

Small Town Transit-Oriented Development in Eastern Ontario and Sweden

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Abstract

Transit-oriented development (TOD) – the practice of planning dense, mixed-use nodes around a transit station – is becoming increasingly common in Canadian and North American urban planning. However, there has been little attention paid by practitioners and scholars to small towns, and how a theory intended for large urban areas can be applied to a smaller setting. With a potential new VIA Rail line being developed between Windsor and Quebec City, the town of Perth, Ontario may become home to a commuter railway station for the first time in over half a century. Can transit-oriented development work in Perth, a town of fewer than 6000 people? This paper explores the question of whether a regional railway station can stimulate transit-oriented development in a small town such as Perth. It examines the existing literature on TOD and makes use of a number of case studies of different scales. It compares VIA Rail as a commuter railway network to the commuter railway system in the Region of Skåne, Sweden, and examines five small towns with existing railway stations: Tierp, Gnesta, Skurup and Svedala (all in Sweden), and Smiths Falls, Ontario. Over the course of this paper, several conclusions are formulated. First, although TOD is possible in small towns, it must cater to the scale of said towns. Second, a railway station on its own is not sufficient to stimulate compact development; transit-supportive policies must be in place. Third, small towns are extremely sensitive to the current housing market, and their growth rates tend to be tied to housing affordability issues in nearby cities. Finally, increased connectivity can have the detrimental effect of reducing commercial activity in small towns, as the ease of access means that businesses have less incentive to locate in smaller markets. These lessons are applied to Perth in order to determine what a TOD plan might look like for the town.

Foreword

This Major Research paper has been submitted to York University's Faculty of Environmental Studies in order to satisfy the final requirement of the Master in Environmental Studies (MES) Planning Program. This paper relates directly to my Plan of Study, titled "Transit-Oriented Planning in Global Regions", and integrates all three components: Urban and Regional Planning, Comparative Urbanism, and Transportation.

This research is heavily focused on transit-oriented development and comparative urbanism on a global scale. My interest in both, and in urban planning in general, was sparked by my years living in Asia – specifically, South Korea and Hong Kong – and my intent had been to include one or both of these places as case studies in my major research. My research on comparative urbanism and global cities theories unearthed some problematic factors that would almost certainly arise while doing research in this part of the world. Almost every scholar makes a similar point regarding existing scholarship about comparative urbanism and global cities – most of the existing research is from a Western perspective, with Western assumptions imposed on cities from other parts of the world (Robinson 2016; Tuvikene, Neves Alves and Hilbrandt 2017; Ren and Luger 2015). I discuss these theories in my Plan of Study:

Robinson (2016) discusses the need to ensure that research in global cities is aware of, and based in, the assumptions of those cultures, and does not impose Western concepts on non-Western cities. She asks "can we promote theory cultures which are alert to their own locatedness and sources of inspiration, open to learning from elsewhere, respectful of different scholarly traditions and committed to the revisability of theoretical ideas?" (p. 188). As with Tuvikene, Neves Alves and Hilbrandt, she is a proponent of self-reflexivity. However, she does display reservations about the effectiveness of this type of research: "Being open to ideas from elsewhere, while attending to the locatedness of all conceptualization, raises challenging questions about the specificity or limited scope of some concepts, and about the extent to which it is productive to think with ideas across many different experiences" (p. 188). (Closs 2018, p 4-5).

Ren and Luger (2015) specifically address the pitfalls of undertaking research in Asian cities. As with Robinson, they address the need to stop imposing Western concepts on Asian cities, describing "the urgent need to engage with the non-'Western' world with renewed focus ... and to consider cities as localized sites that help to define global flows, rather than as hapless victims of broad global currents" (p. 146). However, they opine that "there is to date no consensus on how to design and realize these studies" (p. 145). (Closs 2018, p. 5).

The scholarship indicates that there is an ethical dilemma – a risk in reproducing colonial assumptions and perpetuating 'otherness' when doing research in a different cultural landscape.

Am I prepared to undertake a research project that would require me to place myself as the other, in opposition to a culture I cannot fully understand? Is it even fair for me to attempt to do so? Who am I to interrogate and criticize phenomena that have come about in a vastly different culture and context? I am a white male, born and raised in Canada, with fluency only in the English language. What does it even mean to use an “Asian” research method, versus a Western one?

I decided that the implications and requirements of doing research in Asia were more than I was willing to take on for a paper of this relatively small scope. Thus, when interesting case studies presented themselves in Perth (my hometown) and in Sweden, I decided to pursue those. Sweden, being a developed, Western country with a high level of English fluency, is similar enough in culture to North America that it did not seem I would be imposing cultural expectations on the research subjects. It allowed me to conduct international research, without having to contend with a neo-colonial context I was not prepared to address in the scope of this master’s research paper.

I also started a job as the planner for Beckwith Township in January of 2018, at the same time I was starting work on this research paper. Though balancing work and research has been difficult, and directly led me to have to take two extra semesters to complete my paper, it has benefitted the research as well. Working as a planner in Lanark County, where much of the research is based, gave me firsthand insight as to how planning is carried out in this region. I also formed professional relationships and friendships with some of my interviewees.

Acknowledgements

This is the closest I will ever get to writing an Oscar acceptance speech. So, here goes.

Thank you to York University and to the Faculty of Environmental Studies for considering me worthy of this degree, and to all the professors who shared their wisdom and helped me get to this point.

Thank you to the Council of Beckwith for supporting me (financially and morally), and for trusting in my capabilities even when I was still completing my degree. Thank you to my colleagues for making work pleasant. Enjoying my days at the office made it easier to come home each night and sit back down in front of a computer to write this paper.

Thank you to my mom for housing and supporting me when I moved across the province last year. And thank you to my dad, since I cannot thank Mom without also thanking Dad.

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Thank you to Gleb Poltsvin and Chris McGuire, for reading my paper with fresh eyes and providing feedback leading up to my oral exam.

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Thank you to Forbes Symon, for taking part in an interview, for reviewing my paper, and for being a mentor. Your insight and your ability to link ideas and conceptualize new theories was immensely valuable.

Thank you to Mary Kirkham, for taking part in an interview, for being a mentor, and teaching me what it means to be a planner in Lanark County. Thank you also for covering my duties in Beckwith while I was away in Sweden.

Thank you to Professor Mattias Qviström and Amalia Engström for welcoming me to a new country, giving me a crash course in Swedish planning, and for pointing me in the right direction (quite literally, towards four specific Swedish towns).

Thank you to my MES Planning peers for being the best cohort I could have asked for. Several years ago, a strange, drunk girl I met in a Mac's Convenience Store lamented to me that universities had become too impersonal. She said that universities were intended to be a place

where minds of a certain ilk could come together, share ideas, and grow intellectually together. Her words stuck with me, and I am lucky to say I was able to experience what she was describing when I met all of you. I am looking forward to all of our long careers.

A huge thank you to my supervisor, Professor Laura Taylor. You helped me get not one, but two jobs, guided me towards Sweden, and suggested the topic that turned into this research paper. My self-assurance waned on occasion throughout this nearly year-and-a-half journey but, every time I discussed things with you, I left our meetings feeling more confident about what I was doing, and what I had done. I do not know where I would be without you (again, quite literally).

Finally, thank you to Katrina. Thank you for believing in me, and for supporting my decision to go to grad school. Thank you for moving across the province with me, thank you for accepting my long, unusual hours for almost three years, and thank you for putting up with me sitting in front of my computer almost every weekend for the past year. I'm all yours now.

Table of Contents

Abstract	Page 1
Foreword	Page 2
Acknowledgements	Page 4
Table of Contents	Page 6
List of Figures	Page 8
Chapter One – Introduction	Page 14
Context	Page 14
Research Question	Page 15
Methodology	Page 16
Outline	Page 19
Chapter Two – Literature Review	Page 22
A Brief History of Sprawl and Transit in North America	Page 22
The Costs of Sprawl and Car Dependency	Page 23
The Pedestrian Pocket, Transit-Oriented Development, and New Urbanism	Page 26
Does the Built Form Shape Travel Habits?	Page 29
Challenges of Implementation	Page 31
Changing Lifestyles and an Increasing Demand	Page 32
Node Versus Place, and a Typology of TODs	Page 34
Transit and Density in Small Towns and Rural Areas	Page 37
Chapter Three – Regional Transit	Page 40
VIA Rail and Regional Transit in Canada	Page 40
Recent Improvements to VIA’s Service	Page 42
VIA’s Dedicated Track Plan	Page 43
VIA as a Commuter Railway	Page 45
The Role of Government in Swedish Transportation and Planning	Page 46
Spatial Planning and Polycentrism in Skåne	Page 49
The Impact of Skåne’s Research and Policies	Page 52

VIA Versus Skåne	Page 53
Chapter Four – Perth	Page 54
History, Architecture and Urban Design	Page 54
Transportation in Perth – From Early to Modern Times	Page 59
Planning Priorities	Page 62
Demographics and Factors Influencing Growth	Page 66
VIA Rail and the Prospect of Change	Page 68
Transit-Oriented Development in Perth?	Page 71
Lessons from Perth	Page 73
Chapter Five – Case Studies: Railway Towns in Sweden and Ontario	Page 75
Case Study 1: Tierp	Page 75
Case Study 2: Gnesta	Page 84
Case Study 3: Skurup	Page 92
Case Study 4: Svedala	Page 99
Lessons from the Swedish Towns	Page 106
Case Study 5: Smiths Falls	Page 108
Chapter Six – A TOD Plan for Perth	Page 114
Chapter Seven – Analysis and Conclusion	Page 119
The Importance of Policy	Page 119
The Impact of Housing Prices and the Market	Page 120
Bedroom Communities and the Importance of Two-Direction Mobility	Page 121
A Large Urban Model for a Small Urban Settlement?	Page 123
Suggestions for Future Research	Page 124
Final Words	Page 125
Bibliography	Page 127
Interviews	Page 142

List of Figures

Figure 1: Map of Perth, Smiths Falls and Ottawa	Page 10
Figure 2: Map of Tierp, Uppsala and Gävle	Page 11
Figure 3: Map of Gnesta, Södertälje and Stockholm	Page 12
Figure 4: Map of Skurup, Svedala, Malmö and Copenhagen	Page 13
Figure 5: Riverside South, an Ottawa suburb	Page 25
Figure 6: Kelbaugh and Calthorpe's Pedestrian Pocket	Page 26
Figure 7: A proposed TOD at Bloor and Dundas in Toronto	Page 27
Figure 8: A proposed New Urbanist town in York Region	Page 28
Figure 9: VIA's Dedicated Track Plan	Page 45
Figure 10: Skåne's regional railway map	Page 51
Figure 11: Map of Perth	Page 55
Figure 12: Perth's Town Hall	Page 56
Figure 13: The Code's Mill Building in Perth	Page 57
Figure 14: The McMartin House in Perth	Page 57
Figure 15: The McMillan Building in Perth	Page 58
Figure 16: The Perkins Building in Perth	Page 58
Figure 17: The Tay Canal in Perth	Page 60
Figure 18: Former Perth Station	Page 61
Figure 19: Former Perth engine house	Page 61
Figure 20: Perth Station in 1955	Page 61
Figure 21: Gore and Herriott Streets in Perth	Page 64
Figure 22: Stewart Park in Perth	Page 66
Figure 23: Map of Tierp	Page 76
Figure 24: Train platform in Tierp	Page 77
Figure 25: Commercial buildings in Tierp's centre	Page 79
Figure 26: Siggbo Garden City plan in Tierp	Page 80
Figure 27: Medium-density buildings in Tierp	Page 82
Figure 28: Single-detached homes in Tierp	Page 83
Figure 29: Map of Gnesta	Page 85

Figure 30: Gnesta's town centre	Page 86
Figure 31: Redevelopment proposal for Gnesta's town centre	Page 88
Figure 32: Commercial buildings in Gnesta's core	Page 89
Figure 33: Single-detached homes in Gnesta	Page 90
Figure 34: View of Gnesta from across Frösjön Lake	Page 91
Figure 35: Map of Skurup	Page 93
Figure 36: Skurup's town centre	Page 94
Figure 37: Plan for Västeräng neighbourhood in Skurup	Page 95
Figure 38: Empty streets in Skurup	Page 96
Figure 39: Single-detached residences in Skurup	Page 97
Figure 40: Multi-unit residences in Skurup	Page 97
Figure 41: Railway tracks in Skurup	Page 98
Figure 42: Svedala's central square	Page 99
Figure 43: Map of Svedala	Page 100
Figure 44: Bicycle parking at Svedala's train platform	Page 101
Figure 45: Mixed-density residences in Svedala	Page 102
Figure 46: Mixed-use complex in Svedala	Page 103
Figure 47: Mixed-density residences in Svedala	Page 104
Figure 48: Commercial-residential complex in Svedala	Page 106
Figure 49: Map of Smiths Falls	Page 109
Figure 50: Tweed in Smiths Falls	Page 110
Figure 51: Smiths Falls' former railway station	Page 111
Figure 52: Smiths Falls' current VIA Rail station	Page 112
Figure 53: Beckwith Street in Smiths Falls	Page 113
Figure 54: Zoning map of Perth	Page 115
Figure 55: Perth Soap factory building	Page 117

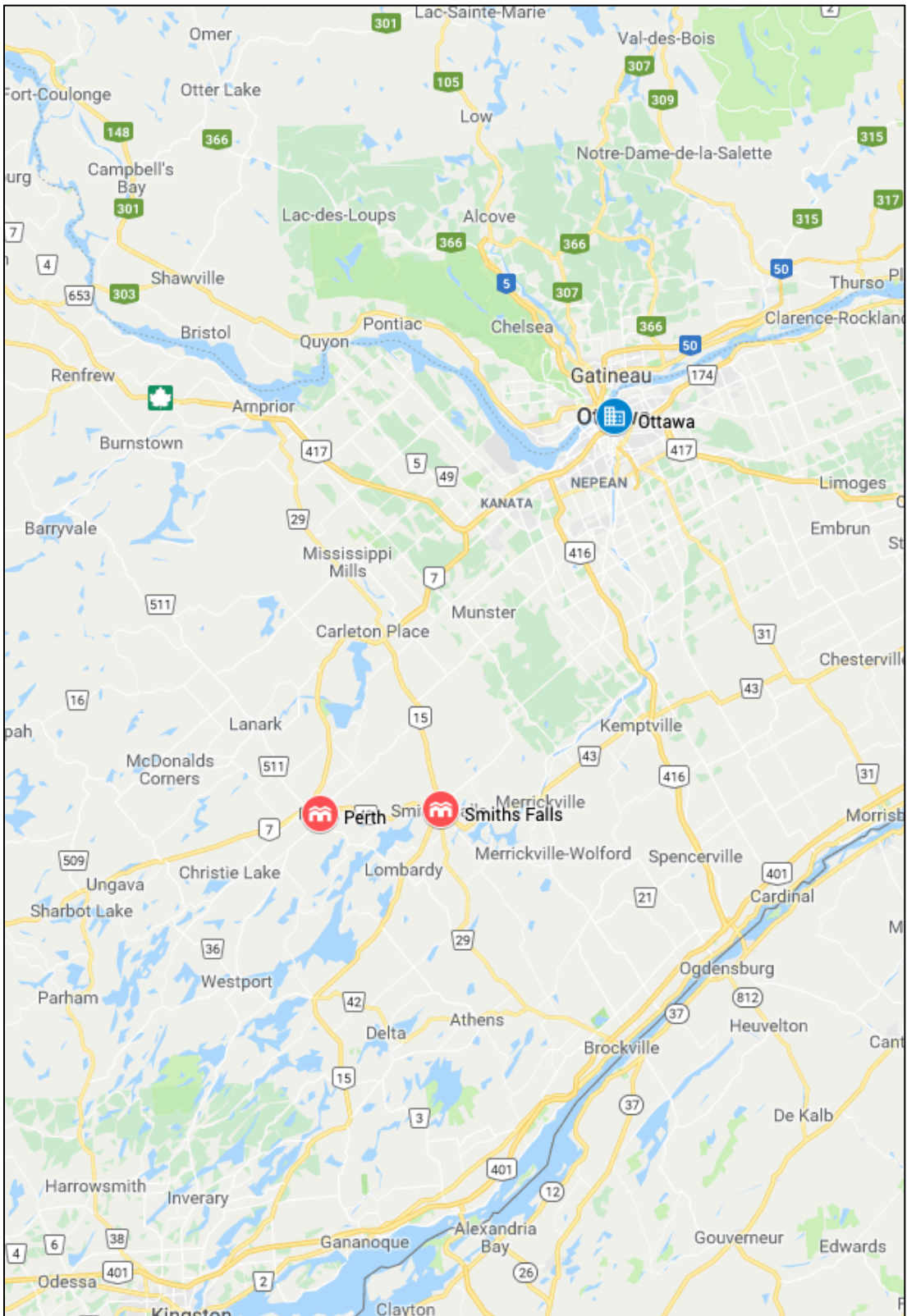


Figure 1: Perth and Smiths Falls in relation to their nearest city of Ottawa.
Courtesy of Google Maps 2019.

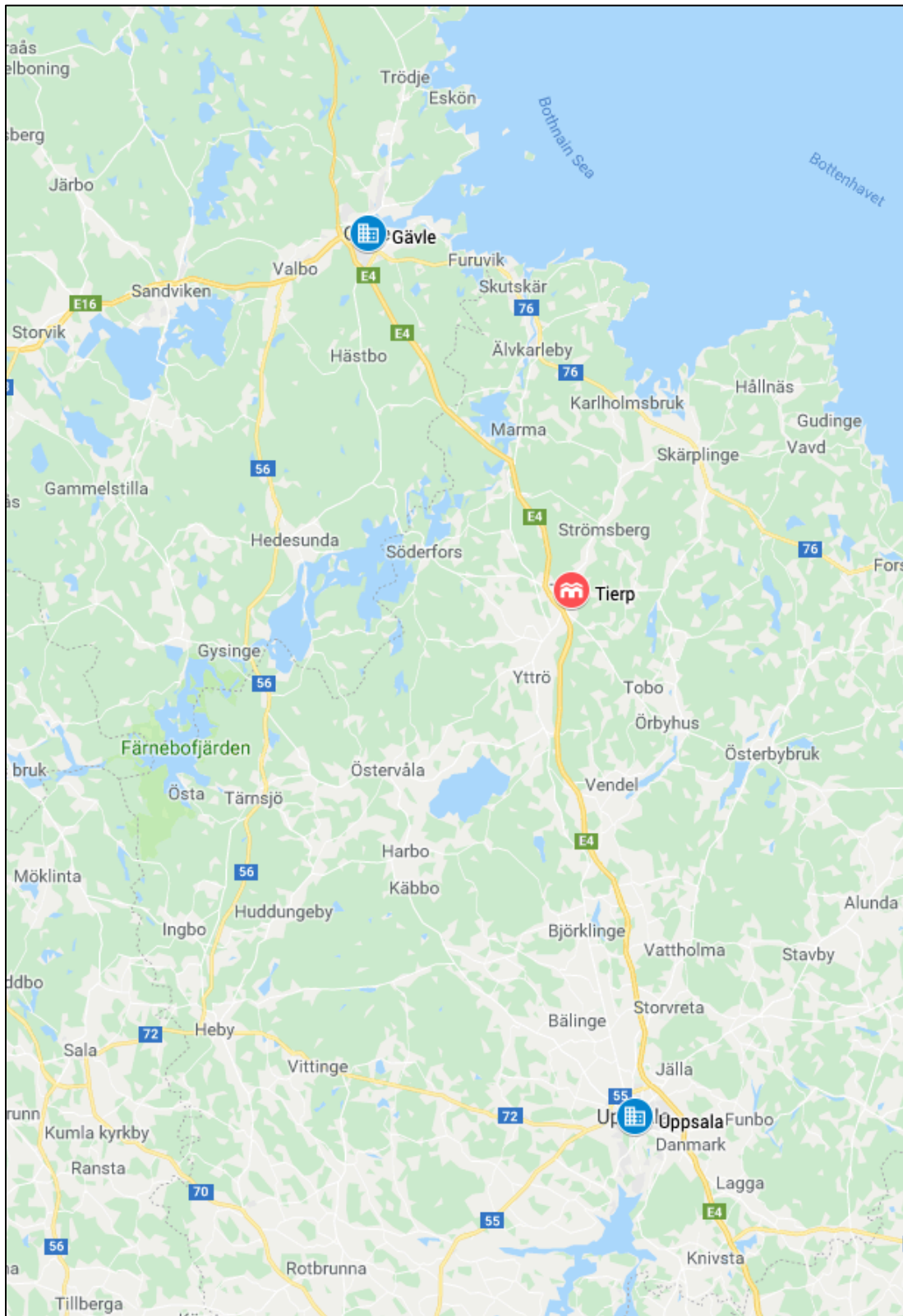


Figure 2: Tierp in relation to its nearest cities of Uppsala and Gävle.
Courtesy of Google Maps 2019.

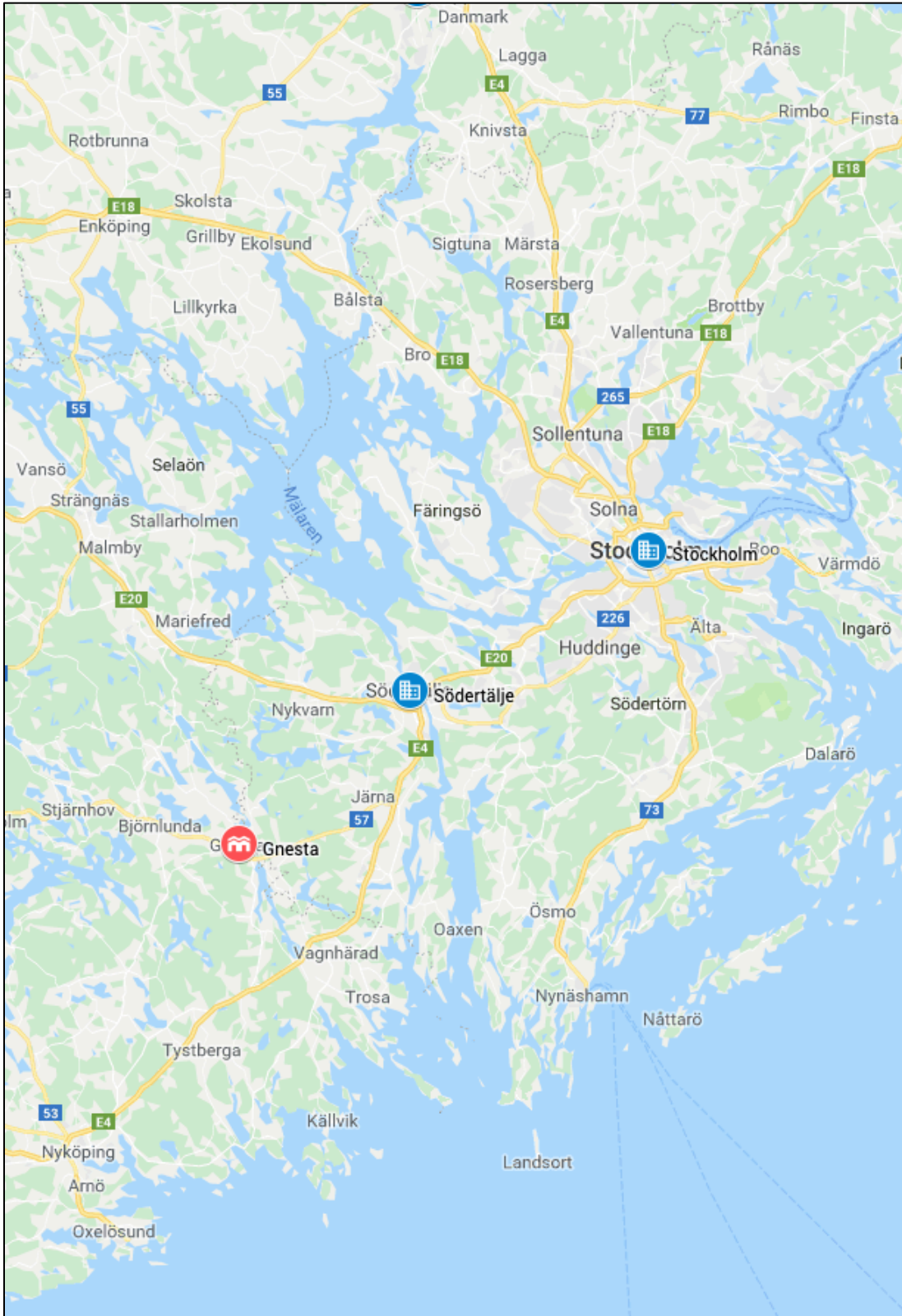


Figure 3: Gnesta in relation to its nearest cities of Södertälje and Stockholm.
Courtesy of Google Maps 2019.

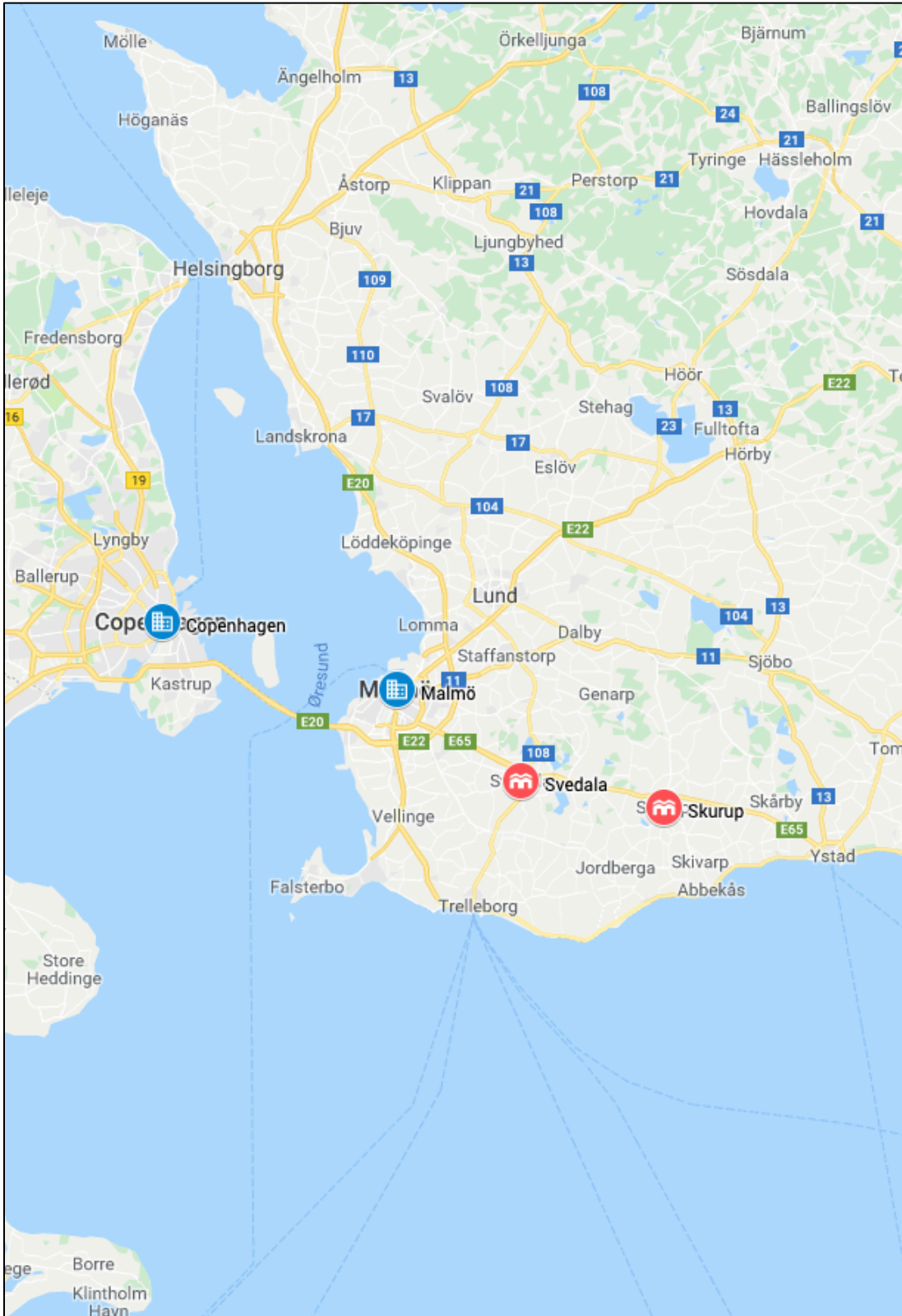


Figure 4: Skurup and Svedala in relation to their nearest cities of Malmö and Copenhagen.
Courtesy of Google Maps 2019.

