymied at the initial step due to inadequate information. In its 2024 budget, the Government of Canada announced the Public Lands for Homes Plan, which seeks to build 250,000 homes on surplus and underused public lands across the country by 2031.<sup>2</sup> To reach this target, the federal government is collaborating with provincial agencies, municipal officials, Indigenous partners, homebuilders, and housing providers that can help in selecting, accessing, and developing the most suitable public lands for conversion to residential communities. One significant move toward implementing the Public Lands for Homes Plan was formally launched in August 2024 as Canada's Public Land Bank, which displays the initial inventory of surplus federal lands available for new residential development.<sup>3</sup> With 56 properties across the country listed at launch and three of those properties located in the most expensive cities of Vancouver and Toronto, Canada's Public Land Bank was an important first step that highlights the essential role for open data in addressing housing affordability challenges by leveraging public lands. Put simply, we cannot factor public lands into plans for housing production if we do not know where they are.

Identifying the full inventory of federal lands within urban regions that are designated as surplus and suitable for residential development, as the initial launch of Canada's Public Land Bank has done, was an important milestone, but not the end goal. The federal lands inventory is substantially larger than those that have been designated as surplus – and the overall public lands inventory of Canada extends into provincial, territorial, and municipal land holdings, which do not appear in the Public Land Bank. The distance between the number of housing units that can be developed on the 56 surplus parcels and the stated Government of Canada goal of producing 250,000 new homes on public lands in seven years highlights the incompleteness of available land data, a shortcoming that the federal government recognizes. The steps taken toward opening federal lands for housing development are worth celebrating, but unlocking the true potential of this approach will require navigating a data challenge that has been at least four decades in the making.

<sup>&</sup>lt;sup>1</sup> Bacher, Keeping to the Marketplace; Lawson and Ruonavaara, Land Policy for Affordable and Inclusive Housing.

<sup>&</sup>lt;sup>2</sup> Public Services and Procurement Canada, Public Lands for Homes.

<sup>&</sup>lt;sup>3</sup> Public Services and Procurement Canada, "Government of Canada Lists Federal Lands."

While there are some robust open databases in Canada (e.g., the Linkable Open Data Environment<sup>4</sup>), there is nothing similar for public lands. The availability of information about public lands is highly variable across provinces/territories and levels of government. Provincial and territorial governments are responsible for stewarding spatial information about land title, and often delegate this role to municipal or local governments, sometimes contracting the data management process out to private corporations. The result is that there are no uniform standards dictating the availability and quality of information on public lands in Canada. Therefore, the amount of information available to members of the public and to governmental staff varies widely among provinces, territories, and municipalities. The following questions, therefore, are open ones: What is the overall status of available data on public land ownership in Canadian cities? Where data is available, to what extent can it be accessed by the public and combined with other datasets that enable robust democratic planning for the use of public lands in new housing creation?

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<sup>&</sup>lt;sup>4</sup> Statistics Canada, Linkable Open Data Environment.

## WHY THE URGENCY FOR INFORMATION ABOUT PUBLIC LANDS?

Canada's current housing affordability crisis demonstrates the high degree to which equitable solutions are dependent on accurate and accessible data on public lands. In 2021, Statistics Canada found that 10% of all households – and 20% of those that rent – had a "core housing need," meaning that they were in dire circumstances due to unsuitable, inadequate, or unaffordable housing.<sup>5</sup> Of those households with a core housing need, 77% are experiencing unaffordable housing conditions. This rate of unaffordability is exacerbated by continual rental increases of record-high levels: they averaged 8% across the country in 2023, and much higher in the most expensive markets.<sup>6</sup> The growing proportion of housing that is unaffordable has generated a deep stratification among the Canadian population, with lower-income households increasingly unable to access decent housing; the bar for access has been moving up since the 1980s.<sup>7</sup> This stratification has meant that difficult housing conditions are cited as a key cause in reports of lower quality of life among renters, young people, and all residents in the most expensive housing markets of Vancouver and Toronto.<sup>8</sup>

In urban centres across Canada where core housing need is highest, the cost of land is typically the largest factor determining the final cost of homes, whether for rent or purchase. Thus, the rise in land costs is one of the main barriers to affordability in new housing projects, as only the most well-resourced private development interests can assemble the funds needed to acquire land – leading to high rents and high sale prices in order to recuperate those costs. Indeed, government provision of public land has historically been the main strategy for overcoming this barrier. It was the central ingredient in the development of Canada's largest social and non-profit housing projects, including, for example, Vancouver's False Creek neighbourhood and Toronto's St. Lawrence Market. Bacher argues that the expansion of Canada's co-operative housing sector in the 1970s and 1980s was also largely enabled by public land provided at little or no cost to prospective non-profit developers. Since the federal exit from housing policy in the early 1990s and the pivot to privatization of public land around that time, relatively little social or non-profit housing that meets affordability goals has been built across the country.

