

Retrofitting Concrete Utopias:

Climate Change Adaptation for Mid-Century Housing Stock

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Abstract

Toronto is the site of nearly two thousand 1960s concrete residential tower blocks in various states of maintenance, in various locations, more or less peripheral to the major public transit corridors, housing in many cases vulnerable populations on the peripheries of the economic core of the city. Overcrowding of apartments, lack of affordability, inadequate maintenance of basic amenities has been identified as significant problems in academic and social agency reports. This paper is concerned with extreme heat events related to climate change and mortality especially for vulnerable population in these legacy towers. My contribution to this discussion takes as its framework of analysis an understanding that social processes are socio-political negotiations in uneven relative power relationships. They are political and environmental. This project is driven by concerns for the experiences of human well-being in the face of the global climate emergency, efforts at reducing operational carbon emissions, and energy consumption, for cooling especially. Comparable towers in France and Switzerland, as well as low rises there and in Germany, are examined, buildings that have undergone significant retrofitting to address these issues. The towers and site analyses are approached within their specific locations, the natural environment and the social infrastructure within which they stand. Practical learnings from European cases and current practices in Toronto lead to practical policy recommendations that aim to bolster institutional and financial capacity in the Toronto situation to address the dual crises of affordable housing and climate change mitigation.

Foreword

In my Major Paper submitted to the Faculty of Environmental and Urban Change in partial fulfillment of the requirements for the degree of Master in Environmental Studies, for the Faculty of Environmental and Urban Change at York University, I examine the problems and possible solutions in Toronto for the dual crises of affordable housing and the extreme heat events that are further evidence of climate emergency. My focus is on residents of residential apartment towers built in Toronto in the period from the mid 1950 to 1985, analogous towers built in Europe and retrofitting and refurbishment in both contexts. During the research and writing of this work I was able to deepen significantly a number of the Learning Objectives set out in my final Plan of Study (POS) from 7 December, 2022.

Learning Objective 1.2 was to understand the role and potential influence of planning practice in achieving carbon emissions reduction in both existing tower neighbourhoods and in the construction of new residential multi-family buildings. Chapters Two and Three, where European cases and existing efforts to address specific building in Toronto have, I believe, showed me the nature of the influence of the practice of planning and its interface between regulation on the one hand and community consultation on the other. Speaking to agency and planning professionals in Bordeaux and in Toronto bolstered my insights into the challenges of their efforts towards social cohesion and carbon reduction strategies.

Learning objective 2.1 was to develop a deeper understanding of how and why it is that Toronto's mass housing boom of the post-war era took the styles, forms and regulatory framework it did, their consequences, and the historical discursive shifts in their reception. I believe that Chapter One of the Major Paper delves into the development of an understanding of the tensions between the original visions of planning suburban expansion of Toronto under the influences of a modern ethos of the separation of land uses for housing, commercial and industrial spaces, while also seeking to reduce the scale of how much land housing required through the promotion of multi family high rise towers as an alternative to single family homes. This ethos was based on assumptions that were based on a progressive vision for cleaner living spaces away from industrial activity and on transportation in the form of personal automobiles

and a public transit system expansion that has been slow to follow. The consequences of this I address in Chapter Three with specific examples in the neighbourhoods encompassed under the name Jane Finch and Lawrence Orton in Scarborough.

Learning Objectives 2.2 about typology identification and international comparative work to understand Toronto buildings has been achieved, I believe, in Chapter One comparisons between the post World War Two rebuild of Rotterdam and Toronto expansion along Jane, with 2.3 about the political economy of the original apartment building being discussed in that chapter with consequences examined in Chapter Three.

Learning Objective 3.1, to understand the everyday realities of tower neighbourhood residents and issues of energy poverty, challenges they face as a result of insufficient personal resources to cover costs of energy usage, and inadequate building quality and maintenance has been, I believe, satisfied in Chapter Three on an overview level, through analysis of agency reports and academic literature analysis and on the deeper level of specific neighbourhoods through site visits and research into specific building project proposals.

Learning Objective 3.2, to understand leading strategies of sustainable urbanism through the potential of ecosystem mimicry in architecture and urban design to mitigate climate change and localized climate extremes and potential mitigation strategies to slow greenhouse gas (GHG) emissions that lead to climate change in terms of residential tower blocks of mass housing has, I recognize, been partially satisfied through the analysis of the retrofitting projects in Bordeaux, as well as the new constructions on Bordeaux's Right Bank, and the new buildings of Mulhouse and the Freiburg-Vauban district. Ecosystem mimicry in architecture was limited in my analysis to its practical application in those districts. Learning Objective 3.3, to achieve a working understanding of leading material practices of refit or retrofit techniques, and the technologies and options for affordable, scalable and effective strategies for mitigating both causes and consequences of climate change extreme events, has been, I believe, largely addressed and satisfied in the sense of an overview in the European Site Visit sections of Chapter Two and in analysis of the refurbishment of towers in the Toronto cases examined in Chapter 3. As I write this foreword and review the aspirations of my Plan of Study in comparison to the analysis presented below, while I believe I have satisfied the deepening of

my understanding as laid out in my Learning Objectives, I am of course aware of how much deeper certain elements of this project might go in further iterations, in other forms. It is my sincere ambition to further pursue the issues and the potentiality of concrete utopian thinking and practical application of the learnings shared here.

Acknowledgement of the Land

The author acknowledges that in Toronto, we are on the traditional territory of many nations including the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee and the Wendat peoples and is now home to many diverse First Nations, Inuit and Métis peoples. The author acknowledges that Toronto is covered by Treaty 13 signed with the Mississaugas of the Credit, and the Williams Treaties signed with multiple Mississaugas and Chippewa bands.

Acknowledgements

This project began as the Covid-19 global pandemic hit home for me in the loss of Professor Leo Panitch, my PhD supervisor, my friend, who died from the disease while in a Toronto hospital to address a treatable cancer in December 2020. Our last conversation was on the phone about whether he would like me to deliver take-out pastrami style trout sandwiches to him somehow despite the lockdown, and what would he think about me pursuing a career in urban planning, starting back at York University. Food delivery was not going to work for him, and he was not really able to talk at the moment, let alone eat a sandwich. Leo's intellectual rigor and clarity gave strength to a very large, international, multi-generational group of critical thinkers, as his friendship and generosity of spirit gave us hope and joy. I am humbled to call him a friend.

That dark period of loss and uncertainty was spent with a profound sense of solitude. However, it was also spent with a strong sense of solidarity with the many brilliant colleagues and friends who knew Leo, either personally, through his intellectual work, or through the work he did convening people under the auspices of the Socialist Register (SR), that august journal, "The intellectual lodestone for the international Left since 1964" as Mike Davis is quoted about it on SR promotional material. As Leo's student, assigned to organize SR annual launch events and the editorial conferences that led to planning the next volumes, I am grateful to have met many of the sharp minds whose contributions to the SR were invaluable to critical thinking about strategies for making the world more just. However, as Leo's student, I was also told to turn to his colleague and friend, Professor Roger Keil, in the development of my thesis as my own work

relied heavily on the strengths of Roger's profound contributions to the development of the intellectual force of Urban Political Ecology. Roger agreed to help me then and I am extremely grateful that he agreed to work with me as my advisor and my supervisor on this project. I hope that my modest contribution is worthy of the generosity of spirit and will that I have experienced from working with him. Thank you.

The City Institute at York University (CITY) founded by a dedicated group of people deeply concerned with issues of social and environmental justice and their expression in urban and suburban society, gave me continued support and a home base as I finished one degree, and collaborated on various local and international projects. I would like to thank all the staff there. Thanks to Professor Linda Peake who took the lead after Roger Keil, who was its first Director. I congratulate Professor Luisa Sotomayor for taking on that role in 2023 and I wish her all successes. I am very grateful to Dr. Sara Macdonald, one time coordinator at CITY, who I value as a friend and as an invaluable guide for me in my approach to this project and returning to the York University community to pursue this degree. Through CITY, and EUC, I am grateful to have met as a colleague and have as a friend, Dr. Murat Üçoğlu, whose guidance and council helped very much in navigating this process. Michael Collens, thanks you for your continued support and guidance in taking this career step forward. Thank you also to Professor Abidin Kusno, who, with Roger Keil and Luisa Sotomayor, sat on my Defense Committee for the MES Degree.

In those days of Covid-19 lockdown as we mourned Leo's solitary passing among other losses, I turned to Roger and Professor Liette Gilbert at the Faculty of Environmental and Urban Change (EUC) at York, who I thank for her encouragement to apply. That sealed my slightly odd decision to return to pursue a second master's degree as a way through my career uncertainty at that time. I would like to thank the staff and faculty of the EUC for their kindness and support. I would also like to thank my cohort of students and the graduates of the MES program, who offered mentorship and guidance, from whom I learned so much. Thank you to William Nixon (MES, 2021) for his guidance with both the City of Toronto, and with the Major Paper. I would like to gratefully acknowledge the honour of being awarded The Charles Caccia Graduate Award

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Working with Covid-19 protocols and social distancing in the winter temperatures of February and March 2021, Professor Douglas Young, now Emeritus, agreed to take walks with take out coffees through neighbourhoods of mid-century modern residential towers and talk with me about what might be a worthwhile project. I was honoured to have had Professor Young on my PhD examination committee, with Professor Nik Heynen, each of whose work continues to inspire me, among that group. I am very grateful for Doug's continued support throughout this process. Thank you for the encouragement to look more closely at what was positive about mid-century residential towers in Toronto as we walked among the many of them on the east side of Yonge Street from Bloor to Dundas, as I continue to see across this research. Many thanks to Professor Pierre Fillion, who took time to walk and talk through Waterloo, Ontario, about this step forward. Thanks to Martin Reis, aka. Martin de la Rue, for telling me about film maker Dieter Engel and his Parkdale film of 1958. Many thanks to Ric Amis, a friend of many years, who is very active with a number of community organizations in Toronto - Parkdale and shared with me the development of the alternative ownership initiatives he has been part of over the years including the artist co-operative Beaver Hall and the Parkdale Neighbourhood Land Trust, which each deserve Major Papers of their own.

In researching Toronto older residential high rises, I am deeply grateful to the staff at the Tower Renewal Office of the City of Toronto and their partners. I thank all those at the City of Toronto who spoke to me about where to look for research material and who further to approach for interviews, which buildings to look at. I applaud those efforts and hope this contribution may support this urgently necessary and complex endeavour. Thanks go to Neil Heatherington of the Daily Bread Foodbank for further guidance. Thank you to the people I met in the Jane Finch community and in Scarborough who took time for me.

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All omissions, oversights, and gaps are, of course, my own responsibility.

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Introduction

Toronto is the site of nearly two thousand 1960s concrete residential tower blocks, in various states of maintenance, in various locations, more or less peripheral to the major public transit corridors, housing in many cases vulnerable populations on the peripheries of the economic core of the city. The United Way Greater Toronto Area (UWGTA) refers to those mostly privately owned rental towers above five stories, purpose built before 1985, as “legacy” towers and they estimate there are some 1715, containing some 200,000 units, with 26 percent of these units as unsuitable, according to the Canada Housing and Mortgage Corporation definition (UWGTA 2021:10-12). City of Toronto estimates suggest there are 1887 of them (Johnston 2023). Overcrowding of apartments, lack of affordability, and inadequate maintenance of basic amenities, are identified by the authors of the United Way report as symptoms of structural inequalities that exacerbate poverty within the legacy towers (UWGTA 2021:16) in this powerful report. As Loren March writes, in a contribution to the report published as part of the *Affordable Housing Challenge Project* of the University of Toronto School of Cities: “Residents of these excluded neighbourhoods are not just faced with social marginalization, but also with the everyday challenges of aging and substandard housing, yet towers remain some of the few places providing affordable rental units to the city’s marginalized, racialized and low-income tenants, and its diverse immigrant populations. Many residents do not have other options” (March, 2022: 103-4).

I am concerned with extreme heat events related to climate change and mortality, especially for vulnerable population in legacy towers. My contribution to this discussion and my focus here is driven by concerns for the experiences of human well-being in the face of the global climate emergency for those living within them: acceptable thermal comfort within these units, the operational carbon emissions, and costs of energy consumption, for cooling especially. The towers are also approached within their specific locations, the natural environment and the social infrastructure within which they stand.

The term ‘social infrastructure’ often is set in a binary formulation to physical infrastructure—interhuman, service agency to individual versus built technical systems. This formulation of

what is social infrastructure obscures the socially negotiated nature of government agency and private investments into both community services and services such as public transit, for example, “creating arbitrary boundaries for resident and agencies in accessing resources” (Cowen & Parlette, 2014: iv). I prefer ‘social’ to refer to what Lo et al. describe as ‘public’ to step out of overemphasizing public/private dichotomies—legacy towers are largely privately owned but some are socially or publicly—but use it analogously to address social inclusion:

All types of public infrastructure – physical infrastructure such as transportation systems, water, sewer, and other utilities; health infrastructure; amenities such as parks and recreational services; knowledge-based infrastructure such as education facilities and libraries; and social services such as settlement services, affordable housing, and employment services – influence the inclusion of urban residents (Lo, et al. 2018: 4).

In writing about specific buildings and neighbourhoods I am localizing these dual challenges in specific sites, situating them within their larger socio-political and socio-natural contexts (Heynen, Kaika and Swyngedouw, 2006) in this modest contribution to critical debates within the field of Urban Political Ecology (UPE) in the “spatialized political ecology of the city” (Keil, 2020). My aims are to offer practical and practicable accounts of the approaches that have been, are being and need to be made to address what I am calling the dual challenges of housing affordability and the climate emergency that are upon us.

Extreme weather events are increasing, and without significant upgrades to this housing, resident populations will suffer. Extreme heat events, exacerbated by global carbon emissions will cause increases in mortality, especially in vulnerable populations, as happened in Chicago, 1995, France, 2003, France, Italy and Germany, 2022, Vancouver, 2022, and is happening across the US and Southern Europe in the summer of 2023. (C.E.R., 2023; Royal Meteorological Society, 2021; AP, 2023; Niranjana, 2023). Neoliberal austerity and institutional retrenchment in 1990s Chicago were part of that crisis. These are lessons Eric Klinenberg wrote about in his account of the socially mediated levels of mortality rates in the 1995 Chicago heatwave (Klinenberg, 2015). Climate change related mortality rates and catastrophes are increased by significant socially mediated factors (Mulvihill & Ali 2016)

Energy costs for maintaining habitable indoor temperatures in extreme heat events are difficult for lower income people to pay, this is especially true with insufficient heating, ventilation and air conditioning (in short now HVAC) efficiencies and building envelope upgrades in the older buildings. Yet, the older housing stock is crucial, the costs of replacement challenging. The expenditures for retrofitting, upgrading, renewing, can however, be estimated. Models exist and work has slowly begun in Europe, and even more slowly in Toronto.

Research Questions

This research has been directed by a series of interconnected questions: what were the circumstances in planning and developing Tower Neighbourhoods in Toronto at their inception in the post-war period? What were policy makers, planners, architects, developers, builders in the period of the 1950s to 1970s when these immense 12 to 16 story concrete towers were largely built thinking? From the modern planning perspective of the era, as argued below, these were utopian solutions to avoid sprawl while building affordable housing bright, clean and rational. We are well aware, of course, that the (utopian) solution of one era might prefigure the crisis of a subsequent period as David Harvey and Leo Panitch among others have pointed out (Harvey, 1996; Panitch & Gindin, 2012, Ch, 12). Toronto in 2023 is in crisis in terms of housing availability, in terms of housing prices, in terms of civic and social infrastructure and it is indispensable to look at what solutions have been put in place by state and financial actors to address previous crises.

The question: What is that legacy looking like in contemporary Toronto? stems from that observation. Writing about capital mobility seeking new sites of profitable investments are abandoning older ones when profit rates fall—a dynamic of “spatio-temporal fix” (Harvey, 2013)—Harvey’s work furnishes an understanding of how different economic sectors and the geographies of built environments rise and fall in investment terms. Cities, their infrastructure and housing stock are to be understood as “strategic sites for commodification processes . . . major basing points for the production, circulation, and consumption of commodities, and their

evolving internal socio-spatial organization, governance systems, and patterns of socio-political conflict must be understood in relation to this role” (Brenner, Marcuse & Mayer, 2012: 3). Housing, especially tower apartment buildings since in the aftermath of the 2008 financial crisis have been hyper-commodified, subject to this dynamic—with Central Bank and regulatory framework set with state involvement—in where historically low interest rates made the private financing of the purchase of larger scale real estate assets especially where rent controls had been minimized but, also, where regulation allowed for rent increases with renovation, an attractive place for corporate forms to invest (August, 2020; Gertten, 2019).

Social and environmental challenges have emerged that have made for difficulties in achieving well being in what are referred to as Tower Neighbourhoods in the Toronto context. A further question—what is to be done?¹—is directed at the legacy of the modern planning in the existing housing stock made up of these Tower Neighbourhoods. What models exist that would work here? Models for Toronto to consider are already built, or better, have been retrofit and rebuilt, in exactly the places Toronto learned its modern planning from: European antecedents. What were built as modernist concrete blocks of mass housing have in specific cases (discussed below) been retrofitted, rethought, the building envelopes reconceived, into what might be called post-concrete utopias. What can Toronto learn, emulate, and implement from the retrofitting of modernist tower blocks in France, Germany, Switzerland, the Netherlands? What socio-technical solutions have been implemented and what governance and financing models have led to sufficient capacity-building and execution skills for the retrofitting of towers there, that can be brought to Toronto? What solutions are could be affordable and scalable across the region? Who would and who could bear those costs?

These questions are not just socio-technical or can be answered technocratically. Technical knowledge can very well serve the achievements of progressive planning (Raco & Savini, 2019). Progressive planning works only if it is coupled with social justice and de-coupled from

¹ This revolutionary utopian question stems from Nikolay Chernyshevsky’s 1863 novel, well before Lenin took the title for a 1902 pamphlet. Utopian thinking in the face of socio-economic challenges, political, financial and socio-technical realities in 21st Century Toronto, I argue, is called for, but these utopias, like the socialist cooperative movement Cherneshevsky’s protagonist Vera called for, offer models.

shareholder value maximization. Mobilizing capital for investment in addressing housing and climate change mitigation has been done successfully in the partnerships we see in the European projects, partnerships between real estate investment foundations, regional and national governments and at the European Union (EU) level discussed below.

The potential transformative power wrought by technocratic urbanism is a socio-political choice with consequence to recall Erik Swyngedouw's (2004) formulation of his skepticism about technocratic solutions.² David Harvey also recognized that there were trade-offs to negotiate between social, political, and environmental projects. To paraphrase: "all socio-political projects have environmental consequences—at issue is urban political ecology with its foundational practical and theoretical concerns" (Peters, 2013: 3, paraphrasing Harvey, 1992).

The costs of doing nothing are hard to calculate accurately. Extreme weather events are hard to predict and maybe Toronto will be 'fine' despite global temperature increases and extreme weather event increases. An estimate from the Federation of Canadian Municipalities (FCM) gives the figure of one dollar invested for municipal climate change adaptation on the city scale saves six dollars in disaster recovery (FCM 2020, 7). Costs of not investing in adequate housing and thermal comfort provision would be externalized to public services budgets in the form of healthcare and emergency services expenses, increases in energy infrastructure provision capacity and energy usage costs, productivity costs, the waste of human potential and opportunity costs as was the experience in recent extreme heat events. Bernstein (2022) and Shiab and Bouchard (2022) have between them harvested and cross-referenced extensive data on spatializing heat and social marginalization in Canada, presented through a CBC interactive website with extensive data references. They count upwards of 600 deaths linked to extreme heat in British Columbia, Canada, but point to insufficient Ontario mortality data.

What can be done? This project seeks to offer recommendations that are practical and scalable across the region. There are strong arguments for ways to at least partially de-commodify and

² "In other words, the transformations in the world wrought by architects and engineers designing, construction companies building, what scientists and politicians 'empirically' and rhetorically pronounce, or defend, or commission in the name of 'disaster prevention' or 'scarcity' or 'increased efficiency' or 'development' are both material and discursive constructs where there is no relative truth to squabble over" (Swyngedouw, 2004: 25)

decarbonize housing through the mobilization of other sources of capital in the form of public banking institutions as Thomas Marois (2021) argues and institutional investors (public pension funds) to which in some combination the European retrofitting projects described below testify. Increases in Central Bank interest rates (in 2023 to 5 percent in Canada) makes the argument for the much needed capital mobilization for addressing the dual challenges of housing affordability and decarbonization more acute still. My research into European cases of radical retrofitting on the second chapter below has been partially concerned with the project of ownership and financing as well as costs and potential or actual operational and construction carbon reduction. Institutional investment models found have significant relevance for practical suggestions for what might be achieved in Toronto.

Seen from another perspective, insufficient investment in building envelope and HVAC on a building level, pushes thermal regulation costs onto the unit level – the residents. Heating, but increasingly importantly, cooling costs on the unit level are expensive. Energy Poverty (EP) frames the lived experience of people in the overlap of issues of insufficient or low income, energy costs, climate change and inadequate and inefficient housing in terms of energy usage (CUSP, 2022). Rising energy costs is eroding housing affordability. This takes money away from other necessities. Canadians pay on average 3 percent of their household income on energy. In Canada, the academic and activist literature on EP places that at six percent (Das et al., 2022; CUSP, 2019:5), double the Canadian median energy costs. Low income makes people more vulnerable to EP, but it is more than just that. The household experience of being chronically, seasonably, too cold or too hot, because of the costs of running typical air conditioning (AC) units, of upgrading them and the windows or insulation yourself, is more than an income issue or a weather issue. It has to do people having to pay a significant portion of their earnings for energy needs to live in and manage with our Canadian climate, or go without to afford their other basic costs, let alone expand their lives and thrive. Energy Poverty is where a cluster of issues meet that can harm well-being, social and economic participation in our society.

Heat and Mortality

In Canada, the “Heat Dome” Vancouver, British Columbia, experienced in 2021 (C.E.R., 2023; Royal Meteorological Society, 2021), forest fires in the summers of 2021, 2022 and 2023, and the smoke clouding the sky over cities across the Eastern side of Canada and the US, made climate change denial increasingly untenable and the costs and effects on energy infrastructure, hospitalization, and deaths, undeniable. Climate emergency awareness is strong within the European media as mortality associated with heatwaves is becoming increasingly acute and European temperature increases are higher than the global average. *The Associated Press*, carried in *El Pais*, and *the Guardian* UK, covered the release of a report published July 10, 2023, in *Nature Medicine*, led by Joan Ballester, an associate research professor in climate and health at Barcelona Institute for Global Health: there were over 61,000 deaths directly due to heat waves in Europe in 2022. (AP, 2023; Niranjana, 2023). The numbers were worse for Southern Europe: France, 73 heat-related deaths per million inhabitants totalling 4,807; but, in Spain, 237 per million or 11, 324; Italy’s was 295 or 18, 010. Germany lost 8, 173 people to heatwave related deaths (Niranjana, 2023). The total in Europe was 25,000 more than the average of the previous six years. For France, this is not new: “Possibly France drew lessons from the experience of 2003,” Joan Ballester said (AP, 2023).

France in 2003 saw 15,000 people succumb to heatwave related death. In 2003, reports then drew attention to what was also reported with this study, that vulnerable populations, especially older people—more so women than men—were subject to suffering and mortality from heatwaves (Met Office, 2023; BBC 2003). Niranjana in the *Guardian*, July 2023, finishes with a crucial Public Service Announcement: it was imperative that older people be socially connected and be checked on: “Julie Arrighi, acting director of the Red Cross Red Crescent climate centre. ‘It’s so crucial for people to look out for neighbours and loved ones – especially those living alone’” (quoted in Niranjana, 2023). These are lessons Eric Klinenberg wrote about in his account of the socially mediated levels of mortality rates in the 1995 Chicago heatwave (Klinenberg, 2015). While neoliberal austerity and institutional retrenchment in 1990s Chicago was part of that crisis, the social isolation of vulnerable populations and abandonment of

poorer neighbourhoods by social services Klinenberg identified remain of concern in 2023. Social infrastructure and sociotechnical infrastructure are deeply intertwined in any effective mitigation of the climate emergency there is no doubt is upon us (Mulvihill & Ali 2016).

Following models of this sort of development from Europe, concrete tower blocks were built in from the 1950s to 1980 to make what Toronto's Tower Renewal Partnership calls Tower Neighbourhoods, many are in clusters like a campus with some as stand alone within low-rise areas (TRP, 2023; Johnston 2023; Dennis, 1994; McClelland and Stewart, 2007; Young, 2006; Sewell 2016; Wight 2016). Stated roughly again, these towers were built to provide housing affordably at densities to avoid sprawling low-rise alternatives. Half a century or more later, with social, political and environmental challenges, extreme weather events related to climate changes that are upon us, quality of life within many of what the United Way Great Toronto refer to as "legacy towers" built up to 1985 is being significantly denigrated (UWGT, 2022: 14). Legacy solutions have created contemporary problems.

Concrete Legacies

Concrete and social liberation are linked in modernity. This modest and ubiquitous building material has been able, with reinforcement, to redefine what urbanism looks like. Its origin story in concrete industry accounts goes back to Bedouins in Syria, perfected by the Romans with the recipe lost after that Empire collapsed but rediscovered in mid 19th Century France and perfected again in the United States (Nationwide Concreting LTD, 2023; PCA, 2023). The concrete industry itself sees social liberation and its own shareholder value increase as intertwined.

The Vicat Group Website writes: "Louis Vicat revealed the secrets of artificial cement in 1817 while building a bridge over the Dordogne River, between Souillac and Lanzac, in southwest France. He filed no patent and freely give advice to the architects and contractors of his time" (Vicat, 2023). Vicat is a French based, Paris La Défence headquartered, international publicly traded corporation, founded by the son of Louis, Joseph Vicat in 1853 with Vicat family

members still involved on the Board of Directors and a capitalization of EUR 1,338 billion (<https://live.euronext.com>). Lafarge Cement is bigger, founded in 1833 by Joseph-Auguste Pavin de Lafarge with nearly ten times the employees, and is connected to the Suez Canal construction of the 1860s. Englishman, Joseph Aspdin is attributed with the invention of Portland cement in 1824, made by burning finely ground chalk and clay attribute until the carbon dioxide was removed (Giatec Scientific, 2022). Aspdin named the cement after the high-quality building stones quarried in Portland, England. In the 19th Century concrete was used mainly for industrial buildings. The first widespread use of Portland cement in home construction was in England and France between 1850 and 1880. Joseph Monier patented the technique of reinforcing concrete in 1867 in France and Francois Coignet used the added steel rods to prevent exterior walls from spreading apart in domestic architecture. In the US, Ernest L. Ransome is celebrated by the American Society of Civil Engineers for his use of reinforced concrete since the mid-1800s, and his development of ways to increase its strength. In 1884, Ransome patented the use of twisted steel bars for the reinforcing of concrete and in 1903 the 16-story Ingalls Building in Cincinnati, Ohio is named as the world's first skyscraper (ACSE, 2023). By the mid 20th century, steel reinforced concrete defined the architecture of the era.

The carbon footprint of concrete production, the building construction industry and waste.

Carbon dioxide emissions from manufacturing new concrete requires power largely from fossil fuels, and the chemical process of making the cement portion of the concrete also produces significant amounts: roughly 620 Kg of CO₂ is produced for every metric tonne of cement manufactured and 8 percent of the worlds CO₂ emissions compared to 2.8 percent from aviation (Tigue, 2022). 40 percent of global raw materials is consumed by building construction industry (BCI) while it generates about 40 percent of waste, emits about 25 percent of carbon dioxide (Oluleye et al.,2022). The process of cement manufacture involves heating kilns the size as long as a 40-storey building is high, large enough to fit a car into it with a diameter of 3.6 metres to 2,700 degrees Fahrenheit, or 1,480 degrees Celsius. "The finely ground raw material or the slurry is fed into the higher end. At the lower end is a roaring blast of flame, produced by

precisely controlled burning of powdered coal, oil, alternative fuels, or gas under forced draft” the American Portland Cement Association explain with heroic prose (PCA, 2023). Certain (unnamed) elements are burnt off, red-hot clinker is produced.