Chapter One – Introduction

Context

In his 1993 book *The Next American Metropolis*, Peter Calthorpe coined the term Transit-Oriented Development (TOD), which he defined as a mixed-use community within walking distance of a transit stop, which would incorporate residential, retail, office, public space, and a variety of other land use types. He argued that this type of community would facilitate a variety of mobility methods, create more livable and sustainable communities, and increase connectivity within larger regions.

Nearly a quarter-century later, TODs seem to have become more prevalent within cities in Canada and around the world. In the city of Toronto, TODs have become a prominent growth management method (Hidalgo 2015; CMHC 2017). Regions in Canada outside of urban agglomerations, though, have largely been neglected on this front, and there is little in the way of research or discourse that considers applying the TOD model to small towns. Over the last several years, the number of regional buses servicing small towns and municipalities in Ontario has shrunk, disconnecting many rural and small town residents from their nearest cities and negatively affecting their access to jobs, healthcare, and other services (Marshall 2017; Bellrichard 2018; Dawson 2018; Doherty and Issawi 2018; Fisher 2018; Rieger 2018). However, recent developments give hope that this trend may be reversed.

In 2016, VIA Rail, Canada's federal transportation corporation, announced plans for a potential new commuter rail line running from Windsor to Quebec City, running parallel to but north of the current line. The Toronto to Ottawa section of this line would potentially include stops in Peterborough, Tweed, Sharbot Lake, Perth, and Smiths Falls. It would involve reclaiming abandoned CP Rail corridors, and converting some tracks that are currently only used for freight (Ferguson 2017; VIA Rail 2016; 2017a; 2017b). In Perth, it would be the first time a commuter rail station operated in the town since 1966, so this plan's implementation has the potential to initiate huge change in the town (Devoy 2016; E. Kirkham 2018).

My aim in conducting this research is to provide insight on the connection between the built form and the availability of rail transit in small towns, using Perth as a model for projection. I chose Perth as a case study for three reasons. First, as noted above, is the potential introduction of a rail station. Second, my intimate familiarity with the town allows for a level of insight that

would not be possible in most other locations. Third, Perth's core was constructed mostly in the 19th century around the Tay River, which connects to the Saint Lawrence Seaway via the Rideau River, and the town's core has retained much of the layout and heritage architecture from the 19th century (Harvey 1936; Turner 1992). Because of its preserved 19th century form, Perth's physical form is already more conducive than many other towns to transit-oriented development. Wheeler (2012) argues that 19th century neighbourhoods are among the most vibrant and desirable areas in North America, due to their compact, mixed-use nature.

My research makes use of comparative analysis between Perth in Eastern Ontario, and four towns in Sweden – two (Tierp and Gnesta) in the vicinity of Stockholm, and two (Skurup and Svedala) in Sweden's southernmost region of Skåne. I also analyze the role of the region; specifically, the research focuses on Skåne, which has been heavily funding and promoting the use of passenger rail as a primary means of intercity transit since at least 2010, with the goal of developing towns on the rail line as transit-oriented developments (Region of Skåne 2010; Qviström 2017). Skåne is contrasted with the role of VIA Rail as a commuter network in Eastern Ontario. This research looks at the effects that increased rail transit has had on the four towns in Sweden, and considers if and how a similar method of transit-oriented development might affect the planning and design to the Town of Perth, if and when a rail station is constructed.

Research Question

The goal of this research is to answer the following question: “Can the introduction or increase in regional rail transit stimulate transit-oriented development in small towns?”

While there is a large amount of scholarship regarding the built form's influence on travel choice (Lund 2006; Cervero 2007; Arrington and Sloop 2009; Feldman, Lewis and Schiff 2012), there is significantly less about transit options' impact on the built form. Much of the research about TOD considers it a method to regenerate and intensify suburban areas. Fewer scholars examine it as a method for other types of regions.

Though Perth is the model onto which this question is projected, it could not have been the sole focus of this research, since no development has yet occurred. Since there is a dearth of scholarship about small town TODs, attempting to simply apply theory directly to Perth would not have been sufficient. Thus, a comparative analysis of case studies was chosen as the primary mode of research. My attention was directed to Sweden by my research supervisor, Dr. Laura Taylor,

who had knowledge of small town TODs in Sweden from having visited herself in 2017, and from her connections to professors conducting research on these TODs. Preliminary research yielded examples of well-developed TOD policies in Sweden, and so I determined that it would be the country from which I would draw comparisons. Research was conducted in four Swedish towns – Tierp, Gnesta, Skurup and Svedala, as well as Perth’s neighbouring town of Smiths Falls, which is home to an active VIA Rail station.

Methodology

This research paper predominantly uses qualitative methods, and its design is a combination of three types of research. The first is descriptive research, which “relies on observation as a means of collecting data”, and establishes norms by examining situations and phenomena (Walliman 2011, p. 8). The second is evaluative research, wherein the aim is to go beyond just gathering facts, and to attempt to make sense of “the myriad human, political, social, cultural and contextual elements involved” (Walliman 2011, p. 12). The following methods were used to gather information:

Literature Review

A review of scholarly literature pertaining to transit-oriented development, New Urbanism, and small town planning was conducted. These theories are the foundation of the research, though the primary research conflicted with the theories in a number of ways. The literature was vital to understanding the history and conceptualizing the theories and how they apply to the towns analyzed in this paper.

Case Studies

This research contains eight case studies at different scopes. Six of the case studies are small towns. The first, and most prominently explored, is Perth, my hometown. Five other towns were chosen based on three factors: (1) each is roughly similar in population to Perth, (2) each is roughly similar to Perth in distance from the nearest city, and (3) each town is home to a commuter rail station. Smiths Falls was chosen because of its proximity to Perth, making it directly comparable. Four towns in Sweden were chosen (based largely on the advice of Professor Mattias Qviström, a professor in the Department of Urban and Rural Development at the Swedish

University of Agricultural Sciences in Uppsala): Tierp, north of Uppsala, Gnesta, southwest of Stockholm, and Skurup and Svedala, east of Malmö in the Region of Skåne.

Besides the six towns, this paper discusses two government organizations that oversee rail transportation: VIA Rail, Canada's passenger rail provider and a federally owned company, and the Region of Skåne, a level of government one tier below the Swedish federal government (equivalent to a province in Canada).

Media and Document Review

This research involved extensive review of several policy documents, including the Official Plans (Ontario) Overview Plans (Sweden) for all six towns studied, as well as policy documents and publications released by VIA Rail and the Region of Skåne. Most of the Swedish documents were only available in Swedish (with the exception of two of the documents released by the Region of Skåne). These were translated using Google Translate; automatic translation technology has become accurate enough to translate ideas with accuracy, if not always grammatical purity. This was sufficient to use these documents as reliable references, but not for direct quotations. The documents provided insight into the municipal and regional policies, and particularly how the policies promote and support transit-oriented development.

Statistical, Demographic Data Review

This was the only true quantitative research method used. Demographic data about the towns was gathered from Statistics Canada and Statistics Sweden, and data about train schedules and frequencies was obtained from the websites for VIA Rail and Swedish commuter transit sites. Again, the Swedish sites required Google translation.

In-Depth Interviews

I conducted semi-structured interviews with a number of professionals and public representatives, all of whom have a high level of knowledge and expertise about the topics, towns and regions they were discussing. Each interview was subject to the approval of a research protocol for interviewing human participants. Consent was obtained from each participant via a letter that was approved by the Faculty of Environmental Studies and given to participants prior to interviewing.

11 interviews were conducted with 15 people in total, and ranged in duration from 30 minutes to 100 minutes. Each interviewee agreed to have his or her name used in the paper – I explained that I was hoping to borrow their expertise to give more legitimacy to my paper. 10 of these interviews took place in person, and one over the phone. Each interview was recorded on a voice recording mobile phone application, and transcribed in full by the researcher. Questions were prepared in advance of each interview; these were used to lead the conversation, but the discussions were allowed to flow naturally as topics were discussed. A few of the interviewees prepared presentations in advance, having been briefed on the topic of discussion. The interviews conducted were as follows:

- Mary Kirkham, former Planning Administrator for Lanark County (March 17th, 2018).
- Adam Nyström, City Architect for Tierp (April 17th, 2018).
- Tomas Enqvist, Planning Architect for Gnesta (April 19th, 2018).
- Jennie Luthander, Planning Architect for Skurup, and planners Julia Andersson Thysell and Ashley Andersson (April 23rd, 2018).
- Karin Gullberg, City Architect for Svedala (April 24th, 2018).
- Jesper Borgström, Spatial Planner in Skåne's Community Planning Department (April 25th, 2018).
- Forbes Symon, Director of Development Services for Perth (June 25th, 2018).
- Kurt Greaves, Chief Administrative Officer for Lanark County (June 28th, 2018).
- John Fenik, recently re-elected mayor of Perth (July 25th, 2018).
- Karl Grenke, Senior Planner, and Ingrid Bron, (now former) Economic Development Coordinator for the Town of Smiths Falls (August 22nd, 2018).
- Jacques Fauteux, Director of Governmental and Community Relations, and Jacob Schabas, Senior Advisor of Corporate Strategy and Planning for VIA Rail (September 24th, 2018).

Fieldwork

Fieldwork is an instrumental research method for analysis of the built form, since images and written descriptions do not provide the depth of sensory experience that can be obtained firsthand. This consisted of visiting each town of study and walking around it, observing the built form and design of each town, taking note of the street life, and taking photographs. This was particularly useful for the Swedish towns, since I had no previous familiarity with them. This part

of the research required international travel – I was in Sweden from April 11th to April 29th, 2018. This international travel was approved by York University and the Faculty of Environmental Studies via a Risk Assessment form.

Outline

Can transit-oriented development work in Perth, and will the proposed railway station be a catalyst? Perth, with its retained 19th century sandstone core and gridiron street layout, already has the physical features and character that New Urbanism and TOD strive to achieve and expand. The planning policies in place encourage the existing character and heritage to be expanded upon, and the town's representatives, politicians and residents celebrate heritage as the most important trait of the town. But Perth is not defined by its proximity to the city. Its distance from Ottawa (approximately 85 kilometres from Ottawa's downtown) means that the majority of its residents do not commute into the city. Perth is more connected to its own rural hinterland, as it is the service centre for a large rural area. Rather than being a commuter town, it is best defined as a "Regional Urban Centre". The potential railway station might be better conceptualized as a "gift" than as a necessity (Kusno 2017). A rail station is not going to fundamentally alter the town on its own, but it can be one tool in helping to create and strengthen a complete community.

This paper is divided into seven chapters. Chapter One, which you have nearly finished reading, contains the introduction, purpose, methodology, and outline.

Chapter Two consists of the literature review, and discusses the history of sprawl and transit in North America, and the impacts they have had on our towns and cities and the way we live. In this chapter, I summarize the theories and application of transit-oriented development and New Urbanism, and discuss how these planning ideals came about as a reaction to car-centric planning, and are intended as a resolution to sprawl. I review the literature on the relationship between the built form and travel patterns, noting that the research looks mainly at the built form's influence on travel habits, rather than transportation options' impact on the built form. I review the challenges of implementing TOD and New Urbanism – in particular, overcoming the standard practices and the inefficiency of the existing built form. I then review literature that suggests there might be an increased demand for density, a change in lifestyle preference among Millennials in particular that could indicate broader public support for transit-oriented development. Next I describe the dual requirement for a TOD to be both a node within a larger network of TODs and a

place with its own character and completeness. I outline a typology of TODs, noting that none of the existing types seem to describe Perth as it would be, should it become home to a railway station. Finally, I discuss the challenges facing rural communities and small towns relating to sprawl and transportation. What is notable is that the majority of the scholarship is focused on large urban regions, and not on small urban towns such as Perth.

In Chapter Three, I analyze the role of the region in supporting transit-oriented development. I compare the framework behind regional transit in Eastern Ontario and Skåne, and analyze the operational mandates of two government entities – VIA Rail and the Region of Skåne. I explain VIA Rail’s history and the challenges it has faced in maintaining adequate service, outline its plans for a dedicated track, and assess its potential in becoming a commuter railway for towns on its network. I then provide a summary of planning in Sweden, outlining the roles of each level of government, and specifically how these roles manifest in Skåne. I explain how the Region of Skåne provides a supportive role to municipalities, and how its mandate is based on a vision of the Region as one contiguous network. I conclude that there is a significant difference between the main purpose of VIA’s railway network and Skåne’s railway network. VIA regards its railway in somewhat of a vacuum, and its goal is to generate the most profit. The Region of Skåne considers its railway as a method of increasing sustainability and quality of life for residents, and judges success based on a number of environmental and economic benchmarks.

Chapter Four serves as a thorough discussion of Perth – its history, architecture and design, planning challenges, and the potential impact of a commuter rail station. Making use of in-depth interviews with planners and other municipal representatives, as well as historical research and document review, I explore the current situation of the town, and assess its potential future.

Chapter Five features case studies of five towns – Tierp, Gnesta, Skurup and Svedala in Sweden, and Smiths Falls in Eastern Ontario. In the Swedish case studies, I find that, though the municipalities have had success in implementing TOD, due to strong policies and the existing built forms of the towns, there proved to be some unexpected challenges in fostering complete communities. In particular, the towns’ rates of growth are highly sensitive to the housing market, and housing demand rises when affordability becomes an issue in the nearby cities. Perhaps the most illuminating finding is the difficulty many of these towns have in retaining businesses; with the ease of access to nearby cities, there is less incentive for businesses to locate themselves in smaller markets. The example of Smiths Falls sheds light on another caveat to transit-oriented

development; even if a commuter station is in place, if transit-supportive policies are not in place, a community will not necessarily benefit from the railway station.

Chapter Six applies the theory to practice, and proposes a transit-oriented development plan for Perth, making use of the lessons from previous chapters.

Finally, Chapter Seven provides analysis of everything discussed, conclusions, and recommendations for future research.

Chapter Two – Literature Review

A Brief History of Sprawl and Transit in North America

In the 19th century and the early part of the 20th century, the automobile had not yet proliferated in North American society (nor any society, for that matter). Because of this, transit and urban development were almost invariably linked (Calthorpe 2003; Belzer, Autler, Espinosa, Feigon and Ohland 2003). Rail lines, which were constructed and operated by private companies, were necessary to move people from place to place and, without strong competition, were financially viable without requiring subsidies (Belzer, Autler, Espinosa, Feigon and Ohland 2003). Since rail lines and urban centres were largely built in confluence with one another, cities and suburbs were coherent and walkable (Barnett 2013a; Barnett 2013b).

This model of city and neighbourhood building started to change in the 1930s, and particularly after WWII, when planning and development started to be centred around the automobile. This brought on concepts such as “separate arterial and collector roads whose only purpose was to carry vehicular traffic” (Kulash 2013, p. 118). Roads were designed to keep commercial traffic away from residential areas, with streets branching out from an arterial road system into local streets. Many ended in cul-de-sacs and crescents, as it was believed that the traditional gridiron pattern allowed too much traffic and created issues with noise and safety (Aurbach 2013; Kulash 2013; Rowe 1991). Rowe (1991) explains that these innovations were intended as solutions to what were seen as problems. For instance, parkways, spiral off-ramps, and cloverleaf intersections were built in order to ease congestion and provide pleasant scenery to drivers, with efforts made to create aesthetically pleasing roadways. The automobile allowed for a physical separation that had not previously been achievable. The Industrial Revolution had created genuine health issues in urban centres, and moving residences to the periphery was viewed as a prerogative for public welfare (Blumenfeld 1961; Moule 2013).

Connected to this physical change was a societal change, with a stronger focus on individuality, and less focus on community (Bothwell 2013). Calthorpe (1989) writes that planning strategies of the time were based on 1940s assumptions, that each home housed a large family with one breadwinner, that all jobs were in the downtown core, and that congestion could be eradicated with more lanes on the highways.

In Canada, this shift was supported by federal government policies. The National Housing Act of 1938 insured lenders who offered mortgages, but only to those which it deemed low risk. Not wanting to lose government insurance, lenders restricted loans to relatively affluent Canadians, thereby discriminating against those of low income (Belisle 2006). This also encouraged developers to seek low-risk opportunities, which meant adopting an assembly-line approach to construction. Mass construction practices led to monotonous residential neighbourhoods on large tracts of land (Belisle 2006).

These factors have led to a pattern of decentralization, low density, and inefficient use of land, where the automobile is the only viable transportation option for much of the population (Belzer and Autler 2002; Farr 2013). This has manifested in the practice of planning. Design of buildings and streets are often considered to be separate tasks, leading to a lack of coherence and relative formlessness (Dover 2013; Solomon 2013).

Calthorpe (1993) laments that American cities have now been built solely for the car, and that neither pedestrian nor transit are able to satisfactorily traverse the built environment. “The car is now the defining technology of our built environment. It sets the form of our cities and towns, dictating the scale of streets, the relationship between buildings, the need for vast parking areas, and the speed at which we experience our environment” (p. 27). Building cities to accommodate cars has also led to a separation of uses, where jobs, schools, shops and other services are largely accessible only by personal automobile. Solomon (1989) argues that even the car had ceased to be a convenient mode of transport, as congestion “dooms us to hours each day of the vacuous torture of getting from one coloured blob to the next” (p. 29). Building cities to be convenient for cars has created cities that are inconvenient for people.

The Costs of Sprawl and Car Dependency

Decades of sprawl and car dependency have created a multitude of issues, not least of which is the difficulty in implementing public transit. Residential and employment areas in many cities are too spread out to support public transit, and the lack of mobility options is felt more acutely by those in lower income brackets, according to Hertel, Keil, and Collens (2015). In a study of the Greater Toronto and Hamilton Area, they found that lower income neighbourhoods tend to be concentrated in areas that have the least access to public transit. They state that “a person’s location relative to the transit system is generally determined by financial resources,

ethnicity, ability to work, proximity to available work, and their political influence” (p. 11). In Toronto, this inequity is strongest in inner suburbs, outside the downtown core.

Affordable housing is often in short supply in proximity to transit (Calthorpe 1993; 2003; Arrington and Sloop 2009). The lack of transit in affordable neighbourhoods leaves many people in lower income brackets with little choice but to own a car. Poticha (2013) argues that the lack of affordable housing in areas served by public transit puts stress on the workforce that provides necessary services, as teachers, public safety workers, and hospital employees, among others, struggle to afford the compounded cost of housing and transportation. In 2016, the average Canadian household spent \$10,660 – about 15 percent of household income – on private transportation (Statistics Canada 2018; 2017). If it were an option for more people to take public transit, they could allocate more of their income to other necessities, or accumulate more disposable income (Belzer and Autler 2002; Bernstein 2003; Lieberman 2013).

Automobile dependency also contributes to public health issues. Without exercise worked into daily routines, healthy habits are less and less a part of daily life for many; obesity rates in North America have risen drastically since the 1980s (Farr 2013). Although this cannot be attributed entirely to sprawl and suburbanization, facilitating walking and bicycling as part of daily transportation habits would aid in resolving this problem (Belzer and Autler 2002).

The impact on mental health and wellbeing is tangible as well. As roads become more congested, people are sacrificing more of their time to traffic. This does not just affect commuters – parents are also spending more time in traffic, as there are fewer available and practical mobility choices for children (Belzer and Autler 2002). 25 years ago, Calthorpe (1993) described the state of American road systems as “stressed beyond retention” (p. 15). Today, across North America, this assessment still applies.

It is not only the commuter who feels the impact of poor design. Pedestrians – and disproportionately the economically and physically disadvantaged, children, and the elderly – find themselves in hostile landscapes (Moule 2013; Hertel, Keil and Collens 2015). Swaths of asphalt parking lots, huge building setbacks, and massive thoroughfares create a scale and a level of separation that erode walkability and make day-to-day tasks daunting (Tachieva 2013).

Finally, and perhaps most importantly, sprawl and auto-dependency have a huge impact on the environment, and are contributing to climate change (Calthorpe 1993; Moule 2013). Cars emit

huge amounts of greenhouse gases, and are one of the leading contributors to climate change (Duany 2013; Barnett 2013; Moule 2013; Kelbaugh 2013).

Suburbanization also means more consumption of land. Open space, farmland, sensitive habitats, and watersheds are being consumed by development (Calthorpe 1993; Bernstein 2003; Arendt 2013; Yaro 2013). Sprawling suburbanization also leads to a lack of resilience in areas that are developed, as “the increase of impervious surfaces and destruction of wetlands reduces the rate of aquifer replenishment and contributes to degradation of water quality (Belzer and Autler 2002, p. 52). Not to mention, asphalt cities are more susceptible to disaster in the wake of major climate events, as evidenced by Houston’s flooding in 2017 (Juan 2016; Kimmelman 2017).

The idea that cities might be more environmentally sustainable than rural and suburban lifestyles seems counterintuitive to some. Indeed, it presents somewhat of a paradox: “That urbanism, while sometimes intensifying local environmental impacts, ultimately has a smaller ecological footprint per capita” (Calthorpe 2013, p. 255). Though urban life may mean living farther from nature, and perhaps sacrificing some amount of personal health (by way of being in an area with a higher concentration of pollution), it is ultimately better for the global environment.



Figure 5: Riverside South, an Ottawa suburb. *Courtesy of Riverside South 2016.*

The Pedestrian Pocket, Transit-Oriented Development, and New Urbanism

In the wake of decades of sprawl and car dependency, Kelbaugh (1989) and Calthorpe (1993) conceptualized urban growth models that would theoretically counteract these trends, and redirect growth in ways that would build neighbourhoods, rather than subdivisions. These models are, respectively, the Pedestrian Pocket and Transit-Oriented Development. The models are quite similar (and not necessarily mutually exclusive, so that a neighbourhood can be both a Pedestrian Pocket and a TOD). Kelbaugh and Calthorpe's (1989) Pedestrian Pocket is "a simple cluster of housing, retail space and offices within a quarter-mile walking radius of a transit system" (p. 3). It is intended to be an area with small increments of growth, and relatively low density. Each Pocket is connected via the transit system, whose presence and convenience mitigates sprawl and preserves open space.

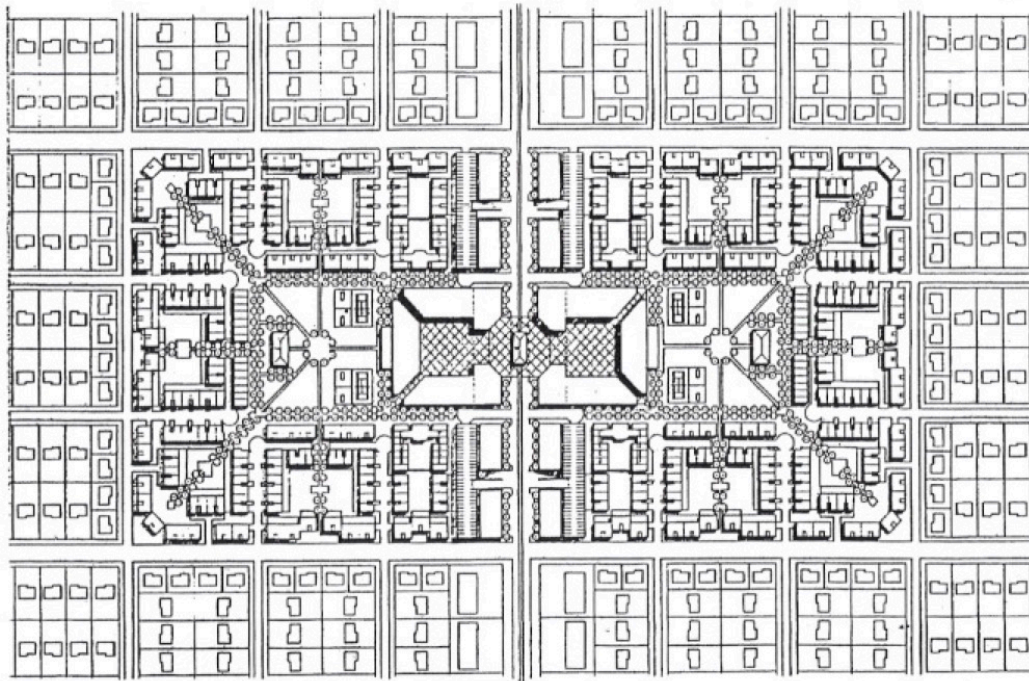


Figure 6: A diagram of Kelbaugh and Calthorpe's Pedestrian Pocket.
Courtesy of Kelbaugh, Calthorpe, Harrison, Mack, Prowler, Sellers, Small, and Solomon 1989.

Calthorpe (1993) builds upon the concept of the Pedestrian Pocket with TOD. The main difference seems to be TOD's accommodation of high densities – Calthorpe provides guidelines for TODs of various sizes and densities, and some with a wider variety of uses than others. However, a consistent feature of TODs is a mixed-use core commercial area located adjacent to the transit stop, creating "more finely integrated, walkable communities with a strong local

identity” (p. 21). Put simply, TOD is defined as moderate to high-density development that mixes residential, employment, shopping, and recreational opportunities, located within easy walking distance of a major transit stop, making it easy to travel by foot, bicycle, transit, or car (Lund 2006; Calthorpe 1993).



Figure 7: A massive proposed TOD at Bloor and Dundas in Toronto. *Courtesy of Kerr 2018.*

New Urbanism is somewhat less prescriptive, but is essentially an extension of TOD design ideals, incorporating environmental sustainability, equity, heritage, architecture, and politics (Barnett 2013a). New Urbanists recognize the dual nature of streets: that they are simultaneously routes of travel, as well as static settings in themselves (Kulash 2013). Streets should provide a rich mix of choices, making them more convenient for those who do not have cars, including the young and the elderly (Dittmar and Poticha 2003). Pedestrian-friendly streets are characterized by public rights-of-way lined with continuous shopfronts, which front directly onto the sidewalk rather than being set back, thereby showcasing or framing the street, instead of withdrawing from it (Gindroz 2013; Dover 2013).

Development is compact, to facilitate mobility without personal vehicles, but is not restrictive – single-family homes, townhouses, mid-rises and apartment buildings can coexist with single-detached homes and townhouses, though the latter two would be less dominant features compared to most residential landscapes (Barnett 2013a; Belzer and Autler 2002). Civic, commercial, institutional, and open space should be integrated throughout the community, not only to facilitate ease of access but to compensate for the smaller amount of private space (Moule 2013; Belzer and Autler 2002).

New Urbanists also call for a return to the traditional gridiron layout of town and city streets, and away from the curvilinear crescents and cul-de-sacs of suburbia – known colloquially as “dead worm” suburbs (Kelbaugh 2013; Wong 2017). Zoning should permit height and density so that communities have sufficient population density to support transit ridership (Barnett 2013a; Greenberg 2013).

Architecture and landscape design should be reflective of and respectful to local history, climate, ecology, and building practice (Barnett 2013a). This continuity of design, incorporating various design and scales while maintaining consistency, helps to create a sense of place, and emphasizes community over isolation by making each aspect of a neighbourhood part of a whole (Polyzoides 2013; Dover 2013). Sidewalks become the community’s public space, as the perception of the public sphere is one of safety and comfort, rather than lurking danger – an effect originally observed by Jane Jacobs (Kulash 2013; Jacobs 1961).



Figure 8: A mock-up for a proposed New Urbanist town in York Region. *Courtesy of Vanderveen 2015.*

The result of these physical changes will be changes in the way people move. By situating residences, workplaces, shops, and other activities in compact areas around transit stations, TOD enables people to get from place to place via public transit, whereas in other urban layouts they would require a personal vehicle (Cervero 2007). Not only does TOD facilitate transit use over personal vehicles; it also enables people to get around by walking, biking, and using other modes of active transportation (Lund 2006; Arrington 2013; Aurbach 2013; Dover 2013). Bicycle and walking paths are given equal priority to cars, with bicycle paths and multi-use trails connected to the central hub, and street crossings visibly marked (Daisa 2003). With other modes of transportation facilitated, the need for cars is reduced.

