PLANNING, PUBLIC WORKS AND TRANSPORTATION COMMITTEE AGENDA

Meeting #: PPT-06-2018

Date: Monday, April 30, 2018, 3:30 p.m.

Location: Halton Hills Town Hall, Council Chambers
1 Halton Hills Drive

Members: **Mayor R. Bonnette, Councillor C.Somerville, Councillor J. Fogal, Councillor M. Albano, Councillor B. Lewis, Councillor M. Johnson, Councillor A. Lawlor**

Pages

1. CALL TO ORDER

2. DISCLOSURE OF PECUNIARY INTEREST

3. COMMITTEE DELEGATIONS/PRESENTATIONS

   a. **Donna Hinde, Partner at The Planning Partnership**

   Donna Hinde, Partner at The Planning Partnership presentation to Committee regarding Destination Downtown Phase 2 and 3 Status Update. (Refer to Item No. 4A)

   (PowerPoint)

   b. **Rob Stribbell, Transportation Planner**

   Rob Stribbell, Transportation Planner presentation to Committee regarding the Active Transportation Master Plan Terms of Reference. (Refer to Item No. 4B)

   (PowerPoint)

   c. **Andrew Grunda of Watson and Associates**

   Andrew Grunda of Watson and Associates presentation to Committee regarding Planning and Sustainability Application Fees Review Update. (Refer to Item No. 4C)

   (PowerPoint)

4. REPORTS & MEMORANDUMS FROM OFFICIALS

Vet Reports to be considered by the Community and Corporate Affairs Committee

Reports will be automatically held when there is a presentation or delegation on the matter.

5. CLOSED SESSION

Committee to Convene into Closed Session if necessary.

6. RECONVENE INTO OPEN SESSION

Motion to approve items pertaining to Closed Session.

7. ADJOURNMENT

TOWN OF HALTON HILLS
Working Together Working for You!

REPORT TO: Chair and Members of the Planning, Public Works and Transportation Committee

REPORT FROM: Tara Buonpensiero, Senior Planner – Policy, MCIP, RPP

DATE: April 9, 2018

REPORT NO.: PLS-2018-0027

RE: Destination Downtown Phase 2 and 3 Status Update

RECOMMENDATION:

That Report No. PLS-2018-0027 dated April 9, 2018 regarding the Destination Downtown Phase 2 and 3 Status Update be received;

AND FURTHER THAT Council receive the Draft Background Discussion Paper as summarized in this Report and attached as Schedule A, for information;

AND FURTHER THAT Council endorse in principle the Draft Vision and Guiding Principles as the basis for the development of a Preferred Planning Alternative for Downtown Georgetown, subject to further refinement based on public input throughout the public engagement process.

BACKGROUND:

In April 2017, Council approved the Terms of Reference for the Downtown Georgetown Planning Study (referred to as Destination Downtown.)

In September 2017, Council approved the retention of a Project Consulting Team led by The Planning Partnership and includes Meridian Planning Consultants, Plan B Natural Heritage, Cole Engineering Group Ltd, Bray Heritage, N. Barry Lyon Consultants Ltd and SCS Consulting Group.

The project is being undertaken through six phases as outlined on Figure 1.

Report Purpose

The purpose of this report is to:

- Provide an update of the work undertaken during Phase 2 and Phase 3 (to date) of the Destination Downtown Project, including:
    - provide a summary of the Visioning Workshop held February 20, 2018
    - provide an overview of the Background Discussion Paper
    - introduce the draft Vision and Guiding Principles for the study
- Seek Council endorsement of the Draft Vision and Guiding Principles; and
- Outline next steps.

Figure 1: Six Phase Planning Process

COMMENTS:

A. Summary of the Project Status including Phase 2 and 3 Deliverables

As mentioned previously, the Terms of Reference for the Destination Downtown Project outlined a six phase planning process for completion of the project and outlined deliverables by Phase. Staff provided an update on the Phase 1 deliverables through a previous report to Council in February 2018 (Report PLS-2008-0011.) The study has now progressed through Phase 2 and is in Phase 3. The deliverables in Phase 2 and Phase 3 (to date) are outlined below and summarized in subsequent sections of this Report:

- Preparation of a Background Discussion Paper
- Public Visioning Session
- Preparation of Draft Vision and Guiding Principles

Phase 3 concluded with two public Design Summit sessions held on April 4, 2018, in which four Downtown Planning Alternatives were used as the basis for interactive design sessions with the public as the foundation for development of a Preferred Planning Alternative in Phase 4 of the project. The results of the Design Summit will be provided in a subsequent report to Council.

Draft Background Discussion Paper

The Draft Background Discussion Paper provides an overview of the current opportunities and potential issues in eight topic areas. The Draft Background Discussion Paper is attached to this Report as Schedule A, and an overview of each section is provided below.

Section 1: Introduction

This introductory section explains why the Downtown Georgetown Planning Study is required, the purpose of the study and outlines the study phases.

Section 2: Policy

The Policy Review section highlights key issues, and outlines:

- Applicable provincial and regional policy directions and requirements;
- Existing Town of Halton Hills Official Plan policies; and,
- Options/policy approaches for addressing the key issues and achieving conformity with provincial and regional policies.

After reviewing the provincial, regional and local policy framework the Draft Background Discussion Paper provides preliminary observations (i.e. key issues and opportunities) for how the Downtown Georgetown Land Use Study could implement these policies. The selection of a preferred approach for any given issue is dependent upon the Town's objectives and goals.

The key issue and opportunities are noted briefly below:

1. **Intensification:** How can the Town best accommodate expected intensification within the Downtown in a fiscally and environmentally sustainable manner?

   The Draft Paper notes three principal areas that should be considered: a) establish the environment for change building on the Official Plan; b) reduce the cost of development through intensification; c) reduce the risks of development approvals for intensification development. It is also noted that the relationship between density and height permissions in the Official Plan and Zoning By-law do not match, and should be reconsidered. Finally, the Draft Background Paper suggests that the

strategy for the Downtown should be based on: Protecting key elements of the Downtown; Promoting the Downtown; and Enhancing the Downtown.

2. **Housing:** What policies are needed to further a diversity of housing options in the Downtown that will not only meet the needs of the current population, but the future requirements of an aging population?

A preliminary observation is that major changes are not required in this area, but the Town should consider some strengthening of its housing policies, and the consideration of incentives to provide more affordable housing.

3. **Urban Design:** The development of a built environment that is well designed, compact, and supports people's needs for daily living should include a high quality public realm that is reinforced by urban design standards that create attractive and vibrant places.

Preliminary observations include that a clear policy framework should be established to ensure compatible development adjacent to existing neighbourhoods, and establish built forms that achieve intensification without negative impact.

4. **Healthy Communities:** A successful community consciously seeks to improve the health of its citizens by putting public health high on the social and political agenda.

Preliminary observations include that the Town should introduce community design policies that address universal accessibility, Crime Prevention through Environmental Design (CPTED) and public art.

5. **Residential and Commercial Activity:** Attracting commercial and residential development to the Downtown is necessary to support economic development, a diversified tax base, and complete communities where residents have access to jobs, goods and services.

Preliminary observations include that the Town must be innovative and respond to the new economy, such as expanding the current Community Improvement Plan program for the Downtown.

6. **Community Infrastructure:** How can the Town best ensure that the land use planning framework supports the expansion of public transit as the community continues to grow and the demographic and economic conditions become more favourable for additional transit expenditures? How can the secondary plan support Complete Streets, an integrated trail/cycling network, and built form throughout the Downtown that provides the opportunity for residents of all ages and abilities to travel safely and conveniently by active modes of transportation?

Preliminary observations include establishing transportation policies building upon the Transit Service Strategy currently underway, as well as establishing a parking strategy for the Downtown, improving connectivity with the GO Station, and developing Complete Streets policies.

7. **Parks and Community Facilities:** What polices are needed to support the Recreation and Parks Strategic Plan, and to ensure the park system, open spaces, trails and recreational facilities continue to support the community for the next 20 years?

Preliminary observations include considering the development of a Public Realm Framework in the Downtown, as well as alternative parks options such as Pocket Parks (i.e. less than 1,000 square metres), Strata Parks (built over below grade structures, such as underground parking), and POPS (privately owned publically accessible spaces).

8. **Natural Heritage System:** How can the natural heritage system be enhanced in the Downtown, and its features and functions protected?

The Scoped NHS Review is not yet completed.

9. **Climate Change and Resiliency:** What policies are needed to start preparing Georgetown residents and the Town's infrastructure for the community mitigation and adaptation changes that will be required in future years to deal with climate change?

Preliminary observations include developing appropriate policies to prepare for climate change under the themes of: energy conservation, water conservation, stormwater management, air quality, urban forest and green buildings/development.

10. **Built and Cultural Heritage:** How can the built heritage and cultural resources of the Downtown be conserved and enhanced to ensure the distinct character of the downtown is preserved and that key buildings remain prominent as intensification occurs?

Preliminary observations include: consideration of a heritage conservation district for a portion of the Downtown, and the development of policies that ensure the integration of heritage buildings in any future development.

<u>Section 3: Downtowns Precedent Review</u>

This section outlines the three downtown areas that were visited by a number of Councillors, Town staff, agency representatives and members of the public that sit on the project Steering Committee on a bus tour held in January 2018. The three downtown areas visited include Guelph, Port Credit (City of Mississauga) and Downtown Oakville. The Draft Background Discussion Paper provides a brief

characterization of each downtown area, summarizes the initiatives undertaken in each of the downtowns that contributes to their success and identifies their respective development characteristics.

Urban Design

With respect to Urban Design, the Draft Background Discussion Paper examined the current Official Plan Urban Design Guidelines for Downtown Georgetown, as well as any urban design briefs prepared in support of previous development proposals in the area. This review helped to establish a framework for updating the guidelines to appropriately guide redevelopment and intensification in Downtown Georgetown. After reviewing the existing urban design documents and undertaking a preliminary analysis of the character in Downtown Georgetown, the Background Paper introduced draft Character Areas (as shown on Figure 1) to be discussed and explored as the study progresses. These draft Character Areas are:

1. Main Street – Retail
2. Main Street – Residential
3. Residential Street – Streets west of Main Street
4. Back Street and
5. Park Avenue

The Urban Design Review outlined a number of potential design opportunities to explore further such as:

- taking advantage of views and vistas to natural areas;
- consider ways to create new gateways into Downtown Georgetown;
- continue to promote the mixed use, local business character in the Downtown;
- look for opportunities for new infill development sites as well as improvements to public areas, such as a central public space; and,
- consider creating a Downtown Walking Loop in downtown which will contribute to place making and well as pedestrian activity.

Land Use

The Land Use Inventory for Downtown Georgetown reviews the existing land uses and provides an overview of development that has occurred in the area to prepare an up-to-date land use inventory. A physical conditions assessment was also undertaken to evaluate the opportunities and constraints to redevelopment in the Downtown area.

This section recognizes that there are two primary opportunities for future development in Downtown Georgetown which are parking lots and a limited number of vacant lots.

Market Analysis

The Market Analysis assesses the potential for land use intensification within the study area. Using a Strength Weaknesses Opportunities and Threats analysis framework, the review focused primarily on residential intensification, but also built upon the 2015 Retail Market Demand Study prepared for the Town.

Further, this market analysis considered how the role of an intensified downtown would function in relation to other planned residential and commercial development in the municipality.

The market outlook recognizes the uniqueness of Downtown Georgetown given its range of retail and residential uses within a walkable neighbourhood. Downtown Georgetown is well positioned to accommodate townhouses and mixed use apartment development. The area bound by Main Street, Guelph Street and Mill Street appears to provide the greatest potential for intensification due to the existing lot patterns and built form, with the potential for higher densities to be focused on the Back Street parking lot and lots fronting onto Guelph Street due to proximity to the GO Train station. Prior to considering redevelopment on any parking lots in Downtown Georgetown, preparation of a long term parking strategy is imperative.

Municipal Servicing

The review of existing and future water, wastewater, and stormwater servicing focused on understanding the available capacity implications in Downtown Georgetown and any implications on future development/intensification potential. The review recognized the increased groundwater capacity that will be available as a result of Georgetown South being converted to lake based services in conjunction with the lake based services being provided for Vision Georgetown. The initial report concluded that Downtown Georgetown will be serviced by the existing sanitary sewer infrastructure and the existing waste water treatment plant, but did identify the need for some improvements to support future development in Downtown Georgetown which will be reviewed in more detail in the subsequent phases of analysis.

Parking and Mobility

The Parking and Mobility Background Review included an initial review of existing policies and programs, currently guiding development in Downtown Georgetown. This included a review of policies related to land use development, transportation and parking by-laws applicable to the downtown core and surrounding areas.

The review of the current amount of parking provided in Downtown Georgetown concluded that there are 317 off street public parking spaces and 134 on street parking spaces available in Downtown Georgetown.

Given that this report is a background review, further work will be undertaken as part of this study to complete a parking assessment as well as propose a complete streets plan to support the recommended land use plan for Downtown Georgetown.

Natural Environment

Given that there is an existing Subwatershed Study (Silver Creek) that applies in the study area and also that Downtown Georgetown is urban and largely developed, the work plan required that a scoped Natural Heritage Assessment be prepared as part of preparation of the Secondary Plan.

The Draft Background Discussion Paper provides: a characterization of the existing natural environment conditions; identifies constraints/opportunities associated with potential future intensification in Downtown Georgetown; and outlines the key tasks to be undertaken in the scoped Natural Heritage Assessment.

Built Heritage & Cultural Resources

The Draft Background Discussion Paper provided a preliminary built and cultural heritage resource review through a based on Town resources, local history, historical mapping, and historical photos. The Paper provides a characterization of heritage resources by sector in the Downtown and identifies significant groupings of areas of cultural heritage resources. The next phases of the study will further consider how to conserve significant heritage properties, commemorate the local history and provide input into where opportunities are available for future intensification in the Downtown that address conservation of built heritage resources.

Workshop #1 – Visioning Session

On February 20, 2018 the first engagement session for the Destination Downtown study was held. It was a Visioning Workshop which began with a presentation given by the Planning Partnership, followed by group discussions to brainstorm key words and phrases to help develop the Vision statement and Guiding Principles. The Vision and Guiding Principles will be the building blocks of the Downtown Secondary Plan, and will influence decision making regarding the future of its buildings, public spaces, land uses, streets, parking, trails, and cycling routes.

Input into preparation of the draft Vision and Guiding Principles was provided by the project Technical Advisory Committee, project Steering Committee and public stakeholders. The Technical Advisory Committee is made up of staff representatives from various departments in the Town, Halton Hills Public Library and representatives

for affected agencies such as Credit Valley Conservation, the Region of Halton and Halton Hills Hydro.

The Steering Committee is chaired by Councillor Fogal, and includes Mayor Bonnette, Councillor Johnson and Councillor Kentner, representatives from the Georgetown BIA, Chamber of Commerce, Heritage Halton Hills, representatives from committees of Council such as the Active Transportation Committee, Heritage Halton Hills, Town Sustainability Implementation Committee, and appointed residents/business owners in the Downtown.

There was a very good turnout at the evening Visioning Workshop, with approximately 40 public stakeholders in attendance.

A comprehensive summary of what was heard at the Visioning Workshop has been prepared by The Planning Partnership which is attached to this Report as Schedule B. Also included in the What We Heard Summary is the results of the Visual Preference Survey (to date) that was prepared as part of the visioning work. This survey was available at the Visioning Workshop and online.

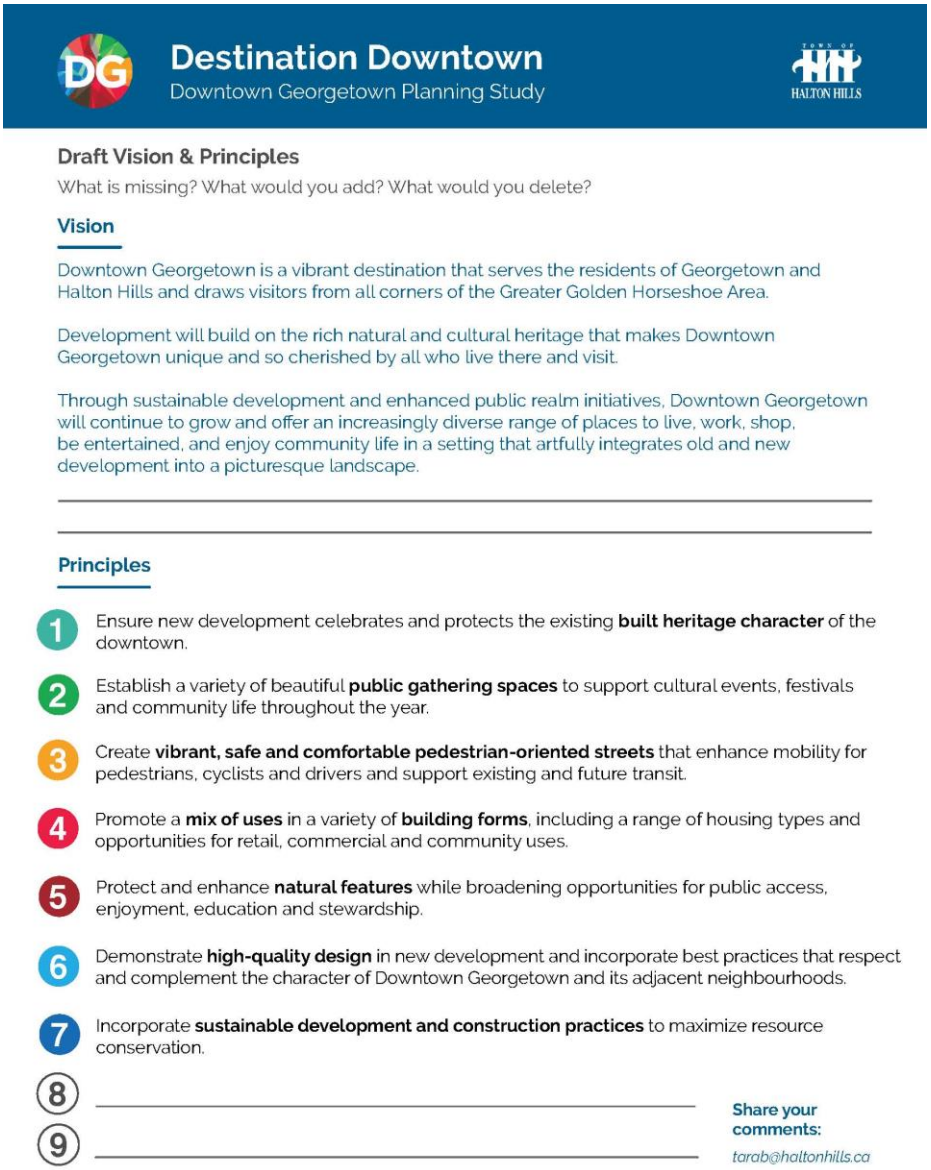
Other engagement tools were used to obtain input on the Vision and Guiding Principles including a Roving Information Station where a staff member from the Planning Partnership visited a number of locations in Georgetown and asked people what they loved about Downtown Georgetown and what would make it even better. A summary of this input is also provided within Schedule B.

Draft Vision and Guiding Principles

As a result of all of the input provided through the Visioning Workshop and other engagement undertaken to date, Draft Vision and Guiding Principles have been prepared and included in this Report as Figure 2.

The Vision and Guiding Principles are draft and were presented for public review and comment at the Design Summit held on April 4, 2018. Public comments are being sought on the Draft Vision and Guiding Principles and a revised Vision and Guiding Principles will be included in a subsequent report to Council. In order to continue to advance the project, Council is asked to endorse in principle the Draft Vision and Guiding Principles as the basis for the development of a Preferred Planning Alternative for the Downtown. It is recognized that the Draft Vision and Guiding Principles remain subject to further refinement through the public engagement process, and will be brought back to Council for confirmation together with the recommended Preferred Planning Alternative.

Figure 2: Draft Vision and Principles



Destination Downtown
Downtown Georgetown Planning Study

HALTON HILLS

Draft Vision & Principles

What is missing? What would you add? What would you delete?

Vision

Downtown Georgetown is a vibrant destination that serves the residents of Georgetown and Halton Hills and draws visitors from all corners of the Greater Golden Horseshoe Area.

Development will build on the rich natural and cultural heritage that makes Downtown Georgetown unique and so cherished by all who live there and visit.

Through sustainable development and enhanced public realm initiatives, Downtown Georgetown will continue to grow and offer an increasingly diverse range of places to live, work, shop, be entertained, and enjoy community life in a setting that artfully integrates old and new development into a picturesque landscape.

Principles

1. Ensure new development celebrates and protects the existing **built heritage character** of the downtown.
2. Establish a variety of beautiful **public gathering spaces** to support cultural events, festivals and community life throughout the year.
3. Create **vibrant, safe and comfortable pedestrian-oriented streets** that enhance mobility for pedestrians, cyclists and drivers and support existing and future transit.
4. Promote a **mix of uses** in a variety of **building forms**, including a range of housing types and opportunities for retail, commercial and community uses.
5. Protect and enhance **natural features** while broadening opportunities for public access, enjoyment, education and stewardship.
6. Demonstrate **high-quality design** in new development and incorporate best practices that respect and complement the character of Downtown Georgetown and its adjacent neighbourhoods.
7. Incorporate **sustainable development and construction practices** to maximize resource conservation.
8. _____
9. _____

Share your comments:
tarab@haltonhills.ca

N**ext Steps**:

The next steps for Destination Downtown are as follows:

1) Public input received at the Design Summit, as well as on-line, will be analyzed and reported to Council, together with an outline of how the Design Summit was conducted;
2) Public input received, together with technical study inputs and public agency comments (I.e. Scoped Natural Heritage System Review, etc.) will be used to develop a draft Preferred Planning Alternative for the Downtown;

3) A workshop on the Draft Preferred Planning Alternative will be held with the Technical Advisory Committee, Steering Committee and the public;
4) Public input received at the workshop will be presented to Council, and the process to revise and finalize a Draft Preferred Planning Alternative, will be outlined;
5) Council will be asked to endorse the Preferred Planning Alternative as the basis for the development of a Secondary Plan for the Downtown through Phase 5 of the project.

RELATIONSHIP TO STRATEGIC PLAN:

Although this Report is only focusing on the work plan and community engagement, Destination Downtown relates to a number of the nine strategic directions outlined in the Town's Strategic Plan. This Study relates extensively to the following Strategic Directions:

- Foster A Healthy Community
- Foster a Prosperous Economy
- Preserve, Protect and Promote Our Distinctive History
- Achieve Sustainable Growth
- Provide Sustainable Infrastructure & Services
- Provide Responsive, Effective Municipal Government

In particular, comments raised by the public so far in the Study reinforce the importance of the following Strategic Objectives:

C.6 To maintain and enhance our historic downtowns and vibrant commercial areas to provide for shopping, services, cultural amenities and entertainment.

D.2 To encourage the preservation and enhancement of the historical character of the Town's distinctive neighbourhoods, districts, hamlets and rural settlement areas.

G.9 To ensure that new population growth takes place by way of identifiable, sustainable, healthy and complete communities and neighbourhoods that reflect excellence in urban design.

G.10 To promote intensification and affordable housing in appropriate locations within the Town.

Halton Hills Council has also approved the 'Top Eight' 2014-2018 Strategic Action Plan priorities for the 2014-2018 Council term. The 'Top Eight' includes Strategic Action 3 – Planning for Growth, and the following sub-actions:

3. Planning for Growth

B. Promote the protection and adaptive re-use of built heritage resources as part of the planning of intensification and new development areas.

C. Preserve the established character of stable neighbourhoods by focusing development in identified intensification areas, and utilizing 'best practices' in urban design for infill development.

FINANCIAL IMPACT:

Council has previously approved 2017 Capital Project No. 7100-22-1901 – Georgetown Downtown Secondary Plan with a budget of $200,000.

CONSULTATION:

The Technical Advisory Committee provided input into the Background Discussion Paper, and participated in the Visioning Workshop. As outlined in a previous section of this report, this Committee is comprised of staff from various departments in the Town, and other affected agencies such as the Region of Halton, Credit Valley Conservation and Halton Hills Hydro.

The Steering Committee participated and provided valuable input at the Visioning Workshop. Members of the Steering Committee are outlined in detail in the section of this report that summarized the Visioning Workshop.

PUBLIC ENGAGEMENT:

There has been two public workshops held on the Destination Downtown project to date. The Visioning Workshop was held on February 20, 2018. The results of that workshop are summarized in an earlier section of this report and a detailed account of input we received on the Visioning Workshop is attached to this report as Schedule B.

The second public session, the Design Summit, was held on April 4, 2018. At this meeting, participants worked with a designer from the Planning Partnership to develop a land use alternative for Downtown Georgetown. The results of this public session will be provided in a subsequent report to Council.

SUSTAINABILITY IMPLICATIONS:

Sustainability is central to the Destination Downtown study. Sustainability implications will be evaluated in subsequent recommendation reports to Council.

COMMUNICATIONS:

Upon Council adoption of the recommendations of this report, it will be posted on the project webpage and stakeholders that have requested email notifications of project updates will be advised that the report is available online.

CONCLUSION:

Upon Council adoption of the recommendations of this Report, the Destination Downtown project will continue advancing through Phases 3 and 4 the report and attachments will be made publicly available on the project webpage.

Reviewed and Approved by,

Steve Burke, Manager of Planning Policy

John Linhardt, Commissioner of Planning and Sustainability

Brent Marshall, CAO

DG

Destination
DOWNTOWN

BACKGROUND PAPER

Issues and Opportunities

April 9, 2018

TOWN OF HALTON HILLS

The Planning Partnership
PLAN B Natural Heritage
SCS Consulting Group
N. Barry Lyon Consulting
Cole Engineering
BRAY Heritage

Table of Contents

List of Figures and Table

1.0 Introduction

1.1 Why is the Downtown Georgetown Planning Study Required?

The Downtown Planning Study will be an integral component of the Town's planning framework setting forth planning initiatives related to the implementation of Growth Plan objectives and developing growth projections for Downtown Georgetown to the 2041 planning horizon. The policies in the Town's Official Plan that are outdated will be updated in the Secondary Plan which will also provide input into the Region's Sustainable Halton Official Plan Review.

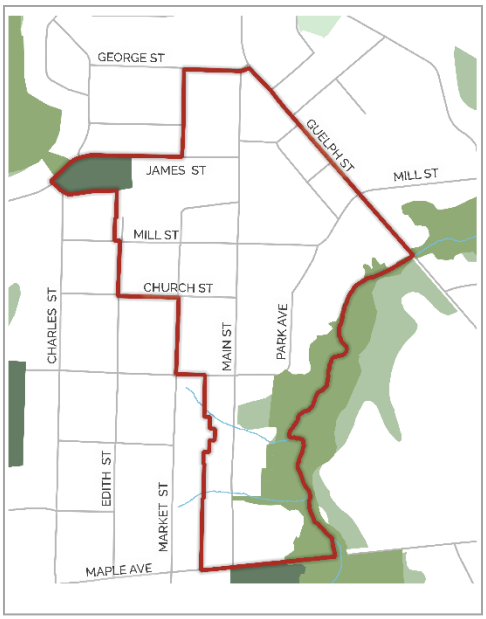
The Planning Study will apply to Downtown Georgetown where redevelopment is expected. It will provide specific local policies for the Downtown for land use, urban design, natural heritage, parking, parks, and sustainability where more detailed direction is needed for matters beyond the general framework provided by the Official Plan. The Secondary Plan will guide growth and development in the defined downtown area where physical changes are expected and desired.

Many downtowns have experienced a renaissance fuelled by market shifts towards alternative housing choices, urbane life styles, and the novelty of heritage and 'main street' charm. With growing interests in developing in such contexts, a great opportunity exists for Halton Hills to harness this change in a manner that will reinforce those qualities of Downtown Georgetown that are treasured. Essential to this end is a clearly articulated long-term vision and comprehensive guidance for the evolution of Downtown Georgetown, which is recognized to be a priority.

1.2 What is the Purpose of the Downtown Georgetown Planning Study?

The Town of Halton Hills has initiated a Downtown Planning Study to:

- Review key planning issues and emerging trends that will influence future growth and change in the Downtown;
- Develop a new detailed planning framework (land use and built form) for Downtown Georgetown, which will be used to guide decision-making and development, primarily infill and intensification proposals, to ensure the heritage character and mixed-use function of the Downtown is enhanced.
- Identify the scale and magnitude of intensification appropriate for the area in the context of growth to the 2041 planning horizon, and the targets of the Growth Plan.
- Establish planning policies, guidelines, and schedules to update the Town of Halton Hills Official Plan and inform the Region of Halton Official Plan review.



1.3 Downtown Planning Study Process

The Secondary Plan is proceeding in six phases:

- Phase 1: Project Initiation & Background Review (complete)
- Phase 2: Community Visioning and Information Gathering (ongoing)
- Phase 3: Detailed Downtown Planning Study
- Phase 4: Downtown Planning Alternatives
- Phase 5: Preferred Detailed Downtown Planning Alternative
- Phase 6: Secondary Plan Development

Phase 1: Project Initiation & Background Review - complete

During Phase 1, the work program was confirmed and a preliminary background review of existing conditions was undertaken to gain a general understanding and overview of the Downtown Georgetown Secondary Plan area.

The Community Engagement Strategy was prepared and outlined the various engagement opportunities for the study, such as a Downtown Visioning Workshop, with the objective of collecting important information from stakeholders and the community to shape a 'made in Georgetown' vision for the Downtown.

Phase 2: Community Visioning and Information Gathering - ongoing

Phase 2 involved a comprehensive review of existing documents and available data relevant to articulating and formulating a new vision for the Downtown. Past and current plans, policies, studies, and research that pertain to Downtown Georgetown were reviewed, analyzed, and synthesized. The objective is to gain an understanding of the planning and regulatory context, historical and cultural resources, environmental, transportation, servicing, and market potential of Downtown Georgetown and how it fits into, and is defined, by the larger community.

Initial meetings with the Steering Committee (SC) and the Technical Advisory Committee (TAC) were held in December 2017 to introduce the project and provide a summary of findings from the Phase 1 work, including the review of background data. Preliminary issues and opportunities were summarized and form the various sections of this paper. The Community Visioning exercise will be undertaken in late February to establish an overall vision and guiding principles which will direct the development of the Downtown Georgetown planning alternatives and secondary plan development.

The next four phases of the study will follow this Background Paper and include the following:

Phase 3: Detailed Downtown Planning Study

During this phase of the study a number of strategies and reports that will, along with the information gained from the Background Report, provide further policy directions and targets for the Downtown Secondary Plan in the form of urban design guidelines, sustainability strategy, heritage conservation, mobility options, and community infrastructure.

Phase 4: Downtown Planning Alternatives

The objective of this phase is the development of three land use/built form alternatives for the Downtown Area that build on the background review and supporting studies completed in the previous phases.

Phase 5: Preferred Detailed Downtown Planning Alternative

Building on the work undertaken in Phase 2, 3, and 4 a Preferred Land Use/Built Form alternative will be developed.

Phase 6: Secondary Plan Development

The objective of Phase 6 is the preparation and development of the Secondary Plan policies for Downtown Georgetown. If required, an associated Zoning By-law Amendment will be prepared. To assist with realizing the vision for the Downtown Area, an Implementation Plan will be prepared to provide direction on the implications on other Municipal studies.

1.4 Paper Outline

This Background Paper outlines the key issues and opportunities identified in the background analysis. The Background Paper consolidates our review of information and analysis of issues and opportunities for:

Policy

The Policy Review section highlights key issues, and outlines:

- Applicable provincial and regional policy directions and requirements;
- Existing policies under Town of Halton Hill's current Official Plan; and,
- Options/policy approaches for addressing the key issues and achieving conformity with provincial and regional policies.

For each issue or opportunity, a series of preliminary observations is provided that either facilitate, manage or restrict actions by development proponents or other members of the community. The selection of a preferred approach for any given issue is dependent upon the Town's objectives and goals.

Urban Design

The Urban Design Review examined the Official Plan Urban Design Guidelines for the Downtown area, as well as any urban design briefs prepared in support of previous development proposals in the area, to establish a framework for updating the guidelines to appropriately guide redevelopment and intensification.

Land Use

The Land Use Inventory for the Downtown provides an overview of development that has occurred in the area to prepare an up-to-date land use inventory. A physical conditions assessment evaluated the physical opportunities and constraints to redevelopment in the Downtown area.

Market

The Market Analysis assesses the potential for land use intensification within the study area. Using a SWOT analysis framework, this analysis focused primarily on residential intensification, but built upon the recent work completed for the Retail Market Demand Study. Further, this market analysis considered how the role and function of an intensified downtown will function in relation to other planned nodes of intensification in the municipality as it relates to likely market demand and physical opportunities available to accommodate new development.

Municipal Servicing

The review of existing and future water, wastewater, and stormwater servicing focused on understanding the available capacity implications in the Downtown with regards to potential future development / intensification. The identification of potential servicing options and challenges, and recommendations were prepared for further analysis at the next planning stage.

Parking and Mobility

The Parking and Mobility Background Review included an initial review of existing policies and programs, currently in place guiding development in Downtown Georgetown. This included a review of policies related to land use development, transportation and parking by-laws applicable to the downtown core and surrounding areas.

Natural Environment

An overview of the existing natural environment conditions and constraints/opportunities associated with Downtown Georgetown was prepared to provide an “environmental framework” for the secondary plan and to identify “opportunities” for restoring/enhancing the ecological features and their associated ecological functions within the study area.

Built Heritage & Cultural Resources

A preliminary Built Heritage & Cultural Resources review and assessment included a research of the local history, historical mapping, and historical photos.

2.0 Policy

Through the review of provincial, regional, and local policies a number of key issues and opportunities have been identified and organized under six themes:

FORM OF GROWTH
#1 Intensification
#2 Housing
#3 Urban Design
#4 Healthy Communities

ECONOMIC DEVELOPMENT
#5 Residential and Commercial Activity

COMMUNITY INFRASTRUCTURE
#6 Transit & Active Transportation
#7 Parks & Community Facilities

GREEN INFRASTRUCTURE
#8 Natural Heritage
#9 Servicing & Low Impact Development

CLIMATE CHANGE
#10 Climate Change & Resiliency (includes green development standards)

CULTURAL HERITAGE
#11 Built Heritage & Cultural Resources

Form of Growth

Issue and Opportunity #1: Intensification

How can the town best accommodate the expected intensification within the existing downtown in a fiscally and environmental sustainable manner?

Downtown Georgetown is identified as an Urban Area in the Regional OP and the Town of Halton Hills OP directs intensification to the Downtown. Considering the focus on intensification within the Town, there is an opportunity to explore residential intensification, as well as strategies for attracting and facilitating intensification to maximize those opportunities. The priority for intensification is to make use of properties which are vacant, underutilized, include significant surface parking or which can be considered 'underdeveloped' considering their location along important transportation corridors. Intensification should also respect the Downtown's heritage resources and character, as well as the traditional commercial and established residential neighbourhoods.

Provincial Policies

Provincial Policy Statement (2014): Section 1.1.3 (Settlement Areas)

- The Provincial Policy Statement (PPS) requires municipalities to plan for efficient and resilient development and land use patterns.
- Under the PPS, settlement areas shall be the focus of growth and development, occurring as:
  - Intensification and redevelopment within previously developed areas; and,
  - New development in designated growth areas, which have not yet been fully developed.
- The PPS requires planning authorities to:
  - Identify targets for intensification and redevelopment; and,
  - Ensure the orderly progression of development within designated growth areas.

Places to Grow (2017): Section 2.2.2 (Delineated Built-up Areas); Schedule 3 (Distribution of Population and Employment for the Greater Golden Horseshoe to 2041

- The Growth Plan requires municipalities to focus a minimum of 60% of all residential development within the delineated built-up area beginning in 2031. Each municipality within the Halton Region should: "
  - encourage intensification generally to achieve the desired urban structure;
  - identify the appropriate type and scale of development and transition of built form to adjacent areas;
  - identify strategic growth areas to support achievement of the intensification target and recognize them as a key focus for development;
  - ensure lands are zoned and development is designed in a manner that supports the achievement of complete communities;
  - prioritize planning and investment in infrastructure and public service facilities that will support intensification; and,
  - be implemented through official plan policies and designations, updated zoning and other supporting documents. "
- Schedule 3 of the Growth Plan has allocated a population and employment growth of 1,000,000 and 470,000, respectively, to the Region of Halton to the 2041 planning horizon.

Regional Policies

Region of Halton Official Plan (2015): Section 55 (Halton's Regional Structure); Section 72 (Urban Area)

- Halton Region Official Plan indicates that Urban Areas should accommodate for most of the growth within the Halton Region. Planning for this growth should take into consideration the character and capacity of the area where it will occur.
  - Urban Areas are planned to provide transit-supportive densities in more compact form in a wide range of housing typologies, providing options for a diverse range of residents, as well as promoting employment opportunities where best suited, amongst other things.
- On Map 5 of the Regional OP, Downtown Georgetown is located within an Urban Area with Regional phasing to 2021.
  - Specific to Halton Hills, the Regional OP indicates that the Town should accommodate 917 residential units between 2017-2021, 2,056 residential units between 2022-2026 and 2,087 residential units between 2027-2031, within its built boundary, which includes Downtown Georgetown. In general, and looking at employment, the Town should plan for 2,192 jobs between 2017-2021, 9,420 jobs between 2022-2026 and 9,606 jobs between 2027-2031. (Table 2A Regional Phasing)
  - The Regional OP specifies that "*the progression from one phase to the subsequent phase within a municipality is independent for each municipality and is also independent for employment and residential lands*".

