

***Le Coteau vert and Un Toit pour tous :***  
**Making affordable housing sustainable**

A case study from Montreal, Quebec

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## **Introduction**

The emergence of publicly funded housing policies in Canada dates back to the early 1900s. At the time, factors such as housing shortages and poor conditions were some of the drivers for the different levels of government to get involved. In recent years, the withdrawal of the federal government from affordable housing creates new challenges. Meanwhile, other factors such as increasing land or energy prices generate even more uncertainty for emerging affordable housing projects.

In Montreal, it is the will to increase the supply of affordable housing and to build an environmentally sound project that brought together the co-op *Le Coteau vert* and the non-profit *Un Toit pour tous*. This case study will look at their project to assess its success and understand how it might inspire and inform other projects in Canadian cities.

In order to do so, a short overview of the project will be given, followed by a description of the planning process and of the environmental features it incorporates. Finally, after an overview of its funding sources, an assessment of the strengths, weaknesses, opportunities and threats for the project will be realised, as well as summary of key lessons other projects can draw from this case.

## **Project overview**

### **Socio-economic context**

The housing project is located in Montreal, in the municipal district of Rosemont–La-Petite-Patrie. The district is home to 134,000 people at a density of 8,456 people per square kilometer (City of Montreal, 2009). It is characterised by a higher proportion of young adults (25 to 34 years old) than in the rest of the city, and people under 25 year-old account for a quarter of its

population. Most of the households in Rosemont–La-Petite-Patrie are renters, especially in the Saint-Édouard neighbourhood (81 % of the households rent) where *Le Coteau vert* and *Un Toit pour tous* are located (City of Montreal, 2013). In Rosemont–La-Petite-Patrie, nearly 27 % of households earn less than \$20,000 a year, that is at or below of the low-income threshold for one-person households (City of Montreal, 2013).

## Goals of the project

This project has two central goals. First and foremost, it aims at providing affordable housing in a neighbourhood where the cost of rent is increasing, at a location that is convenient for the use of public transit and cycling as modes of transport (Dorval-Douville, 2014; Pearl, 2011). Secondly, the construction meets high environmental standards, which are part of the defining character of this project.

## Description of the project

The affordable housing project was initiated by the co-op *Le Coteau vert* and the non-profit *Un Toit pour tous* (Hébert, Laforest, Ternois, & Walker, 2012). It is located on a former municipal workshop a few footsteps from a metro station in the municipal district of Rosemont (Guilbeault, 2010).

The housing project includes 95 co-op units designed for large families (3 to 5 bedrooms) and 60 non-profit units for single occupancy or single-parent families. They are built around a shared interior courtyard (Société d'habitation du Québec, 2013); see Figure 1. Overview of *Le Coteau vert* and *Un Toit pour tous* housing project (Pearl, 2012).). Half of the co-op and nont-profit units are subsidized for the residents to pay 25 % of their income towards housing; the other half of the units are currently slightly below market rent, at 95 % of the median rent of the neighbourhood (Dorval-Douville, 2014).

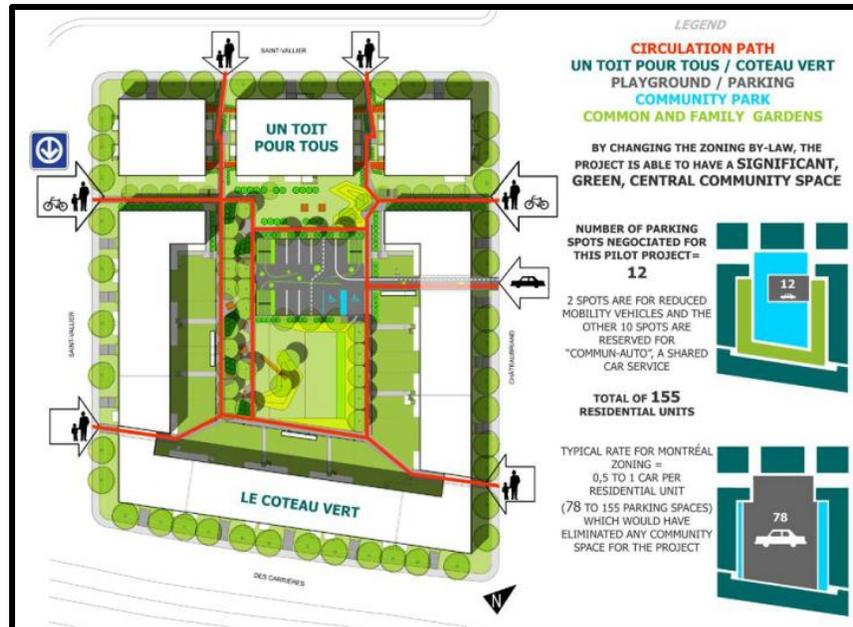


Figure 1. Overview of *Le Coteau vert* and *Un Toit pour tous* housing project (Pearl, 2012).