The carbon footprint of concrete disposal is being addressed in Europe with an emphasis on recycling. Estévez, Aguadoa, & Josaa (2006:1), using data from the EU around 1999 estimate “current annual production of construction and demolition waste (C&DW) is on the order of about 180 million tonnes, of which, about 28% is recycled.” Targets for recycling 70 percent of C&DW, or building construction and demolition waste (BCDW), are discussed in the Waste Framework Directive Waste Framework Directive (2008/98/EC) and a 2018 report commissioned by the Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs. The EU Waste and Construction and Demolition Waste Protocol and Guidelines came into effect 2018 (European Commission, 2018; 2023). Resource efficiencies and opportunities for the building sector are outlined in these guidelines. The market for C&DW/ BCDW in Canada is less developed as might be expected with the differences in scale between the two bodies, the two populations. The figures for percentages of solid waste produced by the construction industry in Canada in 2000 are identified as around 25 to 50 percent of municipal waste, 9 million tons of C&DW annually (Yeheyis et al., 2012). Environment and Climate Change Canada (Government of Canada) (EEEC, 2021) identifies the figure as 4 million tonnes of BCDW in 2021 without a clear account of how that figure was reached. Oluleye et al. make a strong case for the crucial importance of circular economy (CE) research and reform for the BCI as they emphasize the importance of Spain, Italy and Canada in conducting that research. The reduction of construction waste saves waste disposal fees or when recycled near building or demolition sites, which is relatively easy to do, transportation costs are less. “The extension of the useful life of materials through recycling has a cumulative advantage that spans beyond the building itself to the externalities, thus contributing to socio-economic and environmental development,” they argue (Oluleye et al., 2022:7).

Retrofitting and repurposing existing buildings, as architects Lacaton & Vassal (2022) argue and practice, would reduce further the carbon footprint of the BCI, the BCDW and any recycling

industry efforts. Existing buildings require however significant reductions in the energy consumption requirements of thermal control. Toronto-based The Atmospheric Fund (TAF) estimates that 44 percent of carbon emissions in Toronto comes from buildings (<https://carbon.taf.ca>). Like with interventions by Lacaton & Vassal in Bordeaux or Paris, discussed below, a report from 2012 by TAF underlines the site specific nature of any roll-out of retrofit strategies (Toucie, et al. 2012). Whereas the modernist apartment tower block could be characterized as a cookie cutter roll out of a certain concrete heavy urban density intensification, what is required urgently is a site specific, site by site sensitivity to the most cost effective approach to achieve both the carbon and cost reductions to domestic tower living, while ameliorating the living conditions of tower residents. The roll out of a post concrete utopia needs to be site by site, but be scalable and roll out across the region.

Concrete is an ideologically and socially mixed bag, witness large scale apartment tower blocks built in the post war period across big cities in Europe, as they were in North and South America. Concrete was shaped into buildings that were celebrated as new, clean, and bold until the buildings came to be seen as ugly and were maligned. Many were built as inexpensively as possible and not well maintained. Yet, the housing stock provided was and remains crucial; people have to live somewhere.

The architecture industry and media in Europe and the UK are taking retrofitting and refurbishment of existing buildings seriously. The Royal Institute of British Architects (RIBA) have launched in 2023 a concerted effort to promote refurbishment with an award, the *RIBA Reinvention Award* (RIBA, 2023) and the argument for CO2 reduction from the refurbishment, and repurposing of existing buildings is expressed also a cost savings on the level of both the projects and the experience of fuel costs for thermal regulation living within them. The obligatory calculation of embodied carbon in new building development is also on the British government regulatory agenda, enacted in 2013 in the Netherlands, 2021 in France (Harrabin, 2023). The UK based *Architects' Journal* (AJ) has been awarding retrofitting efforts under the rubric of the AJ Retrofit Award since at least 2012, with awards under different categories including housing. The 2021 award went to the refurbishment of 314 flats in three residential

towers in Woodside, Glasgow, owned by the Queens Cross Housing Association with work led by Leeds, UK, based Engie Regeneration (<https://www.engie.co.uk/>). The price point per unit was under GBP 40,000 (CDN 67,000) with operational carbon emissions reduced by 70 percent. Expressed in the project aims was a concern for the mitigation of what in the UK is called “Fuel Poverty”, another term for energy poverty (EP). Residents not evacuated during or after the project completion was also noted by the award judges as an important factor in the Woodside project (Wilson, 2021).

The 2023 winner of the *AJ Retrofit Award* for Housing was the second retrofit phase by the architecture practice of Mikhail Riches of the historically listed Park Hill Estate in Sheffield, UK. Sheffield-Park Hill is a high profile modernist housing estate, the product of an ethos of slum clearance and intended as social housing that looms over the city both physically and emotionally for the people of Sheffield. The Park Hill estates, roughly 1000 flats completed in 1961 designed by Ivor Smith and Jack Lynn was built as a “slum” replacement to modernism ethos of the separation of cars from pedestrians, with recreation of ‘streets in the sky.’ For Sheffield it has been a high profile feature on the skyline of the city, and a council housing project that ran deep in local imagination. Witness the recent celebration of it and working class culture living within it in the form of a musical, *Standing at the Sky’s Edge*, first performed in Sheffield, 2019 and 2022, and then to be staged again London’s West End, 2024. This cultural intervention I include here to talk about the human experiences of living within the sorts of legacy tower neighbourhoods explored too in cultural terms.

The musical, *Standing at the Sky’s Edge* is about families who lived there over generations, based on music from Sheffield’s own Richard Hawley from his 2012 album of that name (Akbar, 2023). The album is a simply gorgeous wall of sound like ballads of love and loss with flights of lead guitar soloing and a dynamic range covering a profound emotional one. The 2019 review of the musical in *The Guardian* (Kalia, 2019) features a strong image of the phase one retrofit beside an unrenovated portion of the building. The UK Grade II listed “brutalist” building, as Kalia calls it, although it is not obviously brutalist— just big and made in large part from concrete—is seen in the theatrical review to reflect the lives of its working class residents. The

utopian hopes of the 1950s are described with those very hopes declining with the downturn in the steel production industry in the later 1970s in the UK, and the post-industrial fortunes of the whole city. Current residents point to the socio-economic and demographic diversity of the phase one retrofit completed then but are also quoted by Kalia as saying it's a *Marmite* situation: you either love it or hate it. The retrofitting comes at a cost seen as high by former residents, too high for some to move back in, an irony perhaps for an iconic working class housing form. It is an indication of inadequate governance of housing prices in the financial planning of the project and eco-gentrification of once publicly owned working-class housing.

Fran Williams, writing for the AJ award announcement says: "As a project, it embodies everything these awards advocate: from decarbonisation to social sustainability" (Williams, 2023). The scheme for this phase of a further 195 units to the first phase of 260, involves a mix of market rate and subsidized housing, with the target of 20 percent "social rent" or subsidized housing hoped for (Wilson, 2022), significant upgrades to the building envelope to reduce thermal regulations cost.

Energy efficiencies achieved in the refurbishing are not accounted for in assessing total housing costs, a question worth asking for further study. But this also a part of the conflict between social and environmentalist agenda setting in retrofitting housing. The practical argument for retrofitting in the UK context is made by an AJ initiative called *RetroFirst*, trying to balance that conflict (Hurst, 2019) and promote their thinking with a social media tag of #retrofirst. In a sort of manifesto, the campaign is aimed to promote taxation incentives to promote rather than block (as it presently does in the UK), policy around existing building promotion and recycling of materials and around public procurement policies. Energy consumption is central to that argument, energy and emissions in the building process, the demolition process: the "substantial embodied energy savings made in repurposing existing buildings, compared with the ultra-high embodied energy costs of demolition and rebuild" (Hurst, 2019). Energy consumption reduction for the thermal regulation of the living space of the completed project is also part of that argument. In the North American context, the urban planning and architecture organization Urban Land Institute is promoting the retrofitting argument in its

Summer 2023 issue of *Urban Land* (Lerner, 2023; Oestreich, 2023). The reduction of operating energy consumption is there added to the account, with numbers achievable with simply upgrades as significant as 20 percent. Residential towers in North America are not yet sufficiently on the radar, but need to be.

The social aspects of the projects of retrofitting tower apartments are important, as in the Glasgow project above, the Bordeaux La Cité Grand Parc below. Hodson and Marvin have engaged with the core issues of governance of a socio-technical transition to systematically re-engineering the built environment and urban infrastructure in response to resource constraints and climate change (2013, 2016). Here, I am looking at the apartment building scale. While the aesthetics of legacy towers as they stand are not everyone's ideal, buildings that contain apartment spaces with two or three bedrooms and usable balconies, even up to the top floors, serve a needed purpose for social reproduction. One might think of family units or other social groupings who want to live together. Central cities have once more become attractive and valuable residential areas, with gentrification of the central cities into extremes as Ehrenhalt (2012) calls "*The Great Inversion*" in the American city. Sprawl containment to protect rural areas is linked with rising land costs in the European cases (Bocquet & Cavailhès, 2020). The peripheral tower blocks erected in the 1960s in Europe, as in Toronto, were also conceived as anti-sprawl strategies (Sewell, 2009). Toronto never "abandoned" its downtown core, although it has certainly gentrified it with housing costs skyrocketing, rents soaring, and the suburbs sprawling throughout the region where land is expensive everywhere. The legacy peripheral towers in Toronto are located in what are now no longer on the outskirts of built-out areas yet remain on the edges of socio-economic and political powers. Lower-middle and working classes finding housing at high densities are increasingly rendered peripheral to mainstream discussions about urban development as well as outside of position of the financial resources to make any other choices. Residents in the peripheral towers are also stigmatized, socially and politically outcast (Charmes & Rousseau, 2022: 23).

Costs associated with retrofitting perfectly solid concrete towers is significantly less than tearing down and rebuilding anew. This is certainly true where height restrictions of 12 stories

have been put on new buildings, as they have in Paris recently, with a new '*Plan Local d'Urbanisme*' adopted in June 2023 (O'Donoghue, 2023). To justify the costs of a tear down, much higher density is required to satisfy investment, as in 88 Isabella Avenue, Toronto, where a perfectly functional white brick and balcony clad 14 story tower was to be replaced with a Diamond Schmitt Architects designed 62 story condominium (Landau, 2022), taking advantage of density allowances along Toronto transit corridors, obliterating rental housing stock in the process. That project remains in the pre-construction phase at the time of writing. Downtown and transit corridors are a different market than the peripheral neighbourhoods not yet served well by public transit, and those towers are often in need of basic maintenance. Retrofits seem distant possibilities, but we must bring this discussion to the fore, under obligations for safe housing and carbon reduction simultaneously.

Rental housing in towers has become an object of corporate interest in the form of Real Estate Investment Trusts, that have, since the financial crisis of 2008, turned attention on the relative safety of the investment and the potential for returns on minimal upgrades when tenant turnover and increasingly high rents for new tenants can be done. The documentary *Push* by Fredrik Gertten (2019) outlines international levels of crisis. Tenant strikes in Parkdale including in 2023, and in July 2023 in Weston have tried to highlight what is an increasingly predatory practices of using minimal renovations and tax increases to justify rent increases well above the 2.5 percent allowable (August, 2020, Hurst, 2023). The tower at 33 King Street, Weston, is owned by Dream Unlimited, traded on the Toronto Stock Exchange with residential and office space assets under its management of 24 billion as its website boasts (<https://dream.ca/>). The Weston area King St tower features minimal quality interior or exterior finishes, but people live there and can not afford Above Guideline (rent) Increases (AGI) of 2.5 percent. The legal frameworks for protecting affordability in Toronto are difficult to manage. Rent strikes in Thorncliffe Park are being reported in mainstream Maclean's Magazine (Shea, 2023), and in the CBC in Parkdale over buildings owned by Akelius Canada — a Sweden-based multinational corporation. (Brown, 2023). These are anecdotal signals to a larger crisis, where retrofitting investment is even harder to imagine when some tenants report their elevators don't work, their balconies are not functional. Yet, investment is urgently required to achieve carbon

reduction, environmental justice and social justice. How this can work is the object of this exploration and of necessity has to be addressed in part on a building by building basis where larger opportunities become apparent. Current legal frameworks around mandating maintenance are weak in Toronto as are regulations and enforcement around energy efficiencies and carbon reduction. This is where learning from international examples can be fruitful. Governmental capacity increases in both regulation and in the provision and brokering of adequate financial tools is needed. Public money spent on private asset improvement as handouts won't work, but there are tools of public agency creation, of development banking that have worked. And can work (McDonald & Marois, 2021).

Structure

Chapter One addresses Toronto history with the planning and building of modernist high rise residential towers. Toronto is the site of nearly 2000 1960s concrete residential tower blocks in various states of sufficient maintenance, in various locations, more or less peripheral to the major public transit corridors. This section shows how Toronto adapted modernism from European examples as part of a localized cautious small-c conservative approach to what Wight insists is modern planning (Wight, 2016). I want to underline the under-realized legacy of modernism in the planning and building of legacy residential towers in Toronto and write to underpin a renewed socially emancipatory and environmentally conscious concern around them. The legacy towers are essential rental housing stock and home to hundreds of thousands of Toronto residents.

In Chapter Two, I am concerned with some of those tower projects in Europe today, projects that addressed housing shortages due the combination of wartime destruction of existing housing stock but, also, to house immigration of working people to help rebuild from the war, density issues. I am not so much concerned with those buildings as historical artefacts, but as legacy buildings that have been sites of serious efforts to rehabilitate and retrofit that legacy of 1960s residential towers, to radically retrofit existing housing stock in the face of the dramatic

effects of climate change in the recognition of the climate emergency we are all facing. Looking at European examples, I am arguing what is possible and what needs to be done around tower block renewal. Fieldwork is crucial to understand social and environmental outcomes from retrofitting interventions and in understanding the situational differences between these projects and Toronto, but also to learn from leading practices, methods and the socio-material (socio-technical) engagement with that climate emergency.

Chapter Three is concerned with the current state of Toronto's legacy towers, the communities who live there and the challenging economics and politics around the maintenance and improvement of those towers, where serious engagement with radical energy consumption reduction for thermal regulation is slow to begin. The argument for retrofitting is strong, but financial and capacity building for industry and governance are not in place in the Canadian context.

Conclusions (Four) are presented as urgent calls to actions around policy, around financing, and governance, and around facing up to challenges too long ignored.

Methodologies

This research is largely qualitative in nature and design. Inductive and deductive approaches as described by Creswell and Cresswell, (2018) into an examination of a complex of social actors, social phenomena. Case studies of specific neighbourhoods and buildings drive this research, following the understanding of case studies as “empirical method that investigates a contemporary phenomenon (the “case”) in depth and within its real-world context” (Macdonald, 2022: 43, quoting Yin, 2018, 15).

Conducting literature reviews, document analysis, site visits and expert interviews, encompass qualitative research methods used. Academic literature related to Urban Political Ecology, Energy Poverty, planning and planning history in Toronto are included in the literature reviewed. Academic literature on the building industry, on building waste disposal as well as

industry agency reports and industry analysis, government, government agency and civic advocacy group reports have informed the analysis presented here. Architecture industry and professional associations in architecture and planning reports and media coverage are all included.

Toronto Sites

Toronto sites were identified by scouting for the signage that describes a site is in the process of application for zoning changes and then researched through the City of Toronto Application Information Centre (AIC, City of Toronto Website), and through interviews where specific buildings were brought to my attention. Rental building ownership is fairly explicit in Toronto with signage promoting which company owns the building in some cases. Further research with websites that rate the rental buildings in Toronto clarify ownership and conditions, and the City of Toronto has its own *RentSafeTO* Evaluation site (CITE). Toronto has an engaged media source for planning and architecture in *Spacing Magazine* and *BlogTO* as well as an active community of professional planners and critics on social media sites such as Twitter among others. European sites were identified initially through the architecture industry media websites and on-line magazines addressing significant retrofitting work, such as *Dazeen*, and *Architects' Journal* (AJ). Site visits led to identifying the complex of representatives from municipal and regional agencies, and universities, who were interviewed and consulted for further interview subjects following the 'snowball' as methodology.

Site Visits

In total, site visits in six cities in Europe took place in April and May, 2023 and four sites were visited in multiple times in Toronto between January and July, 2023. In France and Rotterdam, Netherlands, pre-site visit research was conducted to identify and locate stands of tower apartments from my time period of interest and the neighbourhoods in which they were

located. In Freiburg im Breisgau, Germany, and Mulhouse, France, ecologically progressive low rise neighbourhoods were also researched. Relevant archives, university research unit and municipal and regional officials were contacted in advance, identified through municipal organization charts available on line, with moderate success for returned emails. Site visits included conversations with planners and administrative staff at local municipal offices, *Maries du Quartier* as neighbourhood based government offices in France, are called. Formal interviews were thus comprised of informal initial contact, identification of who would be the best contact with the most local experience, the sharing of a preprepared Discussion Guides, consent asked, and arrangements for further conversation. Archives, community centres, taking local transport, going into local shops, Bar *cafés tabagies* led to more informal discussions held spontaneously, but led to valuable insights and guidance for further steps.

Interviews

Interviews were held in person, by phone and email due to logistical reasons and asynchronous site visits to identifying and speaking to local expertise. An MES Application to Conduct Human Participants Research and Risk Assessment documentation was submitted and accepted by the EUC ethics board and care was taken in all site visits to follow guidelines outlined by the University and Foreign Affairs Canada. Doing Interview-based Qualitative Research: A Learner's Guide (Magnusson & Marecek 2015) provided helpful updates to guide my approach and discussions were initially introduced to interviewers through the sharing of a Discussion Guide I had prepared in English and French (See Appendix). Discussions were open-ended and modifications were required on a case by case basis based on the institutional affiliation of participants and themes to be discussed. The Discussion Guide explains the purpose and voluntary nature of the research to the interviewee, that their participation was voluntary and explicit permission has been given verbally or in writing. Notes were taken during each meeting, in addition to extensive email correspondence. In all interviews notes were taken but no coding took place due to the nature of open-ended conversations. Information collected through the

interviews were contextualized through consulting policy documents and other empirical literature, including news sources and government and corporate websites.

In trying to ascertain the situation of each of the sites, and as a framework for evaluation of the every-day life or experience of inhabitation of the building sites, I was concerned with the following themes or elements: relative periphery, both in spatial and socio-economic terms; social amenities within the quarter, both public and private sector; social life in public and commercial spaces within the quarter; and, most elusively perhaps, a sense of local pride of identity or efforts and measures to foster neighbourhood pride, or related to that, the obverse, the perception of the quarter from within and without. Methodologically—the first significant retrofit of a 1960s concrete residential tower I read about, one of the sites for which prestigious 2021 Pritzker Prize winning architects Lacaton and Vassal won—Bordeaux - la Cité du Grand Parc, a site visit there helped me establish this baseline of analysis. The site specific research had to begin in France to return to see Toronto for what it is – both bad and good in comparison.

Relevance for Toronto

The writing is however Toronto-centred—the joke that Toronto is the centre of the universe is appropriate here as all comparisons, all view-points come from a Toronto-centric perspective: Toronto urgently requires significant interventions into the amelioration of living conditions for the inhabitants on the peripheries of its economic prosperity. In addressing the sites covered below—in and outside of France—I have tried to account for specifics of building ownership and management in the complex of private and state actors in each but, also, civil society and state and non-state agency actors involved with daily life. Real Estate investment and community facilities investment throughout the cases have been beneficial to the communities directly involved but, also need to be understood as part of a complex of private and public actors within political and market driven incentives. In Toronto, too, investment also needs to

be understood in such a complex and if not, why not? Investment is absolutely and immediately necessary, or costs of it lack will skyrocket.

Writing about the legacy of modernism in Toronto recalls something Toronto Planner and academic Hans Blumenfeld wrote when modernism was itself the new idea. “There is always something pathetic about celebrating the birth of an idea: after 50 years tomorrow still has not become today” (Blumenfeld, 1967a: 40). Writing for the Yearbook 1948: American Society of Planning Officials, Hans Blumenfeld refers to Ebenezer Howard and the Garden City movement upon the 50th anniversary of the publication of Howard’s 1898 *To-morrow: a Peaceful Path to Real Reform*, which became known after its 1902 second edition as *Garden Cities of To-morrow*, a planning classic (Howard, 1902). Blumenfeld would play a number of important roles in the planning history of Toronto, including deputy director of the Metropolitan Toronto Planning Board from 1955, senior planner for the cities of Ottawa, Toronto and Vancouver and from 1964, faculty of the University of Toronto (Joch, 2018). He was also a great writer of essays and speeches, as erudite and positively worldly as one might expect from a biography that includes having to abandon Europe as a German Jew born to a wealthy family and a Communist with time in the USSR and the USA before spending the second half of his life based in Toronto and continuing to travel the world once the war ended.

The writings of Hans Blumenfeld themselves show a wealth of international awareness and accounts of travel among the architects and planners connected to Toronto. Blumenfeld, born in Osnabrück, Germany in 1892, while referring to Hamburg as his hometown in an essay published in 1967, is a central figure in the history of Toronto planning, as engaging U of T professor, as leading the 1959 plan for Metropolitan Toronto (Rahder, 2021). In the forward to Blumenfeld’s 1967 collection of essays, *The Modern Metropolis*, US based colleague, architect and planner, S.B. Zisman, recounts their 1949 trip together to Germany as Visiting Experts in City Planning for the US Department of Defense, Blumenfeld’s clarity of ideas of “what needed to be done and the possibilities that lay ahead” (Zisman, in Blumenfeld. 1967b: v).

An Explanation of Title: Hope, Potentiality and Concrete Utopias

The term concrete utopia is used here to signal an older tradition of hope for the “not yet” (*noch nicht*) with which Ernst Bloch (1959/1986) is associated. Hope and utopian thinking are important aspects to modernist thinking. Ernst Bloch made a distinction between abstract and concrete utopias. While abstract utopias and flights of the imagination were like fantastic dreams, concrete utopian thinking is about what is actually possible, what is actually realizable. Bloch’s thinking is clearly associated with Marxian understandings of dialectics but with an emphasis on culture, architecture, Expressionism, and collage (Brown, 2003). This Expressionist collage style of writing Bloch employed is inspirational. That and a shared love of detective fiction—George Simenon was a favourite of his and Walter Benjamin’s. “As Ernst Bloch noted, the detective novel commences with an extraordinary occurrence, whose original causes lie prior to the start of a narrative that leads—with frequent interruptions—to a revelation of these beginnings at its end” (Frisby, 1994: 90). The practice of doing site visits is not unlike seeking the dénouement of the novel of espionage and detection: looking for causes in the complex of social forces, explicit and implicit, governance and authority and financial powers over a dynamic or insider versus outsider in the cities and their inhabitants’ own agency in managing their lives. One is not looking for a smoking gun, but identifying findings in the end. Both have both influenced my methods and thinking about what is the potential for reinvigorating an emancipatory ethos in housing in Toronto. Potentiality following Bloch is of interest here, a potentiality that is grounded in socio economic and socio-technical realities.

Ravenscroft (2021) reported in *Dazeen* magazine on the prestigious Pritzker Prize for Architecture in 2021 by the architects Anne Lacaton and Jean-Philippe Vassal, the nature of that work and their other projects with a view of the important environmental benefits of their approach in terms of carbon reduction, repurposing existing concrete, and important social aspects of their accomplishments: “The modernist hopes and dreams to improve the lives of many are reinvigorated through their work that responds to the climatic and ecological

emergencies of our time, as well as social urgencies, particularly in the realm of urban housing" (Pritzker Prize statement cited in Ravenscroft, 2021).

Site visits were crucial for the evaluation of the spaces between the reports of the professional architecture industry and critical scholarship: to witness as much as site visits allow of local residential lived experiences of every-day life (to signal Henri Lefebvre (1981, 2008) (Eldon, 2004; Merrifield, 2006)) in the circumstances post 'concrete utopias' as I understand the term retrofitting to imply. David Pinder's discussion of Lefebvre and a utopian tradition in Marxian though posits: "my concern [with utopia and its politics] is with how they can embody desire for better futures through insistence that these futures are radically open, that different ways of organizing urban life and space are imaginable and potentially realisable" (Pinder, 2015:30). Nathaniel Coleman, introducing Lefebvre into an "English language discussion of utopian prospects for architecture and the city" uses as his starting point a view of the "sad outcome for ideals largely built on the 19th century Christian utopian and utopian socialist reform visions of John Ruskin (1818-1900) and William Morris (1834-1896)" what CIAM luminary Giedion (1948/1982 cited in Coleman, 2013:350) called a 'degenerate' actualization of form of the "so-called Utopian architecture of modernity, identified (mostly inaccurately) with Le Corbusier and (somewhat more accurately) with the CIAM" (Coleman, 2013: 350). Ebenezer Howard might be added to the reformers' practical faction. Coleman writes that first, the problem with using Lefebvre in the context of social reformism in the English Romantic tradition is that "he was French" (Coleman, 2013:350). Funny. But what he points to is the 1991 translation of a 1974 work, *The Production of Space*, and thus a rather late uptake of the valuable contributions Lefebvre was able to make for Anglophone thinking about such utopian prospects. Supporting Löwy and Sayre (2001) in their view, Coleman concludes the point by writing:

Associating Lefebvre with Ruskin and Morris illuminates the intersection between Romanticism—as a problematization of modernity advanced from a dislocated premodern position—and Utopia—as a way of thinking about realization of a Not Yet, or possible-impossible, achieved sometime in the future—built on actual reform efforts in the present (Coleman, 2013:350).

Interrelationships between social and architectural space is the point, and Coleman considers Lefebvre's and David Harvey's critique of a totalizing capitalism's need for mobility, destruction (of even entire city blocks) and even alienation (Harvey's (2000) spatio-temporal fix) to emphasize: "Despite the apparent intransigence of the present, Lefebvre attempted to bring reform within reach by way of a circular dialectical process—referring also to the past—for testing what might actually be accomplished" in a (Bloch) not-yet utopian mode (Coleman, 2013: 351). Coleman takes on Harvey about Lefebvre's approach to Romanticism as Harvey is against this attribution. My own approach is very prosaic: pavement pounding concrete analysis. My interest is in the utopian thinking more than disagreements about relative romantics in writing about concrete tower blocks—like looking for love in all the wrong places.

Pathos is at play (cf. Blumenfeld) in that tomorrow is still not today, real estate as share-holder value increasing rather than social good dominates our imagination of what is possible but today we have to deal with the built hulks of residential towers, we need the housing, people need a place to live and we need to radically address carbon emissions in the atmosphere as well as people's daily realities. In that sense last century's tomorrow thinking is today's problem, but today we can employ all the socio-technical means at our disposal to try again. Coleman quotes Lefebvre to highlight the importance of utopian thinking "tempered by very concrete analyses;" utopia can resist becoming abstract, assuring that the alternatives it proposes are responsive to the material conditions of the everyday (Coleman, 2013: 359):

Utopia is to be considered experimentally by studying its implications and consequences on the ground. These can surprise. What are and would be the most successful places? How can they be discovered? According to which criteria? What are the times and rhythms of daily life which are inscribed and prescribed in these "successful" spaces favourable to happiness? That is interesting. (Lefebvre, 1996: 151)

In this, I see the aspiration of all planning is utopian, the practical, the implementable. Concrete analysis of yesterday's utopian in its present manifestation under the pressures of today's challenges is urgently required.

Chapter One

Toronto modernism in historical and international frameworks

A discursive analysis of the development of Toronto modernist planning and high-rise residential building in the mid 20th century (1950s to 1970s) might be best framed as why did Toronto not listen even more to Hans Blumenfeld than it did? Barbara Rahder, writing about her one-time professor, characterizes Blumenfeld's position as: "Though he defended planners and planning expertise, he was highly critical of the form urban redevelopment was taking. He believed that planning could and should support local communities, but that development was distorted by the real estate industry, multinational corporations, and politics" (Rahder, 2021: website). How did the architects and planners understand residential density, residential tower blocks and the Metropolitan Toronto Planning Board 1959 Official Plan prepared by Hans Blumenfeld and, further, how did they understand their roles therein? How did they justify divergences? My focus here is on Toronto, how ideas, concepts and categories were formed and the process of the "diffusion of [international] planning ideas and practices" (Ward, 1999: 53) with a focus on post-war Toronto.

