



The Hydrostone: Neighbourhood Futures Report

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1.0 Introduction

The Hydrostone Neighbourhood, located in the North Eastern area of the Halifax peninsula is part of the regional core as identified in the recently amended Regional Planning Strategy. The Regional Planning Strategy identifies a multi-center approach as a means to integrate compact land use and embed principles of urban sustainability within the development of our communities. Inner city neighbourhoods within short distances of downtown Halifax are identified as having great potential for adapting the key principles of the plan, considering the frequent transit service and compact land use which exists in these communities. However, the time frames and policies that will guide the execution of the plan's sustainable principles are not discussed in the Regional Planning Strategy. Accordingly, this sustainable futures report will outline potential scenarios that could inform the needs of a secondary planning strategy for the Hydrostone neighbourhood, outlining policy recommendations and targets for both a 20-year and 100 year horizon.

2.0 Background

In order to appreciate the historical significance of the Hydrostone neighbourhood, it is imperative to understand its connection to Halifax's turbulent past and the emergence of garden city master planning in Canada. The 1917 Halifax explosion destroyed virtually the entire Richmond district and much of the Northeast section of Halifax, resulting in the need for a comprehensive redevelopment plan to address the needs of those left homeless after the explosion. The Halifax Redevelopment Commission quickly formed to coordinate the redevelopment efforts, retaining the services of Garden City planner Thomas Adams and George Ross to develop a master plan to house the victims of the explosion. The Richmond redevelopment plan ultimately produced the Hydrostone neighbourhood, which integrated a mix of housing types on a grid system with axial boulevards linking the interior residential areas with the waterfront. A key characteristic of the plan was a unique fireproof building material, which combined stone and water with stucco, resulting in a unique aesthetic in the context of Halifax's architectural heritage. The plan also integrated back service lanes and large boulevards within the

attached row housing resulting in the unique garden city streetscapes throughout the neighbourhood. Currently, the Hydrostone Neighbourhood is identified as a National historic site by the federal government. However only a limited number of the homes are designated as heritage properties within the Halifax Regional Municipality according to the GIS data collected from Dalhousie University. This limited heritage policy demonstrates the need for a greater policy framework to formally recognize the significance of the neighbourhood and preserve the character of the community for years to come. Overall the neighbourhood is a key piece of the architectural and planning Heritage and evidence of the Halifax explosion, representing the output of the collaborative social efforts of citizens involved with the rehabilitation efforts and the evolution of Canadian town planning ideals after the devastating 1917 explosion.

3.0 Social Profile

Although the neighbourhood remains quite similar architecturally, closely resembling the physical aesthetic of its original composition in 1922, the social profile and population of the neighbourhood has changed dramatically over the last century. Initially, the neighbourhood was developed in response to the need for affordable housing after the Halifax Explosion, providing modest housing for the hundreds of displaced working class families in the Richmond district. Since the 1950's the population of the neighbourhood has consistently decreased, resulting in the negative population trend displayed in the

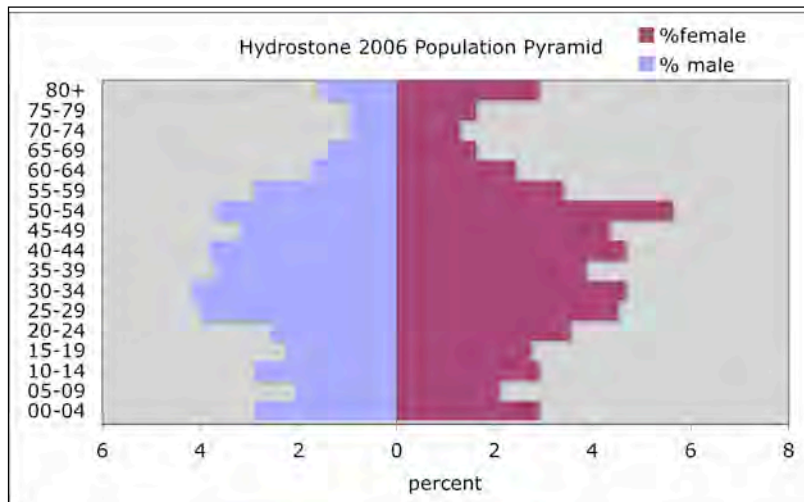


Figure 1: Source Census 2006: Population Pyramid

corresponding population graph (Figure 3). The 2006 census reports a 3.3% decline in the Hydrostone population since the 2001 census, demonstrating the consistent population decline occurring in

most inner city neighbourhoods in peninsular Halifax. This population decrease is related to the decreasing number of school-aged children in the neighbourhood and the lower fertility rates as women become more active in the labor force. Of the married and unmarried couples in the neighbourhood 56.6% have no children and of the 265 families with children 115 couples had only one child, displaying the greater Canadian trend of smaller families (Census Canada,2001). The population displays a considerable presence of baby boomers in the 50-59 age range and a growing proportion of individuals in the 25-34 age range who traditionally were most likely to be associated with young children. Although there appears to be increase in the number of young children in the neighbourhood with an increase in the number of children aged 0-4 than the other child cohorts, the population pyramid indicates the population of the Hydrostone in the near future will remain constrictive.

As the neighbourhood population and family sizes have decreased, the neighbourhood has exhibited many demographic trends associated with gentrification. Since 1981 the neighbourhood has seen dramatic changes in the education and employment characteristics of the Hydrostone residents. More specifically, 1981 education attainment levels indicated a working class population with 70% of the neighborhood having only completed part or all of high school, resulting in only 12% of the neighbourhood having completed any university education. At the same time 38% of the residents in the Hydrostone were employed in working class labor-intensive jobs compared to the 54% of white-collar jobs reported by residents (Census Canada,1981). In 2001 the education and employment data continued to display trends of gentrification, university education increased to represent 33% of the residents and white-collar employment represented 62% of the reported jobs in the neighbourhood (Census Canada,2001). At the same time average income levels of Hydrostone residents in 2006 were \$8,000 higher than the Halifax metropolitan average of 54,000 (Census Canada,2006). Overall the demographic trends of this neighbourhood over the last 60 years indicate a gradual erosion of the working class character, resulting in a smaller and more affluent population.

4.0 Context Area



Figure 2: Google Earth Image: Study Area

For the purposes of this report the Hydrostone neighbourhood is defined as the northeastern section of the Halifax peninsula bound by the streets: Robie, Young, and Duffus, while the Halifax Harbor forms the eastern boundary as illustrated in the adjacent image of the Halifax peninsula (Figure 1). The Hydrostone neighbourhood is roughly .88 square kilometers with a corresponding population density of 11.75 people per acre and a dwelling unit density of 5.7 units per acre. The neighbourhood displays a pod

like urban morphology with three unique residential clusters and a contiguous strip of industrial activity along the Halifax harbor. The zoning map (Figure 2) illustrated below displays the predominantly low-density residential characteristic of the

neighbourhood. The majority of the residential areas including the historic Hydrostone buildings are designated as R-2 general residential, Mulgrave park area is designated as R-3 Multiple

Dwelling and the housing on Union and Albert street are identified as R-1 single family residential. A key commercial region within the neighbourhood is

located on Young street, designated as minor commercial. The harbor lands are federally owned, zoned as C-5 Harbor Industrial. The neighbourhood is also home to Fort Needham Park, situated at the highest point within the neighbourhood, acting as a natural buffer to

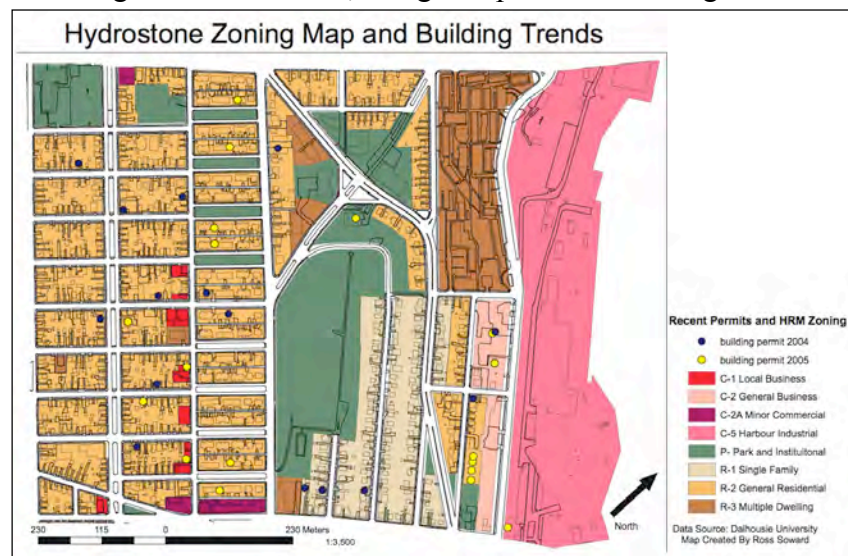


Figure 3: Current Zoning Map

separate the R-2 and R-1 residential homes in the neighbourhood. Park and recreation space accounts for 10% of the land within the neighbourhood, including Fort Needham park, the schools and the public boulevards there is roughly (100,000m²) 29 acres of park and recreation space in the neighbourhood.

