



Frontenac Institution Lands Planning Study



Environmental Project Course
School of Urban and Regional Planning
Queen's University

December 2009

Acknowledgements

The project team would like to thank the Cataraqui Region Conservation Authority for sponsoring the Environmental Planning project course. We would like to extend a special thanks to Andrea Gummo and Steve Knechtel at the CRCA for their guidance and support.

We would also like to thank all the stakeholders who have contributed and provided feedback throughout the process.

Lastly, we would like to thank the faculty, staff and students at the School of Urban and Regional Planning, in particular our faculty-supervisors Dr. Graham Whitelaw and Dr. David Gordon, for their insight and support.

Report Authors

The 2009 Environmental Project Course Team included:

Devin Lake
Christie MacIsaac
Sarah Ramey
Bart Ryan
Carla Schuk
Sarah Smith

Executive Summary



Figure S.1 – (Left) North-east corner of Frontenac Institution Lands looking south over wetland. (Right) South-west corner of the Frontenac Institution Lands looking north-east toward penitentiary (Authors' Collection)

The Frontenac Institution Lands Planning Study is a report intended to provide a leading edge sustainability plan for the Frontenac Institution lands, in the event that they become available for non-penitentiary purposes. The study presents two concept plans that reflect specific sustainability objectives and build upon the goals of Kingston's Adopted Official Plan and the outcomes of a stakeholder workshop, while addressing the unique characteristics of the site.

Located in the urban boundary of the City of Kingston, the Frontenac Institution Lands consist of 338 hectares of land currently operated by the Correctional Services of Canada as a penal farm. The amalgamation of the City of Kingston and two adjacent townships, situated the Frontenac Institution Lands at the centre of the newly created urban boundary. Its diverse landscape consists of prime agricultural lands, forest, wetlands and floodplains, which have persisted for years even as the urban fabric developed around it.

The Frontenac Institution Lands are subject to a number of complex legislation and policies. Currently, Correctional Service of Canada (CSC), a custodial department of the Federal Government, owns the Frontenac Institution Lands, and if divested, the uses of these lands could be constrained by decisions made by the Canada Lands Company. The land uses upon this site will also need to adhere to regulations within the Planning Act (1990), the Provincial Policy Statement (PPS 2005), Ontario's Endangered Species Act (2007), and the City of Kingston's Official Plan (2009).

In addition to extensive background research, the study's findings and recommendations have been informed by an international scan of precedent environmental case studies and an informal stakeholder workshop. Out of these activities, two possible concept plans were developed for the site.

The Green Communities Plan

Vision of leading edge green residential community integrated with environmental restoration objectives that facilitate interconnectedness between our natural systems, food systems, and community to further sustainability goals of the City of Kingston.

- Design**
- Provides 7,500 housing units (56% of Kingston's projected housing needs until 2026)

- Builds on the existing infrastructure, transit service hubs and proximity to major commercial and employment centers
 - Protects the sensitive ecosystem from negative impacts through buffer systems
 - Decreases reliance on the automobile through trails, cycling pathways, walkability and increased transit service
 - 35% of lands dedicated to residential and local commercial uses, including affordable housing
 - 60% of lands as a combination of protected areas, agriculture in the form of community gardens, and open space
 - Remaining lands devoted to community facilities, including a new education centre, recreation centre, and elementary school
- Highlights**
- Emphasis on access, connectivity, and alternative modes of transportation
 - Green building design
 - Edible landscaping and community gardens
 - Stormwater management and greywater recycling
 - Enlarged and enhanced protected areas
 - Low impact design in road extensions
 - New community facilities, including an education centre, recreation centre, elementary school, and soccer field
- Implementation Tools**
- Community partnerships for trail maintenance, environmental monitoring, non-profit housing and green technology training
 - Financial tools such as leasable community space, sustainability design criteria, development charge rebates, and a green building fund
 - Special policy area, zoning, or site plan control

The Agricultural Conservation Plan

Protect prime agricultural land while enhancing the well-being of the site’s natural systems and surrounding communities to further the sustainability goals of the citizens of Kingston and protect its cultural heritage.

- Design**
- Maintains and improves on-site agriculture for local food production and security
 - Minimizes impacts on natural areas and restores existing wetlands
 - Provides 1,750 housing units (13% of Kingston’s projected housing needs until 2026)
 - Preserves and protects Kingston’s farming heritage
 - 50% of lands dedicated to agriculture, which include organic farming, husbandry, research farms, and community gardens
 - 44% of lands preserved as protected area and open space
 - 5% of lands dedicated to residential, with one third of the housing as affordable
 - Remaining lands devoted to community facilities, including an education centre, recreation centre, and agriculture support facilities
- Highlights**
- Eco-agriculture approach
 - Open space, community gardens and agricultural education center

- Increased site access for recreational purposes
- Promotion of on-site tourism
- Enlarged and enhanced protected areas
- New community facilities, including an education centre, recreation centre, cannery, freezing centre, incubator kitchen and farmers’ market
- Special policy area
- Cultural heritage landscape designation
- Community partnerships such as community supported agriculture, a farming collective, or agricultural education
- Financial tools, including government programs, corporate sponsorship, agricultural tourism, and residential development sales to support community schemes

Implementation Tools

The concepts are evaluated against two professionally accepted evaluation tools, the Leadership in Energy and Environmental Design for Neighbourhood Development (LEED ND) Project checklist and the Southlands Project Evaluation Tool, and are also evaluated against the study’s guiding principles. Looking at all three evaluations affirms that the concepts work in a complex harmony with the site to advance principles of sustainability. Though both projects differ widely as to how the land is used they share a number of similarities. These similarities form the basis for our recommendations.