This section has a narrow focus of expressions of modernism in planning and, to a lesser extent, of architecture that relate to Toronto in the early post war period, the later 1950s to 1960s. My interests are in two threads. First, I ask how ideas about modernism in planning and architecture made it to Toronto practitioners, and secondly, how were they then transmitted further to architecture and even to planning students and to Toronto-centred projects. The *Journal of the Royal Architectural Institute of Canada* (JRAIC) played an important role as a channel for ideas that can be categorized as modernism come to be expressed in Toronto, and through whom. Following former Mayor of Toronto, John Sewell's characterization of 1940s and 1950s Toronto planning as "remarkably prescient" (Sewell, 2009:8-9), I argue the RAIC *Journal* can be read to understand how this prescience came to be, through how planning and architecture were discussed, taught and reported on, in the era in Toronto.

Mid-century Toronto became home to many planners and architects, either fleeing Central Europe because of the war, the genocidal racism, or the poor conditions in Europe in the war's aftermath as well as from the United Kingdom (UK) and the United States (US). Among the many figures is Blumenfeld. Yet, it is not just European men that made Toronto think and build in certain ways, but a group of connected and well travelled figures that includes Anne Beaumont, Blanche Lemco van Ginkel, Bessie M. Luffman (nee Scott), Raymond Moriyama, Mary Rose, Margaret Mary Scrivener.

No wonder the term prescient, but instead wonder at what was accomplished.

In the following, I trace this complex of influence on the roll out of ideas of modernism in planning more than architecture through first, revisiting the Journal of the Architectural Institute of Canada then through some of the biographies, built accomplishments and failed promises to ask not what were they thinking so much as what was being hoped for; how much of that emancipatory egalitarian urge Young argues is inherent in modernism remains to be seen in Toronto and how to foster the progressive urbanism that began then.

The Journal of the Royal Architectural Institute of Canada (JRAIC)

The *JRAIC* was produced from 1924 to 1973—under the original title *Royal Architectural Institute of Canada Journal* to 1959—before it modernized to be known eventually as *Architecture Canada* and *Architecture Canada Newsmagazine* using the acronym *JRAIC* comes from library convention. From 1937 to 1955, Eric Arthur, Professor of Architecture at the University of Toronto, was editor sharing a two-fold commitment to historical preservation and modern education (Sabatino, 2001). The Journal took student work seriously and promoted them. The *JRAIC* in the 1950s is a wealth of advertisements for the latest materials, the latest technologies and each issue features roughly half the pages from their sponsors and advertisers. Reports of conferences, reports on the university level of architecture education in Canada as well as reports of international projects make up regular content of the journal. The reception history of the *JRAIC* is hard to pinpoint. Gauging its influence can only be surmised. As

the journal of the professional association, its readership is significant, albeit in a narrow band of architects and planners. The October 1955 issue features a letter to the editor in response to an earlier feature on Japanese architecture from Toronto based architect, Eberhard Zeidler (Zeidler, 1955: 400). That year's volume began with an article about Le Corbusier's Chandigarh (India), written by Jacqueline Tyrwhitt (Tyrwhitt, 1955: 11). There is evidence of the journal's calibre as serious, perhaps it is also telling of certain blindness, for instance, around Tyrwhitt's role in Toronto's discussions about modernism, as will be elaborated below.

The *JRAIC* fulfilled a crucial communication function for the international and regional sharing of developments in planning and architecture. Two significant meetings took place in this era, CIAM 6 on 12, September 1947 in Bridgewater, Somerset, UK, with a significant Canadian offshoot in the Architectural Research Group of Ottawa (ARGO) and the sister groups in Montreal, Vancouver, Toronto and Ottawa (Valen, 2017; Oberlander, 1948). Not quite as international was the Diamond Jubilee of the Ontario Association of Architecture in 1949 in Toronto. Both these events were reported on in the *RAIC Journal*. I present below an analysis of learning vectors of Toronto's modernity discourse in planning and architecture through the editorial choices of the *Journal of the Royal Architectural Institute of Canada* from primarily in the later 1940s to 1950s.

Education in Modernism: University of Toronto

The 1948 May issue of the *JRAIC* reported on the University of Toronto Architecture School gaining an independence from Engineering, although keeping its links with that department (Fleury, 1948; 180). Eric Arthur, professor of architecture there since 1934 and editor at *JRAIC* was no doubt instrumental in ensuring reportage about the university architectural schooling in Canada, including the Beaux Arts in Montreal, the University of British Columbia, and the University of Manitoba with special issues focused on student work.

The April 1950 student issue reports on lectures at Convocation Hall, U of T, held by Buckminster Fuller, Marcel Breuer and Frank L Wright (vol. 27, no.4: 130). That issue covered the 5th year University of Toronto students' field trips the previous autumn, accompanied by Prof. J.A. Murray through Cleveland and Detroit to explore public housing, the work of Frank Lloyd Wright and Eero Saarinen. Another trip was taken to Tennessee to see the dam work of the Tennessee Valley Authority, returning through Cincinnati. Some of the wealthier students and Murray were able to stay at the Terrace Plaza Hotel, completed in 1984, where it is reported, they admired the murals by Miro and Steinberg and the mobile by Calder within. They were able to interview Eero Saarinen at Cranbrook in Michigan (132).

The March 1951 issue features reports of the autumn 1950 field trip through Buffalo and Cleveland, as well as the awarding of the Pilkington Glass Travelling Scholarship, also referred to as the Pilkington Glass Fellowship, to Mr. H.P.V. (Hart) Massey of CAN 1,500 (roughly the value of a master's level SSHRC grant, CAN 16,500 today) plus travelling expenses to go to the United Kingdom (Pilkington was a regular advertiser in the *JRAIC*). Massey had his "Only Half an Architecture" published in the September 1951 issue. Taking on contemporary debates of form versus function, it reads like an idealistic and somewhat pretentious paper: "function taken by itself is an insufficient basis for what is properly claimed as an art [...] Now science is a servant of man and must always be so. It can, however, only be kept in its proper place by a society whose values are of sufficient breath and altitude to subdue its assertions of omniscience" (Massey, 1951). It remains important and a profound sharing of ideas among students and already established architects that the essay be published.

The previous year, it is noted in the Journal, the Pilkington scholarship was awarded to a "Mr. Grossman," who used it to travel to many countries including "some in the Near East" (Vol 28, no. 9, 276), perhaps code for an Israel not yet quite recognized as such, having been founded in 1949. Irving Grossman graduated with his bachelor's in architecture in 1950 from U of T. His credits include Edgeley Village, the Somerset, Flemingdon Park, the Administration Building for Expo67. His is credited with the *Beth David B'nai Israel Beth Am Synagogue, 1959*, in North York

(ERA, 2011; ACO, n.d.). Grossman was also a member of the London, UK, based MARS group (associated with CIAM) and worked with architect Rudolf Michael Schindler in Los Angeles.

Modernism in Planning & Architecture

An ethos born in part from public health and the 19th century public hygiene movement as well as a stylistic movement away from the corrupted bourgeois world of ornamentation, imperialism and the destruction of Europe with the First World War ‘it’ caused, modernism remains a trickster to define, let alone separate its planning from architectural forms. From original efforts to define the ethos by the members of the first *Congrès internationaux d'architecture modern* (CIAM), 1928, at the Chateau de la Sarraz in Switzerland, through subsequent iterations, the perpetual contradictions between modernism as a social movement, for the public good, however defined, and as an elite or socially vacuous stylistic conceit, abound. Logan (2021) compares suburban developments in Toronto-Willowdale and Prague-South City to ask about the potential for a rehabilitation of a socialist modernism in both. CIAM 1 had less local Toronto resonance than CIAM 8, as Logan insightfully analyses. CIAM 6 in Somerset, is however, where, I argue below, we begin to see a Toronto relevance.

CIAM 6 and Toronto

Another layer to understand in the development and roll out of planning in Toronto has direct connections to international discussions in the pages of the JRAIC. *Le Congrès internationaux d'architecture modern* (CIAM) 6, held in the historic Somerset market town of Bridgwater, UK, 1947, restated the goals of the organization and hoped to attract younger professionals into active participation, suggests a young Peter Oberlander in the pages of JRAIC. It seemed “to be the organic growth of a revolutionary movement” (Oberlander, 1948: 201). Peter Oberlander, Vienna born, escaping fascism in the 1930s to Canada, McGill graduate in 1945, worked with Humphrey Carver as his initial secretary at the Central Mortgage and Housing Corporation

(CMHC). He went on to attend Harvard to become the first graduate of their PhD program. He became the University of British Columbia's School of Community and Regional Planning founding professor 1952 (Gordon, 2018). Oberlander's enthusiastic prose encompasses participants from the "vigorous personalities" who founded the organization "when the course of modern architecture was an uncertain one" (Oberlander, 1948). About the combination of people and place: "The flamboyant qualities of the personalities could blazen forth against an uncomplicated backdrop of sunny autumn days and crisp, autumn nights." These personalities, Le Corbusier, Giedion, Gropius, Fry, van Easteren, Roth, Sert, Fischer, all named, and others, made for a "polarity of discussion which made Bridgwater the transitory centre of the architectural world." Moreover: "The calm and placid character of Somerset seemed to crystalize the purpose of the conference admirably."

Oberlander in that article (1948) reports on the revisions of the CIAM aims from the commission led by José Sert. Scalable standards of human values in "community planning," note the term, from neighbourhood to region, from single dwellings to the community were to take advantage of the "social, economic and technical possibilities of our time." Balancing human values with the implication of industrial production, and expansion of the aesthetics of architecture and "the planning and the creation of new forms of expression appropriate to the individual and the community, within the material conditions of today" were, albeit vaguely put, part of these aims. Was this a materialist take in the political economy sense, or in the materials and technology meaning? In the search for "principles of architecture in an industrialized world," aesthetics and human values were to be prioritized together. Oberlander goes on to talk of CIAM governance and the third commission, which was subdivided into the aesthetics of architecture from, led by CIAM secretary, Sigfried Giedion and J.M. Richards and "urbanism" led by Le Corbusier. This part was about leading town planning studies into the directions of, a) neighbourhood planning and, b) regional planning. A post-graduate school of architecture and planning under the auspices of CIAM was discussed, led by Walter Gropius, with possible UNESCO assistance, with a UNESCO representative present in this discussion.

Notably absent from Oberlander's account of the first post war meeting of the organization in CIAM 6 is the role played by Jacqueline Tyrwhitt. Jos Bosman (1985), a Netherlands based architect and CIAM researcher, points to her pivotal role in bridging the Atlantic after the war, travelling between Gropius and Moholy Nagy in America and Le Corbusier and others in Europe, and her central role at Bridgwater. Tyrwhitt was instrumental in building the CIAM Architectural Summer School in 1949 and became general secretary of CIAM, in 1951.

Bosman states unequivocally: "The contacts with the British MARS group, made in this period of isolation, would bring Jaqueline Tyrwhitt into the middle of the international forum on architectural thought, namely at the meeting of CIAM in Bridgwater" (Bosman, 1985: 478). For Tyrwhitt, it was time spent with Hungarian modernist László Moholy Nagy, then director of the Chicago Institute of Design, that changed her. During the war, working with Lord Forrester at the Association for Planning and Regional Reconstruction, "developing cross-disciplinary survey techniques that could be put into practice for the physical replanning of postwar Britain" (Bosman, 1985: 478). She writes in her contribution to the 1971 book *Hommage à Giedion*:

Although I had an architectural background, my mind was almost wholly occupied with the social and economic aspects of the problem, and the world of art was deliberately disregarded. My contact with Moholy Nagy in Chicago changed all that, and when I met him again in New York with Giedion, I experienced a sort of conversion, somewhat similar to suddenly "getting religion." My eyes were opened. I continued my former work but with a different viewpoint (Tyrwhitt, 1971, quoted in Bosman, 1985: 478).

Tyrwhitt would spend time at the University of Toronto in the early 1950s trying to set up a graduate program in city and regional planning until she moved to Harvard in 1958 (Bosman, 1985: 485). David Gordon suggests the University of Toronto initially recruited Tyrwhitt, who had studied at the Architectural Association School of Architecture (AA), among other qualifications, "but she was not supported and left for Harvard" (Gordon, 2018: 79).

Oberlander recalls how CIAM principles came to Canada, mostly through English trained young architects who had come to Canada in the 1930s, some of whom had been active members of the English group, MARS.

Legacy Modernism

What modernism means to the 21st century is in part nostalgia, time lost or passed. The politics of what modernism meant erupt occasionally. In the North American, rather than European context, Nathan Glazer's later work is emblematic. American sociologist and neoconservative magazine editor (including public policy quarterly, *The Public Interest*) as well as architectural critic, Nathan Glazer, perhaps idealistically, addressed both the ethos of planning and architecture of that era in his later writing (2007) as: "Modernism in architecture and planning spoke for the people and their interests—in good sanitary housing, in green space, in access to air and light, in more living space, in an urban environment adapted to their needs and interests—and against the interests of princes, or merchant princes, or profit-minded developers. Modernism, in its origins, was a cause, not simply another turn in taste" (Glazer, 2007). Is it ironic that a neoconservative should bemoan the depoliticization of modernism, or the triumph of style over content, as he suggests? Modernism's promises, unevenly delivered, elicit complex intellectual and emotional reactions, perhaps.

Critiquing Glazer's 2007 *From a Cause to a Style*, University of Notre Dame Professor of Architecture, Philip Bess (2008) points to the function over form conceit in the ethos: "for all but the most child-like of modernist fellow travelers, modernism was never so much about function as it was about using the language of function as one more club with which to beat the decadent culture of 19th and early 20th century Europe and the architecture that (in the view of the early modernists and their growing following) symbolized it" (Bess, 2008). From Le Corbusier's promethean visions to Walter Gropius and the Bauhaus' domestic and institutional architectural and decorative arts interventions, Modernism as a style in both planning and architecture share celebration of a stylistic rationality; they share the new possibilities of construction with 20th century steel, glass, and reinforced concrete as well as the products advertised in the JRAIC. Automobility, its challenges for space as well as its capacities for spatial reach are central to the ethos. The politics of modernism span, perhaps, the continuum of centralized authoritarianisms from fascistic to Soviet (Arendt, 1973; Benhabib, 1996) viz Le Corbusier and neo-modernist *manqué*, Glazer to Bauhaus. But simultaneously modernism

sought an internationalist cooperative framework for transnational learning after the horrors of early to mid 20th century inter-imperial and global war. It sought better living conditions for the many through new building technologies and techniques; clean, bright, safe. Issues of private and public space too, were being rethought.

The transatlantic translations of the ethos are fascinating. While both sides of that ocean shared the spatialized immiseration of the 1928 stock market collapse in intensifying urban deprivation, the bombings of entire city quarters were reserved for the UK and Europe. In Canada and the US, racialized slum clearance was a hallmark of modernity (Lorinc, 2018; High, 2019; Rutland, 2018; cf. Bruce, 1934). Coventry, Le Havre, Rotterdam: all destroyed by bombings to some extent, were rebuilt in the international style. The JRAIC in this period features Rotterdam architecture in two issues (van Eyck, 1950; Elte, 1950; van der Weyde, 1952). An apartment building in Rotterdam pictured in the 1950 and 52 issue, designed by architects van Tyen and Maaskant, clearly (uncanny), resembles Toronto architecture (see fig 1. Van Eyck, 1950, Fig 2. Jane Street Toronto, 2023 and Fig 3. Rotterdam in 2023 below). In 1950s Toronto, we can place modernist influences well in the middle of that continuum, perhaps more capitalist developer side in execution, perhaps more welfare state side in planning policy.



Fig 1. Zuidpleinflat, Rotterdam. (Source: Van Eyck, (1950: 225))

In research of European cases in May 2023, further site visits included 1950s -1960s modernist tower blocks in Rotterdam, NL, with a focus on the Zuidpleinflat, the Gijsinglaan, the Maastorenflat, the Lijnbaanflats, and the apartment tower at De Plantage, Kralingen. Each building is featured in research and a website of the Post-War Reconstruction Community Rotterdam (<https://wederopbouwrotterdam.nl/>) and each still stands. Such Rotterdam post-war buildings were reported in the Journal of the Royal Architectural Institute of Canada in the early 1950s, especially the Zuidpleinflat (van Eyck, 1950; Elte, 1950; van der Weyde, 1952). What I found upon site visits across Rotterdam in May of 2023 was a mix of good maintenance and some significantly more involved renovation, primarily at De Plantage. None are slated to be at the level of retrofit of the Lacaton & Vassal (et al.) projects, but the ‘reinvigoration’ of modernist hopes and dreams are found there.

Toronto's Mid-Century Modern Planning

Many (Sewell, 2009; White, 2016; Logan, 2021; Young & Keil, 2014) have pointed to the strength and vision of forward-thinking in past Toronto planning, a city forecast to greatly increase in population already during the Second World War. “What is remarkable about the Toronto story is that unlike most other large cities in North America, it begins with a strong central planning tradition,” writes Sewell, one time Mayor of the (old) City of Toronto. Critical of who actually led development, he continues about the 1943 and 1959 plans for growth (neither can be called Official Plans): “The plans seem remarkably prescient, yet they often were ignored in both the vortex of growth and in the interplay of departmental interests” (Sewell, 2009:8-9). Sceptical of specifically the way growth was being executed in the post war period of the 1950s and 1960s, Sewell’s critique aims at execution and governance over growth in Toronto: “The intimations of growth had been met with a failure of imagination. There was a great gulf between planning and development, one that never disappeared” (Sewell, 2009: 6).



Fig 2. 2999 Jane St, Toronto (Source: Author, July 26, 2023)

Municipalities in Ontario are controversially known as “creatures of the Province” (cf. Good, 2019; Tindal & Tindal, 2000) and, thus, more or less subject to provincial level legislation around land-use and other planning concerns. Ontario’s 1946 Planning Act strengthened its 1937 predecessor, the Planning and Development Act (Sewell, 2009, White, 2016). Toronto City Council ordered its planners to prepare the required ‘official plan,’ something Sewell describes as “a workaday affair concerned with local infrastructure, and did not address the larger questions of the 1943 Master Plan or regional issues beyond the city’s boundaries” (Sewell, 2009:34). These larger questions in the 1943 plan “reflected the latest thinking of the day, as expressed by two of the most active and influential planners at the time in Canada, Eugene Faludi and Humphrey Carver” (Sewell, 2009:33). The reception of the 1943 plan was enthusiastic and its maps were on display to great public interest (White, 2019) at the Art Gallery of Toronto (now the Art Gallery of Ontario) but it was not adopted as legislation.



Fig. 3. Zuidpleinflat, Rotterdam, NL. (Source: Author, May 10, 2023)

Sewell does not mention others involved with the 1943 plan. A planning board was made up in 1942 of people appointed by the Board of Control, the executive committee of Toronto City Council on the recommendation of the Toronto Board of Trade. Indeed E.G. Faludi, a Hungarian

Italian architect (also Jewish and fleeing from fascist antisemitism) and an “established modernist” (White, 2016: 28) who had his degree (1929) from the University of Rome, was only eventually hired on as office manager of the Board to get the work done. Initial appointments included an alderman, TTC chair McBrien, the Board of Trade Chair named Tolchard, two leading Toronto businessmen, and University of Toronto Architecture professor, New Zealand native, educated in Dunedin, and Liverpool in architecture, editor of the JRAIC, 1937 to 1959, Eric R. Arthur (Carr, 2017; Biographical Dictionary of Architects in Canada, n.d.). Arthur’s influence on the journal and that of the JRAIC on the modernist ethos is significant.

The “1959 Official Plan” (Sewell, 2009), a few hundred pages with many maps, was never formally adopted but its scale and scope evidences a great increase in capacity of the planning apparatus in Toronto. Between the 1943 plan and that of 1959, neither of which were made Official Plan, is of course the creation of an upper tier municipal body in 1953 Metropolitan Toronto whose focus on infrastructure coordination for the growth of the area bridged the competencies of the various smaller municipalities. Hard infrastructure coordination to plan and execute the provision of roads, pipes and both sides of water services was required. Sewell argues a cart before horse situation with infrastructure decisions being made which determined the shape of the suburbs and his focus without an official plan. Toronto expanded none the less for lack of official plans (Harris, 2009) for reasons of institutional path dependency and developer industry oligarchs (Sorensen & Hess, 2015) and for reasons to do with the political economy of development in Toronto (Young & Keil, 2014).

Moore makes an argument for which he credits Toronto architect, Harold Kaplan (1895-1977, of the firm Kaplan & Sprachman). A Tory/ Populist distinction in this line of thinking characterizes planning history in Toronto (Kaplan, 1973). The former were the forces of reformism for the ‘greater good’ through regulatory institutionalization, rationalization, and centralization, with a clear decision-making hierarchy. The latter, municipal populism, “extolled the virtues of the average man (sic) on the street and has sought to protect him (sic) from the experts, the ‘interests’, big government, big business, and big labour” (Moore, 1979: 325). The dynamics of decentralization was seen as “keeping things close and responsive to the people”

(ibid.). A neighbourhood power broker held strings over any efforts towards a “city-wide constituency” (ibid.).

Between 1966 and 1969, a new official plan was developed and adopted by the City of Toronto. It distinguished between high- and low-density residential areas, and an important element of the plan concerned the provision of apartment accommodation for the anticipated growth in population by 1981. The delineation of areas of proposed apartment construction and associated densities was a formal recognition by the Planning Board of the reality of Toronto's residential development in the previous decade. Although the proposals were made by the Board in 1966 and justified in terms acceptable to the planners, they were in large measure an institutionalization of the City Council's policies since the early 1950s (Moore, 1979: 338).

Steven Wight's characterization of Toronto planning as a cautious modernism goes further to elaborate on how planning and execution of the development of Toronto was one where institutional compromises met development industry initiatives.

Toronto's Mid-Century Modern Planning: Ideas and Personnel

Extensive British planning experience significantly helped one get hired by the City of Toronto, as well as the Federal Government, especially the 1948 launched Central Mortgage and Housing Corporation (CMHC). In Toronto, this included Walter Manthorpe and Matthew Lawson (Commissioner of Planning in from 1954 to 1967). Dennis Barker, another ex-pat Brit, succeeded Lawson (White, 2016). Humphrey Carver from Birmingham gained a significant role in the post-war Canadian roll out of development.

Community Planning is the term Humphrey Carver, trained at the Architectural Association (AA), Bedford Square, London from 1924-29, preferred over town planning (Logan, 2021). Carver is crucial to the development of Toronto in the post war period as with his deep involvement with the Central Mortgage and Housing Corporation (CMHC) from 1948 to 1967. The CMHC's focus was on mortgage financing and provided the liquidity that stood as the backbone to the post war suburban housing building boom (Harris, 2004; Young & Keil, 2014;

Logan, 2021). Logan traces Carver's writings and intellectual development over 30 years. Tracing Carver's take on debates around architecture as instrumental, Czech modernist, Karel Teige's position and a Le Corbusier understanding of architecture as composition across a landscape, Logan writes: "Carver believed that it was the architect's or planner's job to bring a sense of aesthetics and beauty to the anonymous products of industrial civilization: apartments, highways, office buildings" (Logan, 2021: 119). This language echoes the aims of CIAM 6 at Bridgwater in the account of Oberlander above. It is also language Carver uses in part in his address to the Diamond Jubilee Convention of the Ontario Association of Architects of 1949.

The evidence for a new turn in thinking about the social aspects of planning and architecture is at the core of the JRAIC under Eric Arthur's editorial stewardship. The documentation of the essential international and regional conferences in CIAM 6 and the OAA Diamond Jubilee is invaluable material. The investigation of intellectual currents shows provincial Toronto as a city influenced and trying to incorporate the ideas and practices associated with many of the 'vigorous personalities' (recalling Oberlander, 1948) at the core of mid-century modernism.

Carver and Diamond Jubilee Convention of the Ontario Association of Architects.

Carver's "The Social Aspects of Housing" (Carver, 1950, from which the following quotations were taken) takes on the different issues of housing from a federal, provincial and municipal viewpoint. It is a substantial address for a chief bureaucrat of the CMHC, self-aware of his role. From its outset, Carver sets parameters of what is at issue and emphasizes the social needs aspects of housing as primary. He does so with a critique of other possible agendas in building housing "to avoid a good many red herrings [...] drawn across the trail." Carver admonishes those who speak of "big construction projects" that "can be used to maintain full employment or because they salvage real-estate prices." He notes the ill use of housing as a "political game of chess" between levels of government. This must be in reference to controversies around the 1948 and 1949 final amendments to The National Housing Act of 1944 that are the object of

critique here (cf. Firestone, 1950, for his speech at the Diamond Jubilee of the OAA about the differences between “economic and sub-economic or subsidized housing”). Carver also admonishes those who want to highlight with housing the structural tensions between “the rival forces of free enterprise and the welfare state.” Circling back to the CIAM debates with tongue in cheek in that same paragraph, Carver states: “Housing has also been used as the private battleground of rival schools of architectural thought, the followers of one school claiming that everybody ought to live in a skyscraper while others believe that no one can be happy without an acre of land and a cow.”

Carver takes on social hygiene debates and minimum standards of what might be reasonable accommodation. He takes on the classic approach to housing and social issues and one thinks of the Bruce Report media circuses and slum clearings it called for (Whitzman, 2009) with the surveys that are made, sub standards are identified and located: “Reports are then published, garnished with frightening statistics about juvenile delinquency, T.B., V.D., and other horrid phenomena” (Carver, 1950) These are followed by recommendations for destruction and rebuild, he concludes the thought. The gist of the speech is about local capacity building for local needs assessments and the empowerment of local authorities to establish local goals. While Logan goes so far as to call Carver a Socialist (Logan, 2021), one might think of this speech as the mid-century modern Anglo-Canadian bureaucrat speaking in the mode of socialist and satirist George Bernard Shaw’s 1883 *An Unsocial Socialist*.

Carver’s support for social housing, for which he and the CMHC under his direction are well known, was keenly matched with the attendance and participation of New York City Chief of Planning, Samuel Ratensky at the Diamond Jubilee Convention of the OAA. The June 1950 JRAIC includes his speech to the physical planning seminar (Ratensky, 1950). Ratensky was former executive director of the Housing Study Guild, from 1934-1936, in a line which included Louis Mumford, Clarence Stein, Albert Mayer and Catherine Bauer, a non-profit US organization for research into both the technical and social aspects of housing and town planning. He had studies with F.L. Wright. His address placed public housing in New York City, “past, present and anticipated” as a “major tool, immediately at hand, for the rebuilding, if not the replanning of

cities.” He pointed to NYC’s successes, “the sheer volume and extent of public housing [...] are so great that is becoming a vital feature of the physiognomy of the city.” His speech made the argument for modernism’s stylistic ethos of a certain regularity to develop plan types: “In our attempt – the goal being economy – to develop plan types with the maximum number of rooms and of dwelling units permitted by law per stair and elevator, we have perhaps made significant sacrifices of essential amenities, only to find that the simple and straight forward is also most economical.” In the form versus function framework, Ratensky concludes his address by stating that “design should be soundly based in an understanding of the patterns of life and the desires of the people to be housed, with that ephemeral and beautiful quality added which distinguishes a home from a house.” The tensions of industrial urban building, economy and human values, challenges identified in CIAM 6, were also the daily work of the colleagues of Ratensky in New York.

The address points to the lack of enthusiasm that he perceived from architects who were less interested in social housing than in stylish signature works but he saw that slowly transforming in New York. Indeed, the pages of JRAIC in this era (around 1948 to '52) have very little focus on apartment building projects. This begins to change somewhat; the 1955 October issue features residential towers by architects Venchiarutti & Venchiarutti, Ruben Fisher and the Toronto firm of Page and Steele (p 368, fig. 4).