Within the Hydrostone neighbourhood there are a variety of opportunity sites identified in as key sites for the realization of future planning policies of intensification, housing affordability, commercial services, and recreation spaces.

This options report will generate some policy objectives to operationalize the key components of urban sustainability within the regional plan, increasing the long-term resilience of the Hydrostone neighbourhood. The report identifies the following objectives to guide the policy recommendations for both the 20 year and 100 year timelines.

Objectives

- Encourage intensification in an equitable manner throughout the neighbourhood
- Increase the amount of affordable housing within the neighbourhood
- Improve the policies which supports transit and active transportation
- Develop strong recreation links within the neighbourhood integrating the key principles of the healthy communities report
- Respect the historical significance of the Hydrostone neighbourhood through expanded heritage policies
- Enhance urban food security options through communal gardening
- Increase and improve upon the mix of housing options in the neighbourhood

5.0 Scenario Outline

This report will focus the creation of recommendations for three possible future scenarios. These three scenarios have all been mentioned in the HRM Regional plan. The first scenario involves what will happen when the world reaches peak oil. Experts predict that global oil supply will fall into a permanent decline at some point. Some experts even believe that our society has already passed this point. Major changes,

specifically related to transportation will be forced to occur when and if this does happen. This report outlines proposed changes that the Hydrostone neighbourhood can make to survive during this time of flux.

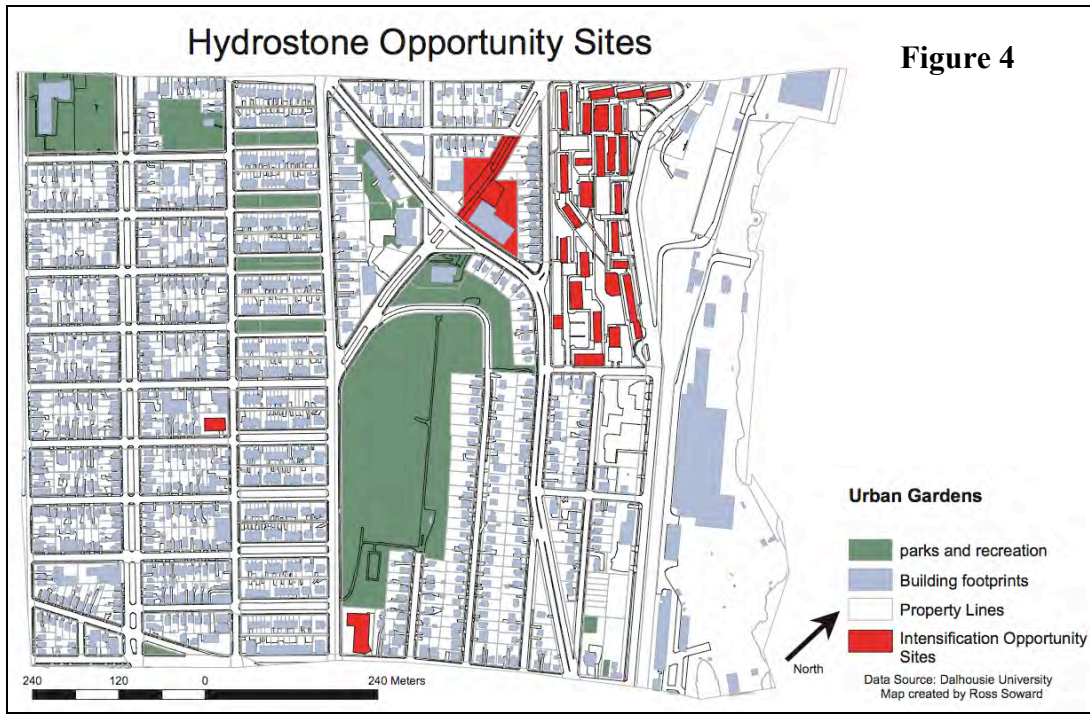
The second scenario that this report will focus on will be how the aging population can be accommodated within this neighbourhood as the “baby-boomer” generation ages.

Demographic projections show that as fertility rates decline, the population is aging. The Hydrostone will have to make some policy and design changes in order provide for these impending population changes. This report will outline recommendations regarding related changes that can be made.

The third scenario that this report will cover will involve how the Hydrostone can show resilience with regard to changes in community character. Evidence shows that gentrification has and continues to occur within this neighbourhood. The north end is becoming a popular place to live for many people on the peninsula. The Hydrostone is nearing 100 years in age and its building stock is deteriorating. This report will outline policy and design recommendations to help create a built and social environment that will foster a strong resilient community character, ensuring that the Hydrostone will continue to be the popular neighbourhood that it is today.

6.0 Opportunity Sites

The following map represents opportunity sites located within the Hydrostone. The sites identified in red are places where intensification and other development will be appropriate in order to promote a sustainable future in the Hyrdostone. Throughout this report, this map will be referenced.



7.0: Recommended strategies to address Population Growth and Peak Oil/ Transportation Demands

In order to ensure the long term resilience of the Hydrostone, this report will identify potential long-term scenarios that will affect the Hydrostone neighborhood, considering

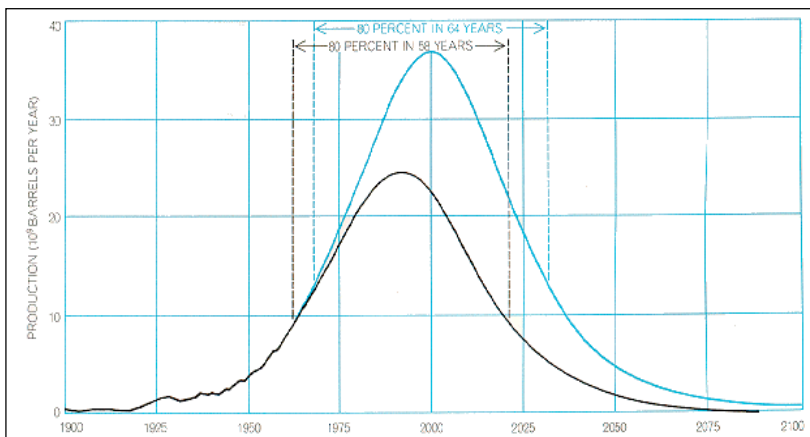


Figure 5: Source: Hubbert, 1971: World Peak Oil Production

issues of long term energy security in the formulation of planning responses. It is argued by many that the global production of oil has recently peaked, implying a rapid decline in the global oil supply for the foreseeable

future. Currently the North American economic system is structured on the premise of long-term availability of affordable oil supplies. However if the supply of Oil is in fact at

its peak, the next 20 and 100 years could give rise to intensive spikes in the cost of oil. Moreover, if oil costs increase these fluctuations will be reflected in the cost of fuel for automobile transportation, challenging the economic viability of current transportation behaviors. In addition, the increase in fuel cost would have enormous implications on the global food industry and the feasibility of relying on import for food needs. The looming energy crisis could have dramatic effects on the day-to-day functioning of communities on both a global and local scale. This section of the paper will discuss some of the potential policy responses for the Hydrostone neighbourhood in the face of a global energy crisis, which could ensure greater long-term resiliency in the Hydrostone.

The potential of an energy crisis occurring within the next 100 years could have considerable indirect effects on global real estate. It is conceivable that Neighbourhoods located within short distances of major employment centers will likely increase in value as a result of the low transportation costs associated with commuting from these inner city neighbourhoods. In contrast the value of suburban developments with poor connections to employment and services could markedly decrease. Moreover, the Hydrostone's proximity to the downtown is ideal for individuals working within the downtown core interested in reducing their reliance on the automobile as fuel costs spike. As a result of this trend, residential properties in the inner city neighbourhood could attract considerable interest in the housing market. This trend is reinforced due to the finite amount of residential properties on the peninsula of Halifax, suggesting the cost of housing in the Hydrostone neighbourhood will rise dramatically in the next 100 years. In respecting the original purpose of the Hydrostone development to provide affordable housing for working class families, policies should support the presence of housing options for all socio-economic groups within society.

7.1 Affordable Housing

The potential of an energy crisis occurring within the next 100 years could have considerable indirect effects on global real estate. It is conceivable that neighbourhoods located within short distances of major employment centers will likely increase in value as a result of the low transportation costs associated with commuting from these inner city neighbourhoods. In contrast the value of suburban developments with poor

connections to employment and services could markedly decrease. Moreover, the Hydrostone's proximity to the downtown is ideal for individuals working within the downtown core interested in reducing their reliance on the automobile as fuel costs spike. As a result of this trend, residential properties in the inner city neighbourhood could attract considerable interest in the housing market. This trend is reinforced due to the finite amount of residential properties on the peninsula of Halifax, suggesting the cost of housing in the Hydrostone neighbourhood will rise dramatically in the next 100 years. In respecting the original purpose of the Hydrostone development to provide affordable housing for working class families, policies should support the presence of housing options for all socio-economic groups within society.

