

Main Street is Dead, Long Live Main Street

by

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CONTENTS

Abstract	iv
Acknowledgements	v
Chapter 1: Introduction	1
Rural Deindustrialization.....	2
Main Street is Dead	4
Thesis Question	7
Chapter 2: Current Urban Strategies.....	8
The Metropolitan City	8
Data Collection	9
Ctrl + C/V	11
Long Live Main Street?.....	15
The Argument	15
Chapter 3: Methodology	18
Challenging the Idea of Rules	18
A Pattern Language, Christopher Alexander	20
Grand Urban Rules, Alex Lehnerer.....	22
Formulating the Approach	25
1.0 Urban Scale	25
2.0 Program Scale	26
3.0 Building Scale	28
Chapter 4: A Local Approach	29
In the Beginning.....	31
The Fall of Sydney Steel.....	32
A Struggling Post-Industrial Community	35
What Sydney has to Offer.....	38
Hopes of a Bright Future.....	42
Chapter 5: Application	46
Urban Scale	47
Street to Community Landscape	56
Site Selection.....	57

Program Scale	58
Target Residents	59
Reinterpreting Collective Living	64
Generated Typologies.....	66
Building Scale	70
Chapter 6: Designing a Community Landscape	73
Objectives	73
Chapter 7: Conclusion	87
Bibliography.....	88

ABSTRACT

Deindustrialization is a phenomenon apparent in many countries across the world, but while the majority of the revitalization focus has been on large metropolitan cities, little consideration has been taken into account for small post-industrial towns. A solution must be rooted to the place in order to succeed, so lessons have been taken from past approaches and combined into an alternative method suited for these small, struggling communities.

Sydney, Nova Scotia, a once thriving industrial town affected by the departure of its coal and steel industries, has been chosen as a test site for architectural intervention. The service based program of its downtown core has become irrelevant, resulting in an abundance of boarded up storefronts and dwindling pedestrian foot traffic. This thesis reinterprets the traditional main street as a new community landscape developed from a genius loci approach to place and time. The incorporation of live/work units and a collective industrial hub creates a level playing field for tradespeople making the move back home to Cape Breton; promotion of new businesses will populate the waterfront, bringing current residents downtown once again and sparking subsequent development within the core.

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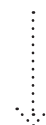
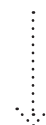
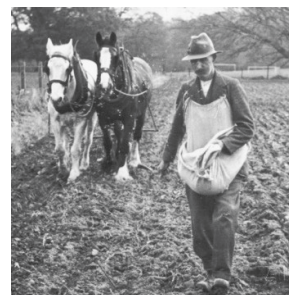
To my family for their patience and support throughout all of my academic endeavors;

And finally, to my friends and studio mates for their advice, support, and welcomed distractions.

CHAPTER 1: INTRODUCTION

Every few hundred years in Western history there occurs a sharp transformation. Within a few short decades, society rearranges itself - its worldview; its basic values; its social and political structure; its arts; its key institutions. Fifty years later, there is a new world. We are currently living through just such a transformation.¹

For hundreds of years, societies around the world have been transforming and adapting, proving their resilience. These transformations can be summed up into three levels of development: a pre-industrial type, which was primarily extractive and relied on agriculture, fishing, and timber; an industrial type, which was concerned with the fabrication and conversion of raw materials into finished products; and finally, a post-industrial type, whose main activity is the processing of information and knowledge, and is primarily service based.² Each of these developmental levels was driven by different needs and worked based on different principles: The pre-industrial society was locked in a struggle with nature and relied on human or animal muscle, while the industrial society mastered these natural threats through the power of the machine.³ Currently, we are entering a new phase of post-industrialization; the post-industrial society is rising above the world of production and focusing on the exploration of new modalities to further efficiency and innovation.



Visual representations of the three developmental levels of transformation our society has endured; photographs from *The Oil Drum*, *Large Industrial Plant* and *Light Installation*, respectively.

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1. Peter Drucker, *Post-Capitalist Society* (New York: HarperCollins Publishers, 1993), 1.
 2. H. V. Savich, *Post-Industrial Cities: Politics and Planning in New York, Paris and London* (Princeton: Princeton University Press, 1988), 4.
 3. *Ibid.*, 5.

Rural Deindustrialization

Deindustrialization is a process of social and economic change caused by the removal or reduction of industrial capacity or activity in a region; this shift has affected a large percentage of countries across the world. The end result is comparable whether the region be large or small, however, approaches toward revitalization have varied. The focus of this thesis will be on the lack of revitalization strategies available for smaller towns, despite their relatively high number in industrial regions like Canada and the United States.

The smaller city or town is more likely to have relied on one or very few industries for employment.⁴ While the disappearance of jobs has affected a large portion of the population, some small towns have adapted faster than others. For those that haven't, deindustrialization could be detrimental to their survival if they're not given clear direction on how to move forward.⁵ Due to their modest populations, small communities can only offer a limited range of employment opportunities; they often have difficulty diversifying their economy when it comes to attracting new businesses and encouraging new services and activities. In comparison, metropolitan cities have larger populations with a broad range of skills. This results in a maximum range of opportun-



A protest against plant closures in the 1980's; photograph by Nick Barrickman, from *The Deindustrialization of Baltimore*.



Parade of concern in Sydney, Nova Scotia, 1967; photograph from *From the Pier, Dear*.

4. Edmund Roy Harvey, *Sydney, Nova Scotia: An Urban Study* (Toronto: Clark, Irwin & Company Ltd., 1971), 2.
5. Peter Cole, "A Tale of Two Towns: Globalization and Rural Deindustrialization in the U.S.," *The Journal of Labor and Society* 12 (2009): 539.

ities and a greater chance of survival when it comes to revitalization.⁶

Most communities seem to be lacking a clear vision of a new fundamental purpose for their existence. They know they can no longer depend on industry as their primary engine for economic development, but small scale projects, like niche markets, bed and breakfasts, and local festivals (though marginally successful) are only temporary solutions and have limited long term potential for development.

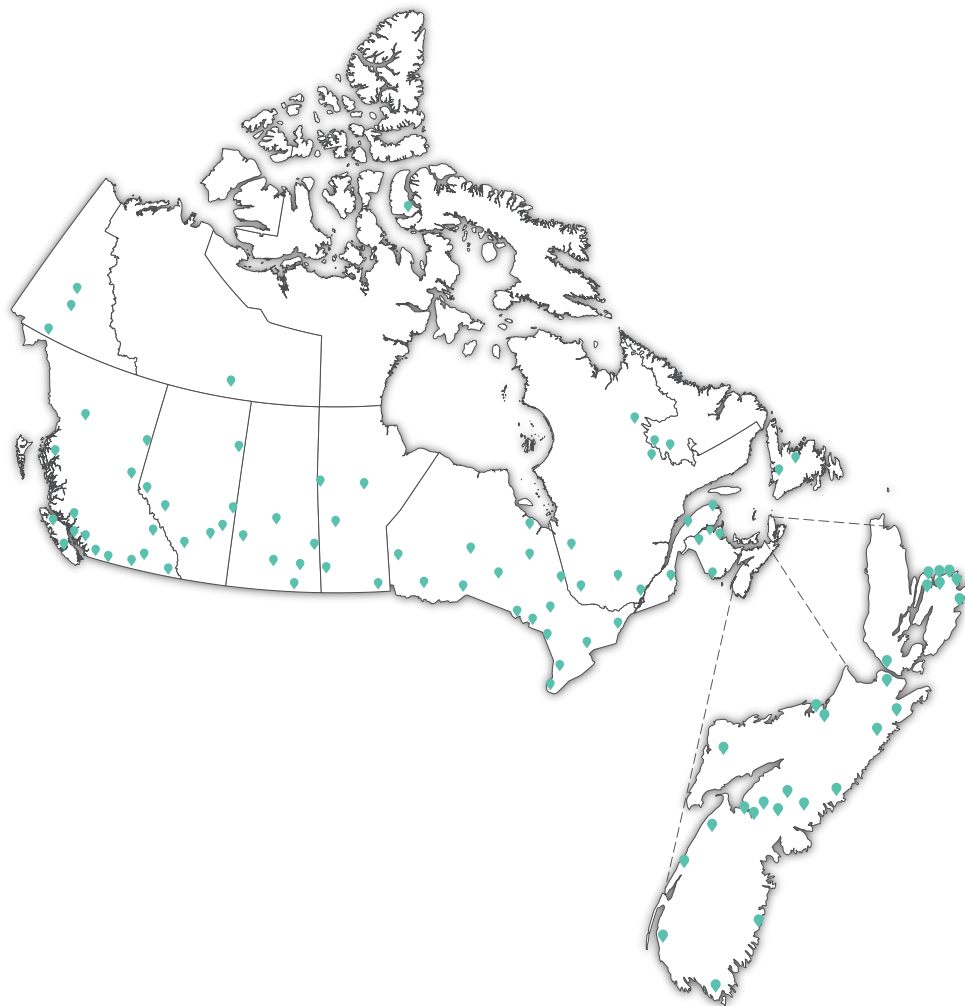


Image highlighting the prevalence of rural post-industrial communities. Due to their size and reliance on one or very few industries in the past, many of these “one industry towns” are struggling to stay afloat.

6. Harvey, Sydney, *Nova Scotia*, 5.

Main Street is Dead

Every small town has what is commonly known as a “Main Street,” and what they represent across Canada and the United States is universal. In its own terms, it denotes the commercial strip of a small town, the traditional center for social, cultural, and economic activity for its community;⁷ but it is also a synecdoche for the small town itself. Main streets encompass the idea of community as well as the group of people who live there. According to Orvell, it is the conjunction of place and people, of the land and of human beings.⁸ Main Streets were places of shared memory, where the entire community came together to live, work, and play.⁹

Main street, small town, and community are not synonymous, but their use has overlapped, and each has both a denotative and connotative meaning. Main street is the particular name of a place in many towns, but it also evokes an ethos, a culture, or an ideology. The small town, likewise, can also refer to a historical place or a larger political culture; while community can mean not only the place, but also the social composition of the place.¹⁰ All of these terms tell us who we were, who we are, and how the past has shaped us. Unfortunately, the small town has been dying for almost as long as it has been in exist-

7. Main Street America, *What Is Main Street*, last modified January 2016, <http://www.preservationnation.org/main-street/>.

8. Miles Orvell, *The Death and Life of Main Street* (Chapel Hill: The University of North Carolina Press, 2012), 4.

9. Main Street America, *What is Main Street*, 2016.

10. Orvell, *The Death and Life of Main Street*, 6.



Main Street in Brantford, Ontario; photograph by Lloyd Alter, from *Are Main Streets a Thing of the Past*.



Main Street in Lancaster, Ohio; photograph by Ben Shahn, from *The Library of Congress*.



Main Street in Mackinac Island, Michigan; photograph by Detroit Publishing Co., from *The Library of Congress*.

ence, and can be seen as a fragile organism, open to attack from a multiplicity of forces.¹¹ From Main Streets with boarded and vacant shops in the West, to deserted towns in New England that stand like a memory of their former bustling selves, there are countless examples of failed and failing towns that have succumbed to a variety of elements.¹²

Main streets are often the first place to see a dramatic change once a town has deindustrialized. The historic program of main streets was commercial and service based; everyone in the community had to go downtown to do their business, from banking and mailing letters, to civic duties and day to day shopping. The streets were lined with boutique clothing and department stores to medical offices, libraries and hardware stores. Several things happened in the mid 20th century that forever changed what our perception of the typical main street model was, sending small downtowns everywhere into decline:

Manufacturing Industry

The automotive industry, specifically, sparked an influx of personal automobiles. This, combined with the construction of improved roadways, promoted outward growth, commonly referred to as sprawl. This has led to the erosion of many city centers, but, specifically within smaller communities, has led to the disintegration of their downtowns as residents begin choosing bigger, detached houses on larger lots along the edge of town.

11. Ibid., 47.

12. Ibid.



Boarded up shops on Main Street in Ash Grove, Missouri, 2014; photograph from *Missouri Loves Company*.



Abandoned Main Street in Baltimore, Maryland, 2012; photograph by Olivia Hubert-Allen, from *Nothing New With Old Town Mall*.



Lack of activity on Charlotte Street in Sydney, Nova Scotia, November 2015.

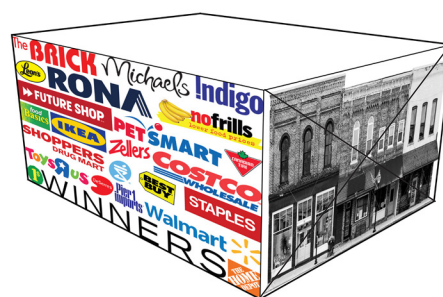
Enclosed Shopping Malls

Big box stores and shopping malls alike have made it easier for people to get all of their shopping done in one place. There is no longer a need to travel downtown and deal with street parking just to visit the drugstore or boutique department stores when one can simply jump on the highway and go to the mall.



Technology

An increase in technology and personal computers have rendered typical main street services like post offices and banks irrelevant. Main street was once a place where people went to take care of all their business, all of which can now be done in the comfort of one's own home.



Just as societies have transformed and adapted over time due to cyclical shifts in economy, values, and social or political structures, our perception of main streets have changed as well. Cities have the ability to adapt to their surroundings, and have been successful at doing so for hundreds of years. Small communities and their downtowns are unfortunately being left behind, with little direction on how to rearrange themselves to suit this new world. In large, populated centers, deindustrialization is used as an opportunity for cities to develop and advance as a whole. Current main street revitalization programs have resisted change due to their focus on historic preservation; these beautification projects are only surface solutions, as they have failed to account for several of the factors mentioned above as well as



Collages representing the manufacturing industry, enclosed shopping malls, and technology, respectively.

the changing needs of their residents. There is an underlying belief of what main streets encompass as a place, culture, or ideology. This perception is in need of an adjustment, and an appropriate strategy should be developed to help these struggling communities move forward.

Thesis Question

If the model of the traditional Main Street - a manifestation of an industrial past - is now an anachronism both in place and time, can a new model for Main Street, one rooted in real place and time, provide a right-size, right-place approach to post-industrial revitalization?

CHAPTER 2: CURRENT URBAN STRATEGIES

Over the course of the early-to mid-twentieth century, millions of people migrated to metropolitan cities like Detroit, Pittsburgh, and Indianapolis. There were many draws, including stable employment, union protection, and the potential for middle-class advancement. Most employment opportunities for new arrivals and existing residents were in factories that produced steel, iron, or other related products; there was tremendous success in these industries and that resulted in a spike in the economy and population.¹³ All of this would begin to change around the 1970s, when these regions began to struggle with loss of jobs and outmigration, mostly due to a shift from manufacturing-intensive to services-based economics.¹⁴ Regions all over the world have varied in their abilities to respond to deindustrialization, and given the historically unprecedented nature of this economic challenge, decisions about how to respond were often quite difficult for regional leaders to make.¹⁵

The Metropolitan City

Architects, urban planners and residents alike, are naturally drawn to cities because they can offer jobs, convenience, culture, vibrancy and a colorful history all in one place. The large, metropolitan narrative,

13. Margaret Cowell, *Dealing with Deindustrialization: Adaptive Resilience in American Midwestern Regions* (New York: Routledge, 2015), 11.

14. *Ibid.*, 12.

15. *Ibid.*, 2.



Packard Automotive Plant, East Grand Boulevard on Detroit's east side, 2006; photograph by Yves Marchand and Romain Meffre, from *Detroit and Deindustrialization*.



Abandoned Bethlehem Steel building in Pittsburgh, Pennsylvania; photograph by John Rizzuto, from *Fine Art America*.



Abandoned rowhouses in Baltimore, Maryland; photograph by Nick Barrickman, from *The Deindustrialization of Baltimore*.

however, is not always about growth and vibrancy, and as mentioned, many issues can arise; these problems are often due to deindustrialization and can lead to abandonment and gradual dilapidation of once viable buildings and neighbourhoods. Some of the world's most economically advanced countries have deindustrialized over the last few decades, and because of this, a lot of focus has been put on the revitalization of these large, post-industrial cities.

Data Collection

In order to move forward, one must first look back in history to analyze past accomplishments and failures. Deindustrialization is a global phenomenon, and this becomes evident when mapping out existing approaches towards revitalization. There have been a wide variety of responses ranging from restoration and landscape projects, to iconic buildings and commemorating installations. This research resulted in a clear inconsistency between the ratio of large scale to small scale approaches toward post-industrial revitalization, as many of these studies failed to account for smaller, one-industry towns. The hopes of this thesis is to fill an existing gap in the architectural discourse by developing a new, genius loci approach for these small, struggling communities.



