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# Urban Experimental Farm

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## Pilot Project Report

Prepared for:

**City of Moncton**

By:



December 31, 2010

**Post Carbon Greater Moncton**

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## 1.0 INTRODUCTION

This report presents the results of an urban farm pilot project conducted in the City of Moncton between September 2009 and August 2010.

The purpose of the pilot project was to determine how urban agriculture can contribute to food self-sufficiency and security. The intent was to explore optimal conditions for small-scale farming in an urban setting and possibly lay the groundwork for a renewed municipal regulatory framework to govern this type of activity.

During the summer of 2009, the sponsoring organization, Post Carbon Greater Moncton, in collaboration with local individuals and stakeholders, obtained a temporary permit from the Greater Moncton District Planning Commission to set up a “backyard farm,” which was expected to grow fruits and vegetables and also raise chickens. A temporary permit was required because raising chickens is considered an “agricultural use” of a property and therefore prohibited by the current municipal regulatory framework.



This report provides detailed information on the rationale for the project and the results obtained. It also includes a comparative analysis of 7 other chicken-friendly North American cities. The report concludes with some recommendations on a renewed regulatory framework that would allow for the raising of chickens within the City of Moncton boundaries.

## 2.0 WHO WE ARE

Post Carbon Greater Moncton (hereafter PCGM) is a collective of over 100 citizens of the Greater Moncton area. Members have come together because they share the view that the world is about to enter an era of oil scarcity, resulting in dramatically more expensive energy supplies and a significant shift in all operating assumptions of society. This view is supported by a growing number of geologists and scientists from around the world.<sup>1</sup>

Our group believes that Greater Moncton will not be immune to this trend and that the time to start planning for a future marked by the high energy costs is now. Being less dependant on fossil fuels, means more self-sufficiency and less vulnerability to volatility in the world oil market. Using less fossil fuel also implies less greenhouse gas emissions and cleaner air.



PCGM's mission is to assist individuals, families and the community of Greater Moncton reduced their dependency on fossil fuel energies. The group focuses on four areas of activity:

- Food self-sufficiency and security
- Energy efficiency
- Active and public transportation
- Education and awareness

Clearly, Moncton City Council shares PCGM's concern. In June 2009, Council passed a resolution acknowledging the challenge of Peak Oil and the need for Moncton to prepare a plan of response. The urban experimental farm pilot project falls squarely within the scope and the spirit of that resolution (See Appendix A for complete resolution).

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<sup>1</sup> [http://en.wikipedia.org/wiki/Peak\\_oil](http://en.wikipedia.org/wiki/Peak_oil)

### 3.0 WHY URBAN FARMING

In the past few years, urban farming has gained widespread attention in cities across the United States and Canada. While city dwellers have long been involved in small-scale gardening or even community gardening, what has captured the most attention recently is the notion that animal husbandry could also be part of the equation. Keeping urban chickens, in particular, has become increasingly popular.

There are many reasons why city dwellers would consider raising chickens in their backyard. First, some individuals and families are concerned about food ethics and animal welfare. They want to know where their food comes from and are increasingly interested in producing their own. Since chickens are one of the smaller protein producers, they fit well into a backyard food production model.

Second, many citizens are becoming increasingly concerned about food safety. They worry about food recalls and other agri-food industry issues. For them, backyard chickens offer a safer alternative to industrial food.



Third, many citizens realize that their food sources are highly dependant on cheap oil. They anticipate rising energy and transportation costs and the ensuing consequences on the price of food. They wish to manage the risk associated with higher food prices and become more self-sufficient.

Finally, some worry about the impact of the modern agri-food industry on the environment. Because fossil fuels play such a critical role in the production, processing, distribution and packaging of global food, this agri-food industry is among the most important contributors to greenhouse gas emissions.

## 4.0 PROJECT DESCRIPTION

### 4.1 Location

Post Carbon Greater Moncton collaborated with Isabelle Pineault and Anne-Marie Laroche in setting up an urban farm. Isabelle and Anne-Marie’s property is 762 m<sup>2</sup> and situated at 68 Cabot Drive, in the northern part of Moncton.



When they were approached by Post Carbon Greater Moncton, Anne-Marie and Isabelle already had a garden that had been slowly expanding. In previous years, they had planted shrubs and had been harvesting fruits like blueberries, redcurrant, pears and raspberries. In an effort to maximize their harvest and limit their household waste, they had been composting.