Forecast for 2030

At the 20 year time range, the impacts of a decreasing global oil supply will result in housing demand increases in inner city neighbourhoods like the Hydrostone district which are located within a short distance of major employment and services. There will be a need to increase the amount of affordable housing options in the short term to provide housing options for the growing number of seniors and young adults in the neighbourhood looking for affordable housing within proximity to community amenities. One option for addressing this issue could be the inclusion of a secondary suite policy, legalizing and encouraging the provision of rental suites in traditional single unit dwelling areas. This policy could affect the homes in the R-1 zones of the Hydrostone neighbourhood. Potential suites would have an additional 550 square feet of habitable space. Approximately, 110 of the dwellings in the Hydrostone neighbourhood are currently zoned R-1 preventing the use of secondary suites in the southeast section of the study area on the streets of Union and Albert.

This policy could increase the population density of the area while maintaining the architectural character of the historic neighbourhood. In addition, to providing increased rental properties in the area it may also allow aging and retired residents to gain additional income and remain in the neighbourhood (City of Victoria, 2006). At the same time this policy allows for a greater mix of individuals to live in the neighbourhood, allowing low income families to remain in a single family dwelling and aging couples to

supplement their income to afford raising taxes and cover mortgage costs. The policy would allow for the conversion of all R-1 homes to include a secondary suite without requiring an additional off street parking spot, presumably the choice of living in this area is linked to the desire of reducing dependence on automobile travel and transportation costs. In order to maintain the character of the neighbourhood the exterior of the building could not be altered ensuring building heights would be preserved,

The removal of the off street parking requirement would increase the viability of legal secondary suites in the R-1 zone a policy approach adopted in Victoria, British Columbia (City of Victoria, 2006). However this policy could result in an excess number of cars vying for a limited number of on street parking spaces. In situations where the parking demand is greater than the supply, parking management strategies could be implemented. The citizens of the Hydrostone neighbourhood could form local parking benefit districts which would work in conjunction with the city to redirect parking fees collected from on street parking to neighbourhood improvement policies (Shoup, 2005). This policy approach is utilized in the communities of San Diego and Austin as a Transportation Demand Management (TDM) strategy to improve the pedestrian environment and discourage automobile use (Shoup,2005). The current regional plan hints at improved parking pricing in section 4.3.5 outlining the need to reduce the trips made in the single occupancy vehicle through better parking pricing policies, emphasizing incentives to reduce parking demand (HRM,2006). The funds collected from on street metered parking could be invested into pilot projects for green technologies within the Hydrostone, decreasing the reliance on traditional energy sources in the neighbourhood. In addition, the funds could be redirected to improve the transit service in the area and further decrease the need for automobiles in the neighbourhood.

Another strategy to address the issue of housing affordability associated with the increasing value of residential neighborhoods on the peninsula as transportation costs escalate could be related to density bonuses. The current planning strategy suggests the need to pursue secondary planning strategies to identify the specific policies for the use of bonus densities in developments where the developer has gone beyond the expectations of the municipality to provide greater amenity to the community. As the land values on the peninsula increase with fewer areas available for development, key

opportunity sites within the study area could be granted increased densities in situations where below market housing units in condominium developments or affordable rental units were incorporated. Therefore strategic point towers throughout the Hydrostone neighbourhood could address goals of intensification and housing affordability in conjunction with density bonuses at the sites identified on the opportunities map. This policy would capitalize on the leverage gained by the city as inner city development opportunities became of greater value to the development community, attempting to profit from the intense demand for housing within close proximity to employment and services in the downtown area.

2030 Goals	2030 Objectives
Increase Affordability	Provide an additional 200 rental units in the neighbourhood
Utilize development Incentives	Provide increased density for developers who integrate 30% of their condo units at a minimum of 15% below market value
Increase supply of rental properties	<ul style="list-style-type: none"> -Legalize Secondary Suites in R-1 Zones -Provide density incentives for developers building point towers with a minimum of 30% rental units
Increase neighbourhood wide density	<ul style="list-style-type: none"> -Encourage Point Towers opportunity sites (see Opportunities Map) -Legalize Secondary Suites in all R-1 Zones
Reinforce alternative transit policies	<ul style="list-style-type: none"> -Reduce minimum parking requirements in new high density developments -Reduce minimum off-street parking requirements in low density residential zones

Forecast for 2100

At the 100-year time line the need for maintaining housing affordability could continue to increase as transportation costs escalate, resulting in a growing demand for inner city

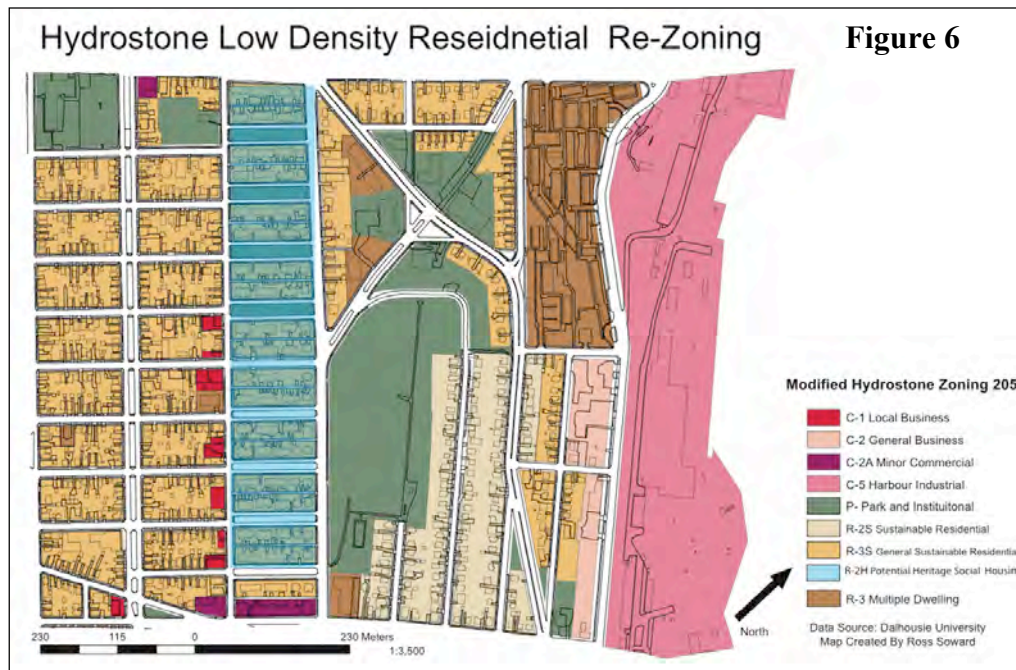
housing on the peninsula. Over this period of time the Mulgrave social housing development located within the R-3 zone of the study area will be over 100 years old, indicating the need to redevelop the site in order to improve the quality of housing in the area and provide higher densities in the area. This project could employ a similar strategy used in the Regent park redevelopment strategy, integrating a mix of market and non-market housing in the area to achieve a greater mix of individuals in the development and improve the quality of housing for the existing residents. In addition, the housing costs on the peninsula will have increased to the point where the profits earned by selling the market units of the redeveloped Mulgrave Park could subsidize the cost of maintaining the additional non-market units.

7.2 Density

In observing the long term intensification and housing affordability needs alongside the aging building stock of the 1922 Hydrostone development it may be advisable to support up-zoning of the residential properties at a neighbourhood scale.

Forecast for 2030

Upzoning of residential properties could occur at possibly a 40 year time frame, allowing the majority of the R2 dwellings to be increased to R-3 dwellings and the R-1 dwellings to be changed to R-2 dwellings. In aging homes, which are no longer energy efficient, or worth maintaining, there could be the opportunity for adaptive reuse to increase the size of these homes. In other situations it may be more likely for the entire building to be demolished to allow for a new home to be developed at a higher density. The municipality would then create new R-2 and R-3 zones in the neighbourhood that would have energy efficient building standards. A policy response provided for in the Municipal act as part of the regulation of uses and intended use of zoning by-laws under performance zoning (Municipal Act, 1998 section, 172). Therefore, zoning would stipulate increased density in the zone and energy efficiency standards, functioning as sustainable R-2 and R-3 zones. Overall, this policy would encourage increased densities while ensuring the new density will be developed using environmentally sustainable building practices.



Criteria for performance standards
Points for maximum density
Provision of rental units, or Condo Units
Alternative energy generation
Reduce or eliminate off-street parking
Adaptive Re-use

In the case of the more historically unique Hydrostone homes, which warrant heritage designation, a more complex process of densification could be utilized. The row housing within the center of the neighbourhood would likely warrant heritage designation over the next 40 years. But in the long-term, these Hydrostone homes could become costly to preserve or update, while complying with the Heritage designation and place a considerable financial strain on the owner of these homes. Therefore the municipality could zone the buildings as heritage in 40 years, coinciding with the neighbourhood wide up zoning of all the residential properties. This would provide a one year window for the province and municipality to coordinate the purchasing of properties identified as key Heritage Assets. If the Hydrostone homes were not bought by the municipality or province, the R-2 dwelling would be changed to a sustainable R-3 zoning. This would ensure any major renovations and increased density, would be regulated by the

performance standards attached to the new R-3 sustainable zone. The other R-1 and R-2 properties would also be up-zoned to the R-2 and R-3 sustainable zones, allowing for greater densities under the performance zoning standards.