Introducing foreign/
unlikely programs



Restoration



Landscape
architecture



Do-all solutions



Service based
program



Residential



Cultural or
commemorating



Iconic buildings

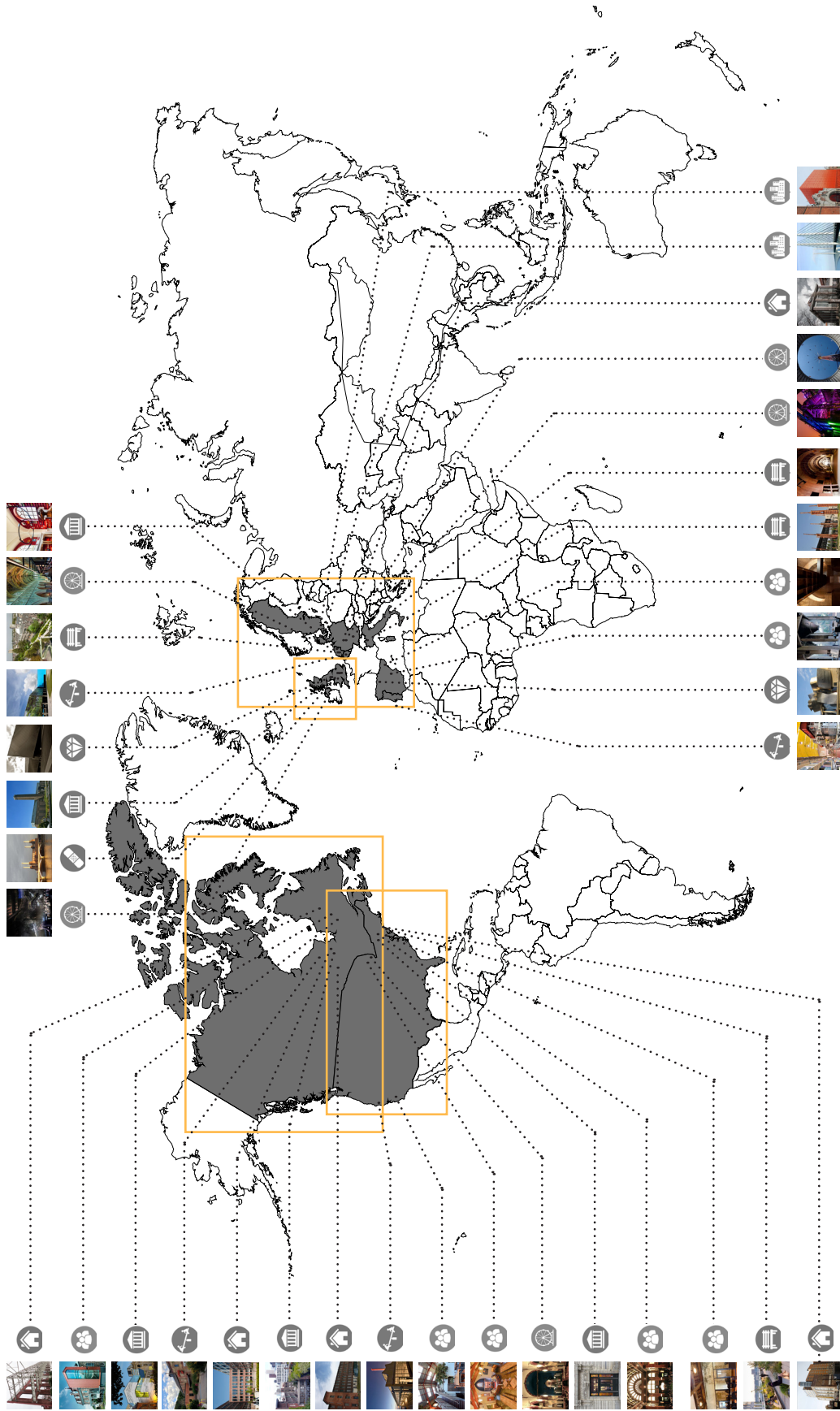


Construction in
anticipation of
population growth



Temporary
installations

Icons representing the 10 categories unveiled during the data collection phase.

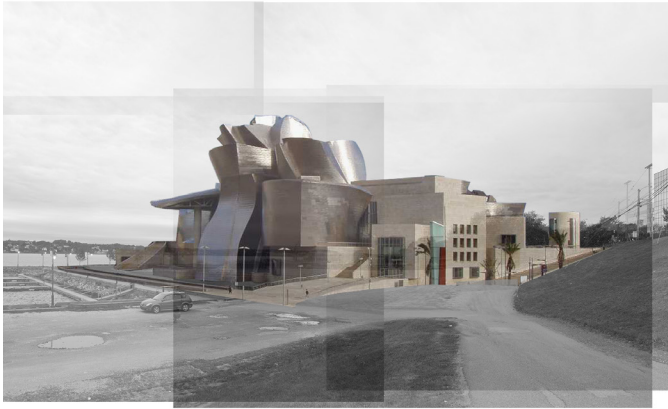


This image represents a portion of case studies that have been grouped into categories based on the specific approach taken. The world map illustrates deindustrialization as a global phenomenon.

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The importance of place is an underlying theme in this research; the methodology is more complicated than simply applying an existing solution to a new area, and is increasingly more difficult considering that the current approaches are suited for cities of a much larger scale. To demonstrate this, an exercise was completed to illustrate the reasons why “flown-in” methods don’t work. By pasting existing projects into various sites around Sydney, Nova Scotia, a struggling post-industrial community, one can understand the importance of a solution being rooted to the place.

Despite the difference in scale, each of these projects had an issue they were trying to address. Many of these issues could be considered “scale-less,” in that the principles are potentially applicable in different areas, on different scales.



Guggenheim Museum, Bilbao pasted into a vacant lot on the Sydney waterfront. The focus of this project was to create an iconic cultural building to put Bilbao, Spain back on the map. While creating a flashy design for a cultural institution would certainly draw attention to Sydney, it would likely not be sustainable. The lesson taken from this approach is that success is in numbers; even the Guggenheim Bilbao wasn't successful on its own, it was the whole overhaul of the waterfront that fueled it's success; image from *AD Classics: The Guggenheim Museum, Bilbao*.



Halifax Central Library pasted into a vacant lot in downtown Sydney. When the Halifax Central Library was built in downtown Halifax, it completely changed the attitude of the local residents as well as attracted international attention. The lesson taken from this approach is that accessible public space and a transparent first floor, if executed correctly, has the ability to activate a street and its inhabitants; Halifax Library and background images from *Google Streetview, 2015*.



This collage represents a way to approach adaptive reuse through materiality. The Malmö Museum of Modern Art blended new with old when they incorporated a contemporary addition onto an existing historical building. In order to maintain a town's history, techniques to mesh the old with the new should be practiced. In this case, the contemporary facade of the Malmö MOMA was wrapped around a historic brick building in downtown Sydney; images from *Google Streetview, 2015*.



Luchtsingel Pedestrian Bridge in Rotterdam pasted into the vacant steel plant site in Sydney. The Luchtsingel pedestrian bridge was built to connect 3 separated neighbourhoods within its downtown. In reality, the bridge crosses over a busy highway, but when applied to Sydney, one can envision the benefits of connecting three previously disjointed, culturally diverse neighbourhoods; satellite images from *Google, 2015*.



The High Line pasted onto Sydney's unused rail line. The highline was an adaptive reuse project that repurposed an elevated railroad in New York into an urban park. A similar project is the Promenade Plantee in Paris, another adaptive reuse of an old rail. Currently in Sydney, the old rail is a visible and physical divide between the downtown and the newly remediated Open Hearth Park. Urban connectivity is important when revitalizing a community. Disjointed spaces are not as successful as those that are connected through either physical or cultural means; satellite images from *Google, 2015*.



Collaging the metal facade of the Guggenheim in Bilbao with the existing brick facade of a vacant building in Sydney was an attempt at extracting lessons through material choice. Brick laying is a well known trade in Sydney, and is evident in many of the existing buildings downtown. By pairing it with the undulating metal facade of the Guggenheim, a foreign material and technique in Sydney, one can imagine the possibilities of aesthetic and form by blending the two together.



A second attempt at extracting lessons through material choice. Collage of Sarphatistraat Offices in Amsterdam, with the mundane vinyl facade of a vacant building in downtown Sydney. A once drab downtown can be transformed through simple material choices. The visible change alone is enough to boost morale and invoke a sense of curiosity of what the community could be, especially when contrasted with existing materials.



These collages represent a transfer of knowledge. There are a lot of skilled tradespeople in Sydney, whether they be formally trained in steel manufacturing, welding, etc. or have learned from relatives the art of building and shaping boats by hand. There are a lot of techniques out there that the people of Cape Breton may not be familiar with, however there may be translations between the two. Examples being the curved hull of a wooden boat, and the curved formwork required to build a vaulted concrete ceiling, or historic manufacturing of steel products and contemporary steel framed buildings.



Long Live Main Street?

Current Main Street revitalization strategies are primarily focused on restoration of historic buildings within the core. Often, the existing service based program remains, with new endeavours such as restaurants and pubs inserted in between. While care is taken to ensure a pleasing experience for pedestrians walking down the street, these beautification projects are only surface deep, and do not hold long term potential for revitalization. These strategies lack a coherent plan in permanently reintroducing residents into the core of the downtown. Entertainment venues are only temporary solutions and will eventually become trivial in the grand scheme of a community's revitalization approach.

The Argument

The idea that smaller communities are being pushed to the wayside is one of the main drivers for this research, and has also lead to the decision in using Sydney, Nova Scotia, as a test site for architectural intervention. All of downtown Sydney's problems are characteristic of the typical failing one-industry town, and will be used as an example of how to approach the inevitable fate small communities have when facing deindustrialization.

Deindustrialization is a hard reality for many people around the world, but contrary to popular belief, it can also be seen as an opportunity for cities to adapt, advance, grow, and show their resilience:



Traditional main street revitalization strategies applied to a Main Street in a small neighbourhood in New York; photograph from *Downtown Revitalization*.



Traditional main street revitalization strategies applied to a Main Street in a small town in Charlotte, North Carolina; photograph from *Downtrodden Downtowns Can Thrive*.

[...] adaptation is supposed to be the life-saving resource of human and animal species. The great city, too, is an organic phenomenon capable of adaptation and in order to survive, it must adapt its politics to the post-industrial condition.¹⁶

While this mentality is enforced when thinking about large cities, for some reason we do not apply the same thought process to small communities. They too are capable of adaptation if given the right tools to do so.

Anachronism can be defined as a thing belonging or appropriate to a period other than that in which it exists. The traditional Main Street model is now an anachronism both in place and time, and is the reason why many one-industry towns are failing. Downtown revitalization is more complicated than it's given credit for, and aimlessly proposing another cookie-cutter solution will only delay its inevitable fate. The aspirations of this thesis are to think outside the typical small town revitalization box, and develop a new model for Main Street, highlighting the importance of a solution being rooted in real place and time. In order to provide a right-size, right place approach to post-industrial revitalization, careful consideration must be taken into account for each individual town; existing assets that make a community unique should be leveraged and incorporated as a foundation for future development.

16. Savich, *Post-Industrial Cities*, 285.



Collage highlighting the importance of place as existing approaches toward revitalization are pasted into downtown Sydney. The surface deep solutions of current Main Street revitalization programs are highlighted, as well as the unsustainable large scale projects.

CHAPTER 3: METHODOLOGY

It cannot be denied that there have been many successful post-industrial revitalization strategies proposed throughout the years. Many cities have been completely turned around thanks to proper tools and thoughtful decision making. Since there has been so much success in the past, this thesis aims to facilitate the development of an alternative strategy for small communities by looking at the past for suggestions on how to move forward. This chapter will outline the methodologies used to develop the approach, and conclude with a comprehensive set of lessons intended to guide the design of a new model for Main Street.

Challenging the Idea of Rules

Rules have a bad reputation in the creative world. More often than not, architects and designers cringe at just the thought, thinking they will hinder the creative process and limit their abilities when it comes to designing. Louis Sullivan once warned:

Formulas are dangerous things. They are apt to prove the end of a genuine art, however hopeful they may be in the beginning to the individual. The formula of an art remains and becomes more and more dry, rigid, and vanishes forever.¹⁷

The first set of rules that are often seen as a burden or constraint on design is the National Building Code. While necessary, the rules within this document are anything but descriptive, and many

rule /rūol/

noun

plural noun: rules; noun: rule

1. one of a set of explicit or understood regulations or principles governing conduct within a particular activity or sphere.

"the rules of the game were understood"
synonyms: regulation, ruling, directive, order, act, law, statute, edict, canon, mandate, command, dictate, decree, fiat, injunction, commandment, stipulation, requirement, guideline, direction; formal ordinance

2. a principle that operates within a particular sphere of knowledge, describing or prescribing what is possible or allowable.

"the rules of grammar"

3. control of or dominion over an area or people.

"the revolution brought an end to British rule"
synonyms: control, jurisdiction, command, power, dominion

4. the normal or customary state of things.

"such accidents are the exception rather than the rule"

synonyms: procedure, practice, protocol, convention, norm, routine, custom, habit, wont; formal praxis

verb

3rd person present: rules

1. exercise ultimate power or authority over (an area and its people).

"Latin America today is ruled by elected politicians"
synonyms: govern, preside over, control, lead, dominate, run, head, administer, manage

3. be a dominant or powerful factor or force.

"the black market rules supreme"
synonyms: prevail, predominate, be the order of the day, reign supreme;

4. pronounce authoritatively and legally to be the case.

"a federal court ruled that he was unfairly dismissed from his job"

synonyms: decree, order, pronounce, judge, adjudge, ordain;

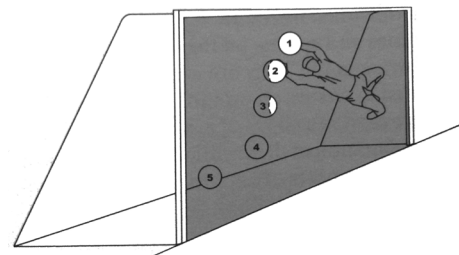
17. Louis H. Sullivan and Claude F. Bragdon, *Kindergarten Chats on Architecture, Education and Democracy* (Washington: Scarab Fraternity Press), 139.

Definitions obtained from *Google, 2015.*

leave almost no room for interpretation due to their connection with public safety. While things such as fire exits and maximum capacities are usually not disputed, constraints on the visual appearance or form of a building are where problems arise. Zoning rules determine such things as use, maximum building heights, and established setbacks from the street - all acceptable principles; design based rules, however, designate things like choices in materials, placement of windows and the shape of roofs. Architects and designers alike feel that established standards force them to think inside the box, rather than to dream up new things.¹⁸ According to Kevin Lynch,

Controls are widely accepted if they are limitations on use, density, and the layout of circulation - even if they should not be. They are viewed with greeted suspicion when applied to visual form. Controls are negative and passive measures, as opposed to the positive technique of design. They stifle innovation and restrict individual freedom.¹⁹

In the realm of games and sports, on the other hand, rules are accepted without much distrust at all. They are usually regarded as necessary conditions designed to ensure an exciting game or play. Without elaborating on the distinctions between building regulations and game rules, it can be said that there are good and bad regulations: those that restrict freedom of movement, and those that actually gen-



Method of scoring according to the FIFA rules: 1-3 No Goal, 4-5 Goal; image taken from Lehnerer, *Grand Urban Rules*.

18. Ray Mark Rinaldi, *Denver Architecture: Would design rules create a better-looking city*, last modified November 8, 2015 http://www.denverpost.com/lifestyles/ci_29078020/denver-architecture-would-design-rules-create-better-looking?source=infinite-up.

19. Kevin Lynch, *Site Planning* (Cambridge: M.I.T. Press, 1971), 238.

erate it in the first place.²⁰

With this thesis, I hope to challenge the public's misconception of rules by uncovering a set of lessons that are descriptive, rather than prescriptive. If the rules are open ended, they will point the user in the right direction, not necessarily make the decision for them. By designing rules that are descriptive and open ended, it allows the methodology to be applied to other communities, not just Sydney. Each user will be able to adapt the principles to the local conditions to which they're being applied, incorporating a sense of place into each individual strategy.

In order to proceed with this methodology, it was necessary to critique existing theories behind rule based architecture and design. For the purpose of this thesis, two approaches have been chosen, from which lessons on what should and should not be done will be discussed. It is said that, often one is able to define what they truly want by looking at the opposite approach.

A Pattern Language, Christopher Alexander

As a precedent for this research, Christopher Alexander's "A Pattern Language" was studied in order to uncover his methodologies. It was originally created to enable every citizen to design and construct their own home within a neighbourhood; while not entirely realized, it does allow one to detect and correct mistakes in urban design. Alexander's theories

20. Alex Lehnerer, *Grand Urban Rules* (Rotterdam: nai010 Publishers, 2013), 62.

have been discussed to great length, and they are often seen as highly utopian and questionable to most people within the profession.²¹

The elements within this language are called patterns; each pattern describes a problem which occurs over and over again in our environment, and then a solution to that specific problem is described in such a way that can be used many times over without doing it the same way twice.²² He clearly describes the empirical background of the pattern, the evidence for its validity and the range of ways it can be manifested. In doing this, Alexander has created a formula that individuals can judge and modify without losing the essence that is central to it.²³ The patterns are ordered beginning with the largest, for regions and towns, then work down through neighbourhoods, buildings, rooms and ending finally with details of construction - a complete handbook for designing. In his book, he states that

[...] when you build a thing you cannot merely build that thing in isolation, but must also repair the world around it, and within it, so that the larger world at that one place becomes more coherent, and more whole; and the thing which you make takes its place in the web of nature, as you make it.²⁴

In his work, no pattern is an isolated entity, each pattern can exist in the world only to the extent that is

21. Ingrid F. King, *Christopher Alexander and Contemporary Architecture* (Japan: a+u Publishing Co., Ltd., 1993), 8.

22. Christopher Alexander, *A Pattern Language* (New York: Oxford University Press, 1977), x.

23. *Ibid.*, xii.