However, responding to a mounting national housing crisis, government officials and housing advocates are once again looking to provide public land at low or no cost to developers of affordable

<sup>&</sup>lt;sup>5</sup> Statistics Canada, "Core Housing Need Rates in Canada."

<sup>&</sup>lt;sup>6</sup> Statistics Canada, "Nationally, Renters Report Lower Quality of Life than Homeowners."

<sup>&</sup>lt;sup>7</sup> Zhu et al., "Neoliberalization and Inequality."

<sup>&</sup>lt;sup>8</sup> Statistics Canada, "Nationally, Renters Report Lower Quality of Life than Homeowners."

<sup>9</sup> Statistics Canada, "Core Housing Need Rates in Canada"; Agha and Czechowski, "Financing, Land, and Organizational Capacity."

<sup>&</sup>lt;sup>10</sup> Pomeroy, "Discussion paper: Envisioning a modernized social and affordable housing sector."

<sup>11</sup> Bacher, Keeping to the Marketplace.

<sup>&</sup>lt;sup>12</sup> Suttor, Still Renovating; Whiteside, "Privatizing Canadian Government Land and Real Estate."

housing in order to generate a more accessible supply. For example, in addition to the federal land bank initiative, the provincial government in British Columbia is developing its own land bank comprised of provincial, federal, and municipal lands that can be directed toward housing development.<sup>13</sup> The Ontario Housing Affordability Task Force similarly recommended that all public land sales require future development to include 20 percent affordable housing.<sup>14</sup>

According to one estimate, nearly 90 percent of surface land in Canada is public.<sup>15</sup> While much of that land is outside of cities and not suitable for housing development, the general prevalence of public land gives Canadian governmental agencies an especially strong potential role within partnerships for large, complex housing development projects.<sup>16</sup> This ability of government agencies to act as landholding partners may make the question of developing affordable housing less reliant solely on the decisions of private companies in two important ways.<sup>17</sup> First, low- or no-cost land can serve as a sufficient incentive for private market developers to see providing affordable units as desirable.<sup>18</sup> Second, such partnerships can be essential capacity builders for non-profit organizations with an innate goal of creating and preserving affordable housing.<sup>19</sup>

However, it is not just land provision but also public access to data about land that allows for improved outcomes in developing new housing infrastructure through better functioning democratic processes. The existence of this access generates opportunities that cannot be realized when data is hidden or held behind paywalls. For example, a non-profit housing provider might own land adjacent to government land and not know it; public data would increase the chances that consolidating the two holdings is explored. As well, public data improves democratic processes by allowing for better engagement in strategic planning for official and secondary plans.<sup>20</sup> In all, information about public lands creates urgently needed opportunities to advance affordable housing initiatives, improve democratic processes, and maximize the potential of land consolidation.

<sup>&</sup>lt;sup>13</sup> Gold, "B.C. Turns from Land Sales to Creating a Land Bank."

<sup>&</sup>lt;sup>14</sup> Ontario Housing Affordability Task Force, "Report of the Housing Affordability Task Force."

<sup>15</sup> McSheffrey, "Public Lands, Public Data."

<sup>&</sup>lt;sup>16</sup> Tsenkova, "Neighbourhood Rebuilding and Affordable Housing in Canadian Cities."

<sup>&</sup>lt;sup>17</sup> Eidelman, "Rethinking public land ownership and urban development."

<sup>18</sup> Eidelman, "Failure when fragmented."

<sup>&</sup>lt;sup>19</sup> Fraser et al., "Acquisition and Preservation of Affordable Rental Housing in Canada."

<sup>&</sup>lt;sup>20</sup> Lawson and Ruonavaara, Land Policy for Affordable and Inclusive Housing.

# OUR APPROACH TO UNDERSTANDING THE CURRENT LANDSCAPE OF PUBLIC LANDS DATA

To gauge the suitability of Canada's public land inventory for new housing development, we undertook a two-part analysis focused on illustrating the most complete public lands database possible under current conditions in Canada. The analysis is derived from work completed under the land assessment portion of the Housing Assessment Resource Tool (HART).<sup>21</sup> For the first part of the analysis, we worked with 13 local partners in diverse communities across Canada as a way of getting a national picture of what could be built. For the second part, we performed a targeted assessment of public lands data in the Greater Toronto Area (GTA) based on a series of freedom of information (FOI) requests.

The land assessment aspect of HART aimed to identify parcels of government-owned land that are well located for affordable housing development in order to enable planning processes to develop around these lands.<sup>22</sup> Critically, the HART land assessment tool relies on data about the location and geometry of government-owned land parcels. This spatial information is required to assess whether a parcel is suitable for development based on its current use and location relative to undevelopable areas (e.g., flood plains or environmental protection areas). The location is also used to assess whether a parcel is well located in terms of proximity to various civic amenities (e.g., schools, community centres, libraries, and parks).