If the municipality and the province felt strongly about the specific Heritage designation, they would be obligated to buy the property from the resident. Therefore, if the municipality and the province decide on the long-term preservation of these homes, the burden would not be on the individual property owner to ensure the conservation of these dwellings for the public good. As a result situations where the homeowner was interested in redeveloping the property to make use of the higher density zoning and the province wanted to preserve the heritage property the government could purchase the home and change it to a Heritage social housing unit. This would allow the province and the municipality to work in tandem to achieve mutual goals of affordable housing and heritage preservation. These two levels of government could identify specific streetscapes that would warrant preservation and purchase these properties from the owners to preserve key heritage assets. This approach would allow for considerable population density increases in the neighbourhood and the preservation of affordable rental housing in the heritage district.

Forecast for 2100

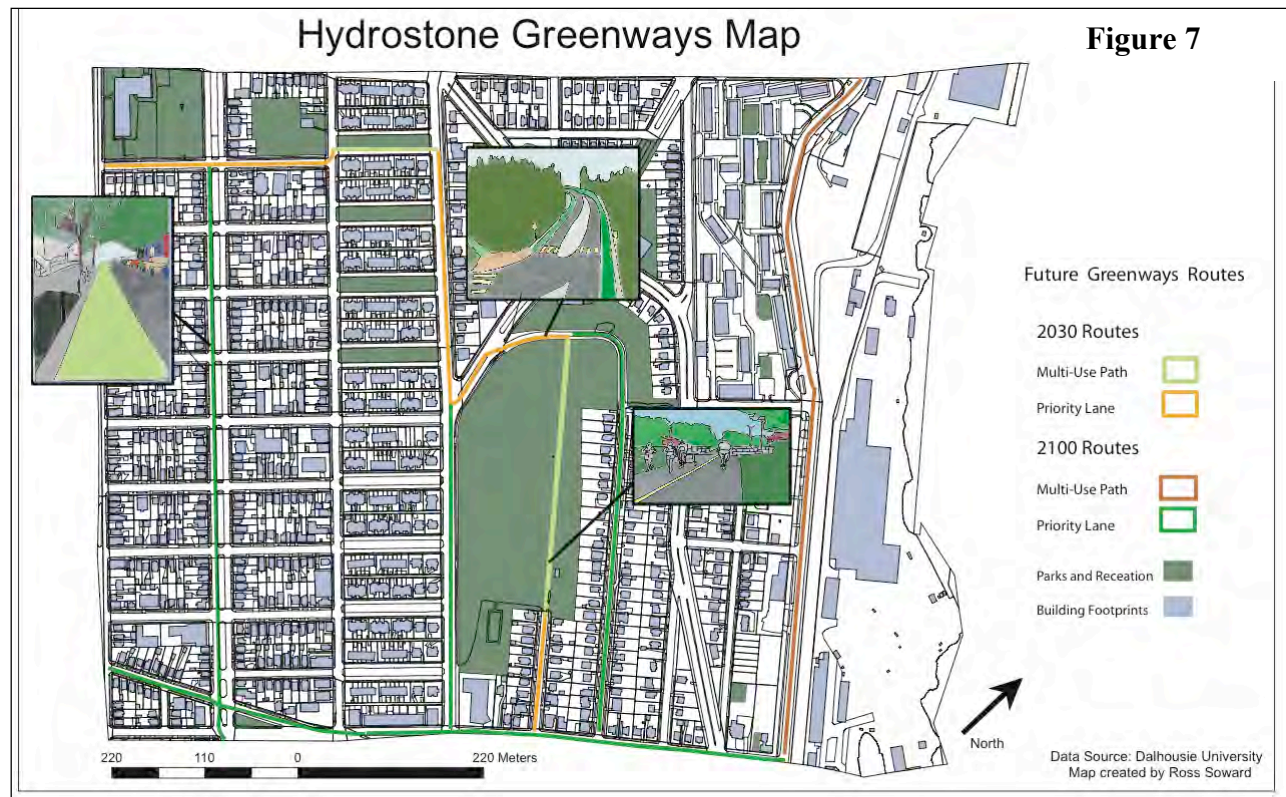
2100 Goals	2100 Objectives
Preserve Heritage Assets	-Local and Provincial Government identification of key heritage streetscapes for long term public purchase and stewardship
Increase Presence of Affordable Housing Units	-Provide an additional 1000 rental units in the neighbourhood -Increase number of social housing units in Mulgrave Park -Convert government owned Hydrostone Heritage Homes to rental units -Increase the number of rental and strata units in the neighbourhood through performance zoning in the sustainable R-2 and R-3 zones -Pursue development incentives for rental and below market condo units in point tower redevelopments
Utilize Development Incentives	Provide increased density for developers integrating 30% of their condo units at a minimum of 15% below market value

Increase Supply of Rental Properties	<ul style="list-style-type: none"> -Convert Government Owned Heritage Properties to social housing units -Provide density incentives for developers building point towers with a minimum of 30% rental units -Integrate performance standards related to secondary suites in sustainable R-2 and R-3 zones
Increase neighbourhood wide population density	<ul style="list-style-type: none"> -Encourage Point Towers at () opportunity sites -Neighbourhood-wide increase of zoning (R-1⇒R-2, R-2⇒R-3) -New Sustainable R-2 and R-3 zones utilize performance zoning to promote density, rental, and townhouses
Reinforce alternative transit policies	<ul style="list-style-type: none"> -Reduce minimum parking requirements in new high density developments -Reduce minimum off-street parking requirements in Low density residential zones -Attach lower parking requirements to new Sustainable R-2 and R-3 zones

7.3 Active Transportation

As the transportation costs increase to reflect the decreasing global supply of oil, policies which reinforce desired transportation choices must be implemented to address the transition from an automobile based economy. The residents of the Hydrostone community will increasingly rely on active transportation modes of walking and biking for day-to-day transportation.

Forecast for 2030



Therefore improvements in the provision of bike lanes would be necessary to create a network of bike lanes, which would link the Hydrostone neighbourhood with the downtown region and surrounding neighbourhoods. A key factor in the number of trips made by bicycle is the safety associated with active transportation routes (Cervero,2003). Also the integration of more bike lockers and communal storage facilities could improve the quality of the experience. A key policy could relate to the creation of a greenway, which would create an exclusive path devoted to walking or biking that would run north south connecting the parks within the region and the downtown core region. Potential routes for this greenway are illustrated in the map (Figure 6) above demonstrating the linear linkage of routes throughout the Hydrostone neighbourhood. If the quality of active transportation infrastructure is improved there is a greater impetus for residents to voluntarily modify their transportation behaviors. The improvement of the pedestrian environment is also of importance as transportation costs escalate and reduce the economic feasibility of rampant automobile use. It is likely walking will reemerge as a major mode of transportation in the neighbourhood due to the close proximity to services, amenities, and employment. Therefore improvements in the quality of sidewalks and

streetscapes through a mixing of the pavement types and added street furniture would improve the pedestrian environment in the area over the next 20 years (Shoup,2005). Overall if the Hydrostone is equipped with complementary policies that complementary addressing the change of modal behaviors of residents, the community will remain resilient in the face of a global energy crisis.

2030 Goals	2030 Objectives
Encourage Transit Share	-Initiate block by block Eco Pass Program
Improve Active Transportation Infrastructure	-Create a mixed greenway trail through the neighbourhood -Communal bike storage areas -Repave aging Sidewalks and increase presence of street furniture
Reduce Reliance on the Single Occupant Car	Initiate Ride-sharing and Car Sharing Services
Link Land Use policy with Transportation Demand Management (TDM)	-Reduce off street parking requirements in low density Residential Zones -Decrease minimum parking requirements in higher density developments -Install metered on street parking in high parking demand areas

Forecast for 2100

A comprehensive Transportation Demand Management Strategy is critical to the Hydrostone community and its ability to remain mobile on a day-to-day basis in the face of rising fuel costs over the next 100 years. A. The Hydrostone and other neighbourhoods on the peninsula could form neighbourhood transportation committees, which would work in collaboration with the municipality's Transportation Planning department. The committee could create services such as a local ride-sharing network to reduce the amount of single occupant trips occurring and mitigate fuel costs. Ride-sharing is a TDM strategy which has worked effectively in cities in the greater Toronto Area, reducing the amount of vehicle miles traveled and the overall demand for fuel (Transport Canada, 2007). In addition, Car sharing programs could be implemented, allowing for the communal use of hybrid vehicles for individuals who may only need an automobile occasionally (Bonsall, 2002). These policies could considerably reduce the

number of vehicle miles traveled by the residents in the neighbourhood. A comprehensive Neighbourhood TDM strategy could reduce the number of private automobiles needed in the neighborhood and support the use of transit and active transportation on a day-to-day basis.

The strength of TDM is its ability to reinforce desired behavior with complementary policies and incentives (Cervero, 2003). For example the use of parking pricing policies and active transportation infrastructure improvements could both encourage the use of alternative modes of transportation and penalize those who continue to rely on the automobile. Moreover, the neighbourhood could follow the lead of policies in Boulder and other progressive cities where the entire neighbourhood adopts eco transit passes (City of Boulder, 2007). The neighbourhood as a whole would purchase annual transit passes with the help of subsidies from local government. The neighbourhood committee would then canvass the local households for family or individual contributions or attach the costs to property taxes. Ultimately, resulting in every neighbourhood resident having a mandatory annual bus pass, which would encourage overall transit use and increase the demand for bus service improvements (City of Boulder, 2007). This policy would create another incentive to pursue alternatives to the single occupant vehicle when commuting or traveling within the city. The neighbourhood eco pass has resulted in major transit share improvements in the neighbourhoods of Boulder Colorado (Boulder, 2007).

