Hand-Me-Down Housing:
City Housing Stock Revisited

by

Claire Cowling

A thesis submitted to the Faculty of Graduate and Postdoctoral Affairs in
partial fulfillment of the requirements for the degree of

Master of Architecture Professional

Carleton University
Ottawa, Ontario

© 2013
Claire Cowling

Abstract

In the 20th Century, and especially following World War II, responsibility for affordable housing fell to public housing providers. Canada's public housing stock is currently in need of major life-cycle reinvestment, as much of it is over 40 years old. Government funding for new public housing has long since dissipated and funds to maintain what was built in the post-war decades are in extremely short supply – exacerbated by waning political support for government-sponsored housing. Municipal housing authorities like the Ottawa Community Housing Corporation (OCH) have been directing an increasing percentage of their resources to the maintenance of aged housing. Working within limited mandates and budgets, housing authorities must find creative ways both to renew their stock and address longstanding problems in the process. This thesis investigates how the challenges facing a physically and socially tarnished public housing stock may present opportunities to experiment with new, more economically and socially sustainable approaches to neighborhood redevelopment.

Acknowledgments

I would like to thank my thesis advisor, Benjamin Gianni for his unwavering support and patience and whose expertise, enthusiasm and kindness has helped shape my architectural education for the last three years.

My parents deserve a very special recognition for their encouragement and tough love, without which I would be writing into my senior years.

Lastly, thank you to all my friends and room-mates for providing much-needed distractions.

Support comes in many forms, each as valuable as the next, and the completion of this thesis would not have been possible without my lovely family and friends.

Table of Contents

<u>Abstract</u>	ii
<u>Acknowledgments</u>	iii
<u>Table of Contents</u>	iv
<u>Introduction</u>	1
<u>Chapter 1</u> - It was Built	6
<u>Chapter 2</u> - It Failed	24
<u>Chapter 3</u> - The Redevelopment of Post-War Housing Ensembles	46
<u>Chapter 4</u> - Site Analysis	76
<u>Chapter 5</u> - Urban Redevelopment Proposal: A Socially Sustainable Model	95
<u>Conclusion</u>	121
<u>List of Illustrations</u>	129
<u>Bibliography</u>	134

Introduction

A significant percentage of Canada's affordable rental housing stock — including the large inventory managed by the Ottawa Community Housing Corporation — is in need of major life-cycle reinvestment. Constructed forty or more years ago, much of this housing is organized into single-use, single-demographic clusters, disconnected from adjacent neighborhoods. Where affordable housing is concerned, this approach to planning has been seen to contribute to crime and other forms of so-called antisocial behavior. Proponents like OCH are eager to explore creative ways of addressing an acute need for life-cycle reinvestment while, at the same time, producing better-integrated, more socially and economically sustainable communities.

On Method

Research on the rise, demise and renewal of public housing has been undertaken in two related ways. The written portion of the thesis examines relevant literature and case studies, tracing the history of public housing in England and North America and identifying a range of economic and social issues associated both with the performance and the redevelopment of post-war social housing. The second portion of the thesis

explores the same issues through a demonstration plan for the redevelopment of a 45-acre site in Ottawa. The area under investigation includes housing owned and operated by the Ottawa Community Housing Corporation (OCH) as well as a number of adjacent properties. Although theoretical in nature, the project explores ways in which OCH might partner with the City of Ottawa and private sector proponents to leverage the ongoing investment it must make in its housing stock. The project will propose the redevelopment of an area larger than that occupied by OCH housing in order to demonstrate the benefits of coordination between multiple property owners and agents. Adjacent to OCH's Russell Heights complex and the Russell Manor tower are vacant industrial lands as well as commercial properties along an arterial corridor designated by the City as a "Design Priority" zone.

The proposed demonstration plan is intended as an extension of research into the renewal of post-war public housing: another means of exploring the issues, challenges and opportunities involved. Among other things, the design exploration considers land acquisition strategies, phasing, and community as it relates to isolation and demographic imbalances. While specific to Russell Heights and Russell Manor, it is my hope that this approach to redevelopment will be able to be applied to other

projects in Ottawa as well as similar enclaves of affordable housing in cities across Canada.

In addition to reviewing literature on the topic, I was fortunate enough to gain first-hand experience. Having lived in close proximity to the Russell Heights complex for the last three years, I volunteered at the Russell Heights Community house for several months, assisting with after-school programs for children and with the food bank program. This afforded me a deeper understanding of the residents and needs of the community. I have attended multiple meetings with representatives from Ottawa Community Housing and other not-for-profit housing providers to better understand how publicly subsidized housing is managed in Ottawa and to better grasp the issues facing housing providers today. Meeting with developers and builders of social housing also helped me to understand to what extent land costs and building practices contribute to affordability. At the 2012 Urban History Association Conference in New York City I attended a round-table discussion of public housing in the United States. Panelists included subject-matter experts like Nicholas Bloom and Bradford Hunt, while topics included popular myths commonly ascribed to post-war public housing. The last day of the conference included tours of four New York

City Housing Authority (NYCHA) projects, guided by Nicholas Bloom. It was an invaluable experience and complemented the issues Bloom covers in his 2008 book, *Public Housing that Worked*.

Structure of the Thesis

Beginning with a definition of key terminology, Chapter 1 provides a brief history of public housing in England and North America. Focusing on the post-war decades, it describes the policies and programs put in place to increase the supply of affordable housing from the late 1940s to the mid-‘70s, when construction was discontinued for various reasons. It ends with a description of current public and social housing providers in Ottawa and an explanation of how access to subsidized units is managed.

Under the general rubric of the “demise” of social housing, Chapter 2 looks at issues related to the performance of government-built housing in the post-war decades. Among the issues at play was the form this housing took, the changing profile of the demographic it was expected to accommodate, and the terms of reference under which government-sponsored housing – especially in the US – was forced to operate. Chapter 3 focuses on the redevelopment (option) of post-war housing complexes,

examining case studies from the US, England and Canada. It identifies creative ways that municipal housing authorities have leveraged the value of their land holdings, working with private-sector partners to create mixed-demographic communities.

Transitioning to the design phase of the thesis, Chapter 4 introduces the Ottawa Community Housing Corporation's Russell Heights complex and Russell Manor, and provides a general description of the neighborhood in which it is located. Included is an analysis of census data, as well as information on zoning and residential density, unit types and population dynamics. These data validate the selection of the area as a candidate for redevelopment. Finally, Chapter 5 describes the design and proposed process for redeveloping the site, with the goal of transforming a relatively low-density and isolated enclave of public housing into a more socially sustainable, better-integrated, mixed-demographic community. The demonstration plan addresses issues such as land acquisition, phasing, site and building design.

Chapter 1 – It Was Built

Introduction

To understand the challenges facing Canada's aging public housing stock, it is important to review what was produced and the programs and policies under which it was realized and, in turn, why the construction stopped. Beginning with an explanation of terminology, Chapter 1 will provide an overview of approaches to the provision of public housing in the United States and England: how it came to be and the forms it took. The focus will be on the post-war period, i.e., from the late 1940s to the 1970s when the construction of government-sponsored housing all but ceased. Turning to Canada, what was produced will be examined to better understand the current state of both the housing stock and the communities that occupy them.

Terms and Terminology

For the purposes of clarity and precision, it is important to define and distinguish between terms that are frequently used, but rarely understood. Housing that is made available at below-market rates may be referred to as "affordable," "social," or

“public” housing. Although these terms are used interchangeably, they carry different connotations.

The Canadian Mortgage and Housing Corporation (CMHC) categorizes affordability as a percentage of household income; housing must cost “... less than 30% of before-tax income.” For renters, housing costs include “rent and payments for electricity, fuel, water and other municipal services,” while, for owners, expenses comprise “mortgage payments (principal and interest), property taxes, and any condominium fees, along with payments for electricity, fuel, water and other municipal services.”¹

Low-income households (those that fall below the low income cut-offs calculated by Statistics Canada) face the greatest challenge with respect to affordability, particularly households with children, whose space requirements are substantial and who benefit by living close to the ground. The formula used by Statistics Canada to determine the low-income cut-off is dynamic. It includes, among other things, household make-up and is re-assessed annually. The term *affordable housing*, then, is generally applied to housing that has been made available to those who would have otherwise not been able to afford it – typically through some form of subsidy. Such housing can be owned and/or operated by public authorities, limited-dividend corporations or by not-for-

profit entities.

As a subset of affordable housing, *public housing* is defined as “housing owned by a government or government agency...”² Most public housing is offered on the basis of “rent geared to income,” (RGI) where rent is calculated as 25 to 30% of household income and is subsidized by a government agency.

The third term, *social housing*, is defined by the Ontario Non-Profit Housing Association (ONPHA) as “...either non-profit rental or co-operative housing funded by a legally prescribed government program (although some social housing providers are now building housing with no government funding).”³ Funding to non-governmental housing providers can be both direct (e.g., grants or low-interest loans) and indirect (e.g., tax forgiveness for a period of time).

A General History and Approaches to Public Housing (US and UK)

Inspired by demonstration housing sponsored by philanthropic societies around the time of England’s Great Exhibition, Louis-Napoleon built some public housing in France as early as 1851. Government-sponsored housing appeared in Great Britain

as early as 1865, when the City of London erected the Corporation Buildings to rehouse slum dwellers displaced by the extension of Farringdon Road. By the late 19th century “market failure” was a generally accepted concept, namely that for-profit housing providers were likely unable to erect housing that was affordable to some 15% to 20% of households. Affordability was a particular challenge in cities where high land values and excess demand pushed up the costs. As low-income families were especially vulnerable to the effects of overcrowding, reformers took up cause of urban housing, especially as it affected the wellbeing of children. Although limited-dividend corporations – a number of which were founded by prominent philanthropists – attempted to address the issue, demand greatly outpaced supply in industrialized cities. Through a series of federal laws, municipal councils were required to compensate for what private and not-for-profit builders were unable to provide. Great Britain was the first country to formalize a comprehensive system of public housing. Council housing, as it has come to be known, was firmly in place by 1900.

Public housing first appeared in North America during the Great Depression when Roosevelt’s Public Works Administration added housing to its inventory of make-work projects. Ongoing federal funding was formalized in 1937 with the passage of

the Wagner-Steagall Act, which funded municipal housing authorities to acquire land, clear it (as necessary) and construct housing. In return, local authorities were required to maintain and manage this housing on the basis of rental revenue – with any excess being returned to the federal government. This housing was envisioned as a “hand-up” (as opposed to a “hand-out”) for temporarily disadvantaged, two parent households with children – of which there was a surplus during the Great Depression. High demand for public housing enabled housing authorities to screen and carefully select tenants to assure the economic and social stability of their complexes. It was by no means housing for the very poor, a socio-economic class often overlooked especially as the American people would rather see public funds spent on hard working and tax paying American families than offer hand-outs for those unwilling or unable to contribute to the country.

Although suspended during WWII (when funds were redirected to war-worker housing), federal funding for public housing was renewed under the Housing Act of 1949 (the Wagner-Ellender-Taft Act). Title 3 of this act authorized construction of 810,000 housing units over a six-year period, though only 200,000 units had been built by 1959, but construction picked up in the 1960s.⁴ By 1970, some 1.3 million

units of public housing had been constructed under the 1937 and 1949 Acts.⁵

With the Housing Act of 1949, and the federal government agreeing to cover acquisition costs and land clearance, politicians strongly advocated that public housing be constructed on sites targeted for slum clearance (Figure 1). While the redevelopment of such sites was crucial to the reinvention and re-branding of cities after the war, and often coordinated around large infrastructure projects, the cost and logistics of doing so went well beyond what municipalities could manage on their own. Arguably then, the purpose of Title 3 was to help cities undertake what amounted to urban renewal projects – for which affordable housing was as much a pretext as the intended outcome.

The push by local politicians towards expensive, so-called ‘blighted’ urban sites, however, put housing authorities in a difficult position. Tighter funding formulas established by the federal Public Housing Authority in 1950 made it difficult to construct anything other than high-rise housing on urban clearance sites.

“But the most crucial PHA change involved... density requirements. The new standard of fifty units per acre for high-cost slum land implicitly mandated the use of multi-story designs. Decently spaced row houses or even walk-ups could not be accommodated at this density, leaving local housing authorities

Figure 1. 1962 Robert Taylor Homes, Chicago. The largest public housing project at the time on the United States boasted 4,415 units

in major cities no choice but to build high-rises on their slum sites.”⁶

During a period when cities were keen to re-brand themselves, high-rise public housing complexes were offered up as symbols of a brave new future. In the post-war decades cities suffered significant deindustrialization and decentralization. Both the number and the economic profile of urban residents continued to drop, reinforcing urban/suburban class separations with which many cities continue to struggle.

Whatever their symbolic value, high-rises were considered less than optimal by many housing advocates – especially as housing for needy families. By the 1960s government-sponsored high-rise housing came under increasing fire for the deteriorating quality of life it supported, and construction of such housing all but ceased in the 1970s. President Nixon, in fact, put a moratorium on the building of public housing in 1973. By then the cracks in public housing stock had turned to gaping fissures. In the US the problematic state of affairs was epitomized by the specular failure of St. Louis’s Pruitt-Igoe complex, which was demolished to great aplomb in 1972. Funding for the construction of public housing was withdrawn two years later, replaced by Section 8 of the 1974 *Housing and Community Development Act*. In place of housing built and

managed by local housing authorities, low-income households were offered vouchers or rent-adjusted units in private-sector rental housing.

While prior to WWII most council estates in England consisted of terrace housing on suburban sites, the focus shifted to high-rise housing after WWII. Given the scarcity of resources in Europe, governments played a more direct role in the construction of housing than they did in North America. Not only did municipal authorities build a greater proportion of housing in the post-war decades, but larger percentages of the population lived in government-sponsored housing in Europe than in North America. The emphasis on high-rises reflected both the increasing influence of modernism and the logistics of replacing bomb-damaged housing in urban neighborhoods. A radical departure from the repetitive by-law terraces of the pre-war period, these new estates were comprised of blocks of flats and stacked maisonettes, arranged in superblocs incorporating large common areas. Units were typically served by exterior corridors that linked to vertical circulation and frequently connected buildings to each other. As with corresponding projects across the Atlantic, this form of housing proved unmanageable and construction was discontinued. Government agencies were unable to sustain the construction of new buildings as existing estates began to crumble.

Factors that contributed to steadily decreasing living conditions in these estates will be discussed in greater detail in the next chapter.

Public Housing in Canada

“Not a year goes by without someone making the claim that Canada is in a housing crisis.”⁷

The first government-sponsored housing in Canada was war-worker housing undertaken during WWII. Approximately 50,000 units of housing, divided between small apartment buildings and “modest one-and-a-half story bungalows with steeply pitched roofs,”⁸ were constructed by a crown corporation called *War-time Housing Enterprises Ltd* (Figure 2). Virtually all of this housing was sold off immediately following the war. While post-war housing policy strongly favored private-sector initiatives, the federal government encouraged a consortium of life insurance companies to form a limited-dividend corporation for the purposes of increasing the supply of rental housing. This organization, called *Housing Enterprises Ltd.*, embarked on a substantial program of construction in cities across Canada in the late 1940s.

Figure 2. Typical *War-time Housing*

The first example of *public housing* in Canada, namely housing constructed and managed by the government, appeared just after the war. Although on the books since the early 1930s (the so-called *Bruce Report* singled out what would become Regent Park for redevelopment in 1934), what's known as Regent Park North was formally initiated by the City of Toronto in 1947. Strongly influenced by Public Works Administration housing in the US, the development comprised some 1300 units on a slum clearance site. Units were organized into four-storey walk-ups and six-storey elevator buildings on a large, superblock site directly adjacent to Toronto's central business district.

Federal funding for low-income housing appeared with amendments to Canada's *National Housing Act* in 1949. These amendments authorized federal/provincial partnerships to build and manage public housing. The federal government covered 75% of capital and operating costs while the remaining 25% – plus responsibility for management – fell to the provinces. Federal funding was administered by the Canadian Mortgage and Housing Corporation, which established an architectural division in the late 1950s to help prepare plans for large projects. While several notable complexes were undertaken, including Toronto's Regent Park South, only

12,000 units had been constructed under this program by the late '50s (Figure 3). This was less than 1% of the total units built in Canada during the decade and less than a quarter of what was constructed by Wartime Housing Enterprises between 1941 and 1945.⁹ Lack of uptake of federal funds for public housing was attributed, in part, to the fact that the 1949 Act had removed any role for the municipality.