## From inception to occupancy

### Participants

This section provides information on a few key players of this project. The list is not exhaustive, and other actors that have been involved at specific times during the process will be introduced in the next section.

#### *Le Coteau vert et Un Toit pour tous*

The housing co-op *Le Coteau vert* was created in 2002 by a group of young people that shared the desire to build housing with high environmental standards, but which would remain affordable (Guilbeault, 2010). The non-profit organisation *Un Toit pour tous* was created by the *Table de logement aménagement Petite-Patrie* as a housing fund to favour the construction of affordable housing in the neighbourhood (L'Avenue inc., n.d.). As it will be explained in more details in the next section, they formed a partnership to pursue a common project in 2004.

### **Technical Resource Group: *Bâtir son quartier***

In Quebec, technical resource groups (TRGs) are local non-profit organisations whose mission is to support co-op or non-profit organisations in the provision of affordable housing (AGRTQ, n.d.). They offer technical support and act as intermediaries between the organisations and the professionals involved in the project. Once the housing is built, they also train the residents on how to maintain their new housing and on how to work as a group to manage it. They have an instrumental role to play in supporting often inexperienced community groups throughout the project. One of the main provincial government funding programs (*AccèsLogis*) requires the organisations to work with a TRG (Omer-Kassin, 2014). For this project, the TRG *Bâtir son quartier* was hired to act as the project manager.

### **L'ŒUF**

L'ŒUF is an architecture firm with a long experience of working on affordable housing and integrating ecological designs to its projects (L'ŒUF Architectes, n.d.-b). Their participation in the project was informed by a previous affordable housing development they designed named Benny Farm, which integrated affordable housing and ecological design.

### **Major steps in the planning process**

The beginning of this process goes back to 2004, year at which the co-op organisation *Le Coteau vert* and the non-profit organisation *Un Toit pour tous* created a partnership in order to pursue a common affordable housing project (Hébert et al., 2012). The architecture firm L'ŒUF was hired immediately after to get the project started.

The association between the two organisations was motivated by news coming from the City of Montreal, which decided to redevelop the large parcel of land that housed its former municipal workshop (Hébert et al., 2012). In 2005, the city created a committee to issue recommendations

for the redevelopment of the site, on which sat *Le Coteau vert* and *Un Toit pour tous*. A workshop was held to define the priorities and type of developments that should be included in the project (Arrondissement Rosemont-La Petite-Patrie, 2006). The recommendations produced by the committee identified a site for the provision of co-op and non-profit housing to be developed by *Le Coteau vert* and *Un Toit pour tous*.

At this point, the TRG *Bâtir son quartier* had been present for a long time already. Indeed, the TRG had been advocating for the inclusion of affordable housing in the redevelopment of the municipal workshop since many years (Guilbeault, 2010). Their role as project manager became even more central after the selection of the location.

In 2006, l'ŒUF held a charette for the conception of the project. Participants included many city officials, the project's major funders, the TRG, the two instigators and others (L'ŒUF Architectes, n.d.-a). One of the objectives of the charette was to illustrate to the group what elements would make this project sustainable and what were the costs associated with different options in order to make the right choices for it to be viable (Hébert et al., 2012).

The land was acquired from the City of Montreal in 2007. However, at the same time, the main funder of the project (the *Société d'Habitation du Québec* with its program *AccèsLogis*) suspended its financial support because of the uncertainties related to the integration of environmental technologies, therefore calling into question the future of the project (Hébert et al., 2012). The TRG *Bâtir son quartier* worked to secure additional funding in order to restore the provincial agency's confidence in the project. The new funding finally came from the Canada Mortgage and Housing Corporation (CMHC) to support the integration of environmental technologies. The SHQ subsequently accepted to resume its funding and provided additional funds related to those technologies through a new program (more details are provided in the

“Sources of funding” section). The temporary withdrawal of its major funder caused an additional delay of one year in the delivery of the housing.