Town Policies

Town of Halton Hills Official Plan (2017): Section A2.2 (Growth and Settlement); D2.5.1 (Downtown Area); D5 (Built-up Area and Intensification Areas)

- Section A2.2.1 states that it is the Town's goal "*to direct most forms of development to urban areas where full wastewater and water services are available and to support the efficient use of land in these areas*".
- Section A2.2.2 highlights the Town's objectives pertaining to growth and settlement such as the need to have most growth focused within Urban Areas on the basis of appropriate servicing, to "*reinforce the function of the two downtown areas as cultural, administrative, entertainment, retail and social focal points of the community*", to encourage compatible development/redevelopment, and to phase development "*in conjunction with required infrastructure improvement where appropriate*".
- Section A2.3.2 pertains to the Town's objectives regarding urban areas. Specifically, the Town aims to:
  - "*Encourage the further intensification and use of the lands within the Downtown Areas, as appropriate;*
  - *Ensure that all new urban development has a positive contribution on urban life in the Town;*
  - *Ensure that the character and stability of existing and well established residential neighbourhoods is maintained and enhanced by ensuring that development and redevelopment is compatible, in terms of built form, with the character of adjacent buildings and neighbourhoods and the scale and density of existing development;*
  - *Ensure that all urban streets are defined by buildings and public spaces wherever possible and appropriate;*
  - *Encourage a high quality of site and building design for all forms of development within the Town;*
  - *Exercise appropriate municipal development control in order to achieve a consistently high standard of site, building and landscape design;*
  - *Ensure that new development areas are integrated into the fabric of the existing community;*
  - *Ensure that neighbourhoods are compact and pedestrian-friendly with a mix of housing types, community facilities, public schools, commercial centres and open spaces; and,*
  - *Foster a sense of civic identity and pride through a high standard of urban design in all future developments*".
- Section A3.2 highlights the existing land use designations with urban areas including Community Areas with sub-designation Downtown Area.
  - The Downtown Area designation is applied to Downtown Georgetown which is planned to be a focal point for commerce, tourism, mixed-use development, and streetscape and façade improvements. The downtown should also be an area for pedestrian-scale activity (D2.5.1).
  - The Georgetown Downtown Area includes 3 sub-areas: Downtown Core, Downtown Complementary and Georgetown Downtown Redevelopment. (see Map 1)

- The vision for the Downtown Core Sub-Area is to "*continue to function as focal points for commerce and hospitality in the Town, accommodating a diverse mix of commercial, residential, cultural and social uses and opportunities"* while preserving and enhancing the cultural and historic features of the Downtown *(*Section D2.5.1.4.1).
    - Max Height along Main St: 4 Storeys
    - Max Residential Building Height: 8 Storeys
    - Max Density: 100 units/ha
- The vision for the Downtown Complementary Sub-Area is to become a *"transitional area between the lands within the Downtown Core Sub-Area and established and stable residential neighbourhoods." The intent of this designation is to accommodate small scale, commercial and residential uses that can utilize existing house form buildings to maintain the character of the area and be complementary to the mixed-use, pedestrian oriented focus of the Downtown".* (Section D2.5.1.5.1).
    - Max Residential Building Height: 3 Storeys
    - Max Density: 30 units/ha
- The vision for the Georgetown Downtown Redevelopment Sub-Area is to *"become the focus for higher density residential uses in the Georgetown Downtown Area, together with complementary commercial or institutional uses, recognizing the redevelopment potential of the area, and its location on the Guelph Street Intensification Corridor between the Georgetown Downtown Core Sub-Area and the GO Station/Mill Street Corridor Area. It is the intent … that the scale and location of new development in the Georgetown Downtown Redevelopment Sub-Area complement the character of the Georgetown Downtown Core Sub-Area, while providing an opportunity for higher density residential uses in close proximity to the Downtown Core, which will support the function of the Downtown Core"* (Section D2.5.1.6.1).
    - Height Range for High Density Residential: 4-8 Storeys
    - Density Range: 75-150 units/ha
    - Min Density: 21-50 units/ha

- Under Section D5, it is the objective of the Town to support and encourage intensification within the Built-up Area of Georgetown with Downtown Georgetown identified as a redevelopment area under D5.2 c). It is also the objective of the Official Plan that:
    - Intensification Areas provide a compatible urban form with existing areas, are transit supportive, promote active transportation, and are environmentally sustainable;
    - Intensification Areas receive priority infrastructure investment;
    - Council consider planning and financial incentives, including CIP's to support development in Intensification Areas;
    - Cultural heritage resources are conserved;
    - Development is characterized by high quality urban design and appropriate type and scale is addressed through area specific plans;
    - Minimum densities are achieved; and,
    - The public realm is of high quality and creates attractive pedestrian-friendly places.

- A minimum intensification target of 340 units to the planning horizon of 2031 has been established for Downtown Georgetown under Section D5 Table D5.1.

- Section D5.4 sets forth policies for intensification to ensure the identified areas are development-ready by:

  "i) coordinating with the Regional the provision of water, wastewater, stormwater and transportation infrastructure with sufficient capacity to support the development densities planned for these areas;

  ii) coordinating discussions with utility providers to ensure that adequate utility services are or will be in place to serve the proposed development; and,

  iii) adopting Zoning By-laws or a Secondary Plan or Comprehensive Development Plan, within one year of the approval of the Official Plan Amendment introducing the Intensification Area;"

Town of Halton Hills Strategic Plan

- The Town Strategic Plan Review and 2014-2018 Strategic Action Plan was a focused review of the 10 strategic action plan priorities from the previous term of Council with a goal of developing a new set of strategic priorities for the 2014-2018 term of Council. The Strategic Plan guides the Town's plans, programs, and services to 2031.

- The Strategic Action Plan identified 8 priorities for the 2014 to 2018 term of Council with a number of objectives for each:

  1. Municipal Service Delivery
  2. Financial Sustainability
  3. Planning for Growth
  4. Transportation/Mobility
  5. Sustainability
  6. Employment Areas Development
  7. Rural Economic Development
  8. Communications

- Strategic Action 3: Planning for Growth promotes the protection and adaptive reuse of built heritage resources as a component of intensification and focuses development in intensification areas.

Town of Halton Hills Zoning By-law 2010-0050 – (Consolidated 2016)

The following are the current zones that apply to the Downtown Area (see Map 2 and 3):

Urban Commercial Zones

Downtown Commercial One (DC1)	Maximum Height	13.0 metres
Downtown Commercial Two (DC2)	Maximum Height	10.0 metres
	Minimum Lot Frontage	15.0 metres

(Standards do not apply to single and semi-detached dwellings)

There are currently three properties within the Downtown with special provisions recognizing previous planning permissions.

Other Zones
Development (D)
Buildings and structures that existed on effective date of by-law
Single detached and accessory buildings – in accordance with standards for Urban Residential Zones
Additions to single detached: max. height 11.0m

Environmental Protection1 (EP1)
Environmental Protection 2 (EP2)
Open Space Two (OS2)

Preliminary Observations

1. Attracting residential intensification within Downtown Georgetown accomplishes several goals, including:

   - Accommodating residential growth without needing to expand the settlement areas;
   - Ensuring that new development does not negatively impact the character and appearance of the existing stable residential neighbourhoods and Georgetown's historic downtown;
   - Increasing the population in proximity to businesses to better support them;
   - Encouraging reinvestment in buildings and the public realm; and,
   - Achieving mixed-use development where residents are closer to jobs and commercial areas and are more able to use alternative modes of transportation.

2. It will be important for the Town to identify strategies for facilitating intensification through this secondary plan process. There are three principal areas that should be considered:

   - **Establish the environment for change:** The Official Plan policies provide the foundation for establishing the right environment for change, by developing a strong vision and supportive policies which prioritize and support residential intensification projects. By furthering these objectives in the Secondary Plan, this will announce the Town's position and interest in working with developers to realize these new forms of development, as well as provide a guiding framework for how intensification can fit within the Downtown's context.

   - **Reduce the cost of development:** Intensification is generally considered to be a more expensive and complex form of development, and therefore the Town should consider expanding financial incentives to make it more attractive for developers.

   - **Reduce the risks of the development approval process:** Due to the complexity that is often involved with intensification, there are numerous elements of a project's planning approval process that can pose a risk to the project's ultimate success. Reducing the risks of intensification projects may include pre-zoning certain lands to permit the desired form of intensification and building support among Town staff and Council members to ensure a smoother approval process.

3. This study will review the existing Town Official Plan policies for the Downtown and will recommend amendments as appropriate and identify the scale and magnitude of intensification appropriate for the area in the context of growth to the 2041 planning horizon, and the targets of the Growth Plan.

4. The density and height in the current OP for Downtown Georgetown and the existing Zoning By-law do not correlate and that appropriate densities for recommended heights will need to be addressed through this study.

5. Further the strategy for the Downtown by including the following:

Protect
Downtown Georgetown is recognized for its special character. A core principle of the strategy may be to protect:

- buildings of historic or architectural value and significance;
- the character of adjacent residential neighbourhoods;
- the pedestrian friendly sidewalks;
- views to church spires and other landmarks; and,
- mature trees.

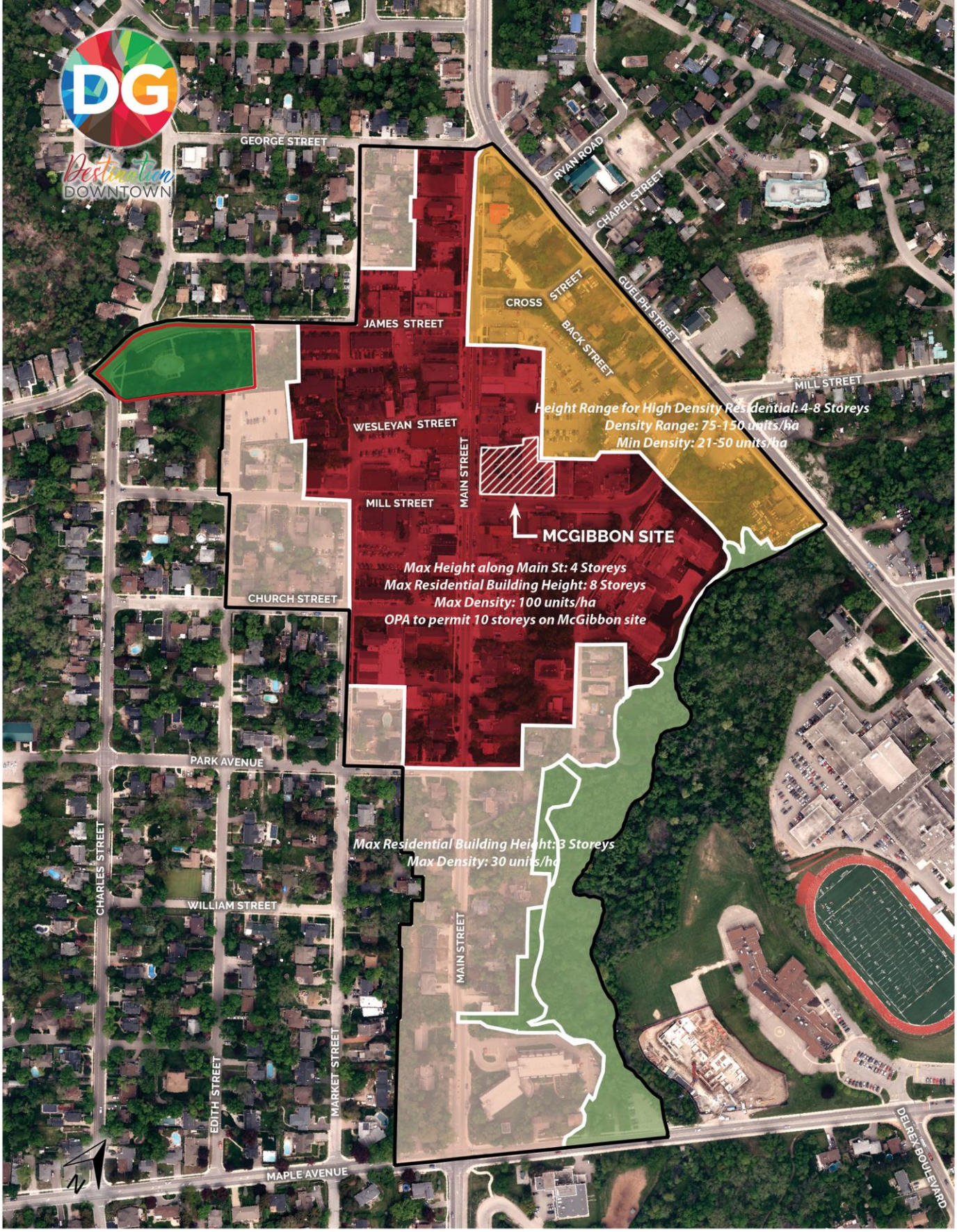
Promote
Provincial and Regional policy directs growth to centres such as Downtown Georgetown. A core principle of the strategy may be to promote:

- intensification to support transit;
- mixed use development;
- the conservation of significant heritage resource;
- architecture that is of its time;
- urban public spaces;
- the identity of Downtown as a destination;
- the economic vitality of Downtown; and,
- sustainable development.

Enhance
The analysis of existing conditions revealed several opportunities to enhance Downtown's character and defining elements. A core principle of the strategy may be to enhance:

- courtyards, mews, lanes;
- public spaces;
- streetscapes;
- pedestrian connections;
- transition to adjacent neighbourhoods;
- sustainability;
- public art; and,
- signage.

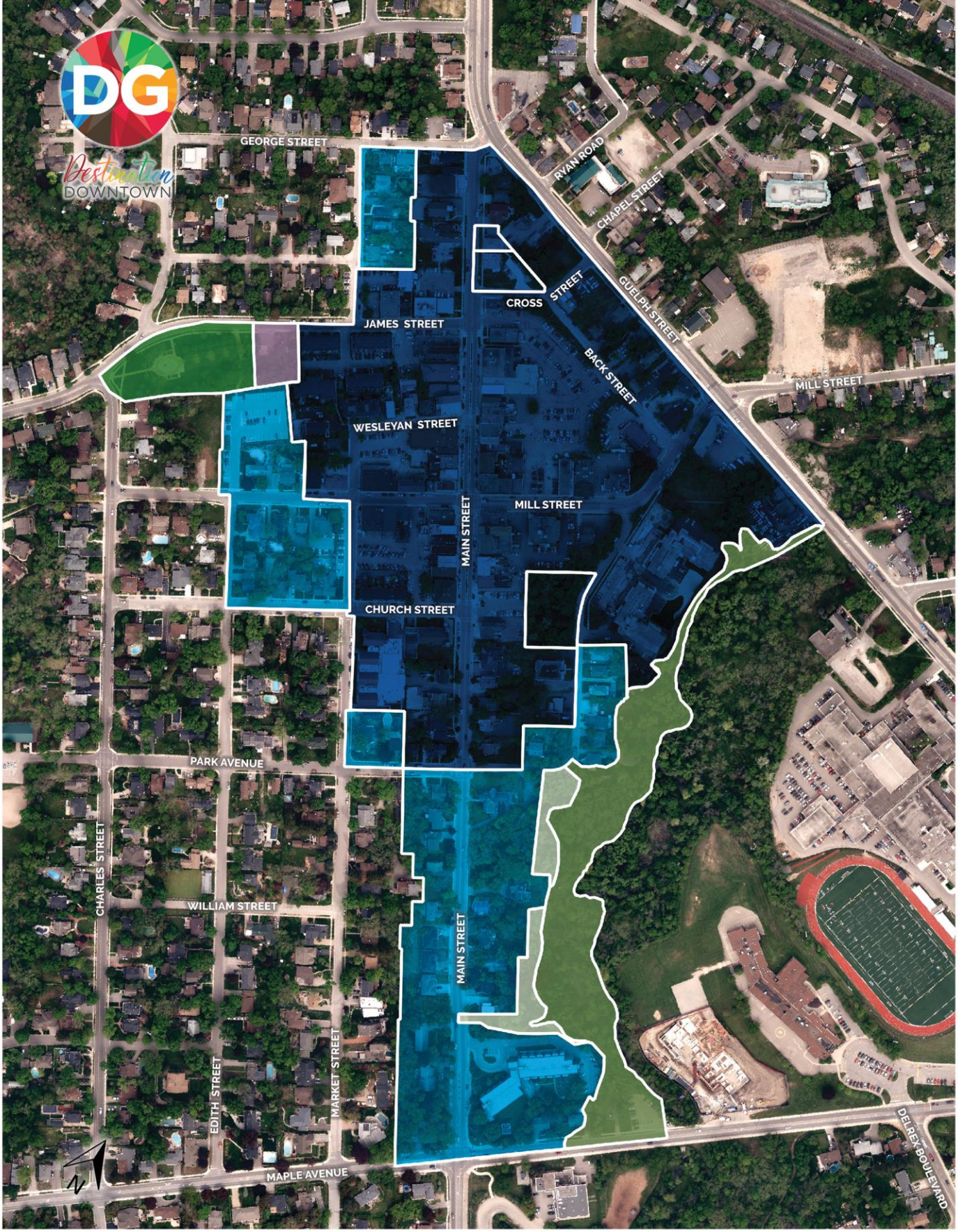
6. Downtown intensification does not only include new infill buildings, but can be achieved by smaller projects involving additions and changes of use of existing underutilized buildings. Policy direction should address this form of development.



MAP 1 - OFFICIAL PLAN

- Greenlands
- Major Parks and Open Space Area
- Downtown Core Sub-Area
- Downtown Complimentary Sub-Area
- Downtown Redevelopment Sub-Area
- Downtown Boundary
- Other Special Policy Area

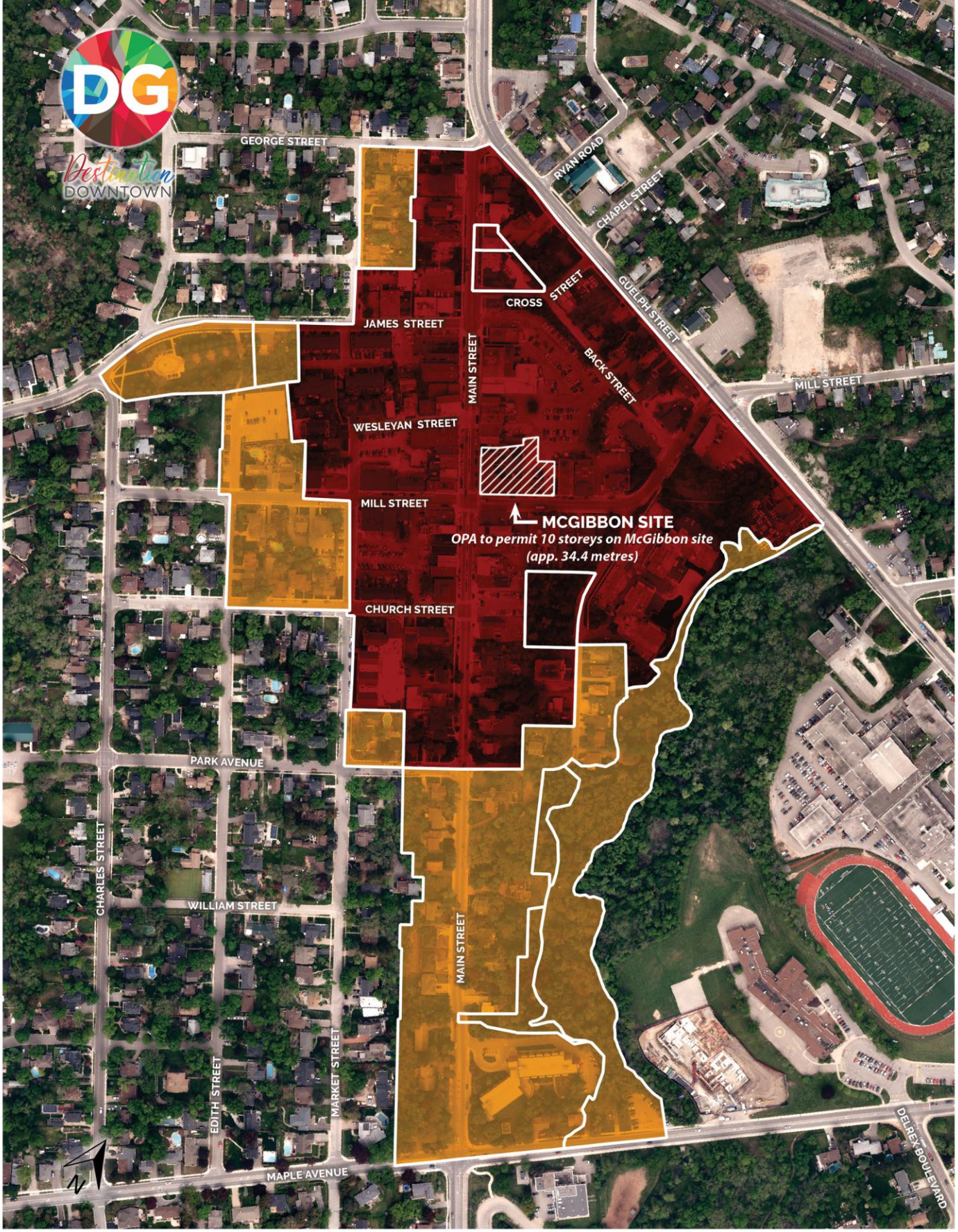
destination downtown
DOWNTOWN GEORGETOWN PLANNING



MAP 2 - ZONING

- Downtown Commercial One (DC1)
- Downtown Commercial Two (DC2)
- Development (D)
- Environmental Protection 1 (EP1)
- Environmental Protection 2 (EP2)
- Open Space Two (OS2)

destination downtown
DOWNTOWN GEORGETOWN PLANNING



MAP 3 - ZONING
PERMITTED HEIGHT

11.0 m
13.0 m

destination downtown
DOWNTOWN GEORGETOWN PLANNING

Issue and Opportunity #2: Housing

What policies are needed to further a diversity of housing options in the Downtown that will not only meet the needs of the current population but the future requirements of an ageing population?

According to the Market Analysis discussed in Section 6.0, Downtown Georgetown has experienced some intensification in the Downtown in the form of townhouse infill. The Residences of the McGibbon Hotel, a ten storey mixed use building, will bring a significant residential development component to the Downtown that offers a higher density housing form along the main street that does not currently exist. Georgetown has historically been a low-density residential community, with 85% of dwelling units registered as single-detached, semi-detached, or townhouses at the time of the 2016 Census.

Housing affordability – The affordability of low density housing is rising in the GTA, including Halton Hills. As discussed below, new single-detached housing prices are over $1,000,000. This trend is expected to continue. For the Town of Halton Hills to continue to grow and attract a broad range of new residents, a diverse housing stock, that includes more affordable options, will be needed.

High pricing in the low-density market is likely to increase demand for higher density housing types (townhouses, stacked townhouses, apartments) in Georgetown, similar to trends observed in other communities in the GTA.

Provincial Policies

Provincial Policy Statement (2014): Section 1.4 (Housing)

- The PPS calls on municipalities to provide an appropriate range and mix of housing types and densities to meet projected requirements of current and future residents of the regional market area. To do so, planning authorities are required to:
    - Maintain at all times the ability to accommodate residential growth for a minimum of 10 years through residential intensification and redevelopment and, if necessary, lands which are designated and available for residential development;
    - Maintain at all times land with servicing capacity to support at least a three-year supply of residential units available through lands suitably zoned to facilitate residential intensification and redevelopment, and land in draft approved and registered plans;
    - Establish minimum affordable housing targets;
    - Permit and facilitate the development of special needs housing;
    - Permit second units;
    - Direct new housing to locations served by existing or planned infrastructure and public service facilities;
    - Promote residential densities that use land, resources, infrastructure and public service facilities efficiently, and support the use of active transportation and transit in areas where it exists or is to be developed; and,
    - Establish development standards for *residential intensification, redevelopment and new residential* that minimize the cost of housing, facilitate compact form, and maintain public health and safety. (Sections 1.4.1 & 1.4.3).

Places to Grow (2017): Section 2.2.1 (Managing Growth); 2.2.6 (Housing)

- Section 2.2.1 of the Growth Plan states that to achieve complete communities, a diverse range and mix of housing options should be provided to accommodate people at all stages of life, as well as the needs of all household sizes and incomes.
- The Growth Plan requires municipalities to develop a housing strategy to meet the intensification/density targets with a diverse range of housing options and affordable housing. The strategy should:
  - Identify a range of mechanisms such as land use planning;
  - Be complementary to current housing and homeless plans;
  - Be implementable through official plan policies/designations and zoning by-laws;
  - Support the achievement of complete communities;
  - Support multi-unit residential developments; and,
  - Require the Town to maintain appropriate servicing capacity to support at least a three-year supply of residential units (Section 2.2.6)

Regional Policies

Region of Halton Official Plan (2015): Section 57-70 (Development Criteria); Section 84-86 (Housing)

- Halton Region OP requires municipalities to direct growth in environmentally suitable areas with appropriate land use designations based on servicing capacity and policy goals laid out in both Regional and local official plans. In addition, the Regional OP requires that:
  - Development be restricted in environmentally sensitive areas;
  - New lots be created under specific conditions such as for the purpose of acquisition by a public body and consolidating lots; and,
  - Single detached dwellings be limited to one per lot unless the additional dwelling's use is accessory to agriculture and unless the additional dwelling is to preserve the heritage value of the existing single detached dwelling within the Niagara Escarpment Plan Area.
- Section 84-86 of the Region OP provides policy direction pertaining to housing.
- Section 84 states that "the goal for housing is to supply the people of Halton with an adequate mix and variety of housing to satisfy differing physical, social and economic needs"
- Section 86 states it is the policy of the Region to:
  - Provide affordable housing;
  - Establish housing targets;
  - Expedite development approval process to reduce cost of housing;
  - Encourage innovative designs;
  - Encourage municipalities to maintain quality of existing housing stock;

- Promote residential intensification through the development/redevelopment of brownfield and greyfield sites, infill, redevelopment and conversion of existing structures;
- Permit second unit;

- Section 86(6) specifies that:
  - "at least 50 percent of new housing units produced annually in Halton be in the form of townhouses or multi-storey building; and
  - that at least 30 percent of new housing units produced annually in Halton be affordable or assisted housing".

Town Policies

Town of Halton Hills Official Plan (2017): Section A2.9 (Housing); Section D1.4.7 (Housing Mix); Section D2.5.1 (Downtown Area)

- Section A2.9.1 states that the Town's goal is "to provide an adequate housing supply and range of housing choices to meet the needs of present and future residents".
- Section A2.9.2 outlines the Town's strategic objectives pertaining to housing including the need to encourage:
  - an adequate supply of land for residential development;
  - residential intensification and affordable housing
  - mixed-use development;
  - a full range of housing development;
  - seniors housing;
  - rental housing;
  - assisted housing;
  - residential care facilities and emergency housing; and,
  - universal physical access.
- Under Section D1.4.7, a complete range and mix of housing is encouraged to assist in achieving a balance of housing in the Town.
- Section D2.5.1 sets forth the policies for the three Downtown Sub-Areas for Downtown Georgetown. Each Sub-Area includes permissions for residential uses that include street and block townhouses, multiple, and apartment buildings, long term care facilities, retirement homes, and special needs housing.
- The Official Plan does not have an affordable housing target and looks to Secondary Plans to establish targets for affordable housing (G3.1 b)). The Region OP under Section 86(6) identifies a target of 30% of new housing units in Halton be affordable or assisted housing.

Preliminary Observations

1. The existing policy framework for housing in the Downtown Area with respect to housing mix and level of detail in the plan is supportive, and does not require major changes in approach. Retain the current approach of:
   - Generally permitting and encouraging a mix of housing types in the Downtown Area.
2. It is important to further support the provision of housing options specifically designed for seniors. Consider placing retirement and long-term care facilities closer to a neighbourhood centre and incorporate multi-storey dense components to achieve a sufficient yield on small sites.
3. Universally accessible housing options should be provided to accommodate the widest spectrum of people, regardless of age or ability, to live within the community.
4. The Town should consider the addition of policies that facilitate the development of affordable housing and special needs housing, including the establishment of an affordable and assisted housing target and the introduction of various incentives for affordable and/or special needs housing.

Issue and Opportunity #3: Urban Design

The development of a built environment that is well designed, compact, and supports people's needs for daily living should include a high quality public realm that is reinforced by urban design standards that create attractive and vibrant places.

The urban design analysis under Section 4.2 of this paper will provide further detail on the review of the existing urban design guidelines. The intent of this review is to provide an overview of the opportunities for structuring the built environment to support a high quality public realm in the Downtown.

Provincial Policies

Provincial Policy Statement (2014): Part V, Section 1.1 (Managing and Directing Land Use to Achieve Efficient and Resilient Development and Land Use Patterns)

- The PPS promotes "Building Strong Healthy Communities", but does not provide specific guidance on community design. Guidance related to efficient land use patterns, as well as providing a mix of densities and land uses in Settlement Areas does, however, support the achievement of compact and walkable communities (Section 1.1.1, 1.1.3.2).
- In addition, Section 1.1.3.4 states that "Appropriate development standards should be promoted which facilitate intensification, redevelopment and compact form, while avoiding or mitigating risks to public health and safety".
- In the context of new Provincial Accessibility for Ontarians with Disabilities (AODA) legislation and an aging population, accessible/universal design also needs to be considered.

Places to Grow (2017): Section 2.2.1 (Managing Growth); and Section 5.2.5 (Targets).

- The Growth Plan is based on the need to develop complete communities that are healthy, safe, and balanced.
- Under Section 2.2.1 Managing Growth, the Growth Plan states that the achievement of complete communities will be supported by:
  - having a diverse mix of land uses, access to services and public facilities
  - including a diverse range and mix of housing options to support people at all stages of life
  - expanding access to a range of mobility and active transportation options, and publicly accessible open spaces, parks, and trails
  - ensuring high quality public realm through site design and urban design standards
- Further under Section 5.2.5 Targets, the Growth Plan directs municipalities to develop and implement urban design and site design policies to support the development of a high quality public realm and compact built form.

Regional Policies

Region of Halton Official Plan (2015): Section 150-164 (Human Services)

- Section 150(1) states that it is the Region's goal to "achieve a sustainable state of health for all on the basis of a clean environment, economic prosperity, social equity, public safety and provision of opportunities for individuals to develop their maximum Potential".
- Section 152(1) states that it is the Region's policy to adopt Healthy Communities Guidelines with Local Municipalities.
- Section 156 states the municipalities should:
  - "Require all proponents of *development* to have regard for the Healthy Communities Guidelines in considering and providing physical design features that promote safety and security;
  - Encourage the Local Municipalities to develop Crime Prevention through Environmental Design (CPTED) guidelines for use in their site plan approval process; and,
  - Promote community based programs for increasing safety and security of individual neighbourhoods".

Town Policies

Town of Halton Hills Official Plan (2017): Section A2.3 (Urban Character); Section D2.5.1 (Downtown Area); Section D5 (Built-up Area and Intensification Areas); Section F2 (Urban Design); Section G4.3 (Height and Density Bonusing)

- Under Section A2.3.2, it is the Town's objective to ensure that:
  - "*All urban streets are defined by buildings and public spaces wherever possible and appropriate;*
  - *There is a high quality of site and building design for all forms of development within the Town;*
  - *New development areas are integrated into the fabric of the existing community; and,*

- *Neighbourhoods are compact and pedestrian-friendly with a mix of housing types, community facilities, public schools, commercial centres and open spaces*".

- Section D2.5.1.4.3 provides policy directions to new development and redevelopment within the Downtown Core Sub-Area. Specifically, it states that land assembly is encouraged, maximum height of buildings facing onto Main Street shall not exceed four storeys and new development shall "*maintain the architectural character and identity of the Downtown Core Sub-Area*".

- Section D2.5.1.4.4 provides policy directions to residential uses within the Downtown Core Sub-Area. It states that Main Street shall be the focal point for commercial and business activity in Downtown Georgetown. New residential uses should be located on the upper floors of buildings located on Main Street. In addition, it states that the "*maximum permitted density for townhouse, multiple and apartment dwelling on a lot shall not exceed 100 units per net residential hectare (…) and the maximum building height shall not exceed eight storeys*". Also, the policy states that development shall require a Zoning By-law Amendment and ensure adequate servicing and amenities are provided.

- Section D2.5.1.5.3 provides policy directions to residential uses in the Downtown Complementary Sub-Area. It states that the "*maximum permitted density for new townhouse, multiple, apartment dwellings and special needs housing on a lot shall not exceed 30 units per net hectare (…)*". In addition, the policy states that development shall require a Zoning By-law Amendment and follow the existing Urban Design Guidelines, as well as ensure adequate servicing and amenities are provided.

- Section D2.5.1.6.5 provides policy directions to new development and redevelopment within the Downtown Redevelopment Sub-Area. Specifically, it states that land assembly is encouraged and that development shall require a Zoning By-law Amendment. In addition, "*a Comprehensive Development Plan (CDP) for all contiguous lands within the designation shall be prepared and approved*". The CDP shall conform to the Urban Design Guidelines and Urban Design policies laid out in the Town's Official Plan.

- Under Section D5, it is the objective of the Town to support and encourage intensification within the Built-up Area of Georgetown with Downtown Georgetown identified as a redevelopment area under D5.2 c). It is also the objective of the Official Plan that:

  - Intensification Areas provide a compatible urban form with existing areas, are transit supportive, promote active transportation, and are environmentally sustainable;
  - Cultural heritage resources are conserved;
  - Development is characterized by high quality urban design and appropriate type and scale is addressed through area specific plans; and,
  - The public realm is of high quality and creates attractive pedestrian-friendly places.

- Section F2.1 outlines the objectives for urban design in response to the growth of the urban population in the existing Built-up Areas through intensification and to support a high quality of built form. The Section provides policy direction for both the Public and Private Realms.

- Section F2.2.6 states that "barrier-free access for persons using walking or mobility aids shall be provided in all public and publicly-accessible buildings and facilities and along major pedestrian routes. Barrier free features shall be integrated with the functional and design components of the site and/or buildings".

- Section F2.2.7 highlights the need for public art in the Town. Specifically, the Town's official plan brings forward the need for:
  - *"The creation of public art in public and private spaces which fosters community identity by interpreting local history, traditions and culture shall be encouraged.*
  - *The integration of art into new development shall be encouraged, particularly within the Downtown Area and Community Node designations.*
  - *Consideration shall be given to incorporating public art into new public buildings, bridges, parks, and noise barriers where appropriate and feasible".*
- Section F2.2.8 pertains to views and vistas and highlights the need for "*the preservation, enhancement and/or creation of significant views and vistas as part of comprehensive planning studies, such as Secondary Plans and during the review of development applications".*
- G4.3 pertains to height and density bonusing. Through the Planning Act, the Town is permitted to pass a by-law allowing development to achieve greater density and height than permitted in exchange for public benefits.

Preliminary Observations

1. Establish a clear policy framework for the design issues related to infill, redevelopment and conversion in order to ensure compatible development adjacent to existing neighbourhoods.
2. Key considerations for good urban design include community structure, street connectivity, streetscaping, building placement orientation and articulation, provision of parking, provision of public space, land use mix, variety of parks, and access to services and amenities. Other considerations should include sustainable design (e.g. passive solar orientation, Low Impact Development), active transportation, and Crime Prevention Through Environmental Design (CPTED).
3. The existing Official Plan recognizes the significance of the Downtown and the policies under Sections D2.5.1 and F2.1 will be incorporated/reflected in an updated and enhanced Downtown Urban Design Guideline.
4. It is recommended that policies be provided that
   - Strengthen the requirements for high quality private and public realms and active transportation facilities;
   - Establish built forms that achieve intensification targets without resulting in negative impact on surrounding neighbourhoods and adjacent properties; and,
   - Provide a policy framework which guides how new development should be compatible with and complement the existing character and architectural style, without attempting an imitation.

Issue and Opportunity # 4: Healthy Communities

A successful community consciously seeks to improve the health of its citizens by putting public health high on the social and political agenda.

Physical, social, and mental well-being are the necessary components of public health. To ensure that these components are achieved, the built environment should be designed to create opportunities to encourage residents to be physically active and socially engaged.