While amendments to the *National Housing Act* in 1964 made federal involvement even more favorable to the provinces, it failed to address the fundamentally top-down approach that made municipalities suspicious of federal programs. The *Ontario Housing Corporation* was established in 1964 to tackle this issue. Acting entirely on the request of local authorities, the corporation began acquiring small buildings and encouraging new construction. The approach had a major impact on other provinces as well: in the following decade some 115,000 new public housing units appeared in Canada.¹⁰

The construction of public housing all but halted by 1978, by which time new public housing units numbered 164,000 and total public housing units numbered 205,000.¹¹ There was a shift in policy to encourage ownership, rather than government-sponsored

Figure 3. Regent Park South

rental, in part to spur the private housing market. Policy was put in place to support the idea of affordable ownership. The Assisted Home Ownership Program (AHOP) was created by CHMC parallel to the Assisted Rental Program (ARP).¹² Families received assistance through AHOP to purchase a new home, the amount depending on household income¹³; the lower the income, the more funding a family would receive. ARP developed incentives for private developers (first as grants and then gradually as low interest loans) to build and offer rental housing at a reasonable cost.¹⁴ In total, 161,000 AHOP and 123,000 ARP units were built in the 1970s.¹⁵ And in 1974 CMHC created the Residential Rehabilitation Assistance Program (RRAP) to “... repair substandard homes to a minimum level of health and safety and to improve the accessibility of housing for disabled persons.”¹⁶ With these policies in place, the building of publicly funded housing projects petered out.

Given the period in which most public housing was constructed in Canada, the majority is between 35 and 50 years old. In addition to longstanding issues related to its form (discussed in the following chapter) then, this housing stock faces severe challenges with respect to the need for life-cycle reinvestment. Given the long waiting lists for RGI housing, it seems logical that every effort should be made to preserve

the existing stock. At the same time it makes little sense to reinvest in housing that is flawed from both an architectural and urban design perspective.

Affordable Housing in Ottawa

Currently, public housing in Canada is owned and managed by municipalities. In addition to ongoing changes to funding, management and the demographic profile of tenants, municipal authorities such as Ottawa Community Housing Corporation continue to grapple with issues related to the form that post-war housing took and its integration (or lack thereof) with adjacent neighborhoods. More recently these challenges have been compounded by the need for extensive life-cycle reinvestment.

Ottawa Community Housing Corporation (OCH), the primary provider of affordable housing in Ottawa was created in 2002 with the amalgamation of *City Living* and *Ottawa Housing Corporation* (Figure 4).¹⁷ It was created to accommodate the housing that was passed from the provincial government in 2001 (a Canada-wide phenomenon with the exception of a few provinces), leaving the municipality to handle management and maintenance of all public housing in Ottawa. Although a stand-alone entity with its own staff and board of directors, the City of Ottawa

Figure 4. OCH holdings, over 100 units, in Ottawa, ON. Pictured below is Russell Gardens, a collection of mid-rise buildings, 335 units

is the sole shareholder in Ottawa Community Housing Corporation. Its portfolio includes 14,783 homes for persons from various demographic groups.¹⁸ OCH owns and manages a wide variety of unit types, distributed across the city.

The second largest provider of affordable housing in Ottawa is *Centretown Citizens Ottawa Corporation* (CCOC), which owns and manages 1,500 units.¹⁹ It is a not-for-profit organization that offers rent-gear-to-income units that are subsidized provincially (though funds are dispersed by the City of Ottawa). CCOC is, at the moment, constructing new units with funding in the form of grants and forgiveness of fees charged by the city. Although its inventory of units is smaller than that of Ottawa Community Housing, CCOC is constructing more housing. For better or worse, OCH has no mandate to do so. Herein lays the dilemma of OCH. While the demand for affordable housing continues to rise, funding for new housing is unavailable and an increasing percentage of its budget goes to maintaining its decaying housing stock. So, while CCOC is maintaining and building new housing stock, OCH is stuck trying to maintain aging buildings, often found in poorly designed clusters, with no expansion of its portfolio in sight, or a viable solution to the social issues it faces.

Applications for OCH and other not-for-profit housing are managed through the Social Housing Registry of Ottawa (commonly known as The Registry). Operating as a not-for-profit agency under the Ontario Housing Services Act, The Registry coordinates access to all rent-geared-to-income (RGI) housing in Ottawa. Eligibility is based on gross household income and a variety of other factors:

“All members of the household must be a Canadian citizen, Landed Immigrant, Refugee or Refugee Claimant; no member of the household is currently under a deportation, departure or exclusion order to leave Canada; at least 1 person in your household must be 16 years of age and older; no member of the household owes money to any social housing provider; no member of the household has been convicted of an offence in relation to rent-geared-to-income assistance or found by a court of law or the Landlord and Tenant Board to have misrepresented their income for the purpose of rent-geared-to-income assistance; if you own a house, you must agree to sell it within 180 days of being housed; you must be able to live independently, and make your own arrangements for support services.”²⁰

Qualified households contribute 30% of their gross monthly income to rent.²¹ As RGI is calculated as a percentage, rent changes with household income. Priority on the waiting list for affordable housing is set by the provincial government, giving housing providers no control over tenant selection, which is typical of an agency eager to deter allegations of discrimination.

Like OCH, municipal agencies across Canada have been struggling to keep up with the demand for affordable housing. The housing under their control is deteriorating due to age and use. Most projects are over 40 years old and in need of substantial capital investment that would still fail to address larger general design issues that may influence the overall success of the complexes. Many projects are often physically isolated from surrounding neighborhoods and carry a stigma due to the socio-economic status of residents. Under the current terms of reference, municipal housing authorities are unable to address these problems. A change of mandate is needed to effect meaningful change.

Conclusion

Similar approaches to the design of public housing emerged following WWII in the UK, the US and Canada. Under the guise of urban renewal, slums and bombed-out housing gave way to high-rise complexes organized into superblocks, symbolizing the modern city. It was the ultimate (though not universal) social failure of these complexes and the cost of maintenance that finally brought this form of building to a halt. Attention shifted to vouchers in the US and affordable ownership in Canada,

both coupled with incentives to entice the private sector to build more rental housing, and with a focus on medium to low density developments. The UK turned to a “hand-over” approach to offset their initial costs.

Much of the government-sponsored housing constructed between the 1940s and the 1970s is still standing and is reaching the end of its life cycle. In addition to fundamental design flaws at the level of the architecture and urban design (towers in the park), this housing faces challenges related to management and demographic imbalances. Chapter 2 will explore theories as to why this housing failed, examining a variety of factors.

Notes

1. “Definitions of Variables,” CMHC, accessed January 5, 2013, http://cmhc.beyond2020.com/HiCOCDefinitions_EN.html#_Affordable_dwelling_1.
2. John Sewell, *Houses and Homes: Housing for Canadians* (Toronto: James Lorimer & Company Ltd. Publishers, 1994), 1.
3. “Glossary of Terms and Acronyms,” ONPHA, accessed May 18, 2013, <http://onpha.on.ca/AM/Template.cfm?Section=Glossary>.
4. N. Krumholz, “The Reluctant Hand: Privatization of Public Housing in the US,” in *The Affordable Housing Reader*, ed. R Tighe and E. Meuller. (Routledge, 2013), 45.
5. Krumholz, “The Reluctant Hand,” 47.
6. D. Bradford Hunt, *Blueprint for Disaster: The Unraveling of Chicago Public Housing* (Chicago: The University of Chicago Press 2009), 131.
7. Sewell, *Houses and Homes*, 1.
8. Ibid., 132.
9. Ibid., 134.

10. Ibid., 135.
11. Ibid., 137.
12. "Sixty Years of Housing Progress in Canada" *Canadian Housing Observer*, 2006, accessed May 18, 2013, http://www.cmhc-schl.gc.ca/en/corp/about/cahoob/upload/sixty_years_2006.pdf.
13. Ibid.
14. Ibid.
15. Ibid.
16. "History of CMHC" CMHC, accessed January 5, 2013, <http://www.cmhc-schl.gc.ca/en/corp/about/hi/index.cfm>.
17. "About OCH" OCH, accessed January 5, 2013, http://www.och.ca/site/index.php?option=com_content&view=article&id=17&Itemid=32&lang=en.
18. Ibid.
19. "About CCOC" CCOC, accessed January 5, 2013, <http://cchohousing.org/index.php/about-us/>.
20. "What is the Registry?" The Registry, accessed January 5, 2013, http://housingregistry.ca/site/index.php?option=com_content&task=view&id=12&Itemid=26&lang=en.
21. "Eligibility" The Registry, accessed January 5, 2013, http://housingregistry.ca/site/index.php?option=com_content&task=view&id=14&Itemid=28.

Chapter 2 – It Failed

Introduction

Public housing in the US, UK and Canada followed a similar trajectory, which can be divided into three general phases. The period from the late '40s to the mid-1970s was characterized by intense building (projects and estates), fueled by enthusiasm for modernist urban planning and by shortages of affordable housing. While very little housing was constructed in the second period, from the mid-1970s to the mid-'90s, the majority of housing built in the previous decades remained in operation and was subject to physical and social decay. Finally, from the mid-1990s to the present, housing authorities have sought out creative ways to redevelop the complexes they control, as an alternative to demolition. Interest in redevelopment has been largely driven by the need for costly life-cycle reinvestment as the post-war public housing stock ages.

While strategies for redevelopment take various forms, they frequently attempt to capitalize on land values. This chapter will explore the first two phases – the period from the late 1940s to the mid-1990s – focusing on the reasons for the failure of

government-sponsored housing and the search for new approaches. Criticisms fall into three general categories, namely form/design, demographics, and management. The redevelopment of public housing will be explored in Chapter 3 through a review of case studies, followed by a demonstration plan for a redevelopment of an OCH housing complex in Ottawa.

The Three Culprits

Criticisms of post-war public housing appeared almost as soon as the first ensembles were constructed – primarily in relation to the application of modernist, “tower in the park” planning. European countries struggled to rebuild after the war, addressing both accumulated shortages, the ongoing decay of the existing housing stock, and the loss of housing to bombing. In the US, urban reforms and politicians were eager to use funding for government-sponsored housing to sweep away the traditional lot and block structure of the inherited city. Architects on both sides of the Atlantic envisioned a new form of city, a brave, new post-war world. Historian Hillary Ballon observed that “Urbanists and housing reformers as varied as Frederic Law Olmstead, Jacob Riis, Lewis Mumford, and Le Corbusier agreed on one thing. The traditional

pattern of street orientation, gridiron urbanism created unhealthy living conditions...
[and] deprived people of basic human needs: open space, light, air.”¹

The first category of criticism to be explored, then, relates to the form that post-war public housing took. At the scale of the unit, building, and neighborhood plan, critics have pointed to design as the reason for the epic failure of many housing complexes.

Form/Design, or, Blame the Architect

Beginning with a discussion of the use of the tower as a means of balancing density with the desire for open space, we will identify some common design characteristics of larger projects, including the isolation caused by inwardly focused (as opposed to street-oriented) planning. We will explore the impact of modernist planning on families and on behavior.

Urban Density, Towers and Families

Amidst virulent debate about the suitability of multi-unit housing for families with children, planners in London were forced to capitulate to the radical approaches being championed by the younger generation of modernists. For logistical and economic

reasons, high-rise housing proved to be the most efficient and economical short-term solution to housing shortages. This was especially true in war-ravaged neighborhoods such as London's Bermondsey, where 75% of the units had been damaged by bombing. Although seasoned planners like Patrick Abercrombie advocated townhouses over flats, two-thirds to three-quarters of the neighborhood's population would have had to be displaced to accommodate private dwellings (e.g., terrace housing). While initially compromising on a strategy of half houses and half flats at a density of 100 units to the net acre, London's statutory development plan of 1951 called for a density of 136 units per acre in the city's East End. This placed a third of the households in houses and some 60% in eight- and ten-storey flats.²

North American "housers" had long argued that deteriorating urban neighborhoods must be replaced with modern government-sponsored housing. In a 1945 speech, Chicago Housing Authority director Elizabeth Wood argued that planning for the rebuilding of the city should be "bold and comprehensive" rather than being limited to a "series of small projects, islands in a wilderness of slums beaten down by smoke, noise and fumes." Wood asserted that "to abandon [the] large-scale planning that lies behind projects is to abandon one of the most important innovations in city

development.” She embraced the modernist superblock in service of a “new kind of urban neighborhood” capable of competing “with the suburbs for social desirability, especially for families with children.”³ In Wood’s vision, low- and middle-income families alike would reside in housing towers set into vast swaths of parkland. At the same time, urban politicians were keen to capitalize on the severe post-war housing shortages to attract the middle class residents back to the city. To this end there was widespread consensus that the post-war city should resemble as little as possible its pre-war precursor. Where urban reform was concerned, no strategy was too audacious.

In a 1948 letter to Wood, however, housing advocate Catherine Bauer expressed reservations about the modernist approaches to public housing. “I am more prejudiced than ever against the romantic-aesthetic-Le Corbusier-ism that dominates all our brightest young planners and architects... It is all very well that the intellectuals do not personally like to look at the ‘sprawl’ made by row-houses, but if dwellings at ground level just are the best homes for families with small children, then it’s up to the architects to find a way to design them so they won’t be dreary.”⁴ By 1952, having overseen the construction of the high-rise Dearborn Houses for the Chicago Housing Authority, Wood reversed her position on “tower-in-the-park” planning.

In an article on modernist housing in *Architectural Forum*, Wood advocated the row house as “simple and natural. The indoor-outdoor activity takes place close to where the mother is at work. The child can keep in touch with her. She can hear him if he cries or gets into a fight.” By contrast in high-rises the “playgrounds are carefully arranged at some distance, vertical as well as horizontal, from the family super table” compromising the parents’ ability to monitor and interact with their children (Figure 5). And while Wood acknowledged attempts – as Yamasaki would later do for Pruitt-Igoe – to recreate the benefits of low-rises by creating communal play spaces on upper-level galleries of towers, she described them as a “poor substitute” for the grade-accessible yards associated with townhouses (Figure 6).⁵

In an article in *Progressive Architecture* in 1952, Catherine Bauer went public with her concerns about the suitability of modernist high-rises for low-income families. Her primary objection was that families did not want to live in these buildings. Reacting to the dismissive tone the editors took to Elizabeth Wood’s comments in *Architectural Forum*, Bauer raged that “When every survey ever made in the United States to my knowledge, from the crudest market study to the most refined piece of intensive field research, seems to indicate an overwhelming preference for ground-level living, the

Figure 5. Robert Taylor Homes street view (top)

Figure 6. Robert Taylor Homes, children playing on elevated walkway (below)

fact can hardly be tossed aside with contempt...” Bauer described high-rises as rigid and “impersonal,” contending that they failed to provide the necessary privacy and personal freedoms that families craved, notably in the form of an enclosed back yard. While Bauer agreed that high-rises could work for certain groups, notably the rich, the old and singles, in her opinion the tower was the “least suitable” form of housing for those on “whom we are now foisting it wholesale: families with very low incomes, from slums...”⁶

Design and Social Behaviour

The impact of design on the social health of communities has been explored by a number of researchers, including Alice Coleman. A key member of the Land Use Research Unit at King’s College, University of London, Coleman conducted surveys on council housing around the UK. In her 1985 book, *Utopia on Trial*, she presents a careful and scientific method of measuring physical evidence of “types of malaise,” including litter, graffiti, excrement, and the instance of children placed in care of social services due to the breakdown of the household.⁷ The occurrence of each was mapped in relation to fifteen design variables, grouped under the following

categories: building/project size, building/site circulation, entrance characteristics, and features of the grounds.⁸ Coleman demonstrated a strong correlation between the design of public housing and so-called ‘anti-social behavior.’ The top five predictors were: 1) the number of dwellings per building entrance, 2) number of dwellings per block, 3) number of storeys per building, 4) the presence and number of overhead walkways (Figure 7), and 5) the complexity of the overall organization of buildings and grounds.⁹ The incidence of vandalism and other forms of anti-social behavior rose in direct relation to each of these factors. Taller buildings served by a single entrance, for example, were especially problematic, as were ensembles of buildings, the complexity of whose organization hindered natural tenant surveillance of public spaces and common areas (Figure 8).