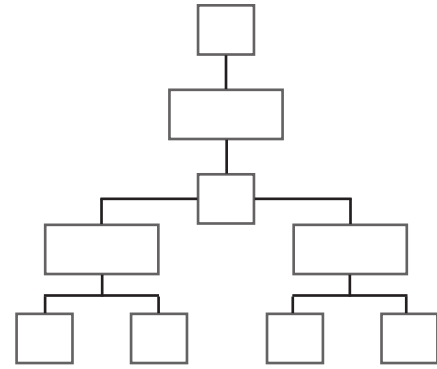
24. *Ibid.*, xiii.

supported by other patterns: the larger patterns in which it is embedded, the patterns of same size that surround it, and the smaller patterns which are embedded in it.²⁵ To this extent, Alexander's method is perhaps a bit too prescriptive, in that every step of the process is narrowed down to a choice in pattern, which leads you in the direction of the next step, and so forth, similar to a flow chart. In a sense, Alexander believes that he has created a design method that contains all of the necessary ingredients and mechanisms for the layperson to succeed in the design world - a common language.

While a sense of order or direction is necessary, I believe there should be more freedom in order to ensure belief in, and success of, the proposed method. If a method goes too far, too fast, there is a lack of respect for individual creativity. However, Alexander's theories do represent intuitive insights that architects are already engaged in, and he uses an overall systematic structure which may serve to unify significant tendencies in the profession.

Grand Urban Rules, Alex Lehnerer

In his book "Grand Urban Rules," Alex Lehnerer is proposing an imaginary city, whose physical appearance is the result of the effect of a specific set of urban rules. In a sense, he is creating an ideal building code, with the rules working both individually and as an integrated body.²⁶ Lehnerer believes that we are professional amateurs with regard to the city,



This diagram illustrates the flow-chart mentality described in Christopher Alexander's methodology. A very prescriptive way of working.

25. Ibid.

26. Lehnerer, *Grand Urban Rules*, 9.

its evolution, and its form, and haven't yet begun to understand the significant role played by rules and regulations in shaping our built environment.²⁷ He is a firm believer that rules are helpful instruments in structuring the work of design and can simultaneously act as guidelines for producing design as well as criteria for evaluating it. Unlike *The Pattern Language*, all 115 of the rules within this method have been meticulously sourced from other cities, referenced, and then applied to an imaginary one. This added step is a vital one, as the methodology could be believed to be more accurate due to the fact that Lehnerer is working by example.

This methodology is similar to Alexander's in that the collection of rules are not finite; Lehnerer has used a specific language when writing his rules to imply that there is freedom in their product:

The freedom contained in a rule consists precisely in that which it does not specify. A conscious lack of specificity becomes a design necessity.²⁸

By replacing phrases like "it must be" with phrases such as "potentially allowable," the "conceivably permissible," and the "desirable under circumstances," Lehnerer is moving away from an approach that wants to control everything and moving toward something that he called "adjustable control."²⁹

Lehnerer's method works less like a flow chart, and more on a need to know basis depending on what you're designing, similar to *The Building Code*. Since

27. *Ibid.*, 58.

28. *Ibid.*, 65.

29. *Ibid.*

§ 4 Streetscape Rules



Jane Jacobs

Multi Function Streets

A street or district serves a variety of primary functions. [p.67]



§ 6 Plot/Block Rules



Ebenezer Howard, Garden City

Fodder Ratio

Gardens must be of sufficient size to allow proprietors to provide themselves with foodstuffs through their own agricultural labor. [p.191]



§ 6 Plot/Block Rules



Town of Mentz, Port Byron

Junkyard Fence Order

Junkyards are to be surrounded by fences which block views to their interiors. [p.113, fig.31]



A selection of rules taken from Lehnerer's book *Grand Urban Rules*, showing organization, references and the idea of adjustable control.

he is building a utopian city from scratch, every aspect of its design has an answer, right down to minimum front yard depths, building height ratios and the maximum length of a building facade - all derived from real situations. Lehnerer wanted to demonstrate that the regulations are not inevitably tied to the context they stem from by applying them to his own imaginary city.

A Handbook for Post-Industrial Revitalization

While I will not be creating idealistic cities, building codes, or planning new neighbourhoods, as the two methods above were intending, some principles can be taken from the examples and applied to a new methodology for main street revitalization:

1. Rules should be formulated through research of past successes and failures in revitalization. They should be lessons extracted from past experiences.
2. Every aspect of a project should be touched on in some way, from siting all the way down to details.
3. Any rule that is defined within the handbook should be descriptive, not prescriptive. There must be flexibility in its wording and application, in that its goal is to guide you in the right direction - not make the decision for you.

By following these guidelines, the next step was to extract lessons from existing approaches. This chapter will be concluded with a comprehensive set of lessons that will inform test site selection, program choice, and building design in Sydney, Nova Scotia.

Formulating the Approach

Rules describe processes [...] These processes possess a certain continuity and inertia in their effects and development; These rules, then, are not mere passive forms of description, but instead also active steering elements for future developments [...] Rules form the medium that links the analysis of an existing situation and its projection into the future.³⁰

1.0 Urban Scale

1.1 Success in Numbers: Revitalization is not possible through the design of one single building, therefore a phased approach is ideal.

1.1.1 Incremental Growth: Do not build in anticipation of an influx of people. Only take on what is currently feasible and build from there.

1.2 Define the Area of Interest: Clearly define the area of interest by locating primary streets, entrance points, edges and boundaries.

1.3 Connectivity: Disjointed communities are not as successful as those in which spaces are connected either through general proximity, physical, gestural or cultural means.

1.3.1 Tangible Connection: In some cases, a physical structure may be required to make two areas feel connected.

1.3.2 Intangible Connection: In some cases, intangible connections are enough to bring a community together where physical ones are not desired or possible.

30. Lehnerer, *Grand Urban Rules*, 66.

1.4 Prioritize Vacancies: Vacant buildings lower the experience one has when walking down a street. Filling in these empty gaps within the town should be a priority.

1.5 Empty Pockets: Vacant lots have the same effect as 1.4; if incorporating a new construction, siting should take into consideration vacant lots along main streets to aid in filling in existing gaps.

1.5.1 Surface Parking: An excessive amount of surface parking interrupts a coherent urban fabric. If this is an issue, attempts to mitigate should be explored.

1.6 Public Space: Incorporation of useable public space should be considered. The type of public space is open to interpretation, but should encourage pedestrians to spend time in the area.

1.7 Compactness of Form: Uses should be concentrated rather than dispersed thinly over a large area. Interventions should either improve/encourage walkability within the area, or be within walking distance of other amenities.

1.8 Create Gateways: By creating gateways, one is clearly marking the boundaries of the downtown, strengthening the transition zones between it and the rest of the town.

2.0 Program Scale

2.1 Diversity: Conduct analysis on the area of interest to determine the needs and possibilities for the community.

2.1.1 Known: Sometimes, what is already working in a specific area just needs to be updated. Existing assets that make a community unique should be leveraged and used as a foundation.

2.1.2 Unknown: If introducing a foreign program, it must not be a burden to the town and should be easily sustained by the existing community.

2.2 Increase the Population: Introduce a program that will increase the population. This may include:

2.2.1 Transient Residents: New program should encourage the transient population to stay by giving them something they can use on a day to day basis.

2.2.2 Incoming Visitors/Residents: New program should support an influx of new people, whether they be temporary (tourists) or permanent (university students, returning families).

2.3 Engage: Part of the building should be open to the public for a certain portion of the week to encourage public/community involvement.

2.4 Gentrification: When incorporating new program, the user should try to avoid gentrification so as not to make current residents feel displaced.

2.5 Catalytic Projects: If incorporating a flagship project, it should spark continuous regeneration of the urban fabric and guide subsequent development.

3.0 Building Scale

3.1 Enhance: Any new design or intervention, whether it be adaptive reuse or new construction, must contribute to the overall beauty of the designated area.

3.2 Transparency: A portion of the building must be transparent to the public, allowing a visual into what's happening on the inside to encourage curiosity.

3.3 Character: A new design must attempt to relate to the buildings around it by documenting exterior and interior features and identifying those that are character defining, either through aesthetic or building technique.

3.4 Friendly Facade: A building should be welcoming to the public, acting as an invitation to enter.

3.5 Hire A Local: One should use available skills from the area rather than bringing in outside labour. This should include using local techniques when possible.

3.6 Teaching Moment: If using a foreign building technique, the process should include a transfer of knowledge to local residents.

3.7 Buy Local: When possible, one should choose local building materials to support the economy.

3.8 Fusion: In order to maintain a town's history, but introduce a contemporary element, techniques to mesh the old with the new should be practiced.

CHAPTER 4: A LOCAL APPROACH

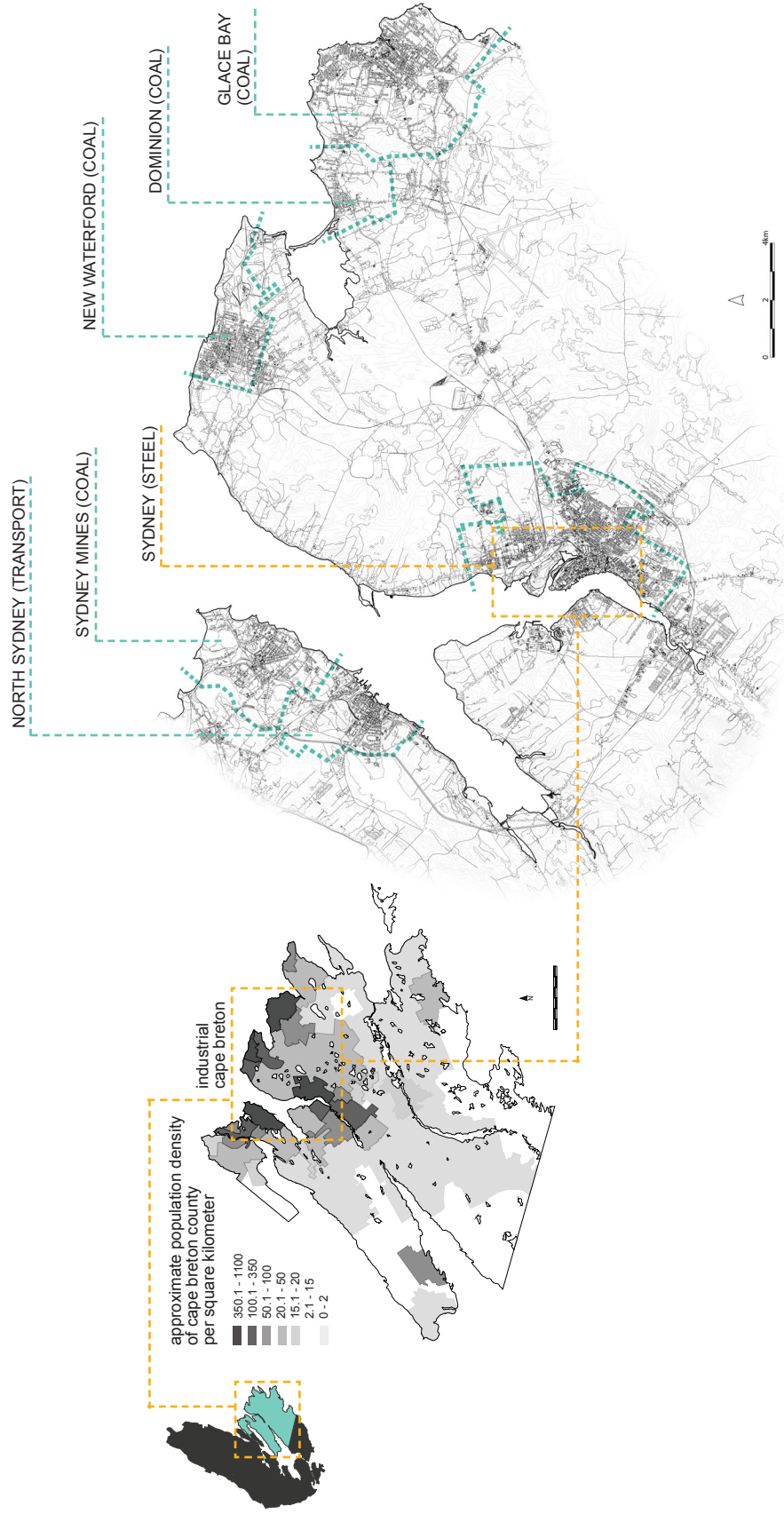
Cape Breton is located in the province of Nova Scotia, at the eastern extremity of the Gulf of St. Lawrence. It is a rugged, irregularly shaped island, and is approximately 175 km long by 135 km at its widest. Its land mass slopes upward from south to north, culminating in what is known as the Highlands, the highest elevation in the Atlantic region.³¹ The Bras D'Or lakes form the island's core and have provided the only significant access to its interior for purposes of settlement. Politically, the island is divided into four counties: Cape Breton, Inverness, Richmond and Victoria. For the purposes of this thesis, the focus will be on the most populated of the four, Cape Breton County. One fifth of Nova Scotia's total population lives on Cape Breton Island, with over 70% of that number being in industrial Cape Breton County, which has been steadily declining in numbers since the Second World War.³²



Map of Nova Scotia, highlighting Cape Breton County; base map from *Google*, 2015.

31. D. A. Muise, *Cape Breton Island*, last modified March 4, 2015, <http://www.thecanadianencyclopedia.ca/en/m/article/cape-breton-island/>.

32. *Ibid.*



Series of maps locating Industrial Cape Breton. This area is encompassed by what is known as Cape Breton Regional Municipality and it includes 6 main towns: those in which the coal-mining activities were found (Sydney Mines, New Waterford, Dominion, Glace Bay), North Sydney, which was and still is a transportation center, and finally Sydney, the industrial heart of Cape Breton; data from the Nova Scotia Geomatics Centre, April 2012.

In the Beginning

The 20th century marked the rise and fall of a major steel industry in Cape Breton. A small government town was transformed into a large industrial city that became known as the steel capital of Eastern Canada.³³ During the latter part of the 1800's, the iron and steel industry was growing in various places in Nova Scotia such as Trenton and Truro. This expansion, sparked by the demands of shipbuilders, mining companies and the railroads, culminated in the completion, in 1901, of a large steel complex in Sydney. Behind the venture was H. M. Whitney, of Boston, who first launched the Dominion Coal Company in 1893³⁴ and envisioned a local steel plant as the ideal outlet for the coal.³⁵ The new mill (known at the time as the Dominion Iron and Steel Co., or DISCO) contained blast furnaces, coke ovens and rolling mills.³⁶ Cape Breton was a logical place for the production of steel, as it had local coal fields and limestone deposits, iron ore across the Cabot Strait in Wabana, Newfoundland, and an accessible harbour from which to export the finished product.³⁷ The mill was launched with great optimism and enthusiasm for the future of Sydney and Industrial Cape Breton. Construction of DISCO began in 1900 and finished in late 1901. It was the most modern

33. Sydney S. Slaven, *The Birth of a Steel Plant*, last modified February, 2006, <http://www.sydneysteelmuseum.com/history/history.htm>.

34. Harvey, *Sydney, Nova Scotia*, 18.

35. Slaven, *The Birth of a Steel Plant*, 2006

36. Harvey, *Sydney, Nova Scotia*, 19.

37. Elizabeth Beaton and Mary Keating, *From the Pier, Dear!* (Sydney: The Whitney Pier Historical Society, 1993), 3.



An aerial view of Sydney Steel Mill, 1977; photograph by Ray Martheleur, from *Sydney Steel Plant Museum*.



Photo of steel plant workers in front of the blast furnace, 1911; photograph from *The Beaton Institute Digital Archives*.



View of the Sydney Steel Plant from across the Sydney Harbour in Westmount, 1945; photograph from *The Beaton Institute Digital Archives*.

steel plant in the world with a state of the art battery of equipment. The boundaries of Sydney were expanded to accommodate the new growth and on January 1, 1904, Sydney became a city.³⁸ Things were progressing well, and the island was filled with anticipation of what was to come. This was the beginning of 100 years of boom and bust cycles for Industrial Cape Breton.

The Fall of Sydney Steel

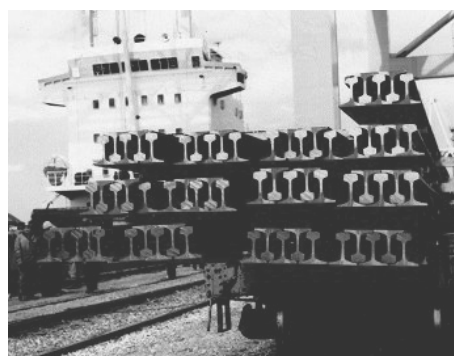
It soon became apparent that the fortunes of the steel company would fluctuate according to world market conditions and Sydney was not prepared for this. The demise of the steel mill was due to several factors, the main one being its reliance on only one product - the steel rail, but also the quality of its materials. The iron ore from Wabana was of a very poor grade, and the Cape Breton coal had extremely high sulfur content.³⁹ For the next 60 years, removal of these impurities was a constant struggle for the steel makers, leading to many problems down the road. In 1944, although the Sydney mill was the second largest in Canada, it had shown only a 33% growth since 1924, while other mills such as Stelco in Hamilton, and Algoma in Sault Ste. Marie, had tripled in size, and Dofasco in Hamilton was five times larger than before the second world war.⁴⁰ The plant changed hands several times before 1950, and by this time it was falling behind Canadian and international competitors. Other industrial cities in Can-



An aerial view of the Sydney Harbour showing dockyards, 1966; photograph by John Abbass, from *The Beaton Institute Digital Archives*.



Rail finishing mill; photograph by Ray Martheleur, from *Sydney Steel Plant Museum*.



Rails ready to be shipped; photograph by Ray Martheleur, from *Sydney Steel Plant Museum*.