2100 Goals	2100 Objectives
Comprehensive TDM Strategy	-Neighbourhood TDM Committee working with HRM transportation planning
Encourage Transit Usage	-Neighbourhood Wide Eco Pass Program -Re-direct parking revenues to improve transit service
Improve Active Transportation Infrastructure	-Continue to refurbish aging sidewalks -Create a comprehensive Greenways network
Reduce Reliance on the Single Occupant Car	-Neighbourhood wide online Ride Share and Car-share program
Parking Management Strategy	-Eliminate all off Street Parking in the neighbourhood -Create a parking benefit district in the Hydrostone -Install metered on street parking throughout the neighbourhood -Utilize parking revenues to finance transit and

7.4 Food Security

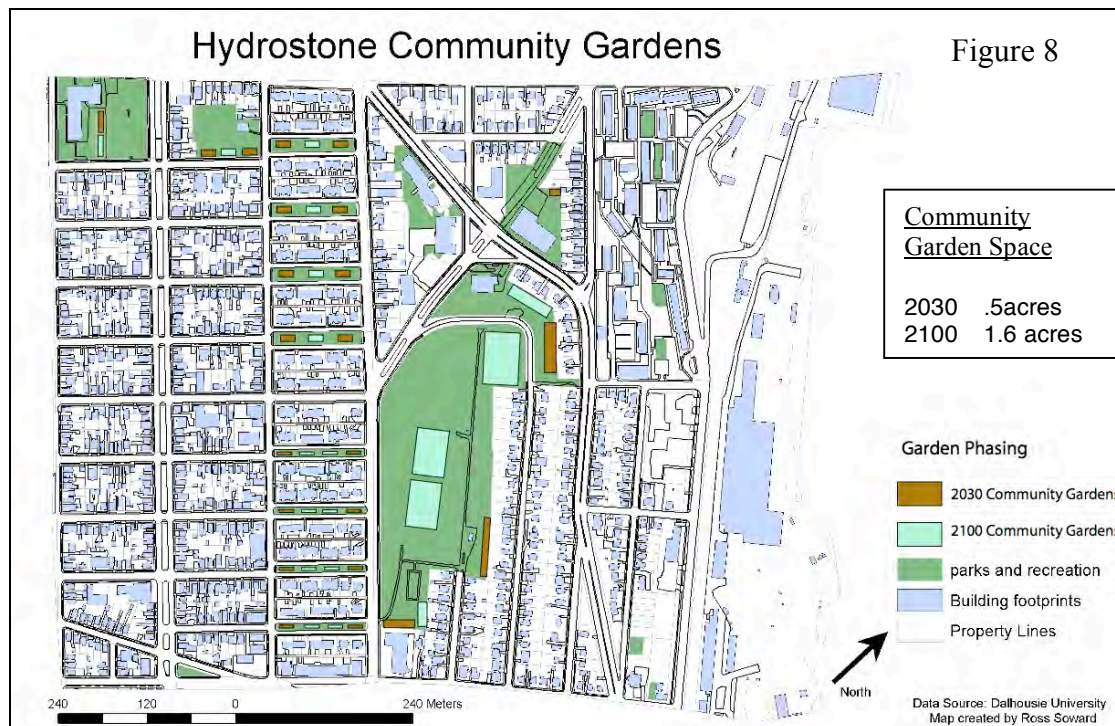
Another indirect impact of the rising fuel and energy costs is the potential for serious increases in food costs. As transportation costs and global food demand increases, it will be less feasible for Nova Scotia to import: fruits, vegetables, and grains. Therefore current food practices are no longer sustainable, calling for local solutions to food security.

Forecast for 2030 and 2100

Although much of the community has relatively small yards there is a considerable amount of green space in the neighbourhood. The community contains, Fort Needham park, The local school, and the extensive boulevards throughout the neighbourhood. The total area of these lands amounts to 30 acres, which could provide a significant amount of carrying capacity for the residents of the neighbourhood. Therefore it would be necessary for significant portions of these public lands to be transformed into community gardens. In addition year round greenhouses could be built on the grounds of the school, and selected boulevards. During the summer months large areas of Fort Needham park could be designated as community gardens, allowing for considerable seasonal food production. Overall the integration of community gardens could improve the sustainability of the neighbourhood and reduce the reliance on food imports during growing seasons.

In order to pursue this policy the municipality would have to take a leading role, allowing the use of these park spaces for a small fee. The community garden would be operated by a not for profit community group which would sign a contract with the municipality in order to ensure the land was maintained in the appropriate manner. In the case of municipalities like Saanich in British Columbia garden sites are leased to the non-profit for a small fee in exchange for services of water hookup and bathrooms (Saanich, 2003). After the lease is signed, the garden group would charge annual fees to the individuals renting individual plots on the site and maintain the lands in a responsible

manner. Municipalities play a key role in identifying suitable sites for gardens through open space and recreation zoning and encourage the lease of other private properties for community gardens. Overall the proportion of park and recreation space accounts for 10% or 100,000m² of the land in the study area, providing the ideal conditions for community gardens policies in the face of rising food costs.



8.0 Recommended Strategies to Address an Aging Population

The HRM Regional Plan outlines that by 2026, there will be more than twice the number of residents over the age of 65 than there were in 2006. Currently, Demographic trends show that the number of school aged children is also leveling off. This will mean that the Hydrostone neighbourhood will have to implement policy in order to stay sustainable in the face of changing demographics. In 20 years time, the baby-boomer population will require a diverse range of settlement options in order to meet their needs. Many amenities will need to be provided that do not exist in the Hydrostone currently. In 100 years the aging population boom will have peaked but there will still be a significant number of the population who still need these amenities. Fertility rates in Canada are

currently dropping and if this trend continues, in 100 years time, an older population will still be present and will need the amenities and services proposed in this report.

8.1 Housing

Seniors require housing which is unique to their needs. Planning policy will have to adapt to the changing demands that a primarily senior population will have within this neighbourhood. An aging population will have issues surrounding mobility. Some will have limited pensions and will be economically restricted which will have a large effect on the types of housing that will be affordable for them. A larger number of houses that meet these demands will be needed in the Hydrostone. Community amenities will play an important role in the lives of these residents. Seniors often lose partners and experience loneliness, anxiety, and depression (Gotbaum, *Sharing Old Age*. 2008). Many live in their homes for long periods of time and do not want to entertain having to give them up even when they cannot feasibly care for the homes as they would have earlier in their lives (Gotbaum, *Sharing Old Age*. 2008). Listed below are proposed policy options that will meet the needs of an increasingly aging population. These proposed changes will help keep the neighbourhood sustainable.

Forecast for 2030

In the year 2030 the Baby Boomer generation will represent the largest demographic within our Halifax. This will impact the housing market in the Hydrostone neighbourhood and planning policy will be required to account for this demographic shift. The increase of a senior population will place unique demands on the housing types available within the city requiring issues such as mobility and economic restrictions to be addressed. There are many programs that can be implemented in order to try and provide adequate, affordable housing for a primarily senior population.

Over the next 20 years, at the peak of the aging demographic scenario, shared housing programs can be implemented. Shared housing programs receive municipal funding but are run by non-profit agencies (Gotbaum, *Sharing Old Age*. 2008). These

programs match homeowners or renters who have extra space in their dwelling or apartment with those who are seeking a place to live. Agencies support this arrangement by matching people to live together, helping them to solve any disputes that might arise, and by organizing rental agreements (Gotbaum, *Sharing Old Age*. 2008). This program is appropriate for an aging population because it provides a solution to many of the issues that seniors face when looking for when trying to secure housing. For homeowners, it allows them to keep their homes instead of moving to an unfamiliar place, while gaining financial assistance from a renter who would like to live with someone. Seniors who participate in these programs are less likely to be isolated and lonely because they gain social interaction and security.

Another program that could be implemented is a shared living program (Gotbaum, *Sharing Old Age*. 2008). This program can also be municipally funded. The program involves housing a small number of seniors in municipally owned homes. Participants apply to the program and are placed in a home. Within this home they will have their own room but will share amenities with other housemates. This program also addresses many of the issues that seniors face such as loneliness, required assistance, and security. Seniors who live in groups can assist each other and interact socially.

The Hydrostone neighbourhood provides excellent opportunities for programs such as these. Both of these programs are being implemented in New York City (Gotbaum, *Sharing Old Age*. 2008). Some of the larger homes, such as those located at the ends of the row housing or the single family dwellings on Union Street would be excellent for shared living programs. The row housing would also be excellent for programs such as these because the houses are conducive to shared living. The properties are smaller and easy to care for, and the boulevards provide excellent spaces for social interaction. Seniors who currently live in the neighbourhood could be encouraged by the municipality to apply for the program. Demographic projections predict that Halifax will increase in population and home sharing will increase density within the Hydrostone (HRM *Regional Municipal Planning Strategy*, 2006).