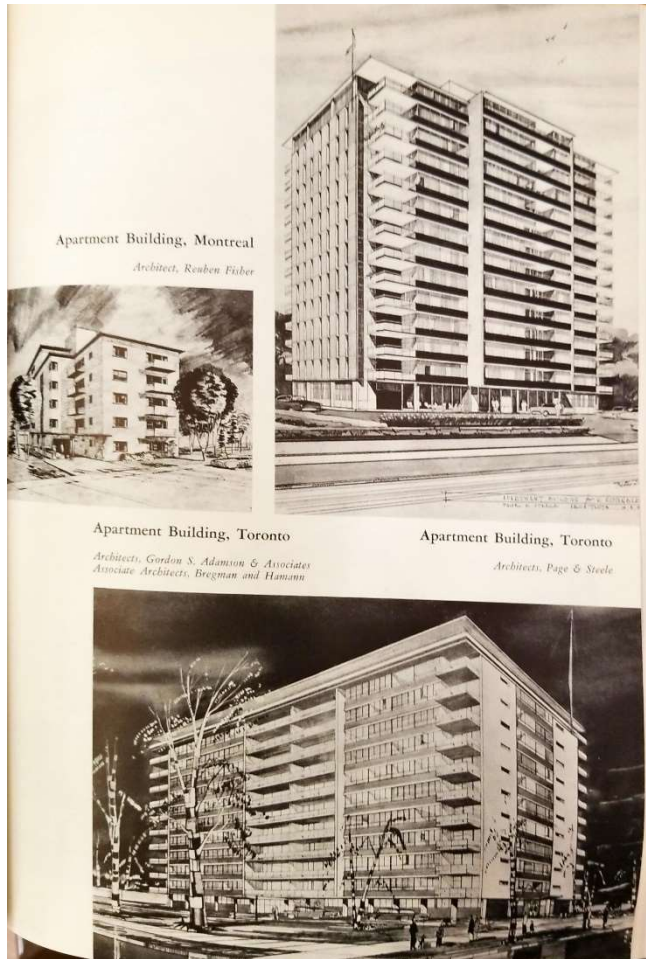


Fig. 4. Toronto residential towers by architects Venchiarutti & Venchiarutti, Ruben Fisher, Page and Steele. (JRAIC, October 1955: 368).

Historical (and unhistorical) figures central to Toronto planning

There are a few strands already identified that require further research: the JRAIC discourse from modernism as ideals to actual projects executed and critiqued, within the editorial role of Eric R. Arthur to 1957. The bench strength of the students being developed by the schools of architecture in Canada was not yet realized,

but it is clear the pedagogical drive of these schools, their professors of architecture, and of urban and regional planning, and the support of the JRAIC, was crucial to the development of the best of what we can call a Toronto vernacular of modernism. The publication of architectural student work, awards, and even juvenile essays shows a model of multi-faceted support for the development of modern ideas with some degree of social over form concerns. The inherent sexism in the journal reflected a troubling lack of inclusion of women in planning discourse. That Julia Tyrwhitt left Toronto for Harvard for lack of support, as Gordon argues, and that there are hardly any other women in the Toronto story at the JRAIC, is as inexcusable as it is expected, but in this turn of the 1940s to 1950s indeed a brave new world was in full potential for Toronto in terms of its planning, its housing solutions, its architecture.

Sue Hendler's 2017 book (with Julia Markovich), *"I was the only woman"- women and planning in Canada*, frames exclusion in planning history of the agency of women in Canada as a matter

of issues of power in social structure. Her work advocates for an inclusive approach to history, one which “would highlight women to correct for their previous absence [from traditional planning history, which excludes them], analyse events in terms of their impacts on both men and women, and discuss both women and events in context so as to problematize issues of power beyond sex and gender ... These resulting histories can, by enhancing our understanding of power, agency, and change, contribute to our abilities to alter the future course of events and accompanying structure in society” (Hendler, 2017: 19). I quote at length to highlight the question of power, agency, and the capacity to make changes happen. Some of the names of the people who played pivotal roles in shaping Toronto planning and projects are better known and have been given biographical credit. Blanche Lemco van Ginkel (1923 - 2022), born in London, England came to Montreal, to graduate in 1938, with her McGill Architecture (undergrad) degree. She completed her MA at Harvard in City Planning and won in 2020 the Gold Massey Medal for Architecture for significant life time achievement (Adams and Southcott, 2020). She famously worked with Le Corbusier designing the roof architecture, two iconic concrete ventilator stacks and the nursery, of the *Unité d'Habitation* in Marseille, France. (Hendler 2017: 110). She became Dean of the School of Architecture at the University of Toronto (and in 1980, Dean of the Faculty of Architecture and Landscape Architecture). She continued to teach there until 1993 (Lam, 2022, Canadian Architect Blog).

A lesser-known figure, Bessie M. Luffman (nee Scott) (1891-1955) was a member of the Toronto Housing Authority and the Toronto Planning Board and was known to be a person of power and influence in addressing issues of housing and planning more than architecture. She was active in the planning of the Regent Park project of social housing. Although the project execution was controversial and architect Peter Dickenson's towers were seen to embody everything bad about tower blocks, Luffman recognized the social stratification of her Toronto with what Hendler attributes to a 1949 public speech and calls her rallying cry: “There are two groups in Canada: the minority who have the means to pay for housing, and the majority who cannot possibly pay” (quoted in Hendler 2017: 110). I emphasize individual biographies at the danger of downplaying structural issues of social power and the dynamics of municipal planning. Regent Park was built as a downtown (east) slum clearance project, recognized as a 1950s

social experiment that “failed” in a 2003 report (Meagher & Boston, 2003: 6) by Toronto Community Housing (THC), which took over ownership from the Province of Ontario in 2002. The report emphasizes learnings from the past and a new process of community consultation taken upon the beginnings of a radical tear down and rebuild of the area. Learnings from Regent Park in its initial development influenced how the tower projects of social housing proceeded in Toronto (Wight, 2016; Sewell, 2016) to keep projects smaller and open to the streets surrounding them rather than attempting self-sufficiency as a campus model which, when executed without the community facilities and services, kept residents somewhat closed in. The 2003 THC report emphasises architectural form of the original master plan, rather than other structural factors of social infrastructure.

North York Modern Planning and Execution

Looking at green field builds in 1950 and 1960s of peripheral Toronto, the building of high-density towers was done without ambitions to combine housing with social services and community facilities into one campus but, rather, keep housing separate and commercial and community services built into what are called malls and smaller plazas. Outside of areas deemed in need of redevelopment, 1950s Toronto was still facing a housing shortage and affordability crises. The 1954 formed Metropolitan Toronto level of government undertook a number of initiatives to address this. Social housing as well as private sector development were built in peripheral areas across the new Metro where larger tracks of affordable underdeveloped land were available at the scale required to build mass housing towers as well as detached and semi-detached low rises, including in the Jane and Finch area in District 10 of Metro Toronto’s 1964 plan. The experiences of this area are shared by developments in other greenfield areas such as Scarborough, and in the expansion of the village of Weston into a suburb in the era.

Partnerships were built between the federal Central (now Canada) Mortgage and Housing Corporation (CMHC) and the Province for social housing projects across the Metro region, with

a larger roll out enabled by federal support through the 1964 National Housing Act (NHA) and simultaneously launched the Ontario Housing Corporation (OHC) in a federal provincial partnership effort (Young & Keil, 2014; White, 2016, March 2022). At the time, these were considered forward thinking experiments in urban planning and financing aimed at building a city of tomorrow. The kind of modernist planning articulated by the CIAM group might best represented in Jane and Finch is at what was called Edgely Village on Driftwood Avenue East of Jane Street and south of Steeles Avenue; Edgely was designed in 1967 by one of Canada's then leading architects, Irving Grossman (Boudreau, Keil, and Young, 2009). The neighbourhood was planned with a mix of high-rise buildings and townhouses, private and public housing, and a separation of pedestrian routes and vehicular routes. A significant difference between that project, the other towers, and commercial and social services from the high modernist models is that accessing community facilities tends towards walking along major road ways.

The neighbourhood was different from old Toronto in more ways than one. By 1975, roughly a quarter of the dwelling units in the ward to which Jane and Finch belonged were publicly owned. In contrast, just 10 percent of Toronto's housing stock was publicly owned. Just six years earlier North York City Council planned for 50 percent of all dwelling units to be in high rise units (Boudreau, Keil, and Young, 2009). Jane and Finch came in tall, dense, and suburban. The plans were smaller, public sector largely and not of the scale however such as Don Mills to the east.

The Pearson government overhauled the country's immigration system, establishing a less racially exclusive merit-based points system. Previously restrained from entry, immigrants from Africa, Asia, and Latin America came to Canada to find brand new affordable housing in Jane and Finch. Already physically distinct from a Toronto increasingly in love with its own urbanism and urbanity, Jane and Finch became racially distinct. In a city of fully detached homeowners, Jane and Finch seemed a world turned upside down. As governments increasingly backed out of their commitments to public housing, the need for repairs to decaying towers and parks became increasingly obvious. While public funds trickled away from Jane and Finch with provincial funding changes to social housing in the 1990s, and the amalgamation of the city into



an expanded City replacing the Metro level, Toronto became increasingly anxious with the influx of visible minorities. Jane and Finch, Scarborough, Weston, became increasingly racialized, increasingly stigmatized, cast as the city's centre of violent crime on the periphery, echoing how Charmes & Rousseau (2021), Tchoukaleyska (2019) and Kipfer & Dikeç, (2019) characterize peripheral France.

Fig. 5. Royal Court Apartments, 165 Jameson Avenue, Toronto. (Source: Author, March 28, 2021).

Modernism and Silent Film: Views from Modernist Jameson Avenue, Parkdale

Dieter Engel, amateur filmmaker, and main character in his self-produced and directed short 8mm film is shown driving down Jameson Avenue at the 0:1:11 mark of *The Big Step*, 1958. Engel, according to his son Hans, as told to photographer and artist Martin Reis, immigrated to

Toronto that year and made the film to show his first apartment (H. Dieter, 2012; Reis, 2020). At 0:1:39, filmmaker-hero parks his mid-century modern BMW Isetta and steps out of the small car's forward facing car door by the Royal Court apartments on Jameson Avenue. The camera pans down the street. It is one of many "mid-century modern," mid-rise apartment buildings on this stretch of road, alternative housing to the formerly stately homes in Parkdale, many of which had by 1958 been converted to multi-unit and rooming houses (Laycock & Myrvold, 1991; Slater, 2004; Sutter, 2016).

The Big Step features neighbouring residential street scenes and the porched homes of South Parkdale which contrast with the Royal Court and its neighbouring apartment buildings, Lugano View, Bel-Manor Apartments, Ashgrove Apartments, Carmel Court, Shoreliner Apartments, Westover Manor, Leopold Apartments, and more (UrbanDB, 2008). This stand of mid-rises dates from the post-Gardiner Expressway construction in the 1950s—that section under construction from 1956 to 1958 (Globe & Mail, 2015, 1958). The demolition of the lower end of Jameson Avenue for that roadwork led to further replacement of those homes with those rental mid-rises (Mutrie, 2010; Whitzman, 2009). This stand of mid-rises, with their proportions, their modest yet distinct elements of geometric brick work ornamentation, airy units with regular balconies, are one of the forms Modernism in Toronto took in architectural style in the era.

Whitzman's Parkdale history traces it from floral suburb through, citing the Bruce Report, "becoming a serious slum" into what Parkdale became in the 1990s and 2000s (Whitzman, 2009: 104, citing Bruce, 1934:23). The Report of the Lieutenant-Governor's committee on housing conditions in Toronto, known as the Bruce Report for its convenor and Chair, His Honour Dr. H. A. Bruce, Lieutenant-Governor of the Province of Ontario, focused more on Regent Park and the Ward areas of Toronto. However, it addressed Parkdale too. Citing issues of "economic deterioration of what was formerly a prosperous district of quite large, substantial houses" (Whitzman, 2009: 104, citing Bruce, 1934:23), south Parkdale was included in the slum clearance recommendations in the report (cf. George, 2011). That is, addressing social decay as a result of poverty and related overcrowding of the larger homes with multiple

sub-units—inhabited by often “foreign” families, with somehow related family unit breakdown, plus hygienic issues related to that and the nearby rail and automotive traffic and factories—was approached through recommendations for housing type replacement and ‘rationalization’ to paraphrase Whitzman. The report intimates that planning for new forms of housing is a forum for the discussion of social regeneration. Whitzman notes: “The reaction to the report’s description of Parkdale is as startling as the description itself: there was none” (Whitzman, 2009: 104). It exemplifies planning historian Richard White’s thesis of Toronto and its cautious modernization; that is modernism in Toronto was taken cautiously (White, 2016: 188).

This is another one of the forms modernism took in Toronto planning. In this case, in Parkdale, it is expressed more rhetorically than in wholesale action. While South Cabbagetown became Regent Park, and the Ward eventually became the New City Hall, both were subject wholesale to action in that decade into the early 1960s (White, 2016; Lorinc et al., 2018). In South Parkdale, the rebuild that took place in the 1950s was largely focused on Jameson Avenue from the lakeside railway line to Queen West. These buildings were all private sector builds and not social housing, which began later in Toronto with the involvement of the Central Mortgage and Housing Corporation, only newly established in the later 1940s. This particular stand of modernist apartment blocks has not fared very well for lack of substantive maintenance, although cosmetic repairs have in certain cases been carried out by the new private owners. The location of other stands of mid-rise mid-century modern mass housing in Toronto are often not sufficiently supplied with the public transit options Parkdale has.

Parts of Toronto in the period (witness Engel’s 8mm film) look remarkably familiar to what can be seen at this time of writing. The pages of advertisements of the JRAIC are uncanny in this continuum of levels of familiarity. Advertisements for companies familiar such as Honeywell and Trane (HVAC), Standard-Dominion (plumbing), Amito (rubber flooring), Flexachrome (vinyl-asbestos tiles) are aimed at the industry with their modern building equipment and products.

Multi-family housing in Toronto met with resistance initially but it is in the later 1950s and 1960s that the building form began in earnest. It is in this era that we might see what modernism what meant to be, how it was meant to be experienced. In *The Big Step*, the look

and feel of the protagonist's new flat at 165 Jameson Avenue, apartment 509, is clean and modern, his new lamp is very Danish modern. His rent is "\$100 dollars" and the year on the cheque confirms that it is 1958. He has access to new laundry facilities that are efficient and even has a modern electric clothes dryer (Engel, 1958: 0:7:44). His shower is hot (0:8:44). As he sits down, clean in a crisp button-down red shirt in his modernly furnished living room, having a vodka cocktail, relaxing after the work of moving in, in front of his modern television set (0:9:28): the aesthetic is authentically mid-century modern as a style of living.

Chapter Two: Concrete Utopian Field Work

Concrete and social liberation are linked under modernity. This modest and ubiquitous building material has been able, with reinforcement, to redefine what urbanism looks like. Concrete is an ideologically mixed bag, witness large scale apartment tower blocks built in the post war period across big cities in Europe as they were in North and South America. Concrete was shaped, misshaped, celebrated, or maligned. The housing stock provided remains crucial; people have to live somewhere. Part One has addressed Toronto modern planning history with its international influences and how it learned its modernism from European examples as part of a localized cautious small c conservative approach to an international approach to mass housing. In Chapter Two, I am concerned with radically retrofit existing housing stock and not with those buildings as historical artefacts but as legacy buildings that have been sites of serious efforts to rehabilitate and retrofit that legacy of 1960s residential towers. Looking at European examples below, I am arguing what is possible and what needs to be done around tower block renewal. Fieldwork is crucial to understand social and environmental outcomes from retrofitting interventions and in understanding the situational differences between these projects and Toronto. However much one jokes about Toronto as the centre of the universe, and however travel and site visits open the mind, comparisons to, and connections with, Toronto seem inevitable and strangely ubiquitous.

In conducting a series of site visits to residential apartment towers that have been recently or are still undergoing extensive retrofitting work in Western Europe in April and May, 2023, I was concerned with a series of issues not typically addressed in the architecture industry journals and reportage about significant retrofitting of apartment tower blocks. The architecture and retrofitting accounts address core issues of design and building techniques, energy and carbon reduction through various technical means, and make the case for the value of not destroying already existing concrete as a counter argument to previous eras of urban renewal through socially disruptive slum clearance (think Toronto, Regent Park in both its 1950s and 2002 forms). Peripheral tower neighborhoods in France, the Netherlands, Switzerland or Germany

are of course embedded in very different historical, imperial-colonial, socio-economic contexts, yet being among the towers in these sites was simultaneously familiar during my field visits.

At the time of writing, July 2023, peripheral France – characterized in the UK based *Guardian* and French *Le Monde* as largely under employed youth of non-white French heritage living on the margins of white rich France in suburban often tower neighbourhoods are rioting about the racial injustices perpetrated on them by French police. Central authority in France—Macron and politicians of the right wing in France—are proving the rioters correct by sending in more police, making thousands of arrests.

Informed about peripheral (modernist) apartment living in France by the important work of Mustafa Dikeç (2007) and of Dikeç and Kipfer (2019), it was Roza Tchoukaleyska's reports (2019) on her research that prepared my expectations of the social marginalization of modernist tower block complexes in the French banlieues. Charmes and Rousseau (2022) point to sprawl containment as a contentious political imperative, a moral consensus amount professionals "emerged, obliterating discussions along lines of class, race or other distinctions of social and economic power (Charmes & Rousseau, 2022: 23). While central cities have once more become attractive and valuable residential areas, sprawl containment to protect rural areas is linked with increasing prices for land rent. The peripheral tower blocks erected in the 1960s in Europe, as in Toronto, were also conceived as anti-sprawl strategies. Lower-middle and working classes finding housing at high densities are increasingly rendered peripheral to main stream discussions about urban development as well as outside of position of the financial resources to make any other choices. Residents in the peripheral towers are also stigmatized, socially and politically outcast. In France, the malignant view of peripheral tower residents as criminal and/or dangerous further pushes them out, racializing police practices adding violence to the experience of peripheralization. The architecture literature about retrofitting buildings is discomfortingly uninterested in issues of race and class in the neighbourhoods around the celebrated buildings. Site visits were crucial for the evaluation of the spaces between the reports of the professional architecture industry and this critical scholarship: to witness as much as site visits allow of local residential lived experiences of every-day life (to signal Henri

Lefebvre (1981, 2008) in the circumstances post ‘concrete utopias’ in post-retrofitting (Pinder, 2015). In this I see the aspiration of all planning as utopian, the practical, implementable, utopian.

In the face of these July 2023 riots, it becomes starker how foundationally important the civil society and social infrastructure aspects of tower neighbourhoods are and that the amount of central state investment made in how these towers *look* is not sufficient for addressing what it feels like to live in and among them. Francois Dubet in *The Conversation* (2023) points to old patterns of rage in France along racialized lines that are spatialized in areas that are peripheral to the polished France of photo opportunities with Macron, the French President. Importantly, Dubet writes of the investment that the French state has made and supported for neighbourhood improvements across France over the past 40 years. “It would be wrong to say that these neighbourhoods have been abandoned” Dubet writes, yet, “the social and cultural diversity of disadvantaged suburbs has deteriorated” (Dubet, 2023). Those with more social mobility leave the peripheral areas as soon as they can afford to. Like Dubet, I have tried to look at factors in the projects below that strive to break down barriers to social inclusion beyond simple infrastructure investment in trying to understand the complexity of exclusion in the current French cases and the contemporary polarized French political landscape, where overt racism plays on the right of the political discourse and paternalism is mixed with police engagement, the teenagers involved in the rioting are demonized as foreign elements in the political commentary (Lichfield, 2023).

In addressing the sites in and outside of France, I have tried to account for building ownership and management in the complex of private and state actors in each, but also civil society and state and non-state agency actors involved with daily life. Real Estate investment and community facilities investment throughout the cases have been beneficial to the communities directly involved but, also, need to be understood as part of a complex of private and public actors within market driven incentives. Mapping unrest as news outlet *Al Jazeera* has done (AJ Labs, 2023) to the specific sites of retrofitting the legacy towers is not within the scope of these accounts although it would be a significant item on a further research agenda. The sites of

retrofitted legacy towers seem not to match the sites of significant destruction, but in no way is this proof of correlation.

Sites and Methods

Architecture (2019), *Architecture Daily* (Walsh, 2019), *Arquitectura Viva* (2018), *Renovate Europe* (2019), *Icon* (2021), *Dazeen* (Frearson, 2019; Ravenscroft, 2021), and popular news sites such as the *Observer* (Slessor, 2019) have focused their accounts on prize winning retrofit projects, primarily in Europe. Important to these accounts of retrofitting are crucial environmental concerns. More or less explicitly, the architecture and retrofitting profession discourse understands that building material disposal needs to be factored into the environmental and financial equation of the carbon-heavy production of new buildings where older ones stood. In this section, I elaborate on significant findings from recent site visits within their broader context within their quarters, and the municipalities they are more or less integrated within, or peripheral to.

Each site was initially identified with the help of those industry journals and magazines. Each visit is identified and elaborated upon in a situation by situation way, from west to north to south and east. Methodologically, I was operating along railway transportation logistics: (almost) all trains across France must go through Paris. My site visits were at the eastern and western extremes of it as well as its neighbours. My research had begun with reading about La Cité du Grand Parc, in Bordeaux, France, with retrofitting work completed in 2017-2018 by architectural firms, Lacaton & Vassal Architects, Frédéric Druot Architecture and Christophe Hutin Architecture. *Dazeen* magazine (Ravenscroft, 2021) reported on the prestigious Pritzker Prize for Architecture in 2021 by the architects Anne Lacaton and Jean-Philippe Vassal, the nature of that work and their other projects with a view of the important environmental benefits of their approach in terms of carbon reduction, repurposing existing concrete, and important social aspects of their accomplishments: "The modernist hopes and dreams to improve the lives of many are reinvigorated through their work that responds to the climatic

and ecological emergencies of our time, as well as social urgencies, particularly in the realm of urban housing" (Pritzker Prize statement cited in Ravenscroft, 2021). The retrofitting project is seen as the necessary environmentally conscious responses to the social justice associated with the original modernist housing construction.

To understand each of the sites, I developed a framework for evaluation of the every-day life or experience of inhabitation of the various projects. This framework contained the following themes or elements: relative periphery, both in spatial and socio-economic terms; social amenities within the neighbourhood, the district, or quarter; both the public and private sector; social life in public and commercial spaces within the quarter; ownership, and, most elusively perhaps, a sense of local pride of identity or efforts and measures to foster neighbourhood pride, or related to that, the obverse, the perception of the quarter from within and without. Methodologically, more than simply because it was first on the itinerary—the first I read about—is the site of the prestigious 2021 Pritzker Prize winning edifice, also furthest west and thus first to visit, Bordeaux - la Cité du Grand Parc, which helped me establish this base-line of analysis.

The architecture press have also focused their accounts on the winning of a previous prize-- the 2019 European Union Prize for Contemporary Architecture – Mies van der Rohe Award. Important to these accounts is the carbon reduction techniques employed in the retrofitting which are crucial to environmental concerns. A number of the buildings that make up *la Cité du Grand Parc* have undergone extensive work in the form of the addition of a supra-skeleton of steel and movable glass panes to the concrete exterior walls among other work aimed at the building services infrastructure – elevators, HVAC, and roof work. To some extent, residential quality of life is addressed most by Sleesor (2019) through stylistic and technical elements in the retrofitting of the residential units.

In addition and subsequent to establishing a base-line of analysis with Bordeaux *la Cité du Grand Parc*, site visits continued to Paris. *La Tour Bois-le-Prêtre*, in the 17th arrondissement, has also been retrofitted as a project of the architectural firms, Lacaton & Vassal Architects,

Frédéric Druot Architecture, completed in 2011, as reported in *Dazeen Magazine* (Frearson, 2013).

The Mulhouse, France, *Cité Manifest* project follows. Initial justification for this site comes in terms of Lacaton & Vassal Architects involvement in this social housing low rise scheme. Site visits allowed me to come across other tower blocks under renovation, to be discussed below. Freiburg-Vauban, Germany, also called the Quartier Vauban, concludes the site visit accounts in Europe.

The largest social housing blocks in Switzerland are undergoing retrofit: a complex of buildings at the northern end of the Line 7 municipal bus line in Geneva-Vernier, Le Lignon. It is 17 and 18 stops to the north west of the city core: Vernier Lignon-Cité and Vernier Lignon-Tours. The complex takes the form of two tower blocks of 26 and 30 storeys and a 12-18 storey linear 'bar' building more than a kilometre long (*Icon*, 2021). It's relative success as a neighbourhood comes from a mix of demographics, social and physical infrastructure investment where it is well connected with transit and has an integration of shops, medical services, schools and churches, walking paths, and parking for cars and bikes.

Bordeaux - la Cité du Grand Parc



Fig. 6. La Cité du Grand Parc, Bordeaux from the south (Source : Author, May 2, 2023)

The *Quartier du Grand Parc* in which La Cité du Grand Parc makes up only a few of the many towers there, is located to the northwest of central Bordeaux. It is a 15 to 20 minute tram or bus (the C tram or 15 bus) ride from the institutional and financial core of the city. There are many high-rises in the area there. The retrofit towers by Lacaton & Vassal, et al. are three towers and are highly visible from the central *Pont du Pierre* that traverses the Garonne river as they gleam with shiny glass in the distance. Unlike stands of mid-century tower blocks in say, *les Hautes du Bayonne*, Bayonne, well away from that city centre (personally visited), or outside of

Montpellier (Tchoukaleyska, 2019), Grand Parc is as close as four stops from the main tram exchange at the *Pôle d'Echanges Quinconces*, a short walk from the *Place de la Bourse*, the showpiece historic landmark overlooking the river. On the tram or by foot, the route travels along the stately avenue of the *cours de Verdun*, by the 18th century Jardin Public, designed by landscape architect Ange Jacques Gabriel, from its creation in 1746, conceived of as for daily public access, gated off as dusk descends (Bordeaux, 2023a).

The route continues alongside the largely two-storey gentrifying quarter of Chartrons, with its boutiques and restaurants, its market hall and surrounding bars with outdoor seating. The route then angles up into an area of historic working-class row houses, one, two or occasionally small three floors, much of it made of the same yellow sand coloured limestone used in the historic centre of Bordeaux. Elements of ornamentation of stone are seen above stone door and window frames on even the most modest residential buildings. The approach from the tram to the Place d'Europe, Gran Parc's centre, transitions from these historic low rises through to the tower blocks quickly, passing through newly built corrugated steel-clad mid-rises with ground floor commercial spaces, including a *tabagie* with coffee and magazines, and the locally famous Yoyovidéo DVD rental, run by long time resident Jean Peyre. To the southwest of Yoyovidéo towards central Bordeaux are school (*Gymnase*) facilities including one of a few well-kept football pitches (soccer fields) in the quarter. To the northwest are the three towers, G, H and I, the signature award winning retrofit intervention of Lacaton & Vassal Architects, with Frédéric Druot Architecture and Christophe Hutin Architecture (Lacaton & Vassal, 2017; Ravenscroft, 2021) at *La Cité du Grand Parc*, 10 to 15 storeys containing 530 units of the 4000 odd units of *La Cité* all together.

These towers are distinct from the neighbours in their gleaming glass and whitewashed concrete, cast concrete triangles and ground level holding up steel frames upon which external enclosable terraces or balconies have been erected. Exterior insulation was added to the sides of the building and thermal treatment of the roofs was carried through. External elevators replaced those internal to the building to create additional space for some of the units (Lacaton & Vassal, 2017b). These balconies, Lacaton & Vassal use "winter gardens" for these flexible

spaces, are on average 3.8 m deep on the south façades of two of the buildings and on two façades of building G. They make up additional 23 500 m² to the 44 210 m² pre-existing total of the three buildings; thus, each unit gained more or less one-third larger private usable space. Eight new units were created in the transformation. This external skeleton features sliding glass doors and sun screening curtains, built to add indoor/ outdoor flexible space to each unit, to add insulation in winter and sun blocks in summer while allowing for ventilation. Project cost is reported by Lacaton & Vassal (2017) at EUR 27,2 million net (transformation), EUR 1,2 Million net (new dwellings), estimated to be less than half of what a tear down and replacement might cost, with energy efficiency gains reported the architects of more than 60 percent (Lacaton & Vassal, 2021). The total figure “\$29,945,344” is reported in Architecture (2019) in US dollars.