In 2009, the construction finally began. An arson disrupted the progress later in the year by destroying a full wing, further delaying the completion of the project. Nevertheless, residents started to move in in the fall of 2010 (Hébert et al., 2012).

## **Setting new environmental standards**

This affordable housing project is characterised by the environmental technologies it integrates. With it, *Le Coteau vert* and *Un Toit pour tous* wished to develop an attractive way of living for families within the city, while also contributing to the creation of a more sustainable community (Guilbeault, 2010). Their partners were instrumental in helping them achieve those objectives.

The choice of the location was central in order to create a community with a low reliance on automobile transportation (Guilbeault, 2010). Because of its proximity to a metro station, the project managed to negotiate a significant reduction of the parking spaces. From the original zoning requirement at 78 spaces, negotiations with the city resulted in a reduction first to 36 and finally to 12 parking spaces (Pearl, 2011). Most of them are occupied by a carshare enterprise, while a few are reserved for people with restricted mobility. This reduction of the parking size was an efficient planning tool which contributed to reduce the cost of construction of the housing project.

Also of great importance in the defining character of this project were its future proofing and passive features. As explained by Daniel Pearl (2011), the concept of future proofing means that the buildings are constructed to enable their evolution in the future, that is the integration of more environmental technologies. Following that logic, the systems which require more

disruptions for their installation are built at the time of construction. For *Le Coteau vert* and *Un Toit pour tous* those technologies included the geothermal energy system, the heat recovery system from grey water and the highly efficient building envelope. However, the housing structure was built in order for other technologies to be added in the future without major disruptions to its residents. One example of those technologies is the photovoltaic solar panels for which anchors and tubing for the wires are already installed on the roofs.

The passive features are also an important part of the project. Passive houses use very efficient thermal insulations (the building envelope mentioned above) and air-tightness in order to reduce the energy needs of the building (Badescu & Sicre, 2003). The good conception of the buildings following those standards reduces greatly the energy consumption, thus contributing to the units' long-term affordability.

Overall, the buildings consume approximately 38 % less energy than average constructions (Pearl, 2011). In the long-run, when additional technologies are added following the future proofing model, it could reach a 92 % reduction in energy consumption compared to the current average. The shared courtyard has also been designed with a retention pond that receives the rainwater collected on the property. More than an additional environmental feature, it was envisioned as a playground for children living in the housing.

Considering all of this, *Le Coteau vert* and *Un Toit pour tous* set an impressive example for the integration of green technologies with a limited budget.

## Sources of funding

The project succeeded in getting a variety of funding sources. The overall cost of the project was estimated at \$23,792,216 by *Un Toit pour tous* after its completion, 63 % of which was paid for by the subventions that will be described in this section (Hébert et al., 2012).

Early in the process, the Charette for the project's conception was financed by many organisations, including the City of Montreal, the Green Municipal Fund from the Federation of Canadian Municipalities and the CMHC's Net Zero Housing Initiative (Hébert et al., 2012).

The main funding of the project came from the *Société d'habitation du Québec* (SHQ). It was allocated through the *AccèsLogis* funding program designed to support non-profit and cooperative housing projects (Société d'habitation du Québec, 2014a). In order to access the funding, the housing project needs to have received support from the local municipality and to have secured other sources of funding (from a municipality, other public organisations, a charity, a private enterprise or a fund raiser). The program will finance up to 50 % of the admissible expenses of a given project (Société d'habitation du Québec, 2014b). It was this source of funding which the SHQ withdrew from the project for a year due to the uncertainties associated with the integration of green technologies.

Funding was also required to finance the environmental technologies that were part of the project. As the main architect of the project explained, 4-5 % of additional funding was necessary to cover the future proofing aspect of the buildings (Pearl, 2011). At the time, no funding was available for this type of projects; all programs required the energy efficiency improvements to be reached at the end of the construction. This explains why the project didn't succeed in getting financing through CMHC's Net Zero program. It also led to the suspension of the SHQ funding described above because of the uncertainty of the project's ability to raise the

necessary funding for those technologies. However, recognising the importance of innovative projects such as this one, the CMHC found other means to allocate funding to the project.