To gain information about public land location within our 13 partner localities in varied communities across Canada (Table 1), the HART land assessment methodology began with outreach to staff members working within the 13 localities to learn about and try to gain access to the variety of possible spatial data inputs. The 13 government partners represented either local or regional municipalities, with the exception of the Government of Yukon, which is responsible for the entire Yukon Territory. These 13 governments were spread across six provinces and territories: Nova Scotia, Quebec, Ontario, Alberta, and British Columbia, in addition to Yukon.

Partnerships with local governments involved initial interviews and at least two follow-up meetings with city staff identified in advance by directors of housing, development, and planning agencies. These meetings allowed us to establish terms for sharing data not publicly available and to create datasharing agreements. Procuring data for each community began with a data request directly to local partners for any data not available on open data portals. With the data-sharing agreements in place, local governments shared requested data that was under their own stewardship and was allowed to be

<sup>&</sup>lt;sup>21</sup> HART, "HART Land Assessment Tool."

<sup>&</sup>lt;sup>22</sup> HART, "HART Land Assessment Tool."

published. For data that they were unable to share, government partners connected us with the relevant data stewards in their communities (for government-owned land, this was typically provincial property assessment agencies).

The second part of our analysis focuses on establishing the extent to which, with more in-depth efforts, it was possible to develop a public lands database for areas where the approach described above did not yield strong results. We used the GTA as a case study. After experiencing challenges with our initial attempts at data access, and reviewing existing literature and databases relevant to the topic, we concluded that the only path toward potentially accessing and releasing a full public lands database for the GTA would be through FOI requests. We therefore filed FOI requests asking for data describing all real estate assets owned by the relevant government, including locations, current use, area of parcels, market values, and owners, as well as for shapefiles of their extent, with the Province of Ontario and with each of the 29 jurisdictions that govern the GTA. In Ontario, FOIs are governed by the *Freedom of Information and Protection of Privacy Act* (FIPPA) for provincial institutions and the *Municipal Freedom of Information and Protection of Privacy Act* (MFIPPA) for municipal ones. We followed the procedures outlined by all provincial and local jurisdictions.

## CURRENT PROSPECTS FOR A NATIONAL DATABASE OF PUBLIC LANDS

The first part of our analysis, in which we attempted to obtain the full set of spatial information about government-owned land from each of our 13 government partner jurisdictions, revealed a varied landscape of data-access issues across Canada – with significant opportunities for improvement.

Federal government land was the most straightforward. This data was freely available to download as a list of land parcels alongside their cadastral boundaries through the Directory of Federal Real Property.<sup>23</sup>

Beyond the federal level, access was far murkier and required data requests with partner governments, some of which could be honoured and some of which could not. The data request we sent to each partner government asked for a variety of datasets, but the ones most relevant to the success of the land assessment were the location of municipal and provincial/territorial government-owned parcels and their cadastral boundaries. Table 1 presents an overview of the results of this phase of our datagathering efforts, with subjective indications of our level of success at obtaining the desired data in each province/territory.

<sup>&</sup>lt;sup>23</sup> Treasury Board of Canada Secretariat, Directory of Federal Real Property.

Table 1. Accessibility of cadastral data for government-owned land by province

Province/ Territory	Partners	Level of access	Description			
Nova Scotia	Cape Breton Partnership, Municipality of Victoria County	Moderate – Limited Access	Government partners were able to provide us with a spreadsheet containing the parcel IDs of government-owned land within their jurisdiction upon request. Cadastral data is made available through the Department of Servi Nova Scotia & Internal Services for a fee that may be waived if the requestor is working on behalf of a municipality.			
Quebec	Ville de Gatineau	Moderate – Limited Access	Ville de Gatineau maintains a dataset of government-owned parcels within their jurisdiction that was available upon request.			
	City of Ottawa	High – Open Access	The City of Ottawa has an agreement with the Municipal Property Assessment Corporation and Teranet Enterprises Inc. to publicly display government-owned parcels within their jurisdiction on their open mappin portal, geoOttawa.			
Ontario	City of Toronto City of Hamilton Halton Region Peel Region York Region Durham Region	Low – Cost Prohibitive	Most government partners within the Greater Toronto/Hamilton Area were able to provide cadastral data for land under their ownership upon request. Accessing cadastral data for provincially owned land required an expensive licensing agreement with the Municipal Property Assessment Corporation and Teranet Enterprises Inc. that included constraints on wh information could be displayed publicly and for how long.			
Alberta	City of Edmonton City of Calgary	Low – Intensive Request Process	Cadastral data for city-owned land was made available by our government partners upon request. We were unable to locate provincially owned land because the Government of Alberta's Land Titles Office is not subject to freedom of information requests, and requires partnerships with individual land owners to make ownership-based requests.			
British Columbia	City of Kelowna	High – Open Access	Cadastral data is made available by the Land Title and Survey Authority of British Columbia through ParcelMap BC. Public ownership is identified in an attribute of the ParcelMap BC data.			
Yukon	Yukon Territory City of Whitehorse	Moderate – Limited Access	Cadastral data for surveyed parcels across the Yukon was made available upon request by the Land Titles Office of the Government of Yukon.			