Provincial Policies

Provincial Policy Statement (2014): Section 1.0 (Building Strong Healthy Communities); Section 1.6 (Infrastructure and Public Service Facilities); Section 1.8 (Energy Conservation, Air Quality and Climate Change)

- The PPS provides a substantial policy framework aimed at building strong and healthy communities. Section 1.1.1 of the PPS states:

  "1.1.1 Healthy, liveable and safe communities are sustained by:

  a) Promoting efficient development and land use patterns which sustain the financial well-being of the Province and municipalities over the long term

  b) Accommodating an appropriate range and mix of residential (including second units, affordable housing and housing for older persons), employment (including industrial and commercial), institutional (including places of worship, cemeteries and long-term care homes), recreation, park and open space, and other uses to meet long-term needs

  c) avoiding development and land use patterns which may cause environmental or public health and safety concerns;

  d) Avoiding development and land use patterns that would prevent the efficient expansion of settlement areas in those areas which are adjacent or close to settlement areas

  e) Promoting cost-effective development patterns and standards to minimize land consumption and servicing costs

  f) improving accessibility for persons with disabilities and older persons by identifying, preventing and removing land use barriers which restrict their full participation in society;

  g) ensuring that necessary infrastructure, electricity generation facilities and transmission and distribution systems, and public service facilities are or will be available to meet current and projected needs; and

  h) Promoting development and land use patterns that conserve biodiversity and consider the impacts of a changing climate"

- Further, the PPS states "healthy, active communities should be promoted by planning public streets, spaces and facilities to be safe, meet the needs of pedestrians, foster social interaction and facilitate active transportation and community connectivity" (Section 1.5.1 a)).

- In the context of new Provincial Accessibility for Ontarians with Disabilities (AODA) legislation and an aging population, accessible/universal design also needs to be considered.

Places to Grow (2017): Section 1.2.1 (Guiding Principles); Section 2.2.1 (Managing Growth); Section 2.2.2 (Delineated Built-up Areas)

- Under Section 1.2.1, a guiding principle of the Plan is the achievement of complete communities that are designed to support healthy and active living and meet people's needs for daily living throughout an entire lifetime.
- To support the achievement of complete communities that are healthier, safer, and more equitable, the Growth Plan directs growth to establish healthy and balanced communities that will maintain and improve the quality of life for residents.
- Section 2.2.1 (4) further supports the achievement of complete communities through a diverse mix of land uses, access to services, range and mix of housing options, access to transportation options and use of active transportation, a vibrant public realm, integration of green infrastructure, and climate change mitigation.

Regional Policies

Region of Halton Official Plan (2015): Section 31 (Halton's Planning Vision); Part IV (Healthy Communities Policies); Section 152

- The Regional Official Plan is divided into two planning concepts, "land stewardship" and "healthy communities". Healthy Communities are the central component of the Region's planning vision as outlined under Section 31 which describes a healthy community as one:

  31(1) that fosters among the residents a state of physical, mental, social and economic well-being;

  31(2) where residents take part in, and have a sense of control over, decisions that affect them;

  31(3) that is physically so designed to minimize the stress of daily living and meet the life-long needs of its residents;

  31(4) where a full range of housing, employment, social, health, educational, recreational and cultural opportunities are accessible for all segments of the community;

  31(5) where mobility is provided primarily through an affordable, convenient, safe and efficient public transportation system and nonmotorized travel modes; and

  31(6) where the principles of sustainability are embraced and practiced by residents, businesses and governments.

- Part IV Healthy Communities Policies sets forth goals and general policies for the development of a built environment that supports healthy objectives for human services, public safety, social support services, transportation services, and energy conservation.
- Further, section 152(2) directs Local Municipalities to have regard for Healthy Communities Guidelines when they are preparing area specific plans or policies related to intensification.

Halton Healthy Communities Guideline

- The Healthy Communities Guideline is an implementation framework to transform identified attributes into concrete municipal policy directions and tangible development outcomes for new and existing communities in the Region. The Guideline is to be used to enhance and complement local

initiatives, ensuring consistent policies among the local municipalities with a view to achieving the six ROPA healthy community components, under Section 31.

- The Guideline sets forth seven attributes and corresponding elements for a healthy community:
  - Built Environment
  - Mobility
  - Natural Environment & Open Space
  - Human Services
  - Sustainable Design
  - Economy
  - Community Food Supply

Town Policies

Town of Halton Hills Official Plan (2017): Section A2.11 (Sustainable Community Development); Section G3.1 (Secondary Plans)

- Under Section A2.11.2 of the Official Plan, a strategic objective of the Town is to *"develop an energy efficient mix of land uses in urban areas by integrating land use planning with energy conservation practices that take into account community layout, building types and densities, mix of uses and other factors that contribute to creating efficient, vibrant, compact, complete and healthy communities;"*

- Under Section G3.1 Secondary Plans, the Official Plan establishes the requirements for Secondary Plans with the intent of any Secondary Plan to:

  d) ensure that the environment-first objectives of this Plan are met, including policies for the protection and enhancement of natural heritage features and ecological functions;

  j) establish land use patterns that promote mixed-use, compact, transit-supportive, walkable communities, including identifying the locations for social, cultural, recreational, educational and religious facilities;

  k) establish the location, types and density of residential and employment lands that contributes to the creation of healthy communities through: the appropriate mix and density of housing; strengthening live-work relationships through the balance of residential and employment land uses; the provision of local parks and open space; and promoting active transportation and the use of public transit;

Preliminary Observations

1. Provincial and Regional planning frameworks provide some direction for healthy communities. However, it is not one single action or policy topic that will define or lead to the achievement of a healthy community, but rather an approach to implementation that considers all of the policy sections of the Secondary Plan comprehensively.

2. A high quality, well-designed built environment is valued within the Town. To support this environment the Town promotes the Downtown as a focal point for a mix of uses, commerce and pedestrian scale activity.

3. With respect to healthy communities, the Town should introduce policies and/or community design standards applicable to new development that implement:

- The AODA: as of January 1, 2016, the design of all new public spaces/facilities are required to meet *Accessibility for Ontarians with Disabilities Act* (AODA) standards;
- Healthy community and active transportation criteria, including walking and cycling as viable modes of transportation for a variety of trips;
- CPTED principles; and
- Public art requirements.

4. Include a section on healthy communities, as required by Section G3.1 of the Town OP. Wording would suggest that healthy, liveable and safe communities are sustained by:

   - Promoting efficient development and land use patterns which sustain the financial well-being of the Province and municipalities over the long term;
   - Accommodating an appropriate range and mix of residential, employment, institutional, recreation, park and open space, and other uses to meet long-term needs;
   - Providing for an appropriate range of housing types and densities to meet projected needs of current and future residents;
   - Promoting development and land use patterns that conserve biodiversity and consider the impacts of a changing climate;
   - Planning public streets, spaces and facilities to be safe, meet the needs of pedestrians, foster social interaction and facilitate active transportation and community connectivity;
   - Integrating arts, cultural, and recreational facilities with local business, health and social services, schools, parks, and civic buildings;
   - Promoting the accessibility of services, culture, and recreation facilities by walking, cycling, or transit;
   - Providing a full range and equitable distribution of publicly accessible built and natural settings for recreation facilities;
   - Facilitating accessibility for persons with disabilities and older persons; and
   - Promoting conservation in energy, water and wastewater management.

Economic Development

Issue and Opportunity #5: Residential and Commercial Activity

Attracting commercial and residential development to the Downtown is necessary to support economic development, a diversified tax base, and complete communities where residents have access to jobs, goods, and services.

The ability of the Town to attract new investment in Downtown Georgetown is influenced by the changing nature of retail and affordability of housing in the GTA. Further discussion can be found under Section 6.0 Market Analysis.

Provincial Policies

Provincial Policy Statement (2014): Section 1.3 (Employment)

- Under the PPS, the province requires planning authorities to promote economic development and competitiveness by:

  - Providing an appropriate mix and range of employment and institutional uses to meet long-term needs;

- Maintaining a range and choice of suitable sites for employment uses and take into account the needs of existing and future businesses;
- Encouraging compact, mixed use development that incorporates compatible employment uses to support liveable and resilient communities; and,
- Ensuring the necessary infrastructure is provided to support current and projected needs (Section 1.3.1).

Places to Grow (2017): Section 2.2.5 (Employment); Section 2.2.6 (Housing)

- Under Section 2.2.5 Employment, the Growth Plan directs retail and office uses to locations supported by active transportation and transit, that the retail sector be supported by compact built form and intensification of retail and service uses, and the integration of these uses to further achieve complete communities (Section 2.2.5, 3.and 12).
- Providing housing options and densities through the development of a housing strategy that includes the identification of a diverse range and mix of housing types, second units, and affordable housing to meet the needs of current and future residents (Section 2.2.6 a)).
- To further support the achievement of complete communities, municipalities should consider available tools to require that multi-use residential developments incorporate a mix of unit sizes (Section 2.2.6, 3.).

Regional Policies

Region of Halton Official Plan (2015): Section 168-170 (Economic Development); Section 81 (Urban Area); Part V Section 205 (Implementation)

- Under Section 81(7.2) the Region will *"Consider intensification and development of Intensification Areas as the highest priority of urban development within the Region and implement programs and incentives, including Community Improvement Plans under the Planning Act, to promote and support intensification."*
- Section 168 states that the "goal for economic development is to achieve sustainable economic prosperity for Halton on the basis of its competitive location, innovative businesses, skilled labour force, high quality infrastructure, sustainable natural resources, a positive business environment, and a diversified economic base".
- Specific to Downtown Planning, Halton Region OP encourages local municipalities to "implement plans and programs for the preservation, improvement, redevelopment and/or revitalization, as the case may be, of downtown core area(s)" (Section 170.12 c)).
- Unser Part V Implementation, the Official Plan further outlines policies in regards to Community Improvement Plans.

  205.3 Under the Planning Act and its regulations, the Region is a prescribed upper-tier municipality that may designate all or part of the Region as a Community Improvement Project Area for the purpose of preparing and implementing Community Improvement Plans to improve the following elements within the Project Area:

  205.3(1) infrastructure within the Region's jurisdiction,

  205.3(2) land and buildings within any Intensification Area, and

205.3(3) Affordable Housing.

205.4 Under a Community Improvement Plan, the Region may acquire and dispose of lands and buildings, undertake improvements to such lands and buildings, and make grants and loans to other parties for the purpose of carrying out programs under the Plan.

205.5 The Region may also participate in a Local Municipality's Community Improvement Plan and make loans and grants to that Local Municipality in support of its Plan.

205.6 Regional Council, in consultation with the affected Local Councils, will use Community Improvement Plans at the appropriate time and circumstances to implement policies of this Plan.

Town Policies

Town of Halton Hills Official Plan (2017): Section A2.7 (Economic Development); D2.5.1 (Downtown Area); Section G7 (Community Improvement Plan Areas)

- Section A2.7.1 states that it is the Town's goal "to provide opportunities for economic development in a manner that fosters competitiveness and a positive business environment".
- Section A2.7.2 outlines the Town's strategic objectives including the need to:
  - "*To ensure that the quality and character of life in the Town is sustained and improved in context of the Greater Toronto Area and the global economy;*
  - *To facilitate opportunities to provide a range of goods and services to the public within Halton Hills through the use of a flexible policy regime;*
  - *To facilitate the establishment of a competitive business environment that is able to easily adapt to changing circumstances and priorities;*
  - *To encourage the development of the business infrastructure required to attract uses that will contribute to the quality of life in the Town;*
  - *To promote the establishment of more live-work relationships that reduce commuting;*
  - *To establish, maintain and enhance employment areas that provide a range of job opportunities and a broad range of commercial and service facilities that meet the needs of residents of the Town and the wider area;*
  - *To encourage wherever possible through the land use planning process the retention and expansion of existing businesses in the Town;*
  - *To ensure that a sufficient supply of serviced employment generating lands is available for development at all times;*
  - *To carefully monitor local and regional trends with respect to the supply of land for employment to ensure that an adequate supply in appropriate locations is available at all times;*
  - *To encourage further industrial development in the Acton Urban Area on the basis of full or partial services, as appropriate;*
  - *To protect lands that have the potential of being used for agricultural purposes from incompatible development to ensure that farming operations can operate with the maximum degree of flexibility and efficiency;*

- *To encourage the development of home-based businesses provided the proposed use is compatible with adjacent uses;*
- *To encourage the protection of the Town's natural attributes, such as its rural character and its natural heritage features in order to maintain and enhance recreational and tourism opportunities that rely upon these attributes;*
- *To encourage the protection of the Town's cultural heritage resources in order to maintain and enhance economic development and tourism opportunities;*
- *To protect and recognize the Town's mineral aggregate resource industry as an important component of its economic base;*
- *To encourage the continued revitalization of the Downtown Areas, which reflects their heritage significance and promote a mix of uses and attractions for community activities both in the commercial core and in immediately adjacent areas; and,*
- *To improve the aesthetic quality of the retail corridors in the Town to ensure that they function as attractive destinations for shoppers from the Town and the surrounding area*".

- Section D2.5.1.4.4 provides policy directions to residential uses within the Downtown Core Sub-Area. It states that Main Street shall be the focal point for commercial and business activity in Downtown Georgetown.
- Section G7 of the Official Plan establishes the entirety of the Town of Halton Hills as a community Improvement Project Area and identifies the Georgetown Downtown Sub-Area as one of the Community Improvement Project Sub-Areas.
- OPA 9 established the intensification hierarchy for the Town. The Georgetown Downtown Redevelopment Area was established as a focus for higher density residential due to its proximity to the GO Station and redevelopment potential. A total of 340 residential units is targeted for Downtown Georgetown with approximately 125 units allocated to the McGibbon Hotel development.

Town of Halton Hills Comprehensive Community Improvement Plan (CIP)

The Town of Halton Hills has a Community Improvement Plan Program in place to assist with the revitalization and redevelopment of an area through financial incentives. The CIP applies to Downtown Georgetown. An Amendment has been prepared by the Town to introduce criteria to allow flexibility for the Town to consider the eligibility of commercial, mixed-use, and institutional properties outside of delineated CIP areas for façade and building improvement grants and loans on a case by case basis.

A review of the Town and Region Community Improvement Plan programs will be undertaken in greater detail in the later phases of the study.

Preliminary Observations

1. It is important to be innovative and to respond to all forms of the new economy within the evolving economic context of Halton, which includes leveraging the Town's quality of life/place attributes.
2. The Downtown Area should be a focal point for higher density residential, commercial, and institutional uses, and should:
   - Establish safe and pleasant pedestrian environments that encourage movement by all modes of transportation;
   - Provide attractive streetscapes; and
   - Provide a range and mix of housing types, including affordable and special needs housing.
3. The Downtown is an important and highly cherished part of Georgetown. Its protection and enhancement are of interest to the Province, the Region, and the Town. Provincial and Regional planning frameworks identify downtowns and main streets as focal points for residential, commercial, and institutional uses, and require the Town to:
   - Establish safe and pleasant pedestrian environments that encourage movement by foot, bicycle and transit;
   - Provide attractive streetscapes;
   - Encourage downtown economic development initiatives; and
   - Provide a range of housing types and costs.

Community Infrastructure

Issue and Opportunity #6: Transit and Active Transportation

How can the Town best ensure that the land use planning framework supports the expansion of public transit as the community continues to grow and the demographic and economic conditions become more favourable for additional transit expenditures?

- Access to transit improves mobility options for people who cannot or choose not to drive, such as youth, seniors, and people without access to a private vehicle. It can also be part of a community's strategy for reducing greenhouse gas emissions from the transportation sector.
- The Town uses ActiVan and the Taxi Scrip Program for transit. Should expanded transit be considered, a supportive land use framework will be important to its success. Key factors include achieving the right mix and density of uses along transit corridors and at transit stops to generate ridership.

How can the Secondary Plan support "complete streets", an integrated trail/cycling network, and built form throughout Downtown Georgetown that provides the opportunity for residents of all ages and abilities to travel safely and conveniently by active modes of transportation – including walking and cycling.

- A variety of transportation options should be available to residents, with the built environment designed to encourage physical activity, facilitate active transportation and support public transit in place of motor vehicles and driving. The accommodation of various travel choices ensures the economic, social, and environmental sustainability of transportation systems.
- Designing a safe, convenient, and accessible environment for walking and cycling encourages these alternative modes of transportation.

Provincial Policies

Provincial Policy Statement (2014): Section 1.6.7 (Transportation Systems); Section 1.6.8 (Transportation and Infrastructure Corridors); 1.8 (Energy Conservation, Air Quality and Climate Change); 1.5 (Public Spaces, Recreation, Parks, Trails and Open Space)

- The PPS calls for the provision of safe, efficient, and multi-modal transportation systems that meet projected needs.
- The PPS recognizes the connection between land use patterns and transportation choices, and calls for integrated planning that minimizes the length and number of vehicle trips, and supports transit and active transportation (Section 1.6.7.4).
- The PPS also requires planning authorities to plan for and protect corridors and right-of-ways for infrastructure, including transportation and transit.
- To reduce greenhouse gas emissions from transportation, the PPS calls on planning authorities to:
  - Promote the use of active transportation and transit in and between residential, employment (including commercial and industrial) and institutional uses and other areas; and,
  - Focus major employment, commercial and other travel-intensive land uses on sites which are well served by transit where this exists or is to be developed, or designing these to facilitate the establishment of transit in the future (Section 1.8 b&c)).
- In addition, the PPS states "healthy, active communities should be promoted by planning public streets, spaces and facilities to be safe, meet the needs of pedestrians, foster social interaction and facilitate active transportation and community connectivity" (Section 1.5.1 a)).

Places to Grow (2017): Section 3.2.2 (Transportation); Section 3.2.3 (Moving People)

- The Growth Plan requires municipalities to plan for transportation system and offer a "balance of transportation choices that reduces reliance upon the automobile and promotes transit" (Section 3.2.2.2 b)) and multimodal access to a range of destinations. Municipalities should also develop and implement transportation demand management policies so that, amongst other things, modal share of alternative to the automobile is increased, active transportation is prioritized, and infrastructure to support active transportation is expanded.
- The Growth Plan requires municipalities to plan for transportation system and improve connectivity among transportation modes. In addition, "in the design, refurbishment, or reconstruction of the

existing and planned street network, a complete streets approach will be adopted that ensures the needs and safety of all road users are considered and appropriately accommodated" (Section 3.2.2.3). Municipalities should also develop and implement transportation demand management policies so that, amongst other things, trip distance and time are reduced.

- Section 3.2.3.1 states that "public transit will be the first priority for transportation infrastructure planning and major transportation investments". In addition, municipalities should make decisions regarding transit on the basis on the following criteria:
  - Plan for transit whereby residential and employment high densities are existing and/or planned;
  - Improve transit in strategic growth areas;
  - Expand transit whereby transit-supportive densities and mix of uses are existing and/or planned;
  - Improve connections to urban growth centres, major transit station areas and other strategic growth areas;
  - Increase modal share of transit; and,
  - Reduce greenhouse gas emissions.

- Section 3.2.3.3 states that "*municipalities will work with transit operators, the Province, Metrolinx where applicable, and each other to support transit service integration within and across municipal boundaries*".
- Section 3.2.3.4 states that "*Municipalities will ensure that active transportation networks are comprehensive and integrated into transportation planning to provide a) safe, comfortable travel for pedestrians, bicyclists, and other users of active transportation; and b) continuous linkages between strategic growth areas, adjacent neighbourhoods, major trip generators, and transit stations, including dedicated lane space for bicyclists on the major street network, or other safe and convenient alternatives*".

Regional Policies

Region of Halton Official Plan (2015): Section 146 (Land); Section 171-173 (Transportation and Active Transportation)

- Section 146(5) highlights the Region's desire to promote a Regional Trail system by enhancing connectivity through acquisitions or easements.
- Section 171 states that it is the Region's objective to promote an active transportation network that is elevated through new development, land use patterns and densities.
- Under Section 172 it is the Region's objective to provide a high level of public transit service that is safe, convenient, within reasonable walking distance (i.e. within 400m), at a reasonable cost, is efficient and that connects with surrounding transit network.
- Section 172 (8) indicates that the Region is aiming for a public transit mode share of at least 20 per cent of all daily trips made by Halton residents by 2031.

- Section 172 (9) supports the "early introduction of public transit service in new development and redevelopment areas and in intensification areas".

- Section 172 (10) indicates the need for "land use patterns and densities that foster strong live-work relationships and can be easily and effectively served by public transit and active transportation".

- Section 173 (2) states the Region should "ensure that the development of the transportation system in and around Halton supports the development of Intensification Areas".

- The Region requires municipalities to "include in the site plan approval process a review of how the proposal has maximized active transportation opportunities and transit access to the site" and to "adopt parking policies in the Intensification Areas that would promote active transportation and the use of public transit" (173 (21)).

- Section 173 highlights the policy direction of the Region pertaining to transit infrastructure such as the need to:

  - Develop and fund inter-regional high order transit projects, in conjunction with the Province, Metrolinx and Local Municipalities, to ensure a transit system with acceptable frequency and capacity;

  - "*Secure, through the development process and/or strategic property acquisitions, the necessary rights-of-way and sites for transit stops and stations and commuter parking or mode transfer facilities for the implementation of local and inter-regional transit systems within Halton"* (Section 173(25));

  - "*Seek Provincial and Federal funding and advocate other revenue sources to support strong local transit systems characterized by: a) a good state of repair, b) excellent feeder services to the inter-municipal/inter-regional higher order transit network, and c) timely services for new and existing communities*" (Section 173(27)); and,

  - Implement the 20 per cent transit mode share target through proactively planning for the required transit infrastructure, monitor public transit usage, and work with the Province and Metrolinx to remove barriers to implementation.

Town Policies

Town of Halton Hills Official Plan (2017): Section A2.8 (Infrastructure); Section F2 (Urban Design); F6 (Transportation); Section F7 (Public Parkland)

- Section A2.8.2 c) states that it is the Town's objective to "establish a transportation system that safely and efficiently accommodates various modes of transportation including trains, automobiles, trucks, public transit, cycling and walking".

- Section F2.2.1.1 pertains to streetscapes and highlights the need for road designs that include bicycle lanes where appropriate, an integrated and specialized design and treatment of streetscape features, complementary streetscape features, gateway features and planned road reconstruction that enhance the existing streetscape.

- Section F2.2.1.2 pertains to roads and highlights the need for rights-of-way with appropriate sidewalks for pedestrian, collector/arterial roads with boulevard if appropriate, medians with hard/soft landscape materials, regularized pattern of street tree planting, minimized private access

onto the public road system, and street lighting that enhances pedestrian safety and that reduces energy consumption.

- Section F6.1 outlines the Town's objectives in regards to transportation including the need to efficiently move people and goods across the Town, ensure appropriate right-of-way widths, encourage alternative development standards for roads, and promote public transit and encourage the efficient use of land along transportation corridors to maximize the use of public transit.

- Section F6.2 provides direction for pedestrian and cycling routes and facilities and states that "Council shall develop an interconnected system of cycling and walking routes providing access to major activity and employment areas and to future public transit. In this regard, Council shall refer to the Trails and Cycling Master Plan to provide the basis for the establishment of a pedestrian and cycling network in the Town". In addition, the Town's Official Plan provides additional policy such that the Town should consider:
  - The provision of safe and convenient cycling;
  - The integration of cycling around school sites;
  - The implementation of bicycle when a road/bridge is being constructed/reconstructed; and,
  - The provision of lands necessary for bicycle paths within road requirements.
- Section F6.3 states that "at the time of adoption of this Plan, a public transit system did not exist in the Town, however, the use and expansion of existing special transit service for the physically disabled (Acti-van) shall be encouraged and promoted. Council shall actively promote transit-supportive land uses in Nodes, Corridors and new development areas. Council shall also review the need for a municipal transit system, as permitted by its financial capability, and if and when provided, integrate and support other transit systems and co-ordinate transportation planning efforts with Regional, Provincial and Federal transportation initiatives. Council shall encourage continuous improvements to the Provincial GO transit system".

- Section F7.1 h) states that it is the Town's objective to "encourage the development of a walking and cycling trail system within the open space system that is accessible to the public utilizing trails, paths, streets and other public open spaces".

Preliminary Observations

1. Establish a transportation policy framework that supports and encourages a multi-modal system for cars, bikes, pedestrians, and future transit. Build upon and implement the Transit Service Strategy once complete.

2. Establish parking strategies for the Downtown. These observations will incorporate the full parking analysis, as well as the conclusions from background review, to provide well informed and targeted long-term solutions. The results from the gap analysis and parking assessment will advise the recommended measures and provide direction related to parking strategies. These observations will represent a phased transition plan to implement the recommended parking strategies developed for short, medium, and long range.

   It is important to balance the supply of parking in concert with redevelopment through a comprehensive approach to planning and urban design. It requires a special approach to the provision of parking that, while meeting the needs of motorists, sustains and enhances the vision for Downtown Georgetown. Parking demand is typically reduced with the provision of transit and

improved cycling and pedestrian routes. The valuable role parking plays in a strong downtown is not questioned, but a strategy should advocate that parking be carefully planned, designed, and located to create a diverse, thriving, pedestrian friendly area. Properly located, signed, and designed parking that offers choice to motorists will augment the function of Downtown and will not result in the visual blight that often results from large surface parking lots.

3. Recognize walking and cycling as viable modes of transportation for a variety of trips that are in the range of five kilometres or less. Build upon the Halton Hills Cycling Master Plan (2010) recommendations and the Town's Parks and Trails Master Plan.

4. Develop complete streets policies unique to the demands and challenges of Georgetown. Require a complete streets approach to the design of new streets, as well as the reconstruction, repair, and maintenance of all arterial, collector, and local streets.

   As part of a complete streets approach, establish a Streetscape Hierarchy. Streets comprise the most significant land area in public ownership and are the primary way in which people experience a place. More than a road, a streetscape defines and considers all of the elements that combine to create the quality and character of the room that contains the street: sidewalks, trees, lighting, furnishing, signage and the character and quality of the buildings that define the street wall.

   Given that a culture of walking is fundamental to achieving a successful downtown, streetscapes must be designed to balance pedestrian, cycling, transit, land use and civic functions, in addition to the movement of cars. The intent of a streetscape hierarchy is to identify the conditions of use, built form, and streetscape required to create beautiful streets.

5. Introduce policies to support the provision of pedestrian and cycling amenities along streets (e.g. street trees, benches, bicycle racks, etc.).

6. Improve connectivity with the GO Station through active transportation opportunities.

Issue and Opportunity #7: Parks and Community Facilities

What policies are needed to support the Recreation & Parks Strategic Plan, and to ensure Georgetown's parks system, open spaces, trails, and recreational facilities continue to support the community for the next 20 years?

Ensuring residents have convenient access to a connected and diverse range of open spaces and parks offers increased opportunities for improved public health. Offering a range of alternative open space opportunities in the Downtown will provide for an enhanced public realm that is both animated and pedestrian friendly.

Provincial Policies

Provincial Policy Statement (2014): Section 1.5 (Public Spaces, Recreation, Parks, Trails and Open Space

- To achieve "healthy, active communities", the PPS promotes the provision of "a full range and equitable distribution of publicly-accessible built and natural settings for recreation, including facilities, parklands, public spaces, open space areas, trails and linkages, and, where practical, water-based resources" (Section 1.5.1 b)).
- Section 42 of the Planning Act supports the provision of parks by enabling municipalities to require parkland dedication as part of development, at the rate of 5% of the land area for residential uses or up to 1 hectare per 300 dwelling units, and 2% of the land area for commercial and industrial land uses.
- Under Provincial legislation the design of all new public spaces must meet AODA standards as of January 1, 2016.

Places to Grow (2017): Section 4.2.5 (Public Open Space)

- The Growth Plan requires municipalities to plan for a park system that is publicly-accessible that includes open space and trails that:
  - "*Clearly demarcates where public access is and is not permitted;*
  - *Is based on a co-ordinated approach to trail planning and development; and,*
  - *Is based on good land stewardship practices for public and private lands*" (Section 4.2.5.1).
- Section 4.2.5.2 states that "Municipalities are encouraged to establish an open space system within settlement areas, which may include opportunities for urban agriculture, rooftop gardens, communal courtyards, and public parks".

Regional Policies

Region of Halton Official Plan (2015): Section 77

- Section 77(5) requires Local Municipalities to prepare Area-Specific Plans for communities in development/redevelopment. Such plans should include, amongst other things, local parks and open space.

Town Policies

Town of Halton Hills Official Plan (2017): Section A3 (Land Use Concept); Section B2.6 (Special Policy Areas); Section D5 (Built-up Area and Intensification Areas); Section F7 (Public Parkland)

- The Town official plan has a land use designation, Major Parks and Open Space Area, which *"applies to lands, which are the site of large land holdings owned by a public authority that are used, or have the potential for passive or active recreational uses"* (Section A3.1.1);
- Section F7 provides objectives and policy directions for public parkland located within the Town of Halton Hills such as the need to maintain, enhance, promote, and protect the system of parkland areas. In addition, the Town Official Plan requires the acquisition, development and maintenance of parks to be guided by the policy framework established through the Recreation and Parks Strategic Action Plan, the Trails and Cycling Master Plan, public parkland standards, Parkland Dedication By-Law, and parkland development policies.
- Specific to Downtown Georgetown, Section B2.6.2 identifies Remembrance Park as a Major Parks and Open Space Area that functions as a gateway to the downtown area and is subject to the policies established for Neighbourhood Parks in the Town Official Plan. As such, Major Parks and Open Space Area located within the Downtown Georgetown shall:
  - *"generally service lands within a 0.4 to 0.8 kilometre radius, depending on population density;*
  - *generally range from 1.5 to 2.5 hectares in size;*
  - *be comprised mostly of tableland and be configured to support their intended use;*
  - *be centrally located within the neighbourhood or neighbourhoods it is intended to serve;*
  - *have frontage on a Collector Road that is adequate for the provision of on-street parking and site visibility;*
  - *be located adjacent to an elementary school, other community facilities where feasible, other open space lands or storm water detention areas to complement existing facilities and/or provide a neighbourhood focal point; and,*
  - *where adjacent to an elementary school have complementary facilities such as sports fields, hard surface play areas and components, and play apparatus"* (Section F7.3.4.2).
- Under Section D5, it is an objective of the Town for intensification areas to provide *high quality public open spaces with site and urban design that create attractive pedestrian-friendly places for social interaction* (D5.1 j)).
- Section F8 sets forth policies for the provision of community facilities and services. Community facilities include schools, libraries, community centres, and other recreational facilities that are designed to meet the educational, social, recreational and cultural needs of Town residents (F8.1).

Preliminary Observations

1. Consider the development of a Public Realm Framework to establish a legible, coherent and appealing physical environment in the Downtown. The Public Realm Framework identifies:
   - urban squares, parkettes and church lawns, as well as existing parks in proximity to Downtown;
   - gateways, key views and sites for landmarks;
   - locations for courtyards and mews;
   - streetscape hierarchy; and,
   - public art opportunities / to be coordinated with the Halton Hills Public Art Master Plan.
2. A variety of parkland options should be considered in the Downtown. Consider the inclusion of alternative parks such as:
   - Pocket Parks – small scale components of the parks system that are generally less than 1,000 square metres in size, but generally greater than 75 square metres:
     - Have frontage on at least one public street;
     - Require that adjacent built form have primary and active frontages facing the Pocket Park, where appropriate; and,
     - Facilities shall include seating and a full furniture program, including lighting, opportunities for outdoor cafés and restaurants, and facilities that promote a passive, relaxing atmosphere.
   - Strata Parks – the use of lands that are built over top of built form (usually below grade parking structures) or
   - POPS - privately owned publicly accessible space that are a specific type of open space which is accessible to the public but remains privately owned. Offers opportunities for additional open space that will complement the public park system
   - Mid-block connections – access within/between development blocks, barrier free and visible from sidewalk
3. Introduce new policies regarding AODA standards/universal design for all elements of the parks and greenway system, and for all community facilities.
4. Introduce CPTED policies.
5. Review the function of Remembrance Park in the Town's park classification.
6. Consider incorporating an active transportation network (trails and paths) in appropriate green spaces to connect with the Town-wide network.

Green Infrastructure

Issue and Opportunity #8: Natural Heritage System

How can the natural heritage system be enhanced in the Downtown and its features and functions protected?

Provincial Policies

Provincial Policy Statement (2014): Section 2.1 (Natural Heritage); Section 4.0 (Implementation and Interpretation)

- The province requires that *"Natural features and areas shall be protected for the long term"* (Section 2.1.1).
- The PPS further states that *"The diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of natural heritage systems, should be maintained, restored or, where possible, improved, recognizing linkages between and among natural heritage features and areas, surface water features and ground water features*" (Section 2.1.2).
- The PPS requires identification of natural heritage systems in southern Ontario (Section 2.1.3).
- The PPS also requires that "*Development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements*." (Section 2.1.7).
- The PPS provides direction for municipalities, through their Official Plans, where they *"shall identify provincial interests and set out appropriate land use designations and policies. To determine the significance of some natural heritage features and other resources, evaluation may be required. Official plans should also coordinate cross-boundary matters to complement the actions of other planning authorities and promote mutually beneficial solutions. Official plans shall provide clear, reasonable and attainable policies to protect provincial interests and direct development to suitable areas"* (Section 4.7).

Places to Grow (2017): Section 4.2.1 (Water Resource Systems); 4.2.2 (Natural Heritage System); 4.2.4 (Lands Adjacent to Key Hydrologic Features and Key Natural Heritage Features)

- Section 4.2.1 states that municipalities undertake watershed planning, identify and protect through designations and policies water resource systems, allocate growth based on watershed planning, inform designated greenfield areas with subwatershed plan and consider the Great Lakes Strategy.
- Section 4.2.2 states that municipalities shall:
  - Map Natural Heritage System (NHS) and exclude settlement areas;
  - Overlay the NHS on top of the municipality's official plan and incorporate policies to maintain, restore and enhance the NHS;
  - Have development demonstrate that there is no adverse effect on the NHS;
  - Permit for agricultural uses, agriculture-related uses, on-farm diversified uses, and normal farm practices;
  - Protect identified NHS under existing policies;

- Refine provincial mapping of the NHS through a municipal comprehensive review;
- Protect natural heritage features beyond the NHS; and,
- Continue protecting, in the event where a settlement area is expanded into the NHS, the natural heritage features within the NHS.

- Section 4.2.4 states that municipalities shall generally limit "*new development or site alteration within 120 metres of a key natural heritage feature within the Natural Heritage System or a key hydrologic feature will require a natural heritage evaluation or hydrologic evaluation that identifies a vegetation protection zone*" (Section 4.2.4.1), where development is generally not permitted. In addition, permitted development shall incorporate mitigation measures to protect and restore key natural heritage features, key hydrologic features, and their functions.

Regional Policies

Region of Halton Official Plan (2015): Section 113-118; Section 146-147 (Land)

- Section 114 states that "*the goal of the Natural Heritage System is to increase the certainty that the biological diversity and ecological functions within Halton will be preserved and enhanced for future generations*".
- Section 146-147 state that it is the Region's objective to protect tree-covered areas, connect woodlands, promote soil conservation, minimize soil erosion, promote the planting of new trees, restore treescapes, discourage activities in woodlands with adverse effect on forest health, and encourage environmental/ecological stewardship.
- Section 146(5) e) states that Municipalities should require "*all development proposals, to the maximum degree possible, preserve existing trees and plant additional trees in accordance with good forestry management practice*".
- Section 146(5) f) states that developments should "*submit, at the time of initial application, an inventory of trees on site and a tree saving and planting plan unless the development will not result in the removal of any trees*".
- The Official Plan identifies the Silver Creek valley as a "Key Feature" within the Regional Natural Heritage System.

Town Policies

Town of Halton Hills Official Plan (2017): Section A2.1 (Natural Heritage and Water Resources); B1 (Greenlands System); C3 (Watercourses); C4 (Natural Hazards); C7 (Watershed Planning); C9 (Tree Preservation/Planting); C10 (Erosion and Sedimentation Control)

- Section A2.1.1 states that it is the Town's goal to "*protect, enhance and where possible restore, significant natural heritage features and related ecological functions in the Town for present and future generations*".
- Section A2.1.2 provides strategic objectives such as the need to protect, connect and enhance the natural heritage and water resources in the Town of Halton Hills.
- Section B1 provides policy directions as to the enhancement of the Greenlands System such as:

- Identifying and protecting Greenlands within secondary plans;
- Transferring Greenlands into public ownership through a land securement strategy, the development approval process, and conservation easements;
- Prohibiting development within adjacent lands unless an Environmental Impact Study and/or a Subwatershed study and/or a Geotechnical study is completed and approved;
- Prohibiting development within significant natural features (i.e. significant wetland and significant habitat of endangered and threatened species) unless an Environmental Impact Study is completed and approved;
- Locating parkland adjacent to Greenlands System;
- Locating and designing trails appropriately given the sensitive significant natural features;
- Designating the Greenlands System with zoning designation Greenlands A and B;
- Expanding the Greenlands System based on new information through Watershed Management Plans, Subwatershed studies or a comprehensive Natural Heritage Strategy;
- Identifying woodlands that are 0.5 hectares or larger and implementing measures to protect them;
- Protecting Environmentally Sensitive Areas;

- Section C3 provides policy directions as to the protection of watercourses such as the delineation of watercourses, regeneration of natural areas near watercourses, protection of headwater areas, Subwatershed Studies, and the application of federal and provincial states and Conservation Authority regulations.
- Section C4 provides policy directions regarding development below the stable top of bank and in floodplains, existing development in floodplains and below stable top of bank, and stable top of bank setbacks.
- Section C7 provides the policy framework for Watershed Plan and Subwatershed Plans.
- Section C9 provides the policy framework for tree preservation / plants through the retaining and enhancement of treed areas outside the Greenlands System, protection of existing trees during public work initiatives, requirement of tree planting in development approval process, tree-planting program, and the development of vegetative cover along watercourses.
- Section C10 provides the policy framework for erosion and sedimentation control.