Anne-Marie and Isabelle thus had experience with urban gardening and were keenly interested in introducing young, veterinarian-approved chickens in their garden.

All of their neighbors were contacted and signed a consent form indicated that they supported the project.

## **4.2 Temporary Permit**

It was determined early that raising chickens on Cabot Drive would be in violation of the current regulatory framework as it would be considered an “agricultural use” of the property, an activity prohibited by Zoning By-law Z-202.

Therefore, Post Carbon Greater Moncton, in collaboration with Anne-Marie and Isabelle, submitted an application for a temporary permit to the Greater Moncton Regional Planning Commission. On June 24, 2009, the Commission granted a one-year temporary permit to the group.

A copy of the GMRPC resolution can be found in Appendix B.

Our group also obtained a permit to build the coop.

## 5.0 RESULTS

To obtain a complete picture, Post Carbon Greater Moncton asked the urban farmers to describe their experience. Here is what they said.

On average, the four hens produced 3.3 eggs per day, which represents almost 2 dozens eggs per week. Such a production was overly abundant for a family of 2. Therefore, some of the eggs were offered to friends and neighbors.

Anne-Marie and Isabelle spent approximately \$650 in fixed costs (i.e., materials to build the coop and enclosure and equipment for feeding and watering). In addition, the feed, hay and saw dust for one year cost approximately \$620, for a total of \$1,270. They estimate therefore that each egg cost them on average \$0.52. Of course, in time, the average cost would go down.

With respect to the production of fresh vegetables and fruits, it has been more difficult to measure. Our observation is that it has been easy to produce a large quantity and variety of vegetables like squashes, corn, cucumbers, sweet peppers, artichoke, lettuce, garlic. Over the pilot period the farm has also produce a good quantity of fruits like melons, berries, strawberries and pears. It must be said, however, that this production of vegetables and fruits on an urban lot would not be enough to supply the average family for a whole year. Therefore, there will always be a need to support local farmers who are a critical link to a more sustainable agri-food system.



Despite the relative inexperience of Anne-Marie and Isabelle, no major problems were encountered during the pilot project. The assistance and counsel of the staff at the Coop Country Store in Moncton and several key reference manuals proved to be invaluable. The general maintenance (cleaning, feeding, watering) has not been overly demanding. However, like any animal, the hens required daily care.

Two main areas of concern (i.e., cold weather and odors) were managed without difficulty. In building the coop, the urban farmers used insulation. In addition, a 175 watt lamp was used on some days to ensure the water would never fall below freezing mark. The hens passed winter without problem. As for the odors, it has generally not been an issue and there hasn't been a single complaint from neighbors. But, admittedly, it is something that needs to be managed. The experience of this pilot project has shown that odors emanating from the coop can be more acute during the spring. The accumulated hay in the enclosure during winter did produce unpleasant odors when exposed to the first warm spring sun. The situation was easily managed by spreading saw dust inside the enclosure.

The hens made intermittent clucking sounds (especially in the morning), but were otherwise quiet. By way of comparison, they are not nearly as noisy as a singing crow or a barking dog. Given the appropriate separation, it is unlikely that hen sounds will cause disturbance to a neighbor of reasonable sensitivity.

The project also monitored rodent activity. During the project period, other than a few small birds and the owners' cats, no other animals were seen approaching the coop and enclosure.

Education was not an explicit objective of the project, but the urban farm pilot project proved to be an excellent awareness creation tool in favor of local food. From the comments they received from friends, acquaintances, work colleagues, neighbors and children of all ages, Anne-Marie and Isabelle have observed a genuine interest and enthusiasm for the notion that hens could be raised in an urban setting. During the pilot project, a number of organizations, including scouts and environmental organizations, visited the urban farm and were engaged in discussions on local food.