Optimal distance for workplaces to be located from transit stations is generally considered to be a circumference 300 to 500 metres at most, while residences can be located somewhat farther away (Daisa 2003; Calthorpe 1993). This is not a scientific approach, but is based on a general rule of thumb that people would be willing to walk for five or six minutes (Murrain 2013; Plater-Zyberk 2013). These neighbourhoods would be arranged in a cluster or a string, each centred around a transit stop and connected by the network (Plater-Zyberk 2013).

Parking requirements are reduced to avoid a sea of concrete, although on-street parking can have a positive effect, as it calms traffic and forms a buffer between cars and pedestrians (Farr 2013; Daisa 2003; Dover 2013). The majority of parking spaces are underground or behind buildings, allowing shop front facades to define the streetscape (Daisa 2003).

Despite the optimism of New Urbanists, one cannot simply impose a utopic vision on the world without taking into account the specific context of each place. These principles must be grounded and work within the realities and constraints of the world in which they operate (Dittmar and Ohland 2003). Attention needs to be given not just to the physical form, but to how people operate within it, once it is constructed.

Does the Built Form Shape Travel Habits?

There is a significant amount of research on the causal relationship between the built form and travel habits (Boarnet and Crane 2001; Daisa 2003; Handy, Cao and Mokhtarian 2005; Arrington and Cervero 2008). In a study of several TODs across the United States, Arrington and Cervero (2008) and Arrington and Sloop (2009) found that previous estimates of vehicle trips that embark from TODs had been overestimated (Institute of Transportation Engineers 2018). They

found that TOD-based households were twice as likely not to own a car, compared to those not living in TODs. Cervero (2007) found that TODs were more likely to affect transit use if they were part of a larger network of interconnected TODs, like “pearls on a necklace”, but that the likelihood that someone would regularly use transit dropped off precipitously for households outside a half-mile radius from stations (p. 2070). Daisa (2003) analyzed the correlation between transit use and population density, though his conclusion was quite broad – that densities of between six and 20 units per acre (approximately 4047 square metres) had a positive correlation with transit use.

However, not all researchers are in accord regarding the link between density and transit use. Crane and Crepeau (1998) argue that these correlations are far from proven: “Many times, these transportation benefits have been advertised as facts rather than hypotheses” (p. 18). Meanwhile, Jabareen (2006) notes that “we still have a lot to learn about how the designs of neighborhoods, communities, and regions shape travel behavior” (p. 40). Many researchers have noted that, due to the multitude of factors that influence travel behaviour, there is not sufficient evidence to indicate a direct causal relationship (Dittmar and Poticha 2003; Daisa 2003; Feldman, Lewis and Schiff 2012). Frank (2000) writes that, due to the complexity of measurement, and the numerous other factors that influence travel choices, it is difficult to ascertain the impact of land use.

Kaufmann (2000) observes that availability of public transit alone is not enough to alter people’s travel habits if said transit has not been implemented with consideration to pre-existing travel patterns, while Filion and McSpurren (2007) state that “for high residential density to translate, as intended, into additional public transit use, it must be juxtaposed with quality transit services – that is, services that are competitive with the car in terms of speed and comfort” (p.501). Several researchers have found that many residents of TODs moved to these areas because of predispositions about lifestyle and transit use, indicating a different causal relationship – one of self-selection (Lund 2006; Feldman, Lewis and Schiff 2012).

The findings of the literature have been inconsistent regarding the reasons people choose to live in TODs. Some have found that access to transit is a driving force (Lund 2006), while others have found a complete ignorance among many TOD residents of transit stations’ existence (Arrington and Sloop 2009). Other noted reasons for moving to these areas include consideration of environmental preservation (Kitamura, Mokhtarian and Laidet 1997), and living in a walkable neighbourhood (Cao, Handy and Mokhtarian 2006). In a series of surveys of TOD residents in the

San Francisco Bay area, Lund (2006) found that, while proximity to transit was frequently mentioned as a reason for moving to these areas, it rated lower than quality of housing, cost of housing, and quality of neighbourhood.

The majority of the scholarship regards unidirectional causation. Conversely, the purpose of my research is not to determine how the built form shapes travel habits, but how the availability of travel options, specifically rail, can shape the built form. On this matter, the scholarship is significantly sparser. This gap in the scholarship is a major reason why comparative case studies are analyzed in this paper; the literature on its own is not adequate to determine how a commuter railway station might impact the built form in Perth.

Challenges of Implementation

There are a number of challenges in the way of implementing true transit-oriented development. First is the cost. In interviews with developers in Montreal, Feldman, Lewis and Schiff (2012) found that construction costs for denser housing types, as well as the high quality of design and architecture New Urbanism demands, presents a financial barrier. Others have noted that, while tried and true models of suburban development continue to pay dividends, there is little incentive for developers to take risks (Bertolini 1996; Belzer and Autler 2002; Symon 2018).

Feldman, Lewis and Schiff (2012) also found land scarcity in proximity to transit stations to be a consistent problem in Montreal. As will be discussed later in this paper, though, land scarcity does not appear to be an obstacle for small towns, neither in Ontario nor in Sweden. Rather, available land near stations, or potential station locations, is something these towns have in abundance (Region of Skåne 2010).

There are also issues with policy and zoning. Though provincial and municipal documents encouraging TOD are becoming more common, such as the City of Ottawa's *Transit-Oriented Development Guidelines* (2007) and the Government of Ontario's *Transit-Supportive Guidelines* (2012), these are – as the titles imply – just guidelines, and developers and municipalities are not beholden to them. Hertel, Keil, and Collens (2016) point out that “once transit plans have been made ... authorities need to provide the policy tools, by-laws and regulations to support [them]” (p. 23). Until guidelines become policy, their implementation may be limited.

Presenting a larger barrier than ineffective policy is counter-effective zoning. Existing zoning codes in many municipalities retain separated zones, making difficult or outright

prohibiting the type of development that is being strived for, often including minimum parking space requirements that guarantee large asphalt lots included as part of each development (Belzer and Autler 2002; Daisa 2003; Dittmar and Ohland 2003).

Also, in many cases, planners, municipal officials, and developers have a lack of knowledge about TOD and how it functions. A result of this is that, while TOD may be implemented physically, it will not necessarily function as intended – as a complete and active community. This partial implementation of TOD stems from an emphasis on the physical characteristics, and an unclear idea of what the performance standards should be (Belzer and Autler 2002).

Another challenge is the issue that TOD is incompatible with many of the existing land uses. In many North American neighbourhoods, existing transit stations are often located in the areas with the least density, since large arterials were deemed the most suitable streets for transit (Lieberman 2013). This means areas around transit stations are often isolated, single-use areas, where residential development is walled off from the street and multi lane roads separate zones (Lieberman 2013; Lennertz and Ferrell 2013). In many cases, the speed and frequency of existing public transit is not sufficient to stimulate densification (Dittmar and Poticha 2003). Considering the fact that the existing density is not sufficient in many areas to justify increased transit, this can lead to a cycle where neither the existing transit nor the existing densities can stimulate the other to increase. However, as will be discussed in Chapter 4, Perth's existing built form has sufficient density that may be able to support transit.

These challenges have led to some failures in the implementation of TOD. TODs constructed in the middle of sprawling suburban landscapes become disconnected pods, rather than part of a coherent neighbourhood (Aurbach 2013). Some, while displaying the desired physical characteristics, lack a true mix of uses and proper integration with the transit station. Several researchers refer to these neighbourhoods as “transit-adjacent development” (Belzer and Autler 2002, p. 54; Cervero 2007, p. 2068; Feldman, Lewis and Schiff 2012, p. 27).

Changing Lifestyles and an Increasing Demand

Even with frameworks, guidelines and policies in place, several researchers have made mention of another hurdle to implementing TOD – public support. Nelson (2013) writes that, to achieve the kind of transformation discussed above, the attitudes of suburbanites must be changed.

Solomon (1989) opines that “there is no conceivable circumstance in which people will choose to relinquish their sunlight, their privacy, their cars, their fancy bathrooms, their access to the out-of-doors. The institutions of community ... are doomed if they threaten the private man” (p. 32).

Indeed, the suburbanization of North America cannot be blamed entirely on external forces; it is the result of a massive number of individual decisions based on lifestyle preference. Belisle (2006) explains that, as consumer options came within reach for more of the population, people gladly took advantage: “As houses and lots grew, men spent more time on hobbies than they did going to saloons and clubs ... Comfortable domestic furnishings, movies, comic strips, automobiles, entertaining radio programs, spectator sports, and department stores captured more of Canadians’ time and money than did edifying pursuits like small craft production, book reading, and museum going” (Belisle 2006, p. 185, 188). However, Solomon (1989) speculated that, as congestion and gridlock continued to rise and the benefits of suburban life faded, the masses would lose their taste for suburban life, and would start to demand a different way of life.

This is now taking place, to some extent. Nelson (2013), citing evidence from surveys, concludes that a higher percentage of Americans would prefer to sacrifice personal space and property size to live in a place that is more accessible to destinations, and requires a shorter commute. Belzer and Autler (2002) note that transit ridership started to increase in the late 1990s. Several writers and commentators have noticed a general swell of interest in rail transit that was not present a few decades ago (Dittmar and Ohland 2003; Fauteux and Schabas 2018). This is further evidenced by such things as the popular Facebook Group “New Urbanist Memes for Transit-Oriented Teens”, a common-interest group for fans of transit and density, where members share news articles and internet memes, and participate in discussion about the perceived successes and failures of urban areas around the world. This group had 143,617 members worldwide as of April 18th, 2019.

This shift may be attributable to demographic changes. Baby boomers entering the “empty nest” stage and downsizing, immigrants arriving from around the world, and young professionals seeking opportunities are migrating inward, returning to the convenience and pedestrian scale of the inner city (Dittmar and Ohland 2003; Fishman 2005). The trend may also be partially due to the desires of the so-called “creative class”, a term infamously coined by Richard Florida in 2002. Yaro (2013) explains that these people are increasingly “footloose”, and are willing to relocate in pursuit of work and quality of life (p. 27). Numerous researchers have supported the claim that

young professionals are increasingly seeking work in urban centres, and value lifestyle over space and privacy (Dittmar and Ohland 2003; Feldman, Lewis and Schiff 2012), while young people in the U.S are getting their driver's licenses later, if at all (Poticha 2013; Yaro 2013).

In a recent study on the correlation between happiness and place of residence, Okulicz-Kozaryn and Valente (2018) found that there is indeed a generational shift. While older generations reported higher rates of contentedness in small towns and rural areas, Millennials are the only generation to report higher levels of happiness in cities. However, the authors point out that, strikingly, a longitudinal study of this sort has never been undertaken, so it is difficult to deduce whether this preference is based on a societal shift, or simply the life stage of those interviewed (Okulicz-Kozaryn and Valente 2018). It may be the case that Millennials are attracted to urban environments simply because they are young, and that they will increasingly suburbanize as they have families (Lund 2006; Feldman, Lewis and Schiff 2012; Okulicz-Kozaryn and Valente 2018).

Nelson (2013) notes that, while “more Americans now want something other than what conventional suburbia offers ... for the most part they do not crave large, dense cities (p. 399), indicating that, while there is a latent demand for walkability and mixed-use communities, it does not necessarily have to take the form of megacities. The apparent conflict between the desire for walkability and the common disdain for high-rises seems to point toward a market for the kind of small town TOD this research paper is focused on.

Node Versus Place, and a Typology of TODs

A major challenge of TODs is that they are at once a node in a greater network of neighbourhoods, and a grounded, located place (Bertolini 1996; Dittmar and Poticha 2003). Bertolini (1996) argues that the area around a station is more than just a place where trains arrive and depart, and that it is “both permanently and temporarily inhabited area of the city, a dense and diverse conglomeration of uses and forms accumulated through time, [where] the mixture of housing, small business premises and informal public spaces of the station's neighborhood are an expression of this local dimension” (p. 322). The distinction between node and place is most apparent when one examines manufactured, developer-driven TODs, such as Tseung Kwan O in Hong Kong, and Sheppard West Station in Toronto. These places have a degree of sterility and conformity that makes them virtually indistinguishable from other, similar developments. As discussed earlier, a TOD should have a level of diversity and vibrancy to support a diverse array

of residents and visitors. Combining the physical characteristics of the node with the less tangible characteristics of a place is not a simple task.

How can a sense of place be created with new developments? Several researchers and architects have recommended taking inspiration from the existing heritage features of the neighbourhood (Belzer and Autler 2002; Kelbaugh 2013; Qviström and Bengtsson 2015; Greenberg 2013). Qviström and Bengtsson (2015) argue that TODs should work as an extension to the history and character of the area being developed “rather than abstract and utopian models” (p. 2517). Kelbaugh (2013) decries the modernist architecture that dominated the latter half of the 20th century, and says that “architecture and landscape design should grow from local climate, topography, history, and building practice” (p. 221). He notes that the most popular and livable areas in the U.S. are the historic neighbourhoods. Greenberg (2013) explains that modern planning and architecture should take precedent from history and heritage, but that an evolution is “inevitable and desirable”, and that simply mimicking historic architecture should not be the goal (p. 247).

Dittmar and Poticha (2003) emphasize the fact that there is no “one-size-fits-all” solution, and that the solution must be based on the type of place in which the TOD, or potential TOD, is located (p. 50). To facilitate this, they provide a typology of TODs, which is pertinent because it provides a reference point of classifications that help to conceptualize Perth’s role (though, as I will discuss below, Perth does not fit any of the below types).

Urban Downtown

The cultural and historic centre of a city. Though it remains an employment centre, its role as such is not as substantial as in the past, as jobs have decentralized (though in many North American cities there is evidence that jobs and corporations are increasingly choosing to locate in city centres) (Showley 2015; Jaffe 2016; Wogan 2016; Sisson 2017). Government offices and financial districts are usually located here. The urban downtown is typically served by several types of transit, and may serve as a transit hub for the region (Union Station being a prime example).

Urban Neighbourhood

Most cities have a set of historic neighbourhoods surrounding the downtown core. These may have been built as an extension of the downtown core, once accessible by streetcar (and, in rare cases, still accessible this way). Being part of the historic region, these neighbourhoods typically have built-in TOD traits – relatively dense housing, with shopping, services and restaurants usually located in a strip along a main street. They tend to be walkable and accessible by regular transit.

Suburban Town Centre

As suburbs grow in population and physical size, they develop the need for their own centres. Like urban neighbourhoods, they provide a variety of services, though the historic designs of these areas typically have a higher proportion of parking spaces, and are not as walkable. They should be connected to the urban centre by rail transit, but also function as a transit hub for the suburban town.

Suburban Neighbourhood

A residential suburban neighbourhood, with transit access usually in the form of light rail or bus transit, which would provide access to the urban centre or suburban town centre. There is some opportunity for densification, with multi-residential housing in close proximity to the stop, and single-detached housing farther away. Transit service is typically frequent only in peak hours.

Neighbourhood Transit Zone

This is a transit stop with limited retail or office space nearby, in a largely residential area. From a TOD standpoint, it is more of a blank slate than the other types.

Commuter Town

A freestanding community outside the continuously urbanized region. Like urban neighbourhoods, it typically has a main street that provides retail, professional services, and some multi-residential housing, though the majority of the town consists of single-detached homes. Transit, in the form of rail or bus, is usually only at peak hours. This is the most applicable type to

the TODs this paper is assessing. However, as will be discussed, it may not be an apt description of all small-town TODs.

As with much of the research about urbanism and TODs, Dittmar and Poticha (2003) conceptualize the small town by its relationship to the city. This focus on cities is reflected in most of the scholarship discussed above. Small towns and rural areas are not frequently taken into account in urban research, and so the applicability of the theories to non-urban regions has not been thoroughly tested.

Transit and Density in Small Towns and Rural Areas

Small, North American towns and rural areas face a number of socio-economic issues. Some of these they share with urban and suburban areas, while others are unique to the setting. These issues are not mutually exclusive and, compounded, feed one another and make each problem worse. First, there are a lack of economic and career opportunities. Small towns do not have the critical mass of population to attract a diversity of industries that cities do. As manufacturing and other industries are increasingly outsourced, and resource industries such as logging, fishing, mining and farming are increasingly automated, employment opportunities become scarce when lost jobs are not replaced (Grant 2008; Litman 2018). The diminishing supply of available jobs leads to an exodus of skilled labour, as rural residents – particularly young professionals – look to the cities for work (Grant 2008; Godavarthy and Mattson 2014; Litman 2018). High school graduates leave the towns for college and university in cities, and often stay there. With fewer active members in the local economy, poverty rates increase among those who remain (Godavarthy and Mattson 2014; Litman 2018). Rural residents become isolated from the rest of society, or depend completely on automobiles (Grant 2008; Litman 2018). Most heavily affected are the elderly, who generally prefer to age in place, but are less mobile and are cut off from necessary services (Farber and Shinkle 2011; Morken and Warner 2011; Litman 2018).

How can these problems be solved (or, at least, stymied to some extent)? Several researchers have argued that transit should be a part of the solution (Godavarthy and Mattson 2014; Litman 2018). Brown and Schafft (2011) found that reported driving rates were much higher among rural people: rural residents drive about 33 percent more than their urban peers, rural workers drive 38 percent more, and lower-income workers drive 59 percent more. This comes at a huge cost. Godavarthy and Mattson (2014) argue that the existence of public transit would not

just save residents money, but would create jobs both directly and indirectly, stimulating the economy. In a study of various rural municipalities across the United States, they found that, when factoring in individual savings on transportation, accident cost savings, environmental emissions cost savings, and the boon to the local economy, rural public transit can provide a net return on investment. Litman (2018) espouses the virtues of multimodal planning, noting that a combination of taxis and ride hailing services, community buses, carpooling services, bicycling and walking trails can have more impact on a dispersed rural area than fixed-route transit.

It must be noted, though, that Litman's assertion hinges on the dispersed nature of rural areas, which itself may be considered an issue. Rural development often takes the form of estate lots and exurban sprawl, which not only compound many of the socio-economic issues discussed, but ruin huge amount of agricultural land and natural features for a relatively small amount of residential development (Grant 2008; Arendt 2013).

It was not always this way. Litman himself points out that that "many smaller towns and rural villages are quite walkable and have good local services" (p. 33). He is effectively saying that many small towns have built forms and streetscapes that are conducive to TOD. It could be argued (and I will argue now) that small towns and urban neighbourhoods have more in common with one another than either of them does with typical North American suburbs. Both tend to have gridiron streets, with a mix of residence types that are walkable from the core. Both have commercial cores with shops and services within walking distance of residential areas. Both can trace their roots to a time before automobiles had proliferated society. The major difference is scale. So it does not seem bold to think that the same principles that are applied to urban areas could be applied to small towns, though the case studies will shed light on some key differences.

A push for density and transit accessibility in small towns has begun to appear in some policy documents. For example, in 2012, the Government of Ontario published a *Transit-Supportive Guidelines* document. Of particular interest is a section about rural settlement areas, which recommends rural towns be built in clusters around transit hubs. It notes that "one of the most significant transportation issues in rural settlement areas is that these areas are often designed to be accessed primarily by private automobile. This severely limits young people and seniors' ability to access local services and/or participate in local activities" (p. 22). There is impetus, then, for rural TODs in Ontario. However, there is still a large bridge to gap. Godavarthy and Mattson (2014) acknowledge in their study that transit can enhance land use features such as compact

development and walkable neighbourhoods, but find that these impacts are so insignificant in rural areas that they omit them completely from their analysis.

But change can occur quickly. Grant (2008) argues that small towns are easier to galvanize than settlements with larger populations:

In functional terms, the overlap one finds in the roles in a small town – where the mayor is also a downtown business person, or the town clerk heads the Rotary Club’s public improvement committee – allows an efficiency of effort not typically found in larger cities. With a couple of dozen people around the table, one has most of the town’s organizations, service clubs, and special interest groups represented. The intricate social and professional overlap frequently makes reaching a broad consensus possible, and in months rather than years (p. 327).

If people can be convinced to at least consider a slightly different way of organizing themselves, change might occur swiftly. Sprawl itself is a recent phenomenon, a result of automobiles and specialist-dominated planning practices (Belzer, Autler, Espinosa, Feigon and Ohland 2003; Bothwell 2013). The short history of sprawl – compared to the history of civilization – brings up a question of the intended “natural” setting of humans. Other biological beings – fish, bees, even bacteria – arrange themselves into efficient systems based on instinct. When urban ecosystems were more a result of societal negotiation and individual decisions, we lived in denser, walkable, mixed-use neighbourhoods. Perhaps this is how we were meant to live.

Chapter Three – Regional Transit

This section will compare the role taken by VIA rail in Ontario to the role taken by the Region of Skåne in providing a mode of commuter transit and in actively trying to influence land use planning. It must be stated that, in terms of scale and jurisdiction, they are not directly comparable – Skåne is equivalent to a province, while VIA is federally-owned. Metrolinx might be considered a better comparison to Skåne. However, Metrolinx is not active in Eastern Ontario, the region of study, and this fact in itself is worth taking note of when looking at the impact of regional rail, since it is an indication of rail's lower priority in Canada compared to Sweden.

VIA Rail and Regional Transit in Canada

VIA Rail was established as a Crown Corporation in 1977, when the federal government took responsibility for passenger rail service on lines owned by Canadian National Railway and Canadian Pacific Railway lines. By this time, the number of passengers using rail transit in Canada had already been in decline for three decades (Gayler 1983; Bird 2015). Since its inception, VIA has experienced mostly cuts in service and in routes (Allen 1990). Regional transit in many parts of Canada has been suffering overall recently, most prominently with Greyhound's cancellation of several bus routes to rural towns in western Canada (Bellrichard 2018; Dawson 2018; Doherty and Issawi 2018; Fisher 2018; Rieger 2018). The financial difficulties experienced by regional commuter systems in Canada are primarily a result of two factors: the prevalence of and dependence on personal automobiles, and the sparse, low-density population across the country, making it difficult to reach the critical load of ridership required to make these systems sustainable (Bird 2015).

I interviewed two representatives from VIA Rail over the phone on September 24th, 2018: Jacques Fauteux, Director of Governmental and Community Relations, and Jacob Schabas, Senior Advisor of Corporate Strategy and Planning. They requested that I highlight the fact that all information they provided was based on the circumstances of the moment and that, due to the evolving nature of the topics being discussed, the situation may have changed by the time this paper is finalized.

Fauteux (2018) emphasizes the fact that the Government of Canada is VIA's shareholder and, because of this, any increase in budget to improve operations has to be approved as part of

the federal budget. Indeed, the organization's *Corporate Plan* reads as an appeal to the federal government to approve the proposed projects (VIA Rail 2017a). This need for federal approval has been a barrier throughout VIA's life. Gayler (1983) described passenger rail as a political pawn, and noted that other modes of transport were often favoured by the Federal Government, leaving VIA without the financial resources it required. In a more modern critique, Bird (2015) argues that both Liberal and Conservative governments have shown indifference towards VIA, and have failed to provide any clear national transportation strategy, leaving VIA without a clear mandate. He also notes that private transportation corporations, including Air Canada and competing regional train and bus services, have lobbied the government to reduce funding for VIA.

Despite its struggles, VIA Rail has retained some level of service, where a private corporation experiencing similar problems may have folded. Bird (2015) speculates that this may be the result of a fear of public backlash – despite its limited usage, rail has a significant amount of support in the country, and the complete abolishment of the federal commuter rail provider could have been a politically unwise move.

Another major culprit behind VIA's struggles is the fact that it does not have a designated commuter rail network – it owns only three percent of the tracks on which it operates – and is forced to share tracks with freight trains (VIA Rail 2017a). Fauteux (2018) is careful not to portray freight in a negative light, explaining that transportation of grain and other goods is integral to the Canadian economy and that, as a crown corporation, VIA must be mindful of that. Passenger train service is completely at the mercy of CN rail, though, and movement of freight trains take priority any time there is a conflict (Langan 2017). The existing rail service is at capacity, and freight trains run between 50 and 55 kilometres per hour, causing frequent delays with passenger trains, which can reach 160 kilometres per hour unobstructed (Schabas 2018; Fauteux 2018; Curry 2016). CN has no legal obligation to treat VIA fairly, which further exacerbates VIA's issues (Bird 2015).

VIA's *Corporate Plan* (2017a) outlines other obstacles VIA hopes to overcome, including an aged, obsolete fleet of trains, and policies that handcuff VIA from operating more like a commercial business. Bird (2015) recommends improvements to the commuter experience, including a revamp of the ticketing system, improvement of the baggage service, better notification about trains' status, friendlier, more communicative staff, and the elimination of boarding queues. VIA's *Corporate Plan* opines that, if the status quo continues, "Canada will continue to forfeit significant socio-economic and environmental benefits for Canadians" and laments that it "has

essentially little or no control over the key factors of operating in an efficient businesslike manner” (VIA Rail 2017a, p. 5, 62).

Recent Improvements to VIA’s Service

Public transit is considered by many to be a public service and, in some cases, operates at a loss (Kalinowski 2015). It comes as somewhat of a surprise, then, that VIA operates as a profit-driven corporation. When Yves Desjardins-Siciliano became CEO in 2010, VIA was declining in revenue and passengers. The company brought in consultants from the private sector to “lift the nose of the airplane” by increasing revenue and efficiency, and decreasing the amount of subsidy required from the federal government (Fauteux 2018). Fauteux emphasizes that VIA is a capital-intensive company, with a mandate to generate revenue and inject it back into the company to improve service, and generate yet more revenue. He says that VIA is attempting to get permission from the federal government to seek funds from private investors, and the *Corporate Plan* suggests that public-private partnerships may be pursued (VIA Rail 2017a). Though the *Corporate Plan* makes reference to “contributing to the social and economic progress of the communities through which [its] rail service passes”, the emphasis is on financial stability and profitability. This discussion of the corporate mentality is not meant as a criticism, necessarily; it appears to have benefitted VIA in recent years. However, it is in sharp contrast to the mandate and language used by the Region of Skåne, which views transit as a public service, with much less focus on revenue (this will be discussed below).

Changes in recent years have put VIA on a positive fiscal trajectory for the first time in decades. In 2014, VIA shifted to what it advertises as a “customer driven strategy”, which includes such things as the optimization of train times, improved on-board service, and an improved web and mobile presence (VIA Rail 2017a). One very tangible change is the replacement of old stock with push-pull trains, saving an hour and a half of time it takes to turn a train around (Fauteux 2018). VIA has seen increased revenues and ridership for three consecutive years, due at least in part to these changes (VIA Rail 2017a; Diaby 2018; Fauteux 2018).

Part of the increase in ridership may be a result of changing societal trends. VIA’s *Corporate Plan* acknowledges this, while also noting that it must continue to improve service to take advantage of these trends: “Continued economic growth, increased road congestion, increased air congestion, increased environmental awareness, increasing energy prices, and an aging

population, together with a train-oriented younger generation (as shown by student segment ticket growth) create an environment where passenger rail should thrive” (VIA Rail 2017a, p. 62). And, of course, it includes a number of obligatory references to environmental sustainability and lowering greenhouse emissions.

Fauteux (2018) calls the current popularity of and demand for train travel a “renaissance”. Schabas (2018) sees train travel as part of a solution to road congestion, describing the opposite impacts transit and personal automobiles have on service levels: “It has become much more difficult and expensive to expand highways, and there’s also a greater recognition that – unlike trains – when more people use highways their service levels get worse, whereas the opposite is the case with transit and with rail. The more people that use it, the more the frequency increases and, therefore, the better the service is”. The increased demand for VIA’s services gives credence to the research of Dittmar and Ohland (2003), Feldman, Lewis and Schiff (2012), and Okulicz-Kozaryn and Valente (2018), all of whom observed an increase in the demand for and desirability of public transit. VIA hopes to be able to offer an alternative to vehicle travel but, as it stands, Canada is the only G7 country without dedicated passenger rail lines (VIA Rail 2017a).