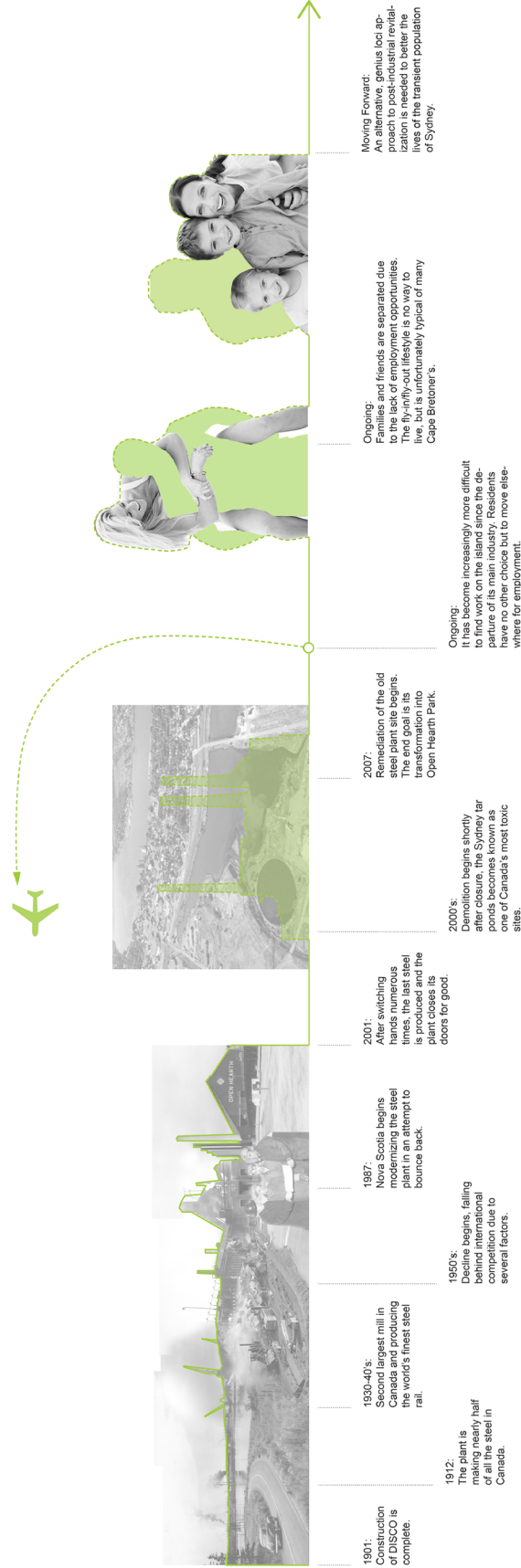
38. Harvey, *Sydney, Nova Scotia*, 19.

39. *Ibid.*

40. *Ibid.*, 49.

ada and the United States were growing and moving forward, quickly leaving the City of Sydney behind.

In 1995, the government of Nova Scotia sought to reduce the number of incorporated towns and cities in the province through amalgamation. The municipalities from which the Cape Breton Regional Municipality was created include the Municipality of the County of Cape Breton, the City of Sydney, the Towns of Glace Bay, Sydney Mines, New Waterford, North Sydney, Dominion, and Louisbourg.



Timeline of the Sydney steel plant, highlighting important events up until its closure in 2001. This closure resulted in a shortage of opportunities for tradespeople in Sydney, forcing many families to be separated as they become accustomed to the fly-in/fly-out lifestyle.

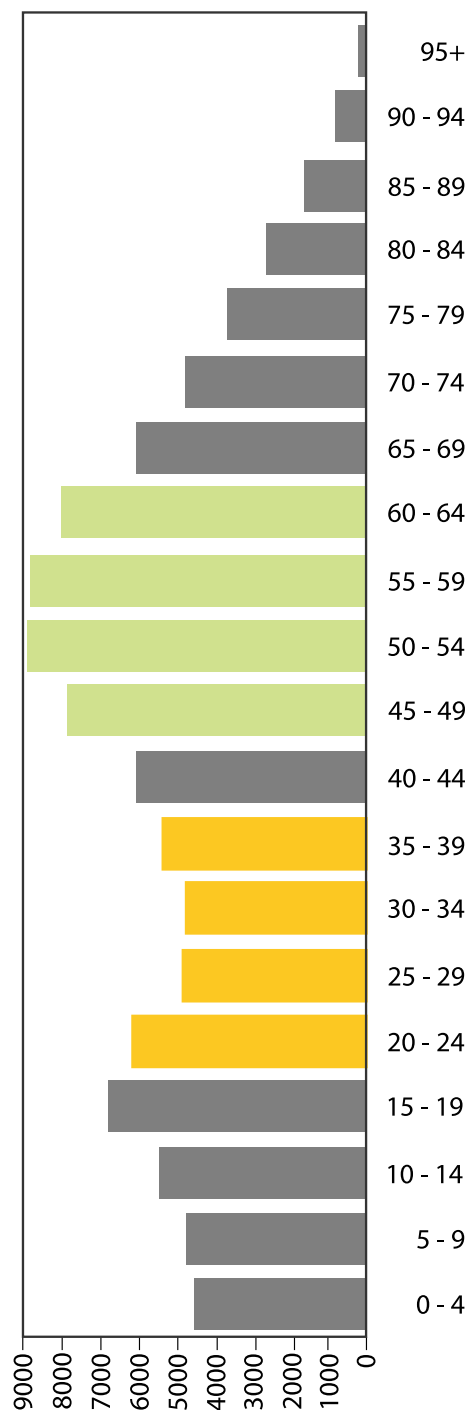
A Struggling Post-Industrial Community

Cape Breton was heavily reliant on its steel and coal industries, so when the plant closed for good in 2001, it was detrimental not only to the economy, but also the morale of its residents. The high unemployment rate and lack of opportunities present for residents of Cape Breton resulted in a great number of people leaving for jobs in other parts of Canada. This has resulted in a drastic decline in population and shifts in demographics,⁴¹ all further affecting the economic outlook of the island.

The population of Cape Breton Regional Municipality had gone from approximately 102,250 in 2006 to only 97,398 in 2011, representing a decrease of -4.7%. The population of CBRM starts to decrease at the age one graduates from highschool, correlating to the fact that young adults are leaving the island to seek different lifestyles and opportunities. There is then a peak in the population around the time one retires, which is problematic to a certain extent, as these individuals are typically no longer supporting the economy of the island. Sydney is home to the largest percentage of individuals within the CBRM, with a population of approximately 31,597 in 2011, a 2.8% decrease from 2006.⁴² The demographic trends are similar in Sydney, with departing residents and businesses resulting in an influx of vacant buildings and lots, specifically in the core of the downtown.

41. Statistics Canada, 2012

42. Ibid.



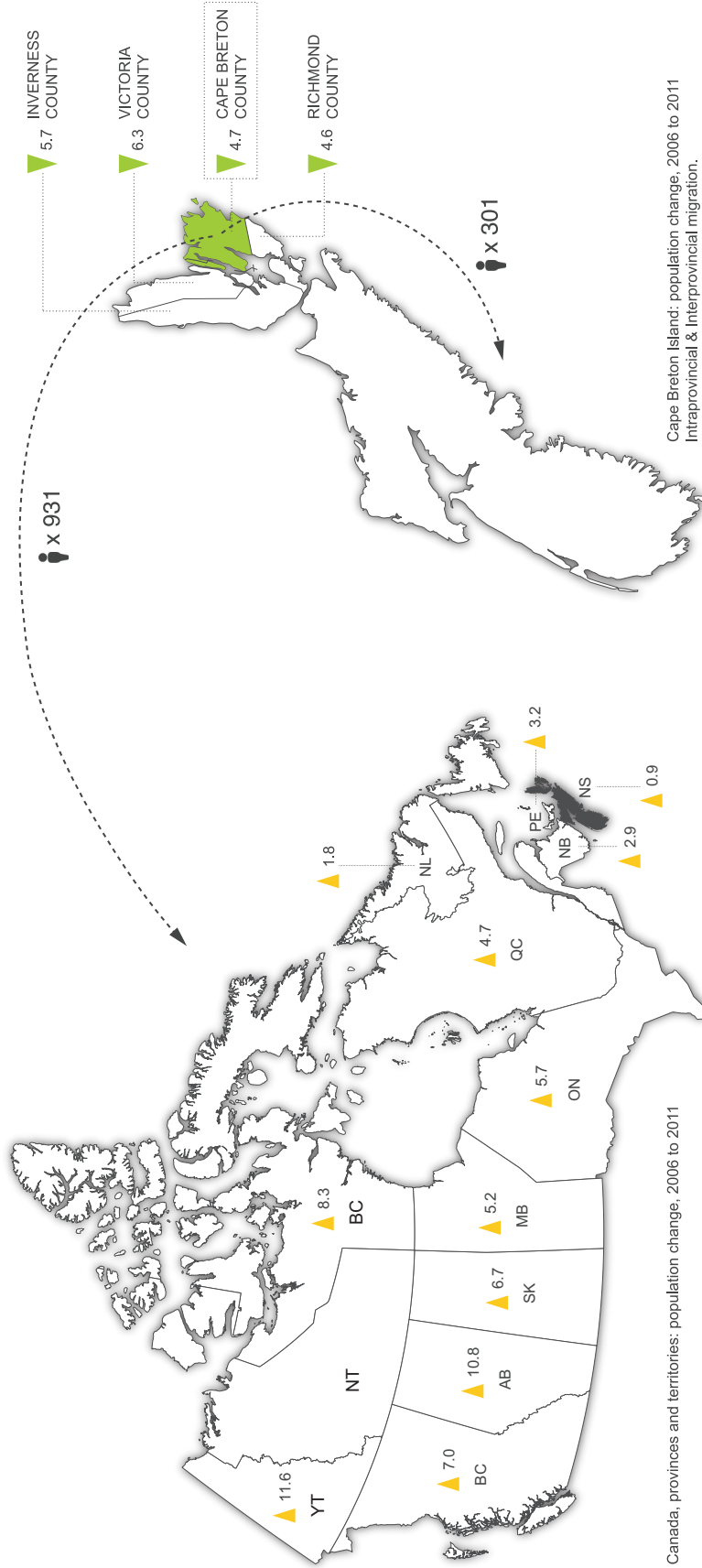
Graph representing CBRM demographics: orange bars indicate a decrease in population after graduation, while green bars indicate an increase around retirement; from *Statistics Canada, 2012*.

Outmigration is a huge issue in Cape Breton, with an approximate decline in the population by 1% or slightly more each year.⁴³ Something even more concerning, however, is the rate of decline, which isn't showing any signs of slowing down, and is in fact, accelerating.⁴⁴ Cape Breton Island, in terms of rate, saw the biggest decline of any region in the country according to Statistics Canada, and the CBRM constitutes a large part of that. In 2012-13, Cape Breton Regional Municipality lost 931 people to interprovincial migration to other parts of Canada, and a further 301 people moved to other areas of Nova Scotia. The other municipalities in Cape Breton are also suffering from declines ranging from -4.6% to -6.3% from the 2006-2011 census years.⁴⁵

43. Statistics Canada, 2012

44. Chris Shannon, *An Island On The Brink*, last modified March 14, 2014, <http://www.capebretonpost.com/News/Local/2014-03-14/article-3650290/An-island-on-the-brink%3F1>.

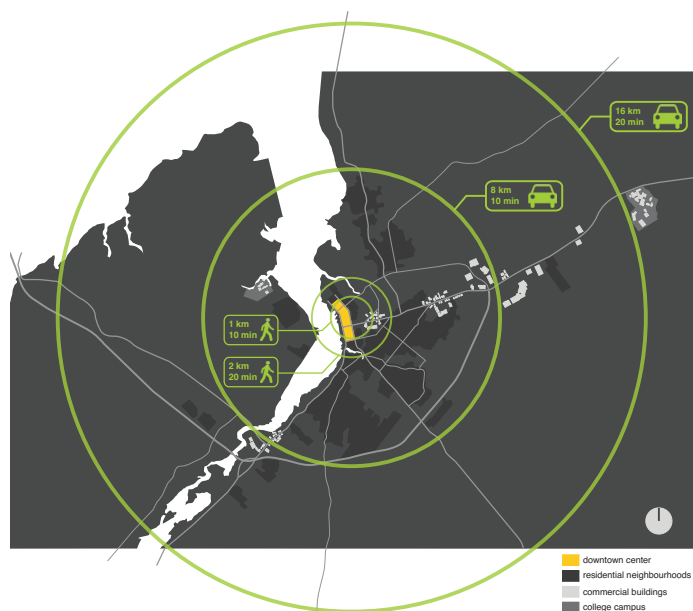
45. Statistics Canada, 2012



Collection of images showing population changes across Canada and specifically within Cape Breton Island from 2006 to 2011; from *Statistics Canada, 2012*.

What Sydney has to Offer

Sydney is a very disjointed town, and the downtown core is suffering because of this. Due to the wide dispersal of activity nodes within the area, there is little reason for residents to travel and spend time in the downtown, resulting in the inability to keep businesses open.

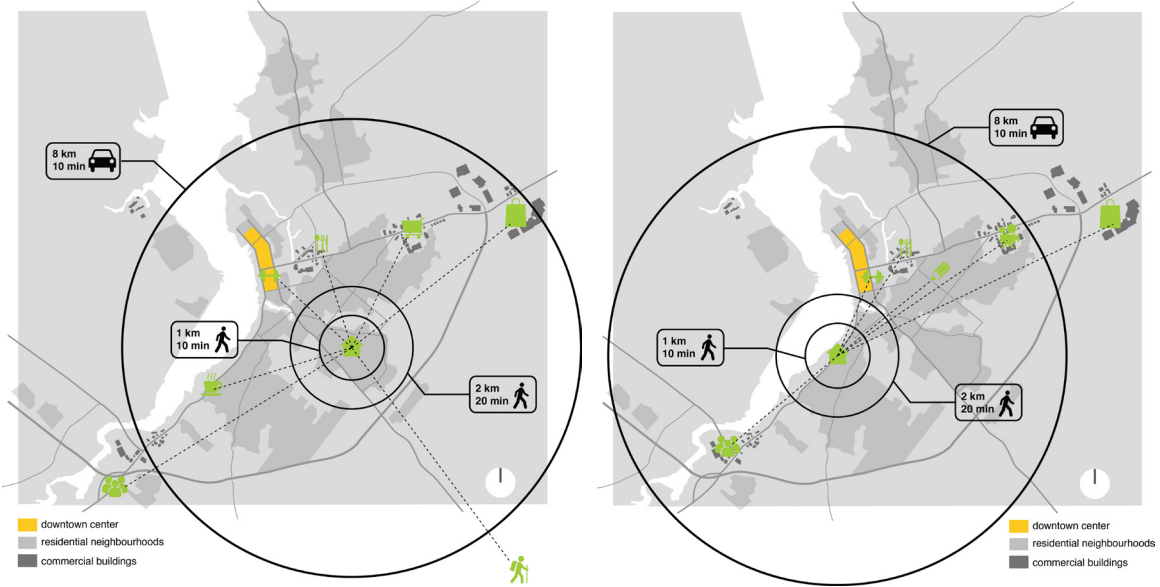


This image illustrates the wide dispersal of activity nodes within Cape Breton Municipality through the use of walking and driving radii.

However, despite its current state, the downtown core is relatively compact in terms of real estate, whether the buildings be occupied or empty, and because of this, holds great potential for a functioning, walkable downtown. An added benefit, that not all communities possess is its location. Situated on the Sydney Harbour, the downtown boasts great views and a large boardwalk. There are several main streets that lead directly into the downtown core, making for easy access either by foot or car.



This image illustrates the walkability of downtown Sydney through the use of walking radii.



Collages representing day to day activities of a typical teenager/adult living in Sydney. Walking and driving radii demonstrate how dispersed the activities are, most would require the use of a car.

Tourism

The Port of Sydney is sometimes referred to as the ocean gateway to scenic Cape Breton Island, and is now a selected destination for many prominent cruise lines. There are upwards of 70,000 eager tourists each season, however, they are often misinformed that to truly experience Cape Breton, they must travel to other towns.

Spectacular views are often the first draw for tourists coming to Cape Breton, but the island has many other features that make it worth visiting. Smaller communities like Cheticamp and Ingonish are thriving off of the tourism industry, due to the cultural activities and scenic drives that occur there. There are five main provincial trails that physically connect these places, with stops along the way highlighting the local craft, food, drink and music. While Sydney is the main town of Cape Breton, and has its own cultural traditions, it is often excluded when people visit the island and overlooked as a cultural hub.

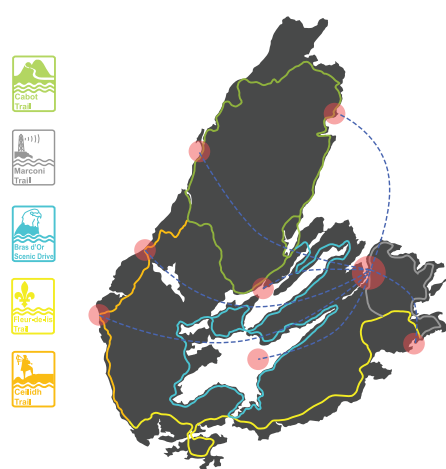


Diagram showing areas of popularity across the island. These places are often destinations for tourists, thinking that they must depart from Sydney in order to experience the culture of Cape Breton.



International cruise ship docked at The Port of Sydney; image from *Port of Sydney*, 2016.