Similar observations had been made a decade earlier by Oscar Newman. Comparing adjacent New York City housing projects in his book *Defensible Space*, Newman demonstrated the impact of design on the incidence of crime. Moreover, the characteristics most likely to contribute to criminal behavior were relatively common to post-war complexes of government-sponsored housing. Newman described these as follows:

Figure 7. Robin Hood Gardens (top)

Figure 6. Trellick Tower, a 31 storey tower with disconnected circulation tower (below)

“These projects are usually very large, accommodating over a thousand families, and consist of high-rise apartment towers over seven stories in height. The sites are usually an assembly of what was previously four to six separate city blocks, amalgamated into one giant superblock, closed to city traffic. The buildings are positioned on the site in a rather free compositional fashion. The grounds are designed as one continuous space, moving freely among the buildings and open to the surrounding streets. In the detailed site design, there is seldom any attempt at differentiating the grounds so as to make portions relate to a particular building or cluster of buildings (Figure9).”¹⁰

Although Coleman’s work is centered on council housing in Great Britain and Newman’s on public housing in New York City, both their findings support the impact of design on the behavior of residents. Summarizing Coleman’s research, John Sewell notes that “the substantial influences on criminal and anti-social behavior, on feelings of personal security, and on the ability of residents to ‘self-police’ the places where they live have more to do with the project’s design than with the often-blamed social characteristics of the inhabitants.”¹¹

Isolation

While deployed most vigorously to protect children from cars and strangers, superblock planning tended to isolate and segregate the poor. Ghettoization and

Figure 9. Brownsville and Van Dyke Houses in Brooklyn, two projects Newman compares in *Defensible Space*

containment were of particular concern in American cities where residents of public housing were overwhelmingly black. Moreover, as Sewell notes, housing complexes paid a substantial cost for operating ‘off grid,’ so to speak. The lack of public roads, for example, placed the financial and logistical burden of maintaining infrastructure on the housing authority, including expenses like street cleaning, snow plowing and garbage collection.¹² Many authorities were even responsible for security, as municipal police did not patrol the area and were not permitted on the grounds unless a crime were in progress.¹³ The absence of public rights of way combined with the fact that few buildings faced onto streets also made navigation of the communities difficult, complicating, among other things, the delivery of mail.¹⁴ Finally, as Elizabeth Wood pointed out, green space in superblock ensembles tended to be ill-defined, underused and poorly maintained.¹⁵ As Jane Jacobs observed, land that belongs to everyone belongs to no one – and frequently becomes the object of turf wars.

“Wherever the rebuilt city rises, the barbaric concept of Turf must follow, because the rebuilt city has junked a basic function of the city street and with it, necessarily, the freedom of the city.”¹⁶

Eight years after Wood and Bauer’s public outcries, with modernist urban renewal

projects in full swing, Jane Jacobs inveighed *both* against the ensembles constructed by housing authorities *and*, more generally, the idea that urban housing for any demographic should be constructed according to the ‘anti-urban’ design principles associated with modernism. Regarding the former, Jacobs questioned the premise that low-income families should be corralled into ensembles, whether ‘estates,’ as in the UK, or ‘projects,’ as aggregations of public housing were called in the US. Jacobs noted that:

“Even if the Utopians had had schemes that made sense socially in cities, it is wrong to set one part of the population, segregated by income, apart in its own neighborhoods with its own different scheme of a community. Separate but equal makes nothing but trouble in a society where people are not taught that caste is a part of the divine order. ...”¹⁷

Jacobs’ primary concern, however, was with planning principles that favored superblocks over the traditional, finer-grained urbanism in which buildings addressed streets (Figure 10). In this respect she lumped projects by Clarence Stein and Henry Wright – with whom Catherine Bauer had long been allied and who preferred low-rises to high-rises – together with Le Corbusier. Jacobs noted that:

Figure 10. Dearborn Homes, Chicago

“Model housing schemes by Stein and Wright built mainly in suburban settings or at the fringes of cities, together with the writings and the diagrams, sketches and photographs presented by Mumford and Bauer, demonstrated and popularized ideas such as these, which are now taken for granted in orthodox planning: The street is bad as an environment for humans; houses should be turned away from it and faced inward, toward sheltered greens. Frequent streets are wasteful, of advantage only to real estate speculators who measure value by the front foot. The basic unit of city design is not the street, but the block and more particularly the super-block. Commerce should be segregated from residences and greens. A neighborhood’s demand for goods should be calculated “scientifically,” and this much and no more commercial space allocated. The presence of many other people is, at best, a necessary evil, and good city planning must aim for at least an illusion of isolation and suburban privacy. The Decentrists also pounded in [Ebenezer] Howard’s premises that the planned community must be islanded off as a self-contained unit, that it must resist future change, and that every significant detail must be controlled by the planners from the start then stuck to. In short, good planning was project planning.”¹⁸

Demographics

Although by no means dismissive of the impact of design, Bradford Hunt argues that towers and superblocks were not the greatest challenge facing post-war public housing. The progressive drop in the economic profiles of tenants produced a

significant change in the demographic mix – from the ‘temporarily disadvantaged’ to the chronically poor. While rent was originally capped at 30% of the tenant’s income, it was revised downward to 25% in the late 60s.¹⁹ Hunt’s detailed study of Chicago Housing Authority (CHA) housing demonstrated that the ratio of children to adults rose exponentially over the course of the 1960s (Figure 11).²⁰ He argues that the ratio of minors to adults was the single most important predictor of anti-social behavior in CHA housing. Together, the form of the housing and the profile of the tenants produced a perfect storm; high-rises and superblock planning became increasingly problematic with the rise in the percentage of children and single-family households.

Despite these demographic changes and ongoing protests by experts like Bauer and Wood, housing authorities continued to erect high-rises for low-income families on slum clearance sites. Through much of the 1950s there was a conspicuous lack of both statistical data and funding to support low-rise alternatives. Hunt notes that by 1959 80% of the high-rises built by the CHA included apartments with three, four and five bedrooms. Large families tipped the balance in favor of minors, precipitating a breakdown of “collective efficacy,” what sociologists define as “the ability of neighbors to work together and in cooperation with the police to maintain social order and limit

Figure 11. Henry Horner Homes, Chicago. Women organizing a large group of children into the elevator

crime.”²¹ Favoring a ratio of six adults to each child under the age of fifteen, Coleman, too believed that population imbalances exacerbated flaws in the design of public housing.²² Indeed, Chicago was not the only city to experience drastic demographic shifts in its public housing; some attribute the demise of Pruitt-Igoe in St. Louis to the surfeit of youth.²³ The imbalance was furthered by policies that denied housing subsidies to two-parent households in which the head of household was employed,²⁴ a complete reversal of earlier policies that favored two parent families, one of which was employed.

Along with the rise in the percentage of children, the drop in the demographic profile of tenants over the course of the 1960s made matters worse. Operating costs escalated as buildings aged – especially as corners had been cut to keep construction costs within extremely tight federal guidelines. To make matters worse, the terms of reference for federally funded housing in the US required authorities to maintain and operate buildings solely on the basis of rental income; no ongoing operational subsidies were provided. Rental revenue, however, dropped precipitously as demand for public housing declined during the 1960s. Poor maintenance, in turn, further diminishing the desirability of government-sponsored housing. Since its official

introduction with the Housing Act of 1937, public housing in the US had devolved from “places of hope” to “housing of last resort” – from way stations for the temporarily disadvantaged middle-class to warehouses for the very poor.²⁵

Management

As with the 1937 Act, funds for land acquisition, clearance and construction of new housing came from the federal government. The municipal authorities, through whom these funds flowed, were then expected to manage and maintain the housing with revenue from rents. As demand for the housing dropped, the economic profile of tenants dropped and rental revenue declined. This further compromised the ability of housing authorities’ to manage and maintain their complexes.

Some historians question the demonization of towers, citing the relative success of high-rise public housing in New York City. New York is unique among North American cities inasmuch as a high percentage of families – including those receiving housing assistance – reside in high-rises. For families of modest means, then, there is less of a physical and social stigma associated with high-rise living than in other cities. In his book *Public Housing that Worked*, Nicholas Bloom attributes the relative success

Figure 12. Harlem River Houses, NYC. Maintenance staff at work gathering fallen leaves

of New York City Housing Authority (NYCHA) housing to the authority's strong maintenance and management programs (Figure 12). NYCHA's portfolio includes approximately 178,000 apartments and nearly 13,000 employees. Many of the city's large housing projects are comprised of high-rises and many of these – like the Brownsville and Van Dyck houses that were the subject of Oscar Newman's studies – are clustered together in lower-income neighborhoods.²⁶ The continued ability of NYCHA to maintain the maintenance standards of such complexes comes from its firm funding policies and commitment to quality of life in its housing projects. New York City is also unique in that there was no rapid decentralization in the 1960s and '70s, as was the case in many North American cities. With steady demand for public housing, vacancy rates were kept at a minimum. NYCHA also has a solid track record of repairing damages and failures in mechanical systems in a timely manner (Figures 13 & 14). For example, there are over 3300 working elevators in their portfolio (many of which have been replaced in the last 10 years) and are typically repaired within five hours of reported breakdown.²⁷ This is notably different than in Chicago, where residents of CHA housing were frequently held hostage by unions while elevators – crucial to the operation of high-rises – remained out of service for long periods. A

Figures 13 & 14. Polo Grounds, NYC. Maintenance staff visible cleaning the grounds and fixing the front door lock

spot check in 1982 revealed that more than 50% of elevators in CHA buildings were not functioning.²⁸ NYCHA has developed an efficient complaint to maintenance system that other housing authorities have been unable to provide. Although high-rise housing (as an acceptable alternative for low-income families) in New York City may be the exception that proves the rule, there is something to be learned from the example.

The Road Ahead

Although they strongly color our perception, it should be acknowledged that the issues raised regarding high-rise developments are in no way typical of all public housing. By no means were all low-income families pushed into high-rises nor can all social problems associated with poverty be blamed on the form of government-sponsored housing. In 1998, Secretary of the US Department of Urban Development (HUD) Andrew Cuomo bemoaned the tendency of the American public to throw out the baby with the bathwater:

“Now we’ve been fighting to get support for public housing – and the American people haven’t been with us because they have that picture in their mind about public housing – the great high rise that you built up to the sky, and then it sank so low that it sucked in the surrounding neighborhoods. That

is not the story of public housing, and it has been a myth and mis-perception that has gone on for too long, and has precluded us from getting the kind of support that we need.”²⁹

That said much of government-sponsored housing constructed in the post-war decades was realized under the aegis of modernist planning principles. As a result, much of it is organized in superblocks in which high-rises figure prominently. Although public authorities built very little after 1974, projects constructed between 1930 and the 1970s remained in operation until quite recently; in Canada, much of it is still in use. In addition to ongoing challenges related to design and demographics, this housing stock faces severe challenges with respect to life-cycle reinvestment. While it is undeniable that steps must be taken to assure an adequate supply of affordable housing, it is crucial that we understand and respond to past failures when making decisions about the future of the aging public housing stock.

In Canada

While fewer in number than the US and the UK, Canada did construct a number of high-rise public housing projects “...less than 4 percent of the [total public housing]

projects contain 200 or more units...”³⁰ The bulk of Canada’s public housing stock is low- or mid-rise and is often found in small groupings (90 percent of projects are under 100 units) (Figure 15).³¹ While the causes of failure as discussed above are specific to the larger projects, however, smaller scale projects are not necessarily immune. Demographic imbalances, isolation and management can be as problematic in smaller projects as larger ones. As Sewell notes, for example “... in the family projects the young are overrepresented and in the seniors’ projects the over-75s are overrepresented,” compared, of course, to the general population.³² Despite their low density, some communities remain cut off from the larger neighborhoods, both physically (with few through-roads and use of cul-de-sacs) and socially (as the stigma associated with those living in public housing was ever-present) (Figure 16).

Management of projects was passed down to municipalities from the provincial governments (most provinces at least) a decade or more ago. In the case of Ontario, municipalities were forced to act as “... authorit[ies] without authority.”³³ While given the responsibility for the “hand-me-down” housing imposed upon them, their mandate prevents them from enacting or enforcing policies that could lead to real change. Local housing authorities struggle to accommodate increasing demand for

Figure 15. Late 1940’s Benny Farm, Montreal, originally built as Veteran’s housing

Figure 16. Late 1940’s Strathcona Heights, Ottawa, originally built as Veteran’s housing

affordable housing in the midst of skyrocketing maintenance budgets for a housing portfolio that is collectively reaching the end of its life cycle. In addition, physical isolation and demographic imbalance add to social disorder.

The construction of new, market rental housing is not a popular option for many developers and as a result, the overall rental stock suffers. The current economy favors the development of condominiums over rental units. Moreover as they age, existing rental buildings are disappearing. With rental income unable to cover the need for life-cycle reinvestment, it is frequently more profitable to raze these buildings and sell off the land or to convert them to condominiums.

We are now reaching a critical time for affordable housing. While demand is higher than ever, municipalities have neither the means nor the mandate to expand their portfolios. They've been condemned to the Sisyphean practice of making superficial repairs to forty-year-old buildings. But the problems facing these projects are not merely physical. Other factors (including design, isolation, demographics and management) contribute to social challenges that housing authorities are powerless to address.

Conclusion

While design is neither the only nor necessarily the most significant factor in the widespread failure of post-war public housing, design matters. Responsible design decisions must be made at the level of the unit, the building, the neighborhood and the city. The design and planning professions must step back and consider the legacy of the post-war decades to ensure that affordable housing is developed (and redeveloped) in a socially and economically sustainable fashion. The following chapter will examine three projects that have explored public-private partnerships in the regeneration and redevelopment of large-scale post-war public housing complexes – with varying (but positive) results.

Notes

1. Hilary Ballon and Kenneth T. Jackson ed., *Robert Moses and the Modern City: The Transformation of New York* (New York: W.W. Norton & Co., 2007), 96-97.
2. Peter Geoffrey Hall, *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century* (Oxford, UK: Cambridge, Mass., USA: Blackwell Publishers, 1996), 236.
3. Devereux Bowly Jr., *The Poorhouse: Subsidized Housing in Chicago* (Illinois: Southern Illinois University Press, 1978), 55-75.
4. D. Bradford Hunt, *Blueprint for Disaster: The Unraveling of Chicago Public Housing* (Chicago: The University of Chicago Press 2009), 131-132.
5. Ibid., 132.
6. Ibid., 133.
7. Alice Coleman, *Utopia on Trial: Vision and Reality in Planned Housing* (London: H.

- Shipman, 1990) 2.
8. Ibid., 33.
9. Ibid., 79-80.
10. Oscar Newman, *Defensible Space; Crime Prevention Through Urban Design* (New York: Macmillan, 1973), 22.
11. John Sewell, *Houses and Homes: Housing for Canadians* (Toronto: James Lorimer & Company Ltd. Publishers, 1994), 150.
12. Ibid., 155.
13. Ibid.
14. Ibid.
15. Ibid.
16. Jane Jacobs, *The Death and Life of Great American Cities* (New York: Random House, 1961), 50.
17. Ibid., 313.
18. Ibid., 10.
19. As part of the 1969 Brooke Amendment to the 1968 Housing Act.
20. Hunt, *Blueprint for Disaster*, 146.
21. Ibid., 145-146.
22. Sewell, *Houses and Homes*, 150.
23. *The Pruitt-Igoe Myth*, Video Recording, directed by Chad Freidrichs (Columbia, MO: Unicorn Stencil, 2011).
24. Ibid.
25. Larry Bennett et al., ed., *Where are Poor People to Live?: Transforming Public Housing Communities* (M.E. Sharpe, 2006), 41-60.
26. Nicholas Dagen Bloom, *Public Housing that Worked: New York in the Twentieth Century* (Philadelphia, Pennsylvania: University of Pennsylvania Press, 2008), 245.
27. As noted by author at The Urban History Association conference, October 25-28, 2012 during the October 27 roundtable discussion: Public Housing Myths: Beyond Victims and Villains, as stated by Nicholas Dagen Bloom.
28. Hunt, *Blueprint for Disaster*, 228.
29. Bennett, *Where are the Poor People to Live?*, 19-38.
30. Sewell, *Houses and Homes*, 138.
31. Ibid.
32. Ibid.
33. Ibid., 144.

