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Fixing Boundaries: An International Review Of Greenbelt Boundaries

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FIXING BOUNDARIES: AN INTERNATIONAL REVIEW OF GREENBELT BOUNDARIES

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Bachelor of Journalism, Ryerson University, 2007

A Major Research Paper

presented to Ryerson University

in partial fulfillment of the requirements for the degree of

Master of Planning

in

Urban Development

Toronto, Ontario, Canada, 2013

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FIXING BOUNDARIES: AN INTERNATIONAL REVIEW OF GREENBELT BOUNDARIES

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Abstract

The legislation governing Ontario's Greater Golden Horseshoe Greenbelt is set to be reviewed in 2015. This will be the first opportunity to review the defined boundaries of the protected area. This paper examines four other greenbelt areas to provide insight into how the province should deal with boundaries at the review. The case study areas are Ottawa's National Capital Greenbelt, British Columbia's Agricultural Land Reserve, London's Metropolitan Greenbelt and Portland's Urban Growth Boundary. Based on lessons from these case studies, the paper concludes with recommendations to provide a structure to the greenbelt review process, including harmonizing boundary definitions and exploring a more flexible approach to boundary definition.

Key words:

An article on greenbelt boundaries in London, Portland, British Columbia and Portland to inform the Ontario government's review of the Greater Golden Horseshoe Greenbelt.

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1.0 Introduction

Ontario's planning system experienced a seismic shift in the early 2000s, when growth containment policies were implemented by the newly elected provincial government. Toronto and its surrounding area became subject to urban containment policies that were designed to limit sprawl and encourage denser growth. Two main provincial policy initiatives were crafted to implement this new vision of the wider Toronto area, known as the Greater Golden Horseshoe (GGH). The first was Places to Grow (2005), which designated growth areas in the area's urban centres. The other was the Greenbelt (2005), legislation that created a fixed boundary within which no urban growth could occur. Together, the pieces of legislation were meant to stop urban sprawl, protect key agricultural land and preserve environmentally sensitive areas.

Though both measures were controversial (Eidelman 2010), the Greenbelt faced the most opposition. Places to Grow, implemented through the Growth Plan for the Greater Golden Horseshoe, directed growth and densities. The Greenbelt put major development controls on thousands of landowners in rural areas of the province. In total, the Greenbelt covers close to 1.8 million acres (Pond, 2009, p. 413).

The Greater Golden Horseshoe Greenbelt is approaching its 10th anniversary in 2015. The legislation that created and oversees enforcement of the Greenbelt is slated for review. This process is set to commence in 2015. The purpose of the review is to "to assess the effectiveness of the policies contained in the Plan ... and make amendments, if appropriate, to update or include new information or improve the effectiveness and relevance of the policies" (Ontario Ministry of Municipal Affairs and Housing, 2005, 44). The dates of review for both the Oak Ridges Moraine Conservation Plan and the Niagara Escarpment Plan, two key pieces of greenbelt legislation, were altered to coincide with the wider Greenbelt review.

There is no prescription for the review other than that it must occur, and that it can consider changes to the boundaries of urban centres (settlement areas) in the plan if the municipality provides a comprehensive planning rationale (Ontario Ministry of Municipal Affairs and Housing, 2005, 44). No mention is made of the outer boundaries of the Greenbelt. At the time legislation was passed. However, the method used to determine Greenbelt boundary came under intense scrutiny and criticism (Lindgren, 2005). Given the anger of landowners within the fixed boundary (Benzie, 2005), it is conceivable that the boundary will be an issue raised during the 10-year review.

1.1 Problem Statement

As the review approaches, provincial planners, policymakers and politicians must be ready to defend the current Plan or propose changes to it, as well as respond to requests from municipalities to alter the urban boundaries.

In order to do so adequately, the province must not only understand the Greenbelt in the context of Ontario, but how it fits in the broader context. Greenbelts and protected environmental areas exist in a number of different shapes and sizes across the globe. The boundaries of protected areas are treated in a variety of ways in these different contexts. Since urban boundaries and the fixed outer borders are likely to become issues in 2013, it is important to understand how selected areas treat these issues in the event that an alternative to the current Greenbelt policies is required.

1.2 Research Question

The research question this paper will address is: **How do other jurisdictions treat the borders and boundaries in their Greenbelts?** Through exploration and assessment of these various

methods, a set of recommendations based on best practices from other jurisdictions will be compiled and submitted to Ontario's Ministry of Municipal Affairs and Housing.

The paper will include a scan of greenbelts in jurisdictions outside of Southern Ontario to study how inner and outer boundaries are treated and determine best practices that can assist in informing the Ministry of Municipal Affairs and Housing during the Greenbelt's 10-year review. The definition of boundaries will include the edges of the Greenbelt bordering on urban and growth areas, as well as any settlements within the Greenbelts.

The goal is for this paper to inform the 10-year review, and provide context and analysis for any debate or research that arises surrounding boundaries during the review process.

1.3 Definitions

Greenbelt

The Province of Ontario's Greenbelt Plan (2005) defines the Greater Golden Horseshoe Greenbelt as an area of permanently protected land that preserves agricultural land, protects environmentally sensitive areas and promotes rural activities (p. 4). The case studies in this report adhere to at least two of these goals. They also, however, serve other purposes such as urban containment.

For the purpose of this paper, a Greenbelt refers to a defined rural area where no development is allowed. The primary purpose of the protected area is to contain growth, preserve agricultural land or protect the environments.

Inner Boundary

Inner boundaries are the delineated border between built-up urban areas and protected Greenbelt areas. These boundaries mark a distinction between urban and rural.

Outer Boundary

The outer boundary of a greenbelt delineates the protected area. All land within the outer boundary is part of the greenbelt and falls under its protection.

1.4 Locational Context

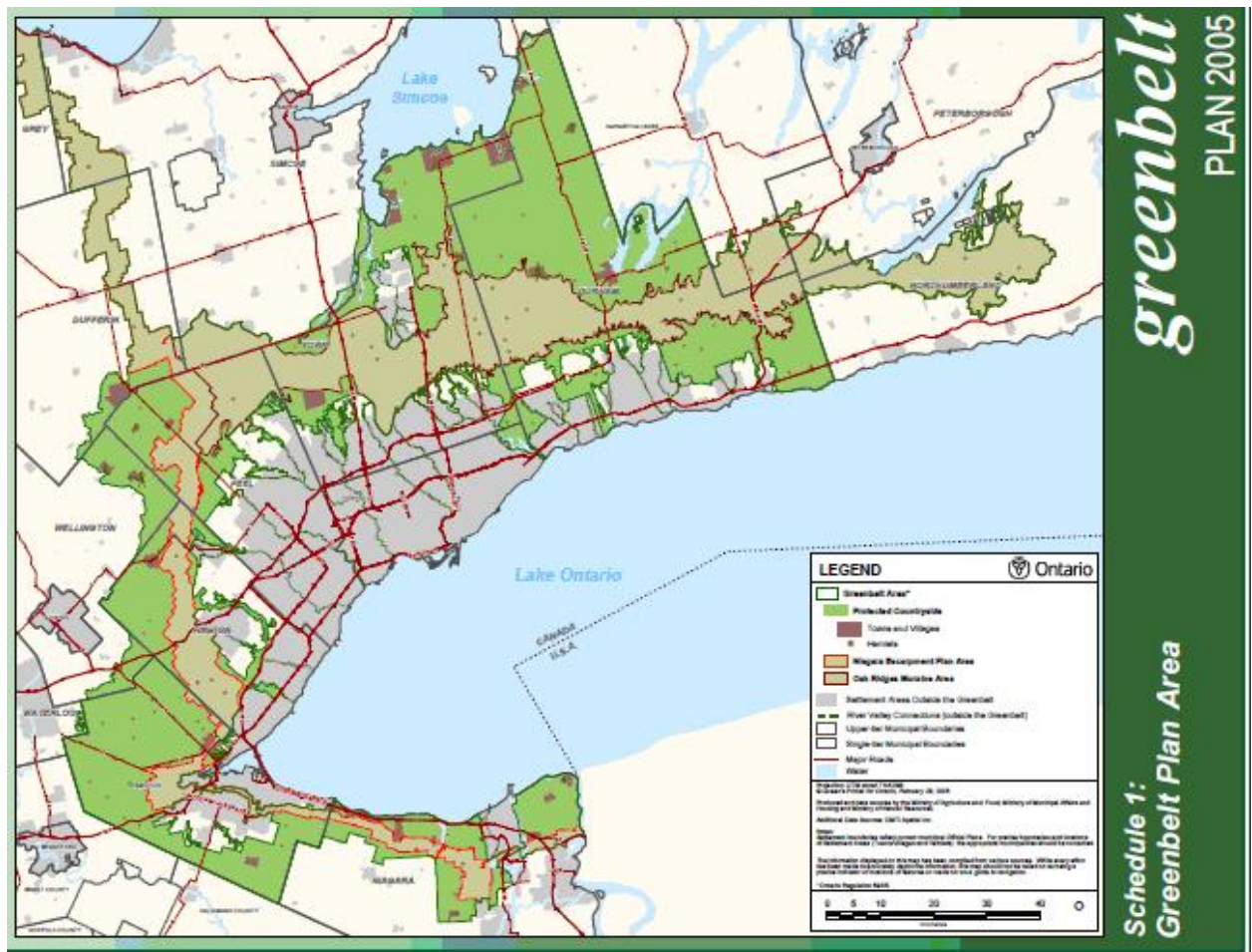


Figure 1: Protected Greenbelt Area in Ontario
Source: Greenbelt Plan (2005)

The Greater Golden Horseshoe Greenbelt is located in Southern Ontario, near Canada's largest metropolitan area, the Greater Toronto Area. It encompasses 1.8 million hectares of land, comprising three main formations:

- the Oak Ridges Moraine, an important water recharge area and environmentally sensitive landscape that sits north of Toronto
- the Niagara Escarpment, a large geologic formation that extends from Niagara Region near the American border north to Lake Huron
- and the Protected Countryside, composed mainly of agricultural lands. These three areas combined make up the Greenbelt, which includes five regions and dozens of single-tier and lower-tier municipalities.

The protected area abuts a large contiguous urban area that includes Peel Region, York Region and the City of Toronto. A swath of the Greenbelt bisects Durham Region, connecting the protected area to Lake Ontario. Large portions of Niagara Region are also included in the plan. Within the Greenbelt there are a number of settlement areas that are either completely or mostly surrounded by protected land.

1.5 Literature Review

Greenbelts have a long history in urban planning. While today they are seen as a useful way to contain urban growth and promote denser cities (Fung & Conway, 2007) the roots of modern Greenbelt planning lie in the early 20th century (Amati, 2008, 3). Ebenezer Howard's Garden City model is seen as a progenitor of mid-century Greenbelts in the United Kingdom (Amati, 2008, 3), when greenbelts were seen as a way to preserve open space - and urban residents' access to it (Nelson, 2006, 44-45). The 1930s saw the first establishment of Greenbelts in the United Kingdom, modeled after the Garden City. Soon the city planning model moved to North America and the United States (Arnold, 1971).

Today, Greenbelts are a common policy tool in jurisdictions around the world. The rationale for greenbelt legislation generally falls into two categories: urban containment and

natural protection (Dawkins & Nelson, 2002, 6). The two are not mutually exclusive, though the former is more prominent in current Greenbelt policies (Ali, 2008, 534). Whereas Howard and his ilk created Greenbelts to curtail perceived negative effects of urban living, in current planning thinking, Greenbelts are seen mainly as a way to stop urban sprawl while also achieving environmental protection (Fung & Conway, 2007).