Affordable housing options can also be provided through the introduction of secondary suites to existing single family dwellings. The current R-1 zoning for many of

the residential units within the Hydrostone do not permit secondary units to be constructed. By permitting the inclusion of secondary suites and “granny flats”, additional affordable housing options will be made available for seniors and aging adults.

In addition to the programs mentioned above, the government can provide subsidies for housing modifications which will specifically improve accessibility. This will allow seniors to continue to live in their homes and make mobility easier for them.

2030 Goals	2030 Objectives
Increase number of affordable living units	<ul style="list-style-type: none"> - Support establishment of shared housing program as well as shared living programs - Permit construction of secondary suites in R-1 zones -
Improve housing accessibility	<ul style="list-style-type: none"> - establish government subsidies for housing modifications to improve accessibility

Forecast for 2100

In the year 2100 the Baby Boom population that once heavily influenced the demographics throughout North America will have passed away. Although the peak years of the aging demographic will be over, demographic trends show that fertility rates are decreasing. If this continues, then the population will still have a large proportion of seniors. Within the Hydrostone, programs that were implemented in 2030 will still be in place to house this demographic. Programs such as shared housing can take some time to become established. By the year 2100 these programs will be well established and can house large numbers of people which will perhaps lead to large senior communities existing within the Hydrostone. This can be encouraged by providing specifically designed housing facilities for these programs. At this time there will also be a housing co-op for seniors operating within this neighbourhood.

Existing housing stock within the Hydrstone must also be maintained in order to continue acting as a housing option for seniors. If these housing units are to remain as heritage and social assets for senior housing, it may be necessary for HRM to provide

assistance. Offering subsidies to homeowners who wish to maintain their historical property would provide incentive for seniors on a fixed income to do so. Continual upkeep must also be considered. Seniors whose mobility is impaired may not be able to continually maintain their property without assistance. The HRM could offer assistance with these tasks for individuals who are in need of such services. By the year 2100, HRM should have a comprehensive plan in place to provide housing programs for seniors.

2100 Goals	2100 Objectives
Encourage housing programs	<ul style="list-style-type: none"> - provide residential zoning that permits specialized housing facilities - provide economic support for publicly funded housing developments
Maintain existing housing stock	<ul style="list-style-type: none"> - provide subsidies for homeowners to upkeep their properties as heritage homes and senior accommodation - offer assistance to maintain property for those who cannot physically do it

8.2 The Built Environment

The built environment will need to change in order to support the aging population. Senior citizens have mobility needs that differ from those of the general population. They also participate in everyday activities that require easily accessible amenities. The Hydrostone will have to address its current built environment to address this. Policy and design changes will need to occur in order to make this a barrier-free space and universally accessible.

Forecast for 2030

Mobility restrictions and barrier-free access will be a very important part of the hydrostone in 20 years. Various amenities will need to be added to the Hydrostone in order to facilitate this. Sidewalks will need to be widened in some areas to 1.8 metres to meet United Nations accessibility guidelines (United Nations Enable. *Accessibility for the Disabled: A Design Manual for a Barrier Free Environment*. 2003-2004). Trails will also need to be accessible. Lighting should be added to areas within the neighbourhood

that are not as adequately lit. Policy should be adopted to ensure that all signage added to the neighbourhood is readable, with large, clear lettering.

Site furniture will need to be added in order to assist seniors when they travel. Benches should be provided in numerous areas. Benches should be added along the main streets, in parks, and also on the medians between the row housing units. Sidewalks should be well-paved to facilitate easy movement. Public washrooms should be added along pedestrian routes within the neighbourhood. Specific policy goals and objective to achieve a built environment conducive to seniors is listed below.

2030 Goals	2030 Objectives
Limit mobility restrictions	<ul style="list-style-type: none"> - widen existing 4' sidewalks to 6' to accommodate 2-way scooters and wheelchairs along main streets such as Young, Barrington and Gottingen - ensure curb ramps accommodate individuals with limited mobility - sidewalks and trails are not to exceed a 5% grading - minimize use of street gratings, drains and manholes on pedestrian paths
Improve safety	<ul style="list-style-type: none"> - provide adequate lighting on sidewalks, trails and stairwells - ensure sturdy handrails are provided on stairwells - require uniform slip resistant gripped on stairs - provide numerous crosswalks with visual and auditory signals as well as adequate time for crossing - ensure sidewalks are level and well maintained
Increase comfort	<ul style="list-style-type: none"> - provide seating at intervals of 100-200 metres in order to accommodate for rests - provide public washrooms in public parks and green spaces - encourage public washrooms in new developments through incentives - a minimum of 1.2 metres should be provided adjacent to seating to accommodate wheelchairs

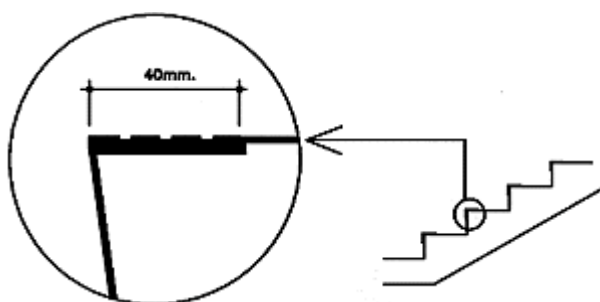


Figure 9: Slip-resistant stairs

Forecast for 2100

In 2100 the built environment should still include the characteristics of the built environment listed above. These characteristics are not only conducive to seniors, but to universal accessibility for all. Any Neighbourhood can benefit from policy that supports barrier-free design, as can the Hydrostone. In 2100, HRM should strive to have a built environment that is 100% accessible. In order to achieve comprehensive accessibility it will be necessary for HRM to implement an accessibility plan specific to the Hydrostone. Current Accessibility policy will be used to facilitate the creation of this report. For example, documents such as the Accessibility Design Report created by the United Nations could provide standards for this. This plan will be based upon the United Nations' Accessibility Design report. Conforming to these standards will meet all accessibility needs throughout the neighbourhood.

2100 Goals	2100 Objectives
Comprehensive accessibility	- ensure all public areas are accessible to members of society
Accessibility Plan	- create a comprehensive accessibility standards report meeting U.N. accessibility standards - implement a neighbourhood accessibility plan

8.3 Community Amenities and Transportation

It is important to recognize that the demand for community amenities will change with the shifting population demographic in the future. A number of considerations will

be required to be made regarding planning policy in order to adequately provide for this shifting demand. Consideration of issues that are important for a senior population, such as socializing, health care, entertainment and transportation must be addressed. Community amenities and design characteristics of the hydrostone neighbourhood will have to change in order to facilitate senior lifestyles.

Forecast for 20 Years

As an increasing number of the “Baby Boomer” population enter into retirement and later stages of life, requirements for various amenities will exist. As a number of these individuals are in a period of transition, social opportunities will be of great importance and policy planning must consider this. Issues surrounding transportation must also be addressed as an aging population is often unable to provide personal transportation and are thus reliant upon public means. By the year 2100 HRM should have a large system of programs, which provide door-to-door transit at reduced prices for seniors (Government of Canada National Advisory Council on Aging. *Housing an Aging Population Guidelines for Development and Design 2nd Edition*. 1989). Entertainment amenities will also shift as an aging population increases and demand for public gardens, recreational clubs, public spaces and hobby groups rise. These spaces should be incorporated into the Hydrostone, in conjunction with the identified opportunity sites. The presence of a growing seniors population and demand for medical amenities will requires more responsive planning policies in the future. Community health clinics should be present in the Hydrostone and zoning should account for this. Institutional zoning should be included in the plan to allow for the creation of health facilities. Also, by 2030, a permanent seniors centre should be built within the Hydrostone. This centre can serve as a social and educational facility for seniors that live in the neighbourhood. It can give assistance to this age group by holding educational workshops. For example, the centre can facilitate showing visually impaired seniors how to use the bus, or navigate the neighbourhood (City of Carson Public Services. *Senior Recreation*. 2008).

2030 Goals	2030 Objectives
Increase number of local services	- require street level commercial outlets in

	high density housing developments -
Increase health care amenities	- provide funding for improved health care services within the neighbourhood - continue to permit health care offices in R-1 zone despite heritage designations
Provide local entertainment and recreation venues	- permit theatre, films and other such entertainment venues in C-1 and C-2A zones - establish programs that organize and provide recreational activities specifically for senior populations -
Establish improved community buildings	- construct a specialized seniors centre in central location of neighbourhood - require safety and accessibility standards specifically intended for older adults -
Ensure accessibility to all amenities	- locate public services in central locations - require low grade entrances and other design features catering to senior population

Forecast for 2100

By 2100, the Hydrostone will be completely accessible and have all of the amenities that seniors need. The proposed seniors centre will be well established. The market will house stores which facilitate everyday use, such as a grocer and a pharmacy. Zoning will be provided in order to reach this goal. By 2100, the Hydrostone will be one of the most exciting and practical places for the aging population to live within HRM.

At this time, the Hydrostone neighbourhood will represent an ideal model for senior living. Policy will aim to maintain this area of the city as such and continue to promote an active and enjoyable lifestyle for seniors in the Hydrostone area. Policies will emphasize the stewardship and maintenance of existing amenities to ensure high quality services throughout this time. While it is important to maintain such buildings, it will be equally as important to ensure development bylaws support the expansion of these amenities to accommodate higher populations and increased demand. If further

development is not possible on the current site, HRM must create policy to give priority for possible development to local public amenities.