The ownership of the social housing buildings is held in public hands under the auspices of the *Aquitanis O.P.H. de la communauté Urbaine de Bordeaux* (CUB). *Aquitantis* is owned by the City of Bordeaux and is the agency responsible for public housing. It provides extensive services around housing with local offices there to serve the community. Grand Parc, with its newly renovated *Salle des Fêtes*, its integrated recreational facilities, its albeit rough local commercial centre, local mayoral office and other amenities, its excellent connections to the city by tram and road, remains short of having integrated into the whole of the City. Keven Balastegui, *Responsable de Secteur, Agence Grand-Parc, Aquitanis Office public de l’habitat de Bordeaux Métropole* speaks of “invisible barriers” (Balastegui, 2023) that remain to separate Grand Parc from neighbouring Chartrons and integration into the Bordeaux community as a whole. He attributes this to socio-economic and cultural barriers within the communities, where residents of the quarter are a mix of long-time residents, now older and newer residents, new to France, or newcomers as immigrants are called in Toronto.

Between the towers of *La Cité*, beside the modernist low-rise that houses the strategically integrated Mairie de quartier Chartrons - Grand Parc - Jardin public, which serves three areas of very different socio-economic demographics, is the commercial centre of Grand Park. While the small local *Marie* building has ornate municipal modern elements, is housed beside the local post office, flies the French flag, the commercial centre across from it is limited in its economic

prosperity or mid-century era architectural detailing. A larger *Auchan* supermarket, a chain commonly found around Bordeaux, is the community's food source anchor. The selection of either finer French or any non-typical French goods is very limited. Smaller kiosk-like shops are beside it, including a barber shop, a Turkish grocer and a restaurant, many medical services providers and a pharmacy.

France does not keep statistics on ethnic origins in its demographic assessments. "The French motto [...] in particular the call for *égalité*, or equality – means that formally all citizens of the republic are equal, or, in the terms of the French republic, indistinguishable from each other in terms of status and identity" (Tchoukaleyska, 2019). One is either officially French or not and multiculturalism in the sense of Canadian official doctrine to collect ethnic and language data for better government service provision does not exactly translate. Statistics are kept and certain neighbourhoods are deemed objects of multi-level government investment, carried out on an agency level with special designation under the *Agence nationale de la cohésion des territoires* (CNCT) of the French state. The *Système d'information géographique de la politique de la ville* (SIG, 2023) presents a list of *Zones urbaines sensibles* intended for coordinated investment. Bordeaux - Grand Parc is not on the list although a neighbourhood on the west side of the historic core by the central train station, Saint-Michel is. Saint-Michel is district where outdoor seating fills up the open space around the historic church tower of that name with diverse restaurants at prices significantly lower than in central Bordeaux. A public market caters to the French, North and West African, and Turkish food provision. It is perhaps a group of solitudes where hipsters have drinks outside, others eat, celebrate and socialize inside. That coordinated investment into social infrastructure, services, building refurbishment and other projects is insufficient to solve the problems of the social and racialized divides in French society became painfully obvious during the week-long protest of June 2023, but Grand Parc itself was not a site of major unrest as far as reported in French media, nor was Saint-Michel.

Employment for people of working age in Grand Parc is getting a serious boost it is hoped from the expansion of the commercial district beyond Grand Parc to the east, where there is a building boom taking place. This is happening essentially next door, along the arteries leading

north to *Le Lac* as it is called, the Lake. At the level of the regional government agency that manages the towers and assists local populations, the hopes for direct employment opportunities beyond service sector jobs may not be significant (Balastegui, 2023).

Yoyovidéo's Jean Peyre, an informal public figure in the neighbourhood, can speak to the historical development of the quarter. He is a local fixture, amateur historian and community animator, whose business model includes handling packages for delivery, document scanning and printing services. This is Yoyovidéo's second location after nearly 40 years of being in business in Grand Parc. In response to questions about the ecological and energy implications of the renovation work carried out in the area, Peyre and a customer answered that of course it was positive to be comfortable at stable temperatures inside with reduced costs for energy consumption. It was not like that before in his previous location (Peyre, 2023).

Peyre grew up in a dilapidated small building along what is now a creek, the Limancet, that ran through the quarter referred to as *les Cressonnières*—its name derived from the term for the watercress plants that grew around the water. Peyre himself used the term for slum, *bidonville*, and the term, *marais*, for wetlands. In 1947, adding to the 10 hectares of land already owned, an additional 50 hectares of the area was acquired by the City of Bordeaux, a plan was laid out by Jean Royer in 1954, and the first of the towers were begun in 1959. Peyre grew up inhabiting a construction site and was at a time in his childhood where that was fun for him and his friends.

Peyre is also part of the community organization that successfully restored and reopened the nearby La Salle des Fêtes Bordeaux Grand Parc in 2018, with Mayor of Bordeaux Alain Juppé. *La Salle des Fêtes* serves again as concert and dance hall, community animation space, but was left derelict for 25 years (Peyre, 2023; Finster, 2023). There is definitely a civic boost which resulted from the investment of the Aquitanis and partners into La Cité Grand Parc. *La Salle des Fêtes Bordeaux Grand Parc* is a wonder. It is a modernist flat roof construction with its front façade or '*fresque*' by ceramic artist Paul Corriger. This is an astounding tile mosaic of geometric patterns in primary colours. Through a community-led initiative, the whole building is functionally restored – plumbing, building envelope – and it is a fully programmed space with

an event calendar mixing children-centred events with concerts, theatre, and cinema festivals. *La Salles des Fêtes Bordeaux Grand Parc* was a wonder in its initial conception. As a concert venue in the 1980s, internationally known musical groups of some serious historical significance performed there: Téléphone, The Cure, The Stranglers, Lloyd Cole and Commotions, Iggy Pop. An exhibition of Grand Park in the 1990s “Le Grand Park dans les années 90’s”, May 2023, outlines the role of the hall in the community, its successes and these details. The exhibition came about as the result of community participation and comprised of a series of images, eyewitness accounts, maps and text about the historical development of the quarter (Finster, 2023; La grande radio France, 2023), presented to the public on the hall’s upper floor.



Fig. 7. *La Salles des Fêtes Bordeaux Grand Parc*. (Source : Author, May 4, 2023)

The images of *La Cité du Grand Park*, particularly a 1980s aerial picture of the whole stand of towers Peyre gave to me from a stack of them he had, show gleaming white towers in a coherent stand of high-rises. This stands in stark contrast to tourist-guide media accounts of the state of the historic centre and port lands of Bordeaux in the 1990s, where coal blackened

historical buildings and abandoned warehouses are described as the drab, dull and depressed norm (Gibb, 2020; Globetrotter, 2016). These media accounts are about how the city transformed, how its historic core, the 18th Century built “Port of the Moon,” became inscribed in 2007 as a UNESCO World Heritage site (UNESCO, 2023). What needs to be recalled, and is addressed in the *Salle des Fêtes* exhibition, is the relationship of the initial building of *La Cité* to the bombed out residential areas of the city of Bordeaux. The modernist project of social housing towers was a desirable alternative to substandard housing available to working class residents in the 1950s and 1960s post war rebuild. A community was built and, as the exhibition underlines, it was and is a home loved by its residents, loved enough to reopen the *Salle* and have the exhibition itself. While the commercial centre, the Place d’Europe, is not thriving commercially, nor is it architecturally impressive in its modernism (on the cheap), the district has community facilities including an attractive swimming pool, schools with playgrounds, and green space, which are well-kept. In terms of social and commercial integration into Bordeaux public life, *La Cité*, despite proximity to the historic Chartrons district, has limited brasseries or restaurants surrounding it. It is not a food desert thanks to the big grocery shop and restaurant in the plaza. There are two other grocery shops not terribly far by foot. Beyond Grand Park, towards the lake, a new commercial district is being built where larger single retail shops are accessible by tram although the impression is of a strip of car friendly box stores, becoming more ubiquitous in urban peripheral France.

It is a longish walk to the next classically French style *Bar et Tabac*, Le Tivoli (at the corner of rue Camille Goddard). The crucial issue of commercial, cultural, medical and social services within neighbourhoods is also crucial to tower neighbourhoods of housing developments. There is a separation of *La Cité* from the neighbouring districts. The official employed by the public housing authority of the regional government sense of “invisible barriers” (Balastegui, 2023) remain to separate Grand Parc from the Bordeaux community as a whole. Balastegui named cultural and financial reasons for barriers. In many cases, residents of the area are an ageing population with mobility issues. Low-income long-term residents are in the mix of also more recent residents where language barriers and low-income play factors. Economic success for newer residents leads to leaving the neighbourhood for bigger housing. On foot, when one

walks out towards central Bordeaux, one is clearly leaving one quarter (Grand Park), one expression of socio-economic and cultural-commercial interchange, for another (Jardin Publique or Chartrons) with palpable transition zone between them.



Fig. 8. La Cité du Grand Parc, Bordeaux, from within the campus
(Source : Author, May 4, 2023)

Grand Park has now been renovated and, as noted, three towers radically retrofitted in the second decade of the 21st century. In terms of the 1990s massive renovation projects undertaken in the city core, Grand Park was not part of what might be called a sort of “Hausmannization” of Bordeaux by means of shiny new trams and sandblasted gentrification of the sooty limestone downtown and Chartrons districts. The UNESCO award was granted under longtime mayor Alain Juppé (Rassemblement pour la République, or Rally for the Republic party, then Les Républicains – centre right) in the late 1990s and start of the 21st century in his tenure from 1995 to 2004 and again 2006 to 2019, the same Juppé who ceremonially opened the Salle des Fêtes Bordeaux Grand Park. The cleansing of Bordeaux worked to return the city

and its dilapidated port to tourist destination from its 1980s doldrums and made it attractive again to the investment.

That this has been a conflictual and contradictory process can be further illustrated down the tram tracks and across the river, to an area visible from the upper floors of the *La Cité* towers. The right bank of the Garonne, once a warehouse and freight-rail district for the port, is a site of massive urbanization and rebuilding with only a few of the historic building remaining. Notably, what remains is the Darwin Eco-système cultural complex to the south of the construction project at the Bastide Niel, the massive historic Grand Moulin de Paris grain mill and silo beyond that, and an old school, working class and affordable lunch spot, the Brasserie Kilika 25 to the north. Mallet et Mège (2022) discuss the discursive tensions of the Darwin site in its experimentation with repurposing and retrofitting an military barracks complex into an ecologically and socially just alternative to dominant models of urban redevelopment, precisely the kind that will surround it. Naming it a laboratory for transition of social and socio-technical systems to address climate change, much like Hodson and Marvis describe, but on small scale: “Il est décrit comme un « laboratoire de transition(s) » et un « écosystème écolo » où la maîtrise énergétique constitue un enjeu primordial. La stratégie repose sur la sobriété et la performance énergétique. Plus généralement, l’objectif est de réduire les consommations de ressources, en valorisant la récupération et promouvant l’économie circulaire” (Mallet et Mège, 2022). The term circular economy is employed, again on a building site scale. It is an example of social enterprise, creative culture and ecological entrepreneurial spirit, rather than communal autonomous squatter politics. That said, a centre piece to the space, beside the restaurant and bakery, pays tribute to dark history of the Spanish Republican POWs housed there in Spanish partner, German fascist occupied France and put into forced labour to build the massive submarine base for Italian and German U-boats at the Port of Bordeaux across the river between 1941 and 1943. The space contains ‘street’ artworks, flexible exhibition and outdoor cinema space, a skateboarding park run by a collective called Brigade (<https://hangardarwin.org/>), shared office space with free wi-fi and flexible desks, as well as being a location for a few little shops plus the café-bar and vegetarian friendly restaurant. Even the Bordeaux Tourism and Convention website (Bordeaux Tourism & Conventions, n.d.) makes

an unironic almost inevitable Berlin atmosphere comparison in English, French and even in the German versions on-line.

Ownership of the Darwin combines private tenure, supported through financing in part underwritten by the *Cummunauté urbaine de Bordeaux* (CUB), and informal occupation on a project by project basis. Bordeaux based global communication agency *Inoxia* founder Philippe Barre is behind the Darwin initiative. The CUB acquired 34 hectares of the right bank in 2007, including, 9.4 hectares of the barracks. With that purchase, the 'Zone d'aménagement concertée' project, le projet de la ZAC Bastide-Niel, began.



Fig. 9. Darwin Eco-système, Rive Gauche, Bordeaux. (Source : Author, May 3, 2023)

The groupe Évolution in negotiation with the CUB, 2009, the core 1 hectare of the central hall of the Darwin site at a price of EUR 1,2 million and were able to raise 13 million in publicly guaranteed private financing (Mallet et Mège, 2022 ; PUCA 2021). The ZAC Bastide-Niel is a project lead by the *Bordeaux Métropole Amanénagement* (BAM) (51 percent), *Aquitanis* (24.5 percent), the public agency who owns and manages *La Cité du Grand Park*, and *DemoFrance*, (24.5 percent) a private firm, present in 230 communes in France, led by Philippe Dejean

(<https://www.bastideniel.fr/sas-damenagement-bastide-niel/>). Demofrance is legally a SA de ESH, or *Sociétés Anonymes Entreprise Social d'Habitations (à Loyer Modéré)*, a private company in the business of the development of social housing with and for the French state.

The Berlin comparison is ironic: it is an advertising executive's take on the collectivist successes of Berlin's autonomous movements projects such as the now defunct Tacheles project, but it is Berlin in a 3rd Way French Eco-neoliberalist Hausmannization mode: state-supported privately owned urbanism. The loose collective behind Tacheles failed to keep the space once the local area was revived—in part by the tourist presence on its way to the Tacheles—with the amalgamation of East and West Berlin City governance. In 2012, the Tacheles artist-squatters were kicked out (Taylor, 2018) as the City of Berlin would not support them. Darwin, as part of Bordeaux Metropole's ZAC efforts, is going strong. Essentially the Darwin project provides a socio-cultural and commercial anchor with government and private engagement to support the combined development of neighbouring subsidized and commercial luxury flats in the urban post-industrial brownfield of Bordeaux's Right Bank.

The right bank of the Garonne is also a site of much luxury residential construction along with public transit infrastructure building to repurpose the industrial rail land as tram maintenance facilities. Other privatized market housing projects in the brownfields include the EKKO residential low-rises, designed with private outdoor spaces as climbing gardens (Scape Architecture, Duncan Lewis and Brigitte Cany Lewis, lodgement EKKO project in Bordeaux of 2021, Quai des Queyries, rue Hortense, Bastide Niel, Bordeaux) (archi-guide.com, 2023). Luxury apartments set in curved vertical wedges like of finely finished brut concrete with sun shade and greenery incorporated into them are close to completion. Decidedly boxier apartments in the five to eight story HALO medium rise project are nearly done. The right bank redevelopment is thus a combination of a French form of complex public private partnership, government agency and private social enterprise, for socialized housing, market housing, public transportation infrastructure mutually supporting each's mandates to form a coherent quarter. What one notices upon site visit is the degree to which each project is taking climate change mitigation in its designs seriously. The architecture is one that looks to passive heating and

cooling methods in the designs for residential space seasonal shading, seasonal sun, blinds and terraces, window placement for ventilation, insolation, materials choices, indoor-outdoor spaces, and public transportation will be integrated although as of writing the area is somewhat isolated from trams.

Paris - La Tour Bois-le-Prêtre



Fig. 10. La Tour Bois-le-Prêtre, Paris. (Source: Author, May 5, 2023)

La Tour Bois-le-Prêtre in the 17th arrondissement has also been retrofitted as a project of architectural firms, Lacaton & Vassal Architects, Frédéric Druot Architecture and completed in 2011, as reported in *Dazeen Magazine* (Frearson, 2013). This work was a radical retrofit of a Raymond Lopez building (assisted by Claude Berson, A. Cadot and Jean Lepinte) (PSS,2014). *La Tour Bois-le-Prêtre*, 18 floors and 49 metres tall, was similar to the one Lopez and Eugène

Beaudouin designed in the *Hansa Viertel*, Berlin, 1958, Bartningallee 11–13 (Frearson, 2013; Bürgerverein Hansaviertel e.V, 2023). Pre-retrofitting, the building was commonly referred to as Alcatraz (Ayers, 2011; Frearson, 2013). Contrary to many comments to the Dazeen article about how the pre-retrofit looked better, this project won for architecture in the 2013 Designs of the Year Awards that are given annually by the Design Museum in London, UK. A nearby building, the *Barre Camille Blaisot*, at the Port de Saint-Ouen, (1-13, rue Camille Blaisot, 11 storeys and approximately 31 metres tall) looks much as la Tour Bois-le-Prêtre looked: it is shorter, although significantly wider.



Fig. 11. The Barre Camille Blaisot, at the Port de Saint-Ouen, Paris.
(Source: Author, May 7, 2023)

Both featured illuminated advertisements on their roofs, especially visible to the cars travelling along the nearby city freeway, the Boulevard Périphérique. Frearson (2013), in *Dazeen*, features a ‘before’ image of La Tour Bois-le-Prêtre, pre-2011, with an advertisement for GSF Nettoyage Industriel on its roof. The Barre Camille Blaisot retains one, reading Meilleurtaux.com, a currently active mortgage brokerage and financial services company. The building was completed in around 1960 and credited to Lopez alone (PSS, 2007). It is under some maintenance level renovation and is work in progress.

Between the Port de Clichy and the Port de Saint-Ouen, on a wedge of land between the Jardin Hans and Sophie Scholl and the Cimetière des Batignolles, at 5 Boulevard du Bois le Prêtre, the retrofit of the *Tour Bois-le-Prêtre* has been integrated into a larger project of promoting a network of environmental and urban community support services across the 17th arrondissement. At the tower base, facing green space is le Centre Social la Serre Pouchette and a performing arts space, La Fabrique de Petits Hasards. In the Jardin named after the two teenage Scholl siblings killed by the Nazis for leaflet distribution in 1943, is a sports complex named Le FIVE partially tucked under the Boulevard Périphérique. A nearby map points to a number of further social, not-for-profit and government funded agencies that support the people of the 17th: four more community centres, called Centres Social; the Recyclerie Sportive Paris Bessières, founded in 2015, part of a non-profit network for sports gear, clothing and bicycle repair; a local branch of a République Française funded les Antennes Jeunes de Paris, directed at youth social and employment support, the Ecoute habitat 17 amicale des locataires Bessières, founded in 2009, also part of a network of associations directed at tenant support and community animation.

These spaces, these services are at the backbone of community capacity building and it is their integration into the rehabilitation of the buildings, the retrofitting of the buildings into them, that makes it work. Decorating the fencing on the north side of the tower separating green space from the Bd. du Bois-le-Prêtre is a series of illustrated panels on metal in colour in the style of *bandes dessinées*, comics, giving a short history of community consultation around the

transformation of the quarter and immediate surroundings with adults conferring and children playing in the parks.

Fig. 12. La Tour Bois-le-Prêtre, Paris. (Source: Author, May 5, 2023)



Mulhouse - La Cité Manifeste.



Fig. 13. La Cité Manifeste Mulhouse, France. (Source: Author, May 17, 2023)

Mulhouse is not a big city, nor exactly pretty: only some water ways and limited colourful medieval timber framed, wattle and daub style buildings. But it boasts attractions and is taking climate mitigation strategies and affordability seriously. Le Cité Manifest Pierre Zemp (as it was renamed in 2022) or just *Cité Manifest*, Mulhouse, France, is a series of low rises, 60 units in total, of social housing in a project led by Jean Nouvel (*Arquitectura Viva*, 2023; AJN, n.d.), built between 2001 and 2005. Pierre Zemp is honoured for his passion for social housing and this project (Fuchs, 2022) is under the auspices of the Social Enterprise SOMCO, Mulhouse, an organization for building workers housing established in the same quarter in 1853. SOMCO calls the Muller Quarter the first workers housing estate of France, “la première cité ouvrière de

France en 1853 - la cité jardin « Muller » à Mulhouse” (SOMCO, 2023). SOMCO now manages upwards of 5000 rental units across Alsace, France.

Mulhouse caught the attention of Toronto planner Hans Blumenfeld, University of Toronto Professor and author, at one point, Deputy Director of the Metropolitan Toronto Planning Board who prepared Metro's 1959 Official Plan. An essay about Mulhouse working class housing appears in his *The Modern Metropolis* (Blumenfeld, 1968). Mulhouse has a history of intense industrial activity with a central place in the automotive and locomotive development of France. It is also famous for textiles, comparable to Manchester, UK, with a large factory area including the Dreyfus-Lantz textile mill located between the town centre and the Gare du Nord (Mulhouse Maps, 1911, 1934) run by Alfred Dreyfus’ older brother Mathieu at one point. The eastern edge of the Cité Manifeste runs along the rue Lavoisier, which traversed this factory area and was built on land that, in the 1934 map is labelled La Contonière. While there are 1960s residential towers north of this area, the Cité Manifeste was built to be consistent in scale with the rows upon rows of two storey dwellings that surrounded the factories already in the older maps. Street names now are consistent with the 1934 map and include west from Rue Lavoisier the Rue Jean-Jaurés, then the Rue des Oiseaux. The east-west streets are named passages and are too narrow for automobile traffic as they pass through this area, consistent with the older housing, the Passage des Rossignols, the Passage de l’Orme, the Passage des Lauriers. Postal delivery is handled on an electric motorcycle and small cars or vans can fit to park.

The various stands of low-rise housing that comprise the *Cité Manifeste* are new builds from nearly two decades ago. I include them in this account for the 14 Lacaton & Vassal units primarily, where one can see an earlier manifestation than the Paris or Bordeaux towers retrofits of their incorporation of flexible space with green house like adjustable window openings and screens into the domestic private space, using materials suitably affordable to manage construction costs: concrete pillars holding a concrete rectangle like a table, over a mix of sliding glass doors a corrugated steel siding. The upper floor space includes a room created as a green house, with ceiling and side textile curtains which allows for shade and ventilation in

warmer months, while providing passive solar heating in winter while the room over and the entire ground floor are insulated by that quasi balcony. Energy cost savings for mechanical temperature regulation are thus reduced, while residents gain usable private floor surface space beyond bylaw allowance (*Arquitectura Viva*, 2023).



Fig. 14. La Cité Manifeste Mulhouse, France. (Source: Author, May 17, 2023)

The unit sizes vary with some at 106, some at 128 and some at 175 m² at a unit cost of an average EUR 75,000 in 2005 valuation (Lacaton & Vassal, 2005). That project description file online (Ibid.) speaks of individual unit bio-climatic regulation options with daily and seasonal adjustability designed into the various configurations with pictures of the completed projected. In 2023, mature garden plantings provide additional shadings from the summer sun and add additional screening from the public of individual unit outdoor space. The Lacaton & Vassal buildings are one section of the area; the others in the complex, by architects such as Mathieu Poitevin ART'M Architecture, Duncan Lewis - Lewis, Potin & Block, Shiguru Ban and Jean de Gastines, are similarly innovative in material uses, passive solar, and mixed indoor, outdoor spaces. The buildings on the Passage des Rossignols—the Duncan Lewis - Lewis, Potin & Block contribution-- have exterior thin metal garden cages for plantings similar to the Scape Duncan Lewis (Duncan Lewis and Brigitte Cany Lewis) lodgement EKKO project in Bordeaux of 2021 to allow for foliage to provide sunshade in summer in a open but private space (Quai des Queyries, rue Hortense, Bastide Niel, Bordeaux (Archi-guide, 2023)). The east access to the passages in the complex has a covered entry gateway from a later build that echoes similar gateways to the smaller streets of the old centre of Mulhouse.

La Cité Manifeste is integrated into the larger area, the historic city and central train station through transit routes (the C5 or C7 buses, the Tram 1) and is walkable to the Marché du Canal Couverte du Mulhouse, which also serves as a weekday outdoor market with a mix of restaurants and grocers catering to French, Moroccan and Turkish cultural foods in and around it. The density of restaurants or *bar tabacs* is low outside of the market area and one is outside of the historic core into an area along a canal that served industrial Mulhouse and close to light industrial areas as well as a high school and elementary schools. The *Tamil Association Culturelle Saivam* is installed into a light industrial building nearby, shared with a branch of the grocery distribution company, Dis-Pro, with the same corrugated steel cladding used in the Cité Manifeste project, while inside it holds festivals and has a performance space. The neighbouring two and small three-story 19th century housing is brightly coloured, the passages are pedestrian friendly and not gentrified.

A significant tower block renovation, with a focus on energy consumption reduction for the building, is underway (at the time of writing) in Mulhouse north of the low-rise quarter, at 36 to 38 Rue Anna Schoen, a 12-story tower plus ground floor. Rents of EUR 12 per m² are at the low end of the spectrum in Mulhouse according to the rental agency Meilleurs Agents (<https://www.meilleursagents.com>). This project which involves both mechanical systems upgrading and building envelope improvement is being undertaken under the ownership of the 1994 established Copropriété Provence, a syndicate of rental property co-ownership active for 28 years, based in Saint-Chamond, France, with the support of the French Republic and a local governmental agency called Mulhouse Alsace Agglomération (<https://www.m2a.fr/>). This political formation represents 39 municipalities in the region with capacity to address housing and energy, employment, environmental services transportation as well as recreational facilities as a governmental entity of the department of Haut-Rhin and the region of the Grand Est. A third central government formation involved is the Agence national d'habitat, a public entity founded in 1971, whose mission has been to improve the existing private housing stock with financial aid for work under conditions to owner occupiers, landlords and condominiums in difficulty (<https://www.anah.fr/>). While actual financials for this project are not freely available, the public/private cooperation and intergovernmental partnership on this project point to a high level of governmental capacity for addressing and promoting climate change mitigation in private sector owned tower blocks as well as energy efficiency promotion for existing French housing stock. The rue Anna Schoen tower stands in an area of the city with a number of other towers in various states of maintenance and renovation.

Freiburg-Vauban



Fig. 15. Freiburg–Vauban. (Source: Author, May 21, 2023)

The cornerstone of the Freiburg-Vauban neighbourhood stems from the repurposing of 19th century military barracks that make up roughly 25 percent of the area: The Selbstorganisierte unabhängige Siedlungsinitiative (SUSI) project. SUSI is multi-unit residential buildings, a self-organized, autonomous, settlement initiative. SUSI is an autonomous socio-political organization focussed on not for commercial profit, self-organized housing. SUSI developed out

of the 1980s and 1990s squatters' movement, established itself at these buildings in 1993, and is now part of a larger network of not-for-profit housing, based in Freiburg, organized along solidarity lines, called the Mietshäuser Syndikat (2023).

Facing the main access road and street car tracks to the town centre, the most prominent of the houses of the converted military barracks has a brightly painted façade with a slogan referencing the Pippi Longstocking film character created by Astrid Lindgren, and the German version of the "Pippi Langstrumpf Song": "*Wir machen uns die Welt wi di wi di wie es uns gefällt.*" This translates roughly as "We are making the world as we (would) like it (to be)" (Streck, 2023; Efraimstochter, 2023).³

Vauban is a quarter of the city at the end of one of the tram lines from the centre of Freiburg, and only some 60 KM from Mulhouse. Vauban is well known as an 'ecovillage' with a significant area of low energy use buildings as well as the site of the self-organized retrofitted military barrack buildings. My interest here was to further understand the potential for low-rise, ecologically more sound architecture as well as the social dynamics of the tension between autonomy and integration in such a quarter; autonomy as a social movement with concern for the rights of affordable housing and integration within itself as a quarter and to the larger municipal scale. Freiburg - Vauban, as site of a cornerstone of the German autonomous solidarity movement's housing projects, beside show pieces of sustainable and ecologically sensitive multi-unit low rise housing shares with the other sites some palpable conflicts and contradictions in the struggle for ecological and affordable housing justice. It is also clear the locals living there don't want pictures taken of their homes and lives which is fair. It also signals

³ This changing the world line is unique to the German version of the film from 1969. That version was recently found to be a non-consensual adaptation of the Swedish original and thus a copy-right infringement after Lindgren's heirs successfully won their case against it at the Regional Court of Hamburg in 2021 (de Winter, 2021). It never appeared so in the English or Swedish versions, where Pippi essentially is described as doing what she wants or likes: "flickan som gör vad som faller henne in" (Lennartsdotter & Wadell, 2008; Björk, 2023). The German language Wikipedia entry for Pippi Longstocking features the mural on the Quartier Vauban wall (Wikipedia (Deutsch), (2023)). The Pippi Longstocking Principle as it might be termed, can only legitimately be done so in German: the "Pippi Langstrumpf-Prinzip" (Streck, 2023). Turning to childhood themes to signal a radical political position around affordable housing rights creates an approachable atmosphere to struggles for an inclusionary ethos. Perhaps I am overstating this, and copy-right infringement notwithstanding, but the German version on the wall in Quartier Vauban is decidedly more engaged with world revolutionary transformation than the Swedish or English.

overexposure as the show piece that the place is has been a problem for residents. Unlike the other sites, I was only able to take a limited amount of images and no video.