While common, there is no single form for Greenbelts. Ontario's Greater Golden Horseshoe Greenbelt places an emphasis on protecting agricultural land (Gayle 2010). Access to recreation and open space play a more prominent role in other jurisdictions, particularly those Greenbelts that were created in the mid-twentieth century (Amati & Makato, 2007). The protected spaces also exist under a number of different regimes, including authoritarian style governments in China (Yang and Jinxing, 2007). Seoul's Greenbelt, one of the most widely studied, was also created under an authoritarian government. As the country moved away from authoritarian rule, the role of the Greenbelt has also changed (Bengston and Young, 2006).

The merits of Greenbelts are generally seen as positive in terms of environmental protection, however there are some consequences of freezing development on protected lands, such as the effect on housing and land prices (Dawkins and Nelson, 2002). Greenbelts seem to have an upward effect on land and housing prices in urban areas in the short term (Lee and Linneman, 1998, 126). The longer-term effects, as density increases inside the urban boundaries, are less clear (128).

Ontario's Greenbelt

Despite its relatively brief period of existence, research has already begun on the effectiveness of the Ontario Greenbelt's policies. It has been praised for its ability to limit growth in the GTA and beyond, as well as its thorough protection policies (Ali, 2008, 546). It's seen as

an example of the shift of the purpose of greenbelts from recreational land to sprawl limiters and land protectors (Macdonald and Keil, 2012, 142).

Much of the research done on the Greater Golden Horseshoe Greenbelt has questioned its long term effectiveness. It has been painted as a political ploy designed to woo suburban voters rather than a substantive policy (Eidelman, 2010). Land rights have been a particularly sticky issue, especially in agricultural literature (Gayler 2010).

Another criticism of Ontario's Greenbelt has been the potential for leapfrog development. Vyn (2012) writes that the sprawl is not being contained by the Greenbelt, but rather pushed out toward its edges (475). This view has been challenged. Tomalty and Komorowski, (2011) argue that growth is being contained adequately, particularly near the inner Greenbelt boundaries (p. 43). They concede, however, that the province needs to consider policies to ensure that leapfrog development does not occur (p. 44).

The Greater Golden Horseshoe Greenbelt's boundaries have been another point of criticism. Pond (2007) contends that the process of creating the borders was mainly a political one. Instead of the most worthwhile land being protected, the least politically sensitive land was selected. Lands that merited protection were left out of the protected area, while “inferior parcels” were included (246).

Fung and Conley (2007) note that the fixed boundaries delineated in the Oak Ridges Moraine Conservation Plan are actually a negative (107). The authors criticize the process of setting the boundaries and note portions of the moraine may be located outside of the fixed boundary and are unprotected (ibid). They too criticize the current boundaries, and the process that created them. Fung and Conley note that the boundaries of the ORM were based on incomplete information (ibid.). The same problems exist in the Greenbelt Plan. The boundary

was defined based on existing property lines and infrastructure (110). The edges were not based on areas that required protection. Instead, the protection area is defined by existing features (ibid.).

Vyn's work (2012) in particular shows the value of owning land adjacent to the Greenbelt. This means that landowners within and close to the edge of the Greenbelt boundary will likely be looking to get the boundary changed in their favour. It would be instructive to look at other greenbelts and how they've dealt with boundary pressures both within and at the edges of protected areas.

2.0 Background

Greenbelt legislation was passed in concert with other growth containment policies such as the Growth Plan for the Greater Golden Horseshoe, which designated growth areas in Toronto and the surrounding area. The Greenbelt Plan delineated 1.7 million acres of protected land across Southern Ontario. The Greenbelt is often discussed as one continuous entity, but its protection is governed by three different plans: the Niagara Escarpment Plan (NEP), the Oak Ridges Moraine Conservation Plan (ORM) and the Greenbelt Plan. The Greenbelt Plan, which was born out of legislation that enabled the unification of the three protection areas, was enacted in 2005. ORM protection was instituted three years earlier, in 2002. The NEP, meanwhile, dates back to conservation efforts that began in the decades after the Second World War. These two plans and their enabling legislation laid the groundwork for the introduction of the Greenbelt in the early 2000s.

Maintenance of the Greenbelt Plan and the Oak Ridges Moraine Conservation Plan is overseen by the Provincial Ministry of Municipal Affairs and Housing. The main focus of the three plans is to identify "where urbanization should not occur in order to provide permanent protection to the agricultural land base and the ecological features and functions occurring on this landscape" (Ontario Ministry of Municipal Affairs and Housing, 2005, 3). Though the province sets the framework for this goal, it is up to local governments to actually implement it. The Niagara Escarpment Commission, meanwhile, is responsible for oversight of the Niagara Escarpment Plan.

The result is multiple levels of policy governing lands within the Greenbelt. This chapter will explore the legislative makeup of Greenbelt policies, focusing on the three plans and the

treatment of boundaries therein. It will also explore the history of conservation efforts in Ontario through the lens of the Niagara Escarpment, Oak Ridges Moraine and Greenbelt Plans.

2.1 Niagara Escarpment Plan

The first portion of the Greenbelt to receive government protection was the Niagara Escarpment, a 725-kilometre long geological formation that runs from the western shore of Lake Ontario north to the Bruce Peninsula on Lake Huron (Whitelaw et. al, 2008, p. 804). The escarpment is a ridge of forested rock that rises to 510 metres at its highest points (Niagara Escarpment Commission, 2013). The escarpment is home to environmentally sensitive landscape, resource deposits and high-yield agricultural land.

The history of the Ontario government's involvement with preserving the Niagara Escarpment stretches back to the 1950s, when citizens lobbied the province to protect the Niagara Escarpment with planning legislation (Moss and Milne, 1998, p. 251). Though concerns about development on the escarpment emerged in the 50s, the province's response was slow. Lobbying continued throughout the next decade, but it took a highly visible aggregate extraction to bring the issue to the forefront of the public consciousness. In 1962, "Dufferin Aggregates Inc. blasted a hole through the face of the [escarpment] in their Milton quarry. This highly visible scar on the landscape could be observed from Ontario's busiest highway, Highway 401. This visibility increased public awareness of both the landscape value of the [escarpment] and development threats to it, contributing to the creation of the [Niagara Escarpment Plan]" (Whitelaw et. al, 2008, 806). The events of 1962 mobilized public consciousness and spurred the provincial government to undertake an environmental review of the area.

The review led to the government passing the Niagara Escarpment Planning and Development Act in 1973. The act established the Niagara Escarpment Commission (NEC), an

oversight body that controls development on the escarpment (Moss and Milne, 1998, p. 251).

The Act also gave the province the power to enact a protection plan for the area. The NEC spent the next decade working on the plan, which was passed in 1985 (ibid.). A revised version of the plan was approved in 1990. It was updated again in 2005 when it was folded in with other Greenbelt legislation.

The NEP delineates the protected portions of the escarpment and sets out the land use and development policies for the area. While conservation is one pillar of the plan, it also focuses on maintaining access and recreation in protected areas, as well as defining areas for mineral extraction.

Boundaries in the Niagara Escarpment Plan

The NEP speaks to two main types of boundaries – the outer boundaries of the protected area, and the internal boundaries that surround settlement areas within that area, as well as specific features. The outer boundary was defined when the plan was passed. It delineates the overall area of the protected escarpment. Any land within this boundary is subject to the policies of the Niagara Escarpment Plan. The treatment of the outer bounds is fairly rigid. This boundary is “fixed and inflexible” (Niagara Escarpment Plan, 2005, p.6). The boundary *can* be changed, but only through an amendment to the NEP, which must be approved by the Province.

The treatment of inner boundaries is slightly more complex. The responsibility for setting urban boundaries is left to the municipalities. These boundaries were set by the municipalities through the Official Plan during exercises to conform to the NEP. These boundaries had to be approved by the Province. Any expansion to these boundaries must be approved through an amendment to the plan. A reduction to the boundaries of settlement areas does not need an amendment (Niagara Escarpment Plan, 2005, p. 24).

A third type of boundary mentioned: boundaries between various areas of the plan. Different designations in the NEP have different levels of protection. Land in natural heritage areas is strictly controlled – no resource or recreation development can occur on these lands. Resource lands, however, can be mined or quarried. The boundaries between designations are “less definite” (Niagara Escarpment Plan, 2005, p. 6). The designation of the boundaries on specific sites is done by municipalities through the application of criteria laid out in the plan. These “designation interpretations” do not require an amendment to the plan (Niagara Escarpment Plan, 2005, p. 6).

In practice, the main boundaries of the NEP have been set – the outer boundaries by the Province and the urban boundaries by municipalities during conformity exercises. Changes to these boundaries are unlikely to be accepted by the current provincial regime. The 2015 review of Greenbelt legislation, however, opens a window to explore changes to policies, and could conceivably result in at least of discussion of boundaries.

2.2 Oak Ridges Moraine Conservation Plan

The Oak Ridges Moraine is an environmentally sensitive landform located north of Toronto. Composed of “a gently rolling landscape of knolls and kettle lakes” (Gilbert et. al, 2009, p. 387), the moraine is an important water recharge area and habitat for any number of flora and fauna. The moraine was recognized as an environmentally significant area in the 1920s and 1930s, but comprehensive protection legislation wasn’t passed until the turn of the 21st century.

Due to its proximity to Toronto, the moraine area was a focus for development for many years, reaching back more than a century. “Much of the moraine was deforested during settlement in the early 1800s. Deforestation, particularly on sandy soils, led to extensive erosion.

Conservation efforts by the Ontario government in the 1930s and 1940s resulted in extensive reforestation.” (Whitelaw & Eagles, 2007, p. 676). Replanting efforts were the extent of conservation efforts until the 1970s, when a framework for environmental planning emerged in Ontario (p. 677). The Region of York began studying the Oak Ridges Moraine in the 1970s, and as years passed, other regions began to examine the impact of land uses on the moraine (Hanna & Webber, 2010, p. 171).

Over the next decades, as development intensified on moraine lands, support for conservation of the area intensified and consolidated. In the late 1980s, a group called Save the Oak Ridges Moraine (STORM) was formed with a mandate to engender support for legislative protection of the moraine (Gilbert et. al, 2009, p. 393). Pressure on the government continued into the 1990s, and the provincial government issued a series of studies on the moraine, culminating in the passage of the Oak Ridges Moraine Conservation Act in 2002 (Hanna and Webber, 2010, p. 171). The policies that govern development on the Oak Ridges Moraine are contained in the Oak Ridges Moraine Conservation Plan (2002).

The plan is structured similar to the Niagara Escarpment Plan, laying out the goals of the plan and the various designations contained within. There are four main broad designations within the ORMCP:

- Natural Core areas, which make up 40 per cent of the land in the moraine, are the main environmentally sensitive areas. Uses on these lands are most restricted.
- Natural Linkage Areas, which make up a quarter of moraine lands, protect “critical natural and open space” areas linking environmentally sensitive areas.
- Countryside Areas, which make up 30 per cent of the moraine, are mainly agricultural lands.

- Settlement Areas, which are existing urban areas in the plan. (Oak Ridges Moraine Conservation Plan, 2002, p. 4-5).

Like the NEP, resource extraction is also permitted in most designations of the ORMCP. The majority of the plan's objectives, however, deal with conservation and development control.

Boundaries in the Oak Ridges Moraine Conservation Plan

Boundary rules in the Oak Ridges Moraine Conservation Plan generally follow the same basic regulations as the Niagara Escarpment Plan. There are two main boundaries – the outer boundary, which delineates the area covered by ORMCP policies, and the internal boundaries around settlement areas and between different designations in the plan.

The internal boundaries, meanwhile were generally set by the Province and “refined” during conformity exercises by local municipalities. The ORMCP is explicit in suggesting that boundaries could change at the 10-year review. The plan dictates that the review must consider the “need to change or refine the boundaries of the Countryside Areas and Settlement Areas (Province of Ontario, 2002, p. 10). Any change to the boundaries of Settlement Areas, requires municipalities to submit a “justification study” for the expansion of urban areas to the Province (ibid.). The plan lays out six criteria for boundary expansion:

- there is lack of lands for short-term growth needs
- there are few or no opportunities for infill and intensification
- other jurisdictions outside the protected area cannot accommodate the growth
- the expansion will not affect Natural Core Areas or Natural Linkage Areas
- the expansion area is relatively small

- water budgets and conservation plans must be taken into account (Oak Ridges Moraine Conservation Plan, 2002, p. 10-11).