Silver Creek Subwatershed Study (2002, 2003)

A three stage subwatershed study for Subwatershed 11 (Silver Creek) of the Credit River was prepared by a team of consultants, the Town of Halton Hills, and the Credit Valley Conservation Authority. A summary of the key findings and recommendations of the Study will be undertaken as a component of the Scope Natural Heritage System Assessment. The preliminary work plan can be found under Section 9.0 of this report.

Preliminary Observations

1. The Region of Halton Official Plan identifies the Silver Creek valley as a "Key Feature" within the Regional Natural Heritage System. Further discussions on appropriate changes to the Land Use Schedule with respect to the Silver Creek Subwatershed Study are underway.

2. The Natural Heritage System needs to be reviewed on the Town's Official Plan Schedules in terms of the features, buffers, linkages and the restoration/ enhancement opportunities.

3. Explore options to further the greening of the Downtown with recommendations for native planting.

Issue and Opportunity #9: Servicing & Low Impact Development

How can green infrastructure, such as water, wastewater and stormwater management, as well as emerging stormwater management (SWM) strategies be effectively implemented in Downtown Georgetown?

These strategies include reducing the number of paved surfaces to reduce run-off flows, and using green infrastructure/natural corridors and Low Impact Development (LID) methods to increase infiltration in urban areas.

Provincial Policies

Provincial Policy Statement (2014): Section 1.6 (Infrastructure and Public Service Facilities); Section 1.8 (Energy Conservation, Air Quality and Climate Change)

- Under the PSS, the province requires that growth be planned such that existing servicing systems are optimized and such that water conservation and water use efficiency are promoted (Section 1.6.6.1).
- Section 1.6.6.2 of the PPS states that "municipal sewage services and municipal water services are the preferred form of servicing for settlement areas. Intensification and redevelopment within settlement areas on existing municipal sewage services and municipal water services should be promoted, wherever feasible".
- Section 1.6.6.4 highlights that individual on-site sewage services and individual on-site water services may be used in settlement areas only for infilling and minor rounding out of existing development.
- Section 1.6.6.5 states that partial services shall be permitted within settlement areas only "to allow for infilling and minor rounding out of existing development on partial services provided that site conditions are suitable for the long-term provision of such services with no negative impacts".
- Section 1.6.6.7 states that "Planning for stormwater management shall:
  - *Minimize, or, where possible, prevent increases in contaminant loads;*
  - *Minimize changes in water balance and erosion;*
  - *Not increase risks to human health and safety and property damage;*
  - *Maximize the extent and function of vegetative and pervious surfaces; and,*

- *Promote stormwater management best practices, including stormwater attenuation and re-use, and low impact development*".

Places to Grow (2017): Section 3.2.6 (Water and Wastewater Systems); Section 3.2.7 (Stormwater Management); Section 4.2 (Policies for Protecting What is Valuable)

- The Growth Plan requires municipalities to "generate sufficient revenue to recover the full cost of providing and maintaining municipal water and wastewater systems" (Section 3.2.6.1).
- Servicing will be planned, designed, constructed, or expanded based on opportunities for optimization and improved efficiency of the current servicing system through strategies, location of growth, a comprehensive water or wastewater master plan informed by watershed planning, and attenuation capacity for large subsurface sewage disposal systems (Section 3.2.6.2).
- The Growth Plan requires municipalities to develop stormwater master plans that:
  - "*are informed by watershed planning;*
  - *protect the quality and quantity of water by assessing existing stormwater facilities and systems;*
  - *characterize existing environmental conditions;*
  - *examine the cumulative environmental impacts of stormwater from existing and planned development, including an assessment of how extreme weather events will exacerbate these impacts and the identification of appropriate adaptation strategies;*
  - *incorporate appropriate low impact development and green infrastructure;*
  - *identify the need for stormwater retrofits, where appropriate;*
  - *identify the full life cycle costs of the stormwater infrastructure, including maintenance costs, and develop options to pay for these costs over the long-term; and,*
  - *include an implementation and maintenance plan*" (Section 3.2.7.1).
- Section 3.2.7.2 states that large-scale development requires a stormwater management plan.
- The Growth Plan establishes policies under Section 4.2 to ensure that "decisions on allocation of growth and planning for water, wastewater, and stormwater infrastructure will be informed by applicable watershed planning." (4.2.1.3)
- Further under 4.2.9, water conservation is supported through official plan policies and other strategies by including water demand management and water recycling objectives.

Regional Policies

Region of Halton Official Plan (2015): Section 144-145 (Water); Section 77-89 (Urban Area)

- Section 145(2) highlights the different Municipal Wellhead Protection Zones.
- Table 2.1 identifies the land use groups that can potentially impact groundwater quality.
- Table 2.2 identifies the land use groups that are prohibited in the three Municipal Wellhead Protection Zones.
- Any development that has the potential to impact the quality of groundwater through contaminants is subject to a review by Halton Region. This could require a hydrogeological study (Section 145(5)).
- Any development and site alteration in proximity to ground water features should be restricted and required to conduct an Environmental Impact Assessment (Section 145(23))
- Section 77(5) requires Local Municipalities to prepare Area-Specific Plans for communities in development/redevelopment. Such plan should include, amongst other things, water and wastewater servicing plans and storm water management.
- Section 89 states that the urban services found in the Urban Area should be designed to meet the local capacity requirements and have urban services designed to satisfy the Urban Services Guidelines and have urban services located only in the Urban Area.
- Section 89(4) permits development in the Urban Area to be located on private wells and/or private sewage disposal systems if urban services are unavailable.
- Section 89(8) states to “limit development in the Urban Area to the ability and financial capability of the Region to provide urban services in accordance with its approved financing plan under Section 77(15) of this Plan”.

Town Policies

Town of Halton Hills Official Plan (2017): Section A2.8 (Infrastructure); Section C5 (Water Resource Management); C6 (Groundwater Management); C8 (Stormwater Management); Section D5 (Built-up Area and Intensification Areas); F8 (Community Facilities and Services)

- Section A2.8.2 B) states that it is the Town’s objective to “ensure that all necessary infrastructure required to serve the urban area is built as necessary prior to, or coincident with, urban development”.
- Section C5 pertains to water resource management and highlights the need to protect existing sources of drinking water for future use and for development to be supported by a Hydrogeological Report.
- Section C6 pertains to groundwater management and highlights the need for adequate sustainable supply of clean water, watershed/subwatershed plans, the protection of existing surface and ground water quality, source protection objectives in land use planning process, and water conservation measures.
- Section C8 pertains to stormwater management and highlights the need for Stormwater Management Report for development proposal and for stormwater management facilities to be properly located in Environmental Zone in Plan of Subdivision.

- Section D5.4 sets forth policies for intensification to ensure the identified areas are development-ready by:
  "i) coordinating with the Regional the provision of water, wastewater, stormwater and transportation infrastructure with sufficient capacity to support the development densities planned for these areas;

  ii) coordinating discussions with utility providers to ensure that adequate utility services are or will be in place to serve the proposed development;

- Section F8.2 pertains to municipal water and wastewater services and identify such as the responsibility of the Region of Halton. It is the Town's policy that:

  - "*All development in the Urban Area shall be connected to municipal water and wastewater systems unless exempted by the policies of this Plan and the Regional Official Plan;*

  - *Development be limited in the Urban Area to the ability and financial capability of the Region to provide municipal water and wastewater services in accordance with its approved Development Charges Bylaws;*

  - *The extension of municipal water and wastewater services across Urban Area boundaries is prohibited, unless the services are being provided to lands within the Hamlet Area designation or other exceptions specifically identified in the Regional Plan; and,*

  - *The allocation of municipal water and wastewater system capacities through the development approvals process will be based upon a program developed in consultation with the Region, and implemented through reports to Council when necessary, which ensures the timely and efficient use of these services*".

Preliminary Observations

1. Provide provisional guidance for the choice of best stormwater management practices in order to control flooding, erosion, sedimentation, and water quality in any natural or manmade waterway

2. Encourage and promote the appropriate integration of natural waterways, ponds and valleys, to enhance and develop functional corridors for wildlife habitat, open space, and parkland.

3. Protect and enhance, through stormwater management techniques and design, the water quality, environmental, aesthetic and recreational potential of Silver Creek.

4. Consider policies that apply best management practices in stormwater management (understanding the difficulty with stormwater management that exists in the Town) including widened open space corridors and Low Impact Development policies that promote and incorporate innovative and appropriate Low Impact Development (LID) opportunities and best practices.

5. Consider Infiltration/Filtration facilities that may include: permeable pavement, bioretention trenches, rain gardens, infiltration trenches, soakaway areas and grass swales which may be located on public or private property within parks, front and back yards, parking lots and road rights-of-way.

Issue and Opportunity # 10 - Climate Change and Resiliency

What policies are needed to start preparing Georgetown residents and the Town's infrastructure for the community mitigation and adaption changes that will be required in future years to deal with climate change?

- The impacts of climate change are already being felt in Ontario. They include more frequent and severe weather events that challenge the Town's stormwater management (SWM) capacity
- Major storm events are increasingly creating risks to public safety and damage to public infrastructure and private property.
- Emerging SWM strategies include reducing the amount of paved surface to reduce run-off flows, and using green infrastructure/natural corridors and Low Impact Development (LID) methods to increase infiltration in vegetated areas and SWM ponds before run-off reaches the Town's sewer pipes.

Provincial Policies

Provincial Policy Statement (2014): Section 1.0 (Building Strong Healthy Communities); Section 1.6 (Infrastructure and Public Service Facilities); Section 1.8 (Energy Conservation, Air Quality and Climate Change); Section 3.1 (Natural Hazards)

- Under the PPS, the Province requires that impacts of climate change be considered in different areas including land use, air quality and natural hazards. Healthy, liveable and safe communities are achieved by *"promoting development and land use patterns that conserve biodiversity and consider the impacts of a changing climate"* (Section 1.1.1h).
- The PPS states under Section 1.6.1 that *"Infrastructure, electricity generation facilities and transmission and distribution systems, and public service facilities shall be provided in a coordinated, efficient and cost-effective manner that considers impacts from climate change while accommodating projected needs".*
- The PPS states further under Section 1.6.2 that *"Planning authorities should promote green infrastructure to complement infrastructure."*
- Under the PPS *"Planning authorities shall support energy conservation and efficiency, improved air quality, reduced greenhouse gas emissions, and climate change adaptation through land use and development patterns"* (Section 1.8).
- Further," Planning *authorities shall consider the potential impacts of climate change that may increase the risk associated with natural hazards"* (Section 3.1.3).

Places to Grow (2017): Section 4.2.9 (A Culture of Conservation); 4.2.10 (Climate Change)

- The Growth Plan requires municipalities to establish policies and strategies pertaining to:
  - Water conservation through water demand management and water recycling;
  - Energy conservation through energy efficiency and demand management initiatives
  - Air quality improvement and protection through reduction in emissions from municipal, commercial, industrial, and residential sources;

  - Integrated waste management; and,
  - Excess soil reuse (Section 4.2.9).

- Section 4.2.10 states that "municipalities will develop policies in their official plans to identify actions that will reduce greenhouse gas emissions and address climate change adaptation goals, aligned with the Ontario Climate Change Strategy, 2015 and the Climate Change Action Plan, 2016". In addition, municipalities should develop:
  - Strategies to reduce greenhouse gas emissions;
  - Greenhouse gas inventories for transportation, buildings, waste management and municipal operations; and,
  - Interim and long-term greenhouse gas emission reduction targets.

Regional Policies

Region of Halton Official Plan (2015): Section 140-149 (Environmental Quality)

- Section 140 states that "the goal for environmental quality is to achieve a high-quality environment, for this and future generations, that will sustain life, maintain health and improve the quality of living".
- Section 141(8) encourages "opportunities for the consideration and use of alternative engineering standards to promote sustainability and more efficient use of resources".
- Section 142-143 states that it is the Region's objective and policy to reduce greenhouse gas emissions through the promotion of active transportation, tree planting and other sustainable initiatives.
- Section 144-145 states that it is the Region's objective and policy to improve water quality through watershed management/plan, sub-watershed studies, efficient and sustainable use of water resources, establishment of Municipal Wellhead Protection Zones, Regional review of development with potential adverse effect on groundwater quality, protection and enhancement of watercourses and headwaters, and restrict development and site alteration with potential adverse effect on groundwater quality.
- Section 146-147 state that it is the Region's objective and policy to protect tree-covered areas, connect woodlands, promote soil conservation, minimize soil erosion, promote the planting of new trees, restore treescapes, discourage activities in woodlands with adverse effect on forest health, and encourage environmental/ecological stewardship.
- Section 148-149 state that it is the Region's objective and policy to sustainably manage waste through the promotion of resource conservation with the principles of reduce, recycle and resource recovery, and Solid Waste Management Strategies amongst other initiatives.

Town Policies

Town of Halton Hills Official Plan (2017): Section A2.11 (Sustainable Community Development), C16 (Energy Conservation), C19 (Green Development)

- Section A2.11.2 states that it is the Town's objective to:
  - *"Develop an energy efficient mix of land uses in urban areas by integrating land use planning with energy conservation practices that take into account community layout, building types and densities, mix of uses and other factors that contribute to creating efficient, vibrant, compact, complete and healthy communities;*
  - *Reduce the consumption of energy, water and land, and non-renewable resources;*
  - *Promote sustainable site and building design and construction techniques in new development that reduce energy and water consumption, improve air and water quality, encourage alternative modes of transportation, provide for enhanced natural environment conditions, and improve waste management; and,*
  - *Promote a total and per capita reduction in energy and water consumption in all sectors by encouraging retrofitting of existing buildings and facilities".*
- Section C16 states that the Town encourages "energy conservation by promoting:
  - *Compact urban form in new greenfield areas that is transit supportive;*
  - *Mixed use development in appropriate locations and live-work relationships that reduce automobile use;*
  - *Lot and building design that maximizes direct access to sunlight during the winter;*
  - *The use of vegetation that will reduce energy consumption of buildings; and,*
  - *Cycling and walking".*
- Section C19 states that development shall promote energy conservation, water conservation and quality, natural environment, air quality, waste management, communication, and transportation/community design through various means such as technologies and site plans.

Climate Change Adaptation Plan

The Town of Halton Hills has initiated a Climate Change Adaptation Plan to satisfy a Council priority under Action 5 Sustainability, of the Strategic Plan Action Plan. Action 5A is to *"Develop a Climate Change Adaptation Plan to address community responsiveness and resiliency to climate change".* The goal of the project is to develop a local scenario based Climate Change Adaptation Plan to develop local actions, priorities, and strategies to assist with reducing the Town's vulnerability to climate change through adaptation measures and to increase responsiveness, or resilience to future climate change impacts.

The Plan is being developed in conformance with ICLEC Canada's BARC (Building Adaptive and Resilient Communities) framework which includes 5 milestones:

- *Milestone One (Initiate): Develop a project work plan and engagement plan, build corporate and community support; identify stakeholders; identify existing adaptation.*
- *Milestone Two (Research): Review climate change science for the municipality; conduct a community engagement exercise; conduct a three-scenario greenhouse gas emission modelling exercise; conduct a natural capital assessment; conduct a Town-owned facility climate change exposure analysis to assess; and identify priority impacts.*

- *Milestone Three (Plan): Establish a vision, mission, goals and objectives; identify and prioritize actions; develop monitoring and evaluation strategy; identify indicators; draft implementation plan.*
- *Milestone Four (Implement): Adopt and implement the actions contained in the Climate Change Adaptation Plan.*
- *Milestone Five (Monitor and Review): Track implementation, update the plan when necessary.*

The Town received a $175,000 grant from Federation of Canadian Municipalities (FCM) in June 2017 to assist with conducting the town-wide natural capital assessment and climate change modeling exercise.

Green Development Standards

In April 2014, Town Council approved a new set of Green Development Standards. The new standards are an update to the Green Development Evaluation Checklist and provide additional guidelines which can apply to all forms of development, not only low rise residential, which was the focus of the original evaluation checklist. These Standards put in place a highly flexible set of criteria that will work to ensure a more sustainable and energy efficient development.

The Standards are organized into three Checklists, based on development type:

1) **Low-Rise Residential:** Single detached, semi-detached, duplex and townhouse development containing 4 or more lots or dwelling units up to 3 storeys in height;

2) **Low-Rise Non-Residential**: Non-residential development up to 3 storeys, larger than 100 square metres;

3) **Mid to High Rise**: All residential apartment buildings and all non-residential buildings 4 storeys in height or higher.

At a Pre-consultation meeting, it is determined if the Green Development Standards apply to the application and if so, the applicable checklist is submitted as a component of the development application.

Integrated Community Sustainability Strategy, 2013

The Integrated Community Sustainability Strategy establishes a vision to 2060 for the Town of Halton Hills. The strategy established a vision for Halton Hills.

"In 2060, the urban and rural communities of Halton Hills balance economic prosperity with a deep commitment to the natural environment, while retaining viable local agriculture and small-town feel, and being socially equitable, culturally vibrant and strongly connected."

To support this vision, Four Pillars of Sustainability were established:

1) Cultural Vibrancy

   A culturally vibrant community where culture is integrated with our economic, social and environmental lives and offers the opportunity for individual fulfillment through access to sports, recreation, arts, culture and heritage.

2) Economic Prosperity

   A community where economic prosperity is based on a green, diversified and resilient economy, and the strengthening of the existing industrial base.

3) Environmental Health

A community where integrated, thriving natural systems are valued, actively protected, and enhanced for long-term health and enjoyment.

4) Social Well-being

A healthy and safe community based on an ethic of caring and social equity.

Under the four pillars are 32 focus areas the community identified as being of importance to the Town.

The strategy will be monitored and measured through State of Sustainability Profiles. The latest report was the 2015 State of Sustainability Profile.

Preliminary Observations

1. Introduce policies to prepare for potential impacts of climate change. Establish a climate change framework under the following headings:
   - Energy Conservation
   - Water Use and Management
   - Stormwater Management
   - Air Quality
   - Urban Forest System
   - Green Buildings and Green Sites
2. Introduce policies that promote Energy Conservation in new developments.
3. Consider policies that apply best management practices in stormwater management (understanding the difficulty with stormwater management that exists in the Town) including widened open space corridors and Low Impact Development policies that promote and incorporate innovative and appropriate LID opportunities and best practices.
4. Minimize air quality and climate change impacts associated with new growth through complete streets, active transportation, reduced parking strategy, separation of sensitive land uses, etc.
5. Consider Urban Forest System policies that speak to the benefits of the urban forest such has reduction in air pollution, urban heat island effect, energy savings, habitat for urban wildlife, biodiversity, and opportunities for recreation and physical activity. Consider a tree canopy target.
6. Promote innovative residential and public building designs that contribute to energy reduction and natural resource conservation, green roofs, synergies between buildings and site management practices.
7. Consider policies that promote building reuse.
8. Incorporate appropriate preliminary findings of the Climate Change Adaptation Plan

Built & Cultural Heritage

Issue and Opportunity # 11 – Built Heritage & Cultural Resources

How can the built heritage and cultural resources of Downtown Georgetown be conserved and enhanced to ensure that the distinct character of the downtown is preserved and that key buildings remain prominent as intensification occurs?

Provincial Policies

Provincial Policy Statement (2014): Section 2.6 (Cultural Heritage and Archaeology)

- Under the PPS, the Province requires that "*Significant built heritage resources* and *significant cultural heritage landscapes* shall be *conserved"* (Section 2.6.1).
- Further, the PPS states that "*Development* and *site alteration* shall not be permitted on lands containing *archaeological resources* or *areas of archaeological potential* unless *significant archaeological resources* have been *conserved"* (Section 2.6.2).
- The PPS states under section 2.6.3 that "*Planning authorities shall not permit development and site alteration on adjacent lands to protected heritage property except where the proposed development and site alteration has been evaluated and it has been demonstrated that the heritage attributes of the protected heritage property will be conserved"*.
- Further, the PPS states that "*Planning authorities should consider and promote archaeological management plans and cultural plans in conserving cultural heritage and archaeological resources*" (Section 2.6.4).
- The PPS states under section 2.6.5 that "*Planning authorities shall consider the interests of Aboriginal communities in conserving cultural heritage and archaeological resources*".

Places to Grow (2017): Section 4.2.7 (Cultural Heritage Resources)

- The Growth Plan requires municipalities to:
  - Conserve cultural heritage resources *"to foster a sense of place and benefit communities, particularly in strategic growth areas".*
  - *Work with stakeholders, as well as First Nations and Métis communities, in developing and implementing official plan policies and strategies for the identification, wise use and management of cultural heritage resources.*
  - *Prepare archaeological management plans and municipal cultural plans and consider them in their decision-making*" (Section 4.2.7).

Regional Policies

Region of Halton Official Plan (2015): Section 165-167 (Cultural Heritage Resources)

- Section 165 states that "the *goal* for *Cultural Heritage Resources* is to protect the material, cultural and built heritage of *Halton* for present and future generations".
- The Region OP indicates that it is the Region's policy to maintain an area-specific list of documented Cultural Heritage Resources (167(1) & 167(5)) and provide a policy framework (i.e. mandated assessments and mitigation activities) for development on and adjacent to Cultural Heritage Resources (167(3)(4)(5)(6)).

Town Policies

Town of Halton Hills Official Plan (2017): Section A2.6 (Cultural Heritage); F2 (Urban Design); F5 (Cultural Heritage Resources)

- Section A2.6.1 states that the Town's goal in regards to cultural heritage is "*to identify, conserve and enhance the Town's cultural heritage resources and promote their value and benefit to the community*".
- Section A2.6.2 highlights the Town's objectives in regards cultural heritage such as the need to protect, retain and maintain cultural heritage resources, as well as furthering the existing inventory of built heritage and cultural heritage landscape resources.
- Section F2.2.4 states that "*development shall be designed to incorporate, conserve and enhance identified cultural heritage resources as distinct elements and/or focal points, and incorporate these features into the overall site and building design*".
- Section F5 provides the policy framework for cultural heritage resources including the built heritage, cultural heritage landscapes, and archaeological resources. Policies include:
  - The preparation of Cultural Heritage Master Plan;
  - Cultural Heritage Impact Statements
  - The retention and protection of significant cultural heritage resources during public work;
  - Mitigation impacts on cultural heritage resources when development has potential adverse effect;
  - The restoration or rehabilitation of significant cultural heritage resources;
  - The rehabilitation of mineral resource extraction areas of cultural heritage interest;
  - The creation of a built heritage and cultural heritage landscape inventory;
  - The designation of cultural heritage resources under the Ontario Heritage Act;
  - The designation of Heritage Conservation Districts under the Ontario Heritage Act and creation of Heritage Conservation District Plan;
  - The retention/relocation of built heritages structures;
  - The assessment of archaeological resources; and,
  - A Contingency Plan for the Protection of Archaeological Resources.

Preliminary Observations

The following are preliminary observations with respect to built heritage and cultural resources.

1. Assessment of built heritage and cultural resources will define a heritage strategy that may include a number of the following recommendations:
   - Consideration of a Cultural Heritage District
   - Infill development should respect the importance of heritage buildings in the Downtown
   - Existing heritage buildings should be integrated with new development, where possible.
   - Heritage façades should be adapted and revealed.

- New buildings should avoid mimicry, over embellishment, or historic pastiche-new construction should be of its time.
- New development should be planned in a way that it is subordinate to heritage character (e.g. greater setback, different materials).
- New development should be planned in a way that is compatible with the rhythm of the facades of heritage buildings.
- Angular planes and setbacks should be used to balance the scale of new development with the historic streetscape.

3.0 Downtowns Precedent Review

Many other Ontario downtowns face similar challenges to Georgetown with respect to their ability to accommodate intensification, including heritage preservation, transition in urban form, management of traffic, perceived lack of parking, and demand for urban public spaces. Additionally, a number of GTA municipalities have found it necessary to reinvent their downtowns in the face of commercial competition from shopping centres and big box commercial centres.

The following three case studies were the destinations for the bus tour conducted in January and include some examples of successful programs that have contributed to the enhancement and rejuvenation of other Ontario downtowns. They have been selected because of their similarities with Downtown Georgetown such as a "Main Street" condition, a significant heritage inventory, and residential intensification. Each has developed innovative strategies and valuable lessons that Downtown Georgetown can build upon.

3.1 Downtown Guelph

Similarities to Downtown Georgetown:

- Downtown commercial district
- Many heritage buildings
- Intensification
- Bus terminal and GO Station

Guelph is known for its successful downtown core, featuring many heritage buildings and large farmers' market. Following a period of sprawl and decline, Guelph has seen numerous initiatives over the past two decades aimed at improving environmental and heritage conditions.

Initiatives

- **Downtown Community Improvement Plan (CIP)** – The Downtown CIP provides funding for minor and major redevelopment within the Downtown core. The CIP assists with implementing the Downtown Secondary Plan and the City's economic development strategy. The program contains several grants that include tax increment based grants, façade improvement, feasibility study grants, and the minor downtown activation grant which promotes building rehabilitation or redevelopment on vacant or underutilized downtown parcels.
- **Tax Increment Based Grant (TIBG) -** A component of the City of Guelph Downtown CIP is the Tax Increment Based Grant (TIBG) program which has been successful for larger project in the Downtown. The purpose of the program is to encourage the rehabilitation, remediation, and redevelopment of brownfield sites.
- **Envision Guelph** - Downtown Secondary Plan to revitalize the downtown core to 2031. The Plan reinforces the historic character of the downtown while supporting increased residential development.
- Enhanced civic spaces, such as the Market Square in front of City Hall, and constructed new signage.
- **Downtown Streetscape Manual and Built Form Standards** – direction for new development in the Downtown, heritage conservation analysis, ensure that new structures do not conflict with

historic buildings and that views of the Church of Our Lady Immaculate (Guelph's most iconic church) are unobstructed.

- **Heritage Redevelopment Reserve (HRR)** grant - to assist in the retention and restoration of heritage elements of heritage buildings

Major Developments

- The Baker District - large downtown redevelopment project, land assembly by public and private investment, City moving forward with request for proposals for the redevelopment of the site
- Old Quebec Street - shopping mall and office complex built on a greyfield site (the old Guelph Eaton Centre), using historic décor and materials (2003).
- Gummer Building - redevelopment of 3 historic buildings; commercial, office and 18 residential suites on upper floors.
- River Run Centre (performance arts centre) and Sleeman Centre (minor league hockey arena and concert venue)
- Metalworks – brownfield redevelopment, 650 residential units, townhouses and high-rise development of up 14 storeys, retail/commercial, heritage building preservation, and future POPS trail.

Ahead of its time in many ways, Guelph has turned its downtown into the true centre of its city, for community events, as well as upscale shopping and restaurants. Quality new commercial and residential developments and streetscaping have produced a historic, but also bustling and contemporary feel in the core.

3.2 Downtown Oakville

Similarities to Downtown Georgetown:

- Downtown commercial district
- Located in a growing municipality
- Many heritage buildings

Old Oakville is one of three commercial districts in Oakville, along with Bronte Road and Kerr Street (immediately beside Old Oakville). It has become one of the 905 region's leading upscale suburban shopping districts. Old Oakville has remained primarily a three-storey, retail-oriented main street, and has leveraged its historic character to promote it as a destination for affluent consumers.

Initiatives

- Instituted design and infill guidelines to ensure new developments enhance pedestrian realm and create public spaces.
- **Liveable Oakville** (2009) – The Official Plan directs intensification and urban development to six growth areas with Downtown Oakville identified as one of the six areas. Part E: Growth Areas, Special Policy Areas and Exceptions, Section 25 of the Official Plan establishes policies for Downtown Oakville. The Central Business District land use designation applies to Downtown Oakville and is intended to accommodate new retail, service commercial, and residential uses through intensification.

- Introduced design standards and assessed current conditions through a **Downtown Transportation and Streetscape Study** (2015). The Study is a component of the Downtown Plan is comprised of two studies, the Downtown Transportation and Streetscape Study and the Downtown Cultural Hub.
- Used streetscape guidelines and site plan control to promote healthy development. Lakeshore Road and Robinson Street were given new decorative street lighting, furniture and paving, as well as trees and flowers.
- Encouraged development of commercial-recreation and entertainment facilities.
- Designated residential areas adjacent to downtown as **Heritage Conservation Districts**.
- Created a **Heritage Grant Program** with $90,000 available each year, available to owners of heritage properties to assist with covering costs of conservation work up to $15,000.
- Downtown Oakville parking locations only accept B.I.A. tokens as payment at all paid parking locations.

Major Developments

- Oakville Towne Square - space for public events and passive recreation. Events held include fundraisers, bazaars, cooking events, outdoor film screenings and a town Christmas tree.
- 5 storey mixed use buildings fronting Towne Square Park along Robinson Street
- 3 storey rear lane townhouse infill development
- One Eleven Forsythe – 13 storey residential building on the western edge of Downtown Oakville.

Downtown Oakville is an example of a successful central business district revitalization that has become both a gathering place and a shopping destination. Streetscaping has played a major role in enhancing its historic charm.

As part of the Town's Official Plan Review, Growth Area Reviews will assess the six growth areas to determine where there may be opportunities to accommodate additional residents and jobs. The “main street” growth areas of Kerr Village, Bronte Village and Downtown Oakville have been studied, and while a specific amendment is proposed for each of the three main street growth areas, the overall effect of the updates would include:

- new and revised urban design policies and mapping to enhance urban design objectives to guide and shape the character of these unique areas
- updated land use designations to permit greater development opportunities at key locations
- adjusted growth area boundaries

3.3 Port Credit, Mississauga

Similarities to Downtown Georgetown:

- Downtown commercial district (core of former Port Credit municipality)
- Located in a growing municipality
- Centered at the intersection of two major arterials (Hurontario Street/ Hwy.10 and Lakeshore Boulevard)
- Proximity to GO Station

Amalgamated into the City of Mississauga in 1974, Port Credit had a history as an industrial and shipping centre, as well as a destination for water recreation. Since the closing of most of its industrial sites, the community has developed itself as an upscale residential area and retail destination.

Initiatives

- Continuing to add mixed-use infill and intensification on underutilized or brownfield sites.
- Provided property owners with information, suggestions and examples for alterations and additions, in order to preserve historic styles.
- Added historic plaques and displays to educate residents about heritage.
- Implemented new height restrictions on buildings.
- Constructed underground parking to allow for denser, more urban appearance at grade.
- Studying feasibility of heritage conservation district.
- Strategic municipal investment in public realm
- **Mississauga Parking Strategy** - Phase II: Port Credit and Lakeview
- **Urban Design Guidelines** – Port Credit Built Form Guide, Low-Rise Multiple Dwellings, Green Development Standards

Major Developments

- **Port Credit Village, Phase 1 -** Innovative live-work townhouses on Lakeshore Blvd. at former St. Lawrence Starch factory site, mixed use development with retail/commercial, public amenity, 5 storey residential with at grade retail
- **The North Shore –**22-storey, 214 unit condominium with grade related commercial uses and a 6 storey low-rise building.

Port Credit was historically a small community, in terms of residential and commercial scale. The renewal process the community has undergone over the past decade has expanded the scale of the area, and may provide a good example at how to grow a traditional retail district, while maintaining its character.

4.0 Urban Design

Urban Design is an integral component of the Secondary Plan; the Urban Design Framework will provide guidance for the design of built form and the public realm to ensure that the heritage character and mixed-use function of the downtown is enhanced.

In Phase 3 of this study, a detailed re-evaluation of the existing Urban Design Guidelines will be undertaken in conjunction with the creation of new guidelines, the purpose of which will be to align urban design with planning policies and, more specifically, to demonstrate how the envisioned urban form for intensification of the Downtown may be achieved.

The updated guidelines will expand to address intensified forms of development, a complete and robust public realm and the synergies between built form and landscape/open space. Furthermore, the guidelines will be focused on place-making, with an emphasis on the Downtown heritage character, the pedestrian environment and connections to the Natural Heritage System.

As the foundation to this work, a **preliminary review/analysis** of the existing Urban Design Guidelines for the Downtown District and of the study area was undertaken with consideration for gaps, opportunities and constraints.

4.1 Urban Design Guidelines for Downtown District

The Preliminary Review/Analysis of the existing Urban Design Guidelines (UDG) for the Downtown District revealed the following:

- **Inner/Outer Core**: The UDG contains guidelines pertaining to either the inner or outer core. This language is not used elsewhere in the Town's Official Plan and is not reflective of the Downtown Georgetown's sub-areas identified on Schedule A4: Downtown Complementary Sub-Area, Downtown Core Sub-Area, and Downtown Redevelopment Sub-Area. Hence, there is a disconnect between both the UDG and the Town's Official Plan.
- **Negative Language**: The UDG uses negative terms, such as "undesirable" and "discouraged", together with illustrative graphics, to exemplify what the Town does not wish to see. We suggest that the use of positive terminologies such as "desirable" and "encouraged" are more effective and will achieve and support a greater and clearer understanding of the vision for Downtown Georgetown's urban design features.
- **Inconsistent Phraseology**: The UDG is inconsistent in the way guidelines are phrased with respect to recommendations/compliance. We suggest that the use of consistent language (e.g. the use of shall and should) and phrasing would reduce unnecessary interpretation and facilitate more consistent application of the guidelines.
- **Building Elements:** In general, the UDG encourages the introduction of canopies and awnings to buildings within the Inner Core however, we would suggest that opportunities for doing so should be considered in conjunction with the heritage character of the Inner Core as well as the ultimate vision for the pedestrian realm/streetscape.
- **Gateway Features**: The UDG refers to Gateway Features in four locations in the Downtown and defines these as being strictly composed of streetscape elements. We suggest that, in addition to these elements, site planning and built form in the adjacent private lands, should be coordinated and designed to enhance these 'landmark' locations.

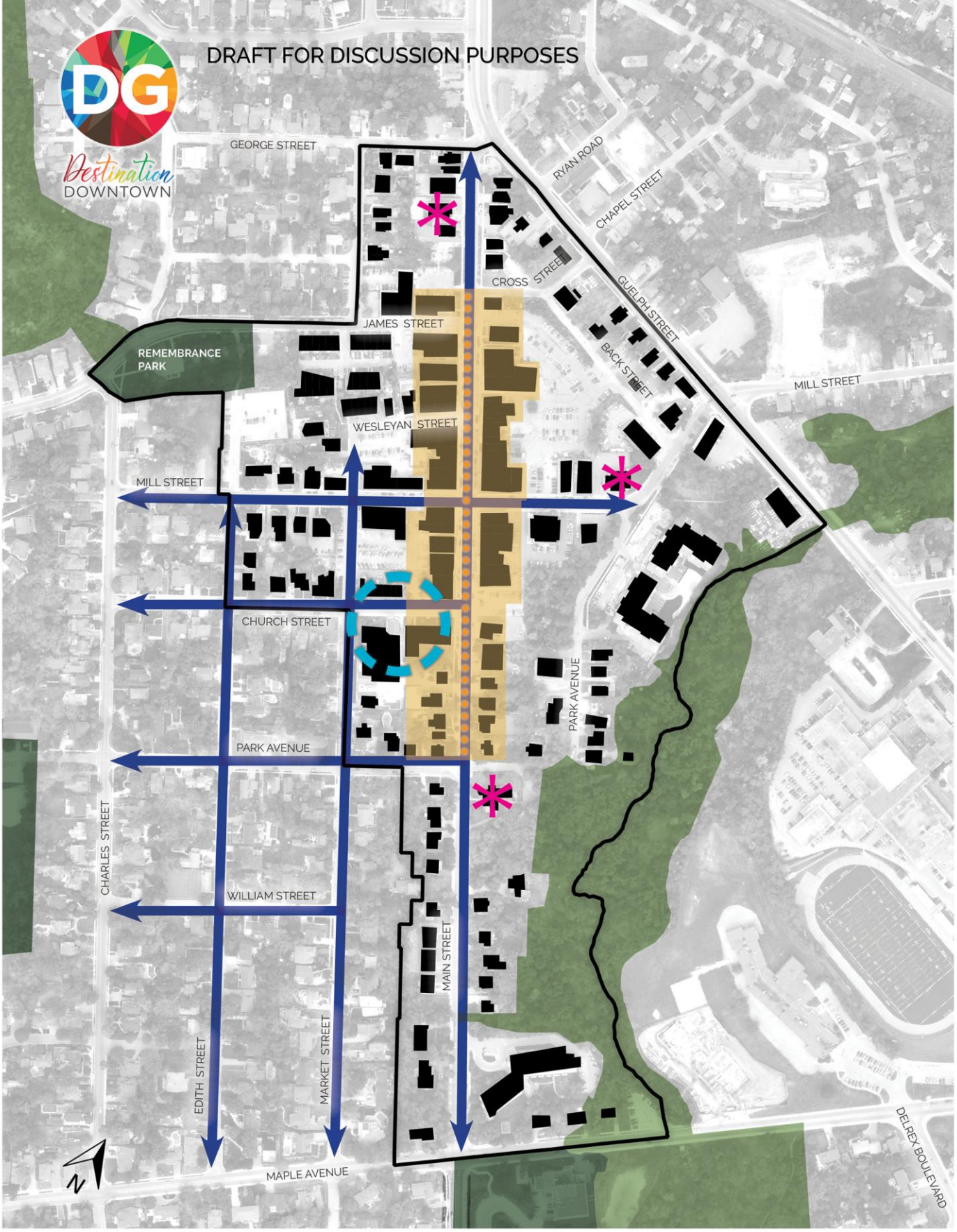
- **Streetscape**: The UDG provides recommendations on streetscape design in the Inner and Outer Core areas of the Downtown, with varying degrees of specificity. We suggest that there be a clear distinction between guidelines that inform planning, design and implementation considerations, as well as providing cross referencing to other relevant documents. A Public Realm Framework for the Downtown would be useful in illustrating not only the overall vision, but also the various public realm elements and how they are organized in relation to each other and to the built form. Additionally, it will incorporate the recommendations of the Halton Hills Public Art Master Plan. Map 5 re-interprets the Inner/Outer Core identifications as defined Character Areas and should be considered as a foundational layer of the Public Realm Framework.
- **Building Height and Massing:** We suggest that Shadow Impact and Pedestrian Wind Impact studies, be identified as a requirement with taller building proposals.
- **Graphics**: As a general recommendation, we suggest that the UDG incorporate more and consistent illustrations to clearly and graphically communicate the intent of the design guidelines.