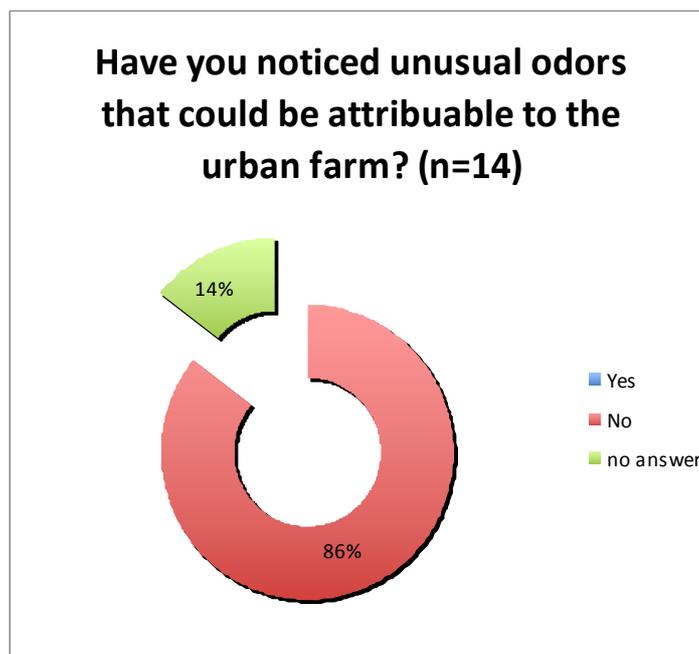
Finally, in addition to the pure pleasure of gathering fresh eggs every morning, several lessons have been learned from the project. First, it is possible to raise a limited number of hens in an urban setting without causing nuisance to neighbors. Second, for the urban farmers, making contact with nature has been particularly engaging and energizing. Because of the connection Isabelle and Anne-Marie have made with the animals, the act of feeding themselves has become more meaningful. In addition, they believe the urban farm has given them a whole new positive perspective on life in their community. They are grateful to the project for having allowed them to meet new neighbors.

## 6.0 WHAT NEIGHBORS THINK

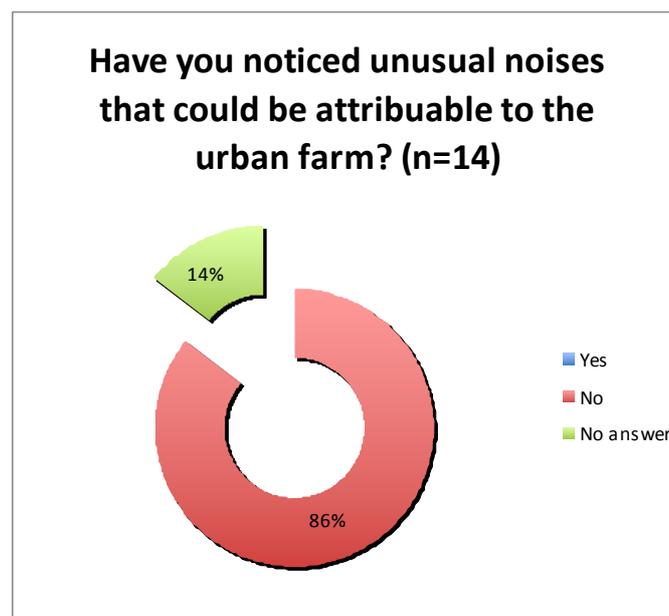
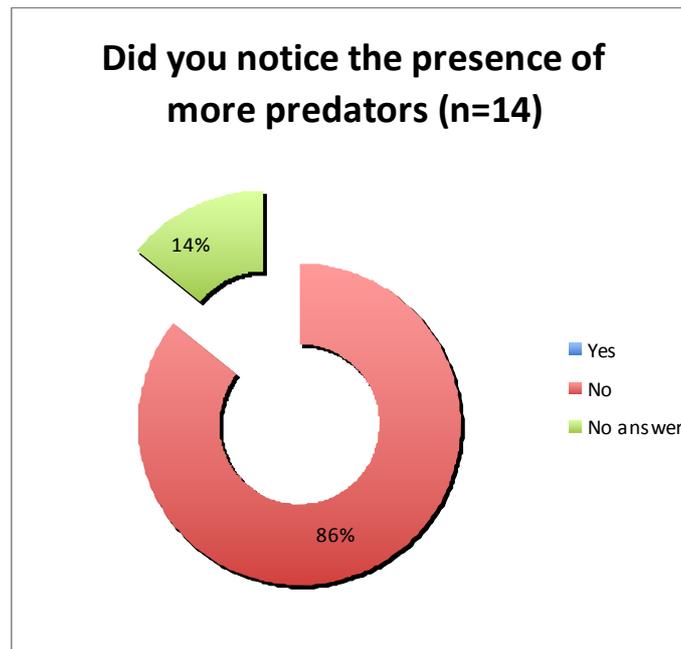
As was mentioned previously, 14 of Anne-Marie and Isabelle’s closest neighbors consented to the pilot project from the outset. When the pilot ended in September 2010, Post Carbon Greater Moncton commissioned an independent survey of all neighbors. A total of 12 neighbors responded. However, at the time of conducting the survey, the houses of two neighbors were vacant and for sale.