The requirements suggest that any change to settlement boundaries will be relatively minor. While boundary changes might be expected, they are unlikely to have much impact on the overall protected area. The more sensitive areas – the Natural Core Areas and Natural Linkage Areas – are under consideration for boundary changes, meaning the areas the Province has deemed most sensitive will remain unchanged. Overall, the ORMCP is more prescriptive about boundary changes than the NEP and lays out a clear process for boundary changes.

2.3 Greenbelt Plan

Decades of conservation efforts in Ontario culminated with the passage of the Greenbelt Protection Act in 2005. This legislation, and the subsequent Greenbelt Plan, united Oak Ridges Moraine and Niagara Escarpment policies, and designated 1 million acres of newly protected land in areas known as the Protected Countryside.

The Protected Countryside is a series of agricultural and environmentally significant lands intended to enhance and connect the Niagara Escarpment protected area with the lands covered by the Oak Ridges Moraine Conservation Plan (Greenbelt Plan, 2005, p. 3). After the passage of conservation legislation to protect the Oak Ridges Moraine, the idea of a wider Greenbelt gained traction during a 2003 provincial election (Macdonald and Keil, 2006, p. 126). The Provincial Liberals promised a Greenbelt during the campaign. Once they were elected, the Liberals put a moratorium on development on a designated study area, parts of which would become the Greenbelt (ibid.)

A committee known as the Greenbelt Task Force was established by the Provincial Government to examine the study area. The Task Force determined which areas were fit for

protection and which sorts of protection should be legislated (Greenbelt Task Force, 2004, p. 2). The task force submitted its recommendations in 2004 and the Greenbelt Act was passed in 2005. Greenbelt policies are laid out in the Greenbelt Plan (2005). The first portion of the plan deals with uniting ORM and Niagara Escarpment legislation with the new Greenbelt policies. Essentially these sections defer to the respective plans for lands within the Oak Ridges Moraine Conservation Plan and Niagara Escarpment Plan protection areas (Greenbelt Plan, 2005, p. 10-11). It also establishes a new protected area, the Protected Countryside, which was discussed earlier in this section. The plan also sets the timing for reviews of each plan to the same date in 2015.

The remainder of the Greenbelt Plan is similar to the NEP and ORMCP – it lays out land uses policies for protected areas. There are four main designations in the plan, with a number of sub-designations (Greenbelt Plan, 2005):

- Natural Systems, which are environmentally significant lands that include natural heritage areas and hydrologic features.
- Agriculture areas, which include prime farmland and are designated for rural and agricultural uses.
- Parkland, Open Space and Trails, which are primarily for recreational uses.
- Settlement Areas, which are existing towns and villages within the Greenbelt areas.

The land designations are similar to those laid out in the ORMCP. There is a greater focus on recreational and agricultural uses, key objective areas in the Protected Countryside.

[Boundaries in the Greenbelt Plan](#)

Boundary treatment in the Greenbelt Plan is very similar to the two predecessor plans. The outer boundary is fixed. Settlement area boundaries are defined by the local Official Plans.

Once the boundaries are determined through conformity exercises, boundary expansions of settlement areas are not permitted until the 10-year review.

In the Greenbelt Plan, there are two designations for Settlement Areas: Towns and Villages, which are existing urban areas in rural locations, and Hamlets, which are small rural settlements. There are separate boundary expansion policies for the two types of settlement areas. During the 10-year review, any allowed expansion in Towns and Villages must be “modest” (Greenbelt Plan, 2005, 24). The area that is being considered for expansion must have municipal servicing, and cannot extend into natural heritage systems, or specialty crops. Watershed impacts and water use must also be taken into account (Greenbelt Plan, 2005, p. 25). The boundaries for hamlets, meanwhile, are based on the existing bounds at the time of conformity. During this period, “minor rounding out” of the hamlet is permitted (ibid.) There is no mention of consideration for hamlet expansion during the review.

The Greenbelt Plan has more to say about the boundaries of specific designations such as key natural heritage features, vegetation protection zones and specialty crop areas, which have stricter measures attached to them, such as buffers. Municipalities or governing conservation areas are given the responsibility to designate the boundaries of these sensitive areas (Greenbelt Plan, 2005, 44).

Boundaries in all three of the plans are fairly rigid. Outer boundaries of all three plans were set by the surveyor general and unlikely to change. While municipalities within the protected areas had some power to determine their own borders, these boundaries were set once conformity exercises were completed. In most cases, the only chance for boundary changes comes at the 10-year review, and most will be relatively minor. The rigidity of the Greenbelt boundaries can be seen as a strength – the protected areas will remain protected. The permanence

of the boundaries could also be seen as inflexibility and the Province could see an influx of demands for boundary changes at the 10 year review.

3.0 Method

This paper relied on case studies as the main research method. As the goal of the project is to find best practices for dealing with inner and outer greenbelt boundaries, case study research allows focus on other jurisdictions and comparison to the Ontario context.

In order to determine which jurisdictions to include as case studies, a preliminary documentary scan of relevant academic literature, professional publications and policy documents was conducted. Through this initial scan, a list of potential case studies was created. Subsequently, in conjunction with a thorough review of existing Ontario Greenbelt legislation, a list of criteria for case study selection was created. These criteria were:

Comparability to the Greater Golden Horseshoe Greenbelt: The selected case studies must be similar to the Ontario Greenbelt in order to offer an apt comparison. The similarities can include, but are not limited to similar planning and governance structures; similar size; similar policies; or similar environmental conditions. This is the paramount criterion, as a comparable framework will mean lessons learned from these case studies will be easily applied to the GGH Greenbelt.

Endurance: This paper will be looking for lessons for the GGH Greenbelt from the case studies. As such, examining policy interventions that have endured should provide insight into what constitutes a successful Greenbelt. The purpose of this is twofold. Greenbelts that have endured have likely been successful. Lessons can be drawn from their success. Additionally, a review greenbelts that have survived for decades could shed light on the issues that the GGH Greenbelt will face in the future.

Innovation: The selected case study areas should have innovative approaches to growth containment, conservation and protection.

Context: While the selected case studies should all meet the three criteria listed above, there should also be some variation and difference in the models being studied. All greenbelts are based on the specific context of where they are located. The selected case studies should include a mix of contexts and purposes. Additionally, the implementation strategies used to enact greenbelt policies should have some variance, in order to assess alternatives for the GGH Greenbelt.

Once the criteria were selected, they were applied to the list of potential case studies. The result was four strong case studies. The rationale for the selection of each is listed below.

Ottawa's National Capital Greenbelt. The National Capital Greenbelt is Canada's first Greenbelt. The successes and threats it has faced over the years will be comparable to those that may face the GGH Greenbelt. It was an early growth containment policy in Canada, and laid the groundwork for what was to come in the Greater Toronto Area.

London's Green Belt. The Metropolitan Greenbelt in London, England, is one of the world's most famous protected areas, and was one of the first of many greenbelts in the United Kingdom. It's a comparable size to the GGH Greenbelt and like the Ontario Greenbelt, surrounds a large metropolitan area and contains a number of small villages within its borders.

Agricultural Land Reserve, British Columbia. The British Columbia ALR is a more recent policy intervention than the first two case studies. Like the Protected Countryside in the GGH Greenbelt, it focuses on protecting scarce agricultural resources. Instead of being a contiguous area, it is split up into pockets around the province. It is a unique form of protection in Canada

and will provide a look at other methods of implementing agricultural protection. Though in reality it is a series of greenbelts, the ALR offers an alternative to one large, connected protected area.

Portland's Urban Growth Boundary. Portland's urban growth boundary is seen as one of the most effective urban containment policies in the United States. Its innovative boundaries and legislative makeup make it an ideal selection.

After the four case studies were selected, a two-pronged research approach was undertaken. A review of academic literature on each of the four case studies was conducted in order to understand the background, context and issues. A review of the guiding legislation for each case study was also taken, with particular focus on how each treated its boundaries. This information was compiled (Chapter 4) before themes were extracted and recommendations were made based on the case study area's treatment of boundaries (Chapter 5).

4.0 Case Studies

4.1 National Capital Greenbelt – Ottawa, Ontario

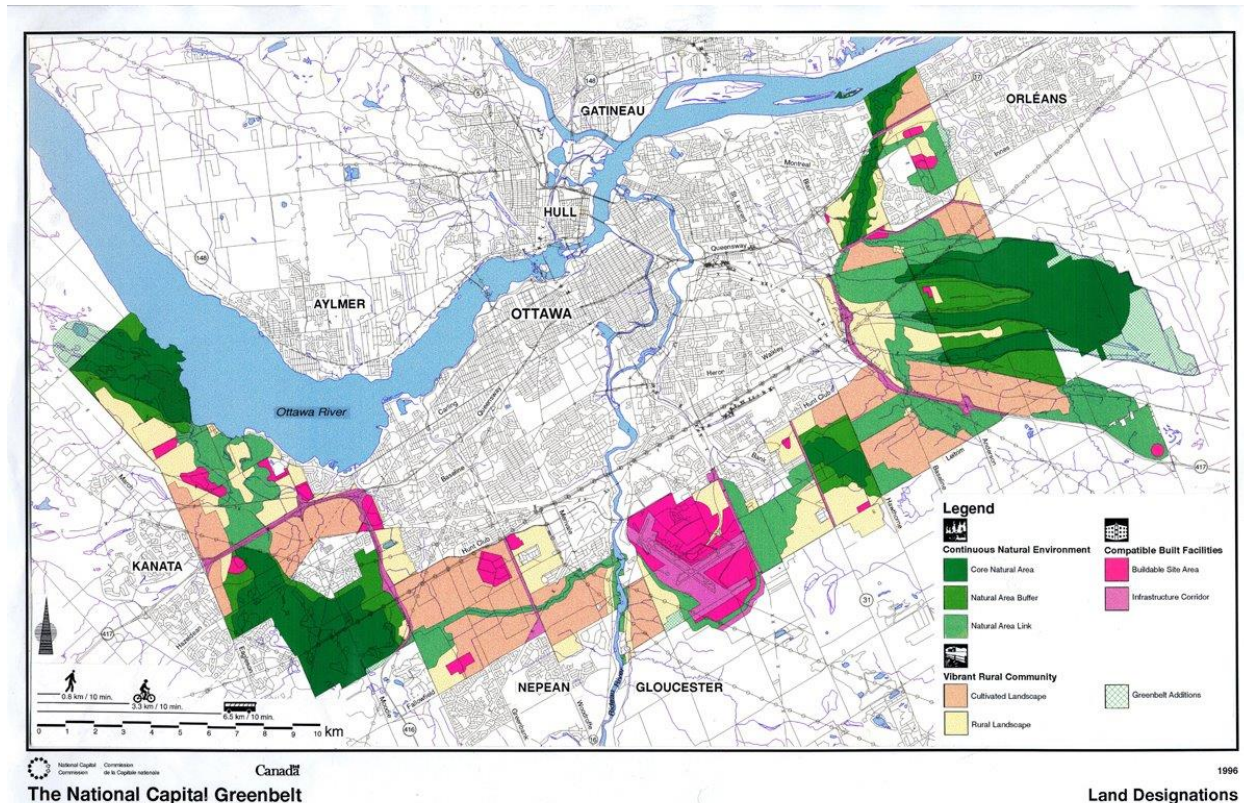


Figure 2 Ottawa's National Capital Greenbelt
Source: National Capital Commission (1996 (b))

The Greater Golden Horseshoe Greenbelt is not the first protected green area in the province. Ontario is also home to Canada's first Greenbelt in the nation's capital of Ottawa. Known as the National Capital Greenbelt, the protected area encompasses 20,000 hectares of rural land within the City of Ottawa (Ottawa Official Plan, Section 3.5). Originally established at the border of urban Ottawa, the Greenbelt now acts as a "separation between the urban area within the Greenbelt and the urban communities that have been established just beyond it" (Ottawa Official Plan, Section 3.5).