4.2 Urban Design Analysis

The Urban Design Analysis looked at key elements of the downtown that should inform considerations for intensification, redevelopment and public realm enhancements, these include:

- Existing Parking Lots
- Vacant Sites
- The Civic / Community Use Cluster
- A future potential Mixed-Use / Transit Supportive Node
- Gateway Locations
- Potential Streetscape Enhancements
- Connections / Pedestrian Systems
- Views/Vistas Opportunities

Analysis of the existing parking lots and vacant sites revealed opportunities for development that are described in section 5.2 (Land Use). *Maps 4-7 illustrate* the results of our Urban Design Analysis.



MAP 4 - URBAN DESIGN

KEY CHARACTER DEFINING ELEMENTS

- Historic Main Street
- Greenlands
- Parks
- Civic/Community Use Cluster
- Enhanced Streetscape
- Grid Street Pattern
- Heritage Landmarks
- Downtown Boundary

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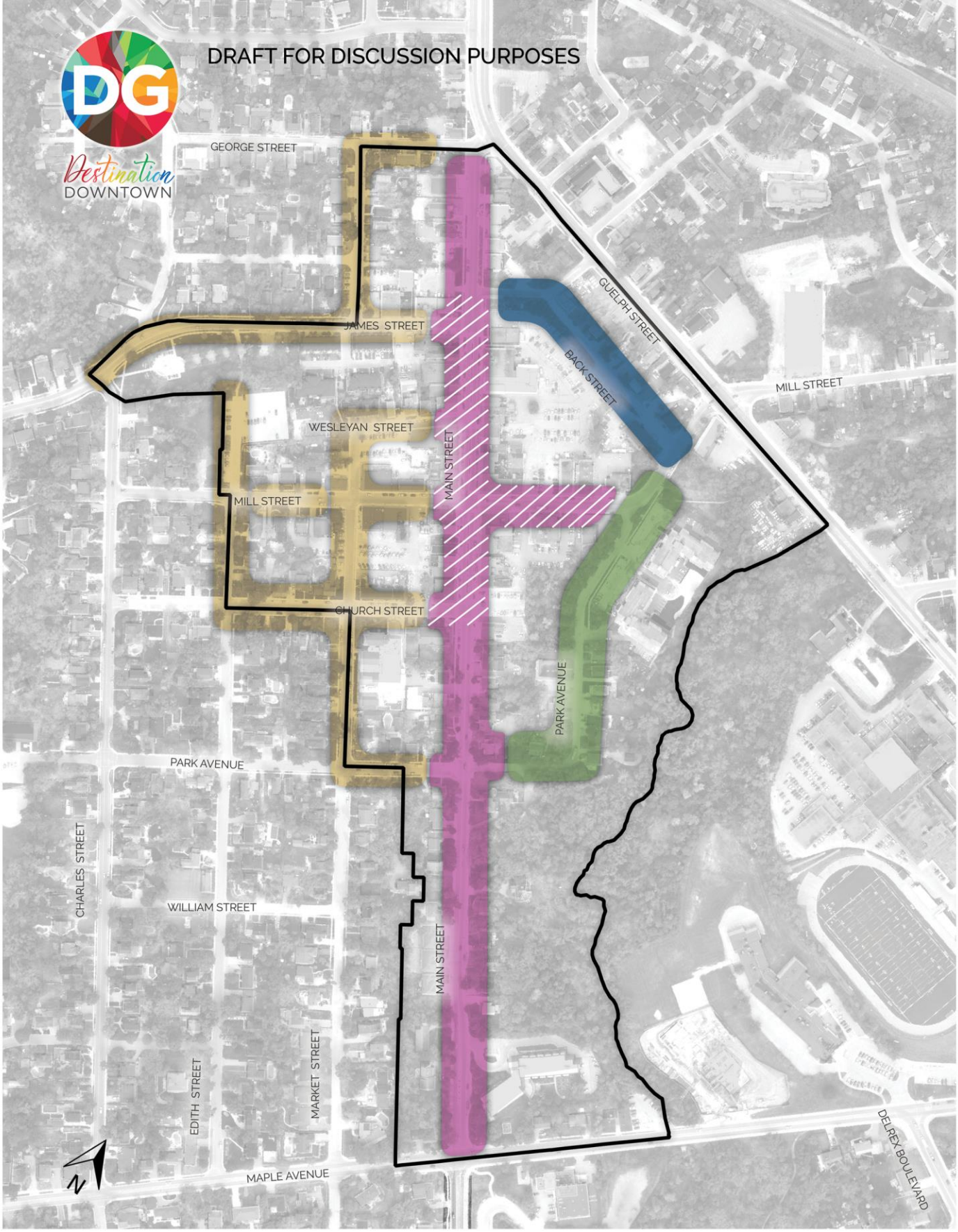
Key Character Defining Elements

The streetscape improvements and building façade improvement that have taken place along the historic Main Street, between James and Church, has significantly contributed to the quality and character of the Downtown. In addition, Downtown Georgetown possesses three key Heritage Landmarks that help form view corridors. The cluster of community uses that are located on Church Street, as part of the library and cultural centre complex, including the Halton Hills Public Library, the Helson Gallery and the John Elliot Theatre, create a civic/community node and significant anchor in the Downtown.

Streetscape Character Areas

The following cross sections illustrate an early review of different street types in the study area. They are aspirational demonstrations that will be subject to detailed review to balance competing demands for the right-of-way to accommodate design objectives.



MAP 5 - URBAN DESIGN

STREETSCAPE CHARACTER AREAS

- Back Street
- Residential Street
- Main Street -Residential
- Main Street - Retail
- Park Avenue
- Downtown Boundary

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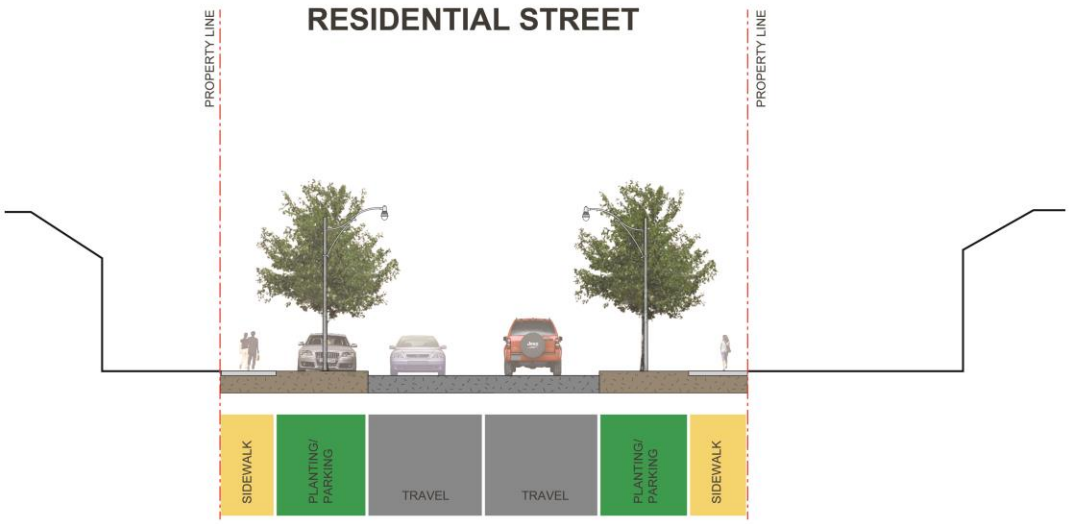
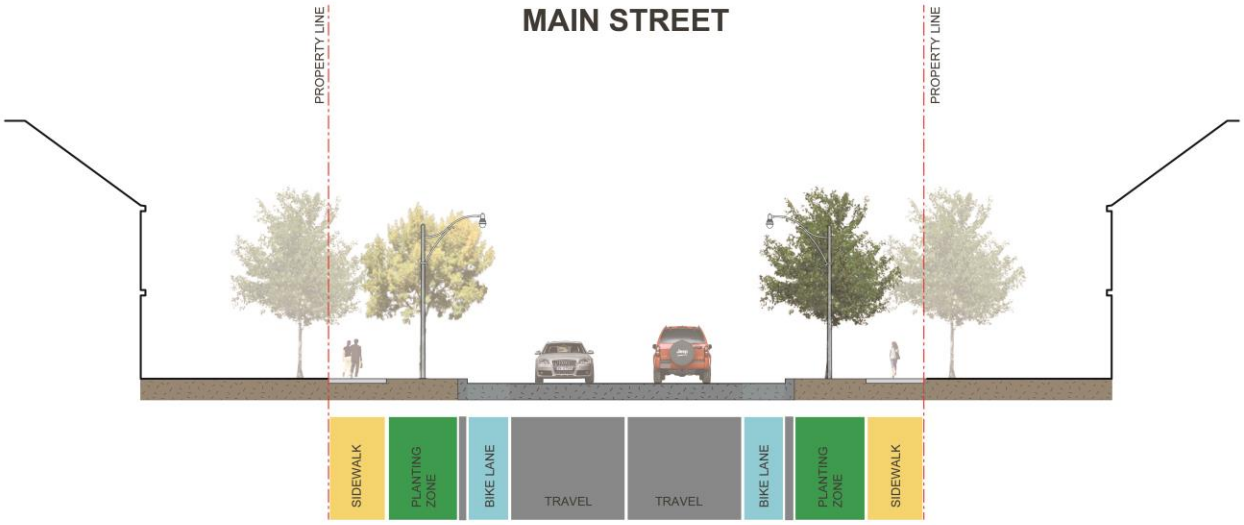
CHARACTER AREAS	STREETSCAPE	BUILDINGS
Residential Streets	• Trees • Sidewalk • Parking - private driveways	Massing: Single-detached Properties: Medium Land Use: Residential, Commercial Height: 1-3 storey Setback: 5-15 m Arch. Style: Various Materials: Brick, Vinyl Siding



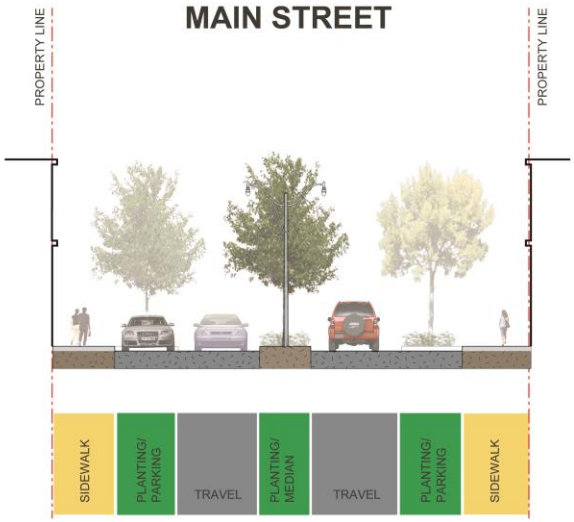


CHARACTER AREAS	STREETSCAPE	BUILDINGS
Main Street - Residential	• Trees • Sidewalk • Parking - private driveways	Massing: Single-detached Properties: Large Land Use: Residential and Long-term care Height: 1-3 storey Setback: 10 m Arch. Style: Various Materials: Brick, Vinyl Siding

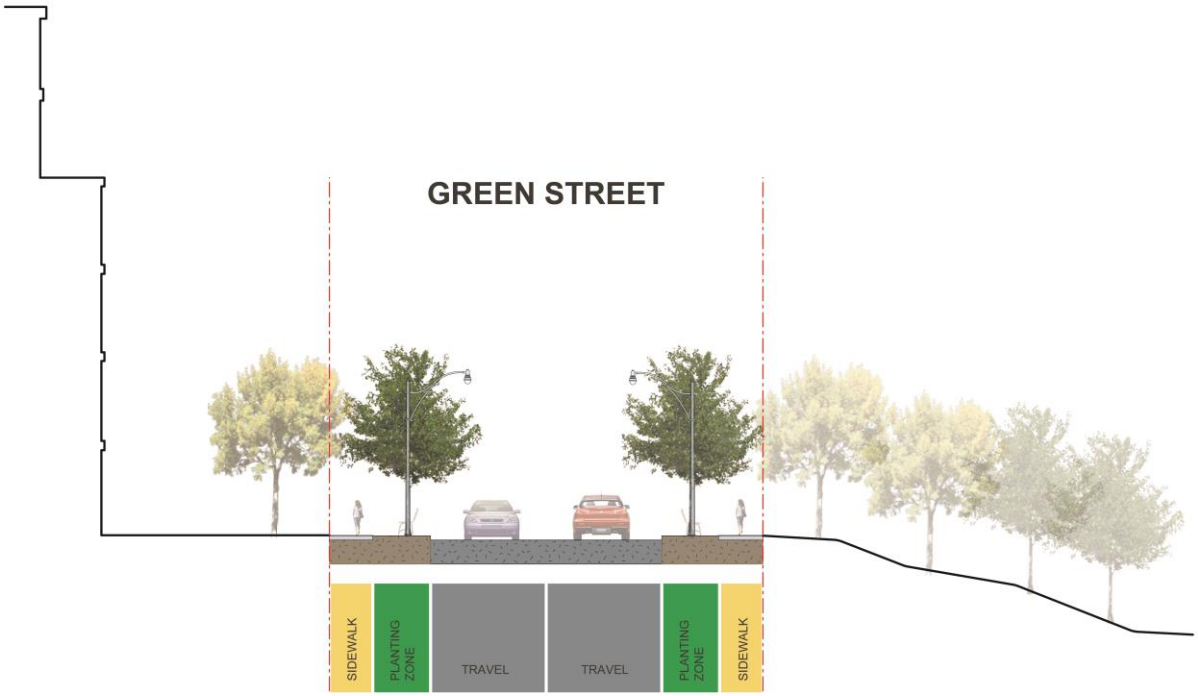




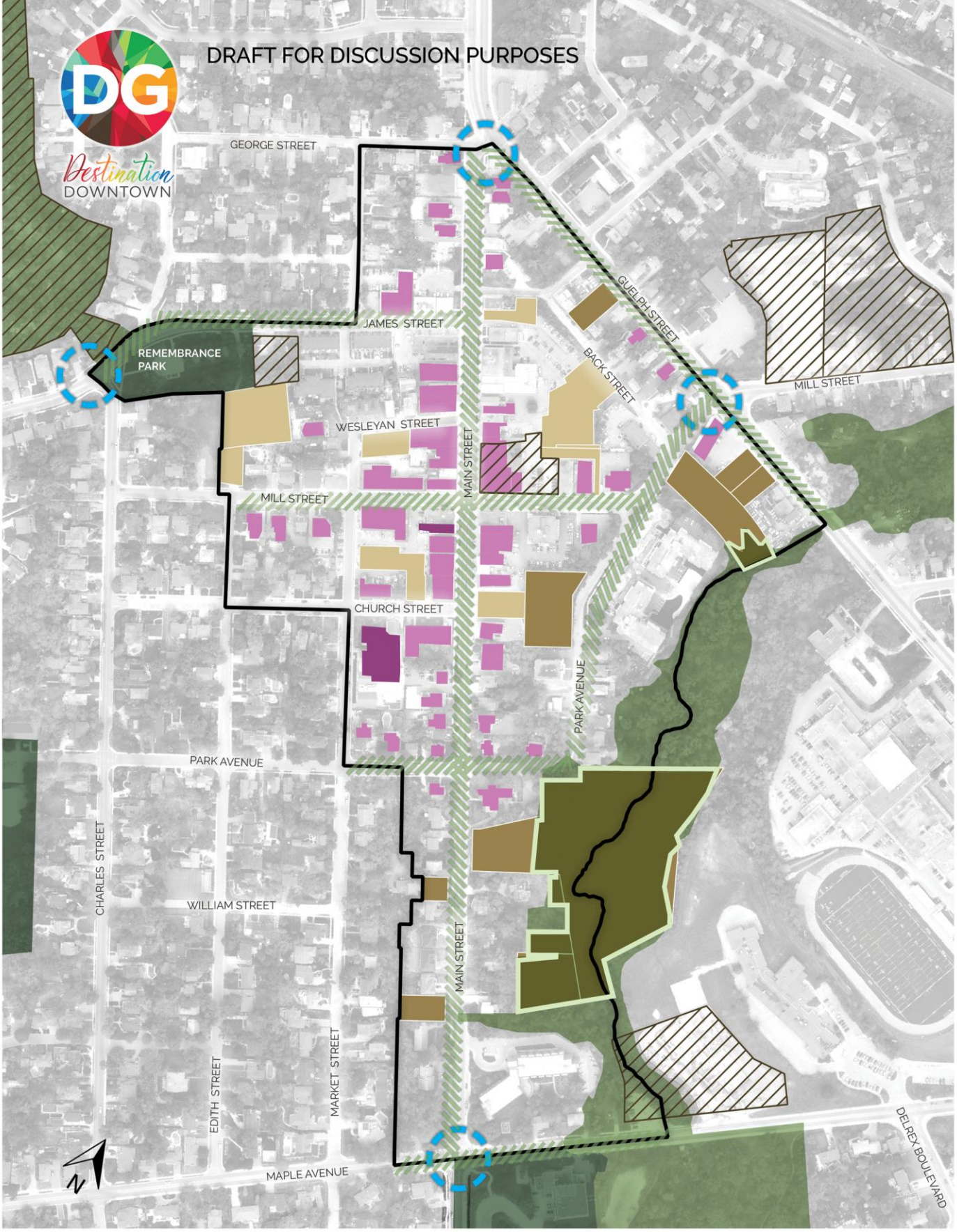
CHARACTER AREAS	STREETSCAPE	BUILDINGS
Main Street - Retail	• Trees • Sidewalk • Lay-by Parking	Massing: Single-detached, mid-high rise Properties: Flat Land Use: Retail, Office, Residential Height: 1-4 storey Setback: 0 m Arch. Style: Various Materials: Brick



CHARACTER AREAS	STREETSCAPE	BUILDINGS
Park Avenue	• Trees • Sidewalk • Parking - private driveways	Massing: Single-detached, mid-high rise Properties: Medium, Steep Land Use: Residential Height: 1-12 storey Setback: 10-20 m Arch. Style: Various Materials: Brick, Vinyl Siding



CHARACTER AREAS	STREETSCAPE	BUILDINGS
Back Street	• Trees • Sidewalk • Parking - Private driveways	Massing: Single-detached, semi-detached Properties: Medium Land Use: Residential/commercial Height: 1-2 storey Setback: 5-10 m Arch. Style: Various Materials: Brick, Vinyl Siding
		



MAP 6 - URBAN DESIGN

EXISTING + PLANNED CONTEXT

- Gateways under the current Urban Design Guidelines
- Proposed Cycling On-Road Routes
- Designated Heritage Property
- Listed Heritage Property
- Greenlands
- Parks
- Redevelopment Project
- Parking Lot
- Vacant Site
- with Greenlands
- Downtown Boundary

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Existing and Planned Context

1. Heritage Properties

Downtown Georgetown possesses a rich inventory of both listed and designated heritage properties. Section 10.0 of this Paper provides a preliminary analysis of those properties.

2. Parking Lots and Vacant Sites

Downtown Georgetown currently has a few properties that are vacant, as well as used for parking purposes.

3. Gateways

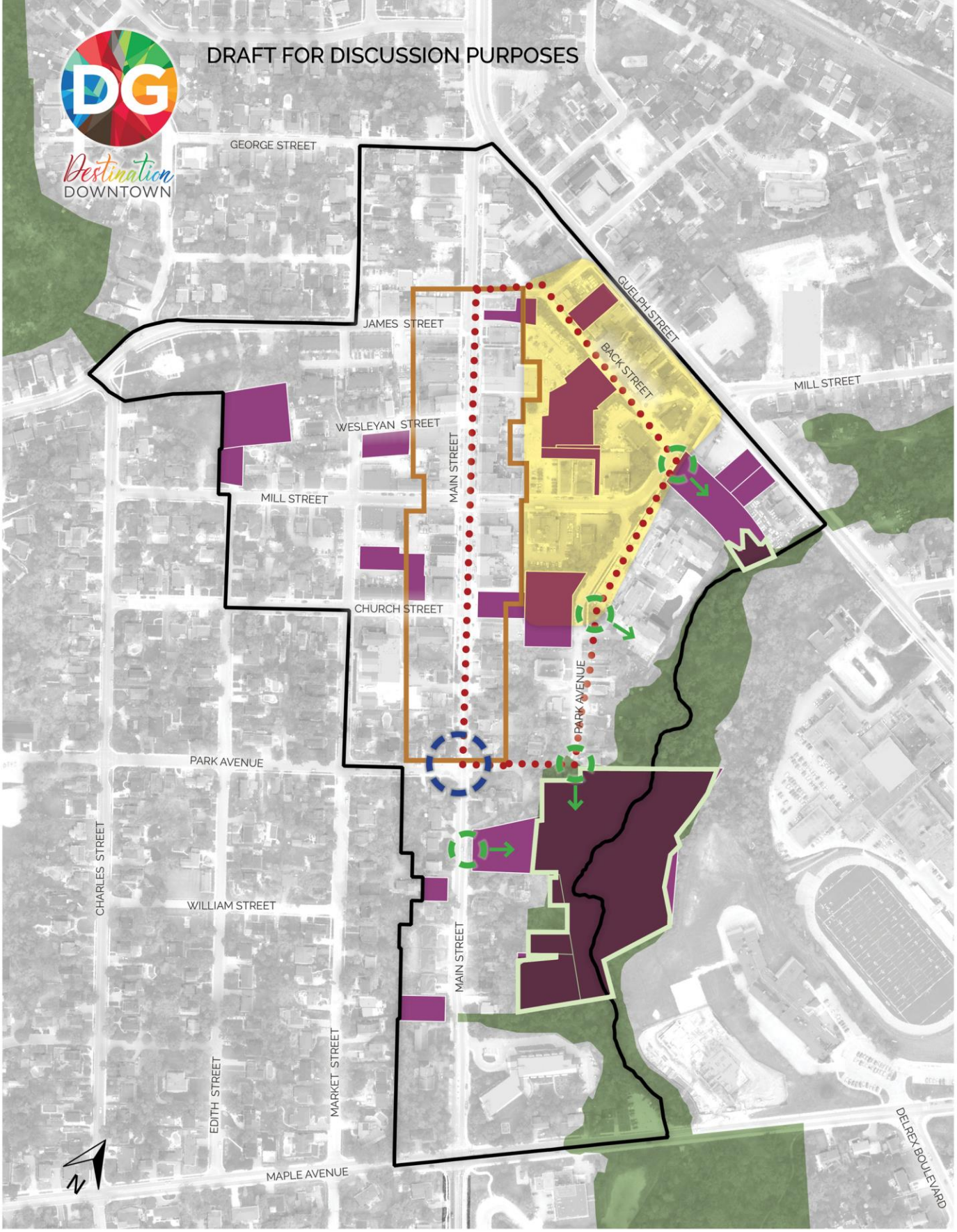
The Town of Halton Hills' Official Plan identified 4 gateways. Treatment within these areas is subject to the existing Urban Design Guidelines.

4. Greenlands

Downtown Georgetown possesses a unique set of natural habitats located within its Greenlands. Development in near proximity to Greenlands are subject to regulations laid out in the Town's Official Plan.

5. Redevelopment Projects

Few development and construction projects located in proximity of and within Downtown Georgetown. Section 5.1 of this Paper provides more details regarding those projects.



MAP 7 - URBAN DESIGN OPPORTUNITIES

- Potential Downtown Gateway
- Downtown Walking 'Loop'
- Mixed-Use / Transit Supportive Node
- Public Realm Improvement/ Potential Infill Development
- with Greenlands
- Vistas to Greenlands
- Greenlands
- Main Street
- Downtown Boundary

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Opportunities

1. Views and Vistas

Downtown Georgetown is located within a unique and beautiful natural setting adjacent to significant natural heritage features. The existing grid pattern of streets is oriented to these features and provides the opportunity, through streetscape enhancements and redevelopment, to elevate their presence within the Downtown and provide both physical as well as visual connections to these areas.

2. Gateway

Downtown Georgetown is a hidden gem that wants to be discovered. Urban design relies on a combination of high-quality architecture, engaging public spaces, animated pedestrian streets and recognizable landmarks to create a sense of place. Gateways are one way in which to form landmarks within the built environment. In addition to the Gateways identified in the existing Urban Design Guidelines for the Downtown Precinct, there is an opportunity to develop gateway/landmarks in another key location that builds upon the structure of the Downtown, while recognizing opportunities for new development. More than just landscape features, gateway/landmarks combine a number of elements, including built form, landscape, streetscape, signage, heritage and public art, to create special and recognizable places within the built environment.

3. Mixed Use / Transit Supportive Node

Georgetown is well known for its unique collection of local business set within its quaint and historic Main Street. With growth and development and the demand for leasable space in the downtown, the area east of Main Street, loosely defined as the 'Downtown Redevelopment Sub-Area', represent a tremendous opportunity for the development of a range and mix of uses that would complement the existing Main Street.

4. Infill Development / Public Realm Improvement

Vacant lands and public parking identified within this preliminary analysis present an opportunity to enhance the public realm, while providing a unique chance to attract private investment for new economic and residential opportunities for Halton Hills' residents.

5. Downtown Walking 'Loop'

Beyond the central portion of Main Street, the other streets in the Downtown, particularly Park Avenue and Back Street, present the opportunity to create a Downtown Walking 'Loop', a coordinated and consistent streetscape that contributes to place-making and facilitates pedestrian movements and supports the mixed-use function and heritage character of the Downtown.

5.0 Land Use

The land use inventory for the Downtown is an overview and summary of the existing land uses, built form, businesses and proposed development. Further, issues and opportunities for development have been examined.

5.1 Existing Built Form

Maps 8 – 10 illustrate Downtown Georgetown's buildings' height and land use.

Businesses

A site visit was undertaken to carry out an inventory of the businesses that are currently in place in Downtown Georgetown. This inventory is contained in *Table 1 – List of Businesses in Downtown Georgetown*. The inventory was taken from the street and therefore may not be a complete and accurate representation of the existing businesses.

Proposed Development

There are currently 5 development and construction projects either proposed or currently under development. As identified on the *Map 11 – Development and Construction Projects*, this includes:

- 25 James St is a 3 storey townhouse with 6 dwelling units.
- 69-70 Main St & 94-98 Mill St, referred in this Paper as the McGibbon Residences, is a 10 storey mixed-use development. The project will restore the façade of the former hotel and integrate commercial at street level and offer 125 condominium apartments.
- 42 Mill St is a proposed High Density Residential Condominium.
- In proximity to Downtown Georgetown is a new municipal water supply pumphouse and expansion to the existing pumphouse.
- 224 Maple Ave is 7 storey seniors residence with a total of 154 suites that is under construction. This new building will complement the already existing Cote Terrace seniors residence.

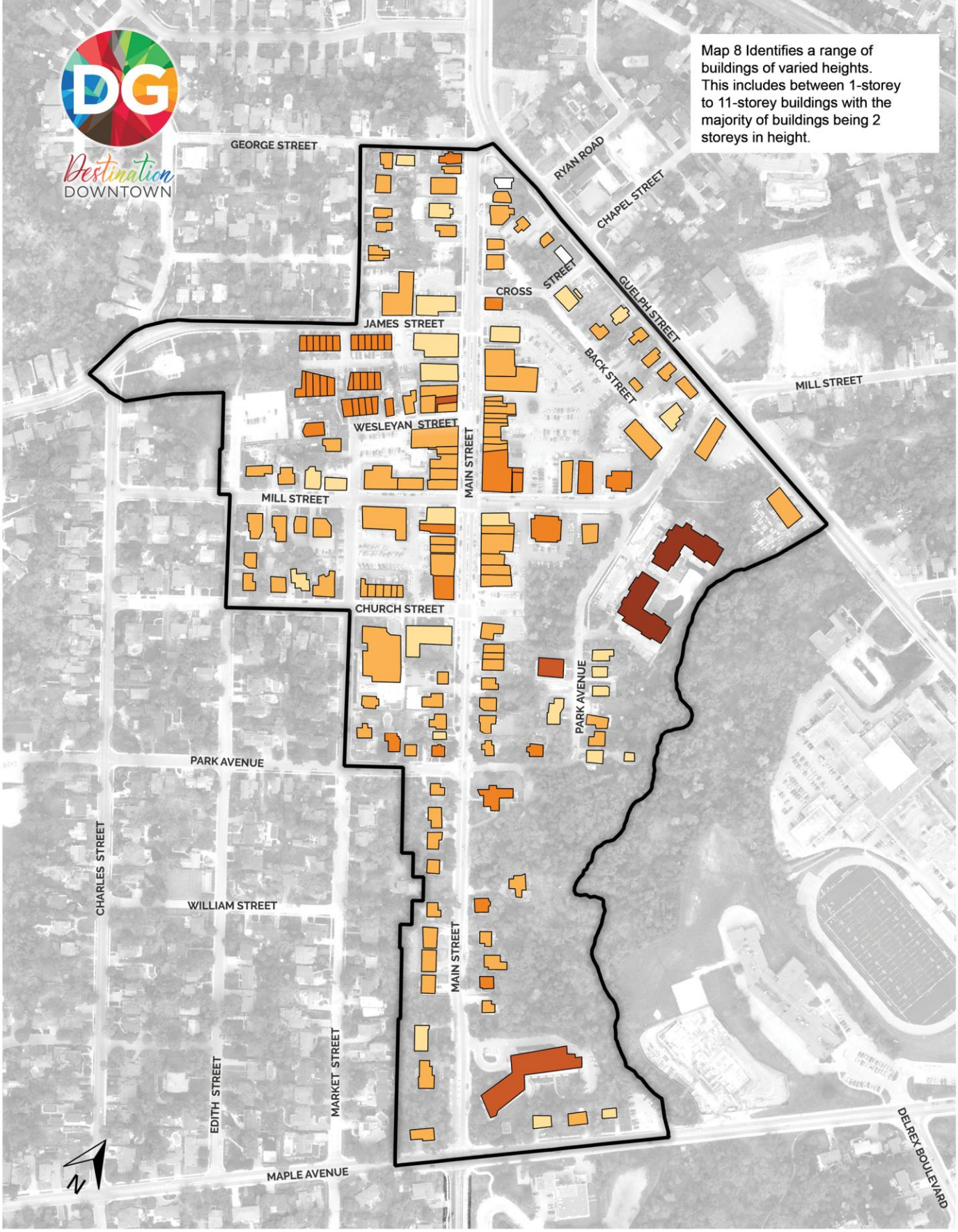
5.2 Opportunities for Development

Parking Lots

Downtown Georgetown contains 6 parking lots that are owned by the municipality as seen on *Map 12 – Parking Lots*. Depending on the needed parking capacity for the downtown area and the potential for future developments to incorporate structured or underground parking, some of these parking lots could be developed through infill development and low impact development.

Vacant Sites

Downtown Georgetown contains 11 sites that are currently underdeveloped as seen on *Map 13 – Vacant Sites*, often times due to the presence of environmentally sensitive features such as extensive woodlots, green lands, watercourses, and steep slopes. In general, these sites provide an opportunity for Downtown Georgetown visitors and residents to connect with nature through open spaces and low impact trails.



MAP 8 - EXISTING HEIGHT

- Under Construction
- 1 storey
- 2 storey
- 3 storey
- 4 storey
- 11 storey
- Downtown Boundary

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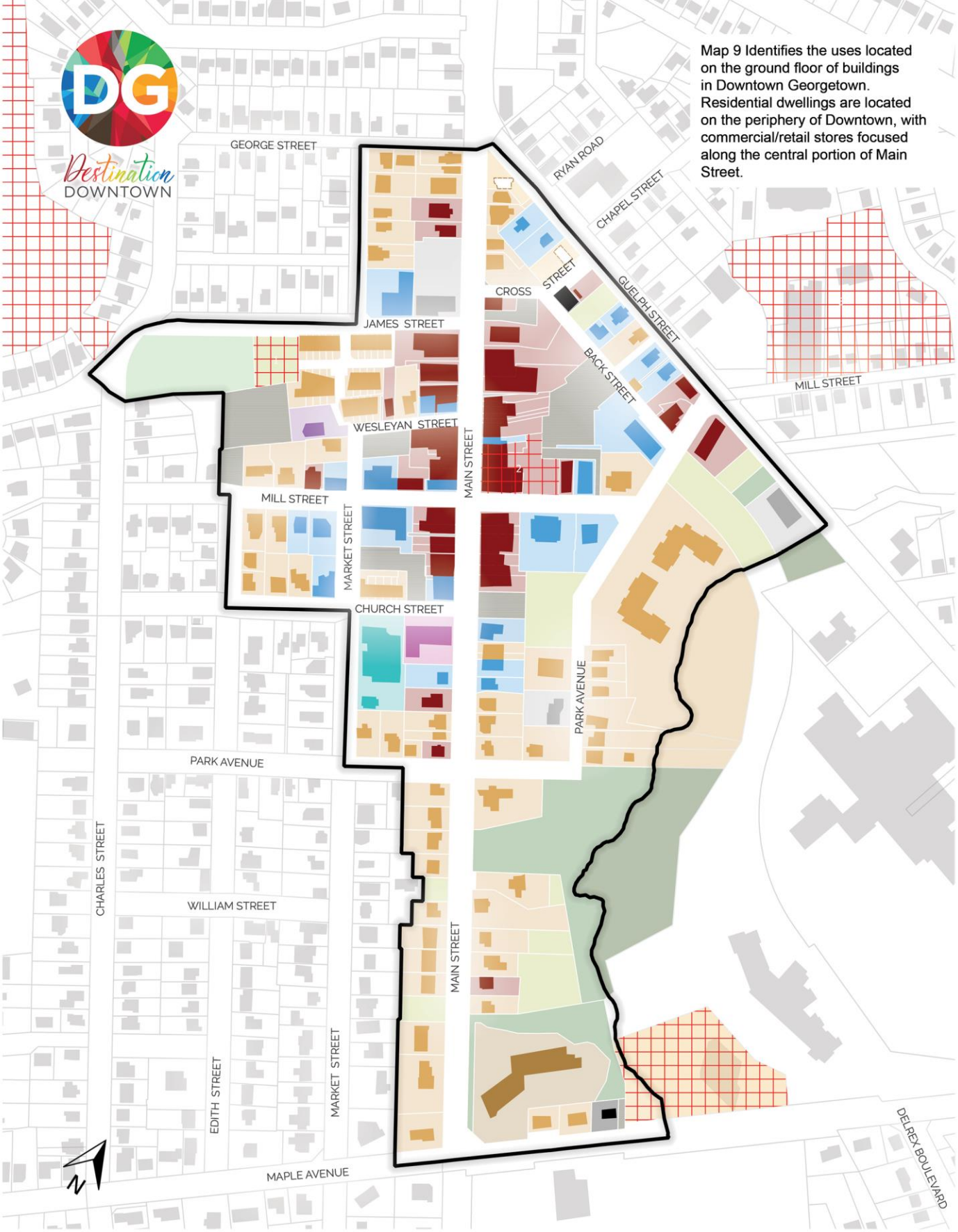
Map 9 Identifies the uses located on the ground floor of buildings in Downtown Georgetown. Residential dwellings are located on the periphery of Downtown, with commercial/retail stores focused along the central portion of Main Street.