2100 Goals	2100 Objectives
Maintain existing public amenities	<ul style="list-style-type: none"> - ensure funding to maintain existing public facilities - continue to financially support community programs facilitating social and cultural integration for seniors
Accommodate growth	<ul style="list-style-type: none"> - ensure development bylaws support expansion of public amenity buildings - provide social and recreational groups opportunity for development on available opportunity sites

9.0 Recommended Strategies to Protect and Enhance Community Character

One of the most unique aspects of the Hydrostone is its character. This neighbourhood has a unique heritage value, a vibrant commercial district, public parks, and a variety of housing types. The hydrostone row housing within this neighbourhood is very distinct and a fantastic example of early Canadian planning. Gentrification is occurring within this neighbourhood. Housing pricing in the north end of Halifax are currently on the rise. The houses in this neighbourhood are beginning to deteriorate as they are nearing 100 years in age. Over the next 20 years it will become increasingly important to protect these heritage homes and ensure their sustainability as they greatly contribute to the character of the neighbourhood. During this time period community amenities can also be expanded upon. There is no main public space that unites the neighbourhood. In 100 years time, density will be an important priority. The addition of public spaces will help to support community character in 100 years time.

9.1 Heritage

The HRM Regional Plan states “our cultural and heritage form a significant part of our identity, create an intrinsic understanding of where we have come from, and enhance our quality of life.” (HRM Municipal Planning Strategy, 2006). The plan outlines the importance of preserving built heritage within the region. The Hydrostone is a neighbourhood that warrants consideration for heritage preservation. It is a reminder of the most dramatic period of change in the Halifax’s history, as it was designed and built directly after the explosion in 1917. It was designed by Thomas Adams which also makes it historically significant as an example of early Canadian Planning. Significant policy changes will need to be made in order to preserve the historical character of this neighbourhood.

Forecast for 2030

Due to the historically significant nature of this neighbourhood, policy changes should be facilitated to make the Hydrostone a designated heritage district. Municipally designating this area will allow the city to further control structural and character changes that residents would like to make to the homes. The proposed row houses should become a designated heritage district as soon as possible. Other streets within the neighbourhood, such as Union Street or Young Street could become designated heritage streetscapes to further preserve their historical vernacular.

Upon designation, a comprehensive master plan should be completed in order to add design elements to the neighbourhood that enhance its historical character. For example, interpretive signage should be incorporated into the neighbourhood which tell its story. Also, street signage should be unique to the district. When visitors enter the Hydrostone signage should provide visual cues that they are entering this neighbourhood. Any new site furniture added to the district such as bike racks, street lights, and bus shelters should be designed to match the existing character of the Hydrostone and tie into its heritage value.

Lastly, the market is an important neighbourhood centre which greatly adds to the character of the neighbourhood. To enhance the character of the market, policy should be changed to promote a “heritage commercial” zone. This would mean that zoning should be changed to ensure that stores within the market are valuable to the neighbourhood, as they once were. For example, when the Hydrostone was first built the market housed a bank and a pharmacy. These were useful commercial establishments and businesses such as these should be brought back to the market, in keeping the original plan Thomas Adams created in mind. Other useful establishments could be stay in the market, such as the bakery, or move to the market, such as a local butcher or produce market.

2030 Goals	2030 Objectives
Apply heritage designations	<ul style="list-style-type: none"> - establish Merkelsfield row housing as heritage district - apply heritage streetscape designation on Union and Young Streets
Provide a Master Heritage Plan for Hydrostone neighbourhood	<ul style="list-style-type: none"> - implement urban design standards for new developments and community amenities - provide interpretive signage at historically significant sites
Promote Hydrostone Market original character	<ul style="list-style-type: none"> - create and apply ‘heritage commercial’ zone to encourage businesses that reflect the original tenants

Forecast for 2100

Policy will need to change to maintain the heritage designation that have been proposed in the 20 year forecast. The heritage designations will be maintained as outlined above. A comprehensive landscape plan should be established in order to assess the street trees within this neighbourhood. The street trees within this neighbourhood greatly add to its character and should be maintained as part of the neighbourhood’s cultural landscape. The garden city plan inspired the plan for the Hydrostone and so the greenery of the area should be a valued and protected feature. In 100 years time, the street trees within this

neighbourhood will likely need to be replaced, or will have been replanted. At this time a plan should be created which reflects the street trees planted in the original landscape plan. This will help maintain the heritage character of the neighbourhood.

Sustainable systems such as solar panels, efficient windows, and wind energy systems are likely to become common amenities in 100 years time. Policy should be developed in order to facilitate the addition of these amenities to the Hydrostone without disturbing its existing heritage character. For example, rainwater collection would be an excellent system to add to this neighbourhood because it involves minimal impact on the building's aesthetic. Policy should be created to facilitate when and how these systems are integrated into the neighbourhood in order to preserve its character.

By 2100 the Hydrostone neighbourhood will be approximately 180 years old. It will be important at this time to maintain the existing interpretive signage as well as add an interpretive centre within the neighbourhood. This centre could be located in Needham Park in close proximity to the Halifax Explosion Memorial. It will tell the story of this neighbourhood and the time period that it represents.

2100 Goals	2100 Objectives
Maintain landscape plan	<ul style="list-style-type: none"> - continually replace old street trees and foliage as needed
Incorporate sustainability	<ul style="list-style-type: none"> - permit solar panels and urban wind turbines on residential dwellings and commercial buildings - require sustainability technologies to be located away from the public view and as unnoticeable as possible to maintain character
Develop a neighbourhood interpretive centre	<ul style="list-style-type: none"> - construct an interpretive centre in a relevant location within the neighbourhood - integrate neighbourhood signage with interpretive centre - promote Hydrostone neighbourhood as a historical destination for tourists - Build an interpretive centre to tell the story of the neighbourhood's history

9.2 Design Characteristics to Enhance Community Character

The Hydrostone is a very distinct neighbourhood. Due to its design it has clear boundaries. Urban design can be used to help this neighbourhood “stand out” as one of the built highlights of HRM. It is important to use urban design to distinguish this neighbourhood. When residents or visitor enter the neighbourhood they should know when they arrive and where they are. Although this neighbourhood is part of a larger Urban fabric, it should be indentifiable. Over the next 100 years, urban design should help to foster this character.

Forecast for 2030

Signage should be designed and installed which gives the neighbourhood uniformity. All street signs, lighting decoration, and way finding within the Hydrostone should have its own design which is unique to the neighbourhood. Designs might incorporate a historical theme or be redesigned to graphically represent those installed at an earlier period. Lighting and street furniture should be added which accomplish the same. Benches and garbage receptacles should also be unique to the neighbourhood. Neighbourhood entryways should be clear and well designed. Features should be designed to tell visitors they are entering the Hydrostone.

2030 Goals	2030 Objectives
Establish urban design plan	<ul style="list-style-type: none">- implement an urban design plan that represents the historical character of the neighbourhood- install unique urban fixtures such as benches, ornate lighting and paving or brick
Create a unique place	<ul style="list-style-type: none">- provide defining design features that establish Hydrostone from surrounding communities- construct an entrance gateway or demarcation- install unique street signs, identifiable as within Hydrostone
Maintain neighbourhood’s historic	<ul style="list-style-type: none">- base urban design standards on existing

character	structures, previous signage, etc
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Forecast for 2100

The Hydrostone's unique identity and characteristics are founded in its historic relevance. At this time, design standards relating to urban fixtures will have been implemented to lighting fixtures, seating and other amenities. In 2100, the majority of the urban design that will need to be implemented will focus on building design and streetscapes.

As density increases throughout the peninsula, the Hydrostone will face increasing pressure to conform to market demands. As much of the neighbourhood is designated as heritage properties or within heritage districts much of these design standards will be applied to new developments. Design characteristics such as building vernacular, setbacks and other such characteristics will distinguish the Hydrostone from surrounding neighbourhoods.

2100 Goals	2100 Objectives
Maintain existing urban design standards	- ensure previously implemented design standards remain in place and in good condition
Expand urban design standards to high density developments	- require that building standards comply with local vernacular - implement recognizable street level design characteristics to new developments

9.3 Parks and Green Spaces, Public Spaces

Parks and green spaces continue to play an important role in the Hydrostone. They greatly add to the character of the neighbourhood and they should be preserved and enhanced. The medians are well used and are an identifying feature of this neighbourhood. Needham park continues to function as a centre point for the neighbourhood and the Halifax Explosion Memorial is housed within this park. These green spaces reflect the Garden City principles used in designing this neighbourhood and should be preserved in an effort to maintain the historical character of the area.

Forecast for 2030

A major opportunity exists to better connect the green spaces within the area that encompasses the Hydrostone. Needham Park can be connected to other green spaces within the neighbourhood and surrounding area. Currently the parks are not well connected and facilitating this connectivity will have a positive and lasting influence on the character of the neighbourhood. This can be incorporated with the HRM Active Transportation Plan by providing pedestrian greenways and active transportation lanes within green corridors. An improved trail network throughout the Hydrostone neighbourhood would also be an ideal development for the area. The proposed “rail trail” along the Halifax Harbour to Seaview Park will be in place by this time (HRM Regional Municipal Plan, 2008). This trail will be incorporated into the comprehensive active transportation system and local green spaces.