As Table 1 shows, two local partners could provide a high degree of data in response to our requests, five local partners could provide a moderate degree of data, and eight local partners could provide a low degree of data. All but two of our local partners either had access limitations, prohibitive costs, or intensive request processes associated with the data request. In general, despite having dedicated staff and targeted resources devoted to the development of a representative public lands database, we mostly could not establish a comprehensive product because there are few instances of truly open and accessible data on public lands across Canada. It is far more common to find incomplete data, opaque processes for obtaining access requiring institutional data sharing agreements, prohibitive costs, or entirely blocked access.

#### A FOCUS ON THE GREATER TORONTO AREA

Given the results of the first part of our study, we deployed a strategic effort to uncover data on public lands in one of the most difficult-to-access parts of the country: the GTA, which has all data other than federal lands behind prohibitive cost barriers. We used the FOI process to request access to data on the portfolios of public land held by the 30 non-federal jurisdictions in the GTA (24 lower-tier municipalities, 4 upper-tier regional municipalities, 1 single-tier municipality, and the provincial government). The results were highly variable, with few municipalities providing high-quality, useful data. A summary is presented in Table 2, indicating for each municipality whether the data was released, what the timeline was, and whether it was a useful response to the request.

Table 2. FOI request outcomes for public land data in the GTA, by jurisdiction

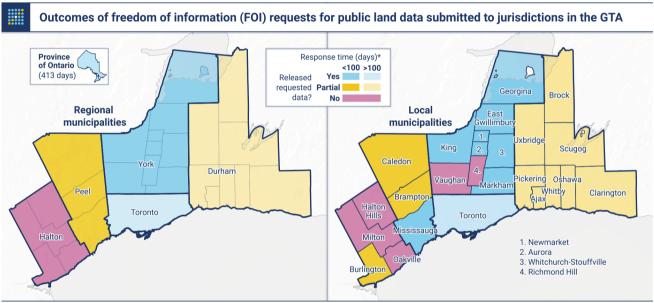
Jurisdiction	Released requested data?	Date of FOI request	Date of data release	Days between request and receipt of data	Useful metadata included in shapefile?	Notes
Province of Ontario (Infrastructure Ontario)	Yes (appeal required)	28-Jan-21	17-Mar-22	413	No	Provided a shapefile of property boundaries with no metadata.
City of Toronto	Yes	05-May-22	15-Nov-22	194	Yes	Provided a shapefile with metadata on land use, etc.
Durham Region	Partial	19-Nov-22	28-Jul-23	251	No	A comprehensive request for data from every municipality in Durham was filed directly with Durham Region. A single shapefile of all municipal properties in the region was provided, but included no metadata and did not distinguish parcels by municipal owner.
Ajax	Partial	19-Nov-22	28-Jul-23	251	No	See Durham Region.
Clarington	Partial	19-Nov-22	28-Jul-23	251	No	See Durham Region.
Brock	Partial	19-Nov-22	28-Jul-23	251	No	See Durham Region.
Oshawa	Partial	19-Nov-22	28-Jul-23	251	No	See Durham Region.
Pickering	Partial	19-Nov-22	28-Jul-23	251	No	See Durham Region.
Scugog	Partial	19-Nov-22	28-Jul-23	251	No	See Durham Region.
Uxbridge	Partial	19-Nov-22	28-Jul-23	251	No	See Durham Region.
Whitby	Partial	19-Nov-22	28-Jul-23	251	No	See Durham Region.

Halton Region	No	21-Nov-22				Request forwarded to MPAC and denied by MPAC.
Burlington	Partial	07-Dec-22	19-Dec-22	12	No	Provided a spreadsheet with addresses and point coordinates, but property boundary shapefiles were unavailable.
Halton Hills	No	21-Nov-22				Request forwarded to MPAC and denied by MPAC.
Milton	No	21-Nov-22				Request forwarded to MPAC and denied by MPAC.
Oakville	No	21-Nov-22				Request forwarded to MPAC and denied by MPAC.
Peel Region	Partial	21-Nov-22	05-Jan-23	45	No	Provided a spreadsheet with addresses and point coordinates, but property boundary shapefiles were not shared.
Brampton	Partial	07-Dec-22	09-Feb-23	64	No	Provided a spreadsheet with addresses and point coordinates, but property boundary shapefiles were not shared.
Caledon	Partial	07-Dec-22	27-Feb-23	82	No	Provided a spreadsheet with addresses and point coordinates but property boundary shapefiles were not shared.
Mississauga	Yes	06-Dec-22	08-Feb-23	64	Yes	Provided a shapefile with metadata on land use, etc.
York Region	Yes	19-Nov-22	21-Dec-22	32	Yes	Provided a shapefile with metadata on land use, etc.
Aurora	Yes	21-Nov-22	04-Jan-23	44	No	Provided a shapefile of property boundaries with no metadata.
East Gwillimbury	Yes	21-Nov-22	14-Dec-22	23	Yes	Provided a shapefile with metadata on land use, etc.
Georgina	Yes	21-Nov-22	22-Dec-22	31	Partial	Provided a shapefile with some metadata on lot numbers.
King	Yes	21-Nov-22	09-Dec-22	18	Yes	Provided a shapefile with metadata on land use, etc.
Markham	Yes	21-Nov-22	14-Dec-22	23	No	Provided a shapefile of property boundaries with no metadata.
Newmarket	Yes	21-Nov-22	06-Feb-23	77	Partial	Provided a shapefile with some metadata on lot numbers.