Freiburg, but especially Vauban, is lauded as a model for carbon neutral living or better for Germany to follow to achieve its goals by 2045, says German Economic and Climate Protection Minister, Robert Habeck (Pieper, 2022). The praise for Vauban as eco village (ecovillage.org), for its housing with solar panels, centralized neighbourhood low carbon wood chip burning heating facilities, walkability and car free centre not only hide the high rents and gentrification in the non- SUSI parts of the area, but also hide the social conflicts between an environmental justice and a neoliberal technocratic approach. The achievement of carbon neutrality in the Vauban model comes at the social costs of affordability (Jürgens, 2022; Pieper, 2022).



Fig. 16. Freiburg–Vauban. Trans: Living space is not a commodity (Source: Author, May 21, 2023)



Fig. 17. Freiburg–Vauban Eco-village (Source: Author, May 21, 2023)

The “most sustainable city district in Europe” (*Green City Times*, 2014), its services provision, schools, electric tram connection and planning by the City of Freiburg, is certainly a proof of concept of what sorts of socio-technical approaches to urban infrastructure work at the district scale, with roughly 5,600 residents in the area. This technical knowledge can very well serve the achievements of progressive planning (Raco & Savini, 2019) only if coupled with social justice and as de-coupled as possible from shareholder value maximization and the logic of real estate

markets, to recall Erik Swyngedouw's (2004) technocratic skepticism⁴ and David Harvey, to paraphrase: all socio-political projects have environmental consequences—at issue is urban political ecology with its foundational practical and theoretical concerns (Harvey, 1992).

That there are conflicts and contradictions to this project is palpable upon a visit to the neighbourhood. What Unfried reported in 2011 in the German daily *TAZ* about his anecdotal experience with driving up to visit the area with kids and suitcases in the car is a charming and funny account of an outsider's series of eco-social faux pas. He quips that he had to see it to believe how urban life might need to be if carbon neutrality is to be achieved, and, tongue in cheek, how it might have to be if the Green Party takes over Germany, or more ominously, (again, jokingly) must be (Unfried, 2011). He went by tram on a second visit.

I went by tram. Far from finding an integrated neighbourhood, there is a clear delineation between the post-squatter movement buildings to the north of the tram line and the private and commercial spaces to the south, where 100 metre apartment cost half a million in Euro: a nearly exclusive bourgeois biotope (eine fast ausschließlich bürgerliches Biotop) (Jürgens, 2022). To the northeast, a gate through which a modest “punk” bar—more of a kiosk—might be accessed and inner spaces were filled with found object art works. Contrast the punk bar with a café and ice cream shop, the patrons in the former in black t-shirts with band names from their parents' generation (mine), the latter with happy children in bright colours. Perhaps my impressions are false and merely anecdotal: an enterprising bicycle repair shop on the north features an old (pre-age verification era) cigarette dispensing machine, dispensing Schwalbe brand innertubes for EUR 9,00 each, assuming the signage is correct, undercutting Amazon.de prices by 10 percent. Byron Miller and Samuel Mössner (2020), in their unexpected but brilliant comparison between Freiburg and the seat of Canadian oil industry financing, Calgary, Alberta,

⁴ As quoted above: "In other words, the transformations in the world wrought by architects and engineers designing, construction companies building, what scientists and politicians 'empirically' and rhetorically pronounce, or defend, or commission in the name of 'disaster prevention' or 'scarcity' or 'increased efficiency' or 'development' are both material and discursive constructs where there is no relative truth to squabble over" (Swyngedouw, 2004: 25)

point to the neoliberal competitive city and real estate value addition that is driven by sustainability efforts, when they remain on the municipal level.

Indeed, the success of Freiburg's sustainability planning has been a double-edged sword. On the one hand, the city has made great strides in promoting sustainable mobility, renewable energy and a high quality of life achievements for which the city rightly deserves praise. On the other hand, successes like these—which have been replicated in several other parts of the city



– have made Freiburg an even more attractive city, which, in the context of a market-based system of housing allocation, has priced a substantial portion of those who live and work in Freiburg out of the city's housing market (Miller & Mössner, 2020:2249).

Fig. 19. Freiburg–Vauban. Cigarette Machine selling bicycle innertubes. (Source: Author, May 21, 2023)

As Swyngedouw is skeptical about technocratic approaches to environmental and urban concerns so are Miller and Mössner skeptical about what sustainability investment costs, to whom and for whom as they employ David Harvey's spatio-temporal fix dynamics to analyse the effects of public investment on the real estate development industry. Sustainability, too, is a for whom—by whom, at whose costs, to whose benefits—question when ecological strides cause social displacement. That there would be social bifurcation between bourgeois eco-village and the anarcho-syndicalism of the rights-to-affordable housing residents was to be seen between both the physical and technical systems in buildings in the neighbouring housing groups and the aesthetics of the two groups, confirmed in my site visit observations.

Vernier, Le Lignon



Fig. 19. Vernier – Le Lignon. Switzerland. (Source: Author, May 17, 2023)

The largest social housing blocks in Switzerland are undergoing retrofit, a complex of buildings at the northern end of the Line 7 municipal bus line in Geneva-Vernier, Le Lignon. It is 17 and 18 stops to the north west of the city core: stop Vernier Lignon-Cité and stop Vernier Lignon-Tours. Its not the end of the world up there (that is the other end of the Line 7: Genève Bout-Du-Monde). From central Geneva, the ride begins to climb up the passed a number of clean and spare apartment buildings, until one reaches the end and is in a large campus at the top of the hill.

Geneva based architectural firm Jaccaud Associés has achieved great progress in the retrofitting of two of the multi-building campus. Le Lignon was originally designed by architects Georges Addor, Dominique Julliard, Louis Payot, and Jacques Bolliger, built between 1963 and 1971, with 2,780 individual dwellings alongside a school, shopping arcade, a series of medical services

offices, two churches, a performance hall, outdoor art works, recreational space, and an urban farm with allotment gardens. 7,000 residents reside there across both social and private tenure. The complex takes the form of two tower blocks of 26 and 30 storeys, and a 12-18 storey linear 'bar' building more than a kilometre long (Icon, 2021). Jaccaud Associés addressed the smaller tower and more than half of the long bar at a cost of SFR 90,124,000. The time horizon of the project is interesting as the call for proposals was issued already in 2002, with work being carried out from 2017-2021 (Jaccaud Associés, 2023).

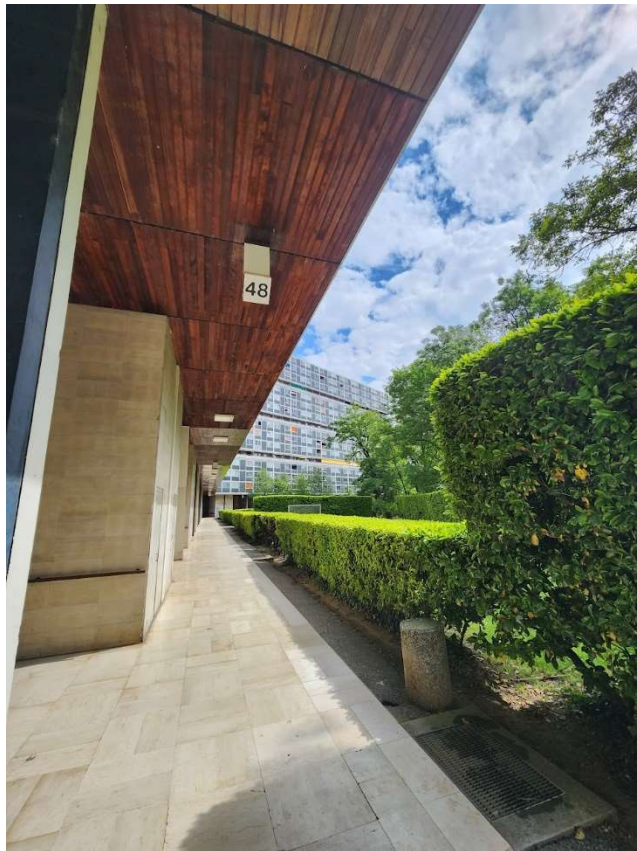


Fig. 20. Vernier – Le Lignon. Switzerland. (Source: Author, May 17, 2023)

The complex is a mix of private and socially owned with the lead client for the renovation being the institutional investor, Anlagestiftung Pensimo or, Pensimo Investment Foundation, founded in 1942 which consists of several Swiss pension funds with similar interests with a geographical focus in major Swiss cities (<https://www.pensimo.ch/>). Further pension funds include BVK, one of the biggest in

Switzerland (Horsfall, 2022). Bellerive Immobilien AG is listed as well and is a publicly traded real estate investment company and connected to the Pensimo Group of businesses. Marconi Investment SA, publicly traded real estate investment company, is also listed. Further foundations include Immobilien Anlagestiftung Turidomus, Imoka Immobilien Anlagestiftung, and a state supported organization for the provision of below market rents La Fondation HBM Camille Martin (Habitation Bon Marché) which is one of many of such real estate foundations under public right (les Fondations Immobilières de Droit Public (FIDP) which has an oversight

committee made of industry professionals and public servants. This one has a portfolio of some 1,745 of the 8000 units of socially subsidized housing organized under these HBH foundations across the Canton of Geneva (<https://www.fidp.ch/>). Government is also directly involved in *the* Comité Central du Lignon (<https://lignon.ch/>; (Jaccaud Associés, 2023) under the auspices of the Commune of Vernier. These dynamics suggest a close-knit grouping of private and institutional investors, working with real estate and government supported foundations and local government that are integrated to make such levels of investment function and be able to leverage the scale of funds required. While public/private partnership might describe these dynamics, another way of understanding this is that social housing is delivered in a combination of direct public money and the mobilization of foundation and institutional investment with state guaranteed market-based investment. This is not real estate speculation but institutionally guaranteed long term asset management directed in part at the public good. Indeed, many of the organizations listed above have histories of more than a century.

The complex is residential modernism in its nearly ideal form, with separations between vehicular and pedestrian traffic, active use of public spaces—kids playing football, walkers walking on paths leading to woods and the river side of the Rhône. The long bar of a building is breathtakingly large, but subdivided into a series of numbered porticos (the numbers in Helvetica, of course) of fine wood and glass doors that see through and go through to the woodland behind them to include the natural surroundings in the user experience of entry. The scale of the building becomes humanized through these individually numbered blocks.

The *Centre Commercial du Lignon* is the name of the low-rise mall with both outdoor and indoor access on a low raised platform between the long bar building and the churches and cultural centre. It is accessible to a moderate two-level parking lot but, also, thoroughly suited for pedestrian access from the bus stop or the residential towers to avoid the cars. Signage for civil society organizations and municipal assistance programs (www.vernier.ch; <https://conseildeshabitants.ch/vernier>) offered in person or online are as integral to the dynamics of the complex as a whole as are the grocery, a busy barber shop *cum* social hub, post office and the sort of medical and dental services required for the population available within.

Around the mall are restaurants with patios as well as walkways to the churches and the Municipally owned Salle du Lignon on the Place de Lignon (<https://www.vernier.ch/lieux/salle-du-lignon>)—a 500 person capacity modernist hall, which among classical and jazz performances, as well as theatre and dance held there is one of the venues used by the Ballet Junior de Genève of the Ecole de dance de Genève (<https://edgeneve.ch/>), supported in part by the République et du canton de Genève. A beach and evening musical programming are being set up by a local community group for the summer of 2023, Lignon Beach, with kids’ activities and shade umbrellas, food and drink available, all supported by the Vernier municipality. A high level of municipal public investment is supporting a high degree of community group activity and community animation.

The experience of spending time there is one of both familiarity (from a Toronto perspective) and utopian wonder. At one of the patio tables where this researcher sought refreshment, a father next table over tells his little son in Arabic to watch out where he kicks the soccer ball as it nearly hits others. The kid runs up and says sorry in French and promises. We were all multi-lingual and part of multi-generational immigrant families from very different places all being among modernist tower block high-rises. The brasserie (bar-restaurant) on one side of the commercial centre, and the local *Churrasqueria* (Portuguese Chicken restaurant) were both well attended on a May holiday afternoon, with a crowd in both that experiences the normalization of diversity in ethnicities living together. The investment into refurbishing and retrofitting the tower blocks is matched by investment and community support for local cultural projects and social services within a walkable campus, with good access to transit connections to neighbouring districts.

Conclusions and Lessons from Europe

The stark message from French racialized youth reminds me of Swyngedouw skepticism about technocratic approaches to environmental and urban concerns and Miller and Mössner concerns about what sustainability investment costs, to whom and for whom. Sustainability,

too, is a ‘for whom, by whom, as whose costs, to whose benefits’ question when ecological strides cause social displacement. Architecture geared at climate change mitigation is thoroughly ingrained in the complex of state and non-state actors and the realization of the massive urbanization projects, of which the Right Bank of Bordeaux is a prime example. Environmental projects have social and political consequences, as Harvey drew the triad, and the Right Bank shows too that social and political projects will have environmental consequences. But domestic architecture geared at climate change mitigation must be more than an elite project.

The foundational questions about social and environmental justice remain in the post concrete retrofitting of the modernist legacy and it is in the social infrastructure that there is positive hope for the effects of the building projects in Bordeaux, Paris, and Geneva Le Lignon, in Mulhouse, and Vauban. While Freiburg-Vauban is perhaps the most environmentally forward, it also, at its scale, seems still to struggle to integrate the conflicts between a social and environmental justice. It is in the social infrastructure more than just the socio-technical infrastructure found in Bordeaux, Paris, Geneva—social infrastructure that also reflects governance and ownership structures—that one sees and feels that they are in part holding on to an “enduring egalitarianism; an egalitarianism which in turn could provide the potential foundation for a renewed progressive urbanism” (Young, 2006: iv).

Lessons Toronto has to learn from these European examples can be detailed in three categories: the economics of retrofitting concrete towers and the value of existing housing, within a complex of the dual challenges of both affordability and radical carbon emissions reduction; the importance of taking advantage of passive ventilation, sun shade, and other environmental services or features of the individual sites; the centrality of the social infrastructure and cultural engagement within the housing complexes and neighbourhoods to build up community self-identification and self-worth.

The first category of lessons has to do with the recognition of existing buildings as valuable housing and valuable architectural objects. The historical and aesthetic importance of the Bordeaux and Paris examples, in terms of the architectural history of style—the Paris building

was referred to as Alcatraz (Ayers, 2011; Frearson, 2013)—does not seem to have been a motivational factor in the projects to invest in the radical retrofitting, but rather the concrete facts of their high levels of valuable well built concrete housing function. The concrete facts of a regulatory and building industry business environment where demolition and building waste disposal are factored into costs analysis, as well as the social, environmental, and financial costs of carbon emissions in the building process, support the building and development industry's turn towards retrofitting and refurbishment as a first option. The industry capacity for retrofitting or refurbishing existing buildings is being actively supported on the EU level and there is active support within the architecture and development sectors to look at retrofitting as first options. High European and UK energy costs are crucial motivators for energy efficiency. Moreover, in those examples as in Glasgow, the technical approaches to building envelope enhancement and HVAC systems were designed with minimal social displacement, even temporarily. Residents were able to remain in place or required to vacate for only very short periods while construction took place opening up the old outer walls to the new outer wintergardens in Paris and Bordeaux (Lacaton & Vassal, 2022).

Eco-gentrification, by which I mean the potential for social displacement and rent hikes through these retrofit projects, was at least taken into consideration in the Sheffield Park Hill project and active engagement to minimize this problem was taken in Bordeaux and Paris. In Geneva, partial project financing seems to have been related to the private sale of some units on the open market. Leveraging a housing market for the environmental and social benefits of energy efficiency and resident's well-being might offer itself as a strategy but needs to be a matter of concern and degree.

The second group of lessons crucial to addressing energy efficiency and reducing energy costs is the importance of taking advantage of what I am calling environmental services, such as air flows within apartment units for passive ventilation. While the wintergarden approach as seen in the high rise and low rise building of Lacaton & Vassal among others employs screens within the living space, many refurbishments and most new builds employ some form of attached sunshade outside of the windows, just as levered shutters that can be adjusted to allow more

or less air and light through are the norm for housing and have been for centuries in hotter climates in Southern Europe. The employment of blinds and shutters and other forms of summer sunshade which can be opened up in cooler seasons is iconic and commonplace in houses in southern France, often painted a certain hue of blue. They are used on apartment buildings as well north, in Germany, even the Netherlands to some extent. This simple technology might be an effective alternative in Toronto to the umbrellas one sees on apartment balconies or tin foil on windows. Anecdotally, residents in the City Park Co-op near Church and Wellesley, a 1950s build addressed below, seem to have individually opted for bar umbrellas in pretty colours.

The third groups of lessons are the centrality of what I have been calling the social infrastructure and cultural engagement in an area. While Toronto built hundreds of legacy towers along main arteries with bus service to a small underground public transit system, planning was done with assumptions for car use and a vision of better transit in the future. Toronto public transit has improved, but slowly. The networked infrastructure (Graham and Marvin, 2001) of transit is clearly a socially and politically negotiated site of conflict in Toronto. European examples, from the site visits, confirm that physical and social mobility are better tied together where trams and dedicated bus lanes are included in neighbourhood development, and costs carried across institutional forms and government agencies. The success record of government and non-profit social agency presence in Europe aimed at social cohesion, especially in the face of structural inequalities that are also racialized, is problematic, despite the obviously large amount of money spent in urban centres in France, Germany, Netherlands, and Switzerland. This has been highlighted by the protests in France in this summer of 2023.

Chapter Three

Faulty Towers: Residential towers in Toronto in the 21st Century

The challenge in Toronto in the 21st Century is to resolve housing inequities and the disproportionate impact faced by marginalized people in accessing affordable housing while simultaneously addressing the climate emergency which disproportionately impacts those very same vulnerable.

This chapter returns to Toronto after looking at European cases and the solutions found to ameliorate tower-based housing with affordability and carbon emissions reduction as dual targets. I address the legacy issues facing today of Toronto tower neighbourhoods to present the scope of problems experienced by residents within the combination of affordability, apartment unit thermal management, and vulnerability. Following the research questions about what needs to be done, I end this chapter with an account of what is being done—specific tower refurbishment projects and proposed projects in their community situations—and what are the opportunities to further address these dual challenges?

The legacy of the tower neighbourhoods in Toronto, envisioned as a solution to population growth without the environmentally damaging effects of sprawling single-family housing across the countryside, has contributed to the challenges residents face in their current situation. Moreover, many towers were located with car access considerations in a city where large arterial roads were upgraded from the initial two-lane country roads, and, it was assumed, public transit development would keep pace of the density needs for those without access to cars (Sewell, 2009). It hasn't and, only now, for instance, are the Jane Finch Community or Weston and Mount Dennis area being connected to increased capacity transit modes from the buses currently connecting these areas of tower neighbourhoods. To address current challenges facing residents of rental residential towers, efforts being made towards climate change adaptation of the buildings themselves is urgently required, but so is also the community facilities and transit connections on which they rely. The legacy of modern planning,

the hopes and dreams for a bright future already challenged in its roll-out in the 1960s to 1980s, have been rendered stagnant in the face of social and environmental changes.

When Douglas Young argued in 2006 about the legacy of modernism in Berlin and Toronto, his conception of progressive urbanism emphasized social justice: “My argument is with those who dismiss Modernist urbanism as undemocratic, both in modernization method and built form, while overlooking its enduring egalitarianism; an egalitarianism which in turn could provide the potential foundation for a renewed progressive urbanism” (Young, 2006: iv). In the second decade of the 21st century, environmental justice must be added into the equation in terms of the construction industry, in terms of transportation, in terms of harnessing the cooling capacity of tree canopies at street level and in terms of a significant reduction in the fossil fuel consumption that goes to the thermal regulation of housing. The management of indoor thermal conditions in the older housing stock, especially in legacy towers, cannot be through increasing the energy load, through turning up the old AC units, if operational carbon is to be reduced. Replacement of HVAC systems alone is insufficient. Building level interventions are required, for example, windows, insulation, retrofits of even more ambition as seen in the European cases, including adjustable sun curtains and shades, and all possible achievements of passive ventilation. As seen in the Bordeaux and Geneva cases, the energy and carbon reduction issues and the social infrastructure questions are not only building questions. They are also about the buildings in relation to centres for food supply, social, municipal, and medical services, labour markets, and transportation options. In Toronto, many towers remain often too distant, or access to such things are along large arterial roads open to the elements, due to an application of the exact same CIAM principles that modern planning expressed as zoning laws which segregated land uses as much as people. How do we address this in today’s climate emergency?

Existing buildings require however significant reductions in the energy consumption requirements of thermal control. The Atmospheric Fund (TAF), a Toronto based organization, estimates that 44 percent of carbon emissions in Toronto comes from building (<https://carbon.taf.ca/>), where HVAC and building envelope upgrades on multi-unit residential

buildings (MURBS) show significant reduction opportunities (Touchie et al., 2012). The findings Touchie et al. report give ranges of 7 to 20 percent reductions of emissions to be attained through the different building system interventions with site specific considerations to be taken seriously. Like with Lacaton & Vassal interventions in Bordeaux or Paris, discussed below, TAF also underline the site-specific nature of any roll-out of retrofit strategies. Whereas the modernist apartment tower block could be characterized as a cookie cutter roll out of a certain concrete heavy urban density intensification, what is required urgently is a site-specific, site by site sensitivity to the most cost-effective approach to achieve both the carbon and cost reductions to domestic tower living while ameliorating the living conditions of tower residents. The roll out of a post concrete utopia needs to be systematic, however, organized and incentivised by regulatory and financial support and create different relationalities among the built form elements and with other parts of the city (labour markets, shopping, schools) to reduce operational carbon (in HVAC) and carbon emissions in transport and daily living. Concrete is an ideologically and socially mixed bag, witness large scale apartment tower blocks built in the post war period across big cities in Europe, as they were in North and South



America. Concrete was shaped, celebrated, new, clean, and bold until it became seen as misshaped and maligned. The housing stock provided was and remains crucial; people have to live somewhere.

Fig. 21. 2415 Jane Street, Toronto. (Source : Author, July 26, 2023)

Challenges to Tower Refurbishments and Retrofitting in Canada

The argument for retrofitting is urgent but, in the Canadian context, financial and capacity building for industry and governance are not in place. Here, I am looking at the apartment building scale as one that Hodson and Marvin have engaged at the scale of the built urban environment and infrastructure in response to resource constraints and climate change (2013, 2016). The aesthetics of legacy towers have been altered in the work of Lacaton and Vassal in France. And buildings that contain apartment spaces with two or three bedrooms and usable balconies serve a needed purpose for social reproduction. Balconies above the 20th floor are less usable and furniture blows off balconies at greater heights in high winds.

Central cities have once more become attractive and valuable residential areas with gentrification of the central cities into extremes. Peripheral tower blocks erected in the 1960s in Europe, as in Toronto, were also conceived of in part as anti-sprawl strategies (Sewell, 2009). Toronto never “abandoned” its downtown core, although it has certainly gentrified it with housing costs skyrocketing, rents soaring, and the suburbs sprawling throughout the region where land is expensive everywhere. The legacy peripheral towers in Toronto remain on the edges of socio-economic and political powers, the “in-between” (Young and Keil, 2014). Lower-middle and working classes finding housing at high densities are increasingly rendered peripheral to main stream discussions about urban development as well as outside of position of the financial resources to make any other choices. Retrofits seem distant possibilities, but we must bring this discussion to the fore, however utopian, under obligations for safe housing and carbon reduction simultaneously.

Rental housing in towers has become an object of corporate interest in the form of Real Estate Investment Trusts, that have, since the mid 1990s and more so since the financial crisis of 2008, turned attention on the relative safety of the investment and the potential for returns on minimal upgrades, when tenant turnover and increasingly high rents for new tenants can be done. The documentary *Push* by Fredrik Gertten (2019) includes significant analysis of Toronto housing in among international levels of crisis. Gertten’s and Martine August’s (2020) work on Real Estate Investment Trusts (REITs) are important foundations for understanding

contemporary dynamics between ownership structures and tenant experiences in the rental housing market in the Toronto area. After years of little investment in even the maintenance of legacy towers, August underlines how from the mid 1990s, “neoliberal restructuring, government policy, and financial innovations created conditions for profitable reinvestment [in rental housing stock], transforming the sector, building-by-building, into a global asset class” (August, 2020: 975). The dynamic interplay between regulation, governance and international capital created a market for private investment into devalued assets. This dynamic is analogous to the corporate international capital that in the 1990s and 2000s that turned its attention to the privatization of urban infrastructure, particularly water and waste-water services as safe investment sites (Peters, 2019; Bakker, 2010; Swyngedouw, 2003, 2004). Infrastructure asset investment provided particularly favourable returns on investment when maintenance investments were allowed to lag or be offloaded through weak governance structures. “Financialization” and “financialized landlords” identified by August as real estate investment trusts (REITs), private equity funds, asset management companies, and pension funds “have acquired nearly one fifth of Canada’s private multi-family rental stock” (August, 2020: 976). REITs alone owned in 2017 nearly 165,000 apartment units with the market still growing. In the research I conducted in the Toronto cases, legacy towers are owned either by the City of Toronto agency, Toronto Community Housing, or by REITs operating multiple towers in an area.

Tenant strikes in Parkdale and in July 2023 in Weston have tried to highlight what is an increasingly predatory practices of using minimal renovations and tax increases to justify rent increases well above the 2.5 percent allowable guideline (August, 2020, Hurst, 2023). The tower at 33 King Street, Weston, is owned by Dream Unlimited, traded on the Toronto Stock Exchange with residential and office space assets under its management of 24 billion as its website boasts (<https://dream.ca/>). The people who live at the King Street, Weston, tower are striking as they can not afford Above Guideline (rent) Increases (AGI)—that 2.5 percent—and the legal frameworks for protecting affordability in Toronto are difficult to manage. Rent strikes in Thorncliffe Park are being reported in mainstream *Maclean’s Magazine* (Shea, 2023), and in Parkdale reported by the *CBC* over buildings owned by Akelius Canada—a Sweden-based multinational corporation. (Brown, 2023). These are anecdotal signals to a larger crisis, where

retrofitting investment is even harder to imagine when some tenants report their elevators don't work, their balconies are not functional. Tenant strikes are signs for the desperate need for governance reform in the rental housing market on the level of the enforcement of standards on pricing and facilities maintenance.

Governmental capacity to force change, force immediate maintenance requirements is currently insufficient. Current rental housing ownership structures, moreover, are not conducive to making necessary investment and change and the Canadian business case for significant retrofitting work needs to be made. But like reforms in urban infrastructure governance in Europe, particularly in water and waste water services in Germany and Poland in the 2000s, the neoliberal restructuring of the sector to build new forms of public-private partnerships was piecemeal, with flaws in contract enforcement recognized which lead to the achievement of extensive management and governance capacity increases through public-public partnerships at supra-regional scales (Peters, 2019). This is where learnings from international examples can be fruitful, where, as seen in refurbishments and retrofits in Bordeaux, Paris, and Mulhouse, France, public multi-agency, private and public foundation partnerships have been able to address required investment. Governmental capacity increases in both regulation and in the provision and brokering of adequate financial tools is needed in Canada. Public money spent on housing asset improvement will require significant increase but, also, the creation of new financial tools and public agency strengthening can be directed at the dual problems of housing affordability and operational emissions reduction. The engagement of development banks, infrastructure banks and foundations, the provision of government-backed low interest loans from credit unions and other financial actors, and further creative ideas, have the potential to address these crises. Such multi-partner engagement works. And can work in Canada (McDonald & Marois, 2021). As with the wave of the creation of a market for infrastructure investment—the governance failure that entailed (Bakker, 2010), and the subsequent recognition of the need for alternative forms of mobilizing capital and management techniques with those assets—the market that was created in the rental housing sector points to the potentiality for other forms of harnessing capital and significant market reform.