Chapter 3 – The Redevelopment of Post-War Housing Ensembles

Introduction

Through an examination of case studies, this chapter will address the last of the three general periods of post-war public housing identified in Chapter 2. This period, from the mid-1990s to the present, has been characterized as one of redevelopment. This frequently involves the teardown of aging housing, largely in response to the significant reinvestment required by life-cycle upgrades. Although it may seem extreme, razing projects makes it possible to address design issues that renovation alone, cannot (though some strategies employ both solutions). To examine challenges and strategies associated with the redevelopment of post-war public housing, this chapter examines three examples, namely Regent Park in Toronto, Harbor Point in Boston, and the Pepys Estate in London (England). In each case design strategies were employed to revive the struggling communities. These strategies, in turn, will inform the demonstration plan that forms a part of this thesis.

Figure 17. World Map by Author (top)
Figure 18. Harbor Point, Boston (bottom left)
Figure 19. Pepys Estate, London (bottom middle)
Figure 20. Regent Park, Toronto (bottom right)

Harbor Point, Boston, MA

As an alternative to constructing and managing public housing, *Section 8* was introduced with the Housing Act of 1974. It included both vouchers and subsidized units in private-sector rental buildings. By 2000, some 1.4 million vouchers were in use by families in the US. This is significant in comparison to the 1.3 million units of federally funded public housing constructed in US between 1937 and 1970.¹ In addition to leaving the private sector to supply rental housing, the 1974 Act decoupled subsidized housing from urban renewal, which was recast in the form of Community Development Block Grants (CDBGs).² That said, redevelopment projects funded by block grants frequently include *Section 8* housing and, more recently, housing funded under the Low-Income Housing Tax Credit (LITC).³ Neighborhood renewal projects are frequently coordinated by community development corporations (CDCs).

Boston's Harbor Point employed an innovative redevelopment strategy, combining government funds with investment from the private sector. Using Harbor Point as a template, HUD's HOPE VI program appeared in the mid-1990s to address severely distressed public housing across the US. In addition to leveraging private sector

Figure 21. Harbor Point, Boston

participation, HOPE VI (described below) was heavily influenced by the ideals of the New Urbanism, whose advocates believe in

“...the restructuring of public policy and development practices to support the following principles: neighborhoods should be diverse in use and population; communities should be designed for the pedestrian and transit as well as the car; cities and towns should be shaped by physically defined and universally accessible public spaces and community institutions; urban places should be framed by architecture and landscape design that celebrate local history, climate, ecology, and building practice..”⁴

Much of central Boston sits on landfill. Columbia Point, a 351 acre spit of land once known as Dorchester Peninsula, is no exception. Originally used as a cattle pasture, the peninsula was the site of a prisoner-of-war camp during WWII. In 1954 the

Figure 22. Harbor Point after redevelopment (left)

Figure 23. Columbia Point original building layout (right)

Boston Housing Authority selected the peninsula as the site of the Columbia Point Development, a complex of 1504 housing units realized under Title 3 of the 1949 Housing Act.⁵

In keeping with the modernist aesthetic – the style of choice at the time – the BHA erected thirty buildings, each served by only one entrance and equipped with a single elevator.⁶ Like many public housing projects in the US, the Columbia Point Development was envisioned as a ‘hand up’ for temporarily disadvantaged families that were expected to find housing elsewhere when they got back on their feet.⁷ First priority was given to two-parent families with children where the head of the household was employed. In its early years, 90% of Columbia Point’s residents were white.⁸ Over time, however, the economic profile of tenants dropped and the racial balance shifted to a majority African American population. Public housing in cities across the US experienced a similar change in the profile of tenants in the 1960s and ‘70s.⁹

Residents attribute the progressive decline of Columbia Point to three factors. First, the passage of the *Civil Right Act* of 1964 compromised the BHA’s ability

to screen tenants.¹⁰ The authority was no longer able to refuse families on the basis of race, gender, past criminal offences, addiction, etc.¹¹ Secondly, tenant upkeep of buildings declined – along with tenant involvement generally – as the *Tenants' Rights Movement* of the mid-1960s pressured landlords to abandon the practice of evicting tenants that failed to maintain certain standards of repair and cleanliness.¹² Finally, overall management and maintenance declined precipitously as rental income evaporated.¹³ Poor maintenance, in turn, compromised the desirability of the housing and contributed to vacancy. With increased vacancy came an increase in crime and a further drop in both desirability and maintenance.

A number of attempts were made to address conditions at Columbia Point. In response to negative press, the complex was awarded a \$10 million renovation loan in 1978.¹⁴ The loan, made available under the Department of Housing and Urban Development's Urban Initiatives Program, was to be used to improve the living conditions of residents.¹⁵ The Columbia Point Community Task Force (CPCTF), comprised of residents, was given the responsibility of working with the BHA to determine how the money should be spent.¹⁶ As it quickly became evident that \$10 million was insufficient to accomplish anything more than cosmetic repairs, the

CPCTF took redevelopment into their own hands, hiring the firm Cocoran, Mullins, Jennison (CMJ) to create a plan for a mixed-income community.¹⁷ The area was not unattractive for development at the time; the University of Massachusetts' Harbor campus and the JFK library had recently been built on the peninsula.

The involvement of private enterprise in this process was groundbreaking in the US, suggesting a new way of dealing with the existing and degrading public housing stock. More importantly it both reduced and redefined the role of the federal government. Although private participation was in contravention of many of the restrictions built into the 1937 Housing Act, the Department of Housing and Urban Development (HUD) backed the CMJ plan and supported the community's proposal for mixed-demographic redevelopment.¹⁸ The support of HUD was invaluable and forced the BHA to cooperate by refusing to fund a simple renovation plan.¹⁹ Together, the BHA, CPCTF and the Boston Redevelopment Authority (BRA) collaborated to produce the *Columbia Point Peninsula Redevelopment Agreement* in 1979,²⁰ for which a plan was formally released in May of 1980. This document included guidelines for land use, established building requirements, regulated land acquisition and clearance, and outlined the terms of reference for the sensitive tenant relocation process. Relocation

of families was the sole responsibility of the Housing Authority; each legally occupied household was eligible for a new or newly renovated unit in the redevelopment.²¹ Relocation was to be coordinated with the phasing, construction and demolition of the housing such that each of the roughly 330 households in Columbia Point would move only once.²²

In 1983 a request for proposals was issued from which only two thoughtful plans were considered.²³ The competing development teams were merged, with CMJ as the lead developer.²⁴ Construction commenced with the full involvement of CPCTF in 1986.²⁵ The Harbor Point redevelopment was completed in 1991 and, by 1993, boasted 92% occupancy.²⁶ The development is owned and operated by Harbor Point Apartments Co.²⁷

The housing in Harbor Point, all of which is rental, includes 400 subsidized units – a net increase of thirty units over the number of occupied units prior to redevelopment. Housing subsidies for 350 of these units are provided by *Section 8* (federal), while the remaining fifty units are subsidized under Chapter 707 (State of Massachusetts).²⁸ The project was also eligible for other state and federal grants, totaling \$200 million.²⁹

The private sector offered \$75 million as equity investment.³⁰

In the end, ten buildings were retained from the original Columbia Point development – three seven-storey buildings and seven three-storey buildings – all of which were extensively renovated.³¹ The design of the overall development was based on existing Boston communities such as Dorchester, the South End and Back Bay.³² CMJ took a few important cues from these time-honored neighborhoods, namely orthogonal street patterns with through-roads, housing with individual entrances (incorporating stoops for social interaction), street parking rather than large lots, and private, ground-level yards.³³ These features were believed to encourage sociability, lowering crime and encouraging community cohesion. Tenants were able to articulate their values through the CPCTF. Community concerns generally fell under three categories: a desire that 1) subsidized units not be distinguishable from market units, 2) that units be well designed and suit the demographic for which they were intended, and 3) that careful attention be paid to security.³⁴

The design of Harbor Point was responsive to the issues raised by the designers and residents. The orthogonal street system opened up nearly all units to views of

either the waterfront or the Boston skyline. Smaller blocks and curb-side parking encouraged pedestrian activity, and individual entrances promote interaction among neighbors. The central green leading to the waterfront accommodates recreational and social functions, as well including community infrastructure such as tennis courts (Figure 24). A limited amount of commercial infrastructure was incorporated in the design of Harbor Point based on what it was believed the community could support.

While the positive reactions to Harbor Point can be attributed to many things, residents frequently cite the strong and respectful (private) management by CMJ Management Co.³⁵ It is clear that the involvement of the CPCTF, which was respected and appreciated by the developers, ensured that the concerns of Columbia Point's residents were both heard and addressed.

“While Harbor Point has won numerous awards and praise from numerous quarters, perhaps the greatest sign of success is that approximately 285 of the 330 low-income families (81.4 percent) that inhabited the complex when renovations began still reside in the new development.”³⁶

Architecturally, the project boasts waterfront access and amenities that keep the market renters interested. At the same time, equal standards are maintained for

Figure 24. Harbor Point, Boston. View of buildings facing onto the central green

subsidized and market units, which is vital to the social sustainability of a mixed-income community. This redevelopment was proposed in a time when the value and purpose of public housing was under attack following the collapse of many blighted communities in the US (Pruitt-Igoe being the most notorious example). The solutions explored in this project included both design and agency. In so doing it laid the groundwork for the HOPE VI program in the US.

HOPE VI

In the 1980s and 90s, municipal authorities across the US were saddled with public housing no longer able to sustain itself with rental income (which dropped with the demographic profile of tenants). Housing authorities were regularly turning to the Department of Housing and Development (HUD) for operational subsidies and grants for upgrades—including extremely costly life-cycle upgrades. Tenants in these complexes as well as the public at large had long turned against public housing both with respect to the form it took and the framework under which it operated. Lack of support made it difficult for HUD both to find and justify the funding to necessary to continue to operate it. Not only were the complexes increasingly expensive to

maintain, but they were, in effect, in contravention of government policies that, since the mid-1970s, had looked for ways to deconcentrate poverty and desegregate housing.

The National Commission on Severely Distressed Public Housing was established in 1989 to address these issues. Its report, submitted in 1991, concluded that only 6% or 78,000 public units in the United States qualified as “severely distressed” according to its standard of “decent, safe and sanitary housing at affordable prices.”³⁷ Following this report, HOPE VI legislation was established, coming into force in 1993. HOPE VI was founded on the principles of New Urbanism, including a shift away from superblocks to connected networks of city streets and finer-grained urbanism. HOPE VI was crafted to address: 1) the expanding stock of severely distressed housing, 2) racial segregation, and 3) the concentration of poverty. Its goals included “lowering the concentration of very poor residents and developing mixed-income communities; strengthening surrounding neighborhoods with sustainable development; involving tenants in the planning and implementation of any changes; and leveraging additional resources.”³⁸ HUD saw the investment of capital into HOPE VI projects as a solution to the steady injection of money into dated and failed projects built prior to 1970s.

To qualify for these one-time grants, communities needed to ensure the quality and social sustainability of the redevelopment (based on prescribed building practices and design regulations) and demonstrate that rental income would be sufficient to cover ongoing maintenance.

Between 1993 and 2007, HUD funded a total of 240 HOPE VI revitalization grants that included the demolition of some 91,802 housing units and has budgeted \$5.5 billion for renovation and new construction.³⁹

Pepys Estate, Lewisham, England

By the 1980s local authorities in the UK could no longer sustain the management and upkeep of estates. The Thatcher government dissolved the Greater London Authority (the former London County Council) in an attempt, among other things, to forcibly devolve the system by which housing was produced (and the degree to which the federal government was on the hook for housing in the UK). The “right to buy” policy instituted by the Thatcher Government in 1980 enabled council housing tenants to purchase units at a discounted price, a transition coined as a “hand-out” to a “hand-over” as a solution to the economic burden this housing placed on the

Figure 25. Pepys Estate, London

federal government. Proceeds from the sale of units went to the federal government to pay down the initial loans for the construction of the housing. Through this process the government effectively off-loaded a large percentage of its public housing stock. By 1986 over 1 million units had been sold to occupants.⁴⁰ Those who could afford to buy often did – which meant that the remaining renters were increasingly of a lower socioeconomic profile. Those who bought were required to stay for three or four years – after which point they could sell. In “popular” complexes (and given the inflation in real-estate values) some of them cashed out and made a windfall. Some residents who chose this option suffered inasmuch as their combined mortgage and maintenance payments were much higher than what they had previously paid in rent. After a period of years, many units were sold along to private landlords. Many of the estates that remain are in the process of regeneration, done by private developers and architects, sometimes sold to the private sector and other times passed to non-profit housing associations to manage.

Housing Associations have become increasingly important through this transition period. Despite being in existence since the late 1950s, they were much less active than local councils in the construction and management of subsidized housing.

Since the 1980s, however, Housing Associations have taken over the management of existing estates and coordinated the construction of new public housing in tandem with private sector developers. Many Council Housing estates have been turned over to Housing Associations through transfers of stock. The management of estates that have not been transferred to Housing Associations is done frequently handled by ALMOs – Arms Length Management Organizations – rather than by the Council itself.

The Pepys Estate provides a useful example of the changes to the form, ownership and management of council estates. Located in Deptford, a district in the Lewisham borough of London, the Pepys Estate was constructed by the London County Council in 1966.⁴¹ It was built on a 35-acre parcel along the Thames formerly occupied by the Royal Victoria Victualing Yard.⁴² Adjacent to the docklands, the Yard's warehouses were used by the Royal British Navy to store supplies. The site also included slaughterhouses, manufactories, breweries and pickling houses.⁴³

Having fallen into decline following the Second World War, the Yard was chosen as a site for a housing development in the 1960s. The design of the complex, similar

to many public housing projects in North America at the time, was described as a “super-modern self-contained town”.⁴⁴ The estate boasted three 24-storey residential towers with vast park spaces at their base. The complex also included ten 8-storey and two 4-storey housing blocks, for a total of 1200 units.⁴⁵ These blocks were constructed of red brick as a tribute to older London neighborhoods.⁴⁶

Typical of the era, the estate’s towers included long, dark corridors and raised pedestrian bridges that connected buildings.⁴⁷ Both of these design features proved problematic – the latter having been identified by Alice Coleman as contributing to crime by “...enabling offenders to dodge from block to block.”⁴⁸ In part abetted by its design, the quality of life in Pepys Estate began to decline, as did many Council projects in London and housing developments elsewhere.

The Pepys Estate received funding under the 1993 Action Single Regeneration Budget for revitalization of the entire complex. While minor improvements were made to several buildings and some of the bridges between buildings were removed, funding was withdrawn in 1999 as it was deemed insufficient to address inherent design flaws.⁴⁹ The original action plan included the demolition of Merrick House,

in which were local shops and a community center.⁵⁰ The plan was to construct new housing along with a new community center in which shops would be moved to the ground level.⁵¹ Sprunt Architects drew up the original master plan and handled modifications to two of the 24-storey towers. The third tower, the one closest to the Thames, was sold to the Berkley Group in 2002 to help fund a more substantial regeneration project (Figure 26).⁵² This tower was completely refurbished, five storeys of penthouses were added, and units sold off as market condos. The few residents still living in the tower at the time of the rehabilitation, some of whom owned their units, were relocated to other estates or bought out.⁵³ The 158 affordable units in this tower were not recovered.