Richmond Hill	No	21-Nov-22				Request forwarded to MPAC and denied by MPAC.
Vaughan	No	21-Nov-22				Only provided a list of addresses (due to intervention by MPAC).
Whitchurch- Stouffville	Yes	21-Nov-22	22-Dec-22	31	No	Provided a shapefile of property boundaries with no metadata.

As Table 2 and Figure 1 show, 11 of the 30 jurisdictions gave what they indicated was a full data release, and another 13 jurisdictions gave what they indicated was a partial release of the data. The remaining 6 jurisdictions refused to release the data. Only 5 of the data releases were classified as useful (with 2 more partially useful), meaning that they fulfilled the request criteria in a manner that allowed the data to be analyzed in terms of its utility for residential development. Overall, even when using the legislative tools available to try to overcome access issues, the level of data that could be obtained for the purpose of understanding the role public lands could play in forwarding housing goals was highly variable, with few municipalities providing high-quality, useful data.

Figure 1. FOI request outcomes for public land data in the GTA: Visual summary



Data Sources: Authors' analysis; OpenStreetMap \*Response time refers to the time between the request and receipt of data

## HOW DID WE GET TO THIS POINT WITH PUBLIC LANDS DATA IN CANADA?

How much information should be available about the ownership of public land in Canada? This question has received a wide variety of answers over the years as the provinces and territories have sorted out their geographic information systems (GIS) data provision programs. The resulting data infrastructure in place since the 1980s has been described as a national tendency toward "GIS classicism" rooted in a push toward charging for access to public geospatial data.<sup>24</sup> At the provincial/territorial level, there is wide variation in the extent to which this reliance on private provision of public GIS data has affected the role of public lands data. In Ontario, for example, while there have been some efforts at public engagement around the question of what data should be available, a highly privatized model of data provision has become established regarding public lands data for cities.<sup>25</sup> British Columbia is an exception to the national trend: it has taken assertive steps in the opposite direction, electing to make all public lands data available through a complete parcel-level dataset for the province.<sup>26</sup>

Given the challenges in accessing public lands data in Ontario, it is worth reflecting a bit on how that province arrived at its current circumstance. The land registry in Ontario is owned by Teranet, a transnational corporation that was founded in, and is currently based in, Ontario. Teranet (also known as "Province of Ontario Land Registration Information System" or POLARIS) was founded in 1990 as a public-private partnership, and took full control of the land registry in 2003. It was incorporated in May 1991 as a public-private partnership to digitize the government's paper land registry system, converting some 400 million pieces of paper into a new software system designed for viewing land records remotely over the internet.<sup>27</sup>

Not without controversy at the time, the company was structured as a 50/50 partnership between the Government of Ontario and Real/Data Ontario Inc. (RDO), with 50% of shares held by each party. The agreement was structured such that the Government maintained 100% ownership of and control over both POLARIS and the information in the land registration system, as well as controlling the use, access to, and fee structure for accessing that information. Part of the justification for this partnership was the suggestion from Ontario land surveyors that it could "create an industry that will have demands far offshore" as there was a "large pent-up demand for land-information-related systems worldwide."<sup>28</sup>

<sup>&</sup>lt;sup>24</sup> Klinkenberg, "True Cost of Spatial Data in Canada."

<sup>&</sup>lt;sup>25</sup> Johnson et al., "The Cost(s) of Geospatial Open Data."

<sup>&</sup>lt;sup>26</sup> Chater and Lanoix, "Integrated Land and Resource Registry Project of British Columbia"; Millard, "Digital Divide and the Government"

<sup>&</sup>lt;sup>27</sup> Ontario, Legislative Assembly, Standing Committee on Estimates.

<sup>&</sup>lt;sup>28</sup> Ontario, Legislative Assembly, Standing Committee on General Government.

As reported in CBC's Fifth Estate, some provisions in the partnership agreement were to be "secret forever," and the agreement guaranteed a minimum revenue flow to the company.<sup>29</sup> The investors backing RDO were also kept secret, until public pressure convinced the company to release a list of shareholders to the *Globe and Mail* in 1993. This list revealed the company to be made up largely of small Canadian investors, with a consortium of five Canadian companies holding 20.7% of the company and foreign investors holding another 21.04% in total.<sup>30</sup> Ultimately, the company was privatized in April of 2003, when the Government sold its 50% stake in Teranet to ownership partner Teramira Holdings Inc.<sup>31</sup>

The Province retained a right to buy back the company, but did not exercise this right before the agreed-upon deadline. On May 8, 2006, it granted Teramira Holdings permission to hold an initial public offering (IPO) of the company. After three attempts to complete the IPO, the company was ultimately sold for \$1.6 billion in November of 2008 to Borealis Infrastructure, an infrastructure investment subsidiary of OMERS (the Ontario Municipal Employees' Retirement System, one of Canada's largest pension funds), which is the current owner. The net result was a slow progression that began with a desire on the part of public agencies to organize the management of public assets and ended with all lands data being fully controlled by a private, for-profit corporation – one that generates substantial barriers to the public's gaining access to data about publicly owned land.