Tower Neighbourhoods in Toronto

Tower Neighbourhoods, as they are known in Toronto, are areas where the predominant housing form is comprised of apartment buildings, built in the 1960s to 1980s, upwards of 14 floors. These are also known as Tower Blocks or Slab Towers. They make up a significant portion of available Toronto rental housing. In many cases, these are to be found on the peripheries of the public transit system, on the peripheries of the old city, and their residents on the peripheries of economic inclusion in Canada's richest city. The United Way GTA (2021) refers to those built before 1985 as "legacy" towers and estimates there are some 1715, containing some 180,000 units, although other estimates suggest 1887 of them (UWGTA 2021:12; Johnston 2023). The City of Toronto has programs in place geared primarily towards loans for building owners, energy audits and some social assistance. These efforts have been individual building focused and the capacity of the City to do more is not yet realized.

The morphological model that was often followed stems from high modernists such as Le Corbusier and the CIAM group. This combined residential high density with surrounding green space, known as Tower in the Park, which, as part of the ubiquitous maintenance deficit identified already decades ago, "today often loom over broad, shabby lawns that the landlords have allowed to go to wrack and ruin" (Bentley Mays 2011). Changes in zoning law to allow mixed use at ground floors has begun to allow rethinking and repurposing of some of the broad spaces between buildings with projects underway, for instance at Jane and Finch, Eglinton and Martingrove, and in Scarborough along the 401 corridor.

Specific buildings in Toronto have been chosen for site visits based primarily on their being objects of recent investment efforts at upgrading or are in the process of application for zoning changes and construction (but not tearing down). No aesthetic evaluation about specific building architectural value in of itself is being offered, although Armstrong's *Making Toronto Modern* (2014) and McClelland & Stewart (2007) each present accounts of attractive mid-century Toronto concrete architecture.

Ownership in the sites visited is mixed between public and private. Some are TCH properties and some privately held. These include the Firgrove Community (TCH), Edgeley Village (a mix of TCH and private and condominium) as well as 470 Sentinel Drive, a large campus comprising many towers within a forested plot near Jane and Finch (private). Lawrence Orton, a TCH property, is near Lawrence Avenue, east of Markham Road and the ravine system at Highland Creek and Morningside Park. My concerns were, as in site visits in Europe in the previous chapter: the relative spatial and socio-economic periphery of the site; social amenities within the neighbourhood, the district, or quarter, both public and private sector; public and commercial spaces within the quarter; ownership, and, most elusively perhaps, efforts and measures to foster neighbourhood pride.

Localizing Climate Challenges in Toronto Towers in a Spatialized Political Ecology

Laudable and in progress City of Toronto efforts (Johnston, 2023) to address resident well-being in these tower blocks primarily focus on the building maintenance standards rather than significant systems-level and envelope-level retrofit. City of Toronto Data is available through the Open Data portal (Toronto, 2023, 2023 a, b, c) which allows for ward and neighbourhood levels of analysis to spatialize areas of concern for addressing climate change challenges. I have created a legacy tower index (LTI) by ward, coding the wards, 1,2,3, according to a combination of the following factors. The City of Toronto data addresses housing as above or below 5 stories. This definition does not quite capture the legacy towers of the United Way definition, but I am hazarding the discrepancy between a medium—around 5-10 stories—and a high-rise of typically around 14 stories. The tower index has been further formulated as follows: the number of tower residents from all eras of tower building, above, below, or at the average of 40 percent; the percentage of towers built between 1961 and 1980, for which data has been collected, around 40 percent being average for the city, above or below. Household income averages and renter versus ownership are factored in, to account for income discrepancies, where the Toronto average in 2016 was just above CAN 100K. Percentage of income towards housing data is available from the city, and has been factored in. The TLI is a tripartite system.

All of Toronto has legacy towers, some have around the average of 40 percent (41.6). Some wards have many more.

There remains the significant caveat that the Ward Profiles rely for their income and demographics information on Statistics Canada Data from the 2016 Census, and Toronto has seen significant increases in rent costs and the income to housing cut at 30 percent in the 2016 data simply cannot remain the case with the inflation of costs, rents skyrocketing while income increases have not been on par with even inflation let alone these costs (CMHC, 2023). The City of Toronto has been partially updating these numbers with the results of the 2021 census, but these are not yet reflected in the ward profiles.

Ward	Ward Name	People in > 5 st	Tower > 5 St % built from 1961-1980	> 30% income shelter	income (000)	rent %	LTI
1	Etobicoke-North	41	48	42.8	73.4	45	3
2	Etobicoke Centre	39	63	44.2	128.4	33	2
3	Etobicoke-Lakeshore	43	21	46.4	106	43	1
4	Parkdale-High Park	38	47	45.6	99.7	58	3
5	York South-Weston	40	51	45.6	68	51	3
6	York Centre	43	46	46.6	86.7	51	3
7	Humber River-Black Creek	39	62	44.4	65.5	51	3
8	Eglinton-Lawrence	33	50	43.1	162.6	45	2
9	Davenport	17	23	47.4	80	49	1
10	Spadina-Fort York	86	18	44.6	103	57	1
11	University-Rosedale	47	27	52.3	170.8	58	1
12	Toronto-St. Paul's	51	41	47.1	155.5	61	1
13	Toronto Centre	82	29	46.5	75.4	71	1
14	Toronto-Danforth	21	49	46	101.3	45	1
15	Don Valley West	39	50	48	216.2	47	1
16	Don Valley East	58	51	47.4	80.65	55	2
17	Don Valley North	52	43	52.2	87.5	41	2
18	Willowdale	61	29	59.4	87.4	39	1
19	Beaches-East York	25	57	46.8	104.12	44	1
20	Scarborough Southwest	34	49	44	78.5	44	3
21	Scarborough Centre	41	41	44.3	70.6	42	1
22	Scarborough-Agincourt	45	46	47.4	75.7	33	3
23	Scarborough North	22	22	45.8	79	19	1
24	Scarborough Guildwood	47	45	44.9	72.3	44	2
25	Scarborough Rouge	12	31	42.3	99.7	20	1
	Toronto	42.24	41.56	46.604	102.7	46	

Table 1. Tower Legacy Index by Ward in Toronto. Note: rent % = rent versus own. Source: Author.

Across Toronto, as an average presented in the Ward Profile section of the City of Toronto website, residents in 2016 were paying upwards of 30 percent of their income on shelter. This

finding seems not to discriminate by ward, building type, income group or other demographics at this level of analysis and it is likely that the 30 percent cut off that is the Statistics Canada benchmark used in ward profiles has become less relevant to the costs of rent and should be raised to 50 percent (Toronto, 2023, 2023 a, b, c; UWGTA, 2021).

Data sets available through the Open Data portal of the City of Toronto do not allow for building or street level of grain of spatial analysis of Tower Neighbourhoods in Toronto. The alternative Neighbourhood Profiles of the City of Toronto allows for a closer demographic but no environmental indicator analysis. The Legacy Tower Index (LTI) for Tower Neighbourhoods is helpful to see obvious foci for concern on the ward level. Legacy towers in Toronto can be found throughout the city and concerted efforts are required in the following wards: Toronto North-East wards of Scarborough-Southwest (20) and Scarborough-Agincourt (22), and in the North-West, the wards of Etobicoke-North (1), York South-Weston (5), York Centre (6), and Humber River- Black Creek (7). The downtown (west) ward of Parkdale-High Park, traditionally seen as particularly challenged with high percentages of vulnerable population, older high-rise towers, and deprivation, appears, at the ward level to be fairing better than some as a result of income levels and the gentrification that has occurred in other parts of the ward that feature gentrified single-family housing. At the level of analysis here, the deprivation is obscured by the ward level data. Parkdale-High Park (4) also requires significant focus on the legacy towers, although who will pay there or elsewhere is up in the air. It is hoped that municipally backed loans (Johnston, 2023) be of interest to corporate owners.

Individual apartment buildings have been subject to registration about crucial information for renters under the auspices of the RentSafeTO Registration & Renewal (Toronto, 2023d). While building amenities are rated, energy or thermal comfort levels can only be estimated. The tools to make educated guesses are there (Toronto, 2023, 2023a, b, c, d; Bernstein, 2022; Shiab & Bouchard, 2022), but in a competitive and expensive market, one has to often take what one can get. City programming towards upgrades to buildings are however gaining a new set of tools. What is needed is a mechanism for collecting building level data that includes a number of indicators beyond what the current City of Toronto has and the City is aware of that

(Johnston, 2023). The Province of Ontario has instituted a mandatory reporting mechanism under the Energy & Water Reporting and Benchmarking (EWRB) regulation ([O. Reg. 506/18](#)). This is now, at the time of writing, under effect and has been taken up by the City of Toronto. July 1, 2023 is the first reporting period (Toronto, 2023c). This will ideally assist in making the



argument for the cost effectiveness of retrofitting crucial rental properties for concerns about heat, about carbon emissions reductions, to make the effort towards the mitigation of climate change and the resilience capacities of legacy tower residents in the face of what should have been recognized as a climate emergency (Monbiot, 2007; Keil, 2020).

Fig, 22. City Park Co-op, Toronto. (Source: Author, July 10, 2023)

Centre Vs Periphery

Towers are throughout Toronto. St. James Town and Church and Wellesley were early sites in the downtown core. Social amenities, transit, and social services concentrated downtown make the experience of tower living different than in more peripheral areas away from multiple transit options. Yet, partially because of gentrification and health care services one must look at neighbourhoods within which the towers stand as well as individual buildings. There are no show pieces of retrofitted legacy towers on the magnitude of the French examples, yet. Each

neighbourhood has its specific challenges and it does not suffice to say the downtown is richer and in better shape. Anecdotally, Toronto's Gay Village might well be spatially determined by the availability of affordable one but also two bedroom apartments in the 1950s, 60s and 70s buildings, erected on land where detached houses once stood on Wellesley, Maitland, Wood, and Alexander streets. Two men could rent together without raising eyebrows. City Park, a complex of three towers in that quarter, designed by Peter Caspari and built in 1955, was celebrated in the *Journal of the Architectural Institute of Canada* and the *Globe & Mail*, September 28, 1955, and still celebrated today (Bateman, 2017). It remains a vibrant, well maintained place as co-operative housing since 1989 with a Heritage Toronto plaque installed in 2021 (Heritage Toronto, 2021a). The buildings just to the north, known as the Village Green are privately owned and managed by Greenrock Property Management (Heritage Toronto, 2021b; Greenrockrs.ca). They have a shared gated garden space with a water feature and sculpture garden with tenants who have lived there for decades. Sure, the gated garden is a recent development related to the high number of methamphetamine users (Vaughan, 2018) that have become a significant concern for the neighbourhood as a result of a lethal combination of addiction health care services at the 519 Community Centre and Casey House and policing strategies to direct users there (witness the Naloxone kits on the fence at Barbara Hall Park behind it as seen by this author in the summer of 2023). The heat island indices of specific areas differ significantly, however.

Spatializing Extreme Weather Events

Work has been done about heat islands on a national level. Bernstein (2022) and Shiab & Bouchard (2022), working under the auspices of the CBC, have between them harvested and cross-referenced extensive data on spatializing heat and social marginalization, with a focus on heat mapping, tree canopies, park spaces, building morphology and human well-being. They present this high-level data in a four-part report for the CBC based on a sophisticated combination of Statistics Canada demographic data, satellite imagery and other sources. Vulnerability to heat events are linked to poverty and marginality (including ethnicity) and the

net results of their work for Toronto suggest a correlation between heat islands and social vulnerability through immigration status and poverty. This has been ‘spatialized’ and closely reflects David Hulchanski’s (2007) ground breaking study of poverty spatialized in Toronto. Their very interesting results take one only to the level of the Forward Sortation Area (FSA) of Postal Codes in Canada, the first three of the six alpha-numeric codes, however. Local delivery units (LDU), the second of the set of the Postal Codes, denote street level, a group of buildings, and sometimes an entire building level (Canada Post 2023).

The CBC Heat Island analysis suggests a temperature differentiation between neighbourhoods, in broad areas of FSAs. Using the Village Green at Church and Wellesley and Sentinel Road at Jane and Finch as examples, the differences are important. The Village Green (M4Y) is identified as being 64 percent cooler than the Toronto average. 470 Sentinel Rd., M3J, is identified as being 99 percent hotter. Lake proximity is certainly at issue, as both areas have less tree cover than Toronto averages. Lawrence Orton, near Lawrence Avenue, east of Markham Road and the ravine system at Highland Creek Park is rated as being 54 percent warmer than the Toronto average and is closer to Lake Ontario than one focus of the Tower Renewal Program, 80 and 100 Mornelle Court, Scarborough at Ellesmere Avenue to the north. The Heat Island index for Mornelle Court has it significantly cooler at 70 percent of the average as well as having 72 percent more vegetation. In Parkdale, the vegetation average is 91 percent lower than average, and it is hotter than 63 percent of the city average. The work Bernstein (2022) and Shiab & Bouchard (2022) present helps to identify overall tendencies for heat islands to be found where lack of vegetation, higher than average poverty, and recent immigration intersect which they emphasize in their analysis. With the exception the Village Green, all other buildings are located in poorer than average areas. Efforts by a research team led by Fadi Masoud at the School of Cities and Daniels School of Architecture, University of Toronto, were begun in 2020 to address the park part of the equation (Masoud 2020) although their progress to date is largely about building awareness. Importantly, they identify that Toronto’s Tower in the Park model is often a tower on a ravine park system, where inexpensive landscaping modifications could work for wonders of access to natural spaces, mitigating the experience of living among concrete towers. The Heat Island analysis suggests there is a significant cooling effect to be found and, also,

suggests that efforts to address building upgrades, renewal and retrofitting be sensitive to the potential for vegetation cover to mitigate extreme heat events.

City of Toronto Institutional Capacity around Legacy Towers

The regulatory framework that applies to the necessary work of reducing the carbon footprint of buildings comes in a number of documents stemming back to before the worst of financial crisis of 2008. These include: *Change is in the Air: Climate Change, Clean Air, and Sustainable Energy Plan* (City of Toronto 2007); *Ahead of the Storm: Preparing Toronto for Climate Change* (City of Toronto, 2008); and *The Power to Live Green: Toronto's Sustainability Energy Strategy* (City of Toronto 2009). *Transform TO* (2017) is a work in progress and the *Toronto Resilience Strategy* in May of 2019, an aspirational report with brilliant suggestions for steps forward, was executed under the guidance of Elliott Cappell and the Rockefeller funded 100 Resilient Cities initiative, which expired when funding stopped suddenly in 2019 (Casey, 2020). Cappell was a compelling Chief Resilience Officer, the position funded as well, but has moved on to PwC according to his LinkedIn profile. The STEP program for evaluation (energy audit) is in progress and is a promising benchmark to begin work.

The Toronto Community Housing Corporation (TCH), formed with the amalgamated City of Toronto in 1998, has embarked on a new scheme aimed at replacing its aging housing stock. In some case dilapidated units are torn down *en masse* and replaced with new, denser buildings. These new buildings are a social mix of private and public units. What is also happening is the rezoning of land parcels to increase the density with allowances of infill mixed use buildings and some market housing along side affordable spaces. The market rental units are used to finance redevelopment projects and the replacement of the public units. Residents are relocated to accommodate construction and guaranteed a right of return.

Create TO and the Toronto Lands Corporation (TLC) are involved in Toronto Community Housing projects, including refurbishments as discussed below (TCH, 2023). The TLC is responsible for the management of Toronto District School Board land holdings, while Create

TO, established in 2018 by the City of Toronto, manages real estate assets of the City's 8,000 properties (torontolandscorp.com; createto.ca). Create TO developed out of the amalgamation of 24 agencies, divisions and corporations including Build Toronto and the Toronto Port Lands Company with the City of Toronto's Real Estate Services and Facilities Management divisions "to apply a city-wide lens to ensure the most effective use of real estate assets" (createto.ca).

Toronto Sites and Toronto Case Studies – modest projects in progress

Legacy towers abound: Jane and Finch; down along Jane or Keele streets from Finch all the way down to St Clair West; along the 401 corridor through North York and Scarborough-Agincourt and Scarborough-Guildwood, with clusters around the Don Valley Parkway; Parkdale; South Etobicoke. Some are breathtaking with white concrete swoops or curved white concrete fountains before them like the one on Lauder Avenue downtown, or the one on Bernard Ave by Spadina nearby with a water feature in the lobby. A site-by-site approach to addressing each tower is not necessarily the best approach as there are similarities among the buildings that might allow for economies of scale in a larger project of decarbonization as well as thermal regulation and affordability. Piecemeal approaches to addressing housing and climate change adaptivity might lead to creating more unaffordability (*Affordable Housing Challenge Project*. 2022; Lorinc, 2022). The TAF study (Touchie et al. 2012) itself used a small series of ideal typical buildings to test the effectiveness of specific interventions, to decide at what scale of a building, height or unit numbers, interventions on heating, ventilation, and air conditioning (HVAC) can be said to offer significant results in terms of percentages of carbon reduction. Inflation has made electricity and some heating fuels significantly more costly in 2023 than 2012, but one can assume cost hikes.

What we do have is potentiality and some strong beginnings as well as neighbourhoods that require attention. Jane Finch is one: 470 Sentinel Road Proposal & The Firgrove Community Revitalization Proposal are interesting cases in point in transition. Edgeley Village and a tower

at 2999 Jane Street have had window work and building envelope and a modern cladding refurbishment done recently with work by Toronto based Susan Speigel Architect Inc. (SSA).

Toronto Community Housing's Lawrence Orton campus is a 336-unit complex completed in 1969, which houses more than 1,000 residents. It was selected by TCH for their landmark *ReSet* program which directs comprehensive capital repair and social reinvestment at a campus scale to revitalize the most challenged sites in their portfolio. 80 and 100 Mornelle Court, Scarborough have been addressed in part by the Toronto Tower Renewal office as has a more central and celebrated tower when it was built, the Torontonion near Yonge and Eglinton (Johnston, 2023). In the following I begin with the Jane Finch Community and those specific buildings and outline other sites thereafter.

Policy and New Housing Development

The legacy of the modernist tower in the park model, especially when the parkland around the towers suffers insufficient investment and maintenance, has a number of inherent problems to it. These include at grade level personal security outside of building entrances, distance to essential supplies, wind tunnel effects: each reduce community-building opportunities, and can even have the opposite effect. The tower in the park model, moreover, stands in sharp physical and social contrast to the areas of low-rise detached and semidetached housing that predominate in the side streets off of the thoroughfares. Where larger populations in an area living in apartment buildings this can be significant (See Table 1, above for ward profiles of tower intensive areas; Toronto, City of. 2023b). Upon site visits at Jane Finch, one sees a bifurcation of the area between tower and low-rise neighbourhoods Residential built-forms suggest a socio-spatial inequity and its perception.

In the Jane Finch area, and in tower neighbourhoods generally, zoning by-laws that restrict usage around these towers have created less walkability and less community level spaces than could develop with mixed use zoning amendments and more presence and activity in service and retail provision at the tower bases. In 2016, the OMB accepted a 2013 City of Toronto

amendment to Regulation 15.20.20.100(1) in by-law No. 569-2013, a new zoning of Residential Apartment Commercial (RAC), By-law No. 572-2014. RAC zoning was coupled with targeting 100 plus unit apartment buildings in priority neighbourhoods, in connection with the City's Tower Renewal program.

Limited ground floor small scale commercial or community service activity could be established on the ground floors of certain buildings either 'as of right' or with minor variance in certain circumstances (less than 400 sq. ft in 100 plus unit towers, less than 1000 sq. ft. in 400 plus unit towers). While the hopes were that RAC zoning would address some of the issues outlined above, its implementation seems to be sparse. City regulation about conversion or demolition of residential units to commercial or community service space has its own protective permitting process. Community priorities consultation for any such conversion is also crucial. Rental for the RAC space must be made with regards to community needs over landlord maximum rent collection drives. Official relief and assistance with licencing, insurance or other small business problems would go far to support this zoning policy or it remains an empty promise. Toronto City Council has adopted an Official Plan Amendment 557 and Zoning By-Law 941-2021 to promote affordable housing through what is called inclusionary zoning (IZ) at its meeting on November 12, 2021. This is aimed at requiring net new affordable housing in developments in specific areas along major transit corridors, including the Jane Finch area. How this will affect the area remains to be seen.

The development of new condominiums accompanying the construction of the Finch LRT will invariably lead to an increase of property values. As a result, the resulting property tax increases will be downloaded onto the low-income tenants in Jane Finch. Coupled with the construction of socially mixed housing, rent increases poses joint threats to a resident's ability to remain in place. Just as increases to property values threaten residential tenants, businesses catering to low-income communities are likewise balanced at the edge of a knife. Central to the vitality of Jane and Finch are culturally diverse restaurants, grocery stores, clothing stores, barbershops, and beauty stores. If they disappear, the residents who depend on them face further financial and social pressure. There is always a concern for refurbishment creating

gentrification at Jane Finch which is why projects such as The Firgrove Community Revitalization Proposal, where social housing remains, are so important. A density increase into the ‘park’ around the existing towers and funding secured through market based development allows for the refurbishment of existing towers. Many changes to the Tower in the Park model as a whole in this area are in the application stages with the City of Toronto.

Jane Finch

The Jane Finch Community is located to the North-West of the downtown core, some 24 kilometres by road from Toronto City Hall in North York, which became a city in 1979 and is now amalgamated into the City of Toronto since 1998. A rebranding of part of the area as “University Heights” in 2007 by the City of Toronto (Romanska, 2021) is met by Jane Finch signage for various community and health services: for example, the Jane Finch Centre (<https://www.janefinchcentre.org>). There is signage in the area using Black Creek as an identity, to be found to the north-east of the intersection, a name that appears in official Toronto usage already in 2014 (McKnight, 2014). To the south of Finch is an area officially called Glenfield-Jane Heights. McKnight wrote in 2014 about Black Creek as the “least livable of Toronto’s 140 neighbourhoods” at the bottom of a City of Toronto ‘equity score’ at the foundations of a new programme to redirect funding towards designating—poorly scored—areas as “Neighbourhood Improvement Areas” (NIA). This replaced the previous Priority Neighbourhood Area designation, with new criteria that included health, economics, political participation, and education. Doolittle quotes Councillor Gord Perks in calling the new research model “robust” and one that would facilitate funding redirection despite political struggle between councillors (Doolittle, 2014). Slaughter (2014) wrote that year, also in *The Star*, about the closure of a music program located at the base of the San Romanoway tower on the main intersection, the Palisades Media Arts Academy, geared towards youth in the neighbourhood: “The music studio was closed April 30 over lack of funding, according to a spokesman from the San Romanoway Revitalization Association [SRRA], the program’s overarching not-for-profit organization.” The

music program received partial funding from the Trillium Foundation of the Province of Ontario, while the SRRA is funded by all levels of government and foundations.

At the south side of the intersection of Jane and Finch are two larger commercial centres, one an enclosed mall, the other a big plaza. Parking lots separate pedestrians from covered shopping access designed for a car-centred community in an area of high pedestrian and transit use. Malls are normally very controlled private spaces the public accesses. Community events have taken place around the Jane Finch Mall, building ad hoc community space at the centre of the area. A seasonal pop-up called Corner Commons (<https://www.cornercommons.ca/>) created fun animated space with bright coloured seating and shade located at a small corner of Jane and Finch Mall parking lot. It attests to what potential can come out of a more permanent fixture in the community, with minimal funding for significant place making.

The NIA designation for the community is part of The Toronto Strong Neighbourhoods Strategy (TSNS) (Toronto, 2023e) and, in 2023, the designation for both areas remains (Toronto, 2023b). The City has also undertaken extensive engagement with the area in its Jane Finch Initiative, looking at both Black Creek and Glenfield-Jane Heights together in terms of income and demographics (Toronto, 2021:12-14). The Jane Finch Initiative, carried through in part through the Jane Finch Centre, also formalizes a community consultation process in the process of development application for zoning changes with the Etobicoke York Community Council which hears the Zoning By-law Amendment Applications for the area. The Jane Finch Advisory Committee is “composed of a diverse representation of residents, meets monthly to provide community oversight and accountability in the creation of the engagement strategy and the development of a Community Development Plan and an updated land use planning framework” (Toronto, 2023, April 26: 10). This is an institutional formalization at the community levels which has, confirmed through the Jane Finch Initiative Ideas Report, been mandated with the capacity to formally consult on the City of Toronto Jane Finch Secondary Plan and draft Urban Design Guidelines by 2023; it is described as “community development planning exercise with an amendment to the Official Plan” (Toronto, 2022: 8) with the engagement of three City divisions, City Planning, Social Development Finance & Administration, and Economic

Development & Culture. The Ideas Report presents the analysis, from the City's processes of consulting, of "what we heard from the communities of Jane and Finch so far and proposes a series of actions that will form the basis of a second round of engagement as we develop the detailed plans" (Toronto, 2022: 6).

With a higher (12 percent) than Toronto average (8 percent) unemployment and median income 60 percent of the Toronto average, as well as a younger than average population, with 35 percent of its population under 25 years of age, Jane Finch also is recognized as having a higher than average recent immigrant population at 59 percent to the Toronto mean of 47 percent. What this underlines is the need for early education centres, further school supports, settlement services, employment services. While community centres are in place, the Domenico Diluca, Northwood, Driftwood, Oakdale and an arena, it was hoped that a new Community Hub and Centre for the Arts can be tied into the building of a Light Rapid Transit (LRT) corridor by the Provincial agency Metrolinx along Finch Avenue (Toronto, 2021: 23). The Hub is planned for Finch Avenue West between Norfinch Drive and York Gate Boulevard and remains an ongoing project in the planning phase (Ontario, 2021). The Finch LRT project is well underway, with tracks laid and many stops near completion, including, in the area the stops Tobermory, Driftwood, Jane/Finch and Norfinch/Oakdale.

The Jane Finch Initiative Ideas Report expressly recognized "change is coming" and that change is tied to the LRT: "With the arrival of the LRT, real estate market demand is expected to increase, especially within walking distance of the area's four future LRT stops. Development pressures are anticipated on larger sites within the area" (Toronto, 2022: 7). The report names the mall and plaza at the intersection of Jane and Finch specifically. There are projects already in the Zoning By-Law Amendment Process that relate to legacy towers.

Community fears about the potential skyrocketing rents are attached to concerns about condominium builds proposed and the outcomes of that LRT link. Writing for the national broadcaster CBC News, Desmond Brown puts forward: "A quick search of available units in Jane and Finch show multiple one-bedroom units listed for at least CAN 1,900 per month. Meanwhile, rentals.ca data from last month [September, 2022] shows that the average rent for

condos and apartments in Glenfield-Jane Heights was nearly \$2,200 a month — up more than \$300 from a year ago. In Black Creek, there's been a nearly \$500 increase since September 2019” (Brown, 2022).