Following the cancellation of the Estate Action Plan, Lewisham Borough hired Hyde Housing to coordinate the redevelopment of the estate in 2000.⁵⁴ The Hyde Group, a not-for-profit housing corporation, currently owns/manages over 43,000 homes in England. The plan called for the seven remaining blocks to be demolished and rebuilt to comply with current building and quality standards (Government Decent Home Standards) (Figure 28). The architecture firm of bptw designed the winning master plan with the goals of “sustainability and connecting public realm space, while

Figure 26. Pepys Estate towers, Aragon in the background

maximizing the unique and historical location of the residential development.”⁵⁵ The regeneration of Pepys Estate proceeded with the input of residents and in conjunction with English Heritage.⁵⁶ The plan included three phases, the first of which involved “...four blocks of flats plus two terraces of three-storey houses overlooking three existing green spaces.” Phase 2 included “a half block of 42 flats overlooking a garden and the Thames beyond.” The third phase is currently under construction.⁵⁷

The scheme also implemented “Home Zone” principles giving pedestrians priority and employing strategies for traffic calming.⁵⁸ £39 million later, 275 new homes were constructed, 169 of which are currently managed by Hyde Housing as affordable rental and shared ownership while the rest were sold as market condos.⁵⁸ Today, the Pepys

Figure 27. Pepys Estate after redevelopment (left)

Figure 28. Pepys Estate, buildings rebuilt by Hyde Housing Group. Top right corner of site is the Argon Tower, sold to Berkley Group (right)

Estate is a mixed-income community with improved park spaces that accommodate pedestrian and cycling facilities and enjoys better access to the Thames.

As the result of a tenant vote In 2007/08, the ownership of Foreshore and Albermarle House (the first rebuilt and the second renovated as part of the estate) were also transferred to Hyde Group.⁵⁹

The Pepys Estate typifies the spate of transfers of British housing estates to 3rd-party agencies deemed better equipped to reinvent and manage them. Unlike local councils, the housing associations have mastered the art of partnering with the private sector to facilitate regeneration and the move to mixed-demographic communities. Following redevelopment, the associations are able to maintain management of estates based on a system of steady rental revenue and shared ownership fees. With their roots in longstanding philanthropic organizations, these associations began to be active in the 1950s. They are partially funded by the government and are not-for-profit organizations. Any fiscal surplus goes into the construction or accumulation of more housing stock.

Regent Park, Toronto, ON

Unlike their counterparts in the US and the UK, municipal housing authorities in Canada do not have access to large federal monies to “get out from under” aging housing estates. So while the intended outcomes of redevelopment (mixed-demographic, integrated, socially and economically sustainable communities) are frequently the same, the financial means are a bit different – arguably more problematic. The greatest assets of these authorities are their land holdings and the relatively low densities in which their properties were built out.

Regent Park is Canada’s first public housing project. The 69-acre complex, owned and operated by Toronto Community Housing (TCH), was constructed in two phases (north and south) beginning in 1948.⁶⁰ When completed in the mid-1950s it comprised 2083 rent-g geared-to-income (RGI) units. Regent Park is currently midway through a fifteen-year revitalization program, at the completion of which the complex will include some 5100 units.⁶¹

Regent Park North, the first portion of the complex to be constructed, was divided into three large blocks (superblocks). While the earliest and easternmost block was

Figure 29. Regent Park, Toronto

comprised primarily of flats arranged in three-story walk-ups, later parcels included six-storey elevator buildings rotated at 45 degrees to the prevailing street grid. Regent Park South, constructed in the mid-1950s, included five fourteen-storey towers divided into innovative two-storey, three bedroom apartments served by corridors on every other floor.

Set back and turning away from streets, buildings in both phases of Regent Park were organized around mid-block common areas. Typical of projects from its era, streets were closed to create what amounted to an overabundance of ill-defined and underused “park” spaces. While planners contested that this inward focus would be both safer for children and promote community cohesion, the reality was significantly different. Being difficult to manage and patrol, neighbors avoided these common spaces and kept to their apartments. From the 1970s onwards, Regent Park developed a reputation for criminal activity and social problems. Like similar complexes in the US and England, the demographic profile of tenants dropped and the length of stay increased (i.e., from the temporarily disadvantaged to the chronically poor – although this had begun changing again by the late 1990s). For decades tenants complained of poor maintenance and a lack of social infrastructure.

In addition to escalating operating costs, Toronto Community Housing was facing serious financial challenges with respect to the need for life-cycle re-investment in what many had written off as failed social experiment. Aging, poorly insulated buildings in Regent Park were served by an outdated and inefficient power plant.

The relatively low density, at which it had been built however, coupled with a favorable location adjacent to downtown, made Regent Park a viable candidate for revitalization. Taking its cues from the public/private partnership model employed in HOPE VI and council estate redevelopments, Toronto Community Housing formed a partnership with a private developer to create a mixed-income community.⁶² In exchange for the opportunity to construct some 3000 condominiums on cleared

Figure 30. Regent Park after Phase 1 (left)
Figure 31. Phase 1 (right)

land, the Daniels Corporation agreed to help TCH replace its RGI units on the site. While the goal is to replace all 2083 existing RGI units, not all of these units will be accommodated within the limits of the 69-acre development; in fact, almost 500 units will be relocated or constructed elsewhere in the city of Toronto. With the prospect of future property-tax revenue (non-existent on a public housing project), the City of Toronto agreed to clear the land and update the infrastructure in the area, sweetening the deal for private developers.

With the goal of creating a more socially and economically sustainable community, the new Regent Park will be considerably more diverse, integrating a mix of housing types, tenancy options, uses and employment opportunities. New streets will also open the area up to surrounding neighborhoods. Together an increase in the number of units and a significant amount of new commercial space will augment the overall density of Regent Park. The target population will jump from 7500 to 12,500, with a projected increase of floor area ratio (FAR) or floor space index (FSI) from .75 to about 2.5. Common open space will be aggregated into a well-defined park ("Regent Park") in the center of the reconfigured community.

The master plan (currently being guided by Gladki Planning Associates)⁶³ includes five phases, the first of which is complete. The second phase is underway, with demolition to precede building. Guidelines for the relocation of tenants give each household the right to a new unit (as stated earlier, not all units will be located within the 69-acre development) (Figure 32).

Current demographic trends can provide insight when considering the social sustainability of a neighborhood. The 2011 Census of Population breakdown (of population by age) for Regent Park is as follows: children and youth (0-24) 36%, working age (25-64) 58% and seniors (65+) 6%. By contrast, the overall breakdown for Toronto was: 28%, 57% and 14% respectively.⁶⁴ Compared to the city as a whole, then, the percentage of children and youth in Regent Park is high. Planners are using a shift in the target size for units to adjust the population balance of the redevelopment to more closely match the Toronto as a whole.

Consistent with many public housing developments (and only part-way through redevelopment), Regent Park still consists of primarily of rental property (89% of units, in fact).⁶⁵ The percentage of renters, lone parent families and dwellings in need

Figure 32. Regent Park Phasing

of repairs is also much higher than Toronto as a whole.⁶⁶ The incidence of low-income – families (64.6%), individuals 15+ (69.3%) and private households (67.9%) – is also high.⁶⁷ Such statistics are, of course, commensurate with Regent Park's status as the largest and oldest ensemble of public housing in Canada. But while predictable and typical, they are not inevitable. With revitalization comes the opportunity to re-balance income and tenancy levels.

Despite a lack of government funding, Toronto Community Housing was able both to leverage its land holdings and its relationship with the City of Toronto to undertake a privately financed regeneration project on a scale that Canada has never before seen. Streets are being re-introduced through the area as are commercial spaces at grade, which, along with increasing the overall density will help to re-adjust demographic imbalances and encourage pedestrian traffic. Functional park space will be introduced in conjunction with a new recreational center. Many of the strategies expressed in new design of Regent Park correspond to those of HOPE VI developments in the US and estate regeneration in the UK.

Conclusion

In the eyes of post-war planners, the housing towers that replaced blighted, inner-city neighborhoods helped to lift the poor above the squalor. Despite the heroic aspirations of modernist urbanism, however, public housing and urban renewal failed. Towers however are only part of the story, as lower density projects were also constructed, especially in Canada. Through government support, local housing authorities have kept this housing afloat with cosmetic repairs to buildings, many of which are over 40 years old. Regeneration has been offered as a solution to these cash sponges, as ongoing repairs fail to address some of the deeper design flaws that many communities exhibit. However necessary, ongoing maintenance neither addresses the need to deconcentrate poverty nor the increase in demand for affordable housing as the overall percentage of rental units diminishes. In the case of Harbor Point, the Pepys Estate and Regent Park, regeneration seemed the only viable option to improve residents' quality of life. Employing strategies and ideals from the New Urbanism, these communities have attempted to augment economic and social sustainability by mixing incomes and uses and by encouraging pedestrian activity through street-oriented housing that stimulates neighborly interaction. While deploying different financial strategies, all three case studies distanced themselves from post-war approaches to urban planning.

Each of these precedents suggests ideas and opportunities that can be applied elsewhere. Indeed, this thesis will attempt deploy a number of the strategies discussed (e.g., design principles, changes in agency and social ideals) to a demonstration plan for the redevelopment of a decaying enclave of social housing in Ottawa, ON. Among the goals for this proposal are sustaining the current number of affordable units on site, deconcentrating the low-income population introducing market (non-RGI) housing, leveraging land holdings and city services to partner with the private development community, and, finally, developing a socially and economically sustainable model of development that can be applied to similar ensembles of public housing – across the city and the country.

Notes

1. N. Krumholz, “The Reluctant Hand: Privatization of Public Housing in the US,” in *The Affordable Housing Reader*, ed. R Tighe and E. Meuller. (Routledge, 2013), 47.
2. “The Community Development Block Grant (CDBG) program is a flexible program that provides communities with resources to address a wide range of unique community development needs. Beginning in 1974, the CDBG program is one of the longest continuously run programs at HUD. The CDBG program provides annual grants on a formula basis to 1209 general units of local government and States.” http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs, accessed July 28, 2013.
3. “The LIHTC Program is an indirect Federal subsidy used to finance the development of affordable rental housing for low-income households. The LIHTC Program may seem complicated, but many local housing and community development agencies are effectively using these tax credits to increase the supply of affordable housing in their

- communities. This topic is designed to provide a basic introduction to the LIHTC Program.” http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/affordablehousing/training/web/lihtc/basics, accessed July 28, 2013.
4. “Charter of the New Urbanism” CNU, accessed July 28, 2013, <http://www.cnu.org/charter>.
 5. “1993 Rudy Brunner Award for Urban Excellence”, Brunner Foundation, accessed January 5, 2013, http://www.brunnerfoundation.org/rba/pdfs/1993/02_harborpoint.pdf.
 6. Ibid.
 7. “Privately Funded Public Housing Redevelopment: a Study of the Transformation of Columbia Point (Boston, MA)”, Institute for International Urban Development, accessed January 5, 2013, http://i2ud.org/documents/Case%20Studies/Harbor%20Point_IUD_2008.pdf.
 8. Ibid.
 9. Ibid.
 10. Ibid.
 11. Ibid.
 12. Ibid.
 13. Ibid.
 14. Ibid.
 15. Ibid.
 16. Ibid.
 17. “Brunner Award.”
 18. “Transformation of Columbia Point.”
 19. Ibid.
 20. Ibid.
 21. The City of Boston and the Boston Redevelopment Authority, *Columbia Point Redevelopment Plan* (The City of Boston and the Boston Redevelopment Authority, 1980), accessed January 5, 2013, <http://ia600805.us.archive.org/29/items/columbiapointred00bost/columbiapointred00bost.pdf>, 30.
 22. Ibid.
 23. “Brunner Award.”
 24. “Transformation of Columbia Point.”
 25. “Brunner Award.”
 26. Ibid.
 27. Harbor Point Apartments Co. is a partnership between the Columbia Point Community Task Force and Peninsula Partners. “From Project to Community: The Redesign of Columbia Point”, Design Observer, accessed January 5, 2013, http://places.designobserver.com/media/pdf/From_Project_t_204.pdf.

28. "Transformation of Columbia Point."
29. This included funding from the SHARP Program, up to \$2.5 million per year available for up to 15 years, Federal funding under the UDAG and Urban Initiatives programs, totaling \$21 million, and State funding under the MHFA and Chapter 884 programs, totaling \$154 million. "Transformation of Columbia Point."
30. "Transformation of Columbia Point."
31. "From Project to Community."
32. Ibid.
33. Ibid.
34. "Transformation of Columbia Point."
35. Ibid.
36. Ibid.
37. Krumholz, *The Reluctant Hand*, 47.
38. Ibid., 49.
39. Henry G. Cisneros and Lora Engdahl, ed., *From Despair to Hope: Hope VI and the New Promise of Public Housing in America's Cities*, (Washington, D.C.: Brookings Institution Press, 2009), 299-300.
40. Ian Colquhoun, *RIBA Book of British Housing: 1900 to the Present Day* (Amsterdam; Boston; London: Architectural Press, 2008), 25.
41. "Overview of Deptford", University College London, accessed January 5, 2013, http://www.ucl.ac.uk/urbanbuzz/downloads/projects_09/Deptford_Case_Study.pdf.
42. "The Road to Regeneration: Foreshore, The Pepys Estate, Deptford", Hyde Housing, accessed January 5, 2013, http://www.hyde-housing.co.uk/client_files/library/special/ForeshoreBro_lo.pdf.
43. Ibid.
44. "Overview of Deptford."
45. "Road to Regeneration."
46. "Overview of Deptford."
47. "Road to Regeneration."
48. Alice Coleman, *Utopia on Trial: Vision and Reality in Planned Housing* (London: H. Shipman, 1990) 38.
49. "Pepys Estate", The National Archives, accessed January 5, 2013, <http://webarchive.nationalarchives.gov.uk/20110118095356/http://www.cabe.org.uk/case-studies/pepys-estate>.
50. "Regeneration in Deptford", University College London, accessed January 5, 2013, http://www.ucl.ac.uk/urbanbuzz/downloads/projects_09/Regeneration_in_Deptford.pdf.
51. Ibid.

52. Ibid.
53. There have been a few articles concerning this process. One of interest can be found here: <http://www.telegraph.co.uk/property/3336718/Tears-of-the-clown-as-his-tower-gets-a-fancy-facelift.html>. The BBC also released a six episode miniseries called *The Tower, a Tale of Two Cities* that follows the lives of a few low-income residents of Pepys Estate and the lives of a few of those who bought a unit in Aragon Tower (the tower of the estate that was sold to Berkley Group for private development).
54. Colquhoun, *RIBA Book of British Housing*, 111.
55. "Regeneration in Deptford."
56. "Road to Regeneration." English Heritage is an organization funded mostly by the Department for Culture, Media and Sport and acts as an advisory body to the government regarding the protection of historic places.
57. "Pepys Estate."
58. Colquhoun, *RIBA Book of British Housing*, 111.
59. "Road to Regeneration."
60. "About the Regent Park Revitalization", Toronto Community Housing, accessed January 5, 2013, http://www.torontohousing.ca/about_regent_park_revitalization#c.
61. "Regent Park Revitalization", Toronto Community Housing, accessed January 5, 2013, http://www.torontohousing.ca/investing_buildings/regent_park.
62. "About the Regent Park Revitalization."
63. <http://www.gladkiplanning.com/2010/11/regent-park-revitalization-on-going/>.
64. "Regent Park Neighborhood Profile", The City of Toronto, accessed January 5, 2013, http://www.toronto.ca/demographics/cns_profiles/cns72.htm.
65. Ibid.
66. Ibid.
67. Ibid.

Chapter 4 – Site Analysis

Introduction

I felt it important to explore the regeneration of housing estates through the process of design. For the purposes of this thesis, I selected a neighborhood in Ottawa, ON. Elmvale Acres was chosen because of its relatively low-density, the high concentration of Ottawa Community Housing units it supports, and its location in an area targeted for revitalization. The redevelopment of this 45-acre site will serve as an extension of research into opportunities for regeneration in response to the challenges faced by municipal authorities with respect to their aging housing stock. Many of the forces at play on this site reinforce its potential as a candidate for redevelopment. These include the presence of city infrastructure, proximity to amenities, and the structure of surrounding neighborhoods.

Russell Heights, a 10-acre complex owned and operated by Ottawa Community Housing Corporation, is located in Ottawa's Elmvale Acres neighborhood. This neighborhood, in turn, is located in the 18th Ward of the city of Ottawa – roughly bordered by the Rideau River on the west, Highway 417 on the north and east, and

Figure 33. Russell Heights, Ottawa

by Walkley Road to the south. The 22 sq. km ward – also known as Alta Vista Ward – is situated about 6 km southeast of downtown Ottawa. In addition to the relatively upscale Alta Vista neighborhood, the area is home to key institutions including the Ottawa General Hospital and the Canada Science and Technology Museum (Figure 36). It is also the location of the Perley and Rideau Veteran’s Health Center, a not-for-profit senior’s assisted living care facility that houses over 450 residents, with two additional buildings currently under construction. The Ward includes a large swath of industrial land flanking a wide train corridor that cuts southeast across the northern edge. The main north/south arterial through the ward is St. Laurent Boulevard, a commercial strip with a major interchange at Highway 417. Another large commercial

Figure 34. Alta Vista Ward, Ottawa (left)
Figure 35. Area under investigation (right)

Figure 36. Surrounding area buildings

zone, located just west of St. Laurent Boulevard on Industrial Ave., is the Trainyards shopping center. Alta Vista is home to approximately 46,000 people, or roughly 5% of Ottawa's population.