MAP 9 - GROUND FLOOR USE

- Residential
- Commercial
- Commercial/ Office
- Office
- Senior Residence
- Industrial
- Church
- Cultural Centre and Library
- Park
- Natural Environment
- School
- Utility Facilities
- Under Construction
- Parking
- Redevelopment Project
- Vacant
- Downtown Boundary

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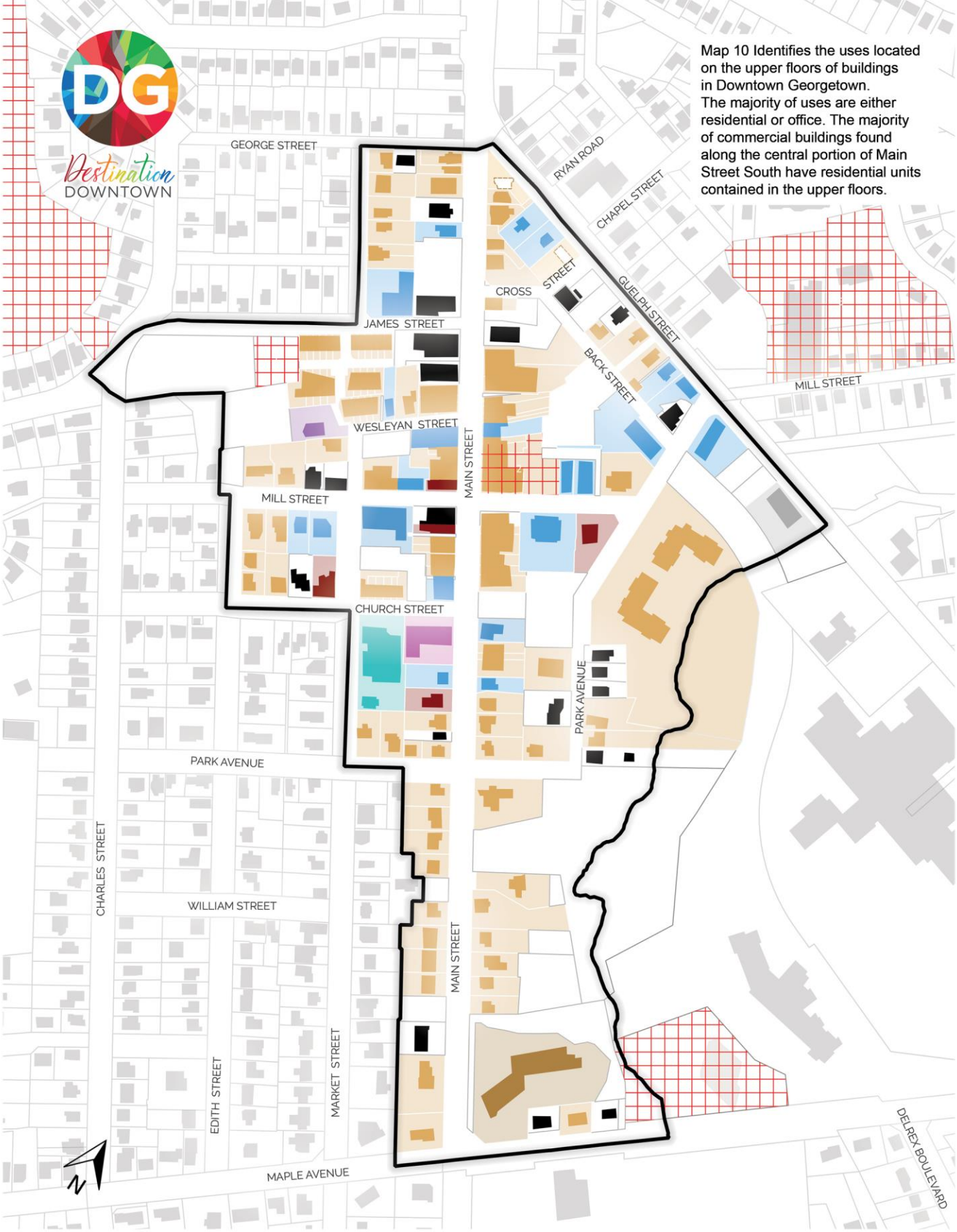
Map 10 Identifies the uses located on the upper floors of buildings in Downtown Georgetown. The majority of uses are either residential or office. The majority of commercial buildings found along the central portion of Main Street South have residential units contained in the upper floors.



MAP 10 - UPPER FLOOR USE

- Residential
- Commercial
- Commercial/ Office
- Office
- Senior Residence
- Industrial
- Church
- Cultural Centre and Library
- School
- 1-storey Building
- Redevelopment Project
- Under Construction
- Downtown Boundary

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MAP 11 - DEVELOPMENT & CONSTRUCTION PROJECTS

1. 25 James St | *6 townhouse dwelling units*
2. 69-79 Main St & 94-98 Mill St | *10 storey mixed-use*
3. 42 Mill St | *High Density Residential Condominium*
4. New Municipal water supply pumphouse and expansion to the existing pumphouse.
5. 224 Maple Ave | *7 storey, 154 suites, Seniors Residence*

Buildings

Downtown Boundary

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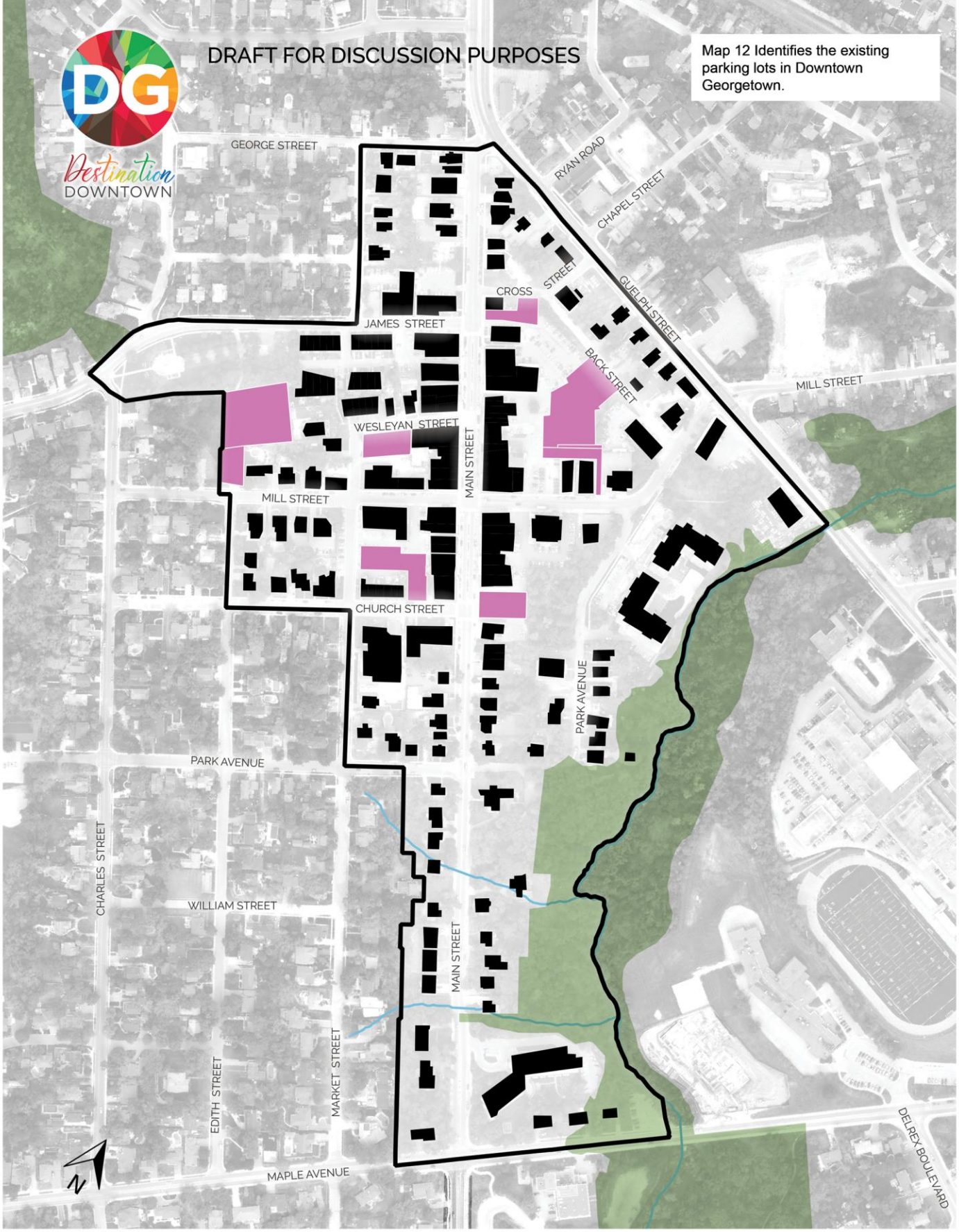
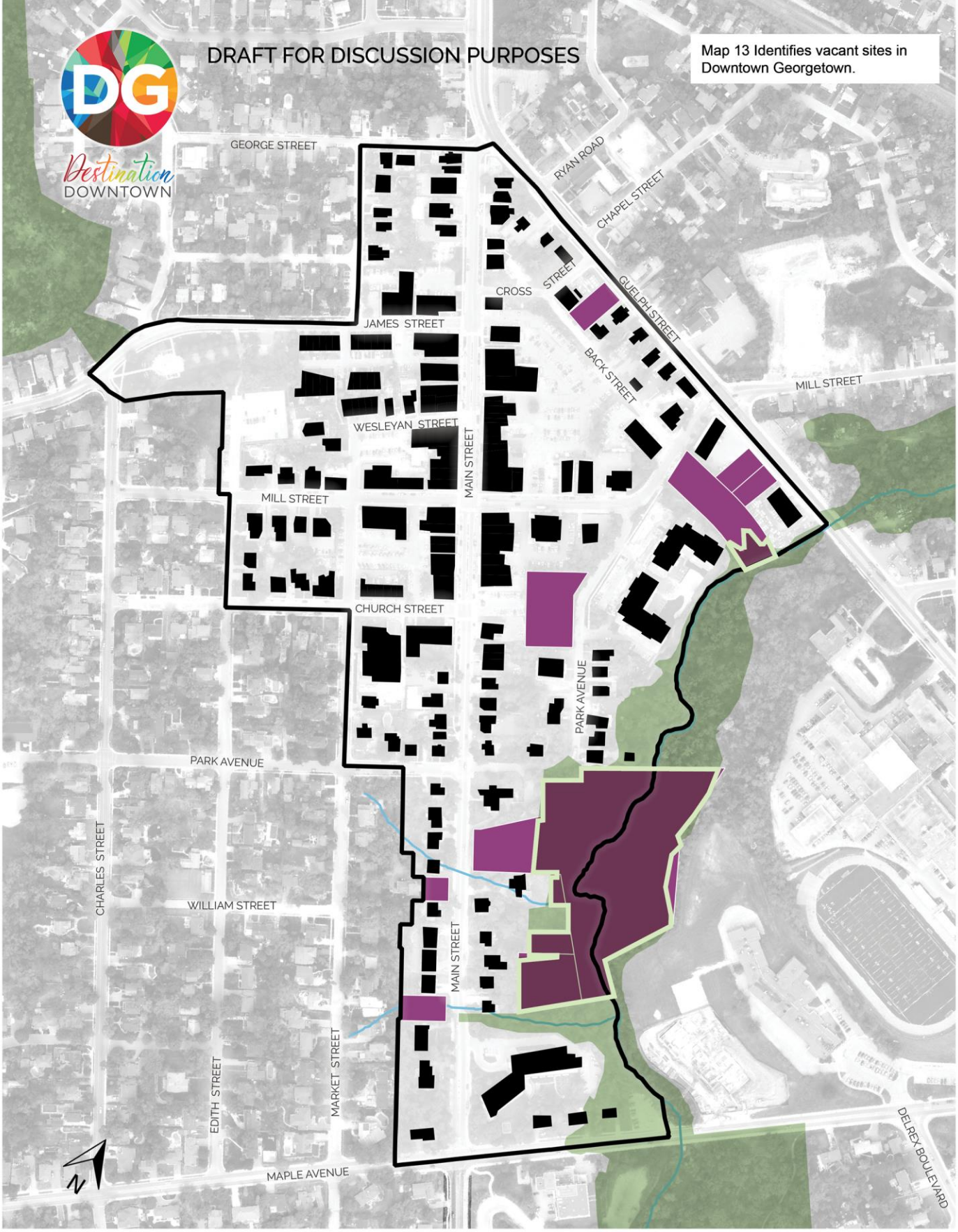


MAP 12 - PARKING LOTS

- Parking Lots
- Greenlands
- Downtown Boundary



MAP 13 - VACANT SITES

- Vacant Sites
- Vacant Sites with Greenlands
- Greenlands
- Downtown Boundary

TABLE 1 - LIST OF BUSINESSES IN DOWNTOWN GEORGETOWN

Address	Business 1	Business 2	Business 3	Other Businesses
52 Main Street South	Accountants on Main			
91-97 Main Street South	Ancient Way Massage Therapy	The Royal Academy of Arts & Education	The Mill St Cheese Market	
92 Main Street South	Azul Mind Body & Soul Spa			
16 Guelph Street	Beautiful Pets			
12 Guelph Street	Braun Enterprises			
67 Main Street South	Caldwell Financial Ltd			
124 Main Street South	Canadian Benefit Administrator Ltd			
26 Main Street South	Carpet Barn			
66-68 Main Street South	Casa Lena			
142 Mill Street	Center Stage			
36 Main Street South	Center Stage			
82 Main Street South	CIBC			
14 Wesleyan Street	circus strategic communications inc.			
69-71 Main Street South	Closed - Upcoming Development			
79 Main Street South	Closed - Upcoming Development			
79 Main Street South	Closed - Upcoming Development			
94 Mill Street	Closed - Upcoming Development			
78 Main Street South	Coldwell Banker	Fieldstone Realty, Brokerage	The Cellar - Steak & Food	Studio Yoga
6 Guelph Street	Cornerstone Health Centre			
171 Main Street South	Cote Terrace			
27 Main Street South	Country Reflections			
16 Main Street South	Creature Comfort	Eric Connelly Architect		
56-64 Main Street South and 3-9 Wesleyan Street	DINI & CO	Couture Cupcake Boutique	Main Video & Varity	Kimby's Apparel, Great Expectations, My Fit Little Foodie Smoothie Bar, Dynamic Health, Ontario Professional Foresters Association, Interics Design, Kire Agro Canada Inc, 501652 Ontario Ltd
83 Mill Street	Downtown Professional Centre			
112 Main Street South	Dr. Mark Hassard Chiropractor	McMaster's Meats & Deli	Silvercreek	
127 Mill Street	Elizabeth's Fashions	Royal Canadian Legion - Branch 120		
28-32 Main Street South and 7-9 James Street	Fish & Chips	Ollie's Cycle & Ski	Sweetie Pie on Main	Militaria Coins, Salon JC
87-89 Main Street South	Foodstuff			
29 Main Street South	For Lease			
70 Mill Street	For Lease	For Lease		
72 Mill Street	For Lease			

Address	Business 1	Business 2	Business 3	Other Businesses
46 Guelph Street	Fred's Towing			
74 Main Street South	Georgetown Thai Cuisine			
61-65 Main Street South	Glazed Expressions!	InSpirit Centre	IPC Investment Group	C&C Planning Group, MGA Insurance Agencies
31-43 Main Street South	Grant Thornton	Woodrex Building	Curves Jenny	
60 Park Avenue	Halton Hills Child Care Centre			
22 Guelph Street	Health Span Wellness			
105 Main Street South	Heather's Bakery Cafe			
53 Main Street South	House of Budha			
41 Park Avenue	Hyland's On Park			
20 Guelph Street	Investment Planning Counsel			
138 Mill Street	Kids Art Studio	Wagner Anderson Accountants		
99 Main Street South	Latitude Food & Drink			
159 Main Street South	Left of Centre Photography			
49 Main Street South	Lemon Drop			
126 Main Street South	Lily Thai Cuisine			
8 Guelph Street	Lounsbury	Lockyer + Hein		
51 Main Street South	MI GIOVI			
123 Main Street South	Mike Francis - State Farm Insurance Agent			
60-62 Mill Street	Mill Dental	For Lease		
10 Back Street	Molly Sante Medical Intuitive			
125 Main Street South	Mountainview Mortgage			
70-72 Main Street South	Moxxi	Uncorxed		
122-134 Mill Street	NHBH	Helsons Law Office	Beauty Body	
57 Main Street South	North Star Drycleaners			
57 Main Street South	North Star Drycleaners			
90 Main Street South	Party Balloons and Gifts			
143 Mill Street	Paul C Armstrong Insurance			
75 Mill Street	Phil Karda - State Farm Insurance Agent	Crystal Tree Yoga		
31 Market Street	Pictures & Presents			
14 Main Street South	Rampulla's Martial Arts			
83 Main Street South	RBC			
48 Main Street South	Salon Estilo			
115 Main Street South	San Giorgio	The Cooperators		
118 Mill Street	Sewing Cafe	White Rabbit Books	Georgetown Pharmacy and Compounding Specialists	Halton Hills Women's Health Cafe
86 Main Street South	Sheppard's Crook			
66 Mill Street	Silvercreek Financial Services	For Lease		
8 Wesleyan Street	Spriggs Insurance Brokers Limited			
54 Mill Street	The Hooded Goblin	Dental Office		
40-44 Main Street	The Spa on Main			

Address	Business 1	Business 2	Business 3	Other Businesses
84 Mill Street	Thrift Store			
98-102 Main Street South	Trendz	The Way We Were	Imai Japanese Cuisine	
145 Mill Street	Williams C Kort			
109 Main Street South	Yong's Restaurant			
45-47 Main Street South	Young's Pharmacy & Home Care			

6.0 MARKET ANALYSIS

N. Barry Lyon Consulting

6.0 Market Analysis

The Market Analysis was completed by N. Barry Lyon Consultants Limited and was reformatted for its inclusion in the Background Paper.

Disclaimer:

The conclusions contained in this report have been prepared based on both primary and secondary data sources. NBLC makes every effort to ensure the data is correct but cannot guarantee its accuracy. It is also important to note that it is not possible to fully document all factors or account for all changes that may occur in the future and influence the viability of any development. NBLC, therefore, assumes no responsibility for losses sustained as a result of implementing any recommendation provided in this report.

This report has been prepared solely for the purposes outlined herein and is not to be relied upon, or used for any other purposes, or by any other party without the prior written authorization from N. Barry Lyon Consultants Limited.

6.1 Introduction

N. Barry Lyon Consultants Limited ("NBLC") has been retained by the Town of Halton Hills, as part of a broader team led by The Planning Partnership, to complete a Planning Study for the Downtown Georgetown Area (see Figure 1, page 3). The purpose of the study is to develop a clear vision and detailed planning framework for Downtown Georgetown.

Traditionally, Downtowns were the economic and social engines of small towns and cities. However, many communities saw their Downtown centres gutted due to a wide range of social and economic factors that took hold in the post-World War II era. Perhaps the single most significant factor was the growing popularity of the personal automobile. By 1952, a new automobile could be purchased for about $2,000, and was rapidly becoming a required family possession. Through the increasing ease of owning a car and the ever increasing network of roadways, the periphery of the City became a desirable and attractive lifestyle alternative to the Downtown areas and other built-up neighbourhoods.

The ever expanding highway system also allowed for the expansion of suburban, car-oriented communities. These communities now supported retail, initially in the form of open air plazas, evolving to enclosed malls and finally large-format retail plazas. These new shopping options provided suburban residents with convenient services and daily commercial needs, undermining the role and viability of the traditional Downtown.

The nature of retail and the composition of growth continue to evolve. Online shopping is already dramatically shifting the way retailers operate and is threatening many forms of bricks and mortar retail. While in other areas demand for specialized and unique products and personalized service is growing. These trends, along with demographic and cultural shifts that place a higher value on convenient, walkable, connected, and pedestrian-friendly environments, bode well for the future of Downtowns.

Fortunately, Downtown Georgetown is not in need of significant revitalization like in many other communities. Downtown Georgetown is already a vibrant area with significant charm. The area is the primary cultural, entertainment, retail and social destination in the Town of Halton Hills. It contains a concentration of built heritage resources, public spaces, and cultural event destinations, as well as being an important location for retail, office space, and residential uses. At the same time, demand from a range buyer groups is growing for residential units in this area. These elements make it an attractive place for new investment, which has already begun with the launch of a mixed-use development at Main Street and Mill Street.

These elements are likely to lead to growing demand for new residential and mixed use intensification which will bolster the role and importance of Downtown Georgetown in the context of the Town of Halton Hills. There is a need to recognize and direct the change that could be coming in the near future as more residents seek to live in proximity to the Downtown and development interest increases.

The Downtown Georgetown Planning Study will guide the development of the Secondary Plan that will provide a framework for growth and development in Downtown Georgetown over the next 20 years. The plan will support the continued evolution of the area into a culturally and economically vibrant destination, and will be used to ensure that any new development enhances the multi-faceted, mixed-use function, and cultural identity of Downtown Georgetown, with particular attention to the area's heritage, public spaces, small businesses, and natural environment.

NBLC's Role

The purpose of NBLC's market analysis is to assess the potential for land use intensification within the Downtown area and help guide the planning and urban design aspects of the study. In order to do this, a contextual market analysis of Georgetown and the Town of Halton Hills was undertaken, along with a more detailed assessment of the Downtown Georgetown area.

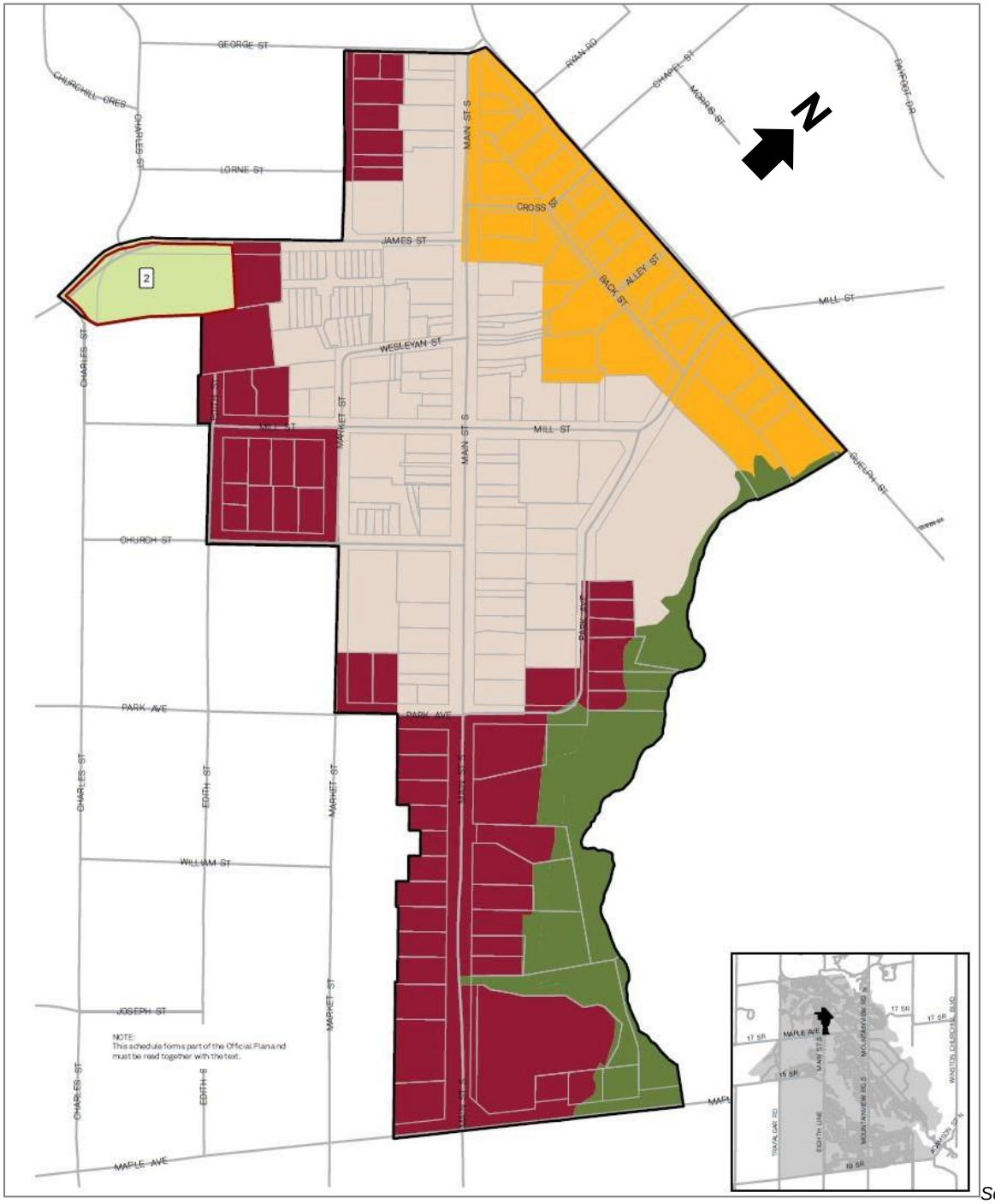
Our market analysis focuses primarily on residential intensification, but also provides brief commentary on opportunities for new non-residential uses. Further, this market analysis is to consider how an intensified Downtown will function in relation to other planned nodes of intensification in the Town of Halton Hills as it relates to likely market demand and physical opportunities available to accommodate new development activity.

Through our market analysis, we have provided commentary on the importance of Downtown areas and what makes them successful. We have assessed development trends, including evaluating drivers of current and future growth, have provided a market profile of the Halton Hills residential and non-residential market, and have provided a forward looking outlook for Downtown Georgetown.

Our work will inform the other aspects of the Planning Study in order to ensure that the land use / built form planning alternatives are both marketable and feasible from a development and economic perspective.

In a future phase of the Downtown Georgetown Planning Study, NBLC will also provide an assessment of the fiscal impact for the Town of Halton Hills of each of the land use / built form planning alternatives.

Figure 1: Downtown Georgetown Area



Source: Town of Halton Hills Official Plan

6.2 What Makes a Downtown Successful?

Downtowns help define a community's identity through distinctive, often historic architecture, in addition to a vibrant mix of residential uses, shops and restaurants, community gathering places, and public spaces. The concentration of uses and residents in a Downtown area allows for the efficient use of land and municipal resources for the social and economic benefit of the community.

Downtowns can be powerful symbols for towns and cities of all sizes and often contain a community's most iconic landmarks, distinctive features, and oldest residential neighbourhoods. Maintaining the unique features, places, and institutions associated with a Downtown contributes to a community's sense of place and identity which can help retain existing residents, attract new residents and businesses, and improve residents' quality of life.

There is no single formula to create a successful Downtown. However, the best Downtown areas are able to attract new residents and visitors, and typically include some, or all, of the following features:

- Communities with great Downtowns **build on what they already have**. This could be a natural asset like a river, medical or educational facilities, heritage buildings, or a host of other assets. These communities have figured out what makes them unique and they play upon that existing identity – protecting, preserving, and promoting it.

- Great Downtowns are **walkable and pedestrian friendly**. In a pedestrian-friendly Downtown, walkers are rewarded with sensory experiences ranging from public art to active storefronts to attractive landscaping and sidewalk amenities. Being able to avoid car travel for basic needs or entertainment is becoming increasingly valued.

- Successful Downtowns have a **quality stock of housing** and established neighbourhoods within walking distance. Nearby residential uses increase the economic vitality of the Downtown as residents patronize local businesses and generate activity throughout all hours of the day and evening.

- The stock of housing is not just proximal, but also includes a **diversity of housing types**. When community services and amenities become walkable, higher density housing options can become more feasible and marketable. Higher densities help populate and animate streets, taking growth pressure off suburban areas, reducing traffic, and improving safety. More choice in the housing market increases the attractiveness of the community to a broader range of prospective residents.

- Successful Downtowns are committed to **mixed-use development**. These communities recognize the importance of keeping a mix of uses integrated rather than separating them from one another. **Careful design** is also used to ensure that any new development in these Downtowns reflects the character of the area.

- The Downtown area is **aesthetically pleasing**, which may involve greening of streets with trees and planters, decorations based on the season or an upcoming holiday, or attractive building facades. As

many as 70% of first time sales are generated by customers drawn inside by a building's attractive exterior[1].

- Successful Downtowns include **public infrastructure investments**. Local governments have invested in elements both small and large ranging from streetscaping, to new parks to libraries and municipal offices. These investments have proven to be effective in supporting the role of Downtowns.

- A successful Downtown offers a logical place for **community events**. This contributes to building community pride and identity and allows for improved social cohesion with opportunities to meet and connect with neighbours and other community members.

- The Downtown includes a **diversity of non-residential uses** to attract residents and visitors to the area. This includes a diverse mix of retail, cultural amenities, and entertainment options. The retail in these Downtowns typically differs from the offerings of malls and retail plazas, thereby avoiding direct competition. Retail in successful Downtown areas is made up of independent retailers, cafes, bars, and restaurants.

  These retailers, in addition to entertainment options, are **traffic generators** that animate the Downtown area and extend the area's life beyond 5:00 pm. Attracting businesses that stay open into the evening is important for the health of Downtown, not just to animate the area in the evening, but also given that 70% of consumer spending occurs after 6:00 pm[2].

- **Consistent programming** is key, and ongoing community events drive positive awareness of the area and the wider Town for both residents and tourists. Downtowns with a range of retail, commercial, and programming options that span all seasons and appeal to the widest mix of people, including families and children, ensures that the area remains animated and thrives throughout the year. Consistent programming also aids in attracting a wider portion of the community to the Downtown, making them more likely to return in the future for shopping, dining, or entertainment purposes.

- Successful Downtowns are **children and family-friendly**. This includes the presence of green space, playgrounds, and events geared towards children and families.

Fortunately, Downtown Georgetown already includes many of these positive elements. There is an existing stock of high-quality residential uses surrounding the Downtown and what appears to be a growing demand for new housing. Main Street includes a diverse mix of businesses, and is aesthetically pleasing given the historical character and charm of the area, the attractive building facades, and elements like landscaping and decorations. The area is walkable and pedestrian-friendly, and is already home to the library and cultural centre, and community events, including the weekly farmer's market that shuts down Main Street to vehicle traffic on Saturday mornings from July to October.

[1] Roger Brooks International, "The Three Statistics That Every Downtown Should Live By", April 30, 2012
[2] Ibid

Figure 2: Existing Conditions in Downtown Georgetown

Challenges of Downtown Development

- Notwithstanding the positive elements associated with many Downtowns, there are several challenges associated with Downtown development that need to be considered. Some of these challenges that could pose a threat to future development in Downtown Georgetown include:

- **Zoning and planning policy** that may unintentionally raise extra hurdles to development feasibility. The municipality needs to create a policy environment that is not only encouraging of new development and investment in the Downtown, but that also ensures that what is permissible is economically viable. While increased flexibility in terms of height and density can be beneficial for project feasibility, it is important for the municipality to have specific criteria as to what they expect out of new development, including how it should be integrated into the Downtown. Having high design standards will ensure that the character of the Downtown is protected even as new development arises.

- **The availability of land for development** is also a significant challenge in Downtowns. Given the age of many Downtowns, there often are very few vacant or underutilized sites. As such, land assembly is often required for new development, which can have an impact on development timelines and project viability. Land assembly can be a significant challenge, particularly when dealing with a large number of narrow lots and multiple land owners.

- **Parking**, both public and private, is also a significant challenge for new Downtown development, particularly in small towns and cities.

  New mixed-use developments often require parking to be provided in underground parking garages, which leads to a significant increase in development costs. In many communities, such as

Georgetown, buyers are also likely to expect a parking space to be included in the purchase price of a new residential unit, preventing the developer from recovering some of their parking construction costs, and potentially putting the feasibility of a new development at risk.

Additionally, some of the best sites for new development in Downtowns, including in Georgetown, are existing surface parking lots. However, in many smaller Downtowns, particularly those that are not served by transit, there is already a limited amount of parking. The loss of public parking lots may require that a new development replace the spaces as part of their underground garage, adding further costs to a development that may already include market and financial risk.

- **Community opposition** can also be a big challenge for new development. Many residents are opposed to any significant changes to places they are familiar with, particularly an area that may have historical significance. A role of the Secondary Plan in Downtown Georgetown will be to educate and inform the public with respect to heights and densities.

- While current high density projects are selling at a modest rate, **an unproven market** can present challenges for new high-density development in small city Downtowns. Halton Hills does not have an established high-density residential market, with the large majority of housing units in the community being low-density. Introducing a new housing type into an unproven market can pose a risk for a developer.

- **Poor destination accessibility** can also limit a Downtown's ability to attract new development, investment, and growth. A location that is not serviced by transit and that is located away from frequently visited destinations outside the Downtown can limit who is attracted to the area and limit the potential buyer pool to downsizers and retirees. While the library and cultural centre is a destination for some, this is somewhat of a problem for Downtown Georgetown given that there are not many other significant destinations nearby that will draw new residents or visitors, either in Georgetown or surrounding communities.

6.3 Drivers of Downtown Development

Across the Greater Toronto Area ("GTA"), demand for Downtown investment is growing. Communities like Ajax, Burlington, Oshawa, and Oakville have all experienced a range of demand for reinvestment in their Downtowns. The following section provides an overview of the common drivers of this investment and how it relates to Downtown Georgetown and Halton Hills.

Population and Housing Growth

According to the Halton Region Official Plan, the population of the Town of Halton Hills is projected to grow to 94,000 people in 2031[3] (+32,839, +54% from 2016[4]). Given that Acton is surrounded by greenbelt lands and 69% of the Halton Hills population was located in Georgetown in 2016, it is reasonable to expect that much of this future growth will occur in Georgetown.

Household sizes are anticipated to decline to 2.69 persons per household ("PPH") in 2031[5], from 2.90 PPH in 2016. As households become smaller, so do housing needs. Demand should continue to grow for a broader range of housing forms including townhouses and apartments.

Given the population forecast and projected household size, there is a forecasted housing need of approximately 34,140 housing units in 2031, representing a need for approximately 13,065 additional housing units from 2016 to satisfy the population growth.

Watson and Associates' 2017 Development Charges Background Study for the Town of Halton Hills forecasts that this housing growth will consist of a higher proportion of apartments than in the past (Table 1). Apartments are expected to account for 34% of the housing growth to 2031 (+4,440 units), which will result in them increasing from a 10% share of the Halton Hills housing market, to a 19% share. Single and semi-detached homes, which represented 78% of Halton Hills housing as of 2016, are forecasted to account for less than half of the housing growth to 2031 (45%, +5,890 units), with the remaining growth forecasted as townhouses and duplexes (21%, +2,735 units).

The demand for higher density housing could come from a variety of groups including seniors, downsizers, single people, first-time buyers, and families. Given that Downtown Georgetown is the primary cultural, entertainment, retail and social destination, it is reasonable to assume that some of the higher density housing growth that is projected for Halton Hills will occur in the Downtown area.

Section 6.4 has additional detail on the distribution of future housing growth in the Town of Halton Hills.

[3] Note: Published growth forecasts for the Town of Halton Hills extend to 2031 only. However, the final Downtown Georgetown Planning Study will consider growth to 2041.

[4] Statistics Canada, 2016 Census

[5] Watson & Associates, Town of Halton Hills 2017 Development Charges Background Study, June 23, 2017

Table 1

Residential Growth Forecast - Town of Halton Hills					
Housing Type	**2016**	**%**	**2031**	**%**	**% of Total Growth (2016-2031)**
Single / Semi-Detached	16,350	78%	22,241	65%	45%
Townhouse / Duplex	2,590	12%	5,325	16%	21%
Apartments	2,110	10%	6,550	19%	34%
Total:	**21,050**	**100%**	**34,116**	**100%**	**100%**
Source: Watson & Associates, 2017 Halton Hills Development Charges Background Study					

Planning Policy

Planning policy in the GTA plays a role in encouraging and directing growth towards areas that allow for more efficient development, including Downtowns.

The Growth Plan for the Greater Golden Horseshoe ("Growth Plan") establishes long term planning objectives related to the location of new growth and allocation of resources. The Growth Plan supports mixed-use intensification within built-up areas, of which most of Georgetown, including the Downtown, is designated.

Other provincial policy documents, such as the Provincial Policy Statement ("PPS"), also include policies that encourage efficient land use planning and ensure sufficient land is available for intensification. There is also legislation like the Greenbelt Act, which protects the Greenbelt area in the GTA and has an impact on the overall housing market, restricting urban sprawl and encouraging compact housing forms.

The Halton Hills Official Plan gives further direction to where growth should occur within the municipality. It encourages new development, redevelopment, and a wide mix of uses in Downtown Georgetown.

Changing Lifestyle Priorities

Among all age groups there has been a shift in how people perceive and value their home. The dramatic shift in demand that has been occurring in many parts of the GTA from low density to high density housing is, in part, due to a shift in valuing lifestyle over space.

The ability to walk for basic daily needs, community services, and entertainment is a fundamental driver of demand for high density living in successful Downtowns, both large and small. This demand is particularly strong amongst millennials and downsizing seniors.

For all buyer groups, high-density living eliminates the maintenance issues typically associated with home ownership. Improved security and the ability to "lock and leave" are also two additional and significant advantages.

Later household formation and lower birth rates amongst young adults have also played a role in increasing demand for higher density residential uses and new housing in Downtown areas as they have not sought out traditional single-family homes as early in adulthood as previous generations.

Aging Population

Seniors today are healthier than ever and many continue to live active lifestyles as they age. By 60, many seniors are entrenched in their local community and as they look to downsize from single-family homes, often hope to remain in their current communities. Seniors and downsizers are anticipated to be a key driver of new high-density residential demand in the Downtown Georgetown area.

The demand for high-density housing units from this group has been brought on by changing lifestyle priorities. They are seeking convenient and low-maintenance living, with less responsibility than what is associated with ground-related housing. An apartment unit also provides a potential opportunity to re-deploy some of the equity from the sale of a single-family home into retirement savings, and provides a "lock and leave" option for people who may own property elsewhere (e.g. snowbirds).