Education

Sydney is home to Cape Breton University, the only post-secondary degree-granting institution on Cape Breton Island. The university serves more than 3,300 students from local, regional and national locations, and welcomes more than 1000 international students from over 40 countries.⁴⁶ Virtually all CBU programs offer a transition-to-work component through co-op education, work placements, and internships. In close proximity to CBU is the Nova Scotia Community College, Marconi Campus. This campus offers a range of diploma programs for a diverse student base. The business center serves as an incubator for small businesses and provides opportunities for students to build their portfolio, as well as generates resources to help them develop their own small business ideas.⁴⁷

People

Cape Breton Island as a whole is home to a diverse group of talented, hard working residents. If you ask anyone who's had to move away for work, most will say if given the opportunity they would love to move home. The issue with Sydney is not a lack of community spirit, as the current residents all uphold and share similar values and want nothing more than to see their community succeed.

46. Cape Breton University, *Admissions*, <http://www.cbu.ca/come-to-cbu/admissions/>.

47. NSCC, *Marconi Campus: Sydney, Nova Scotia*, <http://www.nsc.ca/explorensc/campuses/marconi/index.asp>.

Hopes of a Bright Future

The residents of Sydney are not simply sitting around waiting for a change, there have been several attempts at revitalizing the area, proving that the community as a whole is ready to move on. A local company, New Dawn Enterprises, has taken the lead in community revitalization within Cape Breton, and has been purchasing and renovating several empty buildings around the area. While most of their projects are related to the health care sector and developing residential rental properties, they recently established the New Dawn Center for Social Innovation. The former Holy Angels High School, a large building that sat empty for years, has been transformed into a mixed use facility with “sustainable working and gathering spaces [to] draw in and amplify Cape Breton’s creative, innovative and forward looking energies.”⁴⁸ This space supports individuals, businesses and not-for-profit organizations by providing rentable spaces for offices and studios. A number of local residents have already taken advantage of this, including artists, yoga instructors, daycares, film companies, and more.

In addition to the work they’ve already completed, New Dawn Enterprises has introduced what is known as the New Dawn Innovation Fund - an opportunity for investors to support local, innovative, growth-oriented companies. Each year, Nova Scotians invest more than \$600 million in RRSPs. Less than 2% of



Photo of the former Holy Angels High School in Sydney, Nova Scotia, August, 2015.



Photo of local residents taking part in an art class located in the New Dawn Center for Social Innovation; image from *The Art Room*, 2016.



Photo of local children taking part in a summer camp located in the New Dawn Center for Social Innovation, August, 2015.

48. New Dawn Enterprises, *New Dawn Center for Social Innovation*, <http://centre.newdawn.ca>.

this is reinvested in Nova Scotia.⁴⁹ With the New Dawn Innovation Fund, the investment dollars stay in Cape Breton where they are put to work in the local community. By introducing the New Dawn Innovation Fund, they are promoting the investment of locally-owned businesses and a consistent growth trajectory.

The second major attempt at moving forward has been an ecological remediation of the old steel plant site, and the transformation into what is known as the Open Hearth Park. Remediation of the site began in 2007, when the federal and provincial governments committed \$400 million after more than a decade of proposals and false starts.⁵⁰ Cleanup of the 31 hectare site involved permanently containing sediment polluted with coal tar, heavy metals, PCBs, volatile organic compounds and hundreds of other toxic chemicals from nearly a century of steel production.⁵¹ Just a few short years ago, the Sydney tar ponds was one of the most toxic places in Canada and had become well known all over the world.⁵² Where thousands of workers once forged much of



Before and after comparison of the former steel plant site. Top: Sydney tar ponds before remediation; bottom: Sydney tar ponds after remediation; image taken from *AECOM Transforms Contaminated Site in Canada into Urban Park*.



An artist's rendering of the former Sydney tar ponds site envisioning what it will be after completion; image taken from *A Brighter Future Created Atop Brownfields*.

49. New Dawn Enterprises, *New Dawn Invest Local*, <http://invest.newdawn.ca>.

50. Kenyon Wallace, *Sydney tar ponds revitalization gives Nova Scotia community new lease on life*, last modified April 29, 2012, http://www.thestar.com/news/canada/2012/04/29/sydney_tar_ponds_revitalization_gives_nova_scotia_community_new_lease_on_life.html.

51. *Ibid.*

52. Todd Battis, *Sydney tar ponds have been cleaned up but ghosts of toxic past remain*, last modified December 13, 2014, <http://www.ctvnews.ca/w5/sydney-tar-ponds-have-been-cleaned-up-but-ghosts-of-toxic-past-remain-1.1533919>.

Canada's rails, rivets, bolts, and nails, only grassy fields and a monument to commemorate those who lost their lives working at the plant, remain. The park includes walking trails, bike paths, two sports fields, an outdoor concert venue and a playground;⁵³ all of these are great additions to the community, however due to the lack of people in the downtown core, the amenities are severely underused despite the optimistic predictions for the area:

When the future land use plan becomes a reality, the downtown of Sydney will benefit immediately [...] Fences will come down, roads will open, and three communities once separated by their industrial past will reconnect...It's a turning point, and an opportunity for continuous growth.⁵⁴

While it is refreshing to see people taking a step toward a positive change in the community, there is still an overall lack of direction. Despite efforts put forth by the community with projects such as the New Dawn Center for Social Innovation, The New Dawn Innovation Fund and Open Hearth Park, the lack of connectivity to other communities and abundant empty pockets within the downtown core will remain a constant reminder of what once was, making it impossible to move past the memories of the steel plant. Without a solid approach to take in terms of redeveloping potential after deindustrialization, Cape Breton will continue to circle the drain.

53. Open Hearth Park, *Open Hearth Park*, last modified July, 2015, <http://www.openhearthpark.ca>

54. Wallace, *Sydney tar ponds*, 2012.

Sydney building approved for waterfront as council changes building code

Cape Breton Regional Council hopes to start more development in downtown Sydney, N.S., after approving a new building code.



This professor's rendering shows a side view of the building set to be built in downtown Sydney. (Cape Breton Regional Council)

New Sydney library options unveiled at Cape Breton council

The Sydney Regional Municipality unveiled four recommendations for a new library building in downtown Sydney.

The Cape Breton Regional Municipality unveiled four recommendations for a new library building in downtown Sydney.



Four recommendations for a new library building in downtown Sydney. (Cape Breton Regional Municipality)

Could Cape Breton tech startups turn around island's economy?

"What the heck is going on up here in Sydney?" ask people from tech hubs in Toronto, Waterloo and other parts of the Greater Toronto Area.



Chris Bevan is a local technology entrepreneur and a partner at a venture capital firm in Toronto. (CBC)

Sydney downtown revitalization proposal backed by area councillor

"I think it's key we have more people living in our downtown area," says Councillor Eileen MacDonnell.

The Cape Breton Regional Municipality is looking to revitalize downtown Sydney.



A street view of downtown Sydney. (Cape Breton Regional Municipality)

Downtown Sydney focus of revitalization proposals

Cape Breton Regional Municipality staff made four recommendations for revitalizing downtown Sydney.

The Cape Breton Regional Municipality is looking to revitalize downtown Sydney.



High commercial taxes and a lack of parking are two of the problems for businesses on Charlotte Street in downtown Sydney. (George Heddin/CBC)

Group hopes to rejuvenate downtown Sydney

Nancy King, chair of the Cape Breton Regional Municipality's heritage advisory committee, hopes a proposed pilot program to revitalize downtown Sydney will result in local expertise that can eventually be applied to other downtowns in the region.



A street view of downtown Sydney. (Cape Breton Regional Municipality)

SYDNEY — The chair of the Cape Breton Regional Municipality's heritage advisory committee hopes a proposed pilot program to revitalize downtown Sydney will result in local expertise that can eventually be applied to other downtowns in the region.

Cape Breton Post - Business

CBRM to look at providing more cash to liven up downtown Sydney

Chris Shannon, chair of the Cape Breton Regional Municipality's heritage advisory committee, hopes a proposed pilot program to revitalize downtown Sydney will result in local expertise that can eventually be applied to other downtowns in the region.

SYDNEY — A little-known agreement between the Cape Breton Regional Municipality and the Sydney Downtown Development Association could receive an update to more accurately reflect commercial assessment in the downtown.

The association represents businesses within the border of George Street and the Esplanade and Dorchester and Townsend streets.

A 1987 agreement provided the organization a levy collected by the CBRM. Every 10 cents per \$100 of commercial assessment was collected by the municipality, and deposited in



Chris Shannon, chair of the Cape Breton Regional Municipality's heritage advisory committee, hopes a proposed pilot program to revitalize downtown Sydney will result in local expertise that can eventually be applied to other downtowns in the region. (Cape Breton Post)

Downtown Sydney getting new image

Staff - The Cape Breton Post
Published on November 17, 2015

SYDNEY — Downtown Sydney is getting a new look and a new name. It will now be known as the Sydney Waterfront District and the new identity will be appearing on print publications, business signage, social media and other places promoting the downtown area.



A street view of downtown Sydney. (Cape Breton Post)

Collection of recent news articles highlighting Sydney's attempts to move forward through downtown revitalization.

CHAPTER 5: APPLICATION

The rules within the handbook, outlined previously, encourage design at all possible scales: from urban planning and programming, all the way down to the human scale. In this chapter, lessons will be applied to Sydney, Nova Scotia, in order to test their effectiveness. The lessons have been indicated throughout the text for clarity, highlighting their contribution to the overall strategy.

The first step toward revitalization is master planning. The focus of this study will be in the downtown district of Sydney, Nova Scotia. As mentioned earlier, Sydney's downtown is in an ideal location, accessible through many points, by foot or by car, and is situated directly on the Sydney Harbour. This area holds huge potential that is currently being underutilized.

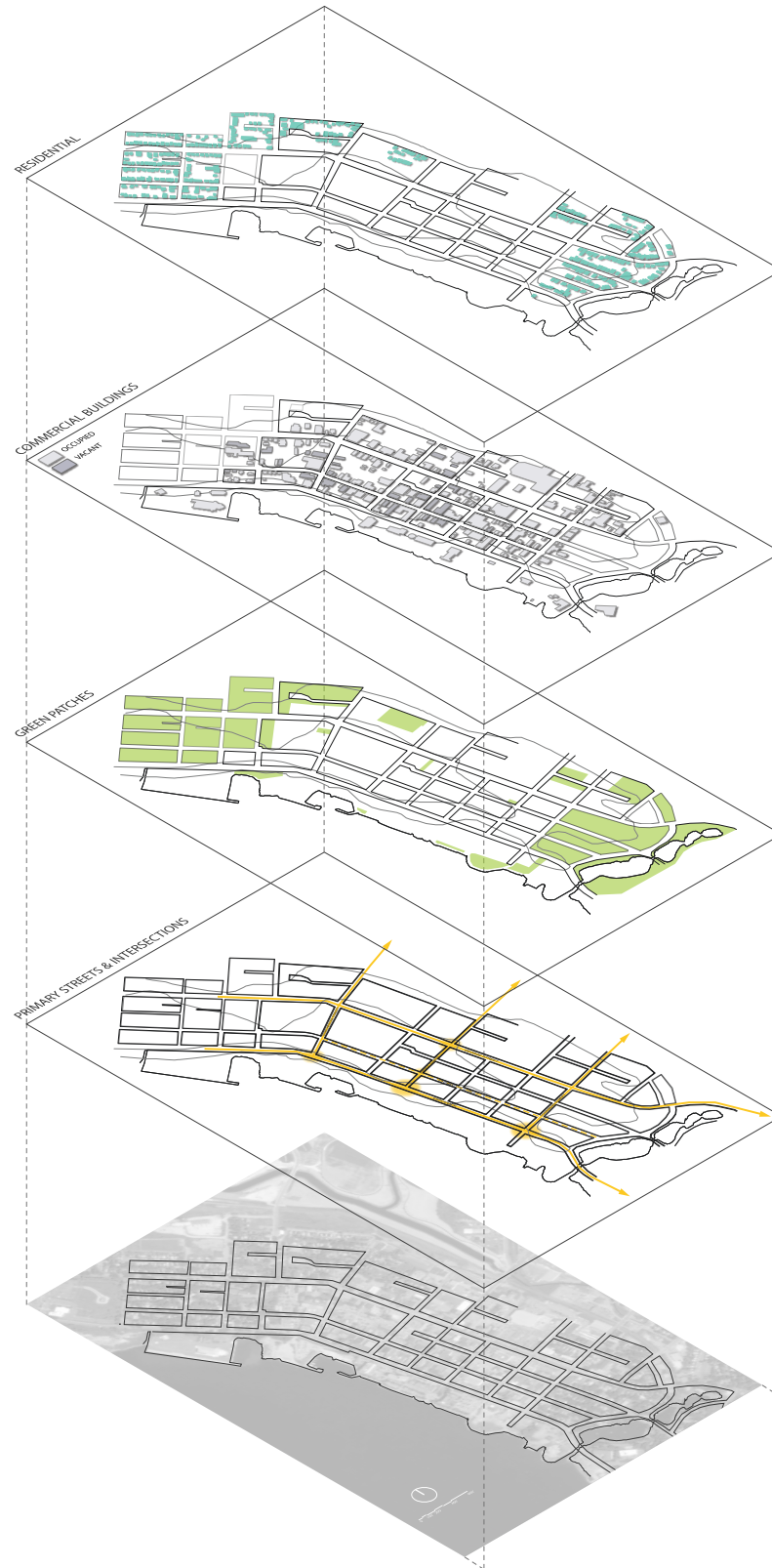
An important point made earlier holds its truth to Sydney, as well. Charlotte Street can be described as the "Main Street" of downtown Sydney. It has many of the same characteristics, in terms of aesthetic and program, as a typical Main Street would. Often, the first place in a post-industrial town to see a major transformation is the downtown core, and this will become more clear as site analysis continues. This is one of the main arguments within this research, and the hopes are to address this issue through the application of rules and an architectural investigation.

Urban Scale

When proposing a master plan for a small community, it is important to note that a phased approach is the most appropriate way to proceed (1.1 Success in Numbers), and that not all interventions will be initiated at the same time (1.11 Incremental Growth). The master planning phase should be used to explore an overall approach, while highlighting important stepping stones that aid in the revitalization process. The first step is to define the area in which the architectural interventions will be focused (1.2 Define Area of Interest). By indicating the various districts, primarily residential and commercial areas, one can easily determine the boundaries of the downtown.



Site plan of Sydney, Nova Scotia: downtown district is within dotted lines. Satellite images from *Google*, 2015.



A series of maps of downtown Sydney highlighting some key features used to aid in the selection of sites: primary streets and nodes/intersections, green patches, commercial district with vacant buildings highlighted, and the residential district.



Map of focused area of downtown Sydney, highlighting the lack of green space, and excessive amount of vacant lots and surface parking. Conditions that weaken the identity of the downtown are represented through the use of viewfinders, described within the next few pages.

Through this preliminary investigation, certain conditions were uncovered that weaken the identity of the downtown. These issues will be addressed throughout the design phase:

Condition 1: Gateway for Incoming Tourists

Currently, there is a lack of entry point into the downtown for incoming tourists. When they land, they are simply greeted with a large, gravel lot. This gives zero incentive for them to stay and explore downtown Sydney.



1. Lack of gateway for incoming tourists.

Condition 2: Physical Barriers

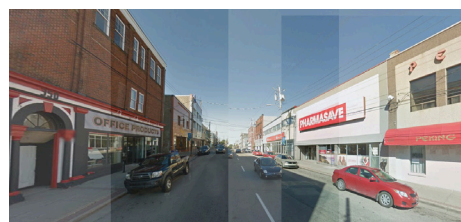
Downtown Sydney is relatively flat with the exception of this transition to the harbour. Where a once thriving yacht club once stood, is now a vacant lot, cut off from the rest of the activity due to its inaccessible slope and resulting fence.



2. Physical barriers disconnecting two districts within downtown.

Condition 3, 5: Typical Street Section

A common trend throughout the downtown is a lack of pedestrian friendly features and program. A downtown should be friendly to the human scale and encourage resting points and walkability, whereas these views demonstrate how the streets have turned into vehicular thoroughways.



3, 5. Streets used solely as vehicular thoroughways. Images from *Google Streetview, 2015*.

Condition 4: Disconnect to Waterfront

Prince Street is a main artery, terminating in the downtown of Sydney. This is a busy street, cutting directly through the center of the downtown and Charlotte Street. At its terminus is a large seniors complex, cutting off views and direct access to the waterfront.



4. Physical disconnect to waterfront from main streets.

Condition 6: Vacant Lots

There are numerous large, vacant lots that currently separate the downtown district from the harbour. In many areas, this is preventing residents from using the harbour due to the simple inability of access.