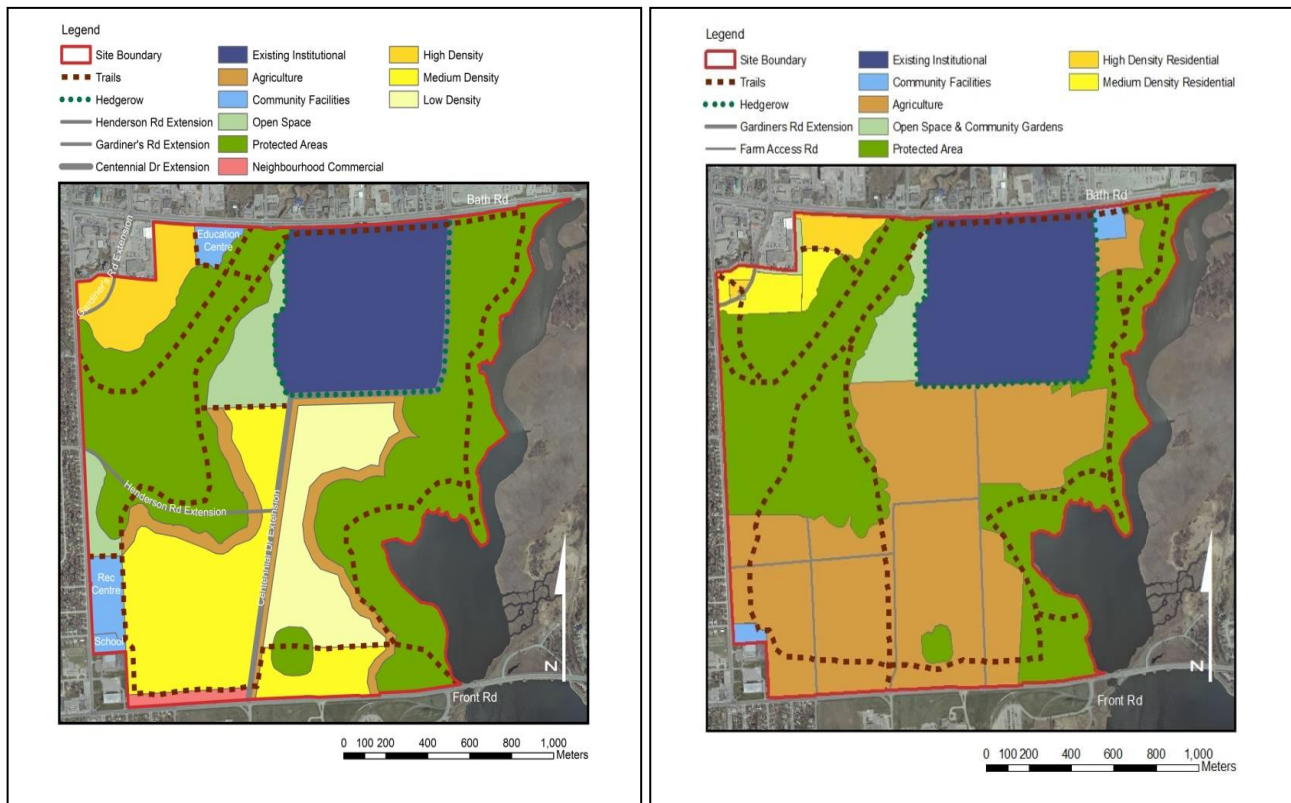


Figure S.2 – Maps Outlining the Green Communities (left) and Agricultural Conservation (right) Concept Plans

Summary of Recommendations

The Green Community Plan and Agricultural Conservation Plan demonstrate how different features could be incorporated on the site, and reflect how different land uses may work together. The size and scale of the lands allows for many different approaches that could further the sustainability goals of the City of Kingston, and the achievement of these goals are not limited to the two concept plans presented. However, certain common themes emerged from both concepts, and based on these themes and input from our stakeholder workshop, we feel that the following ideas would help move any sustainable use forward:

- | | |
|--------------------------------|--|
| Natural Area Protection | <ol style="list-style-type: none"> 1. Prioritize the protection and restoration of the wetland and floodplain, and create natural buffers between it and other site uses 2. Enhance the wetland's habitat value by connecting the east and west protected areas |
| Urban Intensification | <ol style="list-style-type: none"> 3. Provide high and medium density housing to accommodate some of Kingston's population growth, targeted in the northwest corner of the site 4. Design buildings that reduce energy needs through passive solar orientation, low energy building materials, efficient appliances, and on-site energy generation 5. Implement greywater recycling and natural stormwater management techniques to reduce the site's water needs and impact on the wetland |
| Urban Agriculture | <ol style="list-style-type: none"> 6. Integrate an approach that promotes agricultural productivity, environmental integration, and financial stability 7. Foster a sense of community through shared community gardens and farm-support facilities, such as an incubator kitchen and cannery 8. Promote urban farmland as a reflection on Kingston's history and cultural heritage landscapes |
| Community Connections | <ol style="list-style-type: none"> 9. Integrate the site with the surrounding community through partnerships, site design, and community facilities 10. Develop a passive, ecologically sensitive trail system along the site's perimeter and outside protected areas to facilitate healthy communities and recreation |

Next Steps

1. Initiate dialogue on how the possibility of a change in ownership of the Frontenac Institution Lands allows for the exploration of opportunities.
2. Engage the stakeholders and surrounding community if the lands become available. A steering committee or liaison group would aid in ensuring transparency and enhanced community involvement.
3. Create a special policy area for the site that addresses its unique nature and prioritizes sustainability and innovation.
4. Create partnerships that further the development and guidance of different site uses.
5. Begin studies, such as an environmental monitoring program, as early as possible.