The results of this survey are shown in the graphs below.

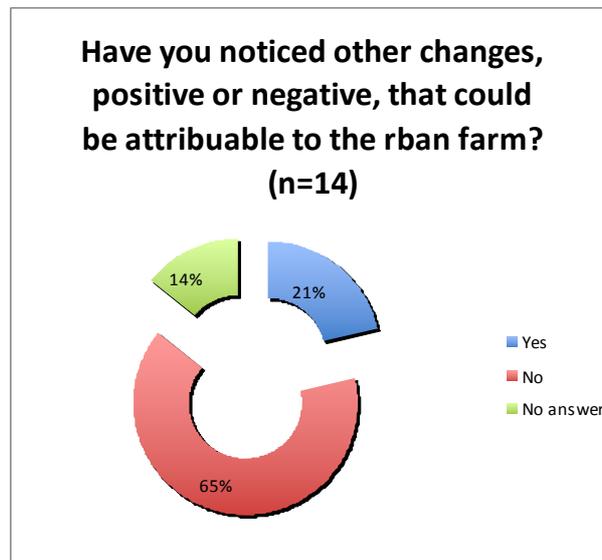
When asked if they had noticed unusual odors during the pilot project, all of the respondents indicated they had not.



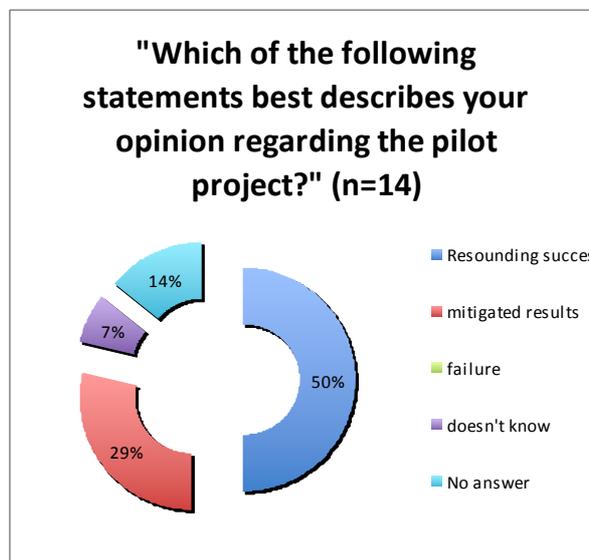
Similarly, all survey respondents indicated they had not noticed the presence of more predators or unusual noises that could be attributable to the urban farm.



When asked if they had noticed other changes, positive or negative, that could be attributable to the urban farm, 65% of the neighbors indicated they had not. Twenty-one percent (21%) indicated they had noticed positive changes. They explained that the project increased the quality of life in the neighborhood and contributed to creating a sense of community. They also enjoyed being offered fresh eggs once in a while.



The neighbours were also asked how they felt about the project overall. Half of them felt that the project was a “resounding success”. Another 29% felt the project had mitigated results and another 7% said they didn’t know. Those who said the project had mitigated results qualified their answer by saying that the project should be considered a success if the city imposes a strict regulatory framework to govern the keeping of chickens within city boundaries.



## 7.0 WHAT OTHER COMMUNITIES DO

City dwellers that raise chickens are springing up all over North America. Because they are on the line between livestock and pets, chickens are allowed in some unexpected places. New York City, Oakland, San Francisco, Houston, Chicago, Seattle and Portland, Ore., are chicken-friendly. In Canada, the following cities allow backyard chickens in one form or another: Niagara Falls, Brampton, Guelph, Vancouver, Victoria and Surrey. Based on the research conducted for this pilot project, over 100 communities across North America have pro-chicken by-laws.

That number is bound to grow. Since Post Carbon initiated its project, the organization has received calls from groups in Charlottetown, Saint John and Fredericton who are interested in doing the same thing. And there are reports of several other Canadian cities, including Edmonton, Calgary and Halifax, currently looking into the matter.