VIA’s Dedicated Track Plan

VIA’s proposed solution to the issues that it experiences sharing tracks with CN Railway is the development of a dedicated commuter track along the Quebec-Windsor corridor, which is estimated to account for between 85 percent and 91 percent of VIA’s total ridership (VIA Rail 2016; Bird 2015; Fauteux 2018). The \$4 billion proposal seeks to “secure existing and new corridors and rights-of-way from incompatible development”, creating a new east-west track north of the existing one (VIA Rail 2017a, p. 19). Much of the track infrastructure required is already in place, in the form of discontinued rights of way and sparsely used freight tracks (Ferguson 2017). The dedicated track would allow trains to travel at speeds up to 177 kilometres per hour, and would cut travel times between major cities by 25 percent (VIA Rail 2017a).

While much of the public conversation regarding rail transit improvements revolves around high speed rail (particularly between Toronto and Windsor), that is not what VIA is proposing (Stacey 2018). As the name suggests, high frequency rail would not be high speed (defined as 300 kilometres per hour or higher), but it would provide a much improved service from what exists (Fauteux 2018). Fauteux says it would provide two-thirds of the passenger count of high speed at

one third the cost. This is mostly due to the fact that high speed rail would require grade separation, in the form of bridges or tunnels, while high frequency can make use of the existing tracks, only requiring upgrades to the existing infrastructure (Fauteux 2018). The comparatively minor infrastructure improvements required would also mean that the project could be completed in less time, providing a return on investment for potential shareholders within a shorter time frame (VIA Rail 2017a). And, Fauteux points out, a high frequency train can stop more often, enabling small towns such as Perth to have their own stops.

The potential for a station in Perth has been questioned. Fauteux and other representatives from VIA Rail have been consulting with Perth's mayor, John Fenik, as well as leaders from a number of other municipalities, in an effort to drum up support (Devoy 2016a; Fenik 2018; Fauteux 2018). However, a draft plan for the new route does not include Perth as a stop, instead showing a track that passes through Perth on its way from Sharbot Lake to Smiths Falls (Ferguson 2017). This has led some politicians and transit advocates to publicly express skepticism that VIA has any real intent to return a commuter stop to Perth (Devoy 2016b; Devoy 2018). Fauteux (2018) refutes this:

We've all said, since the beginning, that we would do consultation ... and that we haven't ruled out or ruled in Perth. What we've done is that we've noted the keen interest of the mayor, and we are interested in pursuing that discussion with the [Town] when we arrive at an approval ... We want to make sure that, when we get an approval from the federal government, we will consult, and then we will make sure that we meet the needs of the community.

Fauteux says that it will be a balanced decision, taking into account both economics and the needs of potential clients. Schabas (2018) adds that VIA's team conducts analysis on the economic impact of projects such as this, and that "that must be an input to the decision". Though the *Corporate Plan* states that the project would "do its part in growing the middle class by supporting inclusive growth strategies through improved regional accessibility", it sounds as though it will be, for the most part, a financial decision (VIA Rail 2017a, p. 45).



Figure 9: A draft of VIA’s Dedicated Track Plan, with no stop in shown Perth (between Sharbot Lake and Smiths Falls). *Courtesy of Ferguson 2017.*

VIA as a Commuter Railway

Though Fauteux (2018) says that commuter rail is “not part of [VIA’s] mission” at this time, they are working actively with other transit agencies to coordinate services and improve mobility. VIA’s Corporate Plan and Sustainable Mobility Report both put a lot of focus on “inter-modality partnerships”, with connections to commuter rail systems at major hubs such as Toronto’s Union Station and Montreal’s Central Station (VIA Rail 2016a; 2016b p. 12). Fauteux (2018) points out that VIA has a partnership with Metrolinx, where each company can sell tickets for the other’s service, streamlining fares and travel. He reasons that it is completely within the realm of possibility VIA to establish a similar partnership with OC Transpo; once Ottawa’s LRT is open, the new Tremblay Station will be right next to the VIA Rail station. Should a station open in Perth, commuters would be able to reach prime destinations across Ottawa completely by rail.

As I will discuss at length in Chapter Four, those that I interviewed in Perth (Kirkham 2018; Symon 2018; Greaves 2018; Fenik 2018) do see the hypothetical station as a potential commuter option. Forbes Symon (2018), Perth’s Director of Development Services, explains that the Town has a very strong working relationship with Ontario’s Ministry of Transportation (MTO), and that representatives from MTO have raised the potential Perth VIA station numerous times

when discussing improvements to the corridor and how those improvements may impact Perth. MTO seems to be suggesting that the provincial government may take a proactive role in helping this project come to fruition. I would argue that the province has a responsibility to aid in this project; while Metrolinx is a provincial transit agency, it is virtually absent from Eastern Ontario, with the exception being Presto's implementation as a payment system for Ottawa's OC Transpo.

I asked Fauteux if VIA would consider lowering prices to make commuting more affordable. He argued that, since ridership has increased for three consecutive years, the current price points appear to be appropriate (Fauteux 2018). However, the affordability of VIA Rail as a regular commuter option is questionable. VIA does offer monthly commuter passes. Since Ottawa to Smiths Falls is not an option on VIA's website, I looked at Kingston to Belleville for comparison. These two cities are in Eastern Ontario, and the distance between the two (75 kilometres) is roughly similar to the distance between Perth and Ottawa (90 kilometres). The price for a 30 day pass is \$325.00; this includes 20 one-way trips (Via Rail 2019b). Presumably, somebody travelling to work consistently would need two passes per month, bringing transportation costs to \$650.00 (without taking into account transportation required to get from the respective stations to home and work). Assuming a hypothetical pass between Perth and Ottawa would be priced similarly, and based on Perth's median monthly income of \$2542.00 in 2015, a commuter would be spending approximately 25 percent of his or her income on transportation (Statistics Canada 2016).

The Role of Government in Swedish Transportation and Planning

Paradoxically, while the state and region have less power over municipalities in Sweden than their counterparts do in Canada, there seems to be more cooperation between levels of government in Sweden, and the region has more impact over municipal planning. The Swedish government has a similar role to the province of Ontario, setting out legislation and regulation under the *Planning and Building Act* (Hedström and Lundström 2013; MLIT Japan 2014). This act sets out the powers of municipalities to oversee planning, which are so extensive that land use planning is unofficially referred to as a "municipal planning monopoly" (Hedström and Lundström 2013; MLIT Japan 2014; Region of Skåne 2010). The act "stresses that decisions about planning and building should consider public as well as private interests, based as it is on an intention to strike a reasonable balance between the public good and impacts on private interests" (Hedström

and Lundström 2013, p. 70). The nation only intervenes in municipal planning in specific, extenuating circumstances – specifically, if standards of environmental protection are being ignored, or if national interests are not considered (Hedström and Lundström 2013; MLIT Japan 2014). The nation declares certain sensitive uses and areas to be national interests, which means they must be protected and considered in Comprehensive Plans and day-to-day planning matters. National interests include such things as the natural environment, the cultural environment (such as historic and heritage buildings), coastal areas, agriculture, fisheries, and, most significantly for the purposes of this paper, rail and transportation infrastructure (Region of Skåne 2010; MLIT Japan 2014; Borgström 2018). The nation allocates funding to the regions and municipalities for these national interests, which are distributed based on requests from regions and municipalities, and level of importance as assessed by the national government (Borgström 2018).

The region, meanwhile, has a number of responsibilities, including healthcare, tourism, economic development, infrastructure and public transportation (Borgström 2018). I met with Jesper Borgström, a Spatial Planner in Skåne’s Community Planning Department, on April 25th, 2018, at the Region of Skåne’s main office in Malmö. He explained that the region’s role is largely as a facilitator and a provider of information: they work with the municipalities, coordinating functions and providing a regional perspective. Specific to this research, one of Skåne’s main roles is to encourage towns to build in a way that supports transportation infrastructure and justifies investment in rail stations (Borgström 2018).

Borgström (2018) explains that much of the region’s guiding role for municipalities comes in the form of building a common knowledge base. Regional planners identify relevant planning issues, do research in conjunction with municipalities, and share knowledge in the form of reports. Three recent reports produced by the Region of Skåne are sources for this research paper. The first is *Stationsnära läge* (2010), which translates roughly to “close to railway stations” (Borgström 2018). It reviews the built area around stations in each of Skåne’s railway towns, and identifies how much of each station area is built up, and what the opportunities are for TOD growth. The second is *Strategies for the Polycentric Skåne* (2013), which discusses strategies for taking advantage of the relatively dense and well-connected regional structure, in order to maximize opportunities for sustainable development (among other things). The third is *The Open Skåne 2030* (2014), which is more of a broad plan for the long term social, economic, and environmental

strategies for the region. This co-operative approach to regional planning in Sweden is known as “spatial planning” (Boverket 2018).

As the term “municipal planning monopoly” suggests, most of the implementation of TOD is the responsibility of municipalities which, in Sweden, have more political and administrative power than in many other countries (Hedström and Lundström 2013). Each municipality must have an up-to-date Comprehensive Plan (also known as an Overview Plan), an advisory but non-legally binding document that guides long-term development and outlines how national interests will be maintained (Hedström and Lundström 2013). This is equivalent to an Official Plan in Ontario. Municipalities must also draft detailed plans for all developments within or adjacent to urban areas (Hedström and Lundström 2013). These seem to be a kind of hybrid between zoning by-laws and rough site plans; municipalities in Sweden do not have comprehensive zoning by-laws, so permitted uses, restrictions, and benchmarks such as setbacks, density and height are prescribed at the detailed planning stage. Detailed plans, which typically cover a block or a couple of blocks, are often drafted before a particular development is planned for the area, so they generally are not overly detailed – specifics of buildings are determined at the building permit stage (Borgström 2018; Hedström and Lundström 2013).

The regional administrative board takes an active role in municipal planning, including the review of proposed Comprehensive Plans (Hedström and Lundström 2013). Borgström (2018) points out that, despite this active role, the region does not have a strong mandate, and municipalities are not bound to follow the region’s recommendations. The spatial planning department conveys the regional perspective to municipalities, and hopes they will follow suit. Perhaps this arrangement keeps the region honest. Because municipalities are not obligated to follow regional goals, the region must strategize in a way that truly benefits municipalities if it wants these strategies to be adopted. In this way, the region gains nothing by making unilateral decisions, as the government of Ontario does (Benzie 2019; Crawley 2019).

This amount of coordination between different levels of government requires a certain level of commitment from all branches of government. With transportation planning, the “chicken and egg” debate often comes up: should public transportation be provided only when there is a sufficient critical load of population to support it, or is it the responsibility of government to provide transit at a loss in the short term, in order to facilitate transit-oriented growth in the long term? In the *Stationsnära läge* report (2010), the region assumes responsibility for the provision

of transit, and states that public transport should be provided ahead of development, and not as a reaction. Borgström (2018) suggests that, since true TOD in Sweden requires coordinated effort from all levels of government, they can enter into agreements: the region and the nation invest in railway stations and infrastructures, and the municipalities agree to direct development in proximity to those stations. However, even without such agreements, the region and municipalities in particular seem to work in an effective partnership when it comes to planning.

Spatial Planning and Polycentrism in Skåne

The documents released by Skåne's spatial planning department highlight the region's polycentric structure (Region of Skåne 2013; 2014). With 1.3 million inhabitants in an area of 10,939 square kilometres, Skåne is one of the most densely populated regions in Sweden (Statistics Sweden 2017b; Region of Skåne 2013). However, "unlike classic conurbations, Skåne is not dominated by a larger city with suburbs, and instead has an urban structure with many independent localities ... As such, Skåne has a high density of urbanised areas, that is, a polycentric urban structure (Region of Skåne 2013, p. 11). The regional government considers this structure to be a strength, as it provides proximity to everything – from small villages to large cities, from urbanized areas to nature. "Polycentrism also entails an aggregate critical mass that provides trade and industry of city-like quality and a large offering of, for example, culture and commerce, while also providing the conditions for reducing urban problems such as congestion and poor air quality" (Region of Skåne 2013, p. 11). Though many of the settlement areas that make up this polycentric structure are small towns with close connections to the countryside, they are interlinked by infrastructure and public transportation, giving the region interconnectivity (Borgström 2018).

Despite the polycentric structure, the Region of Skåne has categorized its settlement areas into a hierarchy. Specifically, a handful of cities and towns are labelled "growth engines" or "regional hubs" (Region of Skåne 2013, p. 17). The three growth engines – Malmö, Lund and Helsingborg – have large populations, high employment and growth rates, are home to research and development entities, universities, and cultural institutions, and drive economic development for the region (Region of Skåne 2013; Borgström 2018). The five regional hubs – Landskrona, Hässleholm, Kristianstad, Ystad and Trelleborg – are localities "of central importance to [the] surrounding area with criteria including a relatively large population, broad trade and industry and

a positive number of net commuters” (Region of Skåne 2013, p. 17). The region prioritizes connectivity to these eight urban centres.

The region’s goal is to develop and strengthen “sub-regional connections” in order for Skåne to “function as a single entity with sustainable physical structures as regards economy, ecology and social sustainability” (Region of Skåne 2013, p. 20; p. 8). A large part of this is accomplished by planning and funding regional public transit. Though the Region has to demonstrate that public investments in transit are being used effectively and in a way that strengthens the economy, Borgström (2018) explains that, unlike VIA Rail, a direct return on investment is not the expected outcome. Transit is planned holistically, cohesively with urban and residential development, pedestrian and bicycle infrastructure, in an effort to mitigate environmental impacts and provide better connections between residents, jobs and services.

The encouragement of dense development is seen as a way to take advantage of Skåne’s polycentrism; if the “beads on a string” structure is retained, the region and nation have the resources to provide the infrastructure to transport people between settlement areas. If its towns and cities were to sprawl, resources would be stretched thin and it would become more difficult to provide adequate public transit (Region of Skåne 2013; Borgström 2018). Conversely, by investing in rail infrastructure, the region and nation are increasing the value of the land in proximity to stations. This attracts developers to build in the area, which leads to a critical mass of population that can sustain more services and better public transportation. Borgström (2018) calls this a “positive spiral”.

Beyond the direct impact on the lives of residents, there is of course the environmental objective of transit-oriented development: reducing greenhouse gas emissions and helping to slow climate change by creating a less car-dependent society (Region of Skåne 2010; 2013). Densification also allows for the protection of agricultural land; Skåne is one of the most agriculturally fertile regions of Europe, and accounts for approximately half of Sweden’s food production (Region of Skåne 2014; Borgström 2018). In this way, dense development serves as an economic boon by protecting one of the region’s main industries.

In order to achieve its objectives, the region encourages municipalities to develop the areas immediately around the rail station. To quantify, it suggests that the area within a 600-metre radius of each rail station can be built up with the same density, and with the same mix of uses, as centrally located districts in Malmö, while a two to three kilometre radius is prime for medium density,

since it is a reasonable distance from which to reach the station by bicycle (Region of Skåne 2010). The region also encourages municipalities to build extensive pedestrian and bicycle infrastructure, and to develop bus transit that is well-connected to the rail network (Region of Skåne 2010). Subsidiary transit has been implemented in some areas via cooperation between multiple municipalities on a bus transit network (Luthander 2018). *Stationsnära läge* identifies massive opportunities for transit-oriented development, as the report found that, on average, eighty percent of the area within a one kilometre radius of rail stations was undeveloped (Region of Skåne 2010; Borgström 2018). This means that, hypothetically, Skåne’s population can increase substantially without increasing residential sprawl nor the number of cars on the road.



Figure 10: The regional railway map for Skåne, which resembles an urban subway system map. *Courtesy of Skånetrafiken 2018b.*

The Impact of Skåne's Research and Policies

Despite cooperation between Skåne and its municipalities, and the quality of rail transit in the region, the majority of travel is still via personal automobiles; in 2013, 55 percent of passenger journeys were by car, 30 percent were by foot or cycle, and 15 percent were by public transit, which is lower than many other conurbations than Sweden (Region of Skåne 2013). Part of this is due to market demands; despite growing populations in Skåne's towns, much of the population is still seeking single-detached homes, and these are easier for developers to deliver (Borgström 2018). The municipal government of the time has an impact on this as well. Left-leaning governments tend to develop and enforce detailed plans that are in line with the region's transit-oriented goals, while right-leaning governments are more likely to sell off municipally-owned property and to permit car-oriented development. However, Borgström (2018) doubts that the political leanings of municipal governments have a strong impact.

With property values in Malmö rising, more people are looking for residence outside the city. However, Malmö still accounts for a disproportionately large percentage of employment in the region, meaning the rate of transportation between settlement areas is increasing (Borgström 2018). The recent spike in population is primarily a cause of the refugee crisis – as Sweden's southernmost major city, Malmö is the gateway to the country for many, and so receives the highest influx of immigrants and other newcomers (Skodo 2018; Borgström 2018). Partially as a result of immigration, Skåne has a younger than average population, and 20 percent of its residents were born in another country (Region of Skåne 2014). Though the region considers this demographic reality to be an asset in providing a young and diverse workforce, the fast influx of population has led to a shortage of housing – particularly affordable housing (Region of Skåne 2014; Borgström 2018). Borgström says that it is difficult to convince developers to provide affordable housing, since there is little financial incentive for them to do so, and limited tools for local and regional governments to enforce it. Much of the existing affordable housing is municipally-owned housing, though Borgström says that, when the municipality takes the first leap and shows that affordable housing is financially viable, this can encourage developers to follow suit.

Even with a high level of connectivity, Skåne still has imbalances. Population density and growth are concentrated in the western half of the region (Borgström 2018). The three growth engines are all on the west coast, and the rail network is much sparser in the eastern part of the region (though Borgström says they provide bus service between eastern towns, where there is not

a sufficient critical load of population to justify rail). The comparatively isolated eastern towns do suffer in comparison, with lower rates of education, lower average income, and higher unemployment (Borgström 2018). This could be seen as evidence that TOD is having the intended impact: in better connected areas, employment rates and quality of life are higher.

Or could it be the opposite? As I will discuss throughout this paper, many railway towns struggle to retain businesses such as retail. The evidence suggests the higher employment rate in western Skåne simply means that more people are able to commute to Malmö for work. And, this seems to be somewhat by design:

The growth engines play an important role in driving development and generating synergy effects for all of Skåne; they drive surrounding areas and municipalities in an upwards spiral. To strengthen Skåne's competitiveness both nationally and internationally, the growth engines need to be developed and supported at [the] regional level, the responsibility for which falls to all of Skåne. (Region of Skåne 2013, p. 19).

Though the intent is to strengthen the region as a whole, an unintended consequence seems to be the creation of relative “haves” and “have-nots”, where small towns struggle to establish themselves as complete communities because they are subsidiary to the “growth engine”.

VIA Versus Skåne

Perhaps the biggest difference between VIA's transportation planning and Skåne's transportation planning is the expected outcome. VIA Rail is hoping to attract shareholders by building a business that generates direct profits from ridership to provide investors with a return on investment. For VIA, factors outside the transportation infrastructure itself, such as population density, mobility trends between jobs and residences, and climate change, are important only insofar as they impact ridership. For Skåne, these things are objectives in and of themselves. If the provision of transit can get more people to jobs, goods and services, and stimulate denser development, the transit initiative will have been successful. For VIA, these things are a welcome bonus, but success is judged by the profit margin. In the following chapters, I will explore how these policies and mandates impact planning and development in small towns.

Chapter Four – Perth

History, Architecture and Urban Design

Perth, a Town of 5930 people, sits approximately 85 kilometres from Ottawa’s downtown, and about 60 kilometres from the city’s western edge (Statistics Canada 2016). The town was founded in 1816 as a military settlement. Following the War of 1812, it had become apparent to the British that the thin line of settlements along the St. Lawrence River between Montreal and Kingston was vulnerable to attack from Americans to the south. To bolster its defense, Britain established a series of inland settlements with connections to the Rideau and St. Lawrence waterways (Turner 1992). In an effort to stymie American expansion, Great Britain populated Perth and the then-unsettled interior of what is now Eastern Ontario with British loyalists. Assisted immigration brought settlers from Ireland and Scotland, with each family receiving 100 acres of land and six months of rations, while British soldiers were offered 100 acres and a year of rations if they chose to settle rather than returning home. Within the settlement area of Perth itself, newcomers were each deeded a one acre lot (Turner 1992).

Unlike most other settlements, the location chosen for Perth was not on a major waterway or existing thoroughfare; it was built on the Tay River, “the largest of the Rideau’s small, regional arteries” (Turner 1992, p. 13). Despite its location on a watershed that could not sustain widespread development, in 1823, Perth was made the centre of administration for the Bathurst District, at the time “a wilderness of struggling pioneers”, which in modern day is comprised of Lanark and Renfrew Counties and, perhaps most significantly, much of the western portion of the city of Ottawa (Turner 1992, p. 9). This designation as the district capital brought a courthouse, a jail, and various other administrative functions to the settlement, immediately improving its status, and the town became a gateway to the even more remote northern settlements (Turner 1992). Its growth was accelerated by the construction of the Rideau Canal from 1826 to 1832, which increased the connection between towns in the region, but it lost much of its regional status with the separation of Carleton County (now part of Ottawa) in 1850, and of Renfrew County in 1861, leaving its jurisdictional area as solely Lanark County (Turner 1992).

The context of Perth – the era in and place in which it was settled, as well as the people who settled there – influenced the architecture style that remains to this day. Perth is situated on a sandstone deposit, and many of its early settlers were Scottish stonemasons (Turner 1992, Brown

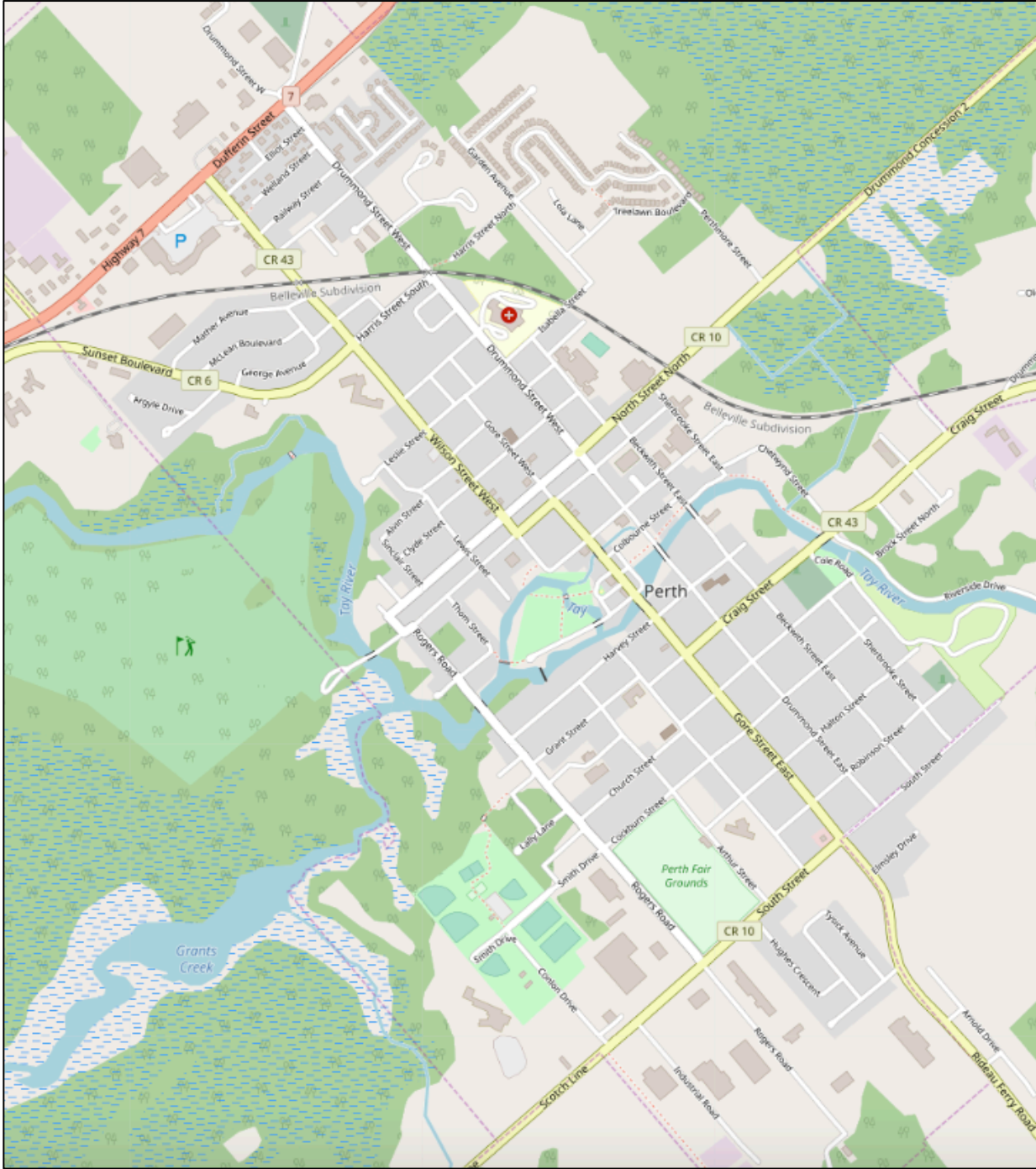


Figure 11: Map of Perth. *Courtesy of Open Street Map 2019.*

2003). Over the course of the 1800s (particularly the 1850s and 1860s), the stonemasons constructed what has been called “Ontario’s finest stone main street” along the central section of Gore Street and, in particular, the intersection of Gore and Foster Streets (Brown 2003, p. 125). The Town’s main commercial intersection at Gore and Foster is dominated by the Matheson complex, a set of buildings that were constructed in the 1840s (Turner 1992). The locally iconic Town Hall was built in 1863, but its cupola, which is displayed on Perth’s emblem, was added in 1874 (Turner 1992, Brown 2003). The stretch of Herriott Street between Gore and Wilson was built up largely by Thomas Alfred Code during an economic boom from the 1880s to the turn of the century: “Unlike Matheson’s tight, fortress-like development at Gore and Foster, built adjacent to the street with walled internal courtyards, the Code complex dramatically reflects the “City Beautiful” movement, with buildings set out almost as if on public display” (Turner 1992, p. 78). The Scottish masonry is punctured by a handful of other styles around the downtown core, including the American “federalist” McMartin House, the Beaux-Arts style McMillan building, and the comparatively modern, Art Moderne Perkins building (Turner 1992). Despite the amalgam of architectural styles, the use of local materials and consistent building heights of two to three storeys help give Perth’s streets a coherent feel (Town of Perth 2016e).



Figure 12: Perth’s Town Hall. *Courtesy of Raué 2018.*



Figure 13: The Code's Mill Building. *Photo taken by author.*



Figure 14: The McMartin House. *Courtesy of Wikimedia Commons 2005.*



Figure 15: The McMillan Building. *Courtesy of Wikimedia Commons 2009.*



Figure 16: The Perkins Building. *Photo taken by author.*

As important as the architecture to the character of Perth is its urban design. The streets of Perth are laid out as a strict military grid, with all but a handful of streets running roughly north-south or east-west (Brown 2003, Town of Perth 2016e). This pattern was imposed on a less symmetrical natural landscape, giving Perth its particular form:

The town straddled the Tay River, which imposed its own geometry on the rigid grid, introducing a ‘romantic’ or ‘picturesque’ flavour to the engineered system of four-acre blocks and streets. Perth was laid out at odd angles of the compass. The river meandering through the centre of town contributes to one’s perception of Perth and sense of place. A series of stone arched bridges connected parts of the town. (Turner 1992, p. 27).

The grid pattern cut the town into roughly symmetrical, approximately four acre blocks, interrupted at certain points by the Tay River and Stewart Park. Commercial and residential buildings were placed close to the street, creating axial vistas (Turner 1992, Town of Perth 2016e). This human-scale layout is a result of the urban design practices of the era, which were informed by the lack of automobiles. Perth’s architectural beauty, combined with its gridiron layout and street-fronting buildings, gives it a “character of place” (Turner 1992, p. 122). Though over a century has passed since most of the town was designed and constructed, the historic core of the town has been preserved, and it retains the ambiance of a 19th century town.