The Ottawa Greenbelt covers only one per cent the area that the Greater Golden Horseshoe Greenbelt encompasses. The two protected areas exist on different scales. However, it is worthwhile to examine Ottawa's Greenbelt in relation to the Greater Golden Horseshoe Greenbelt for two main reasons:

- the Greenbelts are geographically close and exist in the same provincial jurisdiction
- while the legislative oversight is different, both Greenbelts exist in similar political and economic contexts. The pressures that the National Capital Greenbelt has faced over its half-century in existence may be instructive about the problems the Greater Golden Horseshoe Greenbelt could face.

Simply put, the National Capital Greenbelt was Ontario's first greenbelt. Its creation and continued existence likely paved the path for the Greater Golden Horseshoe Greenbelt, however indirectly. This section will provide an overview of the creation and history of the National Capital Greenbelt since the conclusion of the Second World War. It will review the current legislative context in which the Greenbelt exists. Finally, this section will include an examination of the historical and current application of borders and boundaries, before concluding with a discussion of the opportunities and threats the area has faced and is facing.

Background

The development of Ottawa's Greenbelt began after the Second World War, when the federal government began to assert more control over development in Ottawa. In the years immediately following the war, the government of Prime Minister William Lyon Mackenzie King began to establish a plan for the capital city. While the federal government traditionally had no role in local planning matters, the government was "troubled by [Ottawa]'s emerging metropolitan form and . . . the absence of any effective local government-driven planning

initiative” (Fullerton, 2005, 102). King hired French planner Jacques Greber to develop a plan for Ottawa. The aim was to create a “world-class national capital” (ibid.). The plan was completed in 1950, and its centrepiece was a Greenbelt separating the urban and rural realms.

Following the completion of Greber’s plan, the greenbelt concept moved ahead in fits and starts. The federal government began buying up rural properties. With the creation of the National Capital Commission in 1958, the expropriation process was expedited (Erickson, 2004, 208). The government bought more than 600 farms in outlying areas (Amati, 2008, 137) and the greenbelt was implemented in the mid-1960s.

The stated permitted uses were primarily agricultural, but also allowed for ‘public developments’ and private industries on lots larger than 10 acres (Amati, 2008, 136). While the permitted uses do not line up exactly with what would be permitted in a modern protected green area, the goal was not ecological protection. “The greenbelt was seen as an urban growth boundary and a physical separation between urban and rural land-uses, people and functions” (Erickson, 2004, 208). Some public and private office and industrial uses were allowed, but no new residential units were permitted. This was viewed as the best measure to curb urban sprawl (Amati, 2008, 136).

The National Capital Greenbelt and the city it surrounds have changed drastically since its inception. The city now surrounds the Greenbelt, and the policies guiding the Greenbelt are once again under review.

Governance and Legislation

Though the Ontario Greenbelt and the National Capital Greenbelt are located in the same province, they fall under different governance systems. The boundaries and policies governing Greater Golden Horseshoe greenbelt are dictated by the Province of Ontario. They are implemented by municipalities located in and adjacent to the three major policy area

delineations. Ottawa's Greenbelt, meanwhile, is governed by the National Capital Commission (NCC), a federal Crown Corporation that has oversight of federally owned lands in the capital (Picton, 2010, p. 315). The City of Ottawa is responsible for implementing land use policies dictated by the NCC on Greenbelt lands.

Though the governance structure of the National Capital Greenbelt differs from the province's larger Greenbelt, some similarities do exist. Under the Greater Golden Horseshoe Greenbelt, the province is the policy maker and the municipalities are the implementers. The same framework exists for the National Capital Greenbelt. The NCC replaces the province as the oversight authority.

A key difference is ownership. The vast majority of the GGH Greenbelt is privately owned. The NCC owns three quarters of the land in the Ottawa Greenbelt (approximately 15,000 hectares) (NCC Greenbelt Master Plan Summary, p. 5). These lands include an airport, research farms and Department of National Defense sites (*ibid.*). The ownership situation gives the NCC broad control over the Greenbelt, as federal lands are not subject to provincial or municipal policies (Environment Canada, 2011).

The overarching guiding document for control over the Greenbelt is the National Capital Commission's Greenbelt Master Plan (1996 (a)). The plan is the newest in a series of documents that have guided the greenbelt's evolution since the 1960s. The 1996 version drastically repositioned the greenbelt from an urban containment tool to focus more on ecological conservation and recreation (Amati, 2008, p. 240). There is another aspect to the plan, unique to the National Capital Greenbelt because of its positioning in Ottawa. One of the goals of the Master Plan is to ensure that the greenbelt is "a living repository for Canadian history, traditions, technology and ecology" (National Capital Commission, 1996 (a), p. 27). It is envisioned to be a

“national treasure [that] will truly represent rural Canada” (ibid.) The goal of making the greenbelt part of a representative capital region feeds into the increased focus on access and recreation.

The Master Plan breaks down greenbelt lands into seven main land designations:

- *Core Natural Areas*
- *Natural Buffer*
- *Natural Area Link*
- *Cultivated Landscape*
- *Rural Landscape*
- *Buildable Site Area*
- *Infrastructure Corridor*

The plan also separates the greenbelt itself into a number of sectors, with different management plans for each area.

It is the City of Ottawa’s responsibility to implement the policies of the NCC’s master plan (Ottawa Official Plan, 2003, Section 3.5). This is achieved through the city’s official plan and zoning. The City of Ottawa’s Official Plan (2003) devotes an entire section to Greenbelt Planning (Section 3.5). Greenbelt policies are broken up into three main categories: general, rural and employment/institutional (City of Ottawa Official Plan, 2003, p. 3-13). The general policies identify the Greenbelt’s boundaries and identifies land uses within the protected area. The uses include agricultural resource areas, natural environment areas and significant wetlands. These designations are similar to those found in the Greater Golden Horseshoe Greenbelt.

Another similarity to the Ontario Greenbelt legislation is that infrastructure development is allowed within the National Capital Greenbelt. Infrastructure in the NC Greenbelt is to be

designed to a “rural standard” (City of Ottawa, 2003, p. 3-13), likely removing any possibility of major highways that are permitted to run through the Southern Ontario protected area.

The governance model of the National Capital Greenbelt is multi-layered, with most responsibility resting with the federal government. Ownership of Greenbelt lands by the NCC means that continued protection is easier to maintain in the long-run. It also means that the federal government, which normally stays out of local planning issues, has a big role in shaping the future of the Greenbelt and the City of Ottawa as a whole.

Boundaries

The treatment of boundaries has evolved as the urban context around the National Capital Greenbelt has changed. Border policies have changed as the Greenbelt has evolved. When the policy was implemented, the Ottawa area was collection of disconnected rural municipalities in orbit around the central city. It became a formal region in the 1970s and an amalgamated city in the early 2000s. As the city changed and grew, so did the boundary policies. An examination of this evolution will exhibit the resilience or susceptibility of Greenbelt boundaries to political change.

When the NCC Greenbelt was first envisioned, it was seen as a hard border between urban and rural uses (Hosse, 1960, p. 37). The goal was to stop urban sprawl, as outlying municipalities such as Nepean and Gloucester began to grow (Gordon and Scott, 2008, p. 135). The inner borders (those abutting the Ottawa urban area) were seen as the clear divide between urban and rural. The determination of the inner border was not a scientific exercise to ensure the protection of important agricultural or environmentally sensitive land. Nor was it a political one, designed to placate those living on the fringe between the city and the country. Instead, the inner border was determined as a matter of practicality. “The physical practicality of providing water supply and sewage disposal became the governing factor” (Hosse, 1960, p. 37).

Despite its shift in focus from urban containment, the 1996 Master Plan maintains that one of the Greenbelt's purposes is to provide a delineating line between urban and rural areas of the city (National Capital Commission, 1996 (a), Section 4, p. 49). The distinction must not just be in land use, but in visible terms. According to the plan, Greenbelt edges "require special visual emphasis to make the Greenbelt boundary obvious" (ibid.).

The changing context of the Ottawa area is reflected at the edges of the Greenbelt. At the beginning of the Greenbelt's existence, the outer boundary abutted more rural land. By 1996, two-thirds of the Greenbelt's edges were projected to be abutting an urban area (ibid.). It is clear that this change will impact how the Greenbelt will look and interact with urban areas. As such, two sets of policies for boundary changes to the Greenbelt exist in the Master Plan: a set of policies to include new land in the protected area, and another to take currently protected land out of the Greenbelt.

The first set, known as integration policies, lay out the mechanisms that exist for adding lands. These include acquisition of lands by the NCC or other governmental and non-governmental organizations. Community organizations can acquire conservation easements on the lands, or management agreements could be agreed upon with landowners (National Capital Commission, 1996 (a), Section 6, p. 107). These are all fairly arduous ways to add lands to the Greenbelt. In the GGH Greenbelt framework, lands can be added without ownership by amending relevant legislation. The NCC Greenbelt, meanwhile, requires agreement with landowners, or outright purchase.

The Master Plan lays out a number of criteria for integration consideration. The lands must benefit the Greenbelt, and possibly be under threat of future development. Landowners must also be willing to have the designation. The cost of rehabilitating sites and the regulatory

framework on the site is also taken into consideration (ibid.). In extreme cases, the Master Plan says the NCC will consider expropriation, but this is not the preferred method (p. 108).

The plan also lays out policies for removal of Greenbelt Lands. The 1996 Master Plan identifies about 600 hectares slated for possible removal from the Greenbelt (ibid.). There is not much discussion of why these lands should be removed. The only criteria is that they are no longer relevant “for such reasons as isolation from the Greenbelt due to changes in the transportation networks or in urban growth” (National Capital Commission, 1996 (a), p. 108). There are no specific criteria for lands that should be removed, but rather a set of “obligations” that the NCC must consider when making decisions of removal. These include:

- managing assets in a fiscally responsible manner,
- assuring compatibility with adjacent land uses and
- and preserving the capital and greenbelt areas (National Capital Commission, 1996 (a), p. 108-109).

Boundary policies mainly apply to publicly owned lands within the NCC Greenbelt, which are the vast majority. These policies are not strong. The addition and subtraction of lands is much more onerous in the GGH Greenbelt framework than in the Ottawa protected area. However, public ownership theoretically means that even if boundary policies are not ironclad, the people making the decisions are still public agents. The next section will explore how the NCC and the City of Ottawa have dealt with boundary pressures in the Greenbelt.

Issues

The Ottawa Greenbelt faces enormous growth pressures. As the city has evolved, it has almost completely surrounded the protected area. This has led to a number of issues that have pitted growth against conservation. The City of Ottawa acknowledges this in Section 3.5 of the Official Plan (2003). “The rural character of the Greenbelt has been challenged in the past by

applications to develop large community facilities, commercial developments and transportation infrastructure" (City of Ottawa, 2003). Though the Official Plan includes policies intended to address these pressures, the continued growth in Ottawa has led to battles over uses in the Greenbelt.

These pressures continue today. A request from the Ottawa-area airport to extricate lands from the Greenbelt for future expansion was recently approved by the National Capital Commission (Cook, 2013). The decision will see more than 1,300 hectares removed from the Greenbelt. The airport is contributing a separate 170 hectares to be added into the Greenbelt.