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<sup>&</sup>lt;sup>29</sup> Ontario, Legislative Assembly, Hansard.

<sup>30</sup> Moon, "Ontario Scales Back Plans to Computerize Land Records."

<sup>&</sup>lt;sup>31</sup> Bruce, "Ontario sells its stake in Teranet"; Gainer, "Breaking new ground."

<sup>32</sup> Galt, "Borealis Wins Teranet with Discounted Bid."

#### A MULTI-LEVEL GOVERNANCE CHALLENGE

There are multiple challenges to developing affordable and accessible housing infrastructure in Canada. Our findings highlight one of them: a lack of access to robust data infrastructure relating to public lands. Accessing data on public lands, which is essential for incorporating these lands into urban planning to enhance affordability in high-impact city locations, is nearly impossible in some areas of the country and challenging in most others. As a result of the movement in most of the country toward geospatial data privatization, only federal lands, lands in British Columbia, and lands within select cities with robust data infrastructure, such as Ottawa, are readily accessible to the public. That means that only in these jurisdictions can public lands data be fully incorporated into the housing affordability conversation. This data landscape presents a prodigious multi-level governance challenge.

With the current state of Canada's public lands data infrastructure, it will be difficult to achieve housing affordability goals alongside public land development in a consistent manner. Most egregiously, the private-provision data model in Ontario and the closed data model used in Alberta (see Table 1) stymie any push toward comprehensive action. The major challenge, then, is to develop affordability goals that can be adopted at all levels, and ensure equal access to information that allows for fair and equal planning processes in all localities. No consistently applied public lands—based affordability initiative can be implemented without uniform access to information.

"No consistently applied public lands—based affordability initiative can be implemented without uniform access to information."

<sup>&</sup>lt;sup>11</sup> Forouhar et al., "Assessing Downtown Recovery Rates and Determinants."

<sup>&</sup>lt;sup>12</sup> Karner, Pereira, and Farber, "Advances and Pitfalls in Measuring Transportation Equity."

<sup>&</sup>lt;sup>13</sup> Pot, Heinen, and Tillema, "Sufficient Access?"; Humberto, "How to Translate Justice Theory into Urban Transport Metrics?"

#### RECOMMENDATIONS

The federal government has declared a goal of 250,000 homes on surplus and underused public lands by 2031. Building Canada's Public Land Bank into a resource that can support this aim will require creating a robust data infrastructure for public lands. As federal agencies are working to uncover lands beyond surplus holdings in order to add all suitable underused federal lands to the Land Bank, they are establishing a model for action at all levels of government. If provincial/territorial agencies can develop uniform land banks that mirror the federal model, it becomes possible through multilevel governance to leverage much more public land for the creation of an equitable housing supply.

While fully meeting the multi-level governance challenge discussed above will take long-term efforts, we can recommend several actions that could have a high impact in the short and medium term:

- 1. In the short term, use Canada's Public Land Bank as a resource for analyzing the full federal lands repository, beyond the surplus lands that already appear.
- 2. When Canada's Public Land Bank has achieved the goal of assessing all federal lands for suitability in partnered housing ventures, launch a pilot governance initiative with British Columbia. This province is the only one with an analogous data infrastructure. Focus this initiative on identifying high-value land consolidation opportunities across all levels of government and with nonprofit partners. This pilot can eventually serve as a model for potential strategies elsewhere as the data infrastructure develops.
- 3. Extend the efforts launched by the *Public Lands for Homes Plan* to include federal support for purchasing rights to make all public lands data publicly accessible. This would enable a truly national approach to leveraging public lands for housing.
- 4. Enact legislation that commits federal and provincial governments to permanently maintaining publicly accessible lands data.

These four initiatives will make considerable progress toward building the infrastructure needed to address housing affordability challenges in Canadian cities. They at least provide a place to start. If Canada does not take action in this direction, efforts to leverage public lands will continue to encounter major barriers, and the nation will miss a key opportunity to address the housing affordability crisis.