Specific Projects at Jane Finch



Fig. 23. Maple Grove York Apartments, Sentinel and Finch, Toronto, (Source : Author, July 26, 2023)

Three applications described below sought changes to zoning in 2022. This is not an exhaustive list, but represents the current approaches development is taking to challenge the model of modern zoning (separation of land use). The potential for equity seeking engagement, for energy efficiency refurbishing and even retrofitting existing builds is strong as is the potentiality

for rethinking the existing tower in a park model ubiquitous in the area and across the city. One such development (21 251925 WET 07 OZ), to be found on the AIC website of the City of Toronto. At the corner off Finch Ave West at 470 Sentinel Road, and three further immediate parcels on Fountainhead Road, the applicant seeks to add to the existing four 22 story towers an intensification of the land-use around them. Requiring Official Plan and zoning amendments, that application sought to add four mixed-use and residential apartment buildings and a recreation centre to the site. Thus, the applicant, Maple Grove York Apartments Ltd., is applying for significant heights and usage changes: an additional 1,720 residents, 1,000 square metres of retail to a height of 40 storeys. The 40 storey towers are designed narrower than the existing buildings, but still dwarf the existing towers in the planning application illustration. The draft of the pedestrian wind study acknowledges uncomfortable winter winds in the area and predicts a positive influence against these winds with the development. While there is commercial retail across the housing campus on the east side of Sentinel Drive, within the existing tower blocks there is a tiny commercial space one could call a ‘tuck’ shop for supplying milk, soda, cigarettes etc. This application, in applying for mixed-use designation, can be seen as an acknowledgment of a need and want for retail spaces within the area of towers in a park, and proposes the retention of all existing rental units, suggesting condominium ownership will be the norm for the new towers. This has not been confirmed and this project is still at the proposal stage. Standing before the notice of application signage, especially one which is, at the time of writing, within the complex and features basic details and the illustration of the proposal, one is struck by the size of the already existing towers and the amount of trees of many types on the site. On a summer day, it is cooler within those trees than on Finch Avenue. It is also striking how the site abuts onto the neighbouring Black Creek Parkland, yet with only one formal access path to the north of the site. The south side of the site is on Finch Avenue and will have at some point LRT connectivity to the rest of Toronto.

A second private sector application under review at 4500 Jane St at Shoreham Dr. north of Finch (21 188070 WET 07 OZ) also requests zoning amendments for density to build two six-storey mid-rise buildings behind the 14 storey existing tower, offering “improvements to the existing apartment building and site conditions” and extending “the life of the existing rental

apartment building, promote environmental sustainability, and contribute to a high quality urban environment and residential amenities” as it reads on the approval notice from the Etobicoke York Community Council of the City of Toronto (Toronto, 2023, April 26). The Community Council approval notice shows some strength in making demands on the developer. In the approval, it clearly outlines that upgrades to the existing building, including its mechanical, plumbing and heating systems, was required and agreed to “at no cost to tenants”, and the building must be maintained as rental apartments for a period of at least 20 years. In the notice, final approval also requires a Construction Mitigation and Tenant Communication Plan to address current tenant concerns. The Approval Notice also underlines how development in the area, including this, is to be carried out under the auspices of the Jane Finch Initiative (Toronto, 2023, April 26: 10). There is no direct correlation between the Community Council capacity to make demands on the developer for environmentally sound mechanical and building envelope upgrades through the Jane Finch Initiative being in place but, clearly, an increase of institutional capacity to successfully negotiate agreements that will reduce operational carbon emissions is evidenced.

The redevelopment, by Starlight Development, part of a 2011 founded REIT known as Starlight Invest, promises new indoor recreational amenities and enhanced landscaping to improve pedestrian environment and add a privately owned public space (POPS) along the side street, Gosford Boulevard. Starlight Invest, with 70,000 units across North America in its portfolio, is of a scale that could bring a significant reduction of operating carbon emissions to its buildings but its self-advertised sustainability efforts are modest at 10 percent carbon emissions and 10 percent energy intensity reductions since 2020 (<https://www.starlightinvest.com/>). If these numbers are real and imply a year-by-year continuation of energy and carbon reduction across its portfolio, this would be a positive model for the whole industry at a significant scale. The building at 4500 Jane St, with 164 units, is managed by Greenwin, which as property manager, is responsible for 24,000 residential units; over 5,000 of which are affordable housing and non-profit housing units and CAN 3.3 billion in real estate assets (<https://www.greenwin.ca/about>). The new development would add 134 units to the existing ones. 4500 Jane Street apartment rents are rated as lower than average by the rental web site, Zumper.com with a two bedroom

available at the time of writing for CAN 2,709. This web site gives the building an excellent rating at 9.1: “Residents will particularly enjoy knowing that this property rated highest in Price and Amenities, which help to make this rental a great place to call home” (Zumper.com, 2023).

The TCH led Firgrove Community Revitalization is one such public sector redevelopment requiring zoning amendments, (20 122745 WET 07 OZ) and sits just south of the Jane and Finch Intersection. The application, submitted in March 2020, was approved after more than a year in July 2022. What was proposed for a site is 8 new blocks, 6 new buildings, a community centre, a public park, public roads and private driveways. Buildings would be townhouses and apartments that range in height from 4 storeys to 25 storeys for a total of 941 new dwelling units. 341 are TCH units with 600 units intended as market-oriented rentals in a mixed income strategy for the community. 152 TCH apartment units in a refurbished building at 5 Needle Firway would be retained (TCH, 2023a). The Master Plan for this project was done the Planning Partnership (TPP).

Under new Toronto approvals guidelines, the project is approached in phases, so that while some 600 residents have been moved out, many to other TCH buildings, the construction of new towers and townhouses awaits approval of funding as reported by CBC News (Manucdoc, 2022). The TCH is looking at the time of writing for financial support from CMHC as a funding partner. While this development location already has access to essential supplies such as food at the Jane and Finch intersection, the application does not ask for commercial spaces in a mixed-use designation. There is a community centre request and potential for the applicant, the TCH, to develop further resources. Resident sense of a community gone in this process includes that three of the buildings demolished were designed and built with roof top connections and in such a way that people felt within a protected space as Manucdoc reports. The current situation in the community fractured by the demolition where remaining



Fig. 24. 5 Needle Firway, TCH, Firgrove Community Revitalization
(Source: Author, July 26, 2023)

structures, such as the tower at 5 Needle Firway and its neighbouring townhouses, face onto an empty brownfield.

The tower at Needle Firway and the townhouses were recently refurbished, with new exterior cladding on building envelope resealing, insulation, and window replacement. This aspect of the revitalization of the project is not highlighted in the news reports or news releases by the TCH, although it should be.

Edgeley Village

Edgeley Village, to the north of Jane and Finch, was designed in 1967 in a masterplan by Irving Grossman with various architects involved building townhouses and towers in phases in the early 1970s. It is an example of the modernist campus approach to residential districts, with pedestrian walkways and a bridge over the main access road, school and daycare facilities and a modest commercial centre within the area. While no Zoning By-Law Amendments were

required, permitting for renovations were required alerting me to one of the two sets of towers undergoing refurbishment which qualified them for mention here. The tower at 415 Driftwood Avenue in the Jane Finch area is an example of successful municipal inter-agency co-operation on a refurbishment project. It is a Toronto Community Housing Corporation (TCH) building and was addressed through their Smart Buildings and Energy Management department with the cooperation of the City of Toronto Tower Renewal office (Johnston, 2023). This building has been addressed with building envelope and HVAC system upgrades by the Toronto based Susan Speigel Architect (SSA) firm. Community space within the complex was funded directly by The Social Development, Finance & Administration Division of the City of Toronto, with Create TO and the Toronto Lands Corporation (TLC) involvement (TCH, 2023).

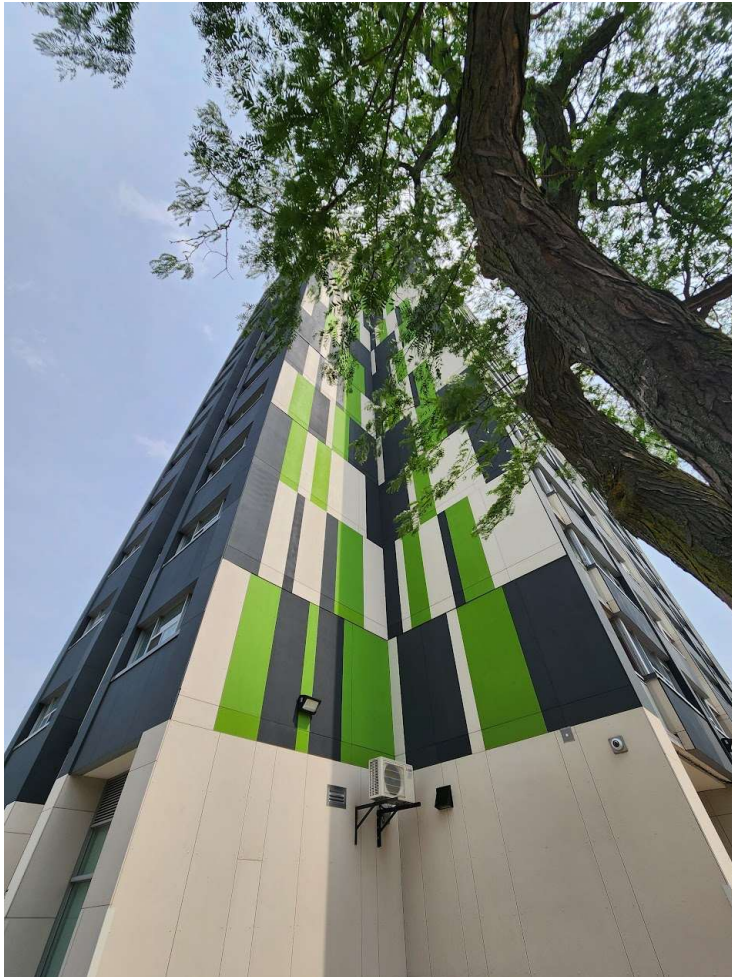


Fig. 25. 415 Driftwood Ave. TCH, Edgeley Village. (Source: Author, July 26, 2023)

Other legacy towers in Edgeley Village are not yet objects of multi-institutional attention. The two 12 storey towers at 335 and 345 Driftwood Avenue and a group of neighbouring townhouses form a condominium complex under the name YCC 70. The site backs onto the same Black Creek Parkland as 470 Sentinel Road but, here, if one could go directly into the valley, one would be able to access the Pond on York University Campus in a few minutes. There is no path or gate. My site visit to 415 Driftwood Ave led me to notice new energy efficient windows installed on parts of each of these towers. Condominium board members were able to discuss with me the circumstances of the partial installation and their living conditions and costs (YCC Interview, July 26, 2023).



Fig 26. 335 Driftwood Ave. YCC, Edgeley Village. (Source: Author, July 26, 2023)

As a condominium corporation, they can finance the CAN 5 million dollar installation costs of new windows over a three year phased approach through their capital reserve fund, a fund kept in accordance with the Ontario Condominium Act, 1998, S.O. 1998, c. 19 where the condominium corporation is required to maintain fund purposes of major repair. They were not able to get any government program support for the investment and expressed frustration that they understood themselves not eligible for government rebate program support that might cover single family homes. Also, the board members pointed to their own lack of capacity and personal time as volunteers to truly investigate what option the corporation could pursue to raise further funding. Moreover, they expressed frustration that their towers did not look as nice as the TCH building at 415 Driftwood Avenue, which, like the tower at 5 Needle Firway, resemble the refurbished towers in Woodside, Glasgow, that won the *AJ Retrofit Award* in 2021.

The board members I spoke to were longtime residents and proud to be in that community. Direct access to the Black Creek ravine was also discussed with security concerns expressed by one, while another suggested the installation of a secure gate would solve that problem. While the condominium fees were set at CAN 800 currently, these board members had paid much less than the current unit price of CAN 480,000 that was discussed as the current price of a two bedroom. Insufficient funds were currently available to restore the swimming pool on the site, and insufficient social services to help one of the resident family's child with autism nearby were also identified as issues the community were facing. YYC 70 is the only condominium discussed here, but points to the fundamental importance of social infrastructure support in understanding the experiences of residents, wherever the building itself is on the spectrum of public or private.

Lawrence Orton, Scarborough



Fig. 27. Lawrence Orton, Toronto – Scarborough. (Source: Author, July 26, 2023)

Scarborough's history of development and its socio-economics are similar to North York in that villages that existed were largely subsumed in a massive redrawing of the landscape into the confines of a grid iron of arterial roads to access residential single-family homes with certain light and medium industry space provisioned for. Along these arterial roads or in small clusters just off of them, near but separate from single family homes were placed mid-century towers and tower neighbourhoods. The direct identification of one intersection with a community is not so clearly articulated however in Scarborough. Many communities live among the legacy towers that have been my focus along with significant refurbishments. Lawrence Orton is a THC

building on Lawrence Avenue East, east of Markham Road and the Morningside Park system at Highland Creek Park. The building is within a modest campus of 336-unit complex of some 1000 residents and was completed in 1969. It sits on the border of two NIAs, Morningside and Westhill neighbourhoods, where the average neighbourhood income is slightly higher than the two Jane Finch NIAs (CAN 33,000 to CAN 26,000) (Toronto,2023b). As a TCH property, it was subject to its 'ReSet' program based on one-time Provincial funding in 2016. The project of refurbishment was completed over four years in 2019 with SvN Architects and Planners and ERA as partner, with consultants involved including Entuitive Corporation (structural engineers), Smith + Anderson (mechanical & electrical engineer), JMV Consulting (sustainability consultant) (ERA, n.d.). Lawrence Orton was conceived of as an operation energy reduction project with specific funding towards that goal. It is a refurbishment, not a retrofit of comparable type to the European projects, but it exemplifies both the necessary thinking and the necessary construction professional capacity towards carbon reduction without gentrification.

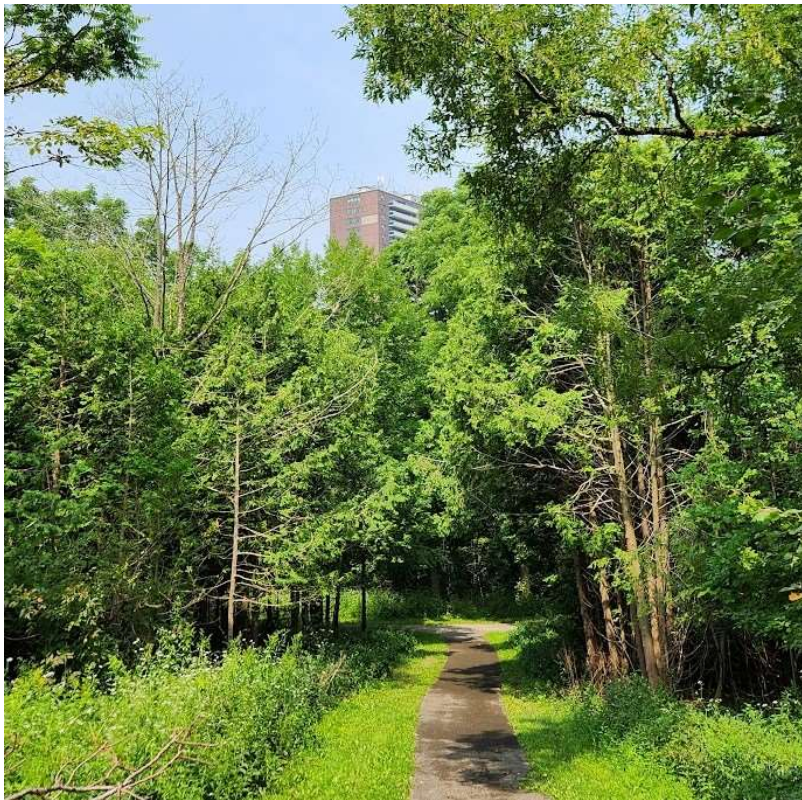


Fig. 28. Lawrence Orton, Toronto, from Morningside Park – Scarborough. (Source: Author, July 26, 2023)

The campus of Lawrence Orton has had the entrance portico and building base significantly improved with an Early Learning and Childcare centre installed within it. The surrounding townhouses are also being refurbished currently (July 2023). Striking when visiting the site is the relationship of the property to the parkland it sits beside and the lack of entrance pathways into the park system. Although the park can be entered from the other side of the valley across the large bridge Lawrence Ave East passes over, and through a passage between the low rises and single-family houses on Celeste Drive accessible from that side of the bridge. It is a tower in the park on a real park, with barriers to access it.



Fig. 29. 4000-4040 Lawrence Avenue East, Toronto, with the mural on the side of social services building, The Storefront East Scarborough. (Source: Author, July 26, 2023)

The area is home to people from various places with shops and restaurants providing primarily South Asian, African and Afro-Caribbean food. There is a Muslim Centre beside a Hindu Kashmiri restaurant in the plaza, so small semi-connected commercial spaces with parking in front near by. These can be accessed on foot by walking along the six lane arterial road that is Lawrence East with limited shade or wind block. A much larger commercial cluster, with both the Cedarbrae and Cedar malls is a longer walk west away at the corner of Markham Road

The East Scarborough Storefront at 4040 Lawrence provides various social services support as a community hub and first stop when requiring help with some sport and child friendly programming (<https://thestorefront.org/>). It is funded in partnership between the all three levels of government, UWGT, the Ontario Trillium Foundation, and the Metcalfe Foundation, a charity with a strong mandate and track record of supporting communities across the city. It is a long walk across a big bridge, although only one bus stop away.

The Storefront sits beside another campus of privately owned legacy towers with attractive decoration along the whole vertical of one of the flat surfaced walls owned by Canadian Apartment Properties REIT (CAPREIT), the largest publicly traded Canadian REIT headquartered in Toronto and operating now for 25 years, with assets of some CAN 17 billion. The company web site invites: “Visit any one of our properties and you’ll experience happy residents serviced by caring individuals” (<https://www.capreit.ca/>). Zumper.ca has a listing for a one bedroom in one of the CAPREIT towers at 4000 Lawrence East renting for CAN 2,145 at the time of writing. The buildings look well maintained, with good quality windows, and are architecturally very good examples of high quality mid-century modern design. If the issues of public transportation speed and connectivity are resolved and the unfortunate pedestrian experience of unmitigated exposure to the elements were different—or if one has a car—much positive can be said about Lawrence Avenue East living.

Chapter Four

Conclusions

The architects Anne Lacaton and Jean Phillipe Vassal gave a series of public lectures and a master class for the students of architecture at the University of Sydney, Australia in 2021. For Vassal, the quality of housing and public space is a direct determinate of people's participation in democratic processes (Lacaton & Vassal, 2021). The buildings themselves and, importantly the spaces around them, the connectivity to community and the transit connectivity to employment spaces, education and recreation spaces are at issue.

CAPREIT's historical time line puts it right at the start of August's (2020) account of the period from 1996 where REITs began to leverage assets in a significant and obviously successful acquisitions phase. The scale of these assets currently holds significant potentiality for investment in operational carbon reduction, while maintaining current resident groups, if mechanisms and regulatory capacity were in place to make this possible. Utopian thinking about such concrete tower blocks, and their owners suggests significant potentiality in this sector to achieve those goals.

Each of these representative development applications for amendments to zoning and planning legislation suggest a recognition of the needs and opportunities to rethink the modernist legacy of the tower in the park as a built form—the requirements, needs and wants to change the residential and pedestrian experience in the area. There are two threats to the communities that come with these potential allowances. While clearly the threat of gentrification accompanies these intended developments, that each of them intend to retain some or all of the existing built forms on their respective sites mitigates that. The second threat can be termed “overbuilding” to refer to overblown densities on less valued lands to maximize developer profits. As the notion of what is too much density is socially determined, a community process is required to address these issues. Community processes have become crucial to all projections of development and refurbishment, as was already recognized in the Regent Park situation in 2002-2003 discussed above. The Toronto projects described above,

even the Lawrence Orton project, are not of a scale of retrofitting existing buildings. Some of the projects discussed are using land values and the potential increases in density to allow for a necessary start at refurbishment. The potentiality of a more ambitious level of retrofitting that has in its purview both social and environmental justices is urgently required to address the dual crises of housing and the climate emergency being faced in the European examples addressed here. In those examples, I highlight the complex of actors involved with the financial piece of the retrofit developments and point to the institutional complexity, but also the partnership models between public (governmental and institutional), foundation and private institutional investors. These are spurred on by the regulatory frameworks but, also, on an investment portfolio of reliance on safer, government backed projects with environmental and social mandates, less subject to market speculation. At the municipal scale, even in a land mass that is as large as Toronto, significant reduction of carbon emissions will be insufficient for climate change mitigation as Miller and Mössner (2020) have argued and might only lead to a level of eco-gentrification that fails social justice.

The presence of the Create TO agency is a positive development as are the dynamics of TCH investment when assets can be leveraged in the Toronto real estate situation to fulfill both social and environmental mandates. But obviously a larger scale of institutional investors, of multi-level government support and the regulatory and financial support (sticks and carrots) are urgently required. Social Housing under the TCH were sites of Ontario's Green Investment Fund (OGIF) in 2016: "\$82 million for social housing providers across the province to complete retrofit projects which would reduce greenhouse gas (GHGs) emissions" (Toronto, 2016). The City of Toronto allocation of the Province's one time Social Housing Apartment Retrofit Program (SHARP) was funding of CAN 42,948,037. This is clearly insufficient when retrofitting costs per unit in the Bordeaux case is EUR 65,000, or CAN 97,000 per unit. SHARP was enough to cover 442.76 units more or less. As Lisa Fergusson for Social Planning Toronto presents her analysis of the City of Toronto Budget passed in 2023 before the last election, the City of Toronto is unable to do what is needed for both social infrastructure and building maintenance left alone (Fergusson, 2023). Asset leverage on a much larger scale, within partnerships aimed at fulfilling the dual mandates of social and environmental justice are required.

Lessons and Recommendations

One

Lessons that might apply to Toronto conclude Chapter Three and were detailed in three categories I will build out here in parallel. The first category of lessons about the recognition of existing buildings as valuable housing and valuable architectural objects is crucial for Toronto. It might be well to recognize at last, the historical and aesthetic importance certain legacy towers that have distinct qualities and style, although here like in Europe, it is the concrete facts of their high levels of valuable well built concrete housing function that is crucial. An historical listing leading to building preservation would require means and methods of restoration, whereas what is perhaps more important is to preserve the affordability of the housing.

1.1 Support the development of a business environment for the development industry where demolition and building waste disposal are factored into costs analysis. This has strong potentiality to support the building and development industry's turn towards retrofitting and refurbishment as a first option.

1.2 Couple regulation with amendments to the taxation regime to promote refurbishment as an approach, as the *AJ RetroFirst* campaign calls for, is a strategy that can work and has in the UK.

1.3 Amend government policy at all levels around taxation, tax incentives, and around environmental regulations at Federal and Provincial levels to promote refurbishment and retrofitting of legacy towers including even condominium corporations faced with financial capacity concerns to refurbish building envelope and mechanical systems. New builds will face these issues as a crisis sooner than was likely planned and can be covered with their existing reserve accounts.

1.4 Encourage REITs and other large asset holding corporations in the development industry to develop foundation arms through taxation incentives to allow for them to play active roles in the retrofitting of their towers as a not-for-profit activity.

1.5 Bolster government “crown” corporations in Canada that already exist at a number of levels, the Canada Mortgage and Housing Corporation (CMHC), Toronto Community Housing, as well as the even younger Create TO. 2023 Toronto Mayoral candidate and former Ontario MPP in the riding where Lawrence Orton sits, Mitsi Hunter, suggested the creation of a Toronto Affordable Housing Corporation with a specific mandate at affordability. However, I strongly suggest addressing housing, energy poverty and building energy retrofits simultaneously.

1.6 Strengthen partnerships between government, banking, not-for-profit housing entities and large asset holding corporations to focus on this dual crisis of affordability and the climate emergency as it were a national crisis as it is an international one. The Tower Renewal Partnership is a great example of what might be possible if sufficient support could be put in place.

1.7 Finally and ultimately important is to support community initiatives for alternative ownership models in Canada to de-commodify rental housing through actions such as government guarantees of loans and support for management capacity building. Collective ownership models of co-operatives and Community Land Trusts and Housing Associations can be effective alternatives when they reach a certain scale, have sufficient management capacity, and strong financial partners in financial organizations such as credit unions whose mandates blend social and environmental goals into the business model.

Two

The second group of lessons was what I am calling environmental services.

2.1 Retrofit and reconnect parkland access where possible as so many legacy towers in Toronto sit above ravine systems with good air flows that might assist apartment units for passive ventilation, while reconnecting residents better to these parklands would allow them to find cool in the parks.

2.2 Encourage the employment of blinds and shutters and other forms of summer sunshade which can be opened up in cooler seasons. This is a call to both architects and building managers to make blinds accessible and fashionable because they are extremely useful when properly designed and employed.

Three

The third groups of lessons are the centrality of what I have been calling the social infrastructure and cultural engagement. The first call is to increase government support for the social agencies that ease the burden of life for so many vulnerable people across the city, such as the United Way Greater Toronto, food banks, employment support, youth at risk agencies, early childhood and family support agencies and the many others who work so hard. Beyond that, the following recommendations are all important aspects of refurbishing and retrofitting the legacy towers and Tower Neighbourhoods.

3.1 Continue to strengthen the planning through community consultation infrastructure embodied in the Jane Finch Initiative there and for other areas of the region.

3.2 Mandate the Zoning By-Law Amendment process to negotiate significant carbon reduction efforts and the refurbishment to existing buildings, as tower in the park site plans are remodeled when density increases fit into the planning carried out through community consultation processes. Success with such refurbishments of older towers while infill is planned is being achieved in Toronto as discussed above.

3.3 Finish building out public transit. Clearly, in Toronto, transit is socially and politically acute site of conflict; yet, it is obvious that physical and social mobility are better tied together where trams and dedicated bus lanes are included in neighbourhood development. Carry costs of transit across institutional forms and government agencies and understand it also as a health and safety concern, the time taken away for commuting is time lost for community and family.

3.4 Support cultural programming and interventions with more money from all agencies and levels of government. As stated above, the success record of European public agency efforts aimed at social cohesion—especially in the face of structural inequalities that are also racialized—is poor in comparison to what has been achieved imperfectly in Toronto at not nearly the spending. Culture is nothing if not the cornerstone of what is community-building and place making and without music and arts support, strong communities cannot be built.

Appendix

Key Informant Interview Discussion Guide

Date: 11.12.2022

Study Name: Retrofitting Concrete Utopias:

Climate Change Adaptation for Mid-Century Housing Stock

Researcher name:

- Frederick Peters, MES (Planning), York University, Principal Investigator.
- Email: fpeters1@yorku.ca

Purpose of the Research:

- This research addresses the need for, and possibilities of, retrofitting existing large concrete tower block residential buildings and tower neighbourhoods to reduce green house gas emissions and address residential thermal comfort. The scale of expense and number of residents of tower blocks makes the undertaking to refit such buildings very challenging.
- Historical framework, current practice and potential future
- How have these challenges been faced and what are the prospects for the immediate future?
- This research includes key informant interviews with planners and architects, municipal and social services agency staff.
- This research is intended to be presented in the form of written academic papers and presentations for an academic and practitioner audience.

What You Will Be Asked to Talk About in the Research:

My research addresses retrofitting existing large concrete tower block residential buildings. Existing housing stock needs to reduce emissions as does the construction industry; both are problems for achieving zero emissions goals. The scale of expense and number of residents of tower blocks makes the undertaking to refit such buildings very challenging. Toronto is an excellent site for this research as for the large number of apartment towers built in Toronto from the later 1950s up to the 1970s.

Part 1 of the research intends frame the legacy of Toronto modernism in planning. I need to speak to senior practitioners with experience of the 1970s and 1980s to explore how were such questions understood from the perspective of planners and architects.

Part 2 of the research addresses the current state of these built legacy structures issues that face residents.

Part 3 of the research looks at cases of retrofitting concrete block social housing in Europe and what might be accomplished in this sector in the immediate future.

Discussion Points:

- a. Evolution of the relevance of environmental, energy usage and climate change in the individual's professional practice. How were such questions understood from the perspective of planners, architects and city officials?
- b. How are such questions understood now from the perspective of planners, architects and city officials?
- c. Possibilities of retrofitting existing large concrete tower block residential buildings and tower neighbourhoods to reduce green house gas emissions and address residential thermal comfort.
- d. The scale of expense and number of residents of tower blocks makes the undertaking to refit such buildings very challenging. How are these challenges seen and how may they be overcome?
- e. Questions about specific buildings, about material and infrastructure conditions on them and in them.
- f. Where appropriate, questions will be presented about the building management and maintenance structures.
- g. What further grey literature and studies shall I look at?
- h. Enquire of who else I should speak to about appropriate theme (historical, current or potential future).

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