Keeping urban chickens is typically governed by municipal by-laws that vary considerably from one city to the next. When restrictions exist, they usually revolve around the number of birds allowed, roosters, enclosures and nuisance prevention. There are also various practices around permits and fees. The following table presents a broad overview of some of the approaches.

City	# of birds	Roosters	Permits/costs	Enclosure requirements	Nuisance clause	Slaughter provision	Property line	Other
Brampton ONT	No limit	Not specifically prohibited	No	Yes	Yes	No	25 ft from neighbor's dwelling	All refuse, material, equipment and food must be contained
Burlington VT	6	No	\$20 initial \$10 renewal	Yes	Yes	No	Yes	Feed and water Waste storage
Guelph ONT	No limit	Not specifically prohibited	No	Yes	No	No	50 ft from neighbor's dwelling	
Madison WI	4	No	\$6/year	Yes	Yes	No	25 ft from neighbour house	
Niagra Falls ONT	10	No	No	Yes	Yes	No	25 ft from property line	Food supply must be protected against vermin
Portland OR	3	Unclear	\$31 one time fee	Yes	Yes	Unclear	Unclear	
Vancouver BC	4	No	Permit required without fee	Yes	Yes	Not allowed	Yes	Basic animal care requirements

## 8.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of this pilot project, Post Carbon Greater Moncton believes that small-scale farming in Moncton is entirely possible and, given the appropriate regulatory framework, can contribute to greater food safety, security and self-sufficiency. Therefore, the organization recommends that the City of Moncton review its regulatory framework with a view to allow the raising of chicken within city limits. In reviewing its framework, the City of Moncton should consider the following elements:

<b>Number of birds</b>	A maximum of 4. The pilot project has demonstrated that 4 birds are enough to supply an average family in eggs without causing nuisance to neighbors.
<b>Roosters</b>	Roosters should be explicitly prohibited.
<b>Permits and fees</b>	<p>It is recommended that an annual permit be required for keeping chickens. Regardless of the number of hens, we recommend an annual fee of ten dollars (\$10.00), which is the same fee currently imposed for spayed female or neutered male dogs.</p> <p>The rationale is the following: a permit system will allow local officials to know at all times who keeps chickens. The fee structure is designed to strike a balance between control and accessibility.</p> <p>We further recommend that a portion of the revenue generated from the fee structure be transferred to the SPCA's annual grant. This measure is to recognize the potential role of the organization in enforcing any new bylaw.</p>
<b>Basic care and sanitary conditions</b>	<p>We recommend a provision stating that chickens must be provided food, water, shelter, adequate light and ventilation, veterinary care, and opportunities to scratch, dust-bathe and roost.</p> <p>In addition, the coop should be equipped with a heating device to ensure water temperature does not fall below freezing mark during winter.</p>
<b>Building requirements</b>	<p>We recommend a provision that states that chickens must remain enclosed at all times.</p> <p>The coop space should be a minimum of 0.4 m<sup>2</sup> and 0.92 m<sup>2</sup> (10 ft<sup>2</sup>) enclosed run space per hen.</p>

	<p>We recommend that the entire structure be roofed and that a perch of at least 15 cm perch for each hen and one nest box</p> <p>We recommend that chickens be kept in an enclosure, chicken tractor, or fenced area (chicken pen) at all times.</p>
<b>Nuisance prevention</b>	<p>We recommend :</p> <ul style="list-style-type: none"> <li>• a provision that specifies that enclosures be clean, dry and kept in a neat and sanitary condition at all times;</li> <li>• a provision placing the onus on the property owner to ensure that no odors from chickens, chicken manure, or other chicken-related substances be perceptible to neighbors. Similarly, the onus should be placed on the property owner to ensure that a neighbor of reasonable sensitivity should not be disturbed by noise from chickens or any other adverse impacts</li> <li>• a provision specifying that the coop be kept at a minimal distance of 10 meters from a neighbor's dwelling and 70 cm from property line</li> <li>• a provision prohibiting the placement of enclosures on a front yard.</li> </ul>
<b>Slaughtering restrictions</b>	<p>We recommend a provision prohibiting the slaughtering of chickens within city boundaries.</p>
<b>Other restrictions</b>	<p>No sale of eggs, manure or other chicken-related products.</p> <p>All food for the chickens should be kept in rodent-proof containers.</p>
<b>Phase-in period</b>	<p>To ensure a smooth transition to an effective pro-chicken by-law, we recommend a 3-year phase-in period. During this period, we recommend that no more than 25 permits be issued.</p>
<b>Education</b>	<p>We recommend that the City of Moncton prepare a pamphlet outlining the elements of the chicken by-law and tips on how to care for chickens. Furthermore, Post Carbon Greater Moncton is committed to organizing workshop for permit holders.</p>