#### **BIBLIOGRAPHY**

- Agha, Ayda, and Konrad Czechowski. "Financing, Land, and Organizational Capacity: Affordable Housing Development." CHRA Congress Session Series 2018. <a href="https://chra-achru.ca/wp-content/uploads/2018/09/2018-09-18">https://chra-achru.ca/wp-content/uploads/2018/09/2018-09-18</a> research financing-land.pdf.
- Bacher, John C. Keeping to the Marketplace: The Evolution of Canadian Housing Policy. Montreal: McGill-Queen's University Press, 1993.
- Bruce, Lindsay. "Ontario sells its stake in Teranet." *IT World Canada*, August 8, 2003. <a href="https://www.itworldcanada.com/article/ontario-sells-its-stake-in-teranet/21041">https://www.itworldcanada.com/article/ontario-sells-its-stake-in-teranet/21041</a>.
- Chater, Dave, and Simon Lanoix. "The Integrated Land and Resource Registry Project of British Columbia." In *Urban and Regional Information Systems Association Annual Conference Proceedings*, 710–747. Urban and Regional Information Systems Association (URISA), 2006.
- Eidelman, Gabriel. "Failure When Fragmented: Public Land Ownership and Waterfront Redevelopment in Chicago, Vancouver, and Toronto." *Urban Affairs Review* 54, no. 4 (2018): 697–731. https://doi.org/10.1177/1078087416671429.
- Eidelman, Gabriel. "Rethinking Public Land Ownership and Urban Development: A Canadian Perspective." *Cities* 55 (2016): 122–126. <a href="https://doi.org/10.1016/j.cities.2015.12.003">https://doi.org/10.1016/j.cities.2015.12.003</a>.
- Fraser, Elizabeth, Ian Rockwell, Nandini Paliwal, Nimmi Hamid, and Shweta Menon. "Acquisition and Preservation of Affordable Rental Housing in Canada." PhD diss., McGill University, 2022.
- Gainer, Maya. (2017). "Breaking new ground: Pioneering electronic land registration in Ontario, 1987–2010." Innovations for Successful Societies. Princeton University, 2017. <a href="https://successfulsocieties.princeton.edu/sites/g/files/toruqf5601/files/Canada%20Case%20Study%20With%20Logo%20JRG 1 30 2017.pdf">https://successfulsocieties.princeton.edu/sites/g/files/toruqf5601/files/Canada%20Case%20Study%20With%20Logo%20JRG 1 30 2017.pdf</a>.
- Galt, Virginia. "Borealis Wins Teranet with Discounted Bid." *Globe and Mail*, November 11, 2008. <a href="https://www.theglobeandmail.com/report-on-business/borealis-wins-teranet-with-discounted-bid/article1065829/">https://www.theglobeandmail.com/report-on-business/borealis-wins-teranet-with-discounted-bid/article1065829/</a>.
- Gold, Kerry. "B.C. Turns from Land Sales to Creating a Land Bank to Help Create More Affordable Housing." *Globe and Mail*, updated August 20, 2023. <a href="https://www.theglobeandmail.com/real-estate/vancouver/article-bc-turns-from-land-sales-to-creating-a-land-bank-to-help-create-more/">https://www.theglobeandmail.com/real-estate/vancouver/article-bc-turns-from-land-sales-to-creating-a-land-bank-to-help-create-more/</a>.

- HART. "HART Land Assessment Tool: Methodology and Policy Implications." Housing Assessment Resource Tools (HART), University of British Columbia, accessed September 3, 2023. <a href="https://hart.ubc.ca/wp-content/uploads/2023/03/LA-Methodology.pdf">https://hart.ubc.ca/wp-content/uploads/2023/03/LA-Methodology.pdf</a>.
- Johnson, Peter, Renee Sieber, Teresa Scassa, Monica Stephens, and Pamela Robinson. "The Cost(s) of Geospatial Open Data." *Transactions in GIS* 21, no. 3 (June 2017): 434–45.
- Klinkenberg, Brian. "The True Cost of Spatial Data in Canada." Canadian Geographer/Le Géographe canadien 47 (2003): 37–49. https://doi.org/10.1111/1541-0064.02e11.
- Lawson, Julie M., and Hannu Ruonavaara. *Land Policy for Affordable and Inclusive Housing: An international review*. Smartland, 2019. <a href="https://smartland.fi/wp-content/uploads/Land-policy-for-affordable-and-inclusive-housing-an-international-review.pdf">https://smartland.fi/wp-content/uploads/Land-policy-for-affordable-and-inclusive-housing-an-international-review.pdf</a>.
- McSheffrey, Elizabeth. "Public Lands, Public Data. Here's How Some Provinces Are Lagging." *Canada's National Observer*, June 13th 2017. <a href="https://www.nationalobserver.com/2017/06/13/news/public-lands-public-data-heres-how-some-provinces-are-lagging">https://www.nationalobserver.com/2017/06/13/news/public-lands-public-data-heres-how-some-provinces-are-lagging</a>.
- Millard, Emily. "The Digital Divide and the Government: Developing a Tool for the Analysis of Government Data." B.Sc. diss., University of British Columbia, 2016.
- Moon, Peter. "Ontario Scales Back Plans to Computerize Land Records: Private Firm Fails to Make Payments in Partnership Deal." *Globe and Mail*, April 27, 1993.
- Ontario Housing Affordability Task Force. "Report of the Housing Affordability Task Force." February 8, 2022. <a href="https://files.ontario.ca/mmah-housing-affordability-task-force-report-en-2022-02-07-v2.pdf">https://files.ontario.ca/mmah-housing-affordability-task-force-report-en-2022-02-07-v2.pdf</a>.
- Ontario, Legislative Assembly. *Hansard*, 35th Parl, 1st Sess (October 10, 1991). <a href="https://www.ola.org/en/legislative-business/house-documents/parliament-35/session-1/1991-10-10/hansard">https://www.ola.org/en/legislative-business/house-documents/parliament-35/session-1/1991-10-10/hansard</a>.
- Ontario, Legislative Assembly. Standing Committee on Estimates. "Office of the Premier." Transcript, November 3, 1998 at 1710. <a href="https://www.ola.org/en/legislative-business/committees/estimates/parliament-36/transcripts/committee-transcript-1998-nov-03">https://www.ola.org/en/legislative-business/committees/estimates/parliament-36/transcripts/committee-transcript-1998-nov-03</a>.
- Ontario, Legislative Assembly. Standing Committee on General Government. "Closure of Land Registry Offices." Transcript, July 30, 1991 at 1500. <a href="https://www.ola.org/en/legislative-business/committees/general-government/parliament-35/transcript/committee-transcript-1991-jul-30">https://www.ola.org/en/legislative-business/committees/general-government/parliament-35/transcript/committee-transcript-1991-jul-30</a>.