Transportation in Perth – From Early to Modern Times

Over its history, a number of projects have taken place to better connect Perth to the outside world by water, rail, or road. Arguably, few have been successful. Its relative seclusion stems from the initial choice of its location on a minor river, rather than a major waterway. Bordered to both the north and south by bog swamps, access by road was as treacherous by land as by water (Turner 1992). Its fortunes changed with the construction of the Rideau Canal between 1826 to 1832, and with the completion of the first Tay Canal in 1834, which ran through the town itself and connected it to the regional system (Turner 1992). However, the first Tay Canal had less impact than expected – the river proved too small to power real industry, and the completion of the St. Lawrence Canals in 1847 decreased the importance of the Rideau system (Turner 1992). By the time the railway reached Perth, in 1859, the first Tay Canal had ceased operations – in part because the builders had failed to anticipate how it would be impacted by the harsh Canadian winters (Turner 1992, Newton and Newton 2015). The railway itself had little impact either – it was a cul-de-sac line that

transported passengers only to Smiths Falls, from where they could go to farther destinations such as Brockville, Ottawa and Montreal. Due to its lack of convenience and long travel times to destinations, the railway did little to stimulate growth (Turner 1992).

In the 1880s, Perth's transportation fortunes changed for the better, both by water and rail. In 1884, Canadian Pacific Railway completed the Ontario and Quebec Railway, which was the major trunk line between Toronto and Montreal and included a stop in Perth:

The town granted a bonus and 25 acres of land to the CPR for erection of factory buildings, where passenger, freight, dining, kitchen, and sleeping cars, as well as flat and box cars, could be assembled. Until 1904, CPR was Perth's major employer. Although the Ontario line of the CPR was designed to link the major metropolitan centres, the railway created opportunities for local producers (Turner 1992, p. 64).

The economic boom inspired Perth's leaders to seek public funding for a new Tay Canal, and a second expensive canal project was completed in 1891 (Turner 1992). Though it did not have the desired industrial impact, it became one of the defining physical features of the town, attracting tourists and remaining a hallmark of the town to this day (Turner 1992).



Figure 17: The Tay Canal. *Photo taken by author.*

The 1900s saw Perth's main mode of transportation transition quickly to the automobile, as was occurring in the rest of North America. Highway 7, which runs from Toronto to Ottawa and is part of the Trans-Canada Highway, was built between 1931 and 1932. It spurred commercial development at the north end of the town, and became home to Perth's largest shopping plaza, the Perth Mews Mall, in 1990 (Turner 1992). But, as will be discussed below, Perth has managed to retain the commercial viability and heritage character of its historic downtown, despite the shift in commercial focus to Highway 7.

Today, rail and water are non-factors in Perth's transportation network. The last passenger train stopped Perth in 1966, and the rail station was demolished in 1979 (E. Kirkham 2018). Though the tracks are still in place, they carry freight only, and pass through the town without stopping. Other than the provision of more active transportation options, including walking and cycling trails, the only major transportation project anticipated in Perth's Official Plan is a bypass road connecting Highway 7 to County Road 43, allowing traffic to reach Smiths Falls from various destinations on Highway 7 without having to pass through Perth's downtown (Town of Perth 2016b).



Figure 18: Former Perth Station (date unknown).
Courtesy of E. Kirkham 2018.



Figure 19: Former Perth engine house (date unknown).
Courtesy of E. Kirkham 2018.



Figure 20: Perth Station, active in 1955.
Courtesy of E. Kirkham 2018.

Planning Priorities

Perth's Official Plan summarizes the priorities and challenges for planning in the town in its first chapter:

Its heritage, its services and facilities, its small town atmosphere, its national image, its proximity to major centres and conversely to cottage country are opportunities to attract development and sustain a healthy economic base. Servicing constraints, transportation conflicts, polarization of commercial development interests and reconciling its heritage image with its future are challenges Perth faces as it enters the new millennium (Town of Perth 2016a, p. 2).

Besides the Official Plan, the majority of information about planning in Perth was obtained via personal interviews with experienced professionals, conducted between March and July of 2018. On March 17th, I met with Mary Kirkham at her home in Elfin, Ontario. Kirkham was the Planning Administrator of Lanark County from 2008 until her retirement in 2017. On June 25th, I sat down with Forbes Symon at a Starbucks in Carleton Place. Symon is a planner who has been the Director of Development Services for Perth since 2017. On June 28th, I interviewed Kurt Greaves at Lanark County's administrative office. Greaves has been the Chief Administrative Officer for Lanark County for six years. Finally, on July 25th, I met with John Fenik at Perth's town hall. Fenik was recently elected to his fourth term as Perth's mayor.

Perth's Official Plan – though it does not actually contain the term “New Urbanism” anywhere in the document – contains a plethora of policies that encourage the town's development both to retain the existing character (which I argue has many of the characters of New Urbanism, though the town predates the definition) and to expand upon these qualities. This may be a combination of the Council and municipal staff of Perth being forward thinking, and simply a reflection of the common planning priorities of the era; Kirkham (2018) points out that the previous Official Plan did not contain such provisions.

- It promotes the compact and efficient use of land in a way that conserves energy and allows existing and future infrastructure to be used efficiently (Town of Perth 2016a).
- It provides for the development and conservation of residential neighbourhoods that maintain the human scale and contain amenities and public spaces (Town of Perth 2016a).
- It highlights the need to provide places for people, where pedestrian travel is facilitated and the impact of the automobile is reduced (Town of Perth 2016a).
- It encourages the development of a transportation system that combines driving with cycling and walking to increase active transportation. This includes the provision of more

cycling and walking paths connected to public areas, public seating, street level lighting, traffic calming features, and signalled crosswalks (Town of Perth 2016a, 2016d). These goals are complemented by Lanark County's efforts to provide cycling infrastructure along the County road network (Greaves 2018).

- It aims to increase Perth's status as a complete community by building on the existing mix of uses, which include "shopping, employment, educational, social and recreational facilities and activities" (Town of Perth 2016b, p. 7).
- It encourages developers to design new buildings and infrastructure with an emphasis on longevity and quality (contrary to how many residential subdivisions are built), and encourages the adaptive reuse of existing buildings. In particular, the Town hopes to repurpose vacant commercial and industrial buildings into residences, and to provide more apartment-style housing on the second and third storeys of buildings in the downtown core, where the ground level use is primarily commercial (Town of Perth 2016d).
- It promotes the addition of more mixed-use development in the downtown core, and the construction of residences and places of business in proximity to each other, to increase levels of activity outside of traditional business hours (Town of Perth 2016d).
- It calls for increased density of housing via the use of infill, zero lot lines (where buildings are built right up to the lot line), and increased heights in areas where it can be transitioned to the existing heights and densities (Town of Perth 2016f).
- It encourages sustainable development, by way of building energy efficient structures, conserving energy via compact development, orienting new buildings to take advantage of solar gain, using vegetation to shield buildings from wind, generating less waste, and recycling building materials (Town of Perth 2016d; 2016f).
- It promotes the conservation of natural features and ecologically sensitive areas within and surrounding the town (Town of Perth 2016a; 2016f).

Kirkham (2018) contrasts Perth with the town of Carleton Place, a town that is 32 kilometres east on Highway 7 and is closer to Ottawa: "They [Perth] want development but they want a certain type of development. So they would never consider the way Carleton Place is developing." What she is referring to is residential sprawl, with single-detached homes accessed conveniently only by car. While Carleton Place has welcomed this type of development for the sake of growth, Perth has policies in place to protect its character.



Figure 21: The intersection of Gore Street and Herriott Street. *Photo taken by author.*

Symon (2018) points out that the Town is effectively fostering New Urbanism via policies that encourage modern development to give to the community the same thing historic development did – buildings within a metre of front lot lines, parking at the back, and relatively narrow streets with sidewalks on both sides: “We want the new to give us a continuation of the old” (Symon 2018). This method of town-building provides for active transportation and helps to maintain a sense of community. In retaining its architecture and character from the 1800s, Perth already has the framework in place to facilitate the sort of built environment Kelbaugh and Calthorpe (among others) have described.

Fenik (2018) provides an example of policy in action. Several years ago, the Town was approached by Walmart, which was considering opening a store on Highway 7. Fenik is critical of the type of “cookie cutter approach to urbanization” that Walmart represents. He says that the Town strives to ensure a “synergy” between new development and existing small businesses, so that the latter can continue to thrive. One such method is by enforcing the use of limestone for commercial buildings – the Perth Mews Mall, for example, has a limestone facade, which is unusual for a strip mall hosting such chain businesses as Loblaws, Subway, and LCBO. In the end, Walmart and the Town of Perth both appear to have decided they were incompatible.

These policies extend to housing as well. The Official Plan calls for the provision of a range of types of housing, to be created by a mix of intensification, redevelopment (including adaptive re-use of old buildings) and green-field development (Town of Perth 2016b). Housing is to be provided in a variety of densities, including single-detached homes, semi-detached homes, townhouses, and apartments. 60 to 65 percent is to be low density, 15 to 25 percent medium density, and 10 to 20 percent high density, with an increase in supply of affordable housing (Town of Perth 2016b). In recent years, the Town has seen some success in achieving these housing goals, particularly in the form of a new single-detached housing subdivision north of Highway 7, and a few rental apartment buildings constructed throughout the town (Kirkham 2018; Symon 2018). Symon points out, though, that the demand will always be higher for single-detached homes, since space is one of the motivators for people to relocate to small towns. There is question, then, as to whether or not TOD is an appropriate model for a small town.

As alluded to above, Perth's number one priority is almost certainly heritage – the maintenance and expansion of heritage architecture, as well as the celebration of its history in the form of events and marketing. Perth's ability to retain so much heritage architecture is a result, in part, of its slow growth over the past 200 years. While sustained levels of growth often leads older buildings to be demolished and replaced with new ones, Perth has benefited, in a sense, from relative stagnation (Turner 1992). Symon (2018) explains that “it has this amazing heritage vibe to it, but it also has a completely intact downtown core that's very vibrant. It's never been gutted like some of the other communities.” Though some of the heritage buildings had become derelict by the late 20th Century, the town benefited from a federal Main Street revitalization program in the 1980s, which saw many of the buildings restored to their former glory (Turner 1992). These efforts have turned into policy, as the preservation of heritage, and the extension of Perth's heritage character, is discussed numerous times in the town's Official Plan (Town of Perth 2016a; 2016b; 2016e; Symon 2018).

Perth's distinct heritage architecture has not gone unnoticed. As far back as the 1930s, a professor from the University of Toronto's School of Architecture would bring students to Perth to examine and draw its historic structures (Turner 1992). In the 1960s, a professor from McGill University's School of Architecture drew sketches of what buildings on Gore and Foster Streets would look like if restored – these drawing inspired an actual project to revitalize the buildings (Turner 1992). In 2000, the TVO show *Studio 2* declared Perth to be Ontario's “prettiest town”

(Brown 2003, p. 125). Algonquin College capitalized on Perth's heritage by running a Heritage Masonry program out of its satellite campus in Perth, though regrettably this was cancelled in 2018 (Laucius 2018).



Figure 22: Stewart Park. *Photo taken by author.*

Demographics and Factors Influencing Growth

Perth is known for being a retirement community – its compactness and attractive built and natural features have made it a popular choice for retirees looking for a slower pace of life since at least the 1980s (Town of Perth 2016a, Kirkham 2018, Symon 2018, Greaves 2018). In 2016, slightly more than a third of the town's population was over 65 years old (Statistics Canada 2016). Greaves (2018) has observed an interesting pattern resulting from this demographic: a high rate of turnover in the housing market. People move to Perth when they retire, but many only stay for a short period of time, due to the death of one spouse, a move to a retirement home, or a move back to the city to be closer to healthcare. This has created a highly active real estate market, despite the relative stagnancy of the population.

Perth services much more than its own residential population. The town is the service hub for a huge rural area, and is a rare town that has a larger working population than residential

population – 6200 people were working in Perth in 2011, when the town had a population of only 5840 (by 2016, it had grown to 5910) (Town of Perth 2016b). This is doubly impressive when one considers the fact that the labour force among Perth residents totals only 2590 (Statistics Canada 2016). Perth has a hospital, two high schools, three elementary schools, four grocery stores, and a number of other services, while the surrounding municipalities of Tay Valley, Drummond/North Elmsley, and Lanark Highlands have very little in the way of services, meaning that Perth functions as the urban centre for a much larger community. The Official Plan estimates that Perth is the service centre for approximately 26,000 people year round, and 40,000 people during the summer months, when nearby cottages and waterfront homes are occupied (Town of Perth 2016b).

Despite its status as a service centre, there are a number of obstacles in the way of Perth's growth, with the most prominent being geography. From the time of its founding, Perth was built in a location that did not have prime access by land or water (Turner 1992). Moreover, it is surrounded by wetlands to the north, east and west, and by a lagoon and landfill to the south, making expansion in any direction difficult (Symon 2018). This does serve as somewhat of a naturally enforced greenbelt, though, which makes compact development a more reasonable option in Perth, compared to other towns that have room to sprawl outward.

Two other practical barriers to growth have only recently been overcome. As a non-amalgamated municipality, Perth's borders are strict. Perth was recently able to expand its growth area by expropriating some land from Drummond/North Elmsley and Tay Valley (Town of Perth 2016a; Kirkham 2018). The Town was also able to overcome service capacity issues by installing a significantly more efficient sewage treatment system, which increased the number of residences that can be supported by the municipal sewer (Symon 2018).

One issue that is significantly more difficult to overcome is that of location. Perth is an approximately 60 kilometre drive from the western limits of Ottawa, and an approximately 85 kilometre drive from the city centre. The eastern municipalities in Lanark County – particularly Carleton Place, Mississippi Mills, and Beckwith – have seen huge growth rates in recent years, due to their proximity to the city and the convenient commute, following the double-laning of Highway 7 between Ottawa and Carleton Place (Symon 2018; Greaves 2018; Fenik 2018). Since Perth is significantly farther away from the city, and is accessible only via single-lane roads, the commute is less reasonable. Symon (2018) observes that there is typically a 45 minute commute

circumference around a city, within which growth rates are relatively high. Outside of that circumference, growth rates drop.

Perth also suffers from the brain drain that plagues many towns and small cities. Greaves (2018) explains that, after young adults move to cities to attend university and college, it can be difficult to attract them to come back: “We lose a lot of our young people, because the opportunities aren’t here for employment. But it’s not just the employment. It’s the social factors. So we don’t have the bar scenes, we don’t have all the different activities you can do in the city.” His observation echoes the research of Okulicz-Kozaryn and Valente (2018) who, as discussed in Chapter Two, found that Millennials are more inclined to city life than older generations.

There is also a built-in policy conflict between allowing growth and protecting heritage. Kirkham (2018) explains that the policies are sometimes overly-restrictive, referencing an example from 2017 where the owners of Shadowfax, a jewelry and clothing shop that has been operating in the town since 1980, were scrutinized for painting the store’s facade purple. The Town claimed that this colour was not permitted under the heritage plan (Molina 2017). Symon (2018) says that the restrictive policies are a result of two factors. The first is the fierce protection of the heritage and character of Perth, and the deliberate prioritization of its protection, even if it is a barrier to growth. The second is merely inexperience; because Perth has not had much development, there has been no impetus to streamline policies to facilitate development.

VIA Rail and the Prospect of Change

Perth’s slow growth and older population might intuitively lead to the assumption that there would be a resistance to change, and a desire to keep the town as it is. However, Kirkham (2018) and Symon (2018) both echoed Grant’s (2008) theory, discussed in Chapter Two, that new ideas and initiatives can gain support and momentum rather quickly in small towns like Perth. Kirkham attributes this in part to the leadership and enthusiasm of Mayor Fenik, and his ability to move things forward quickly and gather public input. Symon explains that, when opportunities arise, small towns are more primed than large cities to capitalize on them:

[Towns] that are geared to recognizing that they’re being lucky, and put resources towards that to make that luck come to fruition – things can happen really quickly in those communities, and they can turn on a dime. And they can make decisions that would get dragged into weeks and months and years of bureaucracy in a larger urban context. And sometimes the larger communities get upset about that, but it’s just that you’ve got a more efficient route from A to B, and fewer players involved.

So I think that, if you can capture the imagination of the community, if you can get the support of the senior management staff, that will give the politicians the confidence to run with an idea.

Stemming from this, all of the interviewees expressed optimism at the prospects of a VIA Rail station opening in Perth, though there was certainly a degree of apprehension expressed. Mayor Fenik expressed the most unbridled enthusiasm about the project, and has told VIA Rail that, if the plans come into fruition, the Town will pay for the construction of a new rail station, built out of limestone to replicate the old rail station and to match the town's heritage architecture (Devoy 2016a; Fenik 2018). Greaves (2018) points out, though, that the development of a new Windsor to Quebec rail corridor has been discussed for decades, and that it will take a significant amount of political will and dollars to turn the conversation into a reality. Public support would probably be less of an issue. Though there are likely to be noise-related concerns from those living near the tracks (Fenik 2018), the interviewees all predict that the station would be supported by the public, and that "you would see people tripping over themselves to get to the ribbon cutting" (Symon 2018).

Greaves (2018) believes that the rail station could be a key tool in retaining young people, by providing easier access to the amenities and entertainment of the city – particularly considering the younger generation has a lower rate of automobile use. By connecting Perth to the upcoming rail transit system in Ottawa and, to a lesser extent, the existing rail transit system in the Greater Toronto Area, Perth residents would be able to access jobs and other destinations in the city without requiring a car, and would be able to benefit from the lower real estate prices in Perth (Greaves 2018). Fenik believes it would give young Perth residents the option to retain residence in Perth while allowing them to attend college or university in Ottawa (Devoy 2016a; Fenik 2018).

Symon (2018) has some reservations. He believes that much of Perth's "small town charm" comes from the relative inconvenience of commuting: "Being an hour away means that there are not many people that are going to have it as a bedroom community. So it still supports that sort of rural community, that agrarian community." To provide an easier mode of transportation could risk turning Perth into more of a bedroom community. Better transit could have a detrimental impact on the local economy and business retention; as I will discuss in Chapter Five, this phenomenon has impacted Sweden's railway towns. This may not need be a major concern for Perth, however, since only 29 percent of the labour force leaves Perth for work, and just 13 percent leaves Lanark County (Statistics Canada 2016).

Interestingly, the interviewees generally placed more emphasis on commuter rail's ability to transport people *to* Perth, rather than away from it. Symon (2018) notes that Perth is a major employment centre, and has had some difficulty in recent years attracting labour to work in its factories and institutions. He believes commuter rail would help to repopulate the labour force in Perth, particularly by bringing workers from nearby Smiths Falls and other towns on the rail line that have a surplus labour force.

The interviewees also emphasized Perth's status as a tourist destination, and looked at the rail station as another way to attract visitors. Tourists come to Perth to visit the surrounding natural area, as well as the town itself, attracted by the historic architecture and participating in events and festivals (Town of Perth 2016f). Kirkham (2018) and Greaves (2018) both see a commuter rail station as a way to bring visitors interested in the town's boutique shops and live theatres. Symon (2018), in discussions with residents of Perth who have moved to the town from elsewhere, has found that many of them first visited as tourists, and subsequently decided to move there to raise their families. In recent years, numerous travel blogs aimed at Millennials have recommended Perth as a prime destination for weekend travellers (McGinn 2016; Przesieki 2017). It is clear that tourism is a vital tool, both in attracting new residents and in keeping a strong local economy. The question is how that tool can most effectively be wielded.

All the interviewees agreed that the rail station would be a boon for the economy. Fenik (2018) believes that it would have a major impact on the population growth rate. Greaves (2018) believes it would be a tool to attract young professionals to work in Perth, noting that small towns typically have difficulty keeping young, educated individuals. As will be discussed in Chapter Five, rail transit has indeed proven to attract young, skilled labour to Sweden's towns (Nyström 2018; Luthander, Andersson Thysell and Andersson 2018). Kirkham (2018) is more tempered in her prognostication. She believes that any change in the type of available jobs would be gradual, and that this should not be a high priority for the Town. Symon (2018) has a more holistic view, looking at the potential station as part of a greater whole:

Every time your community gets a dot on Google Maps for another reason, it makes that community much more attractive. So you've got heritage, you've got lakes and rivers a tourism, you've got the Rideau Canal, where the Tay Canal is part of the Rideau Canal, then you add in a VIA Station. It just starts building a critical mass. More people know the community, see the community, experience the community, and then decide that they want to be part of it.

Symon's analysis of the potential rail station regards it less as a tool with a direct impact on the town's growth, and more like a gift, as conceptualized by Kusno (2017). Though the town may not necessarily need a commuter rail station, it would be another attractive feature that would help the town gain recognition and attract population.

Fenik (2018) views the potential VIA station within the bigger picture, as a symbol of Perth and its residents' commitment to protecting the environment:

We either embrace the thought of mass transit in rural areas, or we embrace the thought of driverless cars. And in the long run, as our planet gets sicker, we increase the volume of cars on the road with driverless cars. Because not only if you have a license do you drive, but everybody else who wants to get in a car without a license drives. So mass transportation reduces the impact from a greenhouse gas perspective. Driverless cars increase it. But the driverless car industry is using the same type of formula or paradigm that Henry Ford did. Let's just pump out as many of these cars as we can, for profit, expand, and it's a brave new world. Sit back, relax, you can go grocery shopping, you can have a couple of beers without worrying about anything, and these driverless cars will take you all over the place. So I think there are two different visions that are going to evolve, probably long after I'm gone. But that's why I think rail is important, and the rail station is important. And the rail station, it's not so much a building; it's representative of an idea. Whenever you enter a rail station, like in Europe ... it is reflective of a decision that an individual makes ... in terms of their impact on the environment, and their lifestyle, and that kind of stuff. I guess that's what I'm trying to get to. It's not a building – rail stations are a concept of something much greater. Use that in your thesis. It's gold! (Fenik 2018).

Fenik's vision for the train station is idealistic. He sees it not just as a tool to help reduce car use in Perth, but as a symbol of the town's commitment to be a part of a positive global change.

Transit-Oriented Development in Perth?

I asked each of the interviewees if they thought a train station could stimulate compact, TOD-style growth in Perth. Kirkham's (2018) initial response was that she had never contemplated how the placement of a train station might affect development. However, once she considered the location of the demolished train station, at the east end of Herriott Street, she realized there was potential for redevelopment of several blocks – a pair of former factory buildings that could be retrofitted into apartments, a fire station and Canada Post depot that could be relocated to other parts of town. However, due to the wetlands to the east and the western lands being largely developed, she was tepid about potential growth in the area, and the public reaction to any sort of major change that might affect the historic downtown.

Symon (2018) does not imagine the station affecting the built form in a significant manner, besides perhaps attracting support businesses such as a car rental agency or travel agency. He points out that the comparatively dense type of development under discussion – such as four storey, multi-unit apartment buildings – has already started to be built in recent years, without having a train station to stimulate it. He notes, though, that this makes up a small portion of available housing, and that efforts to promote dense development in a Perth may run contrary to the very reason people choose to move to small towns. People tend to move to small towns because they are looking for a house with a patch of lawn, without paying a premium for it in an urban area. The low density, the desire to raise a family in the same type of community that one was raised in, and the lifestyle that comes with those things are what attract people to live in a place like Perth. To try to make a small town more like a city may be exactly the opposite of what its residents want.

Greaves (2018) hypothesizes that densification in Perth is feasible, as long as it is planned long-term. He says that the way to really convince people to change their habits and lifestyles, though, is through their pocketbooks. If carbon taxes were implemented consistently, and the price of oil were to rise again, people would reduce their car usage in order to save money. If this were to occur, there would be more demand for public transit, and denser housing near transit stations would be more attractive to more people.

Fenik (2018) expects Perth to grow no matter what, and he believes the trajectory of that growth will be at least partially informed by the type of transportation infrastructure that is provided. If Highway 7 is expanded to four lanes between Perth and Carleton Place, the speed of travel to Ottawa by car will be increased, and the town may see more growth in lands annexed on the edge of town. Likewise, if the commuter rail is reintroduced, there may be more development close to the station, with concentrations of residential units and condominiums in close proximity.

Even if the rail station were built, and transit-supportive zoning were in place, there is no guarantee that development would follow suit. Symon (2018) presents two conflicting traits of developers. The first is that they will continue to find opportunities to operate business as usual. For example, developers building single-detached houses and townhomes in Ottawa have been stymied by progressive, density-supportive policies in the city. Rather than adapt, many developers have looked farther from the city, and have found willing customers in the form of municipalities such as Carleton Place, whose politicians welcome growth and are happy to accommodate

suburban sprawl. Rural areas and small towns tend to adopt trends later; if development is not a given, it is more difficult for a municipality to be selective. “Small communities don’t adopt new ideas quickly, because nothing is happening quickly” (Symon 2018).

Conversely, Symon says that developers can often be leaders in innovation. He points to developers making longer-term, slow earning investments by purchasing existing heritage buildings in Perth, injecting finances into refurbishing them, and allowing them to grow in value over the course of several years. Kirkham (2018) infers that developers and property investors of this sort are more likely to be found in Perth, since Perth does not allow the cookie-cutter style of residential development to occur within its borders. Fenik (2018) acknowledges, though, that it is prohibitively expensive to build with limestone and timber.

Lessons from Perth

- Perth’s history as a 19th century military settlement, and its retained Scottish stonemason architecture and gridiron layout, mean that its existing physical features are already in line with the neo-traditional aspirations of New Urbanism.
- Though automobiles overtook rail as the primary form of transportation in the first half of the 1900s, Perth has managed to retain the physical character, vibrancy and mix of uses in its historic downtown core, even while a highway commercial area was built along Highway 7, at the north end of town.
- The Town’s current Official Plan has policies that encourage development that is in line with TOD and New Urbanism, promoting infill and densification, mixed-use neighbourhoods, adaptive reuse, and active transportation.
- An emphasis is placed on preserving and celebrating Perth’s heritage, and it is encouraged that new development is a continuation of the old.
- Though the town’s residential population skews older than the national population, Perth is the service centre for a large rural area, and more people are employed in the town than reside in it. It might be best classified as a ‘Regional Urban Centre’, as its connection to its own hinterland is stronger than its connection to Ottawa, the nearest city.
- Perth’s distance from Ottawa – being outside the 45 minute commuting radius – means that its population has not grown as quickly as towns closer to the city, and it experiences an

exodus of many of its young residents, who leave the town for higher education and a wider variety of employment options in the city.

- The potential VIA Station has the potential to have a major positive impact on Perth, not only by providing a faster and more convenient method for people to get to the city, but also because it would provide another method of bringing people in, both for employment and as weekend tourists.
- The railway station does have the potential to help stimulate transit-oriented development – perhaps in Perth more than other towns – due to the dense, walkable nature of the existing core, and the political and public support within the town for maintaining the town’s heritage character.

Chapter Five – Case Studies: Railway Towns in Sweden and Ontario

At the outset of my journey to Sweden, I was expecting to find towns where the TOD and New Urbanist influences were evident, that had a distinctly European feel, and that had policies and practices that could be borrowed and transplanted onto Perth and other Canadian towns. This is not exactly what I found. The municipalities do indeed have transit-supportive policies, and they are having success implementing these policies. But this does not automatically give the towns the picturesque quality that New Urbanist ideals strive for (in fact, I would argue that Perth has more of a classic European character than any of the Swedish towns, except perhaps Gnesta). There are also factors beyond the municipalities' control that impact growth and inform the type of development that occurs. Specifically, business retention is a challenge for towns that are well-connected to their nearest cities and, as with larger urban areas, the current housing market has a strong influence on the rate of growth. These challenges will be explored below.

Case Study 1: Tierp

I visited Tierp on April 17th, 2018 and met with Adam Nyström, the City Architect who oversees the municipality's planning department (in Sweden, planning and architecture are treated – logically – as part of the same field, and many people hold both professional titles). A town of 5992 people as of 2018 (Tierp Municipality 2018), Tierp is approximately 62 kilometres north of Uppsala, Sweden's fourth largest city by population, and approximately 51 kilometres south of Gävle, its 14th largest (Statistics Sweden 2017). Upon first impression, the TOD qualities of the town are not readily apparent. Tierp's train station bisects its commercial district, which is not particularly robust, containing a couple of small grocery stores and a handful of shops. Most of the housing immediately surrounding the train station is apartment-style, though there is no apparent design inspiration. Outside the downtown core, the majority of the town is made up of single residential homes and mid-sized industrial buildings. Even on a Saturday afternoon, the town is quiet and relatively empty of people; Tierp has the feel of an industrial town.