These growth pressures have had an impact on the current review of the Greenbelt Master Plan. The Master Plan was last updated in 1996. The new plan aims to create a vision for the Greenbelt to 2067. The proposed updated plan includes a re-think of the main uses in the Greenbelt. Under the update, conservation of the natural environment becomes the main goal, while agriculture and recreation are the secondary concerns (National Capital Commission, 2012). The update also includes a new "tertiary" land use: public facilities (ibid.)

While facilities are seen as permitted in the Greenbelt under the new vision, there are guidelines as to what kind of infrastructure would be allowed. Only new federally-run facilities would be permitted. The vision proposes allowing "federal facilities of national significance that require space, seclusion and location within the Capital" (National Capital Commission, 2012). These facilities would need to "align" with other Greenbelt roles. Existing facilities that do not meet this requirement would be phased out (ibid.)

There are changes to boundaries proposed in the Master Plan update. The revisions would see adjustments to boundaries around natural areas to "a more natural shape" (National Capital

Commission, 2012, p. 4). These adjustments are meant to highlight the natural areas and direct protection to worthwhile areas.

Discussion

The National Capital Greenbelt has existed for half a century and had a profound impact on how Ottawa has grown. The Greenbelt has shaped how the city has developed both inside and outside of its boundaries. While the protected land once served as a separation between urban and rural areas, it now exists as a rural area within a larger metropolitan area.

The change in context has also result in a change in views on how the Greenbelt should function. In the 1950s, it was seen as a way to stop sprawl. By the 1990s, the focus was on less on guiding growth and more on recreation and conservation. The current revision of the Master Plan points to a further change in philosophy for the Greenbelt. The proposed update suggests expanding protected areas, while allowing minor development in other areas (National Capital Commission, 2012). This tweak is telling about the how the role of the Greenbelt has evolved in Ottawa. The protected area is not seen as sacrosanct. It is also not viewed as a development reserve. The gist of the Master Plan update seems to be that some balance between the two is required in order to ensure the success of both the Greenbelt and the city as a whole. There are uses that are compatible with the Greenbelt. As long as they are created and maintained with sensitivity to the surround area, these uses can exist and thrive in the Greenbelt. Meanwhile, the protection of natural areas that have been deemed worth of conservation should be beefed up and expanded.

Ottawa's Greenbelt has evolved along with the city. The original purpose as an urban growth boundary has taken a back seat to other goals. Despite growth on both sides of its boundaries, the Greenbelt has been in constant in the capital. Major changes to the boundary have been uncommon over the course of the NCC Greenbelt's lifespan. Instead, changes have

been relatively moderate. Just as the city adapted its growth and shape to the Greenbelt, the Greenbelt's role has evolved to fit with the changing contexts of the city.

4.2 Agricultural Land Reserve – British Columbia

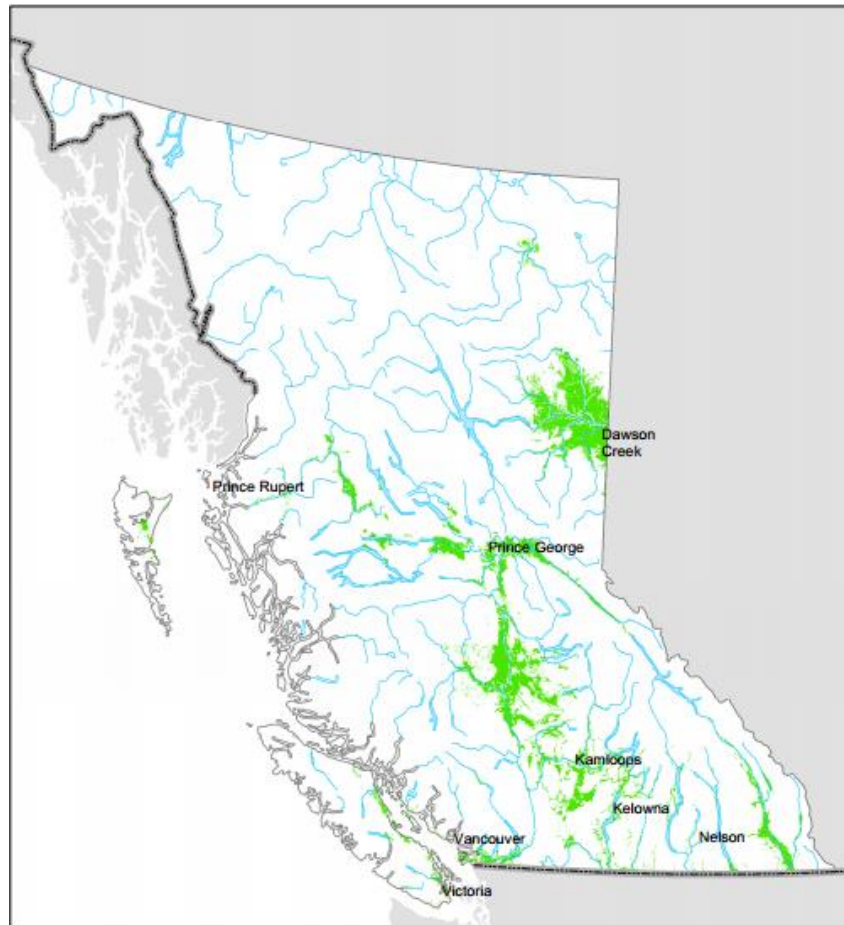


Figure 3 British Columbia's Agricultural Land Reserve (Green areas denote ALR)

Source: Provincial Agricultural Land Commission, 2010

The Agricultural Land Reserve in British Columbia is a large, disconnected network of prime farmland protected by the provincial government. The ALR is essentially a series of Greenbelts situated the province. The cumulative protected area covers 4.7 million hectares of British Columbia. This accounts for close to 5 per cent of the total area of the province (Curran, 2007, p.3).

The Agricultural Land Reserve covers two and half times the area of the Greater Golden Horseshoe Greenbelt, though it is not contiguous. The ALR is made up of a number of protected areas in various locations throughout the province. This includes swaths of land south of

Vancouver and on the eastern edge of Vancouver Island. The majority of the protected areas are in the eastern portion of the province, extending from Prince George in the north towards Kelowna in southern British Columbia.

The main aim of the ALR is to preserve agricultural lands in the province (Curran, 2007, p. 4). This aligns with the GGH Greenbelt's goal to preserve agricultural land (Ontario Ministry of Municipal Affairs and Housing, 2005, p.4). The ALR's goal is more singular than the GGH Greenbelt, which focuses heavily on environmentally sensitive areas.

Through examination of the ALR in comparison to Ontario's Greenbelt, this section will aim to show the success of a boundary system defined by agricultural lands. This is not the sole goal of the GGH Greenbelt, but the ALR may point to best practices for determining boundaries in Prime Agricultural and Specialty Crop areas. It could also reveal potential sources of conflict within agricultural boundary delineations.

In a broader sense, examination of the ALR will allow for comparison of the GGH Greenbelt to another large-scale protected rural area in the Canadian context. The pressures on boundaries stem from issues growth pressures and political realities. These issues may hint at the experiences the GGH Greenbelt could face. The fact that the ALR borders on both existing rural and developing rural areas can also reflect the pressures that Ontario's greenbelt could be facing in the future.

Background

The genesis of the ALR was in the 1970s, when the provincial government in British Columbia sought to protect viable farmland. The province announced its intention to institute agricultural development restrictions by passing a ban on subdividing farmland in 1971 (Stobbe et. al, 2011, p. 558). The ban was in response to the fact that the province was losing between 4,000 and 6,000 hectares of land annually. That is the equivalent of one percent of B.C.'s total

viable land (ibid.). Much of the agricultural land was being lost to urbanization, as farmland outside cities was being developed.

Only a small amount of land in B.C. is viable for farming, and the province developed the land reserve as a way to protect these lands from development. “The establishment of the ALR was a direct consequence of the scarcity of high-quality agricultural land in the province, and the likelihood of development occurring on that land” (Androkovich, 2013, p. 365). In 1973, the province passed legislation banning development on agricultural lands that were deemed worthy of protection. In order to determine which lands were worth protection, the province established the Agricultural Land Commission (ALC). The Commission was tasked with determining which lands would be included in the ALR (Androkovich, 2013, p. 366). Once these lands were identified, the ALC became the oversight body for addition and subtraction of land to the ALR.

Seven land classifications were created for the ALR, based on the quality of the agricultural lands. Generally, the top three classes refer to “prime agricultural”, while the remainder refer with lower quality farmland (Hanna, 1997, p. 167). These classifications are similar to the sub-designations found in the agricultural systems of the Ontario Greenbelt Plan. The next section will explore how the ALR is governed.

Governance and Legislation

Like the National Capital Greenbelt, the ALR is overseen by an arms-length government agency. In this case, the province established the Agricultural Land Commission, an oversight body that determines which lands are to be protected. As discussed in the Background, the ALC was established in the 1970s and continues to provide arms-length governance of the ALR.

The inclusion of agricultural land in the ALR is similar to the process used to include farmland in the GGH Greenbelt. In both cases, the designations were imposed on farm owners (Hanna, 1997, p. 167). As in the Ontario case, no compensation was provided.

The model of governance in the ALR is also similar to that in the GGH Greenbelt. The province dictates policies, which are overseen by the ALC. It is up to municipalities to implement these policies. Municipalities have the responsibility for implementation, but do not have the power to amend the ALR without approval from the ALC. “Though local governments have planning authority, they do not have the power to remove lands from the ALR, or directly amend the use or legal boundaries of holdings within the ALR” (Hanna, 1997, p. 167). Municipalities must apply to the Agricultural Land Commission to change designations on protected land, which will be discussed in the Boundaries section.

While the intent of the ALR is outlined in provincial legislation, it is enacted in Official Community Plans. For example, the policies governing the ALR in the Greater Vancouver Area are outlined in Metro Vancouver 2040 (2011). This plan functions as the areas regional growth strategy. It identifies protection of agricultural land as a strategy to achieve the stated goal of supporting a sustainable economy in Metro Vancouver (Metro Vancouver, 2011, p. 25). In this strategy, the plan identifies the roles of the regional government, municipalities and the ALC with regard to protecting farmland.

Municipalities in Metro Vancouver also have a role to play in protection. The 2040 Plan guides lower-tier governments to pass Regional Context Statements that are supportive of Metro and provincial policies that protect agricultural land. Regional Context Statements are policy statements that link local official plans to the regional plan (Metro Vancouver, 2011). Thus, municipalities are required to acknowledge and adhere to regional dictates through these context statements. Municipalities generally play a strong role in ALR protection. The next section will explore how boundaries are dealt with on the agricultural land reserve.

Boundaries

The boundaries of the ALR are determined by one basic factor: whether the land is agriculturally viable. Unlike the NCC and GGH Greenbelt, the ALR's boundaries are based mainly on this one criteria. The result is not one connected protected area, but a number of areas designated ALR throughout the province. The size of these parcels ranges from a few hectares to thousands of hectares (Provincial Agricultural Land Commission, 2011).

The boundaries of these areas are largely determined by the ALC in the 1970s (Katz, 2010). The process used to define the boundaries was by consulting the Canada Land Inventory (Curran, 2007, p. 3). These general areas still exist, but the boundaries are continuously fine-tuned based on community need and suitability of land (Curran, 2007, p. 15). The designation of lands in the ALR is described as a process. Municipalities such as Metro Vancouver "in collaboration with the province and the Agricultural Land Commission, identify and pursue strategies and actions to increase actively farmed agricultural land" (Metro Vancouver, 2011, p. 29). In other words, the designations are not static.

Accordingly, the ALR's boundaries are subject to appeal. Local municipalities can apply to the Agricultural Land Commission to change the designation of lands or the borders of the ALR. "The intent of this process is to more accurately define the ALR by seeking the removal of lands that are unsuitable for farm purposes in the long-term and include land that can contribute to agricultural production" (Curran, 2007, 9). The municipality must define which lands should be added, and if they seek to have any removed, must make a case for the removal.