An additional impact of the aging population is smaller household sizes. Households with only one or two people, with no plans for household size expansion, typically look towards higher-density housing forms, such as apartments, to reduce maintenance costs.

Like many communities in the GTA, the Halton Hills population is aging. Between the 2011 and 2016 Census periods, the population above the age of 55 in Halton Hills grew by 19%. This is well above the overall growth rate of 3.6%. As the population continues to age, these residents above the age of 55 are going to start considering downsizing, if they have not already. New condominium apartment developments in the Downtown are likely to be attractive to this demographic.

Affordability

The affordability of low-density housing options is declining rapidly in the GTA, including in Halton Hills. New single-detached housing prices are now over $1,000,000, with resales averaging more than $800,000 over the 12 month period between April 2017 and March 2018.

As low-density housing prices have grown, incomes have not kept pace. Between 2011 and 2016, the average resale price of a single-detached home in the Town of Halton Hills increased by 42%[6], while household incomes increased by 27%[7].

This trend of declining affordability is expected to continue. For the Town of Halton Hills to continue to grow and attract a broad range of new residents, including younger demographics, a diverse housing stock that includes more affordable options will be needed. Downtown Georgetown is a logical place for new higher density housing options given the concentration of amenities in the area and the direction of the existing planning policy regime.

Transit Access and Reduced Reliance on Cars

Related to changing lifestyle priorities, the costs of car ownership, not only in financial terms but also in social, time, stress and environmental terms, is reducing car ownership rates and shifting demand to transit, walkable communities and strong live-work relationships. This shift in car ownership has led to increased demand for new housing in Downtowns across the GTA.

Though Georgetown and Halton Hills are not serviced by local public transit, regional GO service is available. Georgetown GO train station is located a 15-minute walk to the east of the Downtown. Train

[6] Toronto Real Estate Board, Market Watch

[7] Statistics Canada, 2016 Census

service is provided on the Kitchener GO line, between Kitchener and Toronto's Union Station. The province's Regional Express Rail ("RER") program will see increased service along this line, with service at Georgetown GO increasing to 30-minute or less headways at rush hour.

In addition to train service, Georgetown also has GO buses which provide more frequent service than the trains. There are several GO bus stops in closer proximity to Downtown Georgetown, including stops along Main Street.

Given the lack of a strong existing local transit network, buyers who prioritize proximity to transit may look to other communities when seeking housing in a Downtown location. Other buyers that do not prioritize transit as highly but are attracted to the character of Downtown Georgetown may appreciate the proximity of regional transit, particularly those who commute to other parts of the GTA for work.

Despite the lack of an existing local transit network, it is worth noting that Town of Halton Hills is currently undertaking a Transit Service Strategy to meet the current and future mobility needs of the community. Any creation of a local transit network that serves Downtown Georgetown would be a positive driver of housing demand in the Downtown.

Changing Nature of Retail

In the same way that retailers once followed residents to suburban areas, shifting the retail landscape towards enclosed malls and large-format, big-box retail, they are now following residents back into more central areas, such as Downtowns. This has shifted the nature of retail back towards local, curated offerings in contrast to large-format, chain retailers. Some of these smaller, independent retailers are further supported by online sales, allowing some of them to pay higher rents associated with Downtown locations, which they otherwise may not have been able to afford prior to the recent boom in e-commerce.

Proximity to Employment

With growing concerns over traffic, congestion, and minimizing commuting times, the association between living and working in proximity has reinforced the relationship between employment centres and dense infill development patterns.

Given that several other submarkets throughout the GTA have significant clusters of employment, Downtown Georgetown is likely to have difficulty competing for a significant number of buyers that value proximity to employment and short commutes.

However, just as the internet has impacted retail, it has also changed the nature of employment. Many employees are now able to work remotely or from home either full-time or part-time, reducing the requirement to live in proximity to their employer and allowing them to live in less traditional centres. The internet and e-commerce has also allowed for an increased number of web-based businesses, whose owners and employees have more flexibility as to where to live.

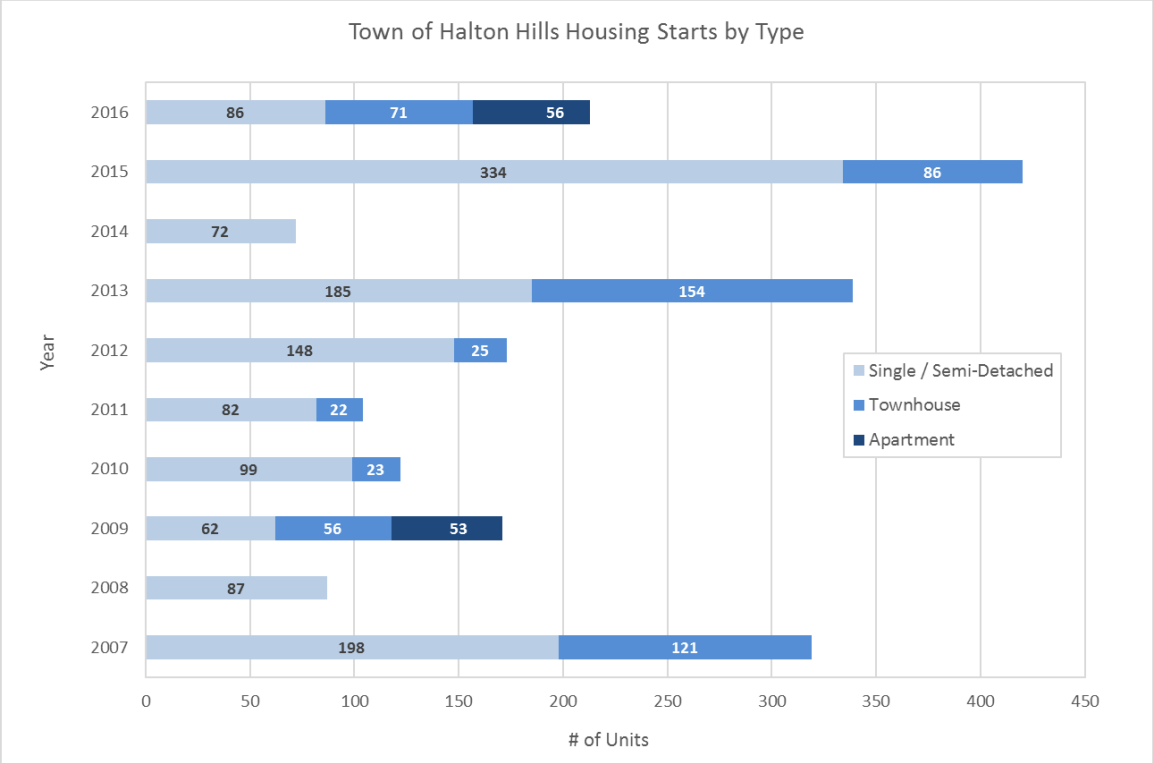
6.4 Residential Market Profile

Historically, the Town of Halton Hills has been a low-density residential community. As of the 2016 Census, 88% of housing units in Halton Hills were registered as single-detached, semi-detached or townhouse units.

The Halton Hills market is also heavily skewed towards home ownership as 86% of households reported that they owned their home as of the 2016 Census. With the implementation of rent controls through the Ontario Fair Housing Plan, it is unlikely that new purpose-built rental units will be constructed in the near to mid-term in Halton Hills, including in Downtown Georgetown, though an increase in condominium apartment investor purchasers at some point in the future could boost private rental supply.

Unlike many similar low-density communities in the GTA, Halton Hills has not seen any significant shift in recent years towards higher densities. Housing start data indicates that low-density housing types remain the predominant housing form (Figure 3). New apartments remain relatively rare, accounting for just 109 of 2,020 housing starts (5%) between 2007 and 2016.

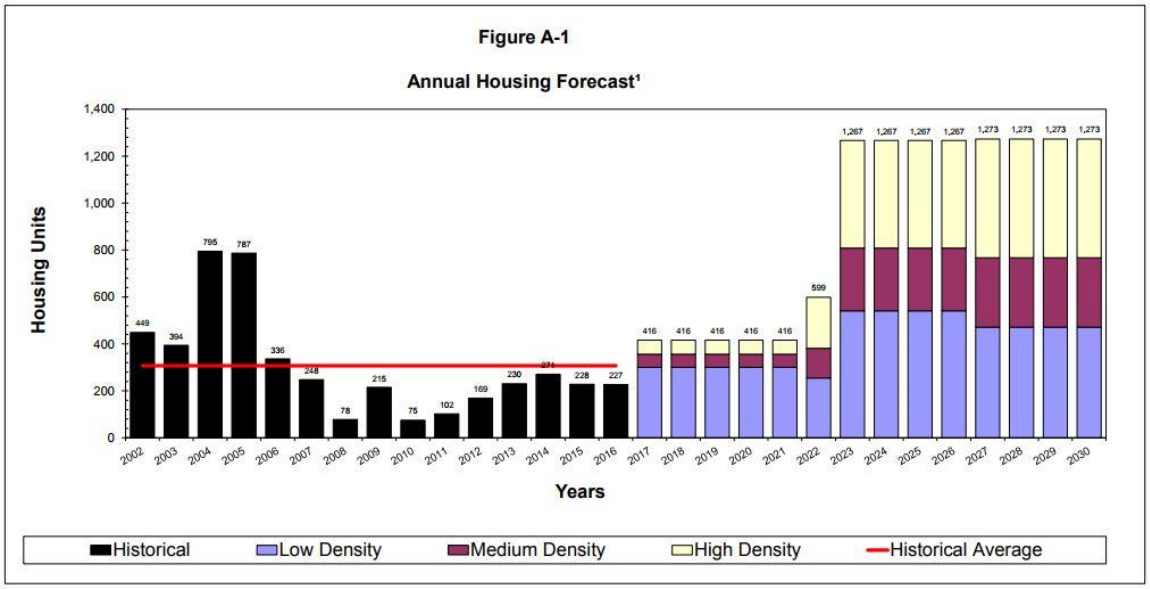
Figure 3



Source: CMHC Housing Portal, 2017

The average of 202 annual housing starts in the 10-year period between 2007 and 2016 is well below the forecasted growth in housing units between 2016 and 2031 (13,065 units, 816 annually). While housing growth is anticipated to remain relatively modest between 2017 and 2022, though higher than in recent years, the period between 2023 and 2031 is anticipated to account for the majority of the forecasted housing growth in the Town of Halton Hills (see Figure 4)

Figure 4



Source: Watson and Associates, Town of Halton Hills Development Charges Background Study, 2017

The reason for this delayed growth is that the Town of Halton Hills is currently undertaking a significant planning project, known as Vision Georgetown, which will see the urban boundary expanded in southwest Georgetown to include an additional 1,000 acres of land. It is anticipated that this area will accommodate more than half of all future housing growth in Halton Hills (6,770 units, 52%) starting in 2021 and that it will be home to 19,000 residents (58% of future population growth) and 1,700 new jobs. In addition to further planning work, capital and servicing improvements are still needed, and as such delivery of new housing in this area is unlikely to occur for several more years, as demonstrated in the Watson and Associates' forecasts (Figure 4).

The rest of the Georgetown built-up area is anticipated to accommodate approximately 38% of the forecasted housing growth (4,920 units), with the remaining 10% (1,250 units) located elsewhere in the Town of Halton Hills.

The distribution of where the future housing growth in Halton Hills is expected to occur is important given that development in Downtown Georgetown will be limited to competing for the 38% of total growth that will be located within the existing built boundary. Furthermore, Downtown Georgetown is unlikely to compete for any new single and semi-detached housing development, but rather is most likely to be a destination for apartment units and some infill townhouse development.

Given that the preferred land use concept for Vision Georgetown submitted to the Town of Halton Hills in June 2017 notes that the area would be expected to accommodate 1,207 high-density (apartment) units (27% of forecasted apartment growth) and 1,950 medium-density (townhouse) units (71% of forecasted townhouse growth), Downtown Georgetown will be a destination for a portion of the approximately 3,200 apartment units and 785 townhouse units that are forecast for the rest of the Town of Halton Hills to 2031.

The following sections provide a snapshot of the current market for low and high-density residential uses in Georgetown and the Town of Halton Hills.

Low-Density Housing Market

As of October 2017, there was very little activity in the new low and medium-density residential market in Halton Hills, with just one project actively marketing (Hello Georgetown by Remington Homes). The current offering at this project consists of 216 single-detached lots (36' and 40' lot frontages), located at 10th Sideroad and 10th Line, at the east end of Georgetown.

The increasing prices for low-density residential units across the GTA is prevalent in Georgetown, with available lots ranging in price from approximately $1,100,000 to $1,300,000, despite relatively modest unit sizing starting from 2,000 square feet ("sf")[8]. This pricing is considered to be the new normal for new single-detached product in Georgetown and Halton Hills.

No new townhouse product is currently available in the Halton Hills market. However, the aforementioned Hello Georgetown did offer townhouse units earlier in 2017, which have since sold out. These units, originally launched in April 2017, were priced between $830,000 and $840,000.

The single-detached and townhouse product that has been available in 2017 at Hello Georgetown represents an increase in pricing of more than $200,000 relative to what was available elsewhere in Georgetown two to three years earlier.

The resale market typically provides more affordable housing options than the new housing market, but prices have also been climbing there. As previously noted, the price of a resale single-detached home in Halton Hills increased by 42% between 2011 and 2016, from approximately $490,000 to $695,000[9]. In 2017, pricing has continued to climb rapidly, averaging approximately $815,000 through the first 11 months of the year, an increase of 17% from the 2016 average.

Increased pricing for low-density housing is likely to shift some demand towards higher density housing in the future. This could be a shift from single-detached homes to an increased number of townhouses, or a shift towards apartments or even stacked townhouse units. This is a trend we have observed in many communities across the GTA as single-family homes become out of reach for the average buyer.

High-Density Housing Market

The high-density residential market has yet to establish itself in a significant manner in the Town of Halton Hills. In fact, there are only three recent projects of note in all of Halton Hills.

The first project is known as Georgetown Terraces. Located near Guelph Street and Hall Road, at the east end of Georgetown, the 11-storey, 56-unit building was launched in November 2014, selling out in August 2017 after averaging less than two sales per month. Georgetown Terraces launched at an average index price of $476 per square foot ("psf"), and offered a suite mix that consisted entirely of large two-bedroom type units.

Though Georgetown Terraces is now complete and sold out, there are two more recent developments that are actively marketing, both of which provide a better picture of the market for new high-density residential units in and around the Downtown Georgetown area.

[8] All pricing and sizing data for new low-density residential projects retrieved from RealNet Canada

[9] Toronto Real Estate Board, MarketWatch

The first of these two projects is The Residences of the Hotel McGibbon, located in the heart of Downtown Georgetown at Main Street South and Mill Street. The 10-storey, 125-unit project launched in August 2016 and was 80% sold in November 2017 (approximately 6 sales per month). The project was met with a strong buyer response, selling 55 units (44%) in its first month on the market, indicating the attractiveness of Downtown Georgetown as a place to live.

Figure 5: Renderings of The Residences of the Hotel McGibbon (L) and 42 Mill Street (R)

Source: BuzzBuzzHome

The project is a redevelopment of the old Hotel McGibbon, a landmark in Downtown Georgetown, originally constructed in the 19th century. The new development will restore the façade of the former hotel building and integrate new commercial space at street level. The agent at the sales centre indicated that they already have several tenants secured, including some businesses that are planning to move from elsewhere on Main Street.

Multi-bedroom suites are the predominant unit type at The Residences of the Hotel McGibbon, though unlike Georgetown Terraces, there are 35 one-bedroom and one-bedroom plus den units (28%) included in the building. These single bedroom units and other smaller multi-bedroom layouts have all sold out as of November 2017, indicating some additional demand in the local market for smaller unit types and sizes. Remaining units range from 1,000 sf to 1,475 sf, and from approximately $650,000 to $875,000.

Pricing at The Residences of the Hotel McGibbon has been quite strong for Halton Hills. After launching at $540 psf, remaining units are now priced at $586 psf on average. Unit sizes in the building are generally quite large, ranging from 725 sf for the smallest one-bedroom unit to 1,553 sf for the largest penthouse unit, with the large majority of units above 1,000 sf.

Located just outside the Downtown Georgetown boundaries, 42 Mill Street launched more recently in October 2017. The 6-storey, 76-unit building is the first of three phases on the site. After its first month on the market, it was approximately 15% sold. Like at The Residences of the Hotel McGibbon, unit sizes are large, ranging from 843 sf for a one-bedroom unit, to 1,962 sf for the largest penthouse unit, with most units above 1,000 sf.

Pricing at 42 Mill Street averaged $603 psf at launch, making it the first Halton Hills development to surpass $600 psf at project opening. Prices for available units range from approximately $475,000 to $1,300,000. Like the projects that have come before it, the majority (77%) of the building consists of multi-bedroom units.

Given their high price points and large unit sizing, both the Residences of the Hotel McGibbon and 42 Mill Street have appealed primarily to downsizers, mostly from Halton Hills, but also some from elsewhere in the GTA such as Toronto or Brampton. The two projects both offer high-end features and finishes that match the high price point associated with their location within or just outside the Downtown. Downsizers were also the primary buyer group at Georgetown Terraces. There have been no recent condominium apartment buildings in Halton Hills that have been positioned to appeal to a wider profile of buyers.

Based on current development applications in Halton Hills, there does not appear to be a significant amount of new high-density development coming despite the growth forecasts, so any new development in the Downtown in the near-term is unlikely to face a significant amount of competition. As of December 2017, there were just 337 apartment units proposed in Halton Hills, all within Georgetown. However, 213 of these units were located in senior's residences, with just 124 units planned as market condominium apartments, all 124 of which are to be part of future phases at 42 Mill Street.

It is worth noting that there has yet to be a stacked townhouse development in Halton Hills. However, given the direction that pricing is headed for single-detached and townhouse product, it is likely that some stacked townhouse product would be marketable. This housing type provides a more affordable ground-related housing option that could fill a gap between townhouses and apartments in the local market.

6.5 Non-Residential Market Profile

Most small city Downtowns are no longer a home for major retailers. These larger retailers have moved out of Downtowns over the past several decades to larger properties in suburban locations. As they have moved further from Downtown centres, the retail in Downtowns has evolved to focus primarily on cafes, bars, restaurants, entertainment options, small independent retailers, and some small-scale office space.

These trends have been observed in Downtown Georgetown as the non-residential market has a focus on smaller population-serving businesses. In February 2016, W. Scott Morgan and Associates reported in their Retail Commercial Demand Analysis that Downtown Georgetown's non-residential offerings consisted largely of eating and drinking establishments, professional services, personal services, and a mix of smaller retailers and boutiques.

Since the 2016 report, little has changed in terms of the types of businesses in Downtown Georgetown. The Downtown is essentially devoid of chains and major retailers, ensuring that the existing stock of commercial uses do not need to compete directly with the large-format retailers in the big-box plazas scattered throughout the rest of Halton Hills. The smaller units, independent businesses, and entertainment options that exist in Downtown Georgetown provide residents and visitors with a different experience than any other concentration of non-residential uses in Georgetown and the Town of Halton Hills.

Downtown Georgetown has a non-residential inventory of approximately 350,000 sf[10]. The non-residential market in the Downtown area is very stable, with little turnover.

At the time of survey (December 1, 2017), the average vacancy rate in Downtown Georgetown was 1.1%, with just 3,700 sf of vacant space. This low vacancy rate is typical for the Downtown, which has averaged

[10] Unless stated otherwise, all non-residential data in this section has been retrieved from CoStar Property

1.2% vacancy over the past five years. This five year Downtown average is below the five-year Georgetown average of approximately 3.5%.

Recent asking rents in the Downtown have averaged approximately $21 psf net, and have been on the rise since late-2013, when they averaged approximately $16 psf net. Typically, $25 to $30 psf net is considered to be about the threshold at which pricing needs to be in order for the construction of new commercial space to be economically viable. While rents remain below this replacement threshold, the upward trajectory of pricing and the ability of the Residences of the Hotel McGibbon to secure tenants for their retail space prior to starting construction indicate the attractiveness of Downtown Georgetown for non-residential uses.

The one non-residential use that is missing from the Downtown Georgetown area is a grocery store. While there are specialty food stores, a grocery store that residents of the Downtown and surrounding neighbourhoods can walk to is absent. From a new residential perspective, the lack of a grocery store could be a market issue. However, the possibility of attracting a new grocery store may be remote given that large grocery chains generally avoid small Downtown areas given their model of requiring a large space and a large amount of parking, something that would be challenging in Downtown Georgetown.

Looking forward, the 2016 study by W. Scott Morgan and Associates indicated a need of 540,000 sf of new retail space to meet the needs of Georgetown's forecasted growth to 2031. However, the majority of this retail space (400,000 sf) is expected to be located in the Southwest Georgetown Urban Expansion Area (Vision Georgetown), leaving 140,000 sf to be spread across the rest of Georgetown, including within the Downtown.

Given this, it is likely that any new non-residential space in the Downtown is incorporated in the lower floors of new mixed-use buildings as opposed to stand-alone commercial buildings. New non-residential uses are likely to build upon the existing mix of uses, and consist primarily of population-serving businesses.

The upward trajectory of non-residential rents since 2013 indicates that new non-residential space will become more economically viable over time. Given that rents for existing space are close to replacement level, it is possible that new space, with modern features and finishes, would be able to achieve rents close to the $25 to $30 psf net range, even today. It will be important to ensure that any new development on Main Street in Downtown Georgetown, particularly between approximately Church Street and Cross Street, include retail space on the ground floor that animates the street and retains the existing character of the area.

6.6 Downtown Georgetown Market Outlook

Downtown Georgetown is a distinct area in the Town of Halton Hills. The range of retail and residential uses within a walkable neighbourhood is something that is unique within the municipality. The existing charm and amenities of the area make it the type of neighbourhood that the housing market is increasingly moving towards throughout the GTA, and demand for a mix of new housing in the Downtown should continue to grow moving forward.

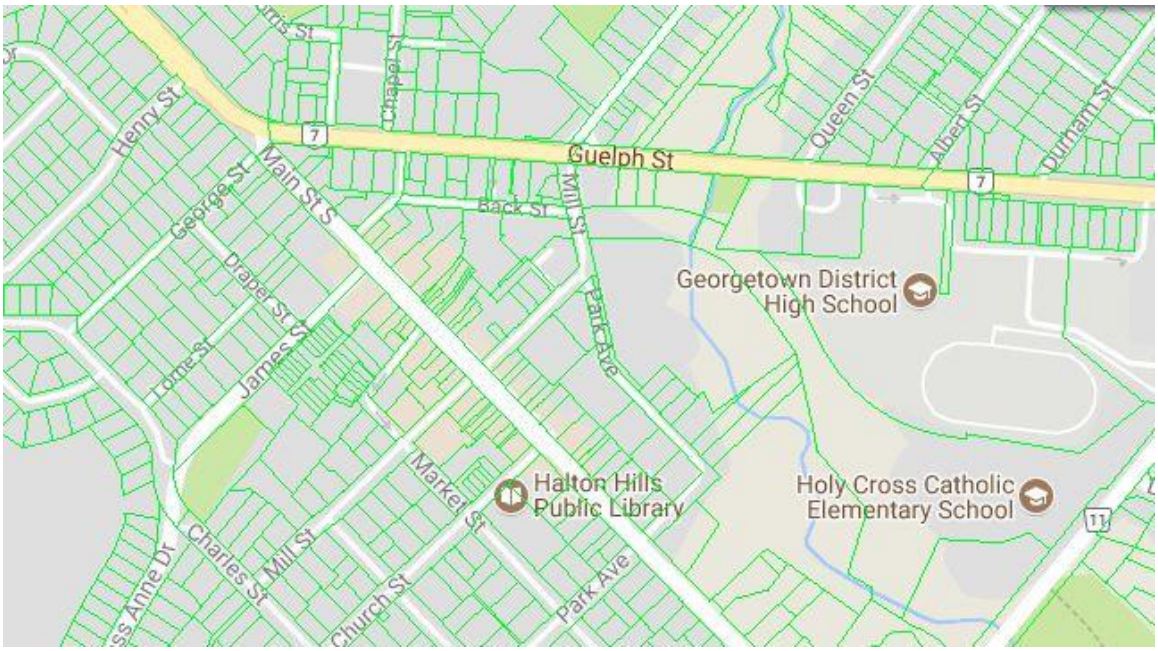
Forecasts for Halton Hills indicate that more than 13,000 new housing units will be required to satisfy the growing population between 2016 and 2031. While most of these units will be located in the Vision Georgetown area, Downtown Georgetown will be well-positioned to absorb a portion of the 4,900 units forecasted to be built elsewhere within the Georgetown built boundary. Specifically, Downtown Georgetown would be appropriate for new townhouse and mixed-use apartment development.

The area bound by Main Street, Guelph Street, and Mill Street appears to provide the greatest potential for intensified development based on existing lot patterns, uses, and built form. The existing surface parking lot at the rear of the buildings fronting on Main Street and the lots fronting on Guelph Street appear to be the most logical places for new high-density development that would minimize the impact on Downtown Georgetown's existing character. This part of the Downtown is also the shortest distance from the Georgetown GO train station, which could be attractive for prospective buyers. This area may be the best place to direct the tallest building heights in the Downtown.

However, narrow properties in many parts of the Downtown Georgetown area, particularly along Main Street (see Figure 6), are likely to make new development a challenge. When a new development requires the builder to purchase a number of properties, potentially from several different owners, the financial and time costs of lot consolidation can threaten a development's viability.

Surface parking lots, like the large lot east of Main Street, are logical properties for future infill development given their larger size. However, it will be imperative to have a parking strategy for the Downtown that guides how to replace some of the existing spaces, assuming their replacement is required to meet public parking demand. Though the Town is currently undertaking a Transit Service Strategy, Halton Hills lacks an existing local transit network and most residents are reliant on private automobiles to get around. Having an appropriate amount of parking is important to attract residents and visitors. Provision of parking should be shared between the public and private sector as provision of structure parking can undermine a new development's economic viability.

Figure 6: Downtown Georgetown Property Map



Source: Geowarehouse

As you move west of Main Street, any new development would begin to impede on the surrounding low-density residential neighbourhood and may be met with significant community opposition. Any potential infill development west of Main Street may be best suited for less intense housing forms, such as townhouses or stacked townhouses.

The two most recent condominium apartment projects within or near the Downtown – The Residences of the Hotel McGibbon and 42 Mill Street – are good indicators of growing demand for high-density residential uses in this area. Demand for higher density housing types will only intensify as the population continues to grow and affordability in the low-density residential market continues to erode.

However, these two projects also demonstrate that high-density residential units in Halton Hills currently appeal primarily to wealthy downsizers. Neither project diversifies the housing mix in any significant way that provides buyers who are priced out of the low-density market with a more affordable housing option, as high-density residential units typically do. As such, many of these other buyer groups who otherwise may be interested in high-density living – including young professionals, first-time buyers, singles, and families – are likely to look to other communities for high-density housing alternatives until more affordable options are available.

So long as housing in Downtown Georgetown remains positioned to wealthier buyer groups, the number of units that the market will be able to absorb in the Downtown will be limited given that the pool of buyers will remain relatively shallow. At a high price point, annual demand for new housing in the Downtown may range between 30 to 60 new units per year based on the performance of The Residences of the Hotel McGibbon and 42 Mill Street.

The market will need to continue to evolve organically towards a more diverse product offering that provides a wider range of unit sizing and price points before it is able to attract a more diverse mix of

buyers and increase annual absorption potential. As new supply comes to market elsewhere in Halton Hills and Georgetown, it would provide competition for Downtown projects and could have a positive impact on encouraging a more diverse positioning strategy for projects in the Downtown.

Given the forecast of 4,440 new apartment units in Halton Hills between 2016 and 2031, new development in the Downtown may not have any significant negative impact on other planned nodes of intensification in Halton Hills, particularly if product in these other nodes are positioned more affordably. In fact, an intensified Downtown could actually have a positive impact on other areas that are earmarked for intensification, particularly those in proximity to the Downtown.

Any enhancements that are made to the Downtown area as a result of the Downtown Georgetown Planning Study could boost demand for new residential uses in proximal neighbourhoods. This includes the Georgetown GO Station Secondary Plan area that is anticipated to accommodate a significant amount of growth (2,800 residents, 300 jobs), including in high-density residential formats. An improved Downtown profile could drive demand for new development in neighbouring areas like this, accelerating their timeline to build out.

New development in these neighbouring areas would also likely diversify the unit sizes and price points of available high-density housing in Halton Hills, even if Downtown Georgetown projects remain priced at a premium, providing the market with product that a wider mix of residents may be able to afford.

New Downtown development should have a focus on high-quality design that maintains the character and charm of the existing area. The Residences of the Hotel McGibbon is a good example of the integration of a new high-density development that maintains the small-town Downtown feel at street level through design features like the retention of the existing façade and heights that step back from the street.

While it will be important to be somewhat flexible in the policy regime for the Downtown in order to attract new investment, the Downtown policy framework should also be very specific related to heights, urban design, and other considerations in order to ensure new development will enhance, not impede, the Downtown Georgetown area, and to set a high standard. At the same time, there also needs to be an understanding as to what type of development is economically viable. It will be important to balance expectations for Downtown development with the understanding of what is viable, in order to ensure that the policy framework does not discourage new investment.

In the non-residential market, new space is likely to be integrated as part of mixed-use buildings as opposed to standalone non-residential buildings. Consideration should be given to ensuring that new non-residential space be kept as small units to reduce the risk of larger retailers infiltrating the Downtown Georgetown area. In this case, new businesses in these smaller non-residential units are likely to build upon the existing mix of uses in the Downtown. Ground floor retail space should be required in all new development along Main Street, to provide for consistency as one moves through the area.

The municipality should also consider staying ahead of the curve in relation to the non-residential market and consider encouraging uses like co-working spaces. Given the changing nature of the workplace, these types of spaces may aid in attracting entrepreneurs and a younger working age population that may otherwise consider other communities. Temporary and pop-up businesses could also be a consideration for any underutilized or vacant units, properties, or spaces. These businesses would improve sites that

may otherwise be detrimental to Downtown density and aesthetics, the pedestrian experience, and the overall impression of the area.

Overall, the market outlook for Downtown Georgetown is positive as the area includes a number of elements that make it attractive for new residential and non-residential investment. As the area begins to intensify, the challenge will be how to integrate new development while maintaining, protecting, and enhancing the existing character and charm that makes the Downtown a marketable location.

7.0 MUNICIPAL SERVICING

SCS Consulting Group

7.0 Municipal Servicing

The Municipal Servicing Assessment was completed by SCS Consulting Group and was reformatted for its inclusion in the Background Paper.

7.1 Water and Wastewater

The servicing study will rely on Regional water and wastewater models, which will be made available by the Town/Region. The Region has already made available the operating plans for water and wastewater indicating the size and location of existing infrastructure.

Existing and Proposed Water Infrastructure (Issues and Opportunities):

Groundwater based Water Supply

- The study area is currently serviced by water supplied from groundwater using seven wells at three municipal well fields: Lindsay Court, Princess Anne and Cedarvale.
  - Cedarvale is the well field adjacent to the Water Purification Plant located just south of the study area.
  - Cedarvale well capacity, depending on permit approval, will increase from 4240 m3/day to 6972 m3/day.
  - The study area is serviced by zone G6G (Georgetown 6 Groundwater).
- An annual review of the groundwater supply is conducted by the Region, according to the growth that is expected in Georgetown.
- Groundwater single detached unit equivalents are released every 18 months or 2 years.
- Overall projected growth for Georgetown will exceed the capacity of the groundwater supply.
- Groundwater supply will be maximized to maintain the community generally north of Silver Creek (to include the study area) as well as the existing Norval community and Georgetown Southeast Greenfield service area in the groundwater service area
- Updates to the groundwater system are required to support this strategy to supply the areas noted in the bullet point above.
- Downtown Georgetown will therefore be serviced by the existing water infrastructure and the groundwater supply system.

Lake Based Supply

- By 2021 the Region will service the new Georgetown Southwest Greenfield Service area, the existing Georgetown South service area and the existing Stewarttown Community by a lake based system with new water pressure zone (Zone G6L), a new zone G6L (Georgetown 6 Lake water) water reservoir at No. 22 Sideroad Reservoir, new zone G6L PS and Zone 4 reservoir expansion at Trafalgar Rd. and No. 15 Sideroad, a new transmission main along Trafalgar, and local improvements.

- The new lake based supply to south Georgetown will allow for additional allocation within the existing groundwater supply system; the extent of which will be determined with further study based on the existing model.

Local water system in Downtown Georgetown (Issues and Opportunities):

- The study area is currently serviced by looped supply watermains that are 300mm and 400mm in diameter; watermains are both ductile iron and pvc.
- A watermain on Back Street is not currently looped, this watermain could be extended to connect (loop) to the existing watermain on Mill Street, which will provide security of supply in the area.
- Future development must consider wellfield protection.
- Capacity of the existing water distribution and storage system is to be confirmed.

Existing and Proposed Sanitary Infrastructure (Issues and Opportunities):

Georgetown Waste Water Treatment Plant (Stream based system)

- The Region has determined that there is insufficient capacity in the Georgetown WWTP to service the full growth to 2031.
- The stream based service area will be maximized to maintain the community generally north of Silver Creek (to include the study area) as well as the existing Norval community and Georgetown Southeast Greenfield service area, to be serviced by the Georgetown WWTP.
- The Region will maintain the existing process capacity at the Georgetown WWTP.
- Georgetown Southeast Greenfield Area (generally south of Guelph Street and east of 10th Line) will be pumped to the gravity system and ultimately to the Georgetown WWTP.
- Downtown Georgetown will be serviced by the existing sanitary sewer infrastructure and the existing Georgetown WWTP.

Mid-Halton Waste Water Treatment Plant (Lake based system)

- By 2012 the Region will construct a trunk sewer on 8th Line to convey flows to the South Halton wastewater system to be ultimately treated at Mid-Halton WWTP. This trunk sewer will service the new Georgetown Southwest Greenfield Service Area (generally south of 15th Sideroad and Silver Creek), the existing Georgetown South service area south of Silver Creek (excluding Georgetown East) and the existing Stewarttown community.
- A new wastewater pumping station is required to service existing areas within the Georgetown WWTP drainage area located south of Silver Creek which will be diverted to drain south to the Mid-Halton WWTP.
- The new trunk sewer to south Georgetown will allow for additional allocation within the existing WWTP; the extent of which will be determined with further study based on the existing model.

Local sanitary system in Downtown Georgetown (Issues and Opportunities):

- The study area is currently serviced by a series of 200, 250 and 300 mm diameter sanitary sewers.
- These sewers convey flows to a local trunk sewer which extends from Guelph Street via Mill Street and Park Avenue to the Credit River valley, and south to the WWTP.
- Capacity of the existing sewer system is to be confirmed.

7.2 Stormwater Management

Design Criteria

- The site drains generally south and east to Silver Creek, or via an internal storm sewer system to four existing storm sewer outfalls east of Main Street, which outlet to Silver Creek just east of the study area.
- The stormwater controls for the study area per the Credit Valley Conservation Authority include: MOECC Enhanced Level quality control; and quantity control is to match the proposed peak runoff rates to existing peak runoff rates for the 2 to 100-year storm events.
- The minimum erosion control requirement for all watercourses within CVC's jurisdiction is retention of the first 5mm of every rainfall event.

Stormwater Servicing Opportunities

- A stormwater management analysis will be required on a site by site basis (within the study area) to determine the stormwater management measures required to achieve the design criteria for the proposed redevelopment.
- Stormwater quality control may be provided via oil and grit separators and infiltration/filtration facilities.
- Stormwater quantity control may be provided via parking lot, underground and/or roof top storage. Any combination of the noted storage could be employed on an individual site.
- Erosion control may be provided via stormwater re-use for irrigation, green roof systems and underground storage.
- The Town is completing a Stormwater Management Strategy that will be assessing the existing systems and making recommendation on the adequacy of the whole system.
- This Stormwater Management Strategy may provide information that could assist with the Downtown Georgetown Planning Study.

8.0 PARKING AND MOBILITY

Cole Engineering

8.0 Parking and Mobility

The Parking and Mobility Background Review was completed by Cole Engineering and was reformatted for its inclusion in the Background Paper.

Please find below the background review, review of best practices, physical conditions assessment, issue identification, and the next steps pertaining to Parking and Mobility in the Downtown Georgetown Planning Study.

8.1 Background Review

The background review includes an initial review of existing policies and programs, currently in place guiding the development of Georgetown Downtown. This includes a review of policies related to land use development, transportation and parking By-laws applicable to the downtown core areas and surrounding areas. Other relevant studies, such as those identified in the RFP were also reviewed.

- Some of the key general facts about Georgetown are:
  - 2016 Census data - Population of 42,123 people and Employment of 24,660;
  - No local public transit system;
  - GO Transit with trains between Georgetown and Union station during morning and evening rush hours;
  - Few multi-modal initiatives.