The historical centre of Tierp is a few kilometres from where the town is today; the current location was founded when the railway was constructed in 1874, and the town grew around the rail station (Tierp Municipality 2011, Nyström 2018). Like many of Sweden's towns, Tierp is part

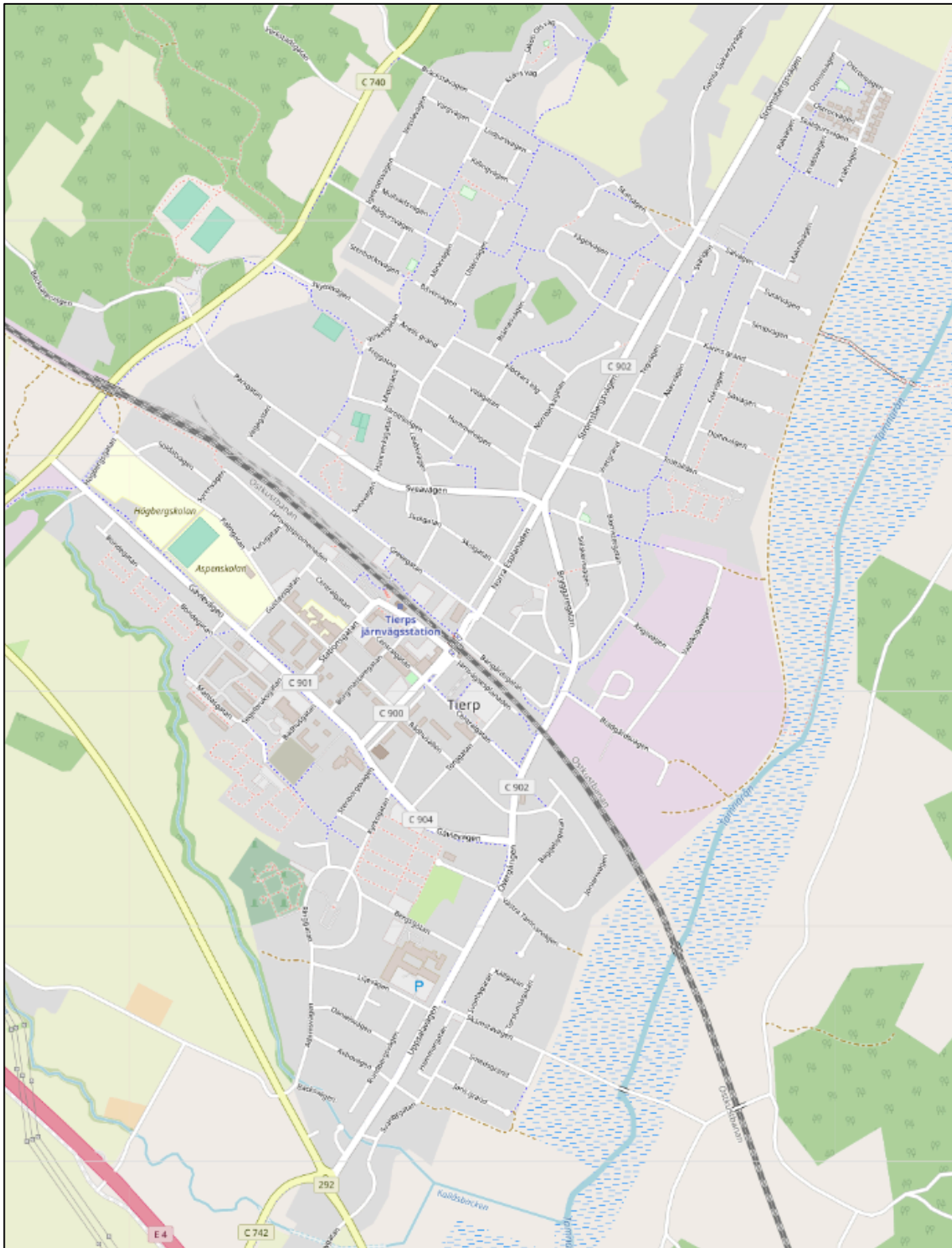


Figure 23: Map of Tierp. *Courtesy of Open Street Map 2019.*

of a larger municipality consisting of six small communities that were amalgamated in 1976 (Tierp Municipality 2011, Nyström 2018).

Nyström described the railway station as the most important factor in Tierp's growth, highlighting the town's accessibility to both Uppsala and Gävle, with a new fleet of trains and increased service levels within the last two years, running in intervals of one train per half hour and one train per hour, respectively, to its neighbouring cities (and shorter intervals during rush hours). A monthly train pass for the region costs 840 Swedish Krona (approximately 125 Canadian Dollars), and the trip time to Tierp is 36 minutes from Uppsala, and 33 minutes from Gävle, making travelling by train competitive with personal automobiles in terms of both affordability and time (Nyström 2018, UL 2018).



Figure 24: Train platform in Tierp. *Photo taken by author.*

Though it is not a visually striking town, Tierp does have many features of a TOD, and the municipality's policies encourage these features to be expanded upon. Tierp Municipality's Overview Plan (2011) promotes development in proximity to the rail stations in order to facilitate public transit use, and notes that it has been trending this way for some time – despite a relatively stagnant population from 1980 to 2011 in the municipality as a whole, the population had increased

in the town and other settlements while declining in the rural areas. This is one major benefit of planning in an amalgamated municipality – it is easier to enforce policies that seek to densify settlement areas and mitigate sprawl; Tierp’s Overview Plan calls for fifty percent of all new development to be within the town. Throughout the Overview Plan, numerous references are made to reducing car dependency by integrating new building development with transit, and supplementing station areas with meeting places and services (Tierp Municipality 2011).

While the Overview Plan calls for larger buildings in proximity to the rail station (Tierp Municipality 2011), Nyström (2018) notes that the town has some work to do to accomplish that, as the area immediately east of the rail track is still largely characterized by large, single-detached homes, and the Overview Plan notes that there were no permit applications for apartment buildings between 2005 and 2009 (Tierp Municipality 2011). The Plan contains guidelines to correct this, by promoting a mix of apartments, semi-detached, and single-detached homes to be constructed, providing accommodation for a range of people including students and the elderly (Tierp Municipality 2011).

Nyström (2018) says that the municipal staff use the availability of public transit as a major selling point to both new residents and to potential developers and business owners; they advertise its proximity to major cities and circulate information regarding the train, buses, and connection points. The municipality also facilitates active transportation. The Overview Plan discusses the existing network of bicycle paths, highlighting linkages between transit stops and institutions such as schools (Tierp Municipality 2011). Nyström (2018) explains that the municipality even constructed a shelter by the station to protect bicycles during the winter. It should be noted that Tierp is not exactly trailblazing with this sort of bicycle infrastructure, since Sweden, like many other European countries, is characterized by the prevalence of cyclists.

The Overview Plan emphasizes protection of the environment as one of the main motivations for transit-oriented development, highlighting both the preservation of natural features (by both inhibiting development sprawl and maintaining green corridors) and the reduced energy requirements of decreasing car dependency (Tierp Municipality 2011).

Nyström (2018) explains that the municipal planning department is working to fulfill this mandate via master planning. Specifically, they are working on a plan for a new neighbourhood named Siggbö Garden City, in the southwest of the town (this was not the only time I encountered the “Garden City” model being used in Sweden – this will be discussed later in this chapter).

Siggbo's entrance will be 500 metres away from Tierp's rail station, and the entire development will consist of 500 dwelling units. The houses on the northern and southern edges of the development will be single-detached (referred to by Nyström as "villas"), while the centre will consist of denser housing – three-storey apartment buildings at the entrance, and six storey apartment buildings around the central square. Between the centre and the fringes will be townhomes – the first of their kind in Tierp.



Figure 25: Commercial buildings in Tierp's centre. *Photo taken by author.*

Nyström (2018) states that, while the municipality ensures that houses and other buildings are kept in good shape, there is no particular influence or goal with the architectural design of new buildings. This likely stems from the fact that there is no obvious, unifying architectural influence on the existing buildings. That being said, the municipality does exert an enormous amount of control over the design of new developments (particularly compared to small town planning in Canada, which tends to be more developer-driven). The Siggbo plan, for example, is a rather strict master plan, which will be sold off to developers to be constructed in accordance with the plan. Nyström argues that private interests do not truly partake in planning; they exist to make profit,

and will build whatever is most profitable if left to their own devices: “I think it’s the responsibility for a municipality to plan for everyone. Plan for the rich, the poor, the old, the young, and the people who will come after us. We have to take that responsibility. So I think it’s really, really important to have the political support to take charge of city planning” (2018).

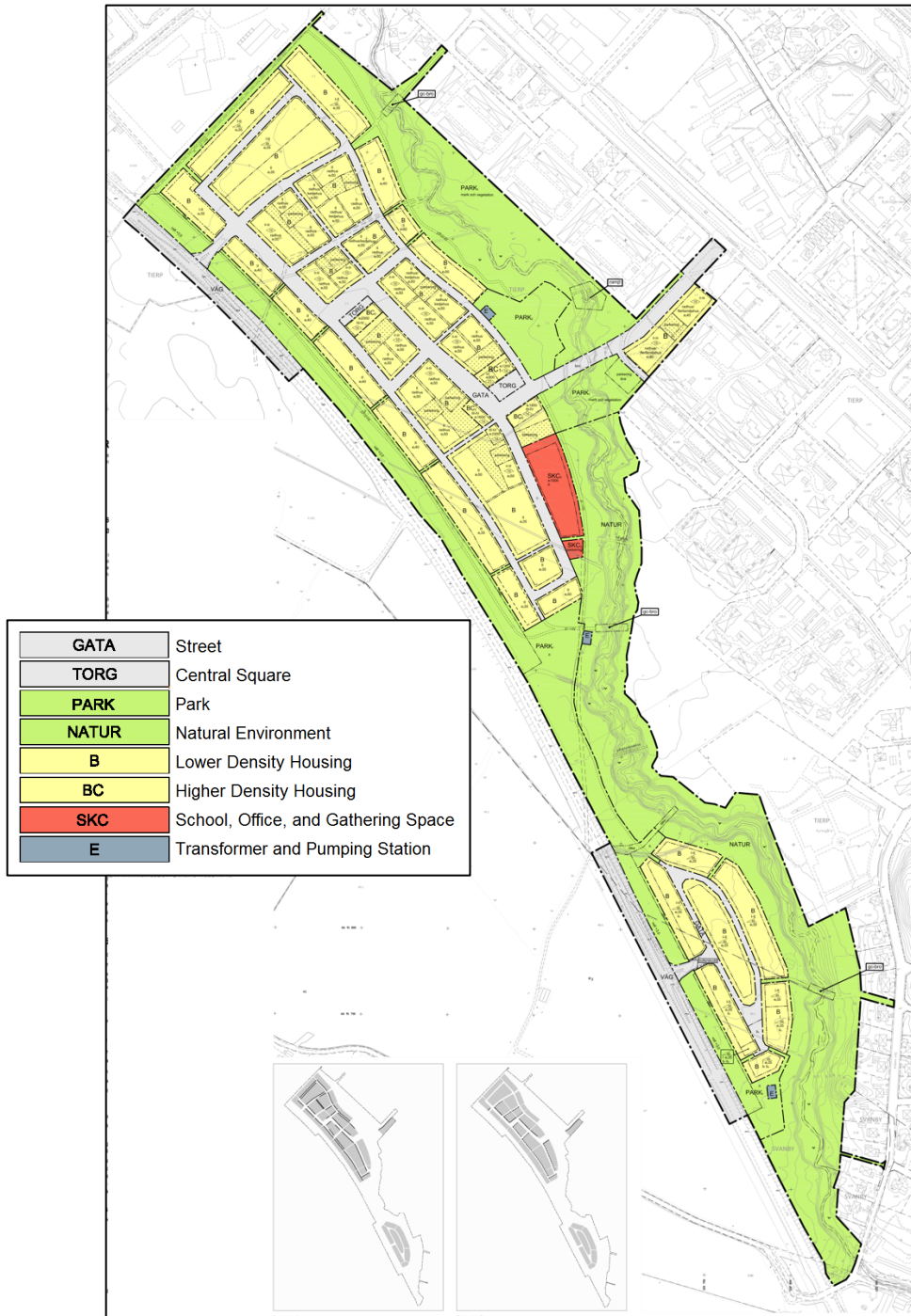


Figure 26: Siggbo Garden City plan. *Courtesy of Nyström 2018b.*

But how does a small municipality like Tierp attract developers, and new residents in turn? Nyström (2018) has seen a trend that, as property values in cities such as Stockholm, Uppsala, and Gävle become less affordable, people look farther away from the cities for affordable options. With housing prices approximately one fifth of those in Uppsala at a convenient commuting distance, Tierp has become a viable option for those working in the nearby cities. This was the first of several times I encountered this link between housing cost and small town growth.

However, while the proximity to urban areas is one of the major forces influencing population growth, it has a somewhat surprising reverse effect on businesses. The Overview Plan calls for the addition of commercial and employment spaces, particularly in proximity to the rail line, and references the proximity to major employment areas in Uppsala and the Arlanda airport as a potential driver for this development (Arlanda, Sweden's largest airport, is roughly halfway between Stockholm and Uppsala) (Tierp Municipality 2011). Nyström (2018) explains that attracting and retaining businesses has been more difficult than the Overview Plan suggests. Though Tierp was traditionally a blue-collar, industrial area, built around forestry and steel production, globalization has seen much of that industry relocate to places like Poland and the Baltics, where labour costs are much lower. Beyond this, Tierp faces more proximate competition for point of service businesses from its neighbouring cities:

The smaller stores, like clothing stores, nice restaurants, hotels – the kind of soft economy, and the night time economy kind of businesses are really hard to attract for a town. That's actually, in my opinion, the weakness of being located between two big cities with a railway in the middle. If you want to go to a nice restaurant, a fancy restaurant, you can go to Gävle or you can go to Uppsala. You don't have to stay here. So therefore, why would anyone take the risk of opening a nice, fancy restaurant here? (Nyström 2018).

Nyström goes on to explain that chains such as H&M have told municipal staff that, if a town the size of Tierp were more isolated, the company would be more willing to consider opening a store. In the case of Tierp, though, the neighbouring cities meet the market for those types of businesses. This seems to indicate a kind of internal conflict within the principles of transit-oriented development. Proponents of TOD and New Urbanism assume that transit and density will lead to “complete communities”, where residences are complemented by goods, services, and recreational space. In the case of Tierp, transit and accessibility have had virtually the opposite effect, rendering it a largely residential town and arguably suburbanizing it.



Figure 27: Medium-density buildings near Tierp's train platform. *Photo taken by author.*

Conversely, Nyström (2018) claims that the railway has a positive effect on attracting skilled, educated professionals to work in the municipality. He and his colleagues all live in either Uppsala or Gävle, and commute by train into Tierp each day. If transit were not so convenient, he argues, it may be more difficult for the town to attract people to work in jobs such as these, since young professionals tend to prefer living in cities (Okulicz-Kozaryn and Valente 2018). This supports Greaves' (2018) theory, discussed in Chapter Four, that a train station could help Perth attract young professionals.

Despite the difficulty in attracting small-scale businesses, Tierp has indeed seen a recent rise in population. The municipality as a whole has risen in population by 200 people per year for the last two years, and its goal is to increase that number to 300 per year consistently (Nyström 2018). This is a major increase from the expected rate of growth as recently as 2011, when it was expected the municipality would grow by 65 people per year until 2030 (Tierp Municipality 2011). Nyström quantifies the high demand, noting that the municipality has a queue on its website for private building lots; over a hundred people have paid to be in the queue, while the municipality can only deliver fifty building lots per year.

In terms of demographics, Tierp's population skews older, and its blue-collar history means that the average income level is below that of most other towns and cities in the region (Tierp Municipality 2011, Nyström 2018). However, with the increased housing demand and the planned

supply of different types of housing, Nyström expects more families to move into the town. Another part of the attraction, argues Nyström, is the ability to be in close proximity to both employment opportunities and nature. Though the cities will maintain a disproportionate amount of the employment opportunities, he has noticed a desire among new residents to be closer to nature and escape the intensity of the city. Because of its compact layout, Tierp offers this lifestyle in a way a sprawling suburb cannot, since one would typically have to drive some distance to leave the developed suburban area. The Overview Plan describes the natural environment as both a positive influence on public health and a driver of eco-tourism (though there is little evidence of tourism at this point in time) (Tierp Municipality 2011).

Nyström (2018) and I discussed not only Tierp's position as a satellite of its neighbouring cities, but also its role as a hub for the surrounding rural area in the municipality. He explains that there used to be some amount of resentment from the other towns towards the political and planning focus placed on the town of Tierp, but that this has diminished to some extent; the residents seem to have bought in to the idea that, if focused is placed on the town's prosperity, the rest of the municipality will follow. They do indeed rely on Tierp for the hospital, dentist office, banks, and grocery stores. He says that, despite the recent influx of population, the culture is still more rural than urban, though the difference between the two has dwindled in modern times.



Figure 28: Single-detached homes in Tierp. *Photo taken by author.*

Case Study 2: Gnesta

I arrived in Gnesta on April 19th, 2018 and met with Tomas Enqvist, the Planning Architect who leads Gnesta's planning and development. The town of Gnesta sits approximately 66 kilometres southwest of Stockholm, Sweden's capital and largest city, and 33 kilometres from Södertälje, Sweden's 16th largest city (Statistics Sweden 2017). It has a population of approximately 6000 people. Gnesta is an aesthetically pleasing town from arrival. The town is built at the southwest end of a small lake, alongside which the train tracks run. Immediately around the train station are numerous mid-rise buildings, the majority of which have businesses in the ground floor. Part of the town is built on a hill overlooking the lake. Upon first appearance, the town seems to have many features of a TOD. Its physical appeal has not gone unnoticed, as it was one of the primary filming locations for the original, Swedish version of *The Girl with the Dragon Tattoo* (Gnesta Municipality 2016).

Like Tierp, the construction of modern Gnesta began in the mid-1800s (specifically 1857) around the rail station (Gnesta Municipality 2018). Also like Tierp, Gnesta was amalgamated with its surrounding region but, in 1992, Gnesta and its immediately surrounding area reversed the trend by breaking off into a smaller municipality of about 538 square kilometres, giving Gnesta more autonomy (Enqvist 2018).

Enqvist (2018) is emphatic about the role the rail station plays in the development of the town, highlighting the short transit time between the town and its neighbouring cities: the transit time via train between Stockholm Central Station and Gnesta is between 37 minutes and 1 hour 3 minutes (there are trains running in half hour intervals, with express trains running every one to two hours depending on the time of day), and just 18 minutes between Gnesta and Södertälje (SJ 2018). The impact of the rail station was heightened massively in 2007, when the federal government declared it a national interest, and spent about 100 million Swedish Krona (approximately 15.2 million Canadian Dollars) on rebuilding the rail station in order to stimulate the town's development as a transit hub, while also increasing the service levels of regional trains. The municipality paid about 10 percent of the cost of this redevelopment, which included the addition of a new platform to facilitate the arrival of trains from both the commuter and regional railway networks (Enqvist 2018, Gnesta Municipality 2018). The Overview Plan states that 2900 people commute from the municipality for work each day, with about 1200 people working in Södertälje and 600 in Stockholm. It emphasizes the importance of swift public transit by pointing



Figure 29: Map of Gnesta. *Courtesy of Open Street Map 2019.*

out that modern society does not really measure transit by distance, but by time (Gnesta Municipality 2018). The use of time over distance as a measurement of transit service was echoed by Jacob Schabas of VIA rail, in the interview discussed in Chapter Three.



Figure 30: Gnesta's town centre. *Courtesy of Gnesta Municipality 2018b.*

The Overview Plan makes a number of references to Gnesta's role as one town in a larger region (Gnesta Municipality 2018), and Enqvist (2018) explains that the municipality is both benefiting from and participating in a national TOD strategy, whose mandate is to build up towns and settlements around railway stations. He describes the existing railroad network as a resource, a tool to be used to reduce car dependency. He notes, however, that it is still a car-friendly town, and that the majority of transit is still by personal automobile. Though the increased service levels have seen public transit gain an increased share of overall transportation, the town still suffers from the "last mile" problem. About half of the municipality's population lives outside the town, where public transit is not as convenient. On top of this, the buses use a different transit pass than the trains, meaning commuters have to pay twice (Enqvist 2018). Until these obstacles are overcome, they will remain roadblocks in the way of Gnesta becoming more transit-oriented, though the

Overview Plan does highlight active transportation as part of the solution, with new weather-protected bicycle parking near the station and a series of walking and cycling paths throughout the municipality (Gnesta Municipality 2018).

Whereas the greater transit network in the municipality may be lagging, policy and practice are creating a built environment in Gnesta that facilitates transit use. The majority of new housing is directed towards the town – away from the rural areas – with the highest densities in the centre, near the station, and with a focus on infill. The Overview Plan prioritizes the densification of the already built environment in the urban area, and calls for a town centre with a rich range of shops, restaurants and trade (Gnesta Municipality 2018). By all accounts, the town appears to be successful in this – the variety of available services is sufficient for residents to have their needs met within the town (Enqvist 2018).

Enqvist (2018) believes that more people will take public transit if more parking is provided. Conceptually, there seems to be a conflict between having both transit-oriented development and a large parking area. But Enqvist sees it as a way to make the train seem more convenient for those outside the town, and explains that there is an opportunity for parking anyway – some of the older houses are within the safety buffer zone along the tracks. The municipality plans to have those houses demolished and replaced with parking, while existing parking outside the safety buffer zone can be built up.

Enqvist (2018) walked me through some of the ongoing projects and upcoming plans in Gnesta. These projects include a major redevelopment of the town centre, which is currently characterized by a number of one storey buildings and older houses. The entire block had been owned by a private organization, but the municipality bought it in 2010 after the company went bankrupt. After years of planning and public consultation, the municipal planning department developed a plan that would include mid-rise buildings with shops at ground level, a central square, and an increase from fifty existing apartment units to eighty units in the same physical space.

North of the town centre, a major housing development is being planned, which would host approximately 600 dwelling units, including a mix of villas, attached dwellings, townhouses, and apartment buildings, with a mix of owned and rental housing (Enqvist 2018). Currently, the housing mix is approximately two thirds single-detached, and one third multi-unit housing of various types (Gnesta Municipality 2018). Enqvist says that there is actually a prevalence of rental housing in Gnesta, so the municipality is placing slight emphasis on delivering condominium units.

The Overview Plan dictates that different types of housing should be provided in each development (so as to prevent segregation), that 90 to 170 new homes should be delivered in the municipality each year, and that 70 percent of these homes should be within the town (Gnesta Municipality 2018). Enqvist notes that the housing demand saw a major increase in 2015; in the preceding 20 years, approximately 40 dwellings per year were being constructed. In 2017, there were 131 housing starts.



Figure 31: Proposed redevelopment plan for Gnesta's town centre. *Courtesy of Gnesta Municipality 2018b.*

Similar to Tierp, the design inspiration for the proposed northern residential neighbourhood – Vackerby Garden City – has been drawn from an old concept: “The main inspiration here has been to make a modern Garden City here, so that you have a lot of green, small scale, small lots, but every lot should have a greenery, and we’re thinking a lot about the environmental issues here, as well as the social aspects” (Nyqvist 2018). Nyqvist explains that Garden Cities have become somewhat of a trend in Swedish planning after a number of successes in other towns and cities. The development is scheduled to commence in 2020 (Gnesta Municipality 2018).

In terms of architectural influence, particularly with the redevelopment plans for the downtown core, the municipality is drawing influence from the town's history. The oldest buildings in the town are three and four storey buildings near the railway station, constructed in the late 1800s and early 1900s (Enqvist 2018). More recent development, Enqvist explains, does not have the same character, but the historical parts of Gnesta – the hotel and the residences on the hill – have been declared culturally significant national interests by the Swedish government, and so are protected by federal policy (Enqvist 2018, Gnesta Municipality 2018). The goal for the town is to extend the late 1880s design and architectural influence across the entire town centre, giving it the feel of a small city (Enqvist 2018).



Figure 32: Commercial buildings in Gnesta's core. *Photo taken by author.*

Similar to Tierp, the municipal planning department has a significant amount of control over the layout of neighbourhoods, the architectural design, and the types of buildings and residences being constructed. Through the practice of buying up portions of land, developing plans, and having those plans approved through a public and political consultation process, the municipality is able to dictate to a large degree the form and function of new developments. These plans are turned into reality via a mix of methods. In some cases, the municipality will construct buildings themselves (particularly when it comes to rental housing, which Gnesta will retain ownership of). In other cases, parcels are sold to developers, who are then bound to stick to the

approved plan (Enqvist 2018). Enqvist, though, believes that the best method is public-private partnerships:

I think the right way to go is that we make a joint venture company with the community and a private company, and then we can develop it together, so that the community has some kind of control. So the private company can put in some money, and maybe some experience with building these kinds of things, and the community can [handle] authorities and so on. (Enqvist 2018).

Unlike Tierp, Gnesta seems to be successful in retaining small businesses. Despite the high number of residents employed outside the municipality, there are also a high number of businesses within Gnesta – there are approximately 1200 registered businesses in the municipality, with 15.6 percent of residents owning his or her own business (Enqvist 2018, Gnesta Municipality 2018). In 2017, there were approximately 3000 jobs in the municipality, and the unemployment rate was 2.7 percent, just over half the national average of 5.2 percent (Gnesta Municipality 2018).



Figure 33: Single-detached homes in Gnesta. *Courtesy of Gnesta Municipality 2018.*

Gnesta's population has been rising 1.5 to 2 percent per year for the last few years, which Enqvist (2018) attributes to the combination of low property values and the ability to live outside the bustling city while still being in close proximity to Stockholm. Part of the population growth comes from a factor influencing the entire country – a huge spike in immigration in 2015 (though new policies have stymied the influx of immigrants) (Lindeberg 2018, Skodo 2018). Gnesta does

not have a huge amount of high-income housing; its housing supply ranges from social housing to middle income (Enqvist 2018).

The Overview Plan promotes Gnesta as being an entry point to a large, natural area, and suggests that this can be a generator of eco-tourism (though, as with Tierp, there is no evidence that tourism is a significant force) (Gnesta Municipality 2018). Enqvist (2018) believes that the proximity to nature is, however, one of the main factors influencing people's decision to relocate to the town. Much of the natural environment immediately surrounding the town has been declared a national interest, thereby prohibiting development. Although the stated reason for this is to protect ecologically sensitive areas, it effectively forms a greenbelt that restricts development from sprawling (Gnesta Municipality 2018).

Enqvist, who is not originally from Gnesta, notes that the small-town culture and charm is a large part of its appeal. Though Gnesta still has the feel of a safe, slow-paced town, he predicts this may change somewhat as more urban people move to the town and bring a faster-paced lifestyle. That being said, 50 percent of all new residences are purchased by people already living in Gnesta (Enqvist 2018).



Figure 34: View of Gnesta from across Frösjön Lake. *Photo taken by author.*

Case Study 3: Skurup

I visited Skurup on April 23rd, 2018, and met with Planning Architect Jennie Luthander, as well as planners Julia Andersson Thysell and Ashley Andersson. Skurup, a town of approximately 8300 people, sits 39 kilometres east of Malmö (Luthander 2018b). Skurup was the first town I analyzed in Skåne. It is a quiet town but, upon first impression, it does appear to be built in the TOD style. What is most visually striking about it is that the majority of older buildings, built around the station, are made of red brick, giving it the aura of a classic industrial railway town. Away from the centre, the town appears to consist mostly of single-detached homes.