6. Large, vacant lots separating downtown from the harbour.

Condition 7: Gateway into the Downtown

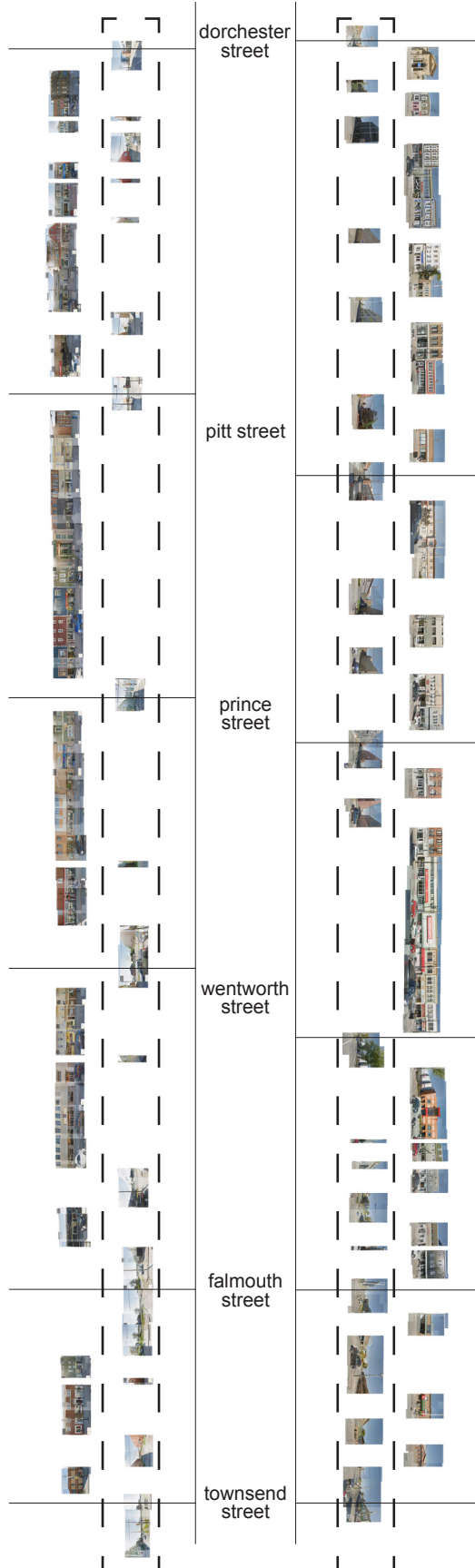
Currently, there is a lack of entry point into the downtown. Kings Road, a main artery into Sydney, flows directly into the downtown. At no point along this road does one realize they are entering an important district of Sydney.



7. Lack of entryway into downtown. Images from *Google Streetview, 2015*.

Condition 8: Discontinuity in Urban Fabric

Charlotte Street is lacking a coherent urban fabric. This is due to the excessive amount of surface parking, vacant lots, and empty buildings. This further impacts the overall identity of the downtown and discourages a positive pedestrian experience.



8. Collaged/Filleted elevational study of Charlotte Street highlighting the extensive amount of void spaces (located within dotted lines); images from Google Streetview, 2015.



Existing section of downtown Sydney, from Charlotte Street to the underutilized harbour. Evident in this section are not only the large vacant lots, but also the typical disfunctional section of Charlotte Street acting as a vehicular throughway, disconnected from the harbour.

When overlaying the initial key points, it made sense to focus the attention on Charlotte Street - the main core of downtown Sydney, due to the high number of vacancies along the main axis. In keeping with the theme of this research, however, it is important to look back in history and see how things have been addressed in the past. The story of failing downtowns has repeated itself over and over, and the situation is no different in Sydney. With improved transportation routes, people found it easier to travel longer distances to work and take care of day to day business. Roads that once connected neighbourhoods to downtown now carry residents to outlying shopping strips and malls. Local businesses have either closed due to corporate competition or moved to the mall, causing shoppers and pedestrian foot traffic to dwindle, while the abundance of neglected buildings and boarded up storefronts gradually reinforced the public's perception that nothing was happening downtown.



This image is highlighting various nodes along Prince Street, one of Sydney's main arteries leading into its downtown. The nodes represent strip malls, shopping centres, big box stores and other amenities residents now must travel to by car due to the outward growth that has occurred; satellite images from Google, 2015.

Street to Community Landscape

Charlotte Street is located where it is for a reason. Due to its location near the water, Sydney was founded as a port city, with access points for ships to dock and transfer materials in relation to its coal and steel industries. The argument for this thesis is that the service based program on Charlotte Street is no longer relevant, as is the case in many small communities. To avoid applying another cookie-cutter solution, and due to its prime location, I believe the attention should be shifted away from Charlotte Street for the time being, and toward the water; energy for revitalization should be focused on rethinking what a contemporary main street could be, rather than trying to fix the typical model. There are currently many different community revitalization programs aimed at the historic preservation of main streets, typically focusing on the core itself. This thesis, however, is going to explore designing from the outside in, proposing that by developing outside of the core (along the harbour), it will spark further development within the core itself (Charlotte Street).

The waterfront is much more than a street, so by shifting the attention towards the harbour, I am re-interpreting the traditional Main Street as a new community landscape. The configuration of the buildings becomes very important, because the way they are composed on the site can either block off the public from the water, or invite them through. If done correctly, it can encourage pedestrian activity and promote the use of new public space. The typical



This diagram illustrates the shift in focus from Charlotte Street down to the waterfront: Street to Community Landscape.



By reimagining the street as a landscape, the once limited street section of Charlotte Street can become much more pedestrian friendly, opening up the ground level for public access. As highlighted in the previous model, public activity was limited to the narrow sidewalks, with the center solely for automobile traffic.

Main Street section is limited in its ability to encourage pedestrian use, and often turns into a throughway for automobiles, as seen on Charlotte Street. The proposed designs will have a focus on this new middle space, highlighting the importance of how a building touches the ground, and how the space in between buildings can be used going forward.

A community's downtown has an important and unique role in economic and social development. Downtowns usually create a critical mass of activities where commercial, cultural, and civic programs are concentrated. This concentration facilitates business, learning, and cultural exchange. It is important that a community maintain its downtown district as it is important to its underlying identity. Due to the shifts from an industrial society to a post-industrial society, this thesis is altering the historic perception of what a main street encompasses through the re-interpretation of the traditional model as a new community landscape, developed from a genius loci approach to place and time.

Site Selection

Three sites have been selected, each belonging to a different phase of development. The first site is highlighting the gateway into the downtown, as currently, there is a lack of transition. At no point along the road does one realize they are entering an important district of Sydney. This phase is a crucial one, as it will spark curiosity in future developments. For the purpose of this thesis, focus will be placed on phase one. The second site is at the end of the cen-

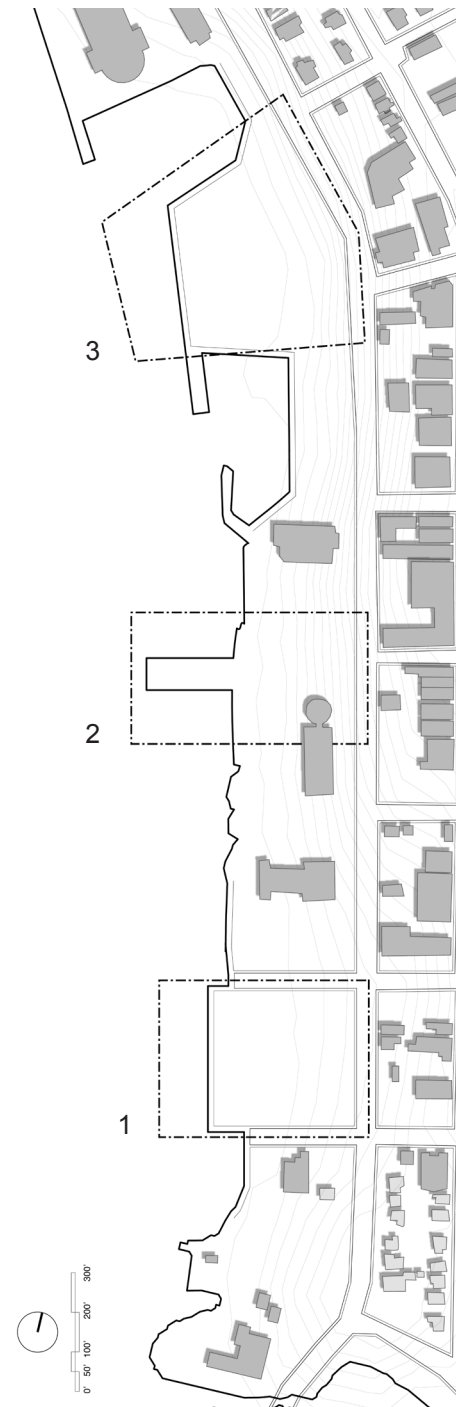


Initial conceptual collages placing typical Main Street buildings on a landscape. The presence of people reintroduces the idea of social activity.

tral axis passing through Charlotte Street. By focusing development along this axis it creates a point of interest to those looking toward the water. The third site is located closest to the cruise pavilion, where thousands of tourists land each summer. For tourists, this is their gateway. It is important to draw them in so they will choose to spend time in Sydney's downtown rather than immediately traveling to other parts of Cape Breton. While the sites are being described as phases, the end goal is that the entire waterfront would become a connected, coherent landscape. The phases are put in place to guide the master planning as a suggestion on how to approach its development.

Program Scale

In order for a downtown to function, it needs a steady flow of people moving through it. The existing tourism industry only takes place during summer months, so targeting incoming visitors first is not a viable solution. Being an industrial town, Sydney is filled with skilled tradespeople that, since the closure of the steel plant in 2001, have been forced to move out west for work. One of the biggest issues in Sydney is a lack of stable opportunities, resulting in heavy outmigration to other provinces in Canada like Alberta. This outmigration is not only a huge hit to the economy and population, but it means that families and friends are being separated; the fly-in/fly-out lifestyle is no way to live, but is unfortunately typical of many Cape Bretoners. With the current state of the oilsands, many of these people are be-



Master plan highlighting the three chosen sites as a phased approach to revitalization.

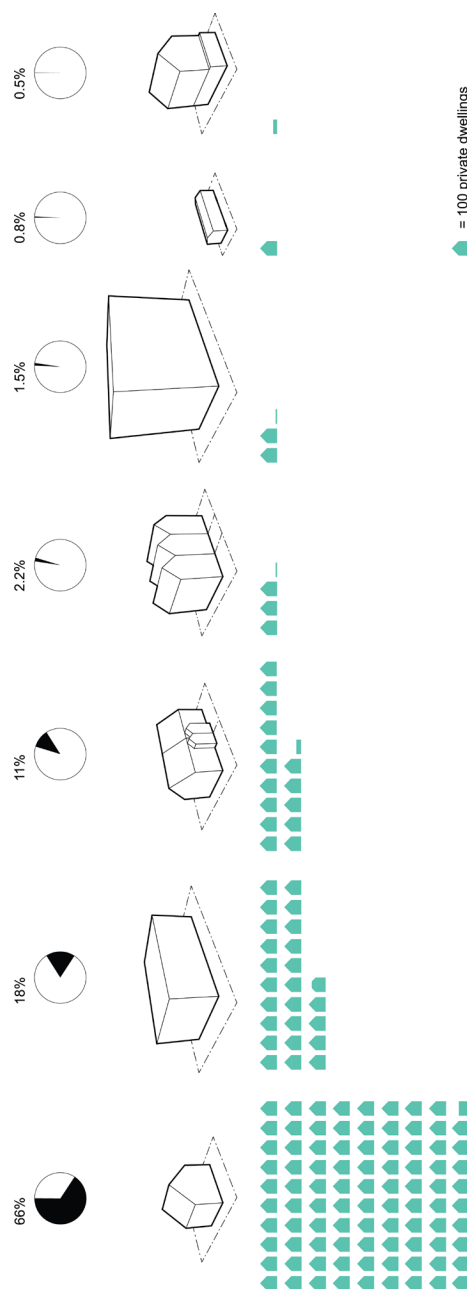
ing laid off due to a lack of work. With this thesis, I have chosen to target those who have made the move out west, but due to unforeseen circumstances are now out of a job. The goal is to encourage this group of people to make the move back home to Cape Breton by providing them with the appropriate resources to rebuild their lives.

Increasing Sydney's population raises additional concerns: an existing lack of affordable housing options. According to Statistics Canada, approximately 66% of the private dwellings in Sydney are single detached houses.⁵⁵ It is not a strange concept for young adults to live in their parents' home long after they've finished school, as there are not many other options for them. This makes it increasingly hard for people to stick around if they are not in the market to purchase a home. By proposing housing as an approach, one can increase the permanent population along the waterfront (2.2 Increase the Population, 2.21 Transient Population), activating the harbour and ideally sparking subsequent developments (2.1 Diversity) in and around the core of the downtown as the needs of the new residents increase.

Target Residents

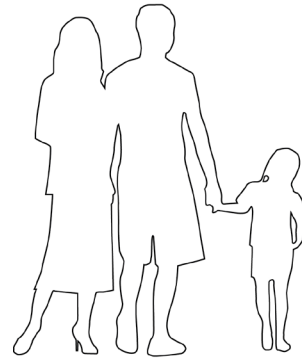
For the purposes of this study, six characters were developed based on common characteristics or situations typically found in Cape Breton. While the characters are fictional, many of them were based off of personal relationships, illustrating the prevalence of the issues at hand:

55. Statistics Canada, 2012.



Graphic representing the total number of occupied private dwellings in Sydney, categorized by structural type: single detached, apartment with <5 storeys, semi-detached, rowhouses, apartment >5 storeys, mobile, other (live/work); data from *Statistics Canada, 2012*.

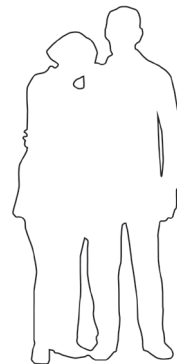
1. Mike grew up in North Sydney, and is a welder by trade. After the birth of his daughter, the idea of maintaining his fly-in/fly-out lifestyle was not desirable. Mike moved his family to Fort McMurray, Alberta, so they could be together without the fear of him missing out on major milestones in her life. Due to the decline in the oilsands, Mike has been laid off and is now in need of another job.



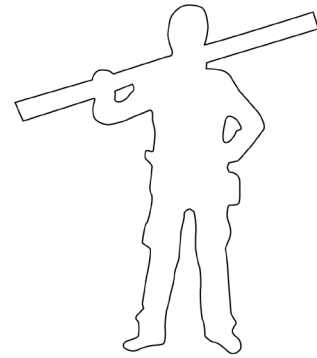
2. Stephanie is a recent business graduate who just completed her studies at the University of Toronto. Since leaving Cape Breton for university, she always knew she would want to return home in hopes of starting a small business. She would rather not move back in with her parents, but there are not many affordable apartments available in Sydney. It would be a lot easier for Stephanie to stay in Toronto.



3. Arthur and Mildred have lived in the same family home in Sydney since the birth of their two children. Now that the kids are out on their own, they feel the large house requires too much up-keep. Since they are now both retired, they would like to downsize to something more manageable, but Arthur is hesitant to give up the large workshop he has in his garage. Arthur has been a hobby boat maker for most of his life, and been thinking about opening a small rental shop.



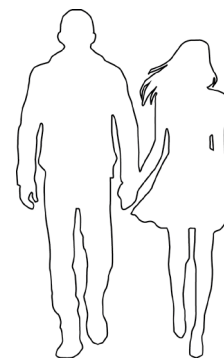
4. John is a carpenter by trade, and moved out west in his early twenties in hopes of finding a job. He recently furthered his education by completing a degree in architecture, and would like nothing more than to move back home to Cape Breton in hopes of contributing to the community through the built form. Since he moved out of his parents' house at an early age and does not have a current residence in Sydney, he will not only need a place to live, but also a large workshop to help realize his dream of having his own design-build company. The lack of available housing in Sydney, as well as the start up cost of purchasing equipment, weighs heavy on his mind.



5. Robert chose to stay in Cape Breton for his secondary education, and has just graduated from the cabinet making program at NSCC. In order to gain work experience and become a reputable cabinet maker, Robert must gain an apprenticeship. Since graduation, Robert has considered moving away due to his inability to find an apprenticeship in Sydney.



6. Greg was an ironworker in Calgary, Alberta. He has been travelling back and forth from his apartment in Calgary to his girlfriend's parents house in Glace Bay for years now, but just when she was planning to move to Alberta, Greg lost his job. Trying to be optimistic about the situation, he decides it might be time to return home. Several of his colleagues have also been laid off, and if an opportunities arose, they would consider moving back to Cape Breton as well.



The net has been cast fairly wide in an attempt to capture a realistic view of what situations exist among the people of Cape Breton. A large portion include those looking for career opportunities, but there are also current residents who simply want to downsize and move closer to town.

Based on the selected characters, it has been decided that the best type of housing to incorporate on the waterfront would be live/work residential units. This choice not only meets the needs for affordable housing in the area, but also opens up the opportunity for new businesses to sprout. The people of Cape Breton are inherently hard workers and the breadth of skills and talents in the area is extremely broad. The current program of the waterfront consists of corporate hotels, a civic centre and the cruise pavilion. Among the mentioned buildings is an abundance of vacant space that is severely underused. Live/work units will eventually introduce a wide variety of program to the waterfront, encouraging current residents and tourists alike to spend time there.

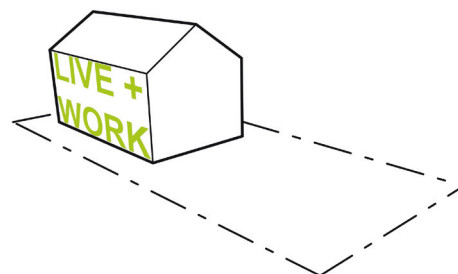
Work/Use Intensity Types

Live/work dwellings can be divided into three categories based on work-use intensity:

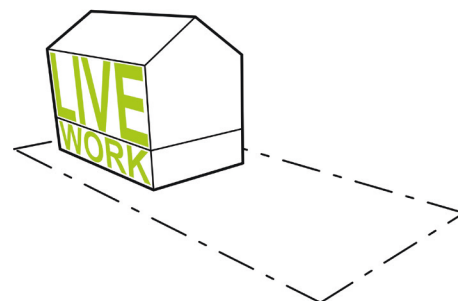
1. Home Occupation: In this scenario, residents pursue small-scale work activities at home. This is the type one often thinks of when someone talks about a “home office.” This type may or may not include a physically delineated work space such as an office, studio, or workshop. A popular example would be a

dad working on his laptop at the kitchen table.