It is not just municipalities that can seek boundary changes. Individual landowners can apply to the ALC to include or exclude land from protected areas (Provincial Agricultural Land Commission, n.d. (b)). The process is similar to the one followed by municipalities to change designations.

The application is considered by both the local government and the ALC. The consideration given by the ALC fits in three areas of focus. First, the individual property is considered for its value to the ALR, its current uses and potential agricultural uses. Then consideration is given to adjoining parcels and impact removal could have on them. Finally, “provincial interest” is considered. This step is designed to align with the idea that the ALR “cannot be endlessly eroded by encroachment of non-farm uses and subdivisions or by deleting land” (Agricultural Land Commission, 2011).

The ALR is malleable to a certain extent. Its efforts are to protect agricultural land. Power to challenge designations does not lie only in the hands of governments and government agencies. Individual landowners have some say in how land is treated. This mechanism has led to charges that the ALR boundary is open to abuse. The Issues section will explore how development has impacted ALR boundaries.

Issues

Growth pressures have had an impact on the Agricultural Land Reserve. Much of the land in the ALR is concentrated in the Lower Mainland, a predominantly urban area of the province (Katz, 2009, p. 7). This results in the pressures of urbanization and development on lands designated for the ALR. Governments in the province must contend with the lure of lucrative development dollars, especially on land near built-up areas (Sinoski, 2012).

The process of exclusion and inclusion of lands is a contentious one. The flexibility in the designations and the presence of an appeal process invites debate and conflict over lands in the ALR. The issue of what land should be included and how it should be protected is a common issue in Greenbelts, as this paper will explore. There is a larger debate in British Columbia, however. It deals with whether the ALR is a success and at what price success comes.

In recent years, the ALR has been under fire in some corners of the province. One of the most prominent criticism of the attack was the Fraser Institute's 2009 report *The BC Agricultural Land Reserve: A Critical Assessment*. The report lambastes the ALR and contends that it has not achieved its goals. The criticisms include claims that the ALR has not encouraged family farming, has limited housing options in B.C. and puts unfair restrictions on private property owners (Katz, 2009, p. 37). The report thrust the ALR back into the political spotlight (Gyarmati, 2009). It seems to have weathered the storm, recently celebrating its 40th anniversary. The debate over the ALR, however, suggests that it could be susceptible to political pressure.

Discussion

Though it has existed for 40 years, the ALR is still seen as a work in progress (Gyarmati, 2013). The ALR has a singular goal of protecting agricultural land. Its value and success have recently come into question. The scope of the ALR is more focused than the Greenbelt, but the protections it offers are not as strong as the GGH Greenbelt.

The fact that the protected land is not contiguous may play a role in this weakness. The ALR is seen as a land designation, not a land feature. The flexibility of ALR designation also likely lends to the perception of weakness. Any landowner can make a case to remove land from the protected area. The process is governed by an unelected body. The rationales for approval of removal are relatively vague. These factors add up to a system that could be susceptible to abuse.

Agricultural protection is a cornerstone of the Protected Countryside and the wider GGH Greenbelt policies. British Columbia's experience with agricultural protection shows that flexible boundaries are useful in finding exactly which lands are worth protecting. Too much flexibility, however, can invite abuse.

4.3 London Greenbelt – London, England

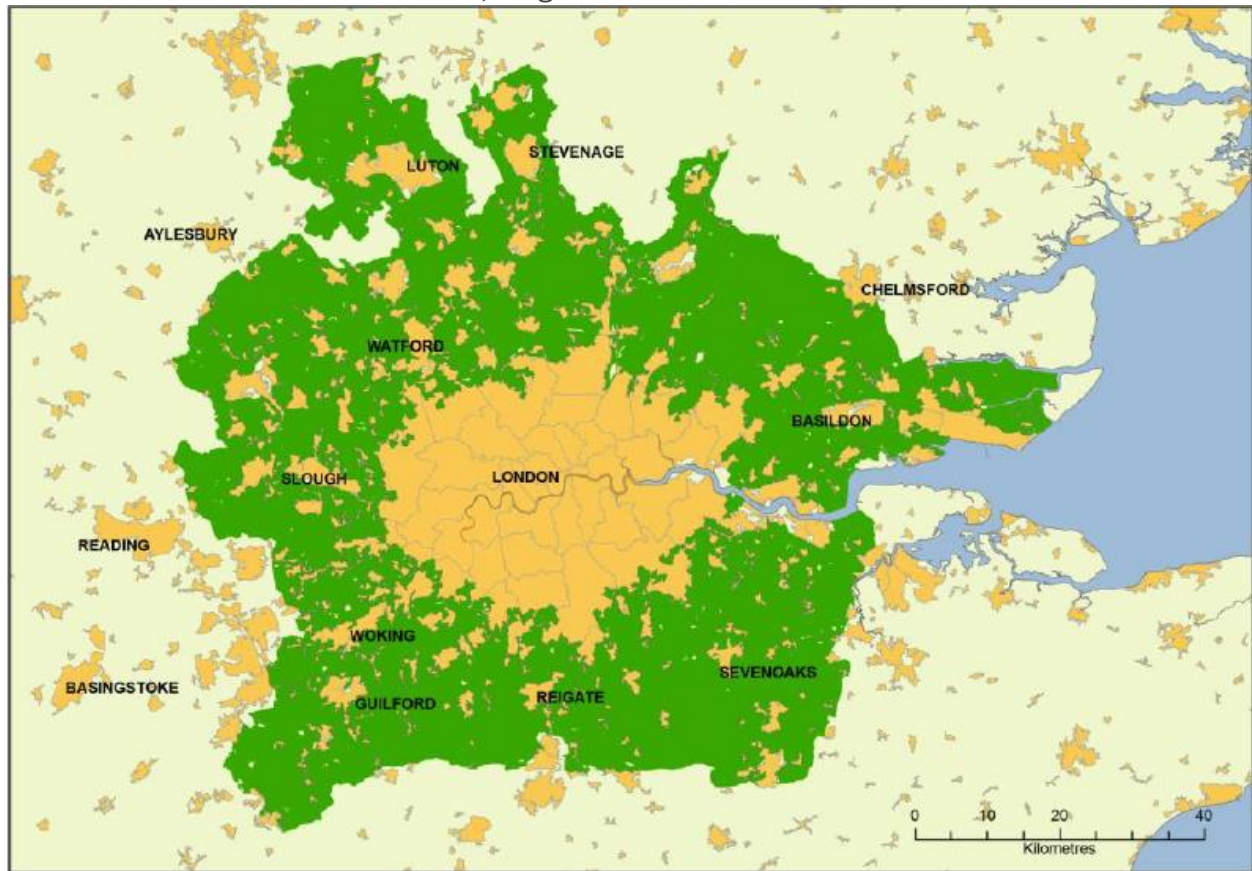


Figure 4 London's Metropolitan Greenbelt

Source: Campaign to Protect Rural England (2010)

Over the past century, Greenbelts have become a cornerstone of planning in England. They are promoted as a way to limit urban sprawl and conserve rural areas (Amati & Yokohari, 2007, p. 313). Greenbelts have a long legacy in the country, beginning in the late 19th century with the work of Ebenezer Howard. The concept gained traction as a town planning concept during the 1930s. Today, 1.6 million hectares of land in England are protected by Greenbelt legislation.

The Metropolitan Green Belt in London, England, was one of the first established in the country. It endures today as a tool for conservation and containment. There have been threats to its efficacy, such as continuous pressure to develop as well as lax interpretation of protection

policies by developers and local governments (Amati & Yokohari, 2007). The national government recently reaffirmed the importance of Greenbelts in the National Planning Policy Framework. The London Greenbelt serves as an apt comparison for the Greater Golden Horseshoe Greenbelt. Its inner boundary abuts a large urban area. Like the GGH Greenbelt, it contains a number of towns and villages. The policies affecting the borders of these settlement areas are of particular interest for this paper.

The London Metropolitan Greenbelt is one of the world's longest enduring and most well-known Greenbelts. It has served as a model for other protected areas and its treatments of boundaries could serve as a model for Ontario's Greenbelt in the future.

Background

The concept of Greenbelts in London can be traced to Ebenezer Howard, whose Garden City plans directly informed the movement towards urban containment and open space in 1930s England (Gant et. al, 2011, p. 267). As public support for Greenbelt proposal grew during the 30s, the local government in London created a framework to purchase land for a greenbelt (ibid.). The goals of this early Greenbelt concept are echoed in Ontario's current Greenbelt Plan. The purpose was to stop "unrestrained urban expansion" and foster agricultural and recreation use (ibid). Though various pieces of enabling legislation and failed Greenbelt plans were enacted and proposed prior to World War II (Cohen, 1994, p. 78), there was little progress in establishing a protected area.

The first major move toward a London Metropolitan Greenbelt came in the midst of the Second World War, when Patrick Abercrombie published the Greater London Plan 1944. The plan included a proposal for a greenbelt circle around London (Amati & Yokohari, 2007, p. 315). From there, "U.K. planning legislation underwent momentous changes opening up the possibility for implementing a greenbelt around London and other U.K. cities without purchasing land"

(ibid). By 1955, the national government began crafting formal legislation to create protected green “girdles” around London. By 1957, the greenbelt was implemented (Gant et. al, 2011, 267).

Greenbelts continue to play a central role in the English planning system. The Metropolitan Greenbelt is the largest in the country, with more than 500,000 hectares protected (ibid.). Fourteen other greenbelts have been implemented across the country (ibid). The national government reaffirmed the importance of Greenbelts in a recent update to its overarching planning policies (National Planning Policy Framework, 2012), meaning protected Greenbelt areas will be a continued presence in the English countryside.

Governance and Legislation

The current framework of Greenbelt legislation in England is similar to that in Ontario, except the national government takes the place of the province. The national government dictates planning policy that must be implemented by municipalities. The National Planning Policy Framework functions in a similar manner to the Ontario Planning Act. It sets out requirements for municipalities’ planning structures and contains policy to implement government goals.

Prior to 2012, Greenbelt policies in England were dictated by a Planning Policy Guidance note from the national government, similar to a Provincial Policy Statement in Ontario (Department for Communities and Local Government, n.d.). This was replaced by the National Planning Policy Framework (NPPF), which was implemented in 2012. The framework, which sets out government planning policies for England (Department for Communities and Local Government,, 2012, p. 1), contains a policy section directing local governments on greenbelt-related matters. Greenbelt protection is one of the main focuses of the plan. The overriding goal of the NPPF is to encourage sustainable development. Part of that goal is “recognising the intrinsic character and beauty of the countryside and supporting thriving rural communities

within it” (Department for Communities and Local Government, 2012, p. 5). Greenbelts are seen as a fulfillment of this goal.

The greenbelt section of the NPPF sets out the national government’s rationale expectations for Greenbelt protection. In many ways, the stated reasons for protecting Greenbelt land in England are the same now as they were when Abercrombie created his plan in the 1940s: curbing urban sprawl and protecting open space (Department for Communities and Local Government, 2012, p. 19). The rationale has also expanded to include encouraging regeneration and to protect the character of historic towns and village.

Greenbelt policies included in the NPPF mirror policies in the GGH Greenbelt Plan. Like the Greenbelt Plan, the NPPF lays out accepted uses in the protected area, as well as policies on borders, boundaries, agriculture and accessibility.

The London Plan is the document that implements greenbelt policies in Greater London. This does not apply to the entire Metropolitan Greenbelt, as a number of jurisdictions in and around the protected area implement the policies that make up the entire Greenbelt. For the purpose of this paper, the London Plan will serve an example of how Greenbelt policies flow from the NPPF to the implementation by local governments. The Local Plan is essentially the equivalent of the Official Plan in Ontario, and lays out planning and development policies for the local jurisdiction.