The green spaces within the boulevard are an identifying feature of the Hydrostone neighbourhood. These green spaces should be preserved to act as recreational space for the surrounding residents, as intended by the original plan. While they will be protected by policy, the boulevards are not to be left entirely original. Recreational equipment should be provided as well as public seating to encourage community members to use the available open space.

Richmond Square was incorporated into the original plan for the neighbourhood. Upon construction, the square was not fully realized and became a large open space in central Hydostone. At this time, it would be ideal to fully realize the original plan and incorporate Richmond Square into the streetscape as an available public space in the neighbourhood. Other public spaces throughout the neighbourhood should also be maintained and emphasis placed on them. Additions to these space such as seating, lighting as well as holding public events should be incorporated into existing public spaces to encourage their use.

2030 Goals	2030 Objectives
Green space connectivity	<ul style="list-style-type: none">- develop greenways system that connects Needham Park with other green spaces- incorporate HRM Active Transportation

	policies with greenway system - expand greenways to 'rail trail' system and Seaway Park
Protect Merkelsfield boulevards	- establish policy that prohibits development on boulevards - permit placement of childrens play areas and public seating - permit ornamental landscaping
Develop local trail system	- develop a comprehensive local trail system that conforms to the HRM Active Transportation goals and policies
Complete Richmond Square	- develop and implement a landscape plan for Richmond Square at the intersection of Devonshire and Dartmouth Aves - incorporate square into greenway connectivity plan
Encourage use of public spaces	- provide additional amenities such as seating, lighting, waste receptacles and washrooms to public spaces - encourage use of public spaces by holding public events
Local food production	- permit community gardens to be established on limited portions of open green space - allow public gardens to located within Needham Park

Forecast for 2100

In 2100 the population growth of Halifax and the peninsula will have grown significantly (HRM Regional Municipal Plan, 2006). Due to this intensification of the peninsula, it is likely that many green spaces will have been compromised throughout the city. This cannot happen within the Hydrostone neighbourhood as it's green and public spaces act as identifiable features for the community and its character. At this time, it would be beneficial for green spaces and public space to be actively protected through a green space protection policy.

During this time, the demand for locally produced food will increase due to oil constraints and high prices. In response, community gardening is to be encouraged

within green spaces throughout the neighbourhood. While community gardens will be permitted, they are not to disrupt the overall structure and open space of the area.

It will also be important at this time to ensure trees and other foliage be maintained throughout Hydrostone. The original landscaping within the neighbourhood will have been long passed and it will be important to maintain the original character of the area. In order to recapture this feature of the neighbourhood a Landscape Master Plan will be implemented in order to ensure continual upkeep of the neighbourhood trees.

Sustainable energy production will become increasingly in demand during this time. Local renewable energy production such as wind turbines or solar energy may be in high demand and should be considered. Incorporation of such technologies into green spaces will be provided that disruption to the green space character is minimized.

2100 Goals	2100 Objectives
Actively protect green spaces and public spaces	- establish policy that restricts develop on green spaces and public spaces
Encourage local food production	<ul style="list-style-type: none"> - permit community garden development on available green spaces - require application process and permit to construct a garden on public green space
Establish a Landscape Master Plan	<ul style="list-style-type: none"> - create and implement a Landscape Master Plan - ensure continual maintenance of trees and shrubbery - establish Landscape Design based upon original landscaping of Hydrostone neighbourhood
Consider renewable energy production	<ul style="list-style-type: none"> - require approval by neighbourhood committee and council to construct renewable energy source - system should not infringe on green space character

9.4 Community Amenities

The Hydrostone was designed to be a neighbourhood where residents could live, work, and play. Although there are many community amenities present, they will need to be maintained and improved in order to make sure that the character of this neighbourhood

is preserved and continues to be desirable. Many amenities currently exist such as schools, churches and a community centre. Valuable commercial spaces also exist in the neighbourhood, namely the Hydrostone Market on Young Street, which should be maintained as an identifiable characteristic of the area. Other amenities have been in the area since prior to the Halifax explosion. Four churches were located in Richmond before the explosion, all of which were redeveloped in three buildings after. These have been a significant and reliable contribution to the overall character and community of the neighbourhood. The building in Richmond Square, originally a school and currently a Provincial Court, is also an amenity that has remained within the Hydrostone. Examples such as these are important to maintaining an identifiable character for the neighbourhood and should be maintained.

Forecast for 2030

The community character of the Hydrostone neighbourhood will undergo a shift over the years. Details of such a shift will be dependant on many variables, regardless, the unique community character will be maintained and promoted during this time. The Hydrostone Market will remain a consistently identifiable feature within the neighbourhood. At this time, it would be ideal to encourage commercial outlets that are more reflective of the original tenants in an effort to draw from historical heritage character as well as provide amenities for day-to-day use. Uses such as a bakery, pharmacist or a bank would be ideal.

The churches within the neighbourhood will remain an important characteristic within the neighbourhood. Planning policy will aim to protect such amenities and promote the building as a community centre to encourage continued use. It will also be important to encourage continued use of the building located in Richmond Square. As this building has been continually used since its completion in 1921, its continued use should be encouraged through flexible zoning to guarantee this (Erickson 2004). The community centre that is located in Richmond Square should be supported by planning policy. With a growing population, the support of a local community centre will be important for maintaining and supporting the character of the community. This centre is

an important tool used for encouraging social interaction and maintaining activity within the area.

2030 Goals	2030 Objectives
Improve services at Hydrostone Market	<ul style="list-style-type: none"> - implement zoning that encourages local commercial needs such as a bakery, pharmacy, bank, etc - restrict physical changes to structures through heritage protection policies
Support long standing amenities	<ul style="list-style-type: none"> - promote churches as community identifiers - encourage church to be used as a community centre by those who do not regularly attend - support continued use of Richmond Square building by implementing flexible zoning
Support local community centre	<ul style="list-style-type: none"> - ensure development bylaws permit expansion of current building - allow for flexible uses within the site

Forecast for 2100

By 2100 the Hydrostone neighbourhood will likely be developing into a distinct borough of Halifax due to increasing population and intensification of the peninsula. In order to foster this sense of community, appropriate amenities will be required to support a distinct neighbourhood unit. Fostering additional commercial development within opportunity sites will emphasize the neighbourhoods independence and foster community growth. Also, by encouraging specialized commercial opportunities such as a satellite farmers market the neighbourhoods character will be further supported. This will also encourage neighbourhood independence, permitting residents to become upon the Hydrostone neighbourhood for all daily necessities.

Churches will remain a physical characteristic of the Hydrostone, though their social role may be as significant. As Neil Nevitte describes in *Decline of Deference*, the importance of religion to the average Canadian family is declining (1996). If this situation does occur then it will be increasingly important to support the use of churches through planning policy. By utilizing the facilities for alternative uses such as

community centres, concert halls or theatres the built structure remains relevant while the historic asset remains as well. Encouraging the continued use of long-standing churches will significantly contribute to the sense of community and character of the Hydrostone.

2100 Goals	2100 Objectives
Improve commercial availability	<ul style="list-style-type: none"> - encourage commercial development within opportunity sites - promote day-to-day commercial uses such as grocers, banks, pharmacy, etc - establish a satellite farmers market location within the Hydrostone
Support churches within community	<ul style="list-style-type: none"> - establish flexible zoning for multiple uses within churches - apply heritage designations to protect physical structure of building

10.0 Conclusion

The Hydrostone neighbourhood is a unique example of urban planning within the Halifax Regional Municipality. As a historically significant area of the city, the neighbourhood has been clearly identified as a valuable heritage. For these reasons, the consideration of the future of this neighbourhood should be carefully considered.

This report has examined three scenarios in the Hydrostone neighbourhood could face over the next 100 years. The first scenario described a peak oil situation in which current transportation trends are required to make a dramatic shift to active transportation and public transit. This situation also requires consideration of other affected attributes of the urban form. Local food production, increased urban densities and cost increases were considered in this scenario.

The second scenario was based upon the “Baby Boom” projections and the impacts on age demographics. As the Baby Boomer generation grows older a variety of planning issues arise such as accessibility, safety and community and recreational provisions. With a higher ratio between those who are working age and seniors, planning policy must

address such issues. Housing, recreational space and public amenities will be required to adapt and were considered in this scenario.

The Hydrostone currently has a distinct character and strong sense of community, an important asset for a neighbourhood. The third scenario focused on preserving this strong identity within the city and fostering character for future generations. The significant history of the Hydrostone distinguishes it from other places in Halifax. Urban design considerations, public amenities as well as parks and public spaces were considered when establishing planning policy focused on maintaining the unique character of this.

The scenarios outlined in this report, though theoretical, represent real issues that are likely to threaten its sustainability over the next century. The Hydrostone's unique character, close proximity to the Halifax urban core and heritage status set this neighbourhood apart from the rest. The future of this neighbourhood is flexible and many variables may impact it. This report has provided three examples of how planning policy can ensure that the Hydrostone remains sustainable over the next 100 years.

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