2. Live/Work: In this scenario, the needs of the residential component outweigh the work needs. In this case, those pursuing work activities must take into consideration the noise, odors, etc. they make so as not to disturb other residents in the building.

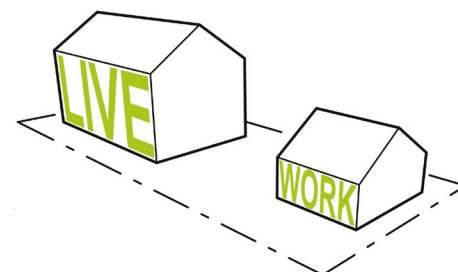


3. Work/Live: In this scenario, the needs of the work component take precedence over the quiet, enjoyment expectations of the residential component. There may be noise or odors, as well as employees and walk-ins that could disrupt other residents in the building, explaining why often the only resident is the one who is working in the workshop. An extreme example of this would be the industrial artist sleeping on a mattress in the corner of the warehouse space he or she is renting.



Live/Work Proximity Types

The examples above can further be defined into three categories based on the proximity of the work component to the living component. The choice one makes depends on the type of separation they wish to have from their work environment.



1. Live-With: This type is the most simple, as it requires little intervention and can work in most homes. The most common scenario one thinks of is the typical artists loft, where living and working mesh into one, but it could also mean using a spare bedroom as an office.

2. Live-Near: In this type, there is a physical barrier,

Diagrams representing different types of live/work dwellings based on proximity. In each case, the working aspect becomes more detached from the living aspect: live-with, live-near, live-nearby.

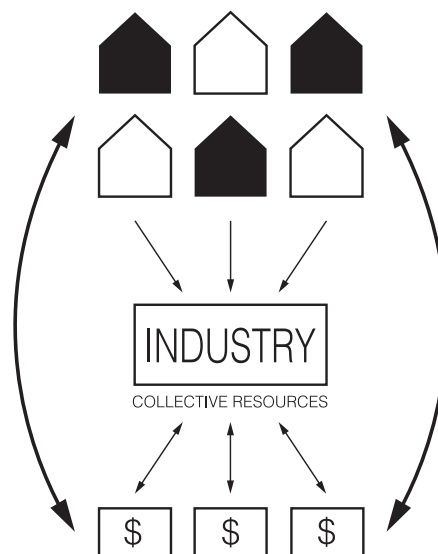
either wall or floor, separating the living component from the working component. The separate entry points allow one to distance oneself from their working environment at the end of the day. In addition to this, it opens up the opportunity to have employees as well as clients/visitors.

3. Live-Nearby: This type can be thought of as the typical garage or shed in a backyard that one uses as a workshop or studio/office. In this scenario living and working take place in completely separate buildings.

Reinterpreting Collective Living

Collective housing can be described as residences where inhabitants share more than just living space, but often food, backyard produce, household chores, and sometimes money. These houses adopt collective, non-hierarchical values, believing that the mutual support provided strengthens both the individuals and their communities.

I am suggesting a new way of thinking about collective living, where residents are not necessarily sharing kitchens and living space, but still maintain the above mentioned non-hierarchical values. Since this thesis is focused on those that have had to move away for work, this design is interested in bringing these people home, to a place where they have access to the space and tools required to successfully reintegrate themselves into the community through the development of small businesses.



This diagram represents a new way of thinking, with residents being central to the success of the industry, and benefits flowing both ways. By contributing to the industrial hub, everyone benefits through the promotion of new businesses. Collective resources create a level playing field for everyone.

Traditional live/work typologies do not necessarily cater to large, industrial workshops. Since the majority of my target residents are either tradesmen or craftsmen, it doesn't make sense for each resident to build his or her own workshop, in terms of both space and financials. By introducing an industrial hub in addition to the housing component as part of the first phase of development, it creates an equal playing field for all those interested in starting a business. Anyone who decides to live in the new units will have access to the collective resources, and will in turn be contributing to the industry and the economy, respectively. This idea of a central, collective hub that serves surrounding residential components is an abstract way of thinking about collective living. As mentioned, these people are not sharing living quarters, but they are sharing the responsibility to support one another as well as the new industries. In return, the collective hub will enable residents to create diverse, economical opportunities for themselves, strengthening the community as a whole.

As a contrast, the mining and steel industries would provide their workers and their families with company housing, usually located in close proximity to the mines or plant. The company houses in Cape Breton are an important part of the region's distinctive visual identity; they can be found in all of the former industrial communities, including Sydney. The houses were built between 1850 and 1920, and while many of them still stand, many are falling into disrepair. These homes were of inadequate quality,

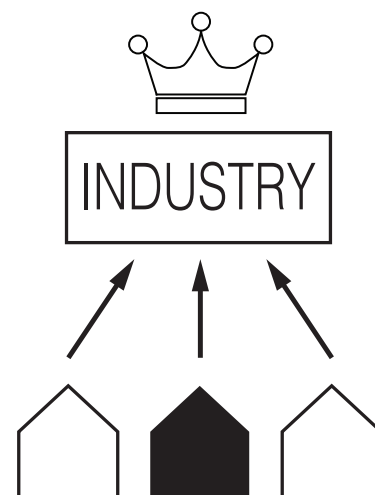


Diagram representing the relationship between the mining and steel industries and their employees. Arrows indicate the one sided benefits in favour of the industries.



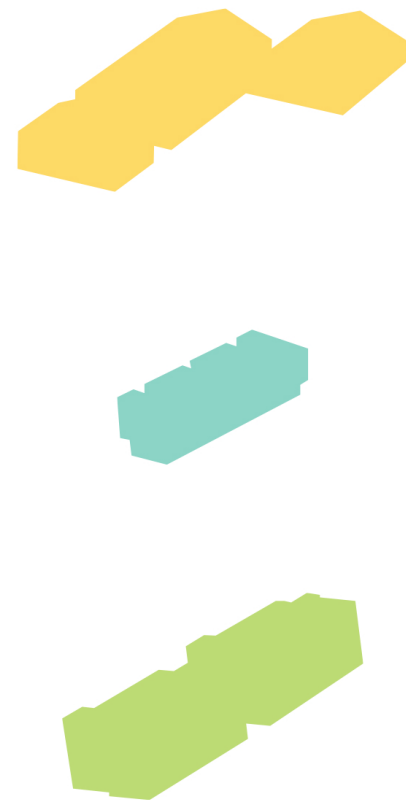
Typical company houses found on Victoria Road in Sydney, leading in to where the steel plant once stood; images from *Google Streetview, 2015*.

and the employees were often mistreated.⁵⁶ There was a clear hierarchy in this system, where those who worked for the industry got little in return.

While paying homage to the industrial history of Cape Breton, the hopes of this design proposal are that the roles of the past will be reversed. The industrial hub can only survive through the contribution of its residents, in turn providing them with an abundance of opportunities to grow.

Generated Typologies

By introducing typologies, it is reinforcing the idea that descriptive rules can be interpreted in many different ways, producing more than one correct solution. Each of the resulting typologies caters to the different lifestyles and needs of the residents, meaning each design needed to be as flexible as possible. The design of the three typologies was guided by the use of the fictional characters described earlier. They depict familiar situations representing people all over Sydney; the hopes are that these architectural interventions will help provide long term solutions for revitalization. A kit of parts was developed to help form the typologies, it included a shop, work, and live component.



Three typologies have been designed to fit the needs of the residents of Sydney: an industrial hub with work shops, live/work row houses, and a mixed use building with various unit types.

56. National Trust for Canada, *Nova Scotia Company Houses*, <https://www.nationaltrustcanada.ca/issues-campaigns/top-ten-endangered/explore-past-listings/nova-scotia/nova-scotia-company-houses>.

Industrial Hub

The first typology is not a housing typology, but the collective industrial hub mentioned earlier. This hub will incorporate both the shop and work components by including tech, wood and metal shops, offices and meeting rooms, as well as studio or display spaces on the ground level for new businesses. By taking the idea of the live-nearby type and adapting it to the situation, one can reinterpret it as collective shop and work components serving the surrounding live components.

Live/Work Row Houses

This “live-near” type incorporates the traditional side hall typology as the live component so as to allow for separate entrances for both the home and office from the ground floor. The living component is lifted off of the ground floor to allow for a public workplace at street level, and each unit has a varying number of bedrooms depending on the needs of the potential residents. This typology is to be located within close proximity to the industrial hub so residents can use the collective resources to fuel whatever business they may have underneath.

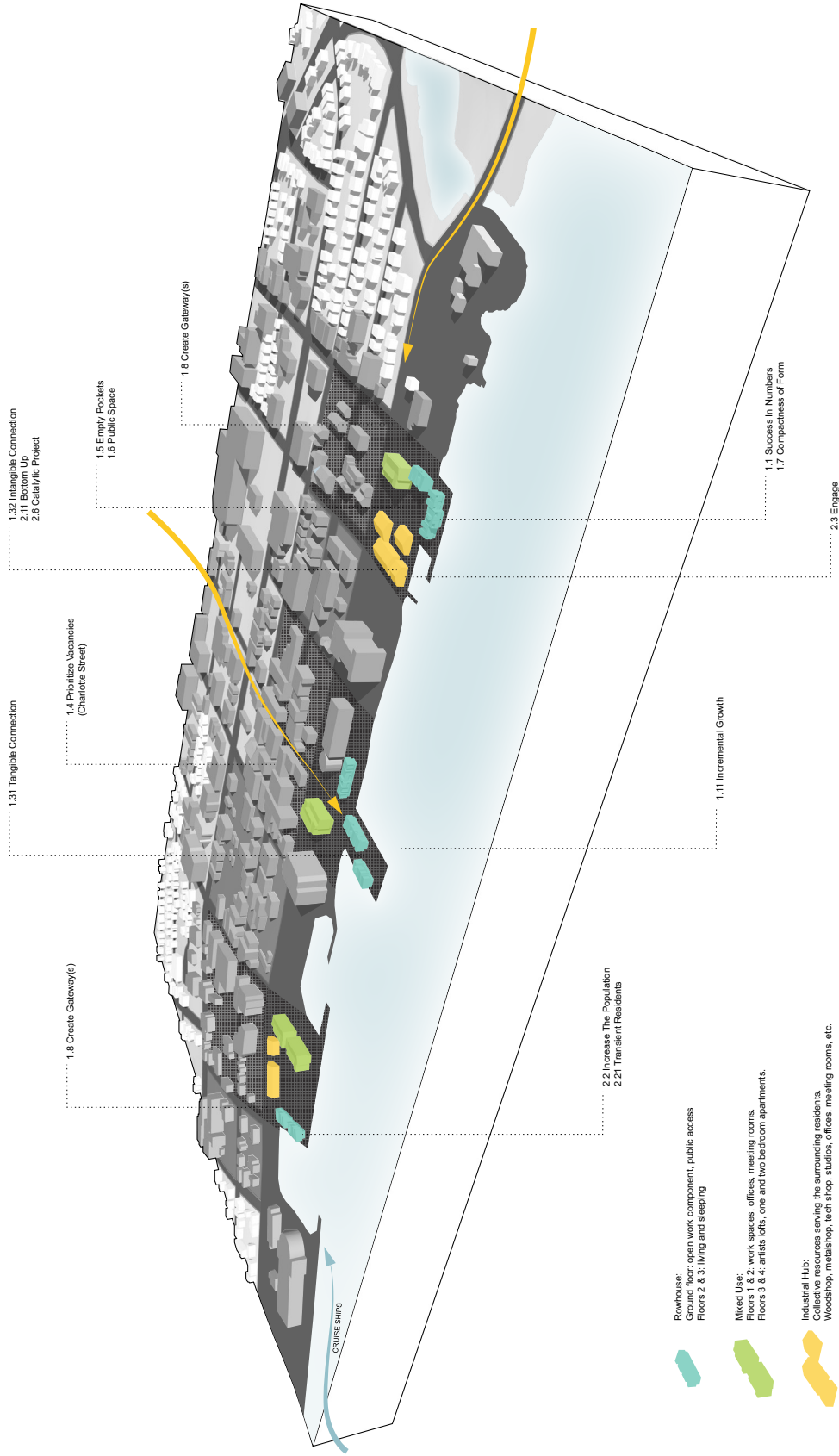
Mixed Use

This typology takes into account the varying types of potential users by offering one and two bedroom apartments, as well as loft style artist studios. This is an alternative option to the multi-story row house for those who want separation from their office and as a result are renting a space in the industrial hub. This

typology also serves those who want to downsize, or simply get away from multiple storeys. The upper floors are for the aforementioned live components, while first and second floors are occupied by shop and work components.

The typologies have been designed so that they are ultimately not site specific, and will be able to adapt to their surroundings. The resulting master plan is therefore not a determined instruction manual, but a suggestion on how these typologies can be adapted to further the development of the entire waterfront.

Typical master plans designate zones for specific functions, but this requires high capital expenditures. Since communities are shaped by their residents, it is important to shape the environment to suit their needs and desires. Residential floors in all types are lifted up from the ground, maintaining a transparent public ground floor. As time progresses, in-fill program will develop as needed, as spaces have been designed to allow for change according to demand.

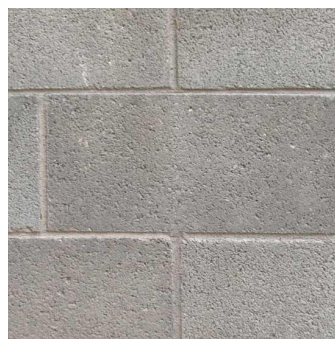


This diagrammatic representation of downtown Sydney is highlighting the three phases of development with suggested typologies adapted to each site. Different shades of grey represent the waterfront reinterpreted as a street. The dark grey stretching through various blocks indicates the extension of this new way of living through the city. Applicable rules have also been highlighted to show their contribution to the approach.

Building Scale

In terms of building construction and detailing, it is important to use any local talent (3.5 Hire A Local) available in the area whenever possible. In the case of Sydney, and the theme of this research, there is an abundance of skilled tradespeople and craftsmen in the area, whether they be formally trained in steel and wood frame construction, welding, etc. or have had tricks of the trade passed down from their parents and grand parents. Vernacular architecture is often used as a term to categorize various methods of construction that use locally available resources and traditions (3.7 Buy Local); it is clear when looking around the area that wood construction is the most abundant method used in Cape Breton, with larger commercial buildings being constructed from steel.

Since Sydney is historically an industrial town, and the program of the buildings is industry related, tying into these roots through building technique and material choice was explored. The form of the industrial hub, including the tech, wood and metal shops, has been informed by the typical industrial shed found all over Sydney, but specifically on the steel plant site itself. The sheds are of steel frame construction with exposed trusses, highlighting the construction method. Typically, these sheds were for employees only, and off limits to the public; in this case, they have been reinvented as a public space. Double height spaces, plenty of wood and glass, as well as garage doors on the ground floor for maximum



Material suggestions for live/work interventions: all of these materials are readily available in the area, and local labour can be used. By introducing new techniques like Shou Sugi Ban, residents have the opportunity to gain knowledge, while adding a contemporary feel to the projects.

transparency make these once private buildings inviting to the public (3.2 Transparency, 3.4 Friendly Facade). All three have been clad in black standing seam metal siding, a cladding material readily available in the area, prepared by local fabricators. Due to the construction method chosen for these buildings, local tradesmen will ideally be awarded the job so that the users of the building feel a sense of pride knowing that either they themselves, or their friends, have constructed it.

The live/work rowhouses are of typical wood frame construction, with concrete block used for the ground floor for durability. The living quarters have been lifted off the ground for privacy, and to allow for public passage through the working component (3.2 Transparency, 3.4 Friendly Facade). To introduce a contemporary element, but sticking with warmer materials for the second and third floor, Shou Sugi Ban, a Japanese technique involving the charring of wood, has been chosen as the cladding for these units. This opens up an opportunity for the people of Sydney to learn a new building technique that can later be applied to new interventions (3.6 Teaching Moment).

Finally, the mixed use building also incorporates several of the aforementioned principles into its design. The bottom two floors are reserved for public access, through the inclusion of studios, offices and meeting rooms. Each of the spaces on the ground floor open up to the public through the use of garage doors, allowing for their program to spill out onto

the public plaza, almost as if it is a continuation of their work space (3.2 Transparency, 3.4 Friendly Facade). Apartments are on the third and fourth floor, with large windows opening up on to the public space below; a public roof garden gives the residents a semi-private outdoor space to enjoy.

The design of each of these typologies has kept flexibility and the public in mind, while ensuring living spaces are private and comfortable for each of the residents. In the next chapter, the composition of these buildings on the waterfront will be discussed, along with the designated zones they've created.

CHAPTER 6: DESIGNING A COMMUNITY LANDSCAPE

Whether such a method makes sense can only be judged when one shows how rules function within a clearly defined design-task.⁵⁷

Objectives

1. Develop a genius loci approach to post-industrial revitalization suited for small communities, highlighting a new way of thinking about main streets as a landscape.
2. Fill in missing housing typologies and create new, diverse opportunities for those returning to Sydney.
3. Activate the waterfront through the use of functional public space, sparking subsequent development in the downtown core.