Numerous OCH properties are located in the Elmvale Acres neighborhood. As well within walking distance are other are a housing co-op, two recently renovated rental towers and several other market rental towers. Compared to the neighboring areas that support mainly single-family dwellings, Elmvale Acres includes an unusually high percentage of rental units. South of Smyth Road, St Laurent Boulevard becomes less of a commercial strip. Between Industrial Ave. and Smyth Rd., however, the car-oriented commercial properties along St. Laurent Boulevard push deep into the block with a tangle of access roads and parking lots. In anticipation of redevelopment this portion of St. Laurent has been designated by the City of Ottawa as a Design Priority area. Russell Heights is located directly behind these commercial properties.

Although Russell Heights is the focus of the study, I have chosen to expand the area under investigation to incorporate adjacent sites with redevelopment potential. Included is another OCH property – an eleven-storey senior's complex (on 4 acres

of land). Although profoundly undistinguished in its current state, the portion of St. Laurent Boulevard bordering the site offers tremendous potential. The deep lots and large, warehouse-style buildings separating OCH complex from St. Laurent Boulevard represent both capacity and flexibility. Combined with a low FAR (0.3) and limited residential density (10.5 UPA), excellent road and transit connections make the 45-acre parcel ideal for redevelopment. Bordered on the east by St. Laurent Boulevard, on the west by Russell Road and by Smyth Road to the south, the larger 45-acre site is both central and varied in use. It is within walking distance of the Elmvale Acres shopping centre, a major OC Transpo (City of Ottawa public bus system) bus terminus, and is relatively close to the Ottawa Trainyards.

Figure 37. Area Land Use diagram

Figure 38. Circulation and Intersection diagram (top)
 Figure 39. Bus stop diagram (bottom)

Rather than address and redevelop an isolated parcel of land, this thesis attempts to examine the larger context. Redevelopment should not only be done in pockets, as needed, but in coordination with broader areas and adjacent landowners to the benefit of the city as a whole. By contrast the *Alta Vista Ridge* development, currently under construction within the boundaries of the area of investigation, has been dropped into the larger context with little regard for the bigger picture. To the degree that it represents a missed opportunity, it is exactly the approach to development I hope to avoid.

Alta Vista Ridge, being developed by Theberge Homes, is a collection of townhouses and condominiums (Figure 40 & 41). Despite its lack of integration with adjacent properties, the development adds to the residential density (UPA) and floor area ratio (FAR) of the overall area, as well as changing the population dynamics. Including *Alta Vista Ridge*, the number of units per acre (UPA) jumps from 10.5 to 14 (calculated over the whole 45-acres), and the FAR increases from 0.3 to 0.38.¹ The development epitomizes the lack of communication between OCH, the development community and the City of Ottawa. Coordination between various parties should be encouraged to take advantage of opportunities such as this. Whatever it isn't, however, *Alta Vista*

Ridge is an indication of the desirability and development potential of the area. For the purposes of this thesis, I will assume this development has not yet been built or even planned.

The ensemble of buildings comprising Russell Heights, owned and managed by Ottawa Community Housing (OCH), sits at the center of the area under investigation (Figure 42). Designated as affordable housing and subsidized by the City of Ottawa, it consists of a complex of townhouses served by a community center (for the exclusive use of tenants). The compound's 158 two-storey townhouses were constructed in 1968. The unit breakdown is as follows: 95 three-bedroom, 47 four-bedroom, and 16

Figure 40. Location of Alta Vista Ridge and building footprints (left)

Figure 41. Alta Vista Ridge. First erected building, from Russell Road (right)

five-bedroom units. 55% of Russell Heights' 630 residents are children and youth.

Russell Manor (located at 1909 Russell Road) is an eleven-story apartment building that caters exclusively to seniors. Constructed in 1971, it is comprised of 189 1-bedroom units and one 2-bedroom unit, 190 units in total. It is currently home to 200 seniors. As noted, the Russell Heights complex is served by the Russell Heights Community House, which offers various programs for youth and coordinates a food bank program and fruit and vegetable program for residents. Russell Heights and Russell Manor are continually in need of repair due to their age and tenant wear. More critically, having reached the end of their life cycles, the buildings are in need

Figure 42. Russell Heights and Russell Manor within site (left)

Figure 43. Russell Heights town houses (top right)

Figure 44. Russell Manor tower (bottom right)

of significant reinvestment. While this presents severe financial challenges to OCH, if framed properly, it also offers significant opportunities to partner with the local development community.

Under its current mandate, OCH is responsible for operating and maintaining housing, but not building it. While it can augment its portfolio by acquiring buildings, these properties frequently mirror the profile of other OCH housing, namely, are older and in need of significant reinvestment. While beyond its current mandate, this thesis explores the possibility that OCH might partner with the private sector to replace some of its aging housing stock. Arguably, private sector collaboration is all the more expedient as OCH, unlike similar entities in England and the US, has little access to federal funding to help with redevelopment.

Assuming similarities in the mandates of OCH and Toronto Community Housing (TCH), partnership with the private market is not completely out of the question; it may be less a question of “if” than of “how.” By proposing a redevelopment plan that suits Ottawa Community Housing, the City of Ottawa and, of course, the residents of the community, it is my hope that this thesis will make a case for reconsideration

of the terms of reference under which OCH currently operates.

Census Data and Population Dynamics

The population dynamics on the site appear to be unbalanced compared both with adjacent neighborhoods and with Ottawa as a whole. A large number of seniors and youth are concentrated in the housing projects that, together, comprise a high concentration of low-income households. Census data can be brought to bear to verify these observations. The following comparison bears no conclusions regarding the quality of either neighborhood.

Figure 45. Census Tracts

Of particular interest are two tracts from the 2011 census: Tract 35060957 (A) and Tract 35061291 (B) (Figure 45).² Tract A, in which OCH housing is located, has a population of 1,083, of which 830 are OCH tenants. Tract B, which corresponds to the predominantly single-family neighborhood south of Russell Rd., has a population of 481. Tract A is quite large in land area due to large industrial and commercial lots. Although the tract extends beyond the area under investigation, the remaining area contains no residential zoning or use. Due to the significant difference in population between Tracts A & B, percentages will be used to convey tract-specific data. The purpose of this data analysis is not to demonstrate that one neighborhood is safer or more prosperous than the other (based on housing type, family structure and age), but to illustrate the differences between adjacent neighborhoods. Data from this analysis will inform the framework for possible intervention.

Under the category of *Occupied Private Dwelling Characteristics*, 76% of the dwellings in Tract B are single-detached houses compared to only 1% for Tract A. The remaining dwellings in Tract B are divided between semi-detached (19%) and row houses (5%), compared to 1% semi-detached and 34% row houses in Tract A. While 63% of the units in Tract A are apartments, there are no apartments in Tract B.

Reinforcing what is apparent from aerial photos and figure ground diagrams, Tracts A & B are substantially different with respect to housing types, neighborhood design and tenancy. Tract B could be characterized as a typical North American suburban neighborhood of owner-occupied single-family homes. By contrast, Tract A is comprised primarily of low-income renters (77% of which rent from OCH), divided between row houses and apartments.

Census data also reveals significant differences with respect to age, family structure and language. Where age is concerned, the tracts contain similar percentages of residents sixty-five and over. They differ substantially, however, with respect to the 0-14 and the 15-64 age groups. While 28% of Tract A's population is between 0-14, only 11% of residents of Tract B fall into this group. A comparison of 15-64-year-olds indicates that 55% of Tract A and 73% of Tract B fall into this category. The ratio of adults to youth in Tract A is just under the 2:1 while it is just over 6.6:1 for Tract B. This ratio has major social implications and has been linked to social behaviour problems in public housing. As discussed in Chapter 3 with respect to Regent Park, population distribution in individual neighborhoods should approximate that of the city as a whole; as discussed in Chapter 2, a high youth-to-adult ratio can threaten

“collective efficacy.”

In the *family structure* category, Tract B has a single-parent-family rate of 14% (75% of which are female lone-parent families), while the rate in Tract A is of 50% (95% of which are female). The rate of married couple families is 71% in Tract B but only 38% in Tract A. This data represents a significant difference in household make-up, which may influence how households are managed.

The last set of data to be compared here is language, specifically mother tongue. Tract B has a high English population (67%) compared to Tract A (37%). The French population is comparable, with Tract B at 10% and Tract A at 16%. More significant is the rate of non-official-language speakers: while it is 20% Tract B, the rate is more than double in Tract A, at 43%.

Once, again, this comparison is by no means a conclusion of anything, it is merely a presentation of two extremely different neighborhood designs. Both are out of sync with Ottawa as a whole and neither is better, as cities flourish with diverse neighborhoods. I am simply trying to convey exactly how different two immediately adjacent neighborhoods can be.

Although the link is neither direct nor causal, census data can be correlated with the incidence of crime. One study by Statistics Canada, *Neighborhood Characteristics and the Distribution of Crime in Winnipeg*, maps crime rates (violent and property) to multiple variables: socio-economic disadvantages, population characteristics, dwelling characteristics and city land-use.³ Each set of variables is well defined within the document and, while findings are specific to the city of Winnipeg, a few trends can be noted. Beginning with population characteristic variables, neighborhoods (Neighborhood Characterization Areas or NCAs) with a higher percentage of female lone-parent families had a higher rate of violent and property crime. Higher percentages of dwellings in need of repair relate to a higher rate of crime. The relationship of crime and disrepair has to do with the disorder of the physical environment.

City land-use variables are also relevant. Neighborhoods with relatively high percentages of commercial and multiple-family zoning see a higher rate of crime than those zoned predominantly single-family. Lastly, the document states that socio-economic disadvantages are the single most important indicator of crime rates. High rates of crime occur in neighborhoods with a high percentage of persons receiving Government transfers and a high percentage of households below the low income

cut-off.

Statistics such as these support the case for mixed-income, mixed-demographic communities. Where Regent Park is concerned, it was the goal of TCH to bring the population dynamics of the neighborhood more in line with those of the city as a whole through redevelopment and urban intensification. Mixed-demographic and mixed-tenancy redevelopment help mitigate ghettoization and segregation, both of which have been correlated with high crime rates and stigmatized populations.

Design

Along with an aging building stock and a demographic composition that differs substantially from Ottawa as a whole, the design of the area under investigation presents both issues of concern and opportunities for change. There is no physical connection between Russell Road and St. Laurent Boulevard for cars or pedestrians. Russell Heights, OCH complex of townhouses, is an isolated complex with no through roads. This lack of connectivity emphasizes and aggravates its difference from surrounding neighborhoods. The recreational, and social programs run by the Russell Heights Community House are limited to residents, adding to the community's

isolation and status as a “special interest” enclave. It is hard not to interpret this as intentional, given the proximity of the Dempsey Community Center – despite the fact that the two centers provide very different services (e.g., Dempsey provides a gymnasium available for rent by the public, while the Community House offers an after school homework club for the youth of Russell Heights). Where opportunities for redevelopment are concerned, Russell Heights has a relatively low residential density (15.8 UPA). While the aging buildings contribute to a reputation for being physically tarnished, Russell Heights may suffer socially from isolation and lack of demographic variation. Similarly, Russell Manor is a tower, home to 200 senior citizens in a large swath of unprogramed green space. These are patterns of concern that can be addressed through re-development.

Conclusion

Given the age of OCH buildings, a significant investment may soon need to be made in the Russell Height community. Rather than spending to maintain the status quo, life-cycle reinvestment can be used to leverage other money and incorporate adjacent parcels, with the goal of creating a more attractive, better integrated, more socially

and economically sustainable community. The design portion of this thesis proposes a demonstration plan for the redevelopment of the area by way of exploring the validity of such a strategy. The relatively favorable location of the site, coupled with its residential characteristics, makes it a viable candidate for transformation. As pockets of housing vulnerable to isolation and stigmatization, OCH projects within the area under investigation are relatively typical in form and design to other OCH projects.

While criticisms of public housing generally target larger, higher ensembles of buildings, most of the public housing constructed in Canada is relatively modest in scale. Indeed, compared to the high-rises against which Catharine Bauer and Elizabeth Wood inveighed, the townhouses in Russell Heights are extremely family friendly. Accordingly this exploration is not about finding solutions to high-rises, but about breaking apart superblocks and making connections with adjacent streets to mitigate the concentration and isolation of low-income tenants. I will propose that OCH coordinate whatever investments it makes in its own holdings with development on adjacent sites, with the larger goal of producing mixed-demographic, mixed-use communities. This suggests a greatly expanded and much more pro-active role for OCH.

In making such recommendations, I draw heavily on models being employed by HOPE IV redevelopments in the US and by Toronto Community Housing for its redevelopment of Regent Park. That said, I am suggesting something even more radical inasmuch as I am proposing that the redevelopment and intensification of OCH holdings be done in concert with the redevelopment of adjacent, non-OCH properties.

Notes

1. Figures for the Alta Vista Ridge development have been estimated for the purposes of this thesis. Estimations are based on the site plan and unit plans, accessed on January 5, 2013, available on the Alta Vista Ridge website: <http://www.avridge.com/#/home>.
2. Statistics Canada. 2012. GeoSearch. 2011 Census. Statistics Canada Catalogue no. 92-142-XWE. Ottawa, Ontario. Data updated October 24, 2012. <http://geodepot.statcan.gc.ca/GeoSearch2011-GeoRecherche2011/GeoSearch2011-GeoRecherche2011.jsp?lang=E&otherLang=F> (accessed 2013-01-04).
3. Robin Fitzgerald, Michael Wisener and Jose Savoie, "Neighborhood Characteristics and the Distribution of Crime in Winnipeg," *Crime and Justice Research Paper Series* (2004) Statistics Canada, Catalogue no. 85-561-MIE2004004.

Chapter 5 - Urban Redevelopment Proposal: A Socially Sustainable Model

The goal of the design portion of this thesis is to better understand the issues at play in the renewal of post-war public housing through the design of a demonstration plan for Ottawa's Russell Heights complex and the Russell Manor tower. As discussed above, the ongoing (and increasingly expensive) repair of aging housing does little to address the impacts of neighborhood design, physical isolation, demographic imbalances, and stigmatization associated with high concentrations of low-income families. Although the clusters of public housing throughout Ottawa are generally low in density (and therefore not subject to many of the more salient criticism leveled against post-war public housing), they still exhibit many of the tenets of modernism under which they were planned.

The parameters of the proposed redevelopment of the area around Russell Heights include:

- The replacement of all 348 affordable owned and managed by Ottawa Community Housing. They would be constructed in such a way as to be integrated with and indistinguishable from market units.
- Increasing the connectivity of the area to surrounding neighborhoods.

- Increasing the overall residential density of the site in order to accommodate a larger number of residents with a broader range of incomes.
- Mixed-use zoning.

These terms of reference are, in part, based on those established for HOPE VI redevelopments in the US. These parameters imply new strategies and an expanded role for the Ottawa Community Housing Corporation and are intended as a model that OCH may apply to its other communities. In order to address social imbalances, the demonstration plan takes into account design-related issues discussed in Chapter 2. It also draws on the fiscal strategies employed by the precedents covered in Chapter 3, adapting them to this unique context. Rather than limiting the investigation to properties owned by OCH, this thesis proposes a larger redevelopment, for which coordination between numerous stakeholders is vital – to the benefit to Ottawa as a whole.

Like the townhouse units in Russell Heights, OCH properties across the city are reaching the end of their life cycle. As such they will be soon requiring significant capital investment. Constructing new buildings is not an option for OCH, as it is not

within its current mandate. I believe this to be a lost opportunity, however, as capital may be better spent on new construction designed both to decrease operating costs and augment the social and economic sustainability of the community. Working within similar limitations, Toronto Community Housing has managed to attract investment from the private sector for the redevelopment of Regent Park. As such, I assume that a change in mandate is not only desirable but possible.