The history of the railway in western Skåne and its towns is different than those of the other Swedish towns studied, in that it was not constructed by public interests. Much of the farmland and means of production in the late 1800s was owned by earls, who sought a more efficient means of delivering farm products (Luthander 2018). So the earls of western Skåne banded together to construct a railway, with a station in each earl's estate, connecting them to both Malmö and Ystad, a city on the south coast (Qviström and Bengtsson 2015). As such, the station in Skurup, opened in 1874, predates the town itself, as it was located at the intersection of roads connecting four small pre-existing settlements (Luthander 2018, Qviström and Bengtsson 2015, Skurup Municipality 2011). The surrounding municipality (and much of Skåne) is still defined by rolling fields and scattered farms, as it is the most agriculturally fertile region in Sweden (Skurup Municipality 2009).

Luthander (2018) explained that, though the town is still quite car centric, there has been a gradual increase in public transit use since the train intervals were increased in 2011 (trains to Malmö run in half hour intervals during rush hours, and one hour intervals at other times) (Luthander 2018b). The time by train between Skurup and Malmö is 31 to 35 minutes, which is roughly equal to the driving time in clear traffic (Skånetrafiken 2018, Andersson Thysell 2018). As stations were opened in various parts of Malmö, and the Region of Skåne undertook initiatives to increase transit use across the region (as discussed in Chapter Three), travel by transit from Skurup became more reasonable, and the total number of passengers using Skurup's station almost doubled between 2000 and 2013 (Qviström and Bengtsson 2015). Skurup's Planning department is currently working on a project to persuade more people to switch from personal vehicles to transit (though, at the time of the interview, they were unable to give me any details about this project) (Luthander 2018).

Skurup's Planners do consider the town to be a TOD – almost all parts of the town are within one kilometre of the rail station, and the majority of demand for housing in the municipality is within the town (this is in contrast to a decade prior, when the demand was more focused on the coastline and homes being built by wealthier residents (Andersson Thysell 2018, Luthander 2018). The municipality shares a bus system with its neighbouring municipalities, which has connections to the rail system, and the Overview Plan makes numerous references to Skurup's position as one node in the larger region of Skåne (Luthander 2018, Andersson Thysell 2018, Skurup Municipality 2009). Both in policy and practice, there appears to be a high degree of integration between transit and land use planning, which is a prerequisite for an effective TOD.



Figure 36: Skurup's town centre. *Photo taken by author.*

One barrier to densification that Luthander, Andersson Thysell and Andersson (2018) refer to is personal preference. While planners in other towns considered property cost and proximity to nature as reasons for moving to their towns, the planners in Skurup note that many of their residents are looking for large houses on large lots of land, which are more attainable in small towns than in cities like Malmö. This echoes the reservations expressed in Chapter Four by Symon (2018), who questioned whether potential new residents in Perth would have any interest in compact, multi-residential housing.

The Overview Plan highlights the station as having a cohesive function as the centre of the town, with shops and businesses spread along streets on both sides of the railroad, and residential and other buildings established in an almost circular structure around the station (Skurup Municipality 2009). The central area is characterized by apartment buildings between two and four stories high, many of which have businesses at the ground level. Outside of the centre, the town consists mostly of low-density residential dwellings. The planning department prioritizes all types of housing – apartments and villas, rental and owned housing (Luthander, Andersson Thysell and Andersson 2018). Compared to Gnesta, in particular, there seems to be more willingness in Skurup to plan for the type of housing the market is demanding, rather than a more idealistic Garden City.

At the time of the interview, the planning department was working on a master plan for a new residential area, called Västeräng, in the southwest of the town. It will be somewhat mixed-use in nature, with a mix of villas, multi-family houses, and a pre-school. Though there is no plan for commercial space within the development itself, its proximity to the town centre means new residents will have access to shops, services and transit (Andersson 2018b). The municipality hosts open houses, where staff members show they have drafted to developers in order to attract them to build according to said plans (Luthander 2018).

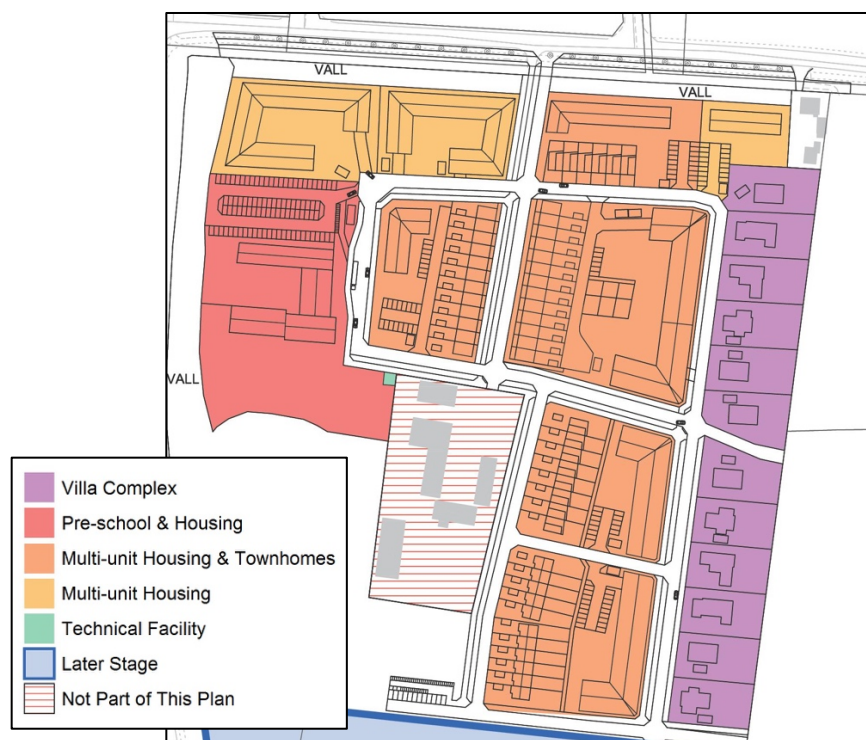


Figure 37: Plan for Västeräng neighbourhood. *Courtesy of Andersson 2018b.*

In terms of design for new buildings, the municipality encourages developers to use the same red bricks that characterize the downtown core (a tradition that stems from historical brick factories in the area) (Luthander 2018). The town’s historical centre, with its red brick buildings, has been declared a national interest, and so the municipality makes efforts to preserve and extend this (Skurup Municipality 2009). Though this policy does not appear to extend to the outer residential areas, Luthander does note that wooden facades are uncommon; since the municipality only has approximately four percent tree coverage, wood is in short supply (Luthander 2018).



Figure 38: Skurup’s empty streets on a Monday morning. *Photo taken by author.*

Like Tierp, Skurup has had difficulty attracting and retaining businesses. Though the town has a cinema and a handful of restaurants, Luthander (2018) laments that there is not a sufficient supply of restaurants and entertainment options to satiate the residents. Small retailers occasionally open locations in Skurup, but close or relocate after a short time, since it is so convenient for people to take the train or drive into Malmö, where everything is in the same place. The struggle to attract commercial activity is further evidence of a surprising trend, where increased connectivity can turn a town into more of a single-use community. I did not anticipate this at the outset of this research. However, the municipality has had more success in attracting larger-scale industrial businesses, including a warehouse – currently being constructed – that will be a showroom for agricultural machines (Luthander 2018). The Overview Plan considers Skurup to have an advantageous

location for businesses to locate, as it is in close proximity to a large metropolis (by Swedish standards) and is well-connected to the region as a whole (Skurup Municipality 2009). While it may be difficult to retain point-of-sale businesses, the interconnectivity of Skåne appears to benefit Skurup in attracting larger-scale businesses that can create jobs.

As with other small towns, one of the major factors influencing growth is the lower cost of housing. Luthander (2018) points out that the average home price is approximately one third lower than even Skurup's western neighbour Svedala. This attracts residents from a mix of income levels to the municipality, though most higher-income newcomers locate along the coast, rather than in the town (Andersson Thysell 2018). Despite this low cost, the town has not been meeting its target of building 100 new dwelling units per year, instead building between 40 and 50 (Andersson 2018). Luthander (2018) points to the global economy as a partial culprit:

The economic crisis in 2009 affected Skurup quite a lot, and there were several years that we didn't build anything, because there was no interest from the building companies to build here. Malmö was still developing quite a lot, because it's one of the largest cities in Sweden, but small towns like Skurup didn't grow at all.

This is further evidence that small towns can benefit from housing unaffordability in cities, and that they suffer disproportionately when the market takes a downturn.



Figure 39: Single-detached residences in Skurup.
Photo taken by author.



Figure 40: Multi-unit residences in Skurup.
Photo taken by author.

As with the more northerly Swedish towns, the planning department in Skurup is promoting and providing for active transportation by adding bicycle trails through the town and

municipality (Andersson Thysell 2018). The goal is to make it faster to cycle than to drive to the railway station (Luthander 2018). This initiative represents materialization of goals set forth by the Overview Plan, which puts a strong focus on sustainable development, breaking sustainability into three categories – environmental, economic, and cultural sustainability. Some of the stated goals to achieve these pillars of sustainability are: (a) taking cultural and natural heritage features, as well as the existing transit network, into account when planning new development; (b) maintaining clear boundaries between urban areas and the surrounding countryside and (c) ensuring that public places within residential areas are of high quality and are aesthetically pleasing (Skurup Municipality 2009). Qviström (2017) argues that the municipality places more emphasis on the aesthetic value of said buffer than it does on more substantive motivations such as mitigating sprawl and protecting agricultural land from development.

Qviström and Bengtsson (2015) point to an internal conflict with the town’s own self-definition as a TOD. The Overview Plan defines Skurup both a small-scale town close to nature and the farming landscape, and as a central location within an expanding region, close to the pulsating city life of Malmö and Copenhagen (Skurup Municipality 2009). Can a place be at once a small, countryside town, and a node in a major urban region?



Figure 41: The railway tracks cut through Skurup’s centre. *Photo taken by author.*

Case Study 4: Svedala

I arrived in Svedala on April 24th, 2018, and met with Karin Gullberg, Svedala's City Architect. Svedala is the largest town I chose as a case study, with a population of over 12,000. It is also the closest of the four towns to its nearest city, being approximately 21 kilometres southeast of Malmö's central station (Statistics Sweden 2017). Its large size, compared to the other towns studied, is clear upon first arrival. Svedala, like Skurup, is striking due to the use of red brick. It is also quiet, but is a bit more physically imposing, with larger buildings and an urban-style town square. Many of the newer buildings immediately outside the core are mid-rise apartment buildings.



Figure 42: Svedala's central square. *Photo taken by author.*

Gullberg began our conversation by explaining the history of the town. As with its neighbour Skurup, Svedala's station – and the network of which it is part – was constructed by a coalition of wealthy landowners in the mid-1800s (Gullberg 2018). The town grew around the railway station, supported by a few industries: sugar production, red brick production, and a company called Sandvik, established in 1862, that develops and constructs machinery for mining (Gullberg 2018, Sandvik 2018).

Gullberg indicates that TOD is the primary planning doctrine in Skåne in general, and Svedala in particular, wherein the station area is the most important node. The train has the highest status in the transportation hierarchy, followed by buses and active transportation, and finally cars.



Figure 43: Map of Svedala. Courtesy of Open Street Map 2019.

She refers to the train station and network as the “our planning heart” – one can live almost anywhere in Skåne and commute to work (Gullberg 2018). Svedala, being in such close proximity to Malmö and the Sturup Airport, is in an especially good position to maximize on the opportunities the transit network offers.

The town’s original design is built in a way that facilitates transit and active transportation. The town centre is dense, with the above-mentioned central square designed by an architect from Malmö. Gullberg (2018) describes it as “city-like”, and the town has the ambition of becoming the “city of the country”, with a mix of shops, restaurants, and cultural places, as well as different types and tenures of housing centred around the rail station, with larger apartment buildings prioritized for placement in immediate proximity to the station and single-detached homes at the periphery of the town. The town also has plans for walkways across the tracks, to mitigate the effect the railway has of cutting the town in half (Svedala Municipality 2018). The municipality supports active transportation by providing bicycle and walking paths (with priority placed on linking schools to residential areas) (Svedala Municipality 2018). Recently, Gullberg undertook a project to increase the convenience and aesthetic incentive to use bicycles and take the train. The train platform was somewhat derelict when she started her role as the City Architect, so she had the area renovated, with new brick walls, additional lighting, bicycle parking, and reduced area where vehicles are permitted, making it more welcoming to commuters.



Figure 44: Bicycle parking at Svedala’s train platform. *Photo taken by author.*

As with all towns that practice TOD, Gullberg and the municipality's Overview Plan both emphasize the need to become more sustainable, to reduce carbon emissions, and to limit the destruction of the natural environment via sprawl (Svedala Municipality 2018; Gullberg 2018). This transit-oriented mandate is also intended to increase the quality of life for more residents, as the variety of housing types in close proximity to one another, as well as jobs, services, and transit, enables residents to stay in the same area through various stages of life, upsizing and downsizing as required (Svedala Municipality 2018).

The majority of housing in the town is made up of single-detached homes, but recent developments have had a larger share of multi-unit and apartment style housing. The policies also promote infill, particularly in proximity to the station (Svedala Municipality 2018; Gullberg 2018). That being said, Svedala is still a town, and not a city. As such, the municipality enforces that a human scale be maintained; there are no skyscrapers to be found in Svedala (Gullberg 2018). As in Skurup, the municipality encourages developers to use red brick to continue the town's historical character, though the use of this material is more evident in the town's core than in any of the newer developments (Gullberg 2018).



Figure 45: A mid-rise apartment building in the background of a relatively dense residential area near Svedala's centre. *Photo taken by author.*

Recently, the town has had no issue attracting developers. As the region's population has grown quickly over the last several years, and property values in Malmö have been rising, people

have been looking farther from the city for housing. Gullberg (2018) says that new applications have come in every week, at such a high rate that the municipal staff has been overworked. While other towns may have to fight to attract developers, Svedala is being careful not to issue permits too quickly, in order to ensure that development is in line with what the town is trying to achieve, and that the town grows in population without sprawling and swallowing up the natural surroundings. The municipality is also trying to purchase land itself, in order to build schools and other necessary services to keep up with growth (Gullberg 2018).

As with Tierp and Skurup, the train station and convenience of commuting to the city leave businesses with less incentive to locate themselves in Svedala:

You compete with things you can buy in Malmö, when you go on the train. That's the bad thing about the train station ... So the closer you get to the big city, it's easier to get on a train and you're in Emporia [a major shopping mall in Malmö]. You can get everything. So it's hard, in fact, for our people who are keeping companies (Gullberg 2018).

To combat this, the municipality is undertaking serious economic development initiatives. Through public consultation, particularly with business operators and owners of commercial buildings in the town's core, the municipality is attempting to determine what kinds of businesses and services are missing from the town, what the town needs, and what it can reasonably support. But the competition from urban shopping centres and internet retailers is fierce, and the municipality is struggling to find solutions (Gullberg 2018).



Figure 46: A mixed-use complex in Svedala. *Photo taken by author.*

Though the Overview Plan anticipates that the proportion of elderly population will increase (Svedala Municipality 2018), Gullberg (2018) points out that Svedala is actually one of Skåne's youngest municipalities, demographically. She attributes the influx of young families to the affordability of housing and the abundance of good schools. The recent wave of immigration from Syria has had an impact as well: Svedala has seen some Syrians move to the town in recent years, but also native Swedes moving away from Malmö, since immigration has caused somewhat of a housing squeeze in the city (Gullberg 2018). The variation of reasons for new residents moving to Svedala means that there are a variety of income levels, and a demand for both rental and owned housing (Svedala Municipality 2018; Gullberg 2018).



Figure 47: A mix of residential densities in Svedala. *Photo taken by author.*

This connection to nature is a big part of what attracts people to live in Svedala. The town offers easy access to the surrounding natural area, including its lakes and golf courses, and there are deep historical ties between the town and the surrounding agricultural area (Svedala Municipality 2018; Gullberg 2018). Businesses and the tourism industry are starting to take advantage of the setting, with horse riding and classes becoming a common past-time, and restaurants and bakeries being opened up in the rural area, producing food from locally-sourced products (Gullberg 2018). The Overview Plan calls for the tourism industry to be strengthened in order to bolster the local economy (Svedala Municipality 2018).

Gullberg (2018) believes the young trending demographic of Svedala may be at least partially a result of a cultural shift. In direct contradiction to the research from Okulicz-Kozaryn and Valente (2018), she has noticed a new era of “flower power”: as little as five to 10 years ago, young people were pouring into the cities. But, as they start having families, they are moving to areas where they can be closer to nature and grow their own food. She says they seem to be more environmentally conscious, more connected to nature, and less attached to cars. If these trends extend beyond Svedala – and beyond Sweden – they would herald exactly the kind of demographic to whom the concept of small-town TODs would appeal. Conversely, if people are moving to these towns for the quiet, small-town lifestyle, the goal of trying to turn a small town into a TOD may be fundamentally at odds with the motivation people have for moving to small towns in the first place.

However, Gullberg (2018) offers some insight that the division between transit-oriented and car-oriented lifestyles may be less a generational divide, and more a geographical one:

We were very inspired by America in the fifties. The fifties and sixties were [when] Sweden [was] very into cars. And everything was America. You should drive your car, you didn't need any walking areas, and you should smoke ... Everything was organized [around] the car ... For us it is [an American phenomenon]. Because in Sweden, before, we had these railway stations, and we built these very dense, small areas, and everything was located from the railways. Because Sweden is very long, and all the nodes and the developed cities were connected to railway stations.

This speaks to the contrast between Sweden and North America, and serves as an indication of how much more difficult an endeavour it is to implement TOD in this part of the world. For Sweden, car-oriented planning was only practiced for a short period, and was a result of American influence. In North America, it is the way our towns and cities have been built for the better part of a century. The more ingrained it is, the more difficult it is to overcome.



Figure 48: A commercial-residential complex across from Svedala's central square. *Photo taken by author.*

Lessons from the Swedish Towns

- The railway station is the one of the most important factors in each town's growth, both in terms of the built form surrounding the station and the service it provides, and increased train intervals have stimulated growth even more.
- While none are as visually striking as Perth (with the possible exception of Gnesta), all four Swedish towns have TOD characteristics in their built forms. This is mostly due to the fact that each town was built around a rail station, and that Sweden does not have as extensive a history as North America of building cities and towns for automobiles.
- All four municipalities have policies that actively promote transit-oriented development, specifically encouraging density around the rail stations, infill, active transportation, and mixed-use developments. Particularly in the cases of Skurup and Svedala, the application of these policies is bolstered by the support received from the Region of Skåne. And, in all four cases, the towns benefit from the nation's declaration of the rail stations as national interests.
- The municipalities create master plans for new neighbourhoods themselves. Sometimes they hire developers to build on public land, while other times they sell the land to developers, who are then obligated to build in accordance with the municipal master plan.
- The planners in all four towns acknowledge that they have benefited from increasing unaffordability in the cities. As housing prices rise in major cities like Stockholm, Malmö

and Uppsala, people look farther from the city for housing options, and these four satellite towns have all had their populations rise as a result.

- Each planner considers the compactness of his or her respective town to be a virtue, as it allows all residents access to the natural environment outside the town, and relief from the crowded, fast-paced atmosphere of the city.
- The planners in Gnesta and Svedala espouse the concept of their towns being “city-like”, particularly with the existence or addition of a central square (Enqvist 2018; Gullberg 2018). This serves as evidence that a large urban concept can be scaled down for a small urban settlement.
- Despite the progressive policies and practice of developing the towns as TODs, the rates of personal automobile use are still significant, and there is a high demand for single-detached homes.
- Though each town is indeed a regional service centre to some extent, they are all much more closely connected to their nearest cities than Perth is to Ottawa.

Perhaps the most significant (and certainly the most unexpected) finding from the Swedish towns is the correlation between prevalent rail transit and a dearth of businesses, and retail in particular (though it was not evident that Gavle experiences this issue). This is contrary to the theories of TOD and New Urbanism – that building densely, and around transit, will help a town to become more of a complete, mixed-use community (Calthorpe 1993; Bertolini 1996; Dittmar and Poticha 2003; Lund 2006). The Swedish planners seem to consider it a failure. Is it really a failure though? The towns have been successful in establishing and maintaining a compact built form – so successful that their residents can reach the city from their homes without requiring cars. Sprawl and automobile dependency have been mitigated; the only failure is that residents have to hop on a train to go shopping. If every benchmark but one has been achieved, there is a strong argument to be made that these small town TODs in Sweden should be considered successes, and that the standards by which one judges a large urban TOD versus a small urban TOD should differ.

Case Study 5: Smiths Falls

I visited Smiths Falls' municipal office on August 22nd, 2018, and interviewed Karl Grenke, the town's Senior Planner, and Ingrid Bron, the town's Economic Development Coordinator, on August 22nd, 2018 (though Bron has since moved on to a similar role in Revelstoke, B.C.) ("City of Revelstoke" 2018). Smiths Falls, a town that sits approximately 19 kilometres west of Perth and had a population just below 9000 in 2016 (Statistics Canada 2016b), is an ideal comparative case study for a simple reason – it has retained a commuter railway station since 1883 (Town of Smiths Falls 2016). Its status as a railway town informed much of its development, and it has historically been an industrial, working-class town (Grenke 2018).

Grenke and Bron provided insight about recent developments in particular – Smiths Falls has experienced an economic resurgence over the last few years, thanks to the cannabis industry (Bagnall 2018). The town, which is more working-class than Perth and is home to fewer retirees, experienced a major economic downturn in 2008 and 2009, when Hershey, the town's largest employer, relocated, and two of its other large employers – Stanley Tools, a steel production plant, and Rideau Regional, a mental health care centre – closed. The closure of these three employers lost the town 1500 jobs – approximately one third of the workforce (Bagnall 2018). Over the next eight years, the town's population shrank slightly, even while other Ottawa-area towns like Carleton Place grew at a rapid pace, and nearly half the population was not connected to the labour force (Statistics Canada 2016b; Bagnall 2018).

Smiths Falls' luck turned in 2015, when the formerly-abandoned Hershey factory reopened as Tweed, a cannabis production factory (the corporation would later rename itself Canopy Growth, though the Smiths Falls factory alone retains the Tweed name) (Bagnall 2018; Tweed 2019). The company brings in between 10 and 50 new hires each week, and is expecting to surpass 1000 employees in 2019, replacing a large portion of the jobs lost a decade earlier (Bagnall 2018; Shaw 2018; Bron 2018). Its success and continued growth have had a major impact on the town. The housing market has spiked, with property values rising quickly and new residences being developed at a rate not seen in years. These have come mostly in the form of single-detached subdivisions, but there has been increasing demand for townhomes and apartment-style infill (Grenke 2018; Bagnall 2018). The increase in population, and the jobs created by Tweed, have had a positive effect on commercial growth and other areas of employment, with downtown

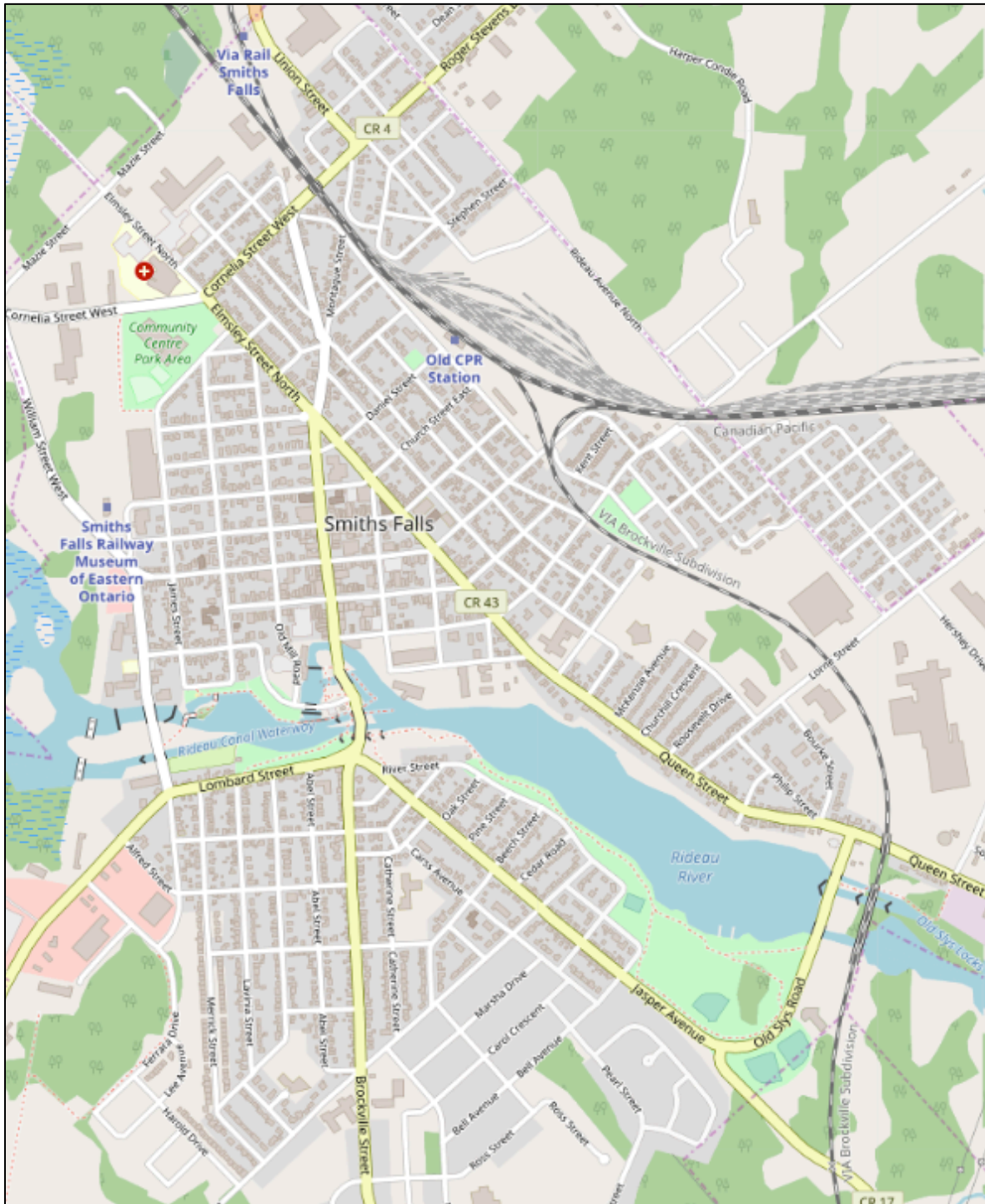


Figure 49: Map of Smiths Falls. *Courtesy of Open Street Map 2019.*

storefronts becoming repopulated, tourist services coming to the town, and an influx of young, well-educated entrepreneurs opening small businesses (Bron 2018). Canopy Growth itself has invested in the community as well, with owner Bruce Linton purchasing property for residential development (Bron 2018).



Figure 50: Tweed's visitor centre. *Courtesy of Tweed 2019b.*

The politicians and bureaucrats in Smiths Falls have been taking advantage of this opportunity, though they acknowledge the precipitousness of centring the economy around a single organization (Greaves 2018; Grenke and Bron 2018). The people of Smiths Falls know the danger of having a single-sector local economy first-hand, and the town is using its good fortune to diversify (Bagnall 2018; Grenke and Bron 2018). The prospect of centring a small town's economy around an industry as untested as cannabis production is intriguing, and could itself be a topic for a major research paper.

All of the above, though, leaves the main question unanswered: how does the train station tie into all this growth and development? The Town does have policies that promote such things as infill, multi-residential development, and commercial development in the downtown core (Grenke 2018). The Downtown Master Plan calls for a number of changes that are in the vein of New Urbanism, including “an inter-connected downtown and waterfront area, enhanced gateway and influence area definition, Beckwith Street streetscape improvements, improved grid road system, pedestrian connections within downtown and along the waterfront, and mixed-use signature waterfront redevelopment sites” (Town of Smiths Falls 2013, p. 19). Though these

policies predate the recent boom, recent developments have provided an opportunity to implement them. However, despite the presence of the train station, the integration of these features with commuter rail does not appear to have even been considered.