The traditional Main Street model is now an anachronism both in place and time; the goal of this thesis was to develop an alternative strategy for revitalization, highlighting the importance of place through in situ architectural interventions along the Sydney waterfront. In order to provide a right-size, right-place approach to post-industrialization, careful consideration of the area and its residents was taken into account before proposing live/work residential units. This approach is suitable to Sydney not only because of its industrial past, but also due to the difficulties many friends and families face on a day to day basis as a result of a lack of opportunities. By incorporating collective resources with an industrial

57. Lehnerer, *Grand Urban Rules*, 69.

hub, it creates a level playing field for those living in Sydney, as well as those wanting to return from out west. This is a type of bottom-up response, leveraging existing assets that make Sydney unique as a foundation for future development. The resulting narrative is similar to collective living, with everyone living and working in a new community landscape. This way of living resolves many of the typical situations found amongst the residents of Sydney.

Potential Residents

1. Thanks to the collective resources and industrial grade equipment, Mike is able to maintain his connection to out west by fabricating metal parts for large oil and gas companies. He and his family will live together in a row house on the water with office space located beneath.



2. Stephanie is a recent business grad; now that there are more affordable apartments in Sydney, Stephanie doesn't have to worry about having to move back in with her parents. Stephanie can now afford a one bedroom apartment in the new mixed use building on the waterfront. The economy is in a great state for her to start her new small business, conveniently located within the same building.



3. The promotion of new businesses within the downtown will encourage young graduates to stay in the area to gain their professional experience. It is possible that NSCC could foster a relationship with the industrial hub in terms of supplying local craftsmen with interns looking for an apprenticeship. Rob-



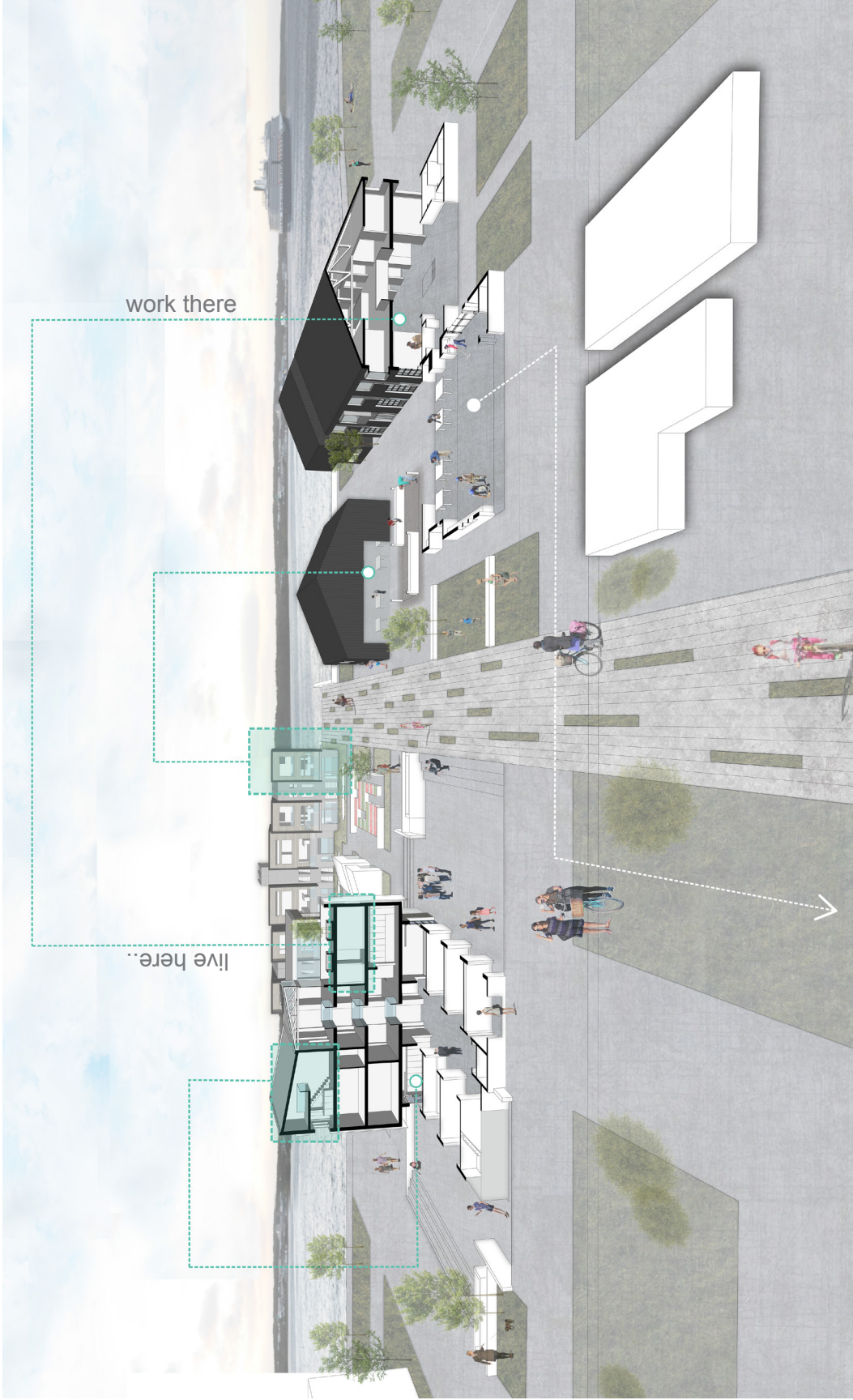
ert lives at home with his parents for now, but works in the woodshop as a cabinet making apprentice.

4. With the help of the collective resources, John can avoid the large start up costs associated with starting a design build company. John will live in a one bedroom apartment in the mixed use building, use the collective wood shop resources, and rent out space within the hub to run a successful design build studio.



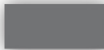
5. If Arthur and Mildred decide to downsize and make the move downtown, Arthur doesn't need to fear giving up his workshop. A live/work situation would allow him to open up his new rental shop, while using the collective woodshop to build his boats. With its convenient location, Arthur is in a great position to start a rental company that will help activate the harbour.







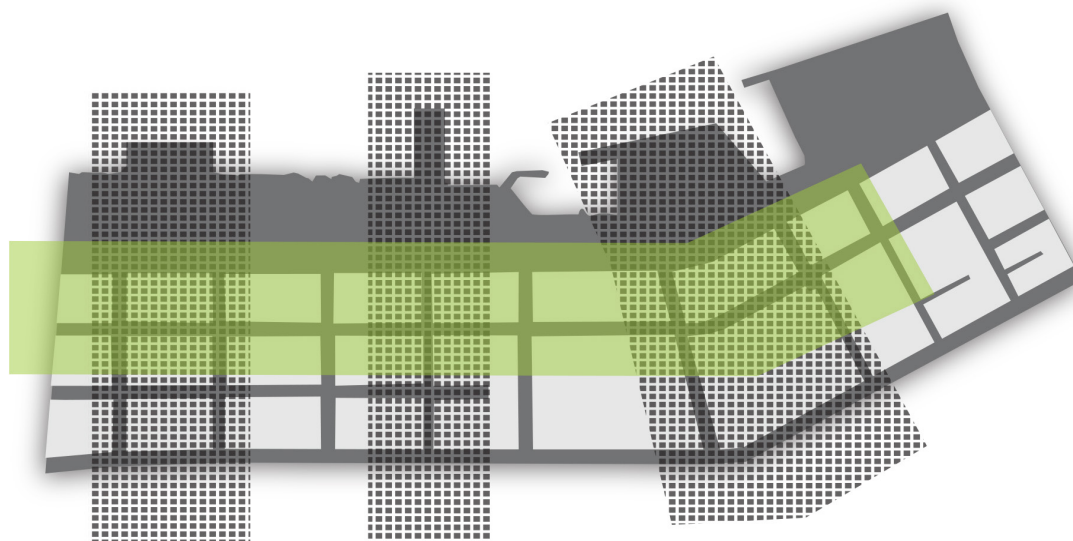
This section is cutting through the site at a point in which one can visually see the relationships formed between the buildings and their residents. Living and working occur within close proximity to one another, creating a collective community on the waterfront, illustrated through the use of dotted lines. The transparent ground floor of each building is emphasized through minimal change in materials between the interior and exterior.

This thesis is about more than just the design of buildings, as the composition of these buildings within the downtown was equally as important. This thesis is altering the historic perception of what a Main Street was, through the reinterpretation of the traditional model as a new community landscape. The first step in this transformation would be the cumulative design and connection of the water side of Esplanade. To reinforce the idea of the street as a community landscape, design typologies would not simply be focused on the waterfront; as time goes on, they would extend several blocks back, with landscape interventions creating a cohesive landscape connecting the rest of Sydney with the harbour, while simultaneously blurring the existing boundaries between blocks. For the purpose of this thesis, the focus has been placed on the gateway into the downtown as a suggestion of how this way of thinking and living could transform the downtown of Sydney.

 The beginning phase of transforming the waterfront into a landscape that is one in the same as the streets.

 The pattern illustrates the second phase, which is extending this way of thinking past the harbour, and into the rest of Sydney, blurring the boundaries of the existing blocks.

 The green band represents the final step, which is a horizontal connection between the three linear sites.



This is a diagrammatic representation of the suggested master plan for downtown Sydney. The end goal is for the entire downtown to feel and be represented as a new community landscape.



This is a suggested master plan of downtown Sydney. The grey hatch highlights the three sites and the blurring of typical block perimeters within; live/work typologies are dispersed throughout. An emphasis was placed on extending the street as landscape concept through to George Street, a natural boundary of the downtown district. While the first site has been developed to a further extent, overtime the same principles could be applied to other sites as well as the interstitial spaces connecting them.



This site plan demonstrates the extension of the street as a community landscape through Sydney. A sense of verticality is evident through the placement of buildings and strategic landscaping. Blown up portions of this image have been included in the next few pages to highlight important aspects of the design.



ESPLANADE



CHARLOTTE ST



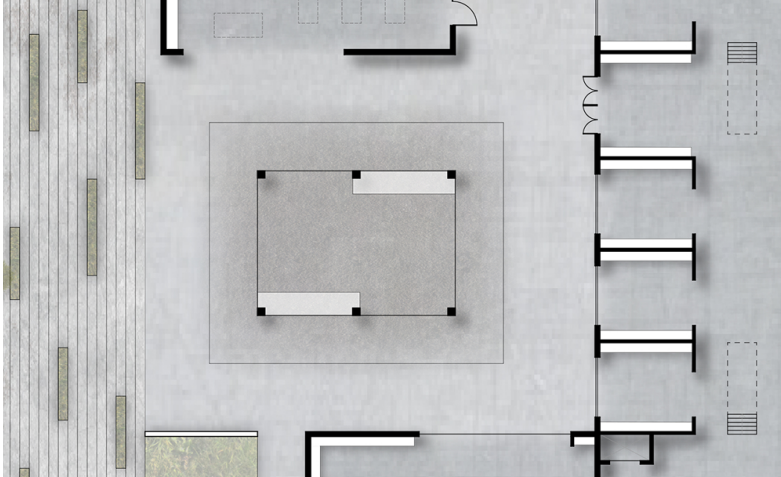
BENTINCK ST



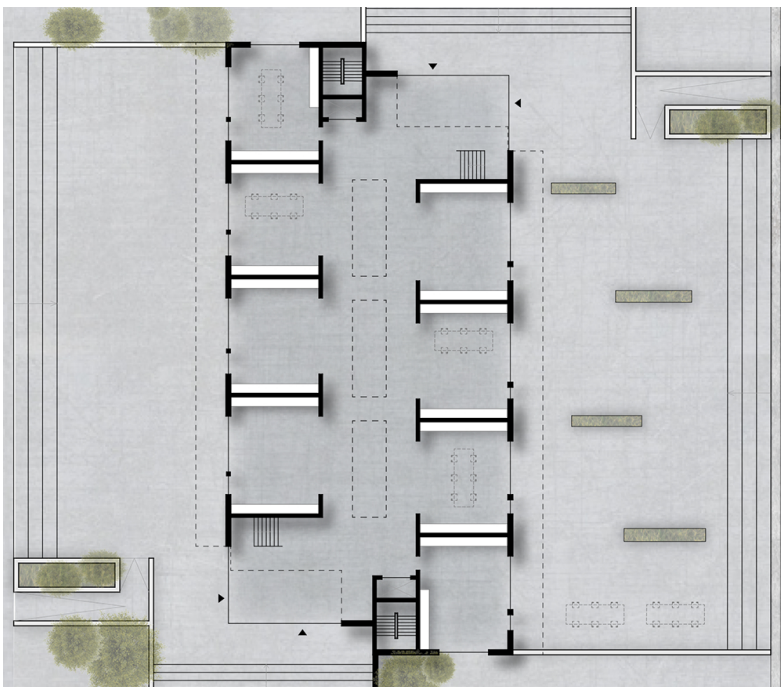
This section is another demonstration of the extension of the street as a community landscape. Previously, Charlotte Street, and all of the other streets parallel to the harbour, were disconnected. By blurring the lines of the standard block, it limits the use of streets as vehicular thoroughways, and reinterprets them as useable public space for the residents of Sydney.



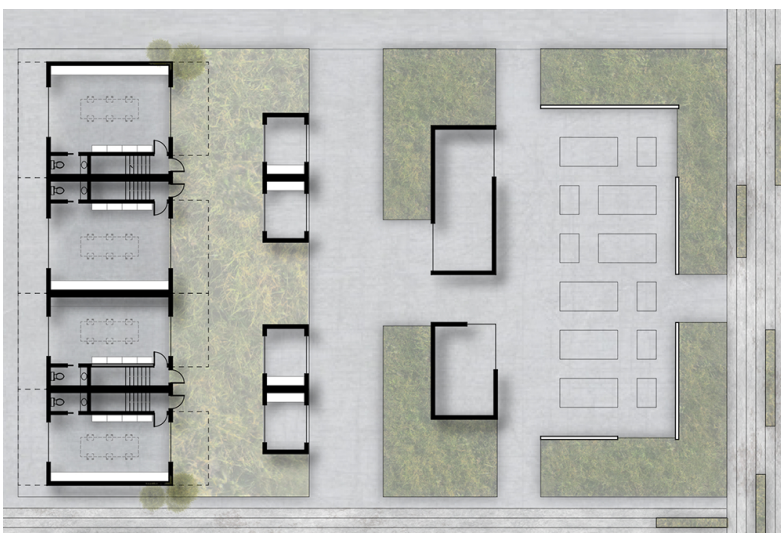
The composition of buildings on the site creates designated zones, each serving a different purpose for a different group of people. Currently, the waterfront is filled with unapproachable vacant lots and poorly designed spaces. By constructing a hierarchy of public space, the entire waterfront is adapted to the human scale.



The placement of the industrial hub with the collective metal shop and wood shop creates an extended outdoor work yard. A small pavilion has been placed in the center to provide a covered work space and separation for those using the yard.



By stepping down the grade around the mixed use building, it creates a public plaza that is inviting to residents and also allows program from the ground floor to spill out.



The third space becomes more private, with live/work row houses composed around a community garden. Balconies from each of the units are arranged so that they look out over the public yard.



This image shows how living and working occur within close proximity to one another. The composition of buildings creates an outdoor work yard for those using the industrial hub, while residents are encouraged to pass by. Currently, pedestrians are blocked off from the water; a new central axis acts as a guide to bring pedestrians through to activate the harbour.



This image shows the grade change around the mixed use building. This creates a public plaza that can be used by the community, and specifically the tenants of the ground floor. This becomes an extension of their work area, allowing program to spill out, and residents to have a visual of what's going on. Landscaping elements are visible as they pull your eye past Esplanade, up to Charlotte Street and beyond, creating a sense of curiosity and interest for pedestrians.



Residents are given a sense of privacy in this public yard with living quarters being lifted off the ground. The bottom floor is transparent and welcoming to pedestrians, and also creates a connection to the water rather than blocking it off. The living quarters have large windows opening up to both the water and the public yard, with balconies overlooking the community garden. A sense of ownership is created through the incorporation of small sheds to create a sense of separation for those entering their home. These sheds can be used as storage, an extra office, or studio space.



The continuation of directional landscaping through the block encourages pedestrians to flow through the space, rather than being disconnected from the harbour. This begins to blur the boundaries between the existing perimeters.



Bentinck Street is a seldomly used, one-way street in downtown Sydney; by converting this area into a pedestrian only zone, it incorporates public space within centres of the existing blocks. This encourages pedestrian activity and continues to fade out the existing boundaries. This portion of the plan also shows the incorporation of various housing typologies into a previously vacant commercial district.

CHAPTER 7: CONCLUSION

An underlying theme in the development of this project was the importance of place in designed strategies toward post-industrial revitalization. This thesis provided a vehicle to investigate issues that plague the majority of one-industry towns facing the inevitable fate of deindustrialization. The elemental connection between most struggling towns is the irrelevance of their current downtown cores; this was addressed through the reinterpretation of existing perceptions of what a Main Street should be.

While the incorporation of live/work units and collective industrial resources was a response catered to the residents of Sydney, the intention is that the strategies used to develop this response could be applied to other communities experiencing a similar decline. The absence of a comprehensive approach for small towns facing deindustrialization is evident within the architectural discourse; this thesis aimed to bridge the gap between large scale responses suited for metropolitan cities and the surface based solutions that currently exist for these small towns.

By consolidating existing assets that make a place unique into a bottom up approach, this thesis has established a sustainable response to deindustrialization. This real-time, real-place approach resolves many typical issues plaguing those affected by deindustrialization by enhancing their day to day lives and providing long term solutions to revitalization.

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