Documents Reviewed

Several documents were reviewed to gain background information on parking and mobility including:

- The Halton Hills Official Plan (OP);
- Halton Hills Complete Streets;
- Halton Hills Intensification Opportunities Study-Intensification Strategy;
- Halton Hills Transportation Planning Studies including:
  - Truck Strategy (2017)
  - Transportation Master Plan (2011)
  - Cycling Master Plan (2010)
- Regional Transportation Studies including:
  - The Regional Transportation Master Plan (2011)
  - The Active Transportation Master Plan.
- Provincial Transportation Studies including:
  - GTA West Transportation Corridor Route Planning Study;
  - GTA West Transportation Corridor Environmental Assessment Study; and,
  - GO Transit Kitchener Waterloo Expansion.
- Background Documents for future developments including:
  - McGibbon Hotel Condominium Proposal documents (including underground parking levels, traffic impact assessment, and site plan statistics).
- Comprehensive Zoning By-Laws including:
  - The Comprehensive Zoning By-Law 2010-0050 including Section 5.2.7 which discusses when additional parking spaces are necessary to be provided in the Downtown;
  - List of Amendments to the Comprehensive Zoning By-Law 2010-0050; and,
  - Proposed revisions to the parking requirements in Downtown Georgetown.

Halton Hills Official Plan

- 2008 Town of Halton Hills Official Plan; consolidated in 2017. The OP objectives pertaining to transportation are:
  - Facilitate the safe and efficient movement of people and goods within the Town's communities and to and from adjacent municipalities;
  - Establish an integrated transportation system that safely and efficiently accommodates various modes of transportation including trains, automobiles, trucks, public transit, cycling, and walking;
  - Promote public transit, cycling and walking as energy efficient, affordable and accessible forms of travel;
  - Protect transportation corridors to facilitate the development of a transportation system that is compatible with and supportive of existing and future land uses;
  - Ensure that new roads in urban development areas are constructed safely, designed in a grid-oriented street network to help distribute car and truck traffic evenly and provide access for the future operation of an efficient public transit system;
  - Encourage the location of school sites on roads that can accommodate cycling, walking and all forms of motor vehicle traffic including school buses;
  - Ensure that appropriate right-of-way width for all existing and proposed roads are provided in accordance with the Planning Act;
  - Encourage the use of alternative development standards for roads, where appropriate;
  - Encourage the efficient use of land along transportation corridors to maximize the use of public transit; and,
  - Restrict development on private roads.
- Overall Transportation including:
  - Pedestrian and cycling routes and facilities;
  - Public transit;
  - Road network;
  - General policies;
  - Private roads;
  - Laneways;
  - Inter-municipal transportation studies;
  - HPBATS (Halton Peel Boundary Area Transportation Study) and the GTA West Corridor Protection Area;
  - Off-street parking; and,
  - Rail network.

Halton Hills Complete Streets

- The integration of Complete Streets principles into the planning, design operations and maintenance of roads addresses the following strategic objectives:
  - To provide accessibility throughout our community;
  - To ensure the use of appropriate design strategies to create safe Communities;
  - To promote an "environment-first" philosophy that recognizes the importance of the protection of the natural environment in all municipal decision-making; and,
  - To provide infrastructure and services that meet the needs of our community in an efficient, effective and environmentally sustainable manner.

Halton Hills Intensification Opportunities Study-Intensification Strategy, 2009

- Regional Municipality of Halton is planned to accommodate for 36,000 more people and 32,000 more jobs by 2021; and an additional 130,000 people and 50,000 jobs between 2021 and 2031. The growth plan includes:
  - Managing growth;
  - General intensification; and,
  - Major transit station areas and intensification corridors.

Halton Hills Transportation Planning

- According to the *Planning Act*, an Official Plan "*shall contain goals, objectives, and policies established primarily to manage and direct physical change and the effects on the social, economic and natural environment of the municipality*".
- Transportation Studies in Halton Hills include:
  - Truck Strategy (2017):
    - Identifies and evaluates truck routing (existing / future) (permissions / restrictions) and identify road improvements and a supportive implementation plan.
  - Transportation Master Plan (2011):
    - Provides the strategies, policies, and tools required to meet the Town's transportation needs safely, effectively and cost efficiently. The TMP study identified an optimum transportation system that can accommodate the transportation needs of existing and future developments.
  - Cycling Master Plan (2010):
    - Makes recommendations that lead to opportunities for the Town's citizens to increase their activity level regardless of age, fitness, ability or cycling skill. The plan has been developed for the enjoyment of all and to bring the community together
  - Armstrong Avenue Reconstruction (study completed 2015; construction 2017);
  - Halton Hills Drive (study ongoing, began 2011; construction T.B.D.);
  - Halton Hills Transit Service Strategy (study expected to be completed Spring 2019);
  - Vision Georgetown (study expected to be completed 2018) – There are two (2) main components of the Vision Georgetown planning project:
    - A land use planning study (known as a secondary plan); and,

        - A subwatershed study which deals with all aspects of the natural environment.

Transportation Studies in the Region

- The Regional Transportation Master Plan (2011):
    - The Road to Change defines a sustainable, integrated transportation system that considers all modes of travel (automobiles, transit, cycling, walking) and supports the policies and objectives arising out of the Halton Region Official Plan Review to the year 2031.
- The Active Transportation Master Plan.

Provincial Transportation Studies

- GTA West Transportation Corridor Route Planning Study;
- GTA West Transportation Corridor Environmental Assessment Study; and,
- GO Transit Kitchener Waterloo Expansion.

Background Documents for Future Developments

- The McGibbon Hotel Condominium Proposal and related documents include:
    - Traffic impact assessment;
    - Underground parking levels;
    - Site plan statistics (from 2015).
        - Showing parking requirements of 188 residential spaces (1.5/unit), 31 shared visitor/ commercial spaces (0.25/unit), making 219 parking spaces required.
        - Showing total building GFA (above ground): 185,449 sf with 125 units total
- The McGibbon Hotel Condominium proposal's application has since been updated to provide 20 parking spaces in a separated part of the parking garage for general public use (in March 2017).

Policy Review

The policies were reviewed to gain background information on parking and mobility including:

- The Halton Hills Comprehensive Zoning By-Laws were reviewed with a focus on sections:
    - 4.9 Exceptions
    - 6.3 Zones
    - 5.2 to 5.7 Parking
    - 5.5 Loading
    - 4.17.3 Driveways

Halton Hills Comprehensive Zoning By-Law, 2010

- General parking provisions are:
  - The minimum amount of parking spaces shall be rounded up to the next highest whole number.
  - Multi-use lots shall be the sum total of the parking requirements for each of the component uses.
  - All parking spaces shall be located in the same lots as the use that requires the parking, except for the Downtown Core Commercial One (DC1) Zone where it may be located in another lot within 500 metres of the lot which parking would be required for a use, provided the off-site parking is located on a lot in the same zone.
  - Parking spaces are not required if the Council enters a 'cash-in-lieu of parking' agreement
- Parking Sizes are:
  - Open area:
    - Minimum width 2.75 m
    - Minimum length 5.5 m
  - Enclosed/ underground:
    - Minimum width 2.6 m
    - Minimum length 5.5 m
- Residential Parking Requirements:

Use	Minimum Parking Space Requirement
Single detached, semi-detached, dwelling units	2 spaces per dwelling unit
duplex dwelling units	1.5 spaces per dwelling unit
Street townhouse dwelling units	2 spaces per dwelling unit, if the building contains less than 7; 3 spaces per 2 dwelling units, if 8 or more units.
Accessory dwelling units	1 space per dwelling unit
Apartment dwelling units	1.5 spaces per dwelling unit
Non-residential dwelling units	1 space per dwelling unit
Multiple dwelling units	2 spaces per dwelling unit
Home occupations	1 space if the area is more than $15m^2$
Bed and breakfast establishments	1 space per guest unit in addition to the residential use

- Non-Residential Parking Requirements:

Use	Required Parking Standards
Adult Entertainment parlours	1 space / 5.8 m^2
Adult Specialty stores	1 space / 20 m^2
Adult video stores	1 space / 20 m^2
Animal Clinics	1 space / 16.9 m^2
Arena	1 space / 4 fixed seats
Art Galleries	1 space / 40 m^2
Billiard Halls	1 space / 20 m^2
Banquet Halls	1 space / 5.8 m^2
Book Superstores	1 space / 84 m^2
Bowling Alleys	4 spaces / lane
Business Offices	1 space / 30 m^2
Children's Superstore	1 space / 48 m^2
Commercial Fitness Centres	1 space / 15 m^2
Commercial Schools	1 space / 20 m^2
Commercial Self Storage facilities	1 space / 5 m^2 of office use plus 1 space / 100 m^2 of the building
Community Centres	1 space / 10 m^2
Day Nurseries	1.5 spaces / classroom plus 1 space / 13 m^2
Electronic Stores	1 space / 40 m^2
Financial Institutions	1 space / 18 m^2
Funeral Homes	Minimum 10 spaces plus 1 space / 13 m^2
Furniture Stores	1 space / 44 m^2
Golf Courses	12 spaces / hole
Golf Driving Range	1.5 spaces / tee
Hospital	1 space / 21 m^2
Hotels	1 space / room
Industrial uses in single premise buildings	1 space / 30 m^2 for the first 1000 m^2 1 space / 100 m^2 for the floor area between 1000 m^2 and 5000 m^2 1 space / 200 m^2 in excess of 5000 m^2
Kennels	1 space / 16.5 m^2

Use	Required Parking Standards
Libraries	1 space / 26.5 m^2
Long-term care facility	0.5 spaces / bed
Medical offices	1 space / 16.9 m^2
Miniature golf course	1.5 spaces / tee
Motels	1.1 spaces / room
Motor vehicle gas bars	1 space / 20 m^2
Motor vehicle rental / sales / used sales establishments	1 space / 20 m^2
Motor vehicle shops / repair facilities / service centres	1 space / 20 m^2
Museums	1 space / 40 m^2
Nursing homes	0.5 spaces / bed
Office supply stores	1 space / 77 m^2
Place of worship	1 space / 9 m^2
Restaurants	1 space / 5.8 m^2
Restaurants, take-out	1 space / 16.6 m^2
Retail stores, personal service shops, service and repair shops, and department stores	1 space / 20 m^2
Schools, private	4 space / classroom
Schools, public	4 space / classroom
Supermarkets	1 space / 13.8 m^2
Theatres	1 space / 4 seats
Trade or convention centres	1 space / 20 m^2
Warehousing	if associated office or retail net floor areas are 15% or less of the total net floor area: 1 space / 90 m^2 (up to 7000 m^2) 78 spaces plus 1 space / 145 m^2 (from 7000 m^2 to 20000 m^2) 168 spaces plus 1 space / 170 m^2 (over 20000 m^2)
Other	1 space / 30 m^2

**See by-law for more details*

- Bicycle Parking Requirements:

Use	Required Parking Standards
Retail, service commercial, institutional	2 spaces + 1 space / 1000m^2 GFA
Industrial	2 spaces + 0.25 space / 1000m^2 GFA
Elementary and secondary school	1 space / 20 students + 1 space / 35 employees
Post-secondary school	1 space / 20 students

- Section 5.2.7 of the Halton Hills Comprehensive Zoning By-law provides policy direction pertaining to parking requirements for non-residential uses in the Downtown Commercial One (DC1) Zone such that:
    - *"Notwithstanding Section 5.1, existing non-residential buildings and structures in the Downtown Commercial One (DC1) Zone in Downtown Georgetown and Downtown Acton are exempt from providing additional parking spaces if they are changing to another non-residential use that would require additional parking spaces.*
    - *Expansions to non-residential buildings and structures within the Downtown Commercial One (DC1) Zone in Downtown Georgetown and Downtown Acton shall not result in the removal of existing parking spaces unless the same number of parking spaces can be provided elsewhere on the lot or in accordance with Section 5.2.5 or Section 5.2.6."*

8.2 Best Practices Review

A part of a review of the best practices, we reviewed plans and policies prepared for the planning of downtown areas:

- Brantford; and,
- Peterborough.

These comparable cities underwent similar planning studies. The best practices review discusses what was recommended for Brantford and Peterborough, as it may be applicable to Georgetown's study.

Brantford

A Master Plan for Downtown Brantford was prepared in 2008. As part of Master Plan, a Strategic Downtown Parking Management Study was prepared in 2007. The objectives of this study were to:

- Collect updated data on downtown parking supply and utilization;
- Identify deficiencies in the existing supply and management of downtown parking;
- Estimate potential impacts of changes to existing parking (i.e. King St. garage expansion);

- Reflect the parking needs and concerns of the downtown business community; and
- Respond to Official Plan parking policies and Transportation Master Plan strategies.

Downtown stakeholder input was collected during the study. Policy context and Parking By-laws, existing parking management, supply & demand were reviewed. Some of the details of the Downtown Street Parking are:

- Downtown Brantford has approximately five hundred (500) on-street parking spaces, including eighteen (18) accessible parking spaces. There is a 2-hour time limit for on-street parking within the downtown area with the exception of specific street sections or loading zones that are signed accordingly.
- NO REPARK BYLAW 182-2002: Re-Park/No Re-Park – prohibits a person from over-extending a 2 hour and/or 3-hour parking restriction through the relocation of a vehicle to another on-street location. A person is, therefore, prohibited from re-parking a vehicle at another on-street location in the downtown as identified in Section “31” for a period of 5 hours from the start of the initial period of having parked the vehicle on-street. This bylaw prohibits a person from over-extending a two or three-hour parking restriction by relocating a vehicle to another on-street location within a defined area.
- The time restriction for the “no re-park” bylaw is 5 hours from the start of the initial period of having the vehicle on-street.
- The area for the “no re-park” bylaw is as follows:
    - Between Brant Ave and Clarence Street (Colborne St. extends to Alfred St.)
    - From and including Water and Wharfe Streets northerly to and including Nelson Street
- Downtown Municipal Lot Parking:
    - 4 lots (with 950+16+115+52=1133 spaces) with:
        - $1.00 per hour
        - Daily maximum $8.00 (8:00 a.m. - 6:00 p.m.)
        - Evening Maximum $1.00 (6:00 p.m. - 8:00 a.m.)
        - Some lots have monthly pass parking available

Based on the survey and analysis of existing parking demand conducted and anticipated demand for new development/redevelopment projects within the downtown, future parking needs were determined.

The Brantford study recommended following parking strategies and a detailed action plan was prepared in order to implement the strategies:

- Increase parking Capacity and Efficiency
- Reduce Long-Term Parking Demand
- Improve Parking Management.
- Improve Parking Control Services

Peterborough

A Strategic Downtown Parking Management Study for the Peterborough was prepared in 2017. The objectives of the Strategic Downtown Parking Management Study are:

- Provides a long-term vision for parking within Downtown Peterborough;
- Support mode share targets in Official Plan and 2012 Transportation Master Plan;
- Support the Downtown core's planned growth and intensification;
- Ensures adequate existing and future parking supply;
- Examines potential transportation demand management (TDM) measures;
- Investigates state-of-the-art parking technology opportunities;
- Addresses stakeholder concerns; and
- Ensures accessible parking needs are met.

As a part of the study, existing downtown parking supply, weekday and weekend parking demand were studied. Anticipated parking supply changes were identified and on the Future parking demand was determined using:

- Places to Grow employment and residential growth projections;
- Peterborough Comprehensive Transportation Plan mode split changes;
- New approved developments; and
- Potential parking supply changes.

The following strategies were recommended for improving the efficiency of current parking operations in Peterborough:

- Reduce the Downtown core's zoning by-law parking requirements;
- Adopt accessible parking requirements that are consistent with the Accessibility for Ontarians with Disabilities Act (number of spaces and parking space dimensions);
    - Residential parking only: on-street parking is reserved for users with residential permits
    - Residential preferred parking: All parking users are permitted, however only permit holders are exempt from the maximum time limit.
- Adopt a residential on-street accessible parking program where accessible permit holders are provided with a designated on-street parking space.
- Adopt a policy requiring parking spaces lost due to redevelopment to be replaced elsewhere.
- Maintain current parking fines for the short term prior to increasing the Expired Meter and Overtime Parking fines to $25

To compare the appropriateness of Peterborough's parking price structure, the parking prices of similar municipalities were examined. Based on the review of the best practices, the study recommended a new parking price structure.

Also, the study examined the current parking technologies and recommend technologies to achieve the desire parking strategies.

8.3 Physical Conditions Assessment

Parking Inventory

A desktop research was done to identify the off and on-street parking availability within the Georgetown Downtown area. The details are discussed below and illustrated in a graphical format on *Map 14 - Parking*.

Off Street Parking

- Approximate parking availability for off-street parking in the downtown area is 367 spaces including:
  - The Edith Street Parking Lot at Edith and Mill Street (with approx. 66 spaces),
  - The Church Street Parking Lot behind Silvercreek Café (with approx. 51 spaces),
  - The Main Street Parking Lot behind Young's Pharmacy (with approx. 185 spaces),
  - The Wesleyan Parking Lot off Wesleyan Street (with approx. 25 spaces),
  - The Main Street Parking Lot at Main and Church Street (with approx. 20 spaces), and
  - An additional 20 spaces will be provided by the McGibbon Hotel Condominium, at Main Street and Mill Street, in a separated part of the parking garage for general public use.

On Street Parking

- There is street parking as per street signage on Mill Street, Church Street, and Park Avenue.
- Approximate parking availability of on-street parking in the downtown area is 134 spaces:
  - Main Street (approx. 50 spaces)
  - James Street (approx. 12 spaces)
  - Wesleyan Street (approx. 4 spaces)
  - Mill Street (approx. 28 spaces)
  - Church Street (approx. 4 spaces)
  - Back Street (approx. 6 spaces)
  - Park Street (approx. 14 spaces)
  - Market Street (approx. 16 spaces)

Parking Assessment

Restrictions

- Parking prohibited 2am-6am Nov 15- Apr 15 (for snow clearing).
- On-street parking is prohibited for longer than five (5) hours unless authorized signs indicate otherwise.
- Free parking is available at several municipal lots (except for 2am-6am) there are permits available to allow overnight parking.
    - These lots are located:
        - The Edith Street Parking Lot at Edith and Mill Street,
        - The Church Street Parking Lot behind Silvercreek Café,
        - The Main Street Parking Lot behind Young's Pharmacy,
        - The Wesleyan Parking Lot off Wesleyan Street, and
        - The Main Street Parking Lot at Main and Church Street.
- There is street parking as per street signage on Mill Street, Church Street, and Park Avenue.
- On-street parking exemptions are limited to six occasions per vehicle per year for a maximum of four days (for residents and guests).
- Unless otherwise posted there is a 12-hour parking limit on all town streets in the winter.

Utilization

We will collect the existing parking utilization information available with the Town and determine the data gaps.

Mobility Assessment

Halton Hills Complete Streets- Currently

- Program to raise money for local hospital through bicycling
- Needs more multi-modal commuting options
- Should consider installing bicycle paths

Multi-Modal Transportation

- There is currently no local, public transit system
- There is a transit service strategy in progress
- There is a GO station
- There is an accessible transit service
- There is a youth taxi scrip program
- There are no bicycle paths

Halton Hills Transit- Currently

- The Town of Halton Hills ActiVan service is a specialized transportation service intended for seniors age 65 and older, and persons with disabilities residing within Halton Hills.
  - Cost:
    - Monday to Friday = one ticket each way (equivalent to $3) between the hours of 7:30 a.m. and 5:00 p.m.
    - Monday to Friday After hours (between 5:00 p.m. to 11:00 p.m.) = one ticket + $1 each way (equivalent to $4)
    - Weekends = one ticket + $1 each way (equivalent to $4)
    - With subsidized prices available
- No public transit
- The Youth Taxi Scrip Program is a service for registered youth in Halton Hills from 13 to 19 years of age
  - Cost - 12$ for a coupon booklet that has a face value of 20$ towards taxi fares
- Georgetown GO (Train and bus) station
  - Located: 55 Queen St., Georgetown, ON
  - Connects to the Halton Hills Acti-van transit
    - Route 30, 31, 33 Kitchener Corridor (Approx. 1 train/ bus per hour)

- Should consider a public transit system (1+ local bus route); there is currently a Transit Service Strategy that is exploring opportunities to create a transit system in Halton Hills (estimated to be completed by Spring 2019).

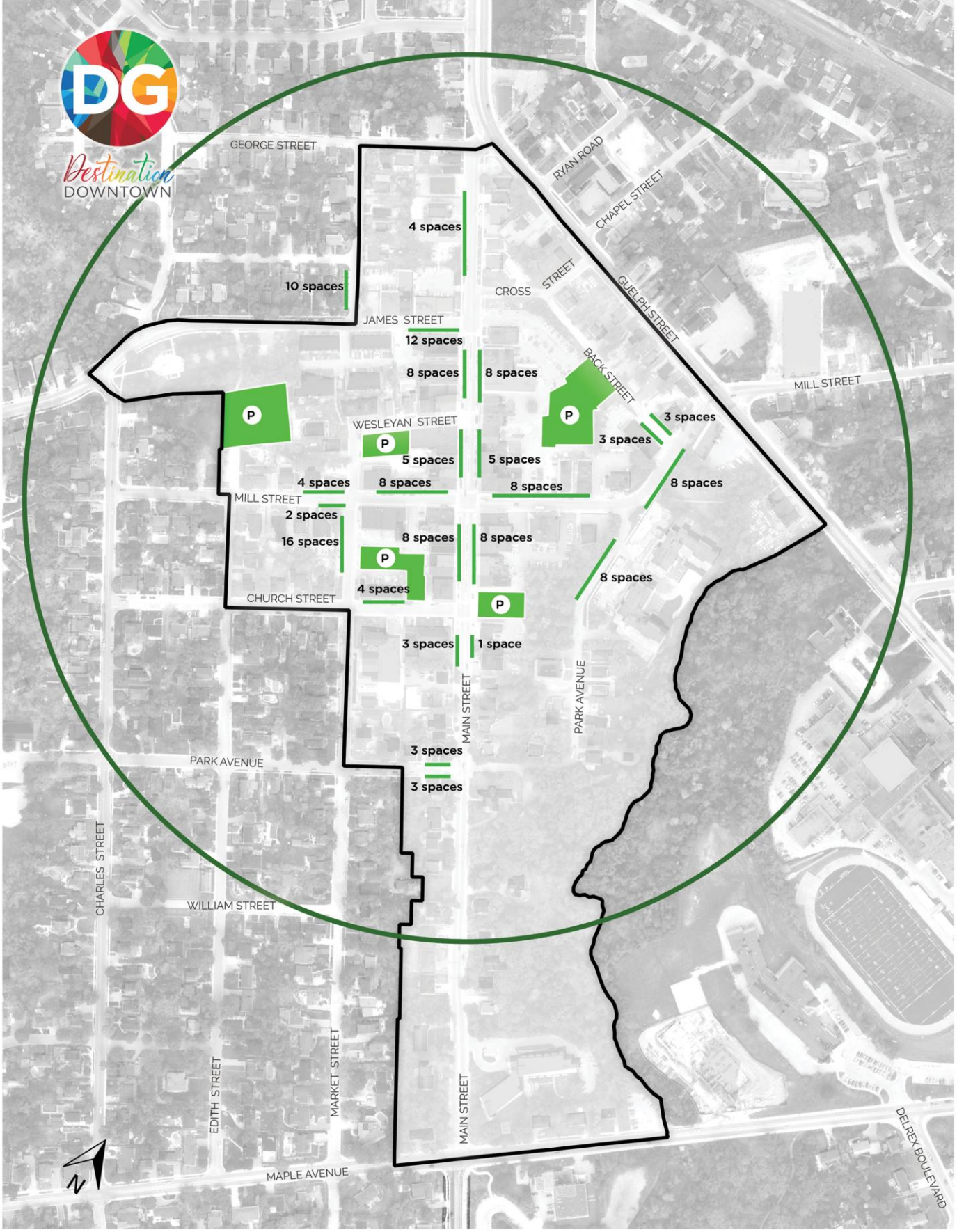
8.4 Issue Identification

- There are areas for improvement with mobility (public transit and a complete streets initiative)
- Information is required to complete the parking assessment (availability, utilization, recommendations)

8.5 Next Steps

The next steps include:

- **Parking Assessment**- to gain information on parking utilization and availability.
- **Recommendations**- The finalized plan will develop and complete streets plan unique to the demands and challenges of Georgetown. These recommendations will incorporate the full parking analysis as well as the conclusions from background review, to provide well informed and targeted long-term solutions for a prosperous Georgetown. The results from the gap analysis and parking assessment will advise the recommended measures which the Georgetown Downtown study will advise and provide direction related to parking strategies within the Complete Streets Analysis. These recommendations will represent a phased transition plan to implement the recommended parking strategies developed for short, medium and long range.



MAP 14 - PARKING

- Parking Lots
- On Street Parking
- 400 m Radius
- Downtown Boundary

destination downtown
DOWNTOWN GEORGETOWN PLANNING

Prepared by The Planning Partnership

9.0 NATURAL ENVIRONMENT
PLAN B Natural Heritage

9.0 Natural Environment

The Natural Heritage System Scoped Review was completed by PLAN B Natural Heritage and was reformatted for its inclusion in the Background Paper.

The following section provides an overview of the existing natural environment conditions and constraints/opportunities associated with the Downtown Georgetown Planning study area. An excerpt from the Silver Creek Subwatershed Study (CVC 2003) has also been included (Figure 1).

9.1 Key Environmental Features and Constraints

- The Silver Creek, a coldwater salmonid stream, forms the eastern boundary of the study area. The creek occupies a well-defined valley. A Subwatershed Study has been completed for Silver Creek by CVC (2002, 2003). The study provides a natural heritage system framework comprised of Level 1, Level 2 and Level 3 protection areas. Level 1 (High Priority Terrestrial Areas) and Level 3 (Low Priority Terrestrial Areas – Enhancement Opportunity) are identified in the Subwatershed Study for the Silver Creek valleyland and adjacent tableland fringe, which flanks the study area. Refer to the attached figure.
- The Silver Creek valley is mainly wooded in character (i.e. valley slopes, bottomlands, tableland fringe) and is dominated by deciduous forest associations (both upland and lowland). Remnant forested areas are present, in association with existing lots, to the west of Main Street and Park Avenue (i.e. in the rear of lots). Forest habitat associated with the Silver Creek valleyland abuts Main Street and Park Avenue in three locations. These areas are considered part of the larger Silver Creek valleyland system, and are identified as Level 1 protection areas in the Subwatershed Study. A cultural meadow is located on the east side of Park Avenue, just south of Guelph Street. This area is identified as Level 3 (Enhancement Opportunity) in the Subwatershed Study. Some sections of the forested valley are also designated as Level 3 (Enhancement Opportunity), including an area that abuts Park Avenue on the east.
- Two tributaries to Silver Creek traverse the study area from west to east, crossing under Main Street. The southerly of the two watercourses is identified as “Greenlands” in the Town Official Plan. The northerly watercourse does not have a “Greenlands” designation but is recognized in the Subwatershed Study as a feature to protect (i.e. Level 1).
- There are no identified wetlands associated with the Silver Creek valley adjacent to the study area. However, the Hungry Hollow Provincially Significant Wetland (PSW) Region of Halton Environmentally Sensitive Area (ESA) is located downstream, south of Maple Avenue.
- The Silver Creek valley is identified as part of the Greenbelt Plan (i.e. Urban River Valley) as it provides an important corridor and linkage function between the Niagara Escarpment to the northwest and the Credit River valley to the southeast.
- The Region of Halton Official Plan identifies the Silver Creek valley as a “Key Feature” within the Regional Natural Heritage System. Town of Halton Hills identifies the Silver Creek valley as “Greenlands” in their current Official Plan.

- The study area is located within Wellhead Protection Area (WHPA) A, B, C, D, Q1 and Q2, and the Issue Contributing Area (ICA). These areas are subject to the policies of the CTC Source Protection Plan (CTC Source Protection Region 2015).
- Silver Creek supports a coldwater fishery (migratory salmon/trout species, and resident trout species). The Subwatershed Study identifies the reach of Silver Creek adjacent to and downstream of the study area as a "high sensitivity" fish community. The fish community is highly sensitive to changes in groundwater inputs (quality/quantity) as wells as the quality and quantity of surface runoff from adjacent urban lands.
- The reach of Silver Creek within the study area may support habitat for the following aquatic species at risk: redside dace (endangered), wavy-rayed lampmussel (special concern), and northern brook lamprey (special concern) (Source: Fisheries and Oceans Canada 2017).
- The forested valleylands within the study area have the potential to support habitat for species at risk protected under the *Endangered Species Act* (e.g. area-sensitive birds, bats).
- The Silver Creek floodplain supports a provincially rare plant community (i.e. Fresh-Moist Black Walnut Deciduous Forest) (Source: CVC pers. comm.)
- The Silver Creek valley is identified as a "high priority" linkage rehabilitation target in the Subwatershed Study (CVC 2003). The areas identified as Level 3 in the Subwatershed Study generally coincide with the "high priority" areas for linkage/corridor rehabilitation (refer to Figure 5.2.6 in the Subwatershed Study).
- The CVC Subwatershed Study designations, described above, are not entirely reflected in the Official Plan Schedule for the Downtown core. Downtown Core Sub-Area, Downtown Complimentary Sub-Area, and Downtown Redevelopment Sub-Area land use designations are overlaid on top of areas identified in the Subwatershed Study for environmental protection and/or enhancement. In other words, the Greenlands designation in the Town's Official Plan does not entirely coincide with the Silver Creek Subwatershed Study, as it relates to environmental protection and enhancement (i.e. Level 1 and Level 3 protection areas).
- The Subwatershed Plan Implementation Report section on the land use approval process (i.e. Figure 5.3.1) indicates that the Silver Creek Subwatershed Study can inform and guide municipal land use planning such as a secondary plan. CVC has indicated that a "scoped subwatershed study" is required for the Downtown Georgetown Planning Study, and that the emphasis would be on identifying opportunities for the enhancement and restoration of Silver Creek and its associated valleyland system.
- Additional information for the study area can be found within Appendix M (Subcatchment 1119 Factsheet) from the Silver Creek Subwatershed Study Implementation Report (CVC 2003).
- A preliminary list of "opportunities" for restoring/enhancing the ecological features and their associated ecological functions within the study area include the following:
  - Retrofitting of the SWM system to further protect and enhance water quality in Silver Creek (e.g. bio-swales, end of pipe wetlands, at-source recharge of runoff, Stormceptors).
  - Revising the land use schedule in the Town's Official Plan to bring it into conformity with the Silver Creek Subwatershed Study (i.e. Level 1 and 3 protection areas). Examples include the tributaries to Silver Creek, the tableland woodland fringe and cultural meadow habitats.

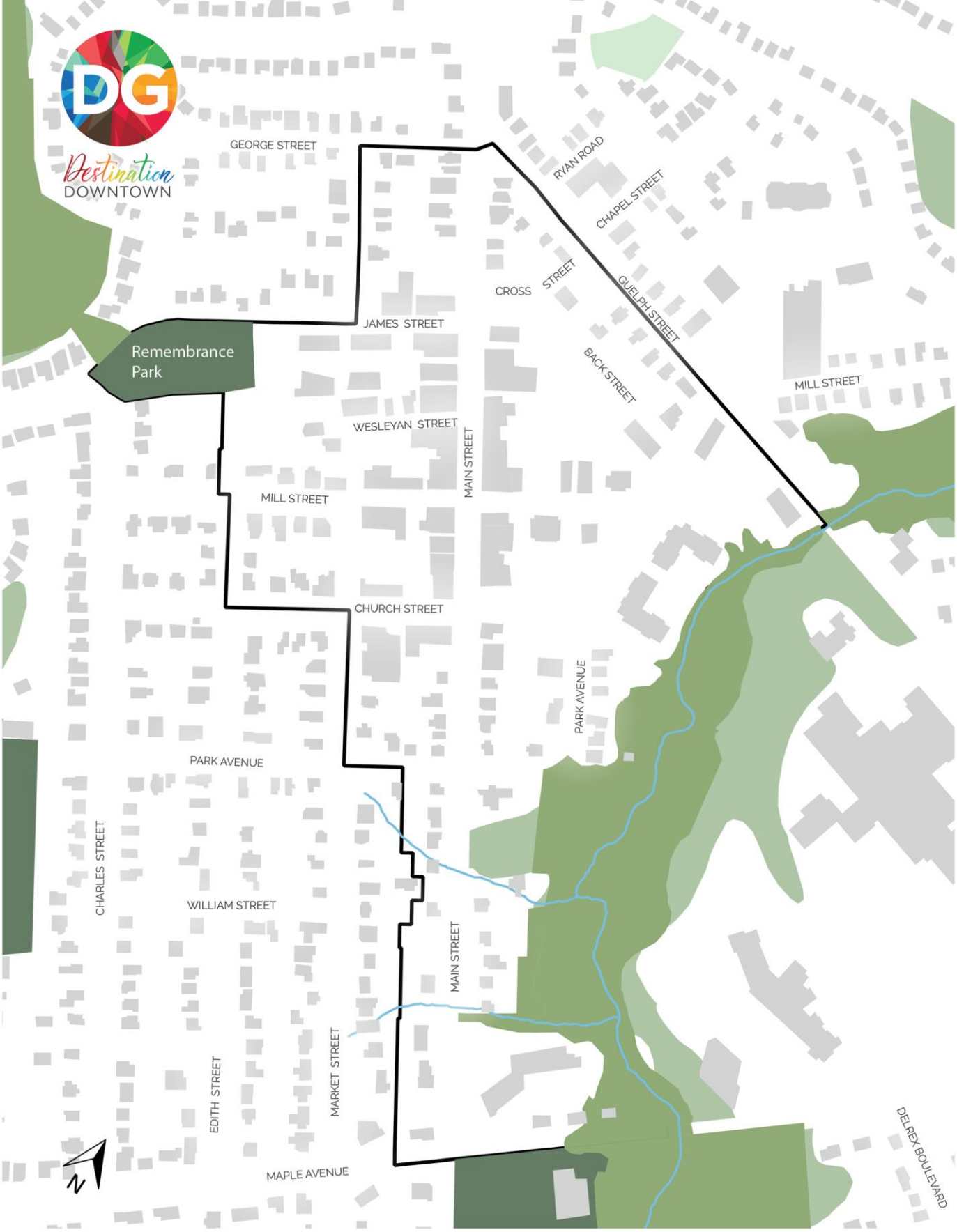
- Greening of the downtown core with locally indigenous native trees and shrubs.
- Exploring alternatives to the use of road salt or reduced application rates.
- Controlling informal trail access to the valleyland and dumping of debris.
- Encouraging public stewardship of the ecological features and functions of the Silver Creek valley, particularly for properties that back onto the valleyland.
- Implementation of the “yellow fish” road program at catch basins.
- Removal of invasive plant species.
- Inter-planting with locally indigenous native plant species.
- Planting of stream banks and disturbed riparian areas and valley slopes to strengthen ecological connections and achieve minimum subwatershed forest cover target of 30%.
- Edge management measures – development/valleyland interface.
- Naturalization of Level 3 areas – e.g. cultural meadow, tableland forest/valleyland fringe.
- Encouraging the use of native plant species by the public in the landscaping of the adjacent residential areas (e.g. City of Peterborough *Green- Up Program*).

9.2 Preliminary Work Plan – Scoped Natural Heritage Assessment Study

- Compile and review relevant background reports, mapping and agency databases for the Silver Creek Valley, including the Silver Creek Subwatershed Study – Phase 1, 2 and 3 (CVC et al. 2002, 2003), MNRF LIO/NHIC, Region of Halton, Town of Halton Hills, and CVC.
- Summarize the key findings and recommendations from the Silver Creek Subwatershed Study (CVC 2002, 2003) focussing on the section of the valleyland that flanks the study area, as well as the adjacent downstream and upstream reaches.
- Complete a reconnaissance level survey of the urban development/natural area interface to confirm and describe existing conditions, restoration/enhancement opportunities, level of disturbance, and environmental management related issues.
- Map the key components of the Silver Creek Valley Natural Heritage System (NHS), including Level 1 and Level 3 Protection Areas, ELC plant communities (broad level), potential significant wildlife habitat features, stream sensitivity, floodplain, and enhancement/restoration opportunities (i.e. corridor function, fish habitat, plant/wildlife habitat).
- Provide recommendations to protect, restore and enhance the natural heritage system in the context of existing development and future development options for the downtown core, as well as the recommendations and implementation plan for the Silver Creek Subwatershed (CVC et al. 2003).
- Identify options for protecting/enhancing the groundwater system and mitigating the impacts of urban runoff on Silver Creek (e.g. Low Impact Development SWM measures).

- Provide guidelines for environmental stewardship to protect and enhance the ecological features and functions of the Silver Creek valley, as described in the Subwatershed Study (CVC 2002, 2003).
- Provide guidelines for the enhancement/restoration of plant and wildlife habitat within the valleyland system (e.g. Level 3 protection areas).
- Review and provide key input to the environmental policies for the downtown core, including revisions to the Land Use Schedule to reflect the Level 1 and Level 3 Protection Areas identified in the Silver Creek Subwatershed Study.
- Review the implementation plan of the Silver Creek Subwatershed Study in the context of the Region of Halton and Town of Halton Hills Official Plans, and provide recommendations where required.
- Confirm the existing Regional natural heritage system and floodplain/hazard mapping, to the extent feasible.
- Document findings and recommendations in a *Scoped Natural Heritage Assessment* report.

Figure 1: Silver Creek Subwatershed Study (CVC 2003) – Level 1 – High Priority Protection Area (Dark Green), Level 3 