The SHQ subsequently decided to resume its funding through the *AccèsLogis* program. It also created a new program named *Projet Novateur*. Since then, it provides additional funding for projects receiving money from *AccèsLogis* which integrate innovative environmental technologies (Pearl, 2011).

## **Assessment of the strengths, weaknesses, opportunities and threats**

The analysis of strengths, weaknesses, opportunities and threats (SWOT) of the case study provides a good overview of the project as a whole. The elements were drawn from documents and from interviews realised with two participants to the project: Yann Omer-Kassin (project manager at *Bâtir son quartier*), and Geneviève Dorval-Douville (member of *Un Toit pour tous* Board of directors).

One of the strengths of this project definitely lies in the strong alliance formed by the co-op *Le Coteau vert* and the non-profit *Un Toit pour tous* from the beginning. Together, they have been a strong basis for the project, as emphasised by Yann Omer-Kassin from *Bâtir son quartier*. They also formed great partnership with organisations that contributed to their success as an innovative affordable housing project. The TRG *Bâtir son quartier* was one of them, which helped fighting to obtain the funding for their innovative ideas. The creation of a new funding program in Quebec based on the needs of their project shows how precedent-setting it has been. It is also worth mentioning that the environmental character of the housing project has created a feeling of pride amongst its residents, who are particularly engaged in the

management of their housing compared to other traditional affordable housing projects in the neighbourhood (Dorval-Douville, 2014).

The main weakness of the project relates to more recent technological issues. Indeed, the geothermal energy system has been problematic during the summertime for a few years now. Because of the unknown nature of the issue, the cost of maintenance and repair of the system is higher than expected. It is still too soon to know if the costs will outweigh the benefits derived from the energy savings it creates in the winter (Dorval-Douville, 2014).

The city's interest in redeveloping the former municipal workshop provided *Le Coteau vert* and *Un Toit pour tous* was a great opportunity. Indeed, the proximity of the location to a metro station, many buses and a central cycling route provided them with a unique opportunity in terms of sustainability and affordability. It also enabled them to get a reduction in parking requirements (and thus a reduction in costs) for the housing complex.

As part of the threats that faced to project, funding was definitely central. The inflexible funding programs created difficult situations by increasing delays and uncertainty for the viability of the project itself, especially related to its future proofing features. The cost of certain green technologies is definitely another threat to their integration in affordable housing projects.

## **Lessons learned and replicability**

*Le Coteau vert* and *Un Toit pour tous* is a young project that will continue to evolve over the next years. Nevertheless, some key lessons can be learned from that case in order to inspire and inform other affordable housing initiatives across the country.

First of all, it has been challenging to obtain funding for innovative ideas such as the future proofing approach embraced by this project. The inflexibility of many funding programs can

make it difficult for unconventional proposals and create additional delays that can be costly. However, as more projects ask for it, there is a great potential for the improvement of certain funding structures.

Secondly, the benefits from the energy savings from environmental technologies need to be well weighted against the costs of those technologies. In the long run, it is likely that the energy savings will outweigh the costs of many technologies, but some might be more efficient than others. More complex technologies (such as the geothermal energy system in this case study) might or might not be appropriate depending on the scale of the project and the complexity it might add to it. This being said, the integration of energy saving technologies should definitely be considered as a way to provide long-term affordability.

Thirdly, it is important to acknowledge that this project was made possible by the funding of many organisations, of which the province was central. Considering the withdrawal of most federal funding in the recent years, the lack of provincial funding in other provinces could make it hard to replicate this project's funding structure outside of Quebec. However, other case studies might illustrate alternative ways to raise the necessary funds.

## **Conclusion**

*Le Coteau vert* and *Un Toit pour tous* is still a young project, and it is early to draw conclusions on how successful it has been. Yet, it has succeeded in delivering more affordable housing in the neighbourhood and it is likely to remain more affordable in the long-run considering the rising energy prices and the energy savings it can generate.

The incorporation of green technologies certainly has been challenging and will likely still be in the future. However, thanks to the determination of its partners, this type of project has already gained recognition from major funding agency, both provincially and nationally.

Concepts such as future proofing and passive systems should definitely gain importance in the future of affordable housing as another mean to provide affordability in housing. One can hope that it will help provide sustainable solutions to some of the challenges facing these types of projects.

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