## **APPENDIX A – PEAK OIL RESOLUTION**

### **Resolution acknowledging the challenge of Peak Oil and the need for Moncton to prepare a plan of response and preparation (passed in June 2009)**

WHEREAS, World oil production is nearing or has passed its point of maximum production (known as “Peak Oil”) and will enter a prolonged period of irreversible decline leading to ever-increasing prices; and

WHEREAS, The availability of affordable petroleum is critical to the functioning of our transportation system, the production of our food and of petrochemical-based consumer goods, the paving of roads, the lubrication of machinery, and myriad other parts of the economy; and,

WHEREAS, Moncton has already demonstrated leadership in confronting challenges of global climate change, including participating in the Cities for Climate Protection program and establishing an Active Transportation and other policy initiatives, and has a rich diversity of citizens committed to maintaining Moncton’s long-term viability; be it

RESOLVED, That Moncton City Council acknowledges the unprecedented challenges of Peak Oil; and, be it

FURTHER RESOLVED, That Council supports the undertaking of a city-wide assessment study in order to inventory city activities and their corollary resource requirements, evaluating the impact in each area of a decline in petroleum availability and of higher prices, with the aim of developing a comprehensive plan of action and response to Peak Oil; and, be it

FURTHER RESOLVED, That Council hereby requests that the Mayor take steps to establish a Peak Oil Task Force, comprising members of Council, the Planning Commission, City and Commission Staff, and the public, to examine the issue of Peak Oil and to develop a framework for adapting to fossil fuel depletion.

## APPENDIX B – GMPDC RESOLUTION



Grand Moncton Planning  
District Commission  
Commissaire du district  
d'aménagement  
du grand Moncton

555-4444 Street  
Box 1188 5210E  
Tel: 506-857-2511 • 857-5305  
Fax: 506-857-2883 • www.gmpdc.ca

Le 3 juillet 2009

Annie-Marie Laroche et Isabelle Pincard  
68, rue Cabot  
Moncton (N.-B.) U1A 5K9

**OBJET :** Demande de permis temporaire – 64, rue Cabot (NID 1001155), Moncton - afin d'élever trois poules (projets-pilote) (Grand Moncton Post Carbon) pendant une période temporaire (dossier n° 09MT-15156)

La Commission du district d'aménagement du Grand Moncton a évalué la demande susmentionnée à sa réunion du mercredi 24 juin 2009.

L'approbation de la demande ci-dessus est accordée sous réserve des conditions suivantes :

- 1) La permission est accordée pour la période d'une année suivant l'émission du permis d'aménagement;
- 2) Le permis autorise l'élevage de poules femelles seulement, les coqs étant explicitement interdits;
- 3) Les requérantes doivent présenter un bref rapport écrit sur les résultats du projet d'ici le 31 décembre 2010 pour le décrire par le Comité de révision au plan municipal;
- 4) La construction du poulailler doit être contenue aux plans présentés;
- 5) Les requérantes doivent consulter le SPCA au sujet de l'exécution de leur projet.

Veuillez noter que la présente lettre n'est pas un permis d'aménagement. Avant d'entamer tout aménagement ou construction, je vous recommande de communiquer avec le Service d'inspection des bâtiments de la Ville de Moncton afin de déterminer les permis (ex. : permis de construction ou d'aménagement) qui pourraient être requis.

Si vous avez des questions, n'hésitez pas à communiquer avec notre bureau au 506-857-2511.

Veuillez agréer l'expression de nos vœux les plus distingués.

L'urbaniste prend soin,

Tina McLaughlin, AMT/UTPC

TMP/gm

c.c. Allen Bureau, gestionnaire en chef, Services d'aménagement, CIDAQM  
Bill Hearn, directeur exécutif, CIDAQM  
Sherry Sparks, directrice, Service d'inspection des bâtiments, Ville de Moncton