In the latest version of the Local Plan (2011), greenbelt protection is a policy embedded throughout. London will accommodate growth “and without encroaching on the Green Belt or London’s other open spaces” (Greater London Authority, 2011, p. 31). The Plan contains specific policies on the Greenbelt, though they are fairly general. The Plan states its support for

the Greenbelt objectives (2011), and notes that “improvements in its overall quality and accessibility” are desirable (p. 232).

The London Greenbelt operates in a similar framework to Ontario. The power rests with the higher level of government, while implementation is left to municipalities. The next section will explore how the Metropolitan Greenbelt deals with boundaries.

Boundaries

The original boundaries of the Metropolitan Greenbelt were derived from Abercrombie’s model. The national government gave them as a guideline to local governments, who implemented the Greenbelt policies through development plans (Thomas, 1970, p. 86). Between 1954 and 1958, municipalities within the Greenbelt submitted development plans which included “small alterations” to the proposed boundaries (ibid.). This was how the boundaries were set.

Today, the NPPF gives municipalities the power to delineate Greenbelt boundaries. Local governments have the ability to set the boundaries, however once they are set, they “should only be altered in exceptional circumstances” (Department for Communities and Local Government, 2012, p. 19-20). The boundaries are set out in Local Plans. Any changes to the delineation must also be made in the plan (Department for Communities and Local Government, 2012, p. 20). The Metropolitan Greenbelt, like the GGH Greenbelt, is large enough to contain a number of small settlement areas, referred to as towns and villages. These local governments have their own plans that implement the Greenbelt policies contained in the NPPF (or, depending on the age of the plans, the Planning Policy Guidance note). These plans combine to create the boundaries of the Greenbelt. In this way, the boundary policies are similar to those of the GGH Greenbelt.

The difference in London (and England as a whole) is that once the boundaries are set, they are not fixed. Though there is strong language in the NPPF to discourage boundary redefinition, the possibility exists that they may be changed. In Ontario’s Greenbelt Plan, there is

some language that speaks to changing the boundaries of settlement areas, which can be considered at the time of the 10 year review. This change, however, only applies to “minor rounding out” (Ontario Ministry of Municipal Affairs and Housing, 2005, p. 25). Additionally, despite the tough language in the NPPF, there are signals that the treatment of boundaries in England could be loosening, which will be discussed in the Issues section.

Issues

Though the NPPF states that boundaries should only be changed under exceptional circumstances, there have been cues given that this policy could be open to change.

The Government has not announced any proposals to change green belt protection. In a written ministerial statement of 6 September 2012, however, it encouraged local councils to use existing laws to review the extent of green belt land in their local areas. As an incentive to use these powers, councils who review green belt land in their local plans will have their local plan examination process prioritised. (Smith, 2013).

This informal policy could be a signal that Greenbelt reform is on the way. The reform could occur on a small scale, such as minor adjustments to boundaries, or on a larger scale in terms of removal of lands from the Greenbelt.

There have been indications that portions of Greenbelt land around London and other urban areas in England could be removed from protection in order to create new land for housing development (Fyson, 2011, p. 15). The extent of this potential development has not been revealed. The subsequent release of the NPPF with Greenbelt-supportive policies could point to limited changes. It is also not clear whether creating more land for housing development is a negative. One of the main reasons to open up new land for housing development is to address affordability concerns in large urban areas such as London (Hecimovich, 2008). While boundary

changes have generally been seen as a concession by Ontario's Greenbelt proponents, the context may be key in this case: the Metropolitan Greenbelt has had longer to develop, and so have the issues facing it. In Ontario, ceding land to development a decade into Greenbelt legislation would be viewed as a weakness of the Greenbelt in some quarters. London's experience points to issues that could be facing Southern Ontario as its Greenbelt matures. This will be explored further in the Discussion section.

Discussion

London's Greenbelt has survived decades of development pressures in one of the world's largest cities. The Greenbelt concept is ingrained in the English planning process, but as demonstrated in the issues section, cracks have begun to show. Limitations on land development have, in part, led to increasing housing costs in the city (Fyson, 2011). The Greenbelt is seen as a potential solution for this problem.

London's experiences with housing affordability and the Greenbelt could be replicated in Ontario. Studies have already been released on the effect of the GGH Greenbelt on housing prices (Ontario Greenbelt Alliance, 2007). As the Greater Toronto Area builds up and out, the pressure to develop Greenbelt lands will increase. As in London, the Province and municipalities will have to make difficult decisions about balancing conservation and growth.

The pressure in London is coming from the internal boundaries. Restrictions on settlement areas have been largely successful, limiting their growth and maintaining rural character. The lesson from London is that growth pressures will eventually put pressure on Greenbelt lands. This pressure will come at the edges of the existing metropolitan area.

4.4 Urban Growth Boundary – Portland, Oregon

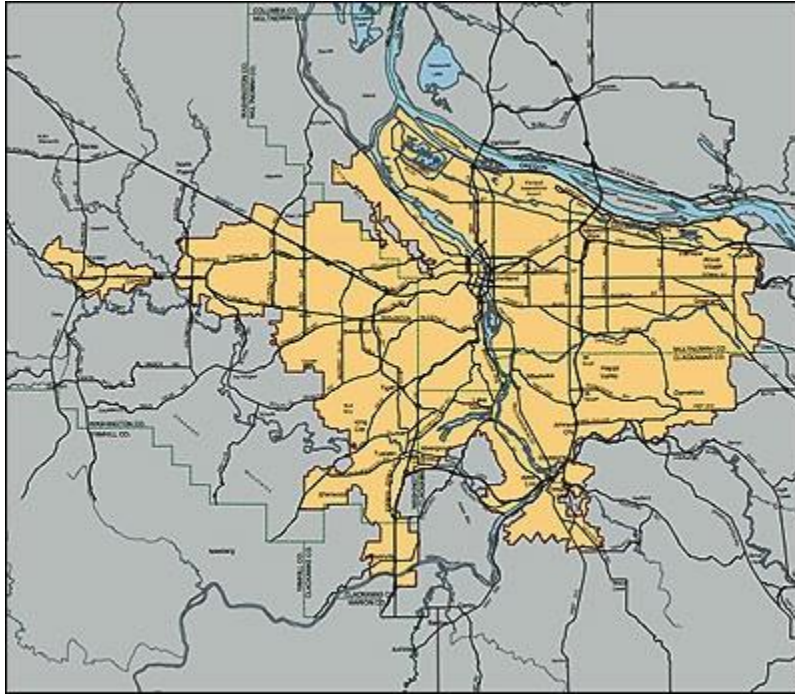


Figure 5 Portland's Urban Growth Boundary
Source: OPB, 2010

Portland's Urban Growth Boundary has contributed to the city's reputation as a trail blazer in urban planning. The Urban Growth Boundary (UGB) was implemented in the late 1970s and has served as a containment and conservation tool for the local governments in the Portland region. Encompassing 24 cities and three counties, the UGB area covers close to 1 million acres in northwest Oregon (Metro, 2000, p. 2).

The UGB, combined with rural reserve policies, create a protected area that functions similar to the Greater Golden Horseshoe Greenbelt. These policies have a dual purpose of directing growth and conserving natural, farm and resource lands. The Portland UGB also covers a number of jurisdictions and enabling legislation is layered between various levels of government, which is similar to how greenbelt policies are implemented in Ontario.

While there are many similarities between goals and policy structure between Portland's UGB and the Southern Ontario Greenbelt, the Oregon example also offers a good contrast to the policies of the GGH Greenbelt. Boundaries in the Portland UGB are designed to be flexible and local governments are more empowered to make changes to boundaries and coverage areas.

The interaction between growth management policies and conservation strategies in the Portland region also provides an interesting policy comparison. It is similar to the situation in Ontario between the Greenbelt Plan and Places to Grow, the province's sprawl containment strategy. Recent developments in the Portland area that have seen the expansion of the growth boundary to create more developable land may reflect how growth pressures will impact the GGH Greenbelt where it abuts urban areas.

The various rationales behind Portland's UGB may not be weighted in the same way as the GGH Greenbelt. The Oregon boundary is more focused on growth containment than on conservation, while agricultural protection is less of a concern. Overall, however, Portland's UGB is an innovative and adaptable policy that may contain lessons for the Ontario Greenbelt.

Background

The Portland UGB is one of America's most famous growth management strategies, and one of the largest growth boundaries in the United States (Nelson & Moore, 1993). The boundary concept first emerged in Oregon in the early 1970s, and in the country as a whole in the late 1950s (Jun, 2004, p. 1333). In 1973, the state government enacted the Oregon Land Use Act, which requires every city in the state to apply growth boundaries (Nelson & Moore, 1993, 294). The rationale behind the move was to create a clear delineation between urban and rural uses, and direct growth to urban areas (ibid). Secondary considerations included agricultural preservation and environmental preservation (ibid.)

Once the state legislation was enacted, local jurisdictions began crafting containment policies. Portland's boundary was first proposed in 1977, and adopted by state legislators in 1979 (Metro Council, 2000, p. 2). The next major milestone in Portland's UGB was the establishment of a region-wide growth plan in the early 1990s. The growth policy aligned boundary policies with growth management options.

The UGB continues to be a major growth containment tool in the Oregon planning process. It is designed to change incrementally to allow for controlled growth around large urban areas. The next section will explore the legislative context in which the UGB operates.

Governance and Legislation

The legislation that governs the Portland UGB mirrors the other case studies in this paper in that it is dictated by a higher level government - in this case, the State of Oregon - and implemented by lower-tier jurisdictions. Each city in Portland must enact an Urban Growth Boundary, as stipulated in the Oregon Land Use Act (1973). The Act also instituted the Oregon Land Conservation and Development Commission, which ensures local government's plan's compliance to UGB regulations, as well as other state planning policies (State of Oregon, n.d.).

The Portland area is governed by local municipalities and a regional government, known as the Metro. State legislation requires the Metro Council to create an urban growth boundary and manage development within and outside of the boundary (Metro, 2000, p. 2). The UGB is implemented at the local level by the Metro government through two key policy documents: Portland's 2040 Growth Concept lays out guiding principles and policies for the boundary, while specific policies are implemented through the Urban Growth Management Functional Plan (Song & Knapp, 2004, p. 211).

The UGB is a key component of the 2040 Growth Concept, which is the Portland region's long-term growth strategy (Metro Council, 2000, p. 1). Work on the plan began in the early

1990s, and it envisions growth in the region for half a century. Many of the general goals of the plan mirror the aims of the Greenbelt Plan, including conservation and access to recreational uses (ibid). One of the main pillars of the plan and UGB is to protect resource-rich land. Resource-related policies in the UGB are similar to those in the Greenbelt Plan. The UGB is the only policy studied in this paper that includes resource management as a major aspect of protected areas.

The 2040 Growth Concept lays out general concepts for the Portland UGB. Section 3 of Metro's Urban Growth Management Functional Plan offers detailed policies for defining, maintaining and altering the Urban Growth Boundary. It also includes the official map delineating the boundaries, compiled from information provided in local comprehensive plans (Metro, 2012, Chapter 3.07). In addition to boundary delineation and expansion, local governments operating directly outside of the UCB are "given the authority of zoning rural lands for exclusive farm use and forest conservation" (Jun, 2004, p. 1334).

Any changes to the area covered by the Portland UGB policies must be proposed through local government's comprehensive plan review, then approved by the Metro government, as well as the state's Land Conservation and Development Commission. The procedure to add land to the UGB - essentially moving the inner boundary outward to encompass more developable land - will be discussed in the boundaries section.

Boundaries

The Portland UGB is designed to be flexible with boundaries. Its main purpose is to limit sprawl, but the legislation recognizes the realities that lands may need to be added within the boundary to accommodate growth. The boundary is designed to be moved in an incremental fashion, allowing new development to occur adjacent to previously developed lands. This "phased development is a way to encourage contiguous development inside the boundary" (Jun,

2004, p. 1335). While the legislation recognizes that expansion will occur, it is supposed to be done in managed and incremental steps.