The first challenge of redevelopment relates to land ownership. The total area of the site (including the roads within and measured to the center of the roads bordering the study area) is approximately 45 acres. Including the Russell Heights complex and the seniors' tower, OCH currently owns about 14 acres or just over 30% (Figure 46). As the acquisition of land and buildings is currently beyond its mandate, OCH must leverage its holdings to attract private developers to the area and coordinate the development as a whole.

Where private ownership is concerned, the proposal leaves individually owned single-family houses largely untouched, as well as the privately owned market rental tower located at 1825 Russell Road. The medical building on the corner of Smyth

Figure 46. OCH Land Holdings

and St. Laurent will also remain. The commercial lots along St. Laurent Boulevard are privately owned, each by a different owner. Through phasing, it is assumed that the current owners will be willing to make their land available for redevelopment, provided the City of Ottawa can offer incentives such as raising the value of the land through up-zoning, and/or by offering relocation incentives. Most of these properties will not be affected by the first phase of construction, which deals primarily with changes to block and street patterns on the western portion of the study area. As was the case for Regent Park, it is possible that the City would be willing to undertake infrastructure changes/upgrades with the assurance of increased revenue from future property taxation.

The new housing under construction on the northern edge of the site (*Alta Vista Ridge* by Theberge Homes) extends from Russell Road to St. Laurent Boulevard. It has been designed as an elaborate cul-de-sac to which access is only possible from St. Laurent Boulevard. As such it compounds the problem of stand-alone enclaves and lack of connectivity that characterizes the area. For the purposes of the exercise, then, I will assume that the redevelopment of this parcel was both delayed and integrated into a larger redevelopment of the study area, i.e., that the City – in concert with private

developers and OCH – has begun to address urban planning and development at a neighborhood-wide scale. The lack of coordination between the public and private realms, not to mention the coordination of development on adjacent properties, is astounding and quite visible within Ottawa.

The relationship between OCH and the City of Ottawa could also prove advantageous in attracting private-sector participation. The City may be able to offer incentives, such as waiving fees and covering the cost of demolition, as well as improving and building infrastructure, in exchange for the inclusion of affordable housing, which would be turned over to OCH to manage. A private developer could be offered the opportunity to develop the whole 45-acre parcel of land. He would benefit from breaks in fees and a portion of the land free of charge, in exchange for supplying OCH with the same number of housing units currently exist (348 units of which 158 are townhouses and 190 units are seniors' housing). Profit would come from the additional market units the developer could fit on the parcel after the units needed to offset the cost of replacing OCH units. In addition to the affordable units, a percentage of the market-rate units should be designated as rental to support a variety of tenancy options. Funding is available from the Provincial Government,

dispensed by the City of Ottawa (in the form of rent subsidies). Funding exists on a per unit basis, so the ratio of affordable units to market units may be high, but market units will still ensure a profit for the developer. Potential for a healthy profit is vital in attracting private-sector participation.

Design

For the design portion of this thesis, I drew heavily on my experience of living in this area and interacting with the residents of Russell Heights through my involvement with the Russell Heights Community House and its staff. The case studies discussed above also influenced design decisions. Many of the goals I set for this project echo those of the Harbor Point project, which later led to the HOPE VI program. Ultimately, this proposal is only one of many possibilities for this site.

Having lived in this area for three years, I have become aware of a few key issues on the site that can be easily rectified. There is no connection (vehicular or otherwise) from Russell Road to St. Laurent Boulevard. Existing traffic lights at two key points along St. Laurent Boulevard could facilitate road connections through the site to Russell Road (Figure 47). The traffic light at the intersection of Smyth Road and

Russell Road is confusing and dangerous, especially for pedestrians, due to the streets being staggered. Aligning them would create a much safer, more easily navigable intersection (Figure 48). It is also my goal to make St. Laurent Boulevard more convivial to pedestrians and cyclists. To do so I proposed that deep commercial lots along St. Laurent Boulevard be truncated to encourage more street-oriented services (Figure 48).

Figure 47. Existing Traffic Lights (left)
Figure 48. Initial Design Tactics (right)

These connections produced a block size similar to the surrounding neighborhoods (Figure 49). From there, a more sophisticated road system was created, including a lane behind the properties along St. Laurent Boulevard across which a transition could be made between commercial and residential uses at grade (Figure 50). Additionally, an attempt was made to reduce height, density and the diversity of uses moving west from St. Laurent Boulevard to Russell Road (Figure 51).

Figure 49. Early Road Layout (left)
Figure 50. Road Layout and Kept Buildings (right)

Once the grid was established and buildings were placed around the perimeters of blocks, a pedestrian path was carved through the ensemble (Figure 51). It acts as a kind of counterpoint to the grid. Among other things this path represents an important pedestrian connection through the site for residents of the Perley and Rideau Veteran's Health Center. While the grounds of this facility are beautiful, they are organized in such a way as to discourage interaction with the community. The recreational pathway was integrated into the site to complement pedestrian movement along streets and to create key pedestrian crossings separate from the major traffic intersections (Figure 52). The pathway also connects several neighborhood-oriented park spaces. The Northern portion of the park in the center of the community functions as a casual space, while the Southern park is more formal with a basketball court for organized and unorganized recreation as coordinated by the community center just beside it. Children's play equipment is also incorporated in this park.

This Page

Figure 51. Proposed Pathway (left)

Figure 52. Pathway and Major Pedestrian Crossings (below)

Following Pages

Figure 53. (pg 105) Site Plan

Figure 54. (pg 106, top) Bird's Eye View looking southwest

Figure 55. (pg 106, bottom) Bird's Eye View looking northeast

As proposed, the demonstration plan attempts to address the previously identified problems of design, demographics, and management. Where OCH is concerned, management and isolation (a sub-topic of design) are closely interrelated and the new street and block system addresses both. As the existing, private roads do not benefit from municipal services such as garbage collection, snow clearing, road cleaning, etc., an overall plan with only public roads will save OCH not only money, but liability and management responsibility. Public roads will also enable police officers to patrol more regularly and effectively. More importantly, the street and block layout will improve connectivity, opening access from St. Laurent Boulevard and neighboring communities and encouraging integration of people and neighborhoods, including, as mentioned, the Perley and Rideau Veteran's Health Center. This proposal opens up recreational activities within walking distance of the facility.

Public park spaces are another headache for local housing authorities, as they must be maintained and, if the space is ill defined and difficult to monitor, might be co-opted for illicit activities. Clearly defined green space in the proposed scheme is directly related to pedestrian travel and organized into traditional boulevards and recreational pathways. As noted, well-defined park space for children and sporting

events is also provided in the center of the community. As these spaces are not for the exclusive use of OCH residents, they could also be maintained by the City of Ottawa. The pedestrian-oriented design will encourage more thru-traffic, allowing for better integration and more general surveillance. Private yards will be delineated with low fences to eliminate confusion regarding ownership or maintenance. This scheme leaves OCH only responsible for its tenants and units. From the exterior affordable and market units will be indistinguishable, mitigating the stigma and perceived social isolation of public housing projects. Public facilities, including the community center and parks, will be open to the larger community just as children from families of different income levels currently attend the same schools.

Included in the redevelopment proposal are additional amenities. Consistent with the City's guidelines on storm-water management, four retention ponds have been integrated into the design (Figure 56). Landmarks have been placed adjacent to three of the ponds, each conceived of as a climbable public art piece. These markers lead pedestrians to the lighthouse on the east side of St. Laurent Boulevard, itself a landmark and symbol of the adjacent Canadian Museum of Science and Technology. The community center, located along the swath of park space in the center of the

demonstration plan, includes a gymnasium and other recreational facilities for the use of the entire community.

Figure 56. Pedestrian Infrastructure

Where demographics are concerned, the combination of market rental and ownership units will ensure a mix of incomes. The numerous housing types included in this proposal will ensure a mix of ages and household types; each with an appropriate unit type (townhouses for families, as Catherine Bauer encouraged). Together townhouses and mid-rises, with individual entries for ground level units, achieve a healthy “dwelling per entrance” ratio that encourages neighborly interaction on a stoop-to-stoop basis. In tandem with this, well-defined parks and yards facilitate and encourage natural surveillance by residents. As the townhouses are more desirable for families, the highest concentration of children will be in areas with the most “defensible space.” Here, the youth-to-adult ratio will be less of a burden as public park space is minimized and residents will be able to self-police their own yards.

The overall demographic mix achieves a much lower youth-to-adult ratio, improving the “collective efficacy” of the community in general. While high-rise buildings include elevators and common areas, the tenant profile of these buildings (singles, seniors, empty-nesters, young couples, etc.) makes these areas less vulnerable to vandalism and anti-social activity. The taller buildings along St. Laurent also include commercial space at grade, encouraging local business and increasing land value. As

the St. Laurent corridor has been designated as a “design priority”¹ area by the City of Ottawa, it can be assumed that future developments will be designed to a similar standard, increasing land values of the entire neighborhood.

The new UPA for the site will be 24 and the FAR .75. The general breakdown of unit types is as follows: 668 apartments of varying sizes (square footage and number of bedrooms) and 289 townhouses of varying sizes (number of bedrooms, based on a standard two- or three-story unit with the option of a developed basement) (Figures 57 & 58). The total unit count, including the remaining older buildings is 1082 units. Of the new construction, 70% are apartments (25% of which will be for sale) and 30% townhouses, a breakdown close to optimal according to Douglas Farr in *Sustainable Urbanism: Urban Design with Nature*.² Of the 1082 total units on site, 348 will be handed over to OCH for management as affordable housing. This is approximately 32% of the total. There does not seem to be a magic ratio of affordable units to market units for attracting private sector involvement, as every city and country is different with drastically different economic systems and government funding. While 32% seems high to this author, the viability of this percentage can not be proved without further research into the dynamics and economics involved in construction in Ottawa.

Following Pages

Figure 57. (pg 112) Housing Types and Unit Counts

Figure 58. (pg 113) Housing Types and Unit Counts II

Apartment Building over Commercial
434 units

Mid-Rise Apartment Building
132 units

Two/Three Storey Townhouses
149 units

Stacked Two Storey Townhouses
106 units

(Three) Flats over Two Storey Townhouses
136 units

Figure 59. Possible Townhouse Layout (left)

To qualify for maximum points in the LEED-ND rating system for “Compact Development” and “Neighborhood Pattern and Design,” projects must achieve a UPA greater than 63 and an FAR greater than 3. Although proposed densities are considerably lower than this, the demonstration plan is in a position to qualify for maximum points in the other categories, namely “Walkable Streets” and “Connected and Open Community.” As noted, the redevelopment includes thru streets, mixed-income communities, including a variety of housing types and affordable housing and a pedestrian friendly pathway/tree-lined boulevard system. Given the suburban location of this site and the urban grain of the surrounding areas, it was not feasible or appropriate to propose high densities. The city infrastructure, including buses, would not be able to support this density, nor would the marketplace support a high-density development in this area at this time. For these reasons, my goal was to double the current density. For the purposes of this thesis, LEED ND was used as a reference and a loose guideline only. The points were not calculated specifically for this project, but the requirements for attaining points proved helpful when considering targets.

Phasing

The challenge of relocating the residents of the existing community can be addressed through phasing. The most significant population to be relocated is the senior citizens living in Russell Manor. As OCH seniors' tower (containing 190 units) will be demolished in the second phase, residents can be moved to units constructed as part of Phase 1, most notably into the tower on St. Laurent Boulevard built in the park space adjacent to the medical building. Phase 1 also includes a commercial/residential tower (overlooking the park that will be constructed in the following phase). Families currently residing in the Russell Heights townhouses – also scheduled to be demolished in Phase 2 – will be relocated into new townhouses and mid-rise housing blocks constructed in Phase 1. The focus of Phase 2 is infrastructure. The complete road layout will be implemented with minimal effect on existing commercial activity, as many of the roads are continuations of existing streets. Phase 3 will develop the rest of the site, both commercial and residential.

Figure 60. Phase 1 (above left)
 Figure 61. Phase 2 (above right)
 Figure 62. Phase 3 (left)

Figure 63. Perspective of St. Laurent Boulevard Looking South (above left)
 Figure 64. Mid-Rise Block Looking West (above right)
 Figure 65. Northern Park Space Looking South (left)

Conclusion

Although it requires a change in mandate, it may be feasible for OCH to redevelop its holdings and improve the larger Elmvale Acres neighborhood in the process. The investment necessary to keep Russell Heights and Russell Manor in operation might be better directed toward redevelopment – following the example of Boston’s Columbia Point and Toronto’s Regent Park. Unlike these examples, however, it may be both necessary and desirable to incorporate adjacent properties into a comprehensive development scheme. To this end, it is recommended that Community Design Plans be undertaken for all areas within a 600m radius of all OCH properties that include more than 100 units or occupy more than five acres. This suggests not only a new role for OCH, but an expanded role for the City of Ottawa in addressing the economic and social consequences of disaggregated development. While the strategy described in this chapter does not increase the number of affordable units, the equation will be different with each of Ottawa Community Housing’s holdings. It is ultimately these holdings (most notably the land owned by OCH) that will allow the private market to aid in replacing housing stock. As with Regent Park, land is an important calling card.

Notes

1. According to the City of Ottawa Planning and Development department, Design Priority Areas are: “Mixed-use nodes and corridors that are significant to the City’s overall design. They include the downtown precinct, traditional main streets, arterial main streets, mixed-use centres, town centres, village cores, community design plans and capital projects. They are subject to design review by the Urban Design Review Panel.” Accessed July 28, 2013, <http://ottawa.ca/en/city-hall/planning-and-development/how-develop-property/glossary-terms>.
2. Douglas Farr, *Sustainable Urbanism: Urban Design with Nature* (Hoboken, N.J.: Wiley, 2008), 136.

Conclusion

A significant percentage of Canada's public housing stock was constructed between the 1940s and the '70s in response to acute housing shortages and a desire to reinvent cities. Much of it was organized into stand-alone enclaves according to what Jane Jacobs described as "anti-urban" planning principles. Municipal housing authorities like the Ottawa Community Housing Corporation have been put in the difficult position of maintaining and modernizing their aging portfolios in order to keep units available in an environment of growing demand. Their limited mandate requires them to spend more and more to preserve housing that, in many cases, was poorly constructed and/or designed in ways that may contribute to social isolation and stigmatization. Creative thinking must be brought to bear on addressing the economic and social challenges facing this housing stock; problems must be recast as opportunities.

Redevelopment projects in Canada and elsewhere have tackled these issues in successful ways, both through demolition and rebuilding and through renovation and retrofitting. Boston's Harbor Point, the first redevelopment project in the US

to attempt a public/private partnership, was applauded by the US Department of Housing and Urban Development as it lowered HUD's financial obligations to the aging and substantially vacant project. Informed by principles of New Urbanism, the Harbor Point redevelopment was a proof-of-concept project for HUD's extensive HOPE VI program. London's Pepys Estate regeneration project also drew upon the private sector, both to facilitate redevelopment and to manage the estate. Similar to New Urbanism, the plan for the reconfigured Pepys Estate was based on "Home Zone" principles that promote walkability and street-oriented buildings. In Canada, where limited federal funding is available for the redevelopment of public housing, Toronto Community Housing was able to leverage the value of its land holdings to raise bonds and to attract a private-sector partner.

The design portion of this thesis applies similar strategies to the hypothetical redevelopment of an enclave of OCH housing in Ottawa's Elmvale Acres neighborhood. Although lower and significantly smaller in scale than the projects referenced above, the Russell Heights complex is in need of life-cycle reinvestment and is subject to isolation and stigmatization due to the concentration of low-income residents. The goals of the demonstration plan, which incorporates a number of adjacent parcels,

included replacing all existing affordable units, improved connectivity, a significant increase in overall residential density, and a greater integration of uses. While many legal, logistical and financial issues remain to be worked out, such a strategy could prove a more sustainable option for OCH going forward, both on this site and others.