- Pomeroy, Steve. "Discussion paper: Envisioning a modernized social and affordable housing sector in Canada." Ottawa: Carleton University Centre for Urban Research and Education, 2018. <a href="https://carleton.ca/cure/wp-content/uploads/Envisioning-a-strengthened-social-housing-sector-FINAL-Oct-2018.pdf">https://carleton.ca/cure/wp-content/uploads/Envisioning-a-strengthened-social-housing-sector-FINAL-Oct-2018.pdf</a>.
- Public Services and Procurement Canada. "Government of Canada Lists Federal Lands for Housing and New Tool for Builders." Government of Canada, August 25, 2024. <a href="https://www.canada.ca/en/public-services-procurement/news/2024/08/government-of-canada-lists-federal-lands-for-housing-and-new-tool-for-builders.html">https://www.canada.ca/en/public-services-procurement/news/2024/08/government-of-canada-lists-federal-lands-for-housing-and-new-tool-for-builders.html</a>.
- Public Services and Procurement Canada. *Public Lands for Homes* (website). Government of Canada, updated August 25, 2024. <a href="https://www.canada.ca/en/public-services-procurement/services/infrastructure-buildings/public-lands-homes.html">https://www.canada.ca/en/public-services-procurement/services/infrastructure-buildings/public-lands-homes.html</a>.
- Statistics Canada. "Core Housing Need Rates in Canada." Government of Canada, updated April 23, 2024. <a href="https://www150.statcan.gc.ca/n1/pub/11-627-m/11-627-m2022056-eng.htm">https://www150.statcan.gc.ca/n1/pub/11-627-m/11-627-m2022056-eng.htm</a>.
- Statistics Canada. *The Linkable Open Data Environment* (website). Government of Canada, July 26, 2024. <a href="https://www.statcan.gc.ca/en/lode">https://www.statcan.gc.ca/en/lode</a>.
- Statistics Canada. "Nationally, Renters Report Lower Quality of Life than Homeowners." The Daily. Government of Canada, February 19, 2024. <a href="https://www150.statcan.gc.ca/n1/daily-quotidien/240219/dq240219b-eng.htm">https://www150.statcan.gc.ca/n1/daily-quotidien/240219/dq240219b-eng.htm</a>.
- Suttor, Greg. Still Renovating: A History of Canadian Social Housing Policy. Montreal: McGill-Queen's University Press, 2016.
- Treasury Board of Canada Secretariat, *Directory of Federal Real Property* (website). Government of Canada. <a href="https://www.tbs-sct.gc.ca/dfrp-rbif/home-accueil-eng.aspx">https://www.tbs-sct.gc.ca/dfrp-rbif/home-accueil-eng.aspx</a>.
- Tsenkova, Sasha. "Neighbourhood Rebuilding and Affordable Housing in Canadian Cities." *Urban Research & Practice* 15, no. 5 (2022): 773–88. https://doi.org/10.1080/17535069.2022.2082023.
- Whiteside, H. (2020). "Privatizing Canadian Government Land and Real Estate: Railroads, Reconciliation, and Rip-offs." *Land Use Policy* 99 (2020): 104821.
- Zhu, Yushu, Yue Yuan, Jiaxin Gu, and Qiang Fu. "Neoliberalization and Inequality: Disparities in Access to Affordable Housing in Urban Canada 1981–2016." *Housing Studies* 38, no. 10 (2021): 1860–87. <a href="https://doi.org/10.1080/02673037.2021.2004093">https://doi.org/10.1080/02673037.2021.2004093</a>.



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