The Town's Official Plan does contain a handful of policies that contemplate development around the train station, though collectively these policies fill a little over a page. The Official Plan calls for lands adjacent to the train station to be redeveloped and intensified into a mixed-use area, containing both housing and employment, which would support workers who may choose to commute to or from Smiths Falls, and would encourage the reduction of automobile trips (Town of Smiths Falls 2016). These policies are quite general, though, and do not appear to have made a discernable impact as of yet.



Figure 51: Smiths Falls' former railway station – now a theatre. *Courtesy of Skura 2018.*

This is at least partially due to the location. The station is on the northern edge of town, near the border with the Township of Montague. It had previously been more centrally located in the town, but moved to the current location in 2011 (VIA Rail 2011). Adam Bentley, a Master of Urban and Regional Planning student at Queen's University, wrote his own major research paper in 2010 about the impending relocation, and assessed each location's capacity to facilitate transit-oriented development. He determined that the previous location, at the intersection of Victoria Avenue and Daniel Street, was preferable for a number of reasons. The area within a 600-metre radius includes a mix of commercial, residential, and industrial land, and the station is less than

500 metres from the historic core of the town on Beckwith Street. The site area has a mixed-use land use pattern, a grid-style road network, a comprehensive pedestrian route network, and historical precedent for infill and intensification (Bentley 2010). Bentley added that the policies of the time encouraged TOD-style development in the downtown core (though the municipal planning documents discussed in this paper were published after his report, they do indeed continue this trend of promoting intensification and walkability in the downtown core), and that the mix and intensity of uses meant that there was activity at all times of day, and opportunity to attract new businesses and organizations.



Figure 52: Smiths Falls' current VIA station. *Courtesy of Canadian Public Transit Discussion Board Wiki 2013.*

Conversely, the site where the station now sits is nearly one and a half kilometres from the downtown core, and has substantially fewer uses, with the zoning in the area allowing for rural, industrial, and auto-oriented development (Bentley, though, seems to regard zoning as being absolute; from my experience, re-zoning of properties in small municipalities is a relatively straightforward process, as long as it is justifiable under the policy framework). More importantly, the site is farther from both residential and commercial areas, not as well connected to the pedestrian pathway network, and really only conveniently accessible by car (Bentley 2010). Several of the interviewees (Kirkham 2018; Greaves 2018; Grenke 2018) agree with Bentley – that the current location of the station is not conducive to pedestrian use, creating a barrier in the way of attracting commuters. Location is not the only issue, however. Service levels are quite low,

with only three arrivals and three departures to and from Ottawa each day (VIA Rail 2019). Grenke and Bron (2018) comment that the intervals are not sufficient to provide for regular commuting.

While they admit that the current impact of the station is lacking, Grenke and Bron express optimism about the future of the site. Grenke (2018) believes that, as Tweed continues to expand and the town's economy with it, housing demand will increase, and the station area may become more attractive to developers once the central parts of the town have been filled in. Bron (2018) anticipates that, as it grows, Tweed will have to cast a larger net to attract its workforce. This may lead to more commuters coming from Ottawa, which would put demand on VIA Rail to increase service levels.

Despite this optimism for the future, the station does not appear to have a great impact at the present, in spite of the town's current high rate of growth, the booming local economy, and the enforcement of policies in the vein of TOD. As with the Swedish cases, Smiths Falls does not fit the prescribed mould of TODs. However, while the Swedish cases indicate that transit connectivity does not necessarily lead to a mix of uses, the experience of Smiths Falls indicates that dense, mixed-use development and the existence of a rail station are independent of one another. What this means for Perth is that appropriate policies have to be in place to take advantage of the rail station, should it be built.



Figure 53: Beckwith Street in Smiths Falls. *Courtesy of Lanark County Tourism 2019.*

Chapter Six – A TOD Plan for Perth

Though many previous attempts at TOD have not been deemed successes by researchers, this assessment stems in part from the fact that TODs are intended to be a catch-all solution for a city's ills: protecting the natural landscape, providing more affordable housing, creating walkable, complete communities, mitigating car use, and providing a mix of densities and uses where people can live, work and play (Belzer and Autler 2002; Cervero 2007; Feldman, Lewis and Schiff 2012). Perhaps, in diverse metropolis, this is not a bold expectation. But in a town like Perth, with a small population and even smaller rate of growth, expectations have to be tempered. Is TOD possible in Perth? I believe it is. But it needs not be radical.

As this paper has addressed, Perth's existing design, architecture, and character already possess New Urbanist features. Can this be extended? A heritage building is not a heritage building simply because it is old. If the new architecture and urban design of Perth were reflective of what exists, it too would become part of the heritage core. Take, for example, the ruined historic cores of Poland's cities after the Second World War, rebuilt from memory and virtually indistinguishable from the demolished architecture (Jeleński 2018). This kind of phoenix-like rebirth is not uncommon in history, though of course we cannot hope for disaster to spark inspiration. Nor should we require it.

What would a transit-oriented development plan for Perth look like? The level of ambition cannot outweigh the capacity the municipality has to stoke change. As noted previously in this paper, development in Ontario is largely developer-driven, and the municipality often plays the role of a facilitator. It may be unrealistic to expect VIA Rail to become a commuter rail service, or for Perth to become a true TOD. Perth does not seem to fit into any of the TOD typologies discussed in Chapter Two; the closest category is the "commuter town" (Dittmar and Poticha 2003). But Perth is not defined by its relationship to Ottawa, as the concept of a commuter town implies. Does this mean that TOD is a poor model for a relatively isolated town like Perth? Perhaps the model simply needs to be reconceptualized for Canadian towns, and for small towns in general. As Bertolini (1996), Dittmar and Poticha (2003) discuss, the "node" aspect of TOD can often be at odds with the "place" aspect. Perth may never be a true node, but applying TOD principles to the station area could be successful in allowing Perth's population and economy to grow while

retaining its sense of place. By borrowing the principles of TOD, it may be able to grow in a way that maximizes quality of life for more residents, and minimizes environmental impacts.

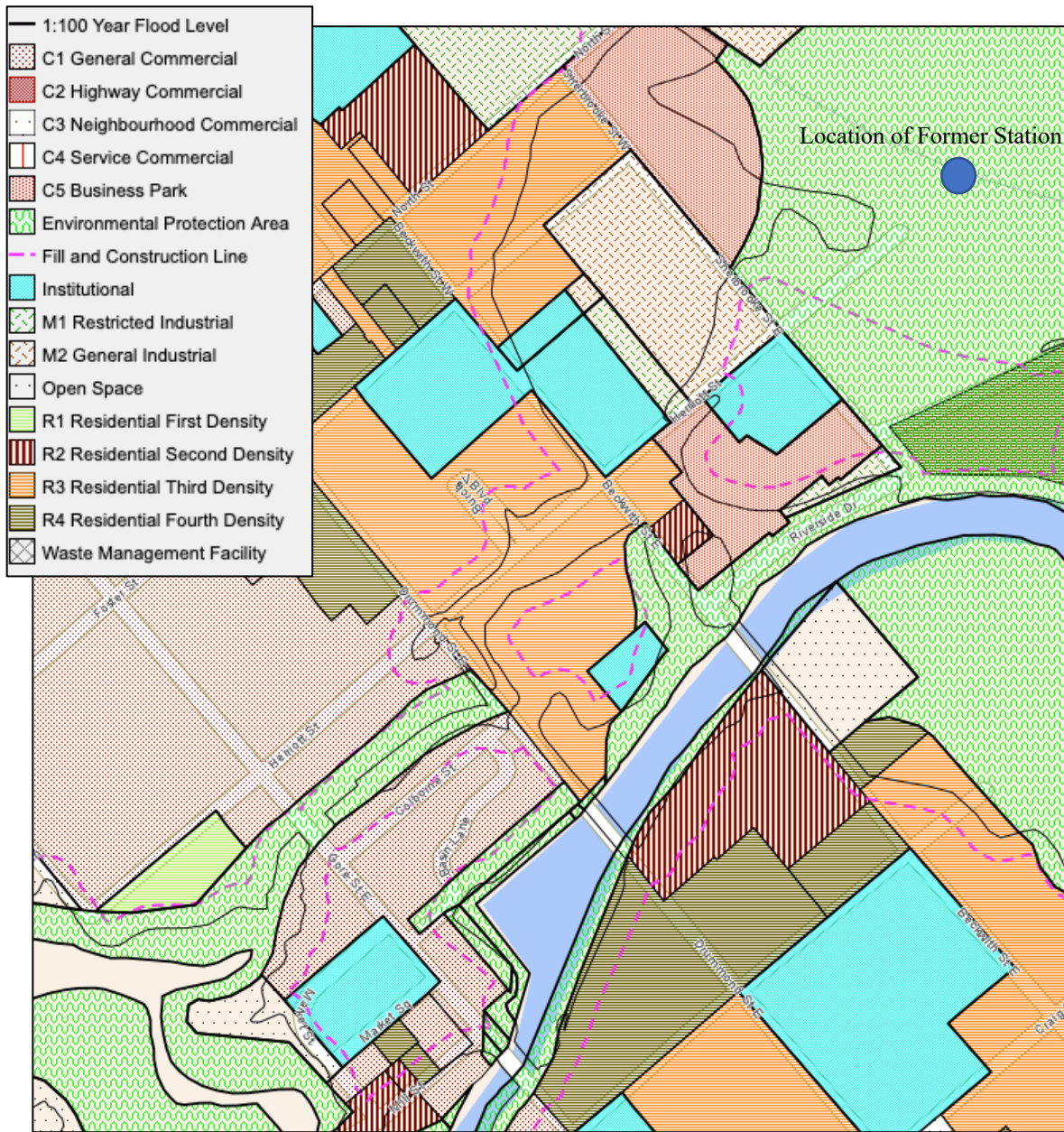


Figure 54: Actual Zoning Map of Herriott Street, Gore Street, and the former rail station location.
Courtesy of Town of Perth 2017.

The first consideration is the location of the station itself. Though a number of points along the track could be considered, the former station’s location at the east end of Herriott Street, as recommended by both Mayor Fenik (2018) and Mary Kirkham (2018), is ideal. Despite the

presence of wetlands to the east, and the fact that the immediate surroundings are largely undeveloped, it has several features which make the prospect of its development into a TOD feasible. First, and most obviously, is its proximity to the heritage core, which would make walking practical – this location is only 550 metres from Gore Street, at the heart of Perth’s historic core and tourist district. Second is the general walkability of the area. If the station were to be located on the western edge of town, where the tracks run between Highway 7 and Christie Lake Road, could only be accessed conveniently by car. Despite a relative mix of uses in the area, it is not at a human scale, with large parking lots, massive setbacks from the road, and a complete lack of sidewalks. Third (and this is closely connected to the first two), the lack of walkability in the other potential location in the western part of the town would not appeal to visitors. It would likely become a suburban-style station, most closely reflecting Dittmar and Poticha’s “neighbourhood transit zone” (2003), and would be unlikely to stimulate TOD. Conversely, the wetlands by the former Herriott street station would serve as a natural border, and would necessitate intensification rather than sprawl.

The immediate surroundings of this hypothetical station include the former Brown Shoe and Perth Soap factory buildings. Brown Shoe has already been subject to adaptive reuse, and is now host to a number of businesses. Perth Soap has been owned and operated by the Shandex Group as a soap factory since 2011 (Weir 2018), but is of a design and style that would be suitable for retrofitting, with a commercial ground floor and residential units above.

Other redevelopment in the area would necessarily be more gradual. The first step would involve a re-zoning of Herriott Street, covering the entire 550 metre strip from the station to Gore Street. The street would be zoned commercial-residential, with compact, two to three-storey development enforced. This would almost certainly lead to push back from residents on the street, fearing a potential draconian practice of forcing them to redevelop, or otherwise leave their homes. Of course, this would not be the case, as the existing homes would be protected as legal non-conforming structures. Redevelopment of the privately-owned residential lots could only be initiated by the landowners, and hence would have to occur gradually.



Figure 55: The Perth Soap factory building, now Shandex Personal Care Manufacturing Inc. *Photo taken by author.*

There are a number of properties that could be redeveloped more quickly. The Drummond, North Elmsley and Tay Valley Fire Department building and the former Service Canada building (now a Canada Post depot) are both public, and could be relocated to other parts of town, since neither benefits from being in an area with heavy foot traffic. Parking areas can be built upon, and new buildings can strategically infill areas where homes have large setbacks from sidewalks. The Town could also invest in active transportation infrastructure. This could include a municipal bike sharing system, located at the station, and clearly delineated bicycle paths along as many streets as possible. These steps should be gradual, and should be taken without seriously diminishing space for cars. Positive incentives may alleviate the requirement for negative incentives, though those involved would have to be patient, as change would occur slowly.

Many of Perth's major streets, including Gore and Herriott, have on-street parking. As Perth is currently only conveniently accessible by automobile, proposing to replace all street parking with bicycle paths would be an overreach. However, Herriott Street could be used as a pilot, with the cycling network expanded over time. Alternately, since the downtown core of Perth already has slow traffic movement, the speed limits could be reduced, and signage could be erected around the town, informing drivers that the streets are shared with cyclists.

Also, if the municipality were to frame the secondary plan as being in conjunction with the station, there may be less pushback. The potential for a new VIA station is anticipated to have broad public support (Symon 2018; Fenik 2018). Drawing a connection between the two may make the public consultation process easier, especially if it were framed like this: even if the station were built, the train would not necessarily stop every time in Perth, instead making expedient trips between larger destinations. If Perth made an effort to build up ridership by way of urban design, it may persuade VIA to have trains stop more frequently in the town.

As well, to mitigate the commuter-town impact the rail station might have on Perth, the town should proportionately increase the features that make it a tourist attraction and regional hub. The town already has policies in place that promote this, including the encouragement of urban design that reflects the heritage architecture, and the improvement of an active transportation network that provides links to the natural environment and recreation areas. Expanding upon the features that give it a sense of place would prevent it from losing its soul if the population were to rise.

A major caveat to this plan is the presence of flood plain lands in proximity to the site of the former Herriott Street station. As shown in Figure 54, much of the land in proximity to the former station is within the “1:100 Year Flood Level”, and even more land is encompassed within the “Fill and Construction Line”, within which development is prohibited (Town of Perth 2017). This might necessitate the station being in a location farther from the downtown core (or, at the very least, it may necessitate new development being farther from the station). The example of Smiths Falls indicates that this might limit the potential impact of the railway station on development. However, in a town as small in physical size and population as Perth, it might make more sense to consider the entire town to be the service area of the station, rather than a set radius around the station itself. If the entire town is the “transit-oriented development”, then the town as a whole serves to benefit from the station’s existence, regardless of its specific location within the town.

Chapter Seven – Analysis and Conclusion

I commenced this research looking for a causal relationship, expecting some kind of model that could be borrowed from the Swedish towns and applied directly to Perth. As it turns out, it is not nearly this straightforward. The Swedish TODs are not absolute successes, and the infrastructure and framework in place (particularly surrounding regional transit) mean that there are challenges transit-oriented development in Canada must overcome that would not be faced in Sweden.

There is a tension between the literature reviewed and the case studies. The scholarship surrounding transit-oriented development is focused on large urban areas, and the applicability of these theories to small towns is not thoroughly addressed. Dittmar and Poticha (2003), in their typology of TODs, regard small towns as almost an afterthought, devoting only three sentences to the “Commuter Town”. This definition does seem to apply to the four Swedish towns. But it does not apply to Perth. Perth warrants the creation of a new category: “Regional Urban Centre”.

There were a number of themes and trends that came out of this research, some of which were expected, but some of which came as a surprise. As a sign, perhaps, of both success and failure, I conclude with as many questions as answers.

The Importance of Policy

Can a rail station, in itself, stimulate transit-oriented development? It can certainly help to stimulate population growth, but it is only effective when combined with other factors. As the example of Smiths Falls illuminates, the location of the train station and service levels make a huge impact. Smiths Falls is in a major economic boom, and yet the train station has minimal impact on the town.

Though transit stations and TOD policy complement one another, there does not appear to be a causal effect between the two. The existence of a commuter rail station in itself may not have any influence over the built form of a town if the policies in place do not explicitly promote mixed-use densification around said station. Considering that policy is a prerequisite to TOD, it might make more sense to conceptualize this potential station as a “gift” to the town, rather than as a vital requirement for the town to be developed properly (Kusno 2017). Perth is not suffering from its lack of connection to the city. It does not have major housing or unemployment issues. If a station

is built, it will not be out of necessity, but rather because Perth happens to be on the trajectory of the train. What can the town do with it? Rail is an instrumental tool, but is just one element of a complete community.

There is an old adage that people will not change their behaviour until it is convenient for them to do so. This applies to developers. Developers will not build TODs unless it is convenient to do so, and there are a number of strategies that can be used to make it convenient. First, the policies have to be in place that enforce this style of development in desired areas. Second, the municipality can provide financial incentive, in the form of reduced development charges, or selling land at discounted prices to developers willing to build to municipal standards (assuming the municipality is willing and financially capable of assuming land). Third, municipal planners should take steps to educate developers about TOD, and to streamline the application and approvals process (Feldman, Lewis and Schiff 2012). Of course, the planners themselves need to be educated about TOD first.

The Impact of Housing Prices and the Market

The research indicates that small towns and peripheral areas benefit from housing crises in the cities. As property values rise in the urban centres, people look farther out for housing options. This phenomenon came up in multiple interviews; the planners in all four Swedish towns referred to the comparatively low housing prices as one of the main reasons for residential population growth (Nyström 2018; Enqvist 2018; Luthander 2018; Gullberg 2018). In this sense, it benefits small urban municipalities to be opportunistic, and to take advantage of opportunities that they did not themselves create.

Could there be a link between the fact that these towns benefit from housing affordability issues in the city, and the compact development being built in the towns? In growing as TODs, are the towns meeting the same market as the cities, thereby making them more susceptible to the housing economy? If they were more willing to meet a different market (as some have argued Canadian towns are), and provide housing for people who want space and privacy, might their housing market be more inelastic? Perhaps not. As discussed in Chapter Four, Symon (2018) has observed developers in the Ottawa area looking farther from the city to build single-use, residential subdivisions. This is an example of exactly the same type of development being constructed within the city limits and at the periphery, and it shows that the positive correlation between property

values and population growth outside of the urban area seems to occur regardless of the type of housing being provided. This indicates that encouraging TOD would not cause small towns to be any more susceptible to housing market trends.

Bedroom Communities and the Importance of Two-Direction Mobility

An unexpected finding of this research is that the availability of rail transit seems to often have a negative correlation with business retention. Out of four municipalities in Sweden with whom interviews were conducted, three stated that it was difficult for them to attract and retain businesses in the towns (Nyström 2018; Luthander 2018; Gullberg 2018). The proximity and ease of access to the urban centre mean that residents of the towns use a lot of services in the city, and businesses in the towns do not get the market share they would if the town were more remote. People shop where they work, rather than where they live. The towns become bedroom communities, to some extent, where there is residential growth, but growth in employment and commercial sectors is not as high. The planners, architects and theorists who promote transit-oriented development describe it as a method of creating complete communities that have a mix of residential, employment, shopping, and recreational opportunities, where the increased connectivity, and status as a node, will help the TOD to become a more complete community. (Calthorpe 1993; Bertolini 1996; Dittmar and Poticha 2003; Lund 2006). The case studies in Sweden indicate that connectivity may not have the desired effect.

Perth, it turns out, is not directly comparable to these towns for a couple of reasons. All of these towns define themselves based on their nearest city. They see themselves as bedroom communities (though they do not use that phrase), and use the ease of access as a selling point to attract new residents. Perth, on the other hand, is the regional urban centre for a large rural area. As discussed in Chapter Four, it has a residential population of 5900 and a working population of 6200. Perth's dependence on Ottawa is much weaker than the Swedish towns' dependence on each of their respective nearest cities.

However, even if there were a risk that the commuter rail station may lead Perth to become more of a bedroom community, the Town and its representatives have a built-in method to combat that. There was emphasis from all four interviewees who discussed Perth on ensuring that the transit moves in both directions (Kirkham 2018; Symon 2018; Greaves 2018; Fenik 2018). The

train should be a tool for people to come into the community, and not just to leave and work in the city.

Municipalities have two methods by which they can bring people in. The first is employment opportunities. If there are job opportunities in the town, people may travel from the city, or from neighbouring towns connected by rail, to work in the town. Perth is already a large employment centre for a town of its population, and its major employers are struggling to fill positions (Symon 2018). A new option for commuters would increase the pool of available labour.

The second method of attracting people is tourism. The town or municipality must have a method of attracting visitors. Perth is already a local tourist destination, with the surviving 19th century Scottish architecture in the core, the number of boutique stores and restaurants, the numerous festivals, and the surrounding lakes and rivers (though, it must be noted, the surrounding lakes and rivers are only accessible by car). People are attracted to Perth because of the geography and the architectural history, which makes it an impractical model for other towns to use in practice, as the largest factors driving tourism were not created by the people in charge of stimulating it. Much of the existing scholarship on the relationship between tourism regards larger cities, and looks at tourism as a method for growth and development (Harrill 2004; Shone and Memon 2008; Londo and Vela 2014; Wise 2016; Saarinen, Rogerson and Hall 2017; De Frantz 2018). It was beyond the scope of this paper to test how these theories and examples might apply to Perth.

Tourism is an important industry for Perth, but is not so intense as to be a burden. If the station is built, and residential population increases, tourism should increase proportionately to maintain the "completeness" of the community. Will a train station lead to this automatically? How can this be managed or harnessed? The answers to these questions are unclear. The flow of tourists is not easily controllable, like a tap that can be tightened and loosened. Perth is fortunate to have a consistent influx of visitors, but the town is not so large, or so well known, as to be flooded by tourists. The carrying capacity must be taken into account, and the rate of tourism must be controlled so as to increase proportionately with the growth rate of the population, infrastructure and built environment. Otherwise, it could risk being overwhelmed by tourism.

A Large Urban Model for a Small Urban Settlement?

As was made clear by the almost entirely urban context of the literature review about transit-oriented development and New Urbanism, my research has had to consider the question of imposing a large urban model on a small urban community. Can a theory that is typically applied to cities can be applied to a small town? In other words, is the model scalable? A second question follows naturally: is a small town rural, exurban, suburban or urban? The answer to the question depends on the town in question but, in the case of Perth, urban does seem like the most appropriate label (indeed, the Town's Official Plan identifies it as an urban area) (Town of Perth 2016f). The best way to differentiate Perth from a city like Ottawa is to distinguish between a large urban settlement and a small urban settlement.

Many researchers, such as Calthorpe (2003), talk about TOD as a way to cure suburban decay. Is Perth in need of saving? It is certainly not decaying, but there is little question the town would benefit from rail transit. It is also not suburban. As discussed above, Perth is better defined as a “Regional Urban Centre”.

Though, hypothetically, any urban structure can be imposed on any setting, it does not make sense to build something for which there is no demand. The important question is: why do people move to rural areas and small towns? Apart from housing affordability, the main reason people move to small towns is the desire for space and tranquility. Even if there is a generational shift, and there is more demand for walkability and compact living spaces, cities may already be meeting the market for those who want those things. In Canada, at least, it seems as though people who move to these towns are looking for space, and not density. That being said, the density and beauty of Perth’s downtown core, as discussed, is a large part of what brings people in. Does this mean there is demand for density in small towns? Or does it simply mean that people want to visit these compact neighbourhoods, before returning home to their secluded, single-detached homes? This may be another research question of its own.

Canada has a long history of building around cars, and much of the rail infrastructure that once existed has been demolished. Our towns and cities are largely built with cars in mind, and we now have a very car-oriented culture. This leads to a chicken and egg question – how much does the urban form influence the culture and people’s desires, and how much do people’s desires and the culture influence urban form (or is it some combination of the two)? Some research has indicated that there is a generational shift, and that Millennials prefer urban lifestyle and require

less space, but this is far from conclusive (Okulicz-Kozaryn and Valente 2018). New trends in planning and development tend to proliferate first in cities, and gradually spread to surrounding areas. The discussion and research about planning and development are focused on cities as well, so trends outside of cities go unnoticed in the discourse. If there is indeed a societal shift towards denser, walkable living environments, might this eventually reach the rural areas and small towns?

Suggestions for Future Research

This paper was limited by time, and the scope that a single-author research paper permits. Suggested research on the same topic, or similar topics, might include the following:

1. *More quantitative research*: This paper used descriptive and evaluative research, with quantitative data used only to supplement qualitative information. Future studies might look at the increase in built area around rail stations over time by comparing historical and contemporary aerial images, use regression analyses to find the relationship between frequency of train service and population density, and look at the increase in transit use after the introduction of a rail station or increase in service levels.
2. *Public consultation, interviews and surveys*: The primary research in this paper came from interviews with experienced planners, bureaucrats and politicians. The assumptions I have made in this paper about public support are drawn from scholarly research and the opinions of experts. Interviews with and surveys of the general population would better ascertain the human impact of the topics being discussed.
3. *Case studies from other regions and countries*: This paper regarded six small towns in Sweden and Canada. This is a very small sample, and future research could analyze other Canadian towns, and draw comparisons to towns in other countries. A similar study might also be conducted by a researcher fluent in Swedish, to allow for a more in-depth literature and document review relating to Sweden.
4. *The impact of the rail station on Perth*: Should VIA Rail follow through and open a commuter station in Perth, researchers might study the real impacts of said station, rather than predict the hypothetical impacts as this paper did.
5. *The relationship between tourism, planning and complete communities*: This paper briefly discussed a potential link between tourism and the preservation of complete communities.

More research on this might determine if and how tourism can have a positive impact on small towns.

6. *A longitudinal study of Millennial preferences:* Recent research indicates that the younger generations may be shifting in preference, and are generally more likely to prefer urban areas to suburban and rural areas. However, it is unclear if this is a true generational shift, or if it is just a trait of being young. A longitudinal study of Millennial preferences as they age can answer this question. Also, while it does appear to be the case that Millennials and the younger generations in general are more inclined towards city life than older generations, it is not clear if the traits of city life that appeal to them can be transferred to small towns. It will become clearer after longitudinal research has been conducted, but this would require a study of Millennials and city life over the course of several years – a generation perhaps.
7. *Connect the primary research to small town planning literature:* The literature reviewed in this paper is focused on transit-oriented development and New Urbanism in an urban context. Further research should incorporate a review of the literature about small towns and small town planning to shed more light on the unique challenges of transit-oriented development and small towns.
8. *An expansion of the history of rail in Canada:* Future research on small town transit-oriented development in Canada might include a broader exploration of the historical context of rail in Canada, its importance to the country's settlement, its subsequent dismantling, and the effects said dismantling has had on the built and natural environment.

Final Words

My research question was “Can the introduction or increase in regional rail transit stimulate transit-oriented development in small towns?” The answer, put simply, is “Somewhat, but only in combination with numerous other factors.”

The comparison between Sweden and Canada was chosen because of the relatively similar socio-economic status, as well as the climate and vast geographies. However, there are other factors that distinguish the two countries and make direct comparison more difficult. Specific to the examples I discussed in this paper, the Region of Skåne takes a holistic approach, and addresses transit as one facet of a larger network of residences, businesses, natural areas, agricultural areas,

economic drivers, and people. Trains in Skåne are conceived of as interregional public transit, and are the public contribution to (or investment in) the larger urban system. The success of the train is judged by the success of the regional system as a whole. VIA, meanwhile, functions as a profit-driven enterprise; success is judged mainly by profit margins. Because VIA does not participate in a comprehensive planning approach, it is less plausible for towns in Eastern Ontario to harness transit to stimulate a particular kind of growth than it is for Swedish towns.

What can be concluded from the municipal and regional cases discussed in this paper – VIA Rail, Skåne, Tierp, Gnesta, Skurup, Svedala and Smiths Falls – is that a rail station can be a tool in helping to stimulate transit-oriented development, but it will not stimulate TOD on its own. There need to be policies in place with regards to development (which Perth does have), strong commercial and tourism sectors (which are only partially in the town's control), and a strong employment sector. Even with all these things in place, there needs to be a market of potential residents who want to live in a small town, but are satisfied with less personal, private space, and fewer personal vehicles. If all of these factors go in the town's favour, small town TOD can be accomplished.

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