Currently, responsibility for delineating growth boundaries rests with the Metro council. The UGB covers two dozen cities and jurisdictions in Oregon, most of which are under the umbrella of the Metro government. Each jurisdiction is responsible for defining the boundary in their coverage areas on their comprehensive plan maps (Metro, 2012, Chapter 3.07, p. 111). Together with lower-tier local governments, the Metro council creates growth estimates for a 20-year time period. The boundaries are adjusted based on these forecasts (Metro, 2000, p. 2).

Like the GGH Greenbelt, Oregon mandates review of the boundary, in this case every five years (Metro, 2013). There are however, provisions in the Urban Growth Management Functional Plan that allow for the Metro Council (and lower-tier jurisdictions) to consider expansion of the boundaries (Metro, 2012, Chapter 3.07, p. 113). The justification for the expansion must meet three criteria:

- A demonstrated need to accommodate future population, in line with the 20-year growth forecasts.
 - A demonstrated need for land for housing, employment or public uses
 - A demonstration that these two needs cannot be accommodated on existing urban lands.
- (ibid.)

If these criteria are met, the Metro Council must first consider lands identified as urban reserve. These are lands outside of the boundary that are slated for growth if required. Any change to the boundaries must be in line with adjacent land uses. Any addition of land to the urban area must be near already built out areas. The council cannot designate an “island” of urban land within rural areas (ibid.). There are differing procedures for major and minor changes

to the boundary, but both must be approved by Metro Council and the Land Conservation and Development Commission. Major amendments requires impact studies and a longer process for approval (Metro, 2012, Chapter 3.07).

The UGB is designed to change to accommodate new growth over time. Large-scale changes for the purposes of development are not allowed unless municipalities can show a need. The impacts of the changes on existing urban areas must also be considered. The flexibility of the boundary shows that the UGB is not a mechanism to stop growth. Instead, its aims are to control sprawl and guide growth to appropriate areas.

Issues

Portland's UGB is generally seen as an innovative growth management strategy. Despite this view, there have been criticisms of how boundary changes have been handled over the past decade. The scale and location of additions to the urban growth boundary have been an issue in Portland. In 2002, close to 20,000 acres of land were added to the urban area. An additional 2,300 were added in 2004 and 2005 (Sullivan and Richter, 2010).

The basis of rationale for additions to the UGB is also an issue. These additions are based on population and employment projections from Metro. The accuracy of these projections has been called into question (Sullivan and Richter, 2010). The council has seen to be jumping the gun to expand the boundaries of the UGB because the need for more land is misstated.

The UGB is the newest policy intervention examined in this paper, and it will likely face bigger issues as it ages. The issues it has faced over the past decade not necessarily about the effectiveness of the boundary. The issues that have arisen around the UGB are debates any city faces about the location and speed of growth.

Discussion

In London and Ottawa, growth pressures caused a re-examination of Greenbelt purposes and boundaries. In Portland, this evolution is built into the system. The UGB is designed to accommodate growth. Expansion is staged through urban land reserves. Any new land added into the boundary must be adjacent to already developed land.

The policy recognizes that urban contexts change and housing, employment or institutional needs may arise suddenly in a city. Incremental growth ensures that Metro can accommodate these needs. The other side is that non-urban lands are not seen as undevelopable. It is often easier to deal with growth pressures by building out than building up. The governments that manage the boundary are the same that create projections to determine need for developable land. These projections can theoretically be manipulated to overstate need.

The strength of the Portland UGB is that it is adaptable. It limits sprawl while managing not to strangle natural urban growth. Though it is in its infancy compared to other case studies, Portland's UGB has some of the most innovative and flexible policies.

5.0 Discussion

The case studies presented in the previous section all provide lessons for the Greater Golden Horseshoe Greenbelt. There are a commonalities between each case study, as well as key differences. This section will explore the common themes in the Greenbelts' treatment of boundaries before providing conclusions and recommendations.

5.1 Themes

Legislative Layering

Each of the studied Greenbelts exercises a similar top-down approach to the one used in the GGH Greenbelt. A higher-tier authority (the federal or provincial/state government) dictates the rules for planning in the protected areas. Municipalities implement this plans.

In three of the cases, an advisory body holds much of the power over land designation and boundaries. In Portland, British Columbia and Ottawa, approvals must be sought from oversight bodies that are agencies of the government.

Opportunity for adjustment

Boundaries are treated seriously in all the studied protected areas. This stems from the fact that they were either borne out of the desire to control growth or to protect resources such as agricultural land. The other commonality in treatment of boundaries is that there are specific mechanisms in each to change the bounds of the protected area. This can be done by changing the designation on the land or by adjusting boundaries in Official Plans.

Flexibility

British Columbia's ALR and Portland's UGB provided differing examples of the value of flexibility in boundaries. The fine-tuning of the ALR has led to a perceived ease of removing non-active farmland for development (Campbell, 2006). The Portland UGB, meanwhile, has managed to effectively control growth by identifying future urban areas outside of the boundary and allowing new development to occur only adjacent to already built up areas.

Evolution

The experience of the older protected areas that have existed for decades shows that a Greenbelt's role is constantly redefined. This does not only mean refining boundaries, but a re-examination of the purpose of part or all of the protected area. London is grappling with using Greenbelt land for affordable housing, while the National Capital Commission in Ottawa has refined its view on the goals of its protected area a number of times.

The following table provides a comparison of boundary treatments in each of the case study areas.

Case Study Comparison Chart

Table 1 Case study comparison

	Initial boundary determination	Current boundary policies	Flexibility	Process to change boundaries	Governance
National Capital Greenbelt	Expropriation of farms based on 1950s Greenbelt concept. Goal was to create line between urban and rural uses.	Boundaries abutting urban land should act as a buffer between urban and rural contexts	Most of the lands are owned by the National Capital Commission. Additions and removals depend mainly on ownership.	Acquisition or disposal of property by the National Capital Commission or management agreements with the NCC.	Overseen by the National Capital Commission, an arm's length federal agency.
British Columbia Agricultural Land Reserve	Agricultural lands were designated based on ratings from the Canada Land Inventory.	Boundaries are flexible and based on use/quality of agricultural land.	Landowners and municipalities can apply for land addition and removal.	Application to the Agricultural Land Commission by Landowner or Municipality	Overseen by the Agricultural Land Commission, a provincial agency.
London Metropolitan Greenbelt	Defined broadly by Abercrombie's model then modified and implemented by municipalities.	Local governments have power over boundaries, but should only be changed in "exceptional circumstances."	Settlement Areas can adjust boundaries at any time.	Boundary changes must be reflected in municipality's planning documents.	Mainly governed by local municipalities, with oversight by the federal government.

Portland Urban Growth Boundary	Developed as a growth management policy in the 1990s.	Boundaries act as barrier between urban and rural, contain growth. Any new development must be directed to urban reserve areas. Any new additions to the boundary must be adjacent to existing development.	Designed for incremental growth. Areas are designated for future growth (urban reserves).	Municipality can make case to Land Conservation and Development Board. Must be reflected in Official Plans	Overseen by the Land Conservation and Development Commission, a state agency.
Greater Golden Horseshoe Greenbelt	Initial protection area defined by province, refined by Greenbelt Advisory Council before final decision on boundaries made by province. Partly defined by existing Oak Ridges Moraine and Niagara Escarpment protection area.	Inner and outer boundaries are relatively fixed, with consideration of any changes allowed during 10-year review.	Boundary changes mostly discouraged, except for minor adjustments.	Different for each protection area (NEP, ORM, PC). Generally, at the review municipalities must make a case for minor adjustments to the boundary based on set criteria. The change must be approved by the province.	Protected Country side and ORM are overseen by the provincial Ministry of Municipal Affairs and Housing. The NEP is overseen by the Niagara Escarpment Commission, a provincial agency.

5.2 Conclusions

The four case studies in this report show that Greenbelts are like any planning intervention. It is a process. No urban region is static. Contexts change and needs shift. In Ottawa, a Greenbelt designed to control growth in the 1950s is now seen as an area for moderate rural growth and conservation of the natural environment. In British Columbia, London and Portland, growth in urban areas has meant a rethink of boundaries.

At the same time, these policy interventions have lasted for decades – in some cases more than half a century. This fact shows that Greenbelts can achieve their stated goals, including conservation, growth containment or agricultural protection. In order to survive, however, they must adapt to the changing contexts. This does not mean a wholesale removal of Greenbelt policies, but a gradual change to suit a changing context.

The Ontario greenbelt has strong protection policies and firm boundaries, designed to protect environmentally sensitive areas. Much of the literature on the Greenbelt, however, contends that the process to determine boundaries was politically motivated. If this is the case, then the rigidity of the boundaries may be a misstep.

The case studies in this paper show that as the policy becomes more engrained, this rigidity could lead to problems. Minor flexibility in boundaries generally allows growth to occur smartly and naturally without compromising the makeup of Greenbelts as a whole.

The GGH Greenbelt is in its infancy compared to the other Greenbelts studied here and has not undergone its first full review. The opportunity for gradual change still exists. It may be that the Greenbelt is too young to have fulfilled its original purposes yet. It is still shaping growth as the region rapidly expands. At the same time, growth is putting pressure on the existing Greenbelt boundaries.

The Greater Toronto Area, however, has changed dramatically over the past 10 years. In order to ensure the continued success of Greenbelt policies, it is important that these changes are recognized. The next section will provide recommendations for the province to consider while preparing to undertake the 10-year review of Greenbelt policies.

5.3 Recommendations

The goal of these recommendations is to introduce a more detailed structure to the Greenbelt review. The past eight years have shown how the Greenbelt operates in the wider planning policy structure in the province. This experience, as well as the case studies provided in this report, offer insight into what pressure the GGH Greenbelt will face moving into the future. Implementation of these recommendations into the review process could make the Greenbelt more ready to face growth pressures and more flexible to accommodate a rapidly expanding region.

Short-term

These recommendations are actions that could be taken in the lead up to the 2015 review.

- Identify potential sites near boundaries where landowners or municipalities are likely to advocate for removal from greenbelt protection.
- Identify land parcels that no longer achieve Greenbelt goals. These could include isolated parcels near development that no longer offer connection or protection between agricultural and environmentally land or agricultural land that is no longer viable. These lands could be considered for removal from protection. If the timeline for this step is too tight, it could be moved to the review.

Medium-term

These recommendations are actions that can be undertaken during the 10-year review.

- Explore where growth pressures are likely to be the highest along the interior boundaries and settlement boundaries of the Greenbelt. Identify the impacts that growth beyond the boundary would have.
- Identify areas for future growth in the long-term along the interior boundaries. This will allow the province and municipalities to be prepared for growth pressures down the road. Ideally, this land would not compromise naturally significant or agriculturally significant areas.
- Harmonize boundary review processes between all three plans.
- Harmonize designations and definitions among the three plans.
- Explore allowing consideration of boundary changes in settlement areas outside of the regular review period.
- Consider the contextual and cumulative impacts of allowing gradual or minor changes to the inner and outer boundaries in the long-term.

Long-term

This set of recommendations can be undertaken once the review is complete.

- Consider a redefinition of Greenbelt boundaries. This redefinition could be based on a scientific review of the current edges. This would ensure that lands that require protection would be protection and limit the amount of land that is not agriculturally or environmentally significant that is restricted from development. It is important to note that this would not necessarily reduce the total size of the Greenbelt, but may reshape the boundaries to be more effective.

- Determine whether the review process was effective in addressing the issues facing the Greenbelt. Consider creating a more frequent review, or reviewing some pieces of the legislation (such as boundaries) on a more frequent basis.

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