A stumbling block for the redevelopment as proposed is the modest value of the land coupled with limited mechanisms for increasing its value. The up-zoning permitted under Section 37 of the Planning Act – through which increased density and height can be traded against community infrastructure (including affordable housing) – works best where there is high demand for development. While the demonstration plan was strongly influenced by projects in Boston, London and Toronto, these are all larger cities with economies to match. More than likely it will not be feasible to use the exact system employed by Regent Park, despite the fact that Russell Manor is located in the same province with many of the same financial constraints. Land values in Regent Park were much higher due to its proximity to the urban core (although the exact value was a major point of contention prior to the actual redevelopment).

Despite challenges with land values, the idea of working with private sector proponents

is still desirable for all involved. The City of Ottawa would stand to gain tax revenues from a large development, OCH would have renewed housing stock and the private developer would make money. The exact roles and contributions of each of these proponents, however, would have to be further investigated. As was the case for the precedents in Boston and London, government grants might be needed to close the gap.

Especially where small complexes of RGI housing are concerned, I believe it's important to look at the broader neighborhood when pursuing redevelopment. City planning standards should discourage isolated, disconnected pockets of development, whether undertaken by the public, quasi-public or private sector. While fraught with challenges, the precarious state Canada's aging public housing stock offers an opportunity to reconsider the mandate of municipal housing authorities, enabling them to improve the quality of life of their tenants while enhancing the overall quality of surrounding neighborhoods. It is recommended that Community Design Plans be undertaken for all areas within a 600m radius of all OCH properties that include more than 100 units or occupy more than five acres.

Looking Back/Final Thoughts/In Retrospect

Largely for the sake of rhetorical emphasis, this thesis may have reinforced stigmas about public housing and those residing within them. Although this was not my intention, it is entirely possible that unsubstantiated assumptions and prejudices have surfaced here and there. What I failed to address in the body of this thesis are some of the good qualities of low-income housing ensembles such as Russell Heights. I experienced a strong sense of camaraderie and community when working with neighborhood children at the Community House. Everyday events, such as walking to the bus or buying groceries is a social event. There is a collective understanding when it comes to the raising of children, and neighbors are always around to help out. OCH staff assigned to Russell Heights are absolutely outstanding and always willing to go the extra mile to help out persons in need. The staff are familiar with all the residents, adding to the sense of safety and community. In fact, one of the biggest complaints I have encountered with the Regent Park development (in the form of newspaper articles mostly) is the loss of the sense of community with the scattering of tenants throughout the city.

In retrospect I would have liked to explore these negatives to regeneration more thoroughly. Terms like *gentrification* and *urban renewal* can carry negative associations, driven by fear of the loss of character of neighborhoods, including the phasing out of local businesses and the relocation of residents that contributed to the community. I would also have liked to have spent more time researching smaller-scale and lower-density housing ensembles, as neither towers nor large complexes are the norm for public housing in Canada (although at least forty OCH projects are over 100 units). As many Canadian complexes are similar in design and type to Russell Heights, I would have preferred to have put more emphasis on them and spent less time excoriating the usual suspects (e.g., Pruitt-Igoe).

With respect to methodology, it was advantageous to design and research simultaneously – something that only a designer is in a position to do. It was a good balance of theory and practice, having concurrently to find, apply, and assess general approaches to redevelopment and quantitative information such as density targets, etc. Moreover, the design process increased my appreciation for urban planning and my understanding both of the need and of the complexities associated with better design and development protocols. Also, though the relationship between the urban

planner and architect is a tricky one, the professions should be more aware of each other in order to work together more effectively. While my knowledge of the two professions is largely superficial at this point, it seems logical that they collaborate to enhance the city planning process. Again, I am not completely sure that they do not currently work together and city planning will always have its flaws. The process of this thesis though made me realize that the two are not independent and should not be treated as such.

Were this project to continue, I would work more closely with OCH to produce a pro-forma that tests this proposal and establishes a viable plan for all involved. In the absence of hard data and the opportunity to discuss strategies/incentives with City staff, property owners, residents, the development community and OCH, I have no way of knowing if this design would “work” from a logistical and financial perspective. Nor, short of actually building it, is it possible to evaluate how such a proposal might function from a social perspective. That said, I believe it’s important to put a vision out there in order to get people excited about the possibilities of regeneration; to “get the ball rolling” so to speak. My thesis is one of infinite possibilities for this site and for the redevelopment of public housing enclaves in general in Ottawa. It is my hope

that it can be used to advocate change in the mandate of OCH and encourage a more economical and socially responsible method of city-wide development.

While it is unclear what the future holds for public housing, at this moment it is bleak. The pressing need to reinvest in an aging public housing stock presents unique opportunities to realize smart and sustainable urban development. If municipalities are not willing to take the lead in redeveloping the properties they control (however arm's-length), how can they possibly encourage others to take the initiative?

List of Illustrations

- Figure 1. Robert Taylor Homes, Chicago
Accessed August 01, 2013
http://affordablehousinginstitute.org/blogs/us/2005/01/public_housing.html
- Figure 2. Typical Wartime Housing.
Accessed August 01, 2013
<http://www.erudit.org/revue/cgq/2004/v48/n133/009760ar.html?vue=figtab&origine=integral&imID=im2&formatimg=imPIGr>
- Figure 3. Regent Park South.
Accessed August 01, 2013
<http://www.skyscrapercity.com/showthread.php?t=235086>
- Figure 4. OCH Holdings over 100 units.
Google map, edited by author, photo by author
- Figure 5. Robert Taylor Homes street view
Accessed August 01, 2013
<http://wonderland1981.wordpress.com/2012/11/02/the-robert-taylor-homes-a-government-sponsored-ghetto/>
- Figure 6. Robert Taylor Homes, children playing on elevated walkway
Accessed August 01, 2013
<http://affordablehousinginstitute.org/blogs/us/2012/01/can-you-say-pruitt-igoe-in-chinese-part-2-why-theyre-doing-it-wrong.html>
- Figure 7. Robin Hood Gardens
Accessed August 01, 2013
<http://www.oobject.com/18-brutalist-buildings/robin-hood-gardens-london/7952/>
- Figure 8. Trellick Tower
Accessed August 01, 2013
http://www.photoeverywhere.co.uk/britain/london/slides/trellick_tower_concreteP1039506.jpg_orig.htm
- Figure 9. Brownsville and Van Dyck Houses in Brooklyn
Accessed August 01, 2013
<http://lightbox.time.com/2012/01/31/brownsville-brooklyn/#1>

- Figure 10. Dearborn Homes, Chicago
Accessed August 01, 2013
<http://meganrolph.wordpress.com/tag/le-corbusier/>
- Figure 11. Henry Horner Homes
Accessed August 01, 2013
<http://www.chicagoreader.com/chicago/why-did-chicagos-public-housing-fail-too-many-kids-says-d-bradford-hunt-in-blueprint-for-disaster/Content?oid=1200872>
- Figure 12. Harlem River Houses, NYC
Photo by author
- Figure 13. Polo Grounds, NYC
Photo by author
- Figure 14. Polo Grounds, NYC
Photo by author
- Figure 15. Benny Farm, Montreal
Accessed August 01, 2013
<http://www.robur.com/references/benny-farm.html>
- Figure 16. Strathcona Heights
Accessed August 01, 2013
<http://www.cmhc-schl.gc.ca/en/inpr/bude/himu/bebu/upload/Repair-Retrofit-and-Renovation-of-Strathcona-Heights-Ottawa.pdf>
- Figure 17. World Map by Author
Graphic by author
- Figure 18. Harbor Point, Boston
Accessed August 01, 2013
<http://www.harborpointonthebay.com/>
- Figure 19. Pepys Estate, London
Photo by Ben Gianni
- Figure 20. Regent Park, Toronto
Accessed August 01, 2013
<http://www.torontohousing.ca/regentpark>
- Figure 21. Harbor Point, Boston
Google map, edited by author
- Figure 22. Harbor Point after Redevelopment
Google map, edited by author

- Figure 23. Columbia Point
Google map, edited by author
- Figure 24. Harbor Point, Boston
Accessed August 01, 2013
<http://www.harborpointonthebay.com/>
- Figure 25. Pepys Estate, London
Google map, edited by author
- Figure 26. Pepys Estate towers
Accessed August 01, 2013
<http://www.geograph.org.uk/photo/2394217>
- Figure 27. Pepys Estate after redevelopment
Google map, edited by author
- Figure 28. Pepys Estate, buildings rebuilt by Hyde Housing Group
Google map, edited by author
- Figure 29. Regent Park, Toronto
Google map, edited by author
- Figure 30. Regent Park after Phase 1
Google map, edited by author
- Figure 31. Phase 1
Accessed August 01, 2013
<http://www.torontohousing.ca/regentpark>
- Figure 32. Regent Park Phasing
Google map, edited by author
- Figure 33. Russell Heights, Ottawa
Google map, edited by author
- Figure 34. Alta Vista Ward, Ottawa
Google map, edited by author
- Figure 35. Area under Investigation
Google map, edited by author
- Figure 36. Surrounding Area Buildings
Google map, edited by author
- Figure 37. Area Land Use diagram
Graphic by author

- Figure 38. Circulation and Intersection diagram
Graphic by author
- Figure 39. Bus Stop diagram
Graphic by author
- Figure 40. Location of Alta Vista Ridge
Graphic by author
- Figure 41. Alta Vista Ridge
Photo by author
- Figure 42. Russell Heights and Russell Manor within site
Google map, edited by author
- Figure 43. Russell Heights town houses
Photo by author
- Figure 44. Russell Manor tower
Photo by author
- Figure 45. Census Tracts
Google map, edited by author
- Figure 46. OCH Land Holdings
Graphic by author
- Figure 47. Existing Traffic Lights
Graphic by author
- Figure 48. Initial Design Tactics
Graphic by author
- Figure 49. Early Road Layout
Graphic by author
- Figure 50. Road Layout and Kept Buildings
Graphic by author
- Figure 51. Proposed Pathway
Graphic by author
- Figure 52. Pathway and Major Pedestrian Crossings
Graphic by author
- Figure 53. Site Plan
Graphic by author
- Figure 54. Bird's Eye View looking southwest
Graphic by author

- Figure 55. Bird's Eye View looking northeast
Graphic by author
- Figure 56. Pedestrian Infrastructure
Graphic by author
- Figure 57. Housing Types and Unit Counts
Graphic by author
- Figure 58. Housing Types and Unit Counts II
Graphic by author
- Figure 59. Possible Townhouse Layout
Graphic by author
- Figure 60. Phase 1
Graphic by author
- Figure 61. Phase 2
Graphic by author
- Figure 62. Phase 3
Graphic by author
- Figure 63. Perspective of St. Laurent Boulevard Looking South
Graphic by author
- Figure 64. Mid-Rise Block Looking West
Graphic by author
- Figure 65. Northern Park Space Looking South
Graphic by author

Bibliography

- Ballon, Hilary, Jackson T., Kenneth ed. *Robert Moses and the Modern City: The Transformation of New York*. New York: W.W. Norton & Co., 2007.
- Bennett, Larry et al., ed. *Where are Poor People to Live?: Transforming Public Housing Communities*. M.E. Sharpe, 2006.
- Bloom, Nicholas Dagen. *Public Housing that Worked: New York in the Twentieth Century*. Philadelphia, Pennsylvania: University of Pennsylvania Press, 2008.
- Bowly Jr. Devereux. *The Poorhouse: Subsidized Housing in Chicago*. Illinois: Southern Illinois University Press, 1978.
- Brunner Foundation. "1993 Rudy Brunner Award for Urban Excellence." Accessed January 5, 2013. http://www.brunerfoundation.org/rba/pdfs/1993/02_harborpoint.pdf.
- Canadian Housing Observer. "Sixty Years of Housing Progress in Canada." Accessed May 18, 2013. http://www.cmhc-schl.gc.ca/en/corp/about/cahoob/upload/sixty_years_2006.pdf.
- CCOC. "About CCOC." Accessed January 5, 2013. <http://cchohousing.org/index.php/about-us/>.
- Cisneros, Henry G. and Engdahl, Lora ed. *From Despair to Hope: Hope VI and the New Promise of Public Housing in America's Cities*. Washington, D.C.: Brookings Institution Press, 2009.
- The City of Boston and the Boston Redevelopment Authority. *Columbia Point Redevelopment Plan*. Accessed January 5, 2013, <http://ia600805.us.archive.org/29/items/columbiapointred00bost/columbiapointred00bost.pdf>.
- The City of Toronto. "Regent Park Neighborhood Profile." Accessed January 5, 2013.

http://www.toronto.ca/demographics/cns_profiles/cns72.htm.

CMHC. "Definitions of Variables." Accessed January 5, 2013.

http://cmhc.beyond2020.com/HiCODefinitions_EN.html#_Affordable_dwellings_1.

CNU. "Charter of the New Urbanism." Accessed July 28, 2013. <http://www.cnu.org/charter>.

Coleman, Alice. *Utopia on Trial: Vision and Reality in Planned Housing*. London: H. Shipman, 1990.

Colquhoun, Ian. *RIBA Book of British Housing: 1900 to the Present Day*. Amsterdam; Boston; London: Architectural Press, 2008.

Farr, Douglas. *Sustainable Urbanism: Urban Design with Nature*. Hoboken, N.J.: Wiley, 2008.

Fitzgerald, Robin, Wisener, Michael and Savoie, Jose. "Neighborhood Characteristics and the Distribution of Crime in Winnipeg." *Crime and Justice Research Paper Series* (2004) Statistics Canada, Catalogue no. 85-561-MIE2004004.

Freidrichs, Chad. *The Pruitt-Igoe Myth*. Video Recording. Columbia, MO: Unicorn Stencil, 2011.

Hall, Peter Geoffrey. *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century*. Oxford, UK: Cambridge, Mass., USA: Blackwell Publishers, 1996.

HUD. Accessed July 28, 2013. http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/communitydevelopment/programs.

Hunt, D. Bradford. *Blueprint for Disaster: The Unraveling of Chicago Public Housing*. Chicago: The University of Chicago Press 2009.

Hyde Housing. "The Road to Regeneration: Foreshore, The Pepys Estate, Deptford." Accessed January 5, 2013. http://www.hyde-housing.co.uk/client_files/library/special/ForeshoreBro_lo.pdf.

Institute for the International Urban Development. "Privately Funded Public Housing Redevelopment: a Study of the Transformation of Columbia Point (Boston, MA)." Accessed January 5, 2013. http://i2ud.org/documents/Case%20Studies/Harbor%20Point_IIUD_2008.pdf.

Jacob, Jane. *The Death and Life of Great American Cities*. New York: Random House, 1961.

Krumholz N. "The Reluctant Hand: Privatization of Public Housing in the US," in *The Affordable Housing Reader*, ed. R Tighe and E. Meuller. Routledge, 2013.

The National Archives. "Pepys Estate." Accessed January 5, 2013. http://webarchive.nationalarchives.gov.uk/20110118095356/http://www.cabe.org.uk/case-studies/pepys-estate_.

Newman, Oscar. *Defensible Space; Crime Prevention Through Urban Design*. New York: Macmillan, 1973.

OCH. "About OCH." Accessed January 5, 2013. http://www.och.ca/site/index.php?option=com_content&view=article&id=17&Itemid=32&lang=en.

ONPHA. "Glossary of Terms and Acronyms." Accessed May 18, 2013. <http://onpha.on.ca/AM/Template.cfm?Section=Glossary>.

The Registry. "What is the Registry?" Accessed January 5, 2013. http://housingregistry.ca/site/index.php?option=com_content&task=view&id=12&Itemid=26&lang=en.

Sewell, John. *Houses and Homes: Housing for Canadians*. Toronto: James Lorimer & Company Ltd. Publishers, 1994.

Statistics Canada. 2012. GeoSearch. 2011 Census. Statistics Canada Catalogue no. 92-142-XWE. Ottawa, Ontario. Data updated October 24, 2012. <http://geodepot.statcan.gc.ca/GeoSearch2011-GeoRecherche2011/GeoSearch2011-Geo>

Recherche2011.jsp?lang=E&otherLang=F
(accessed 2013-01-04).

Toronto Community Housing. "Regent Park Revitalization." Accessed January 5, 2013.
http://www.torontohousing.ca/investing_buildings/regent_park.

University College London. "Overview of Deptford." Accessed January 5, 2013.
http://www.ucl.ac.uk/urbanbuzz/downloads/projects_09/Deptford_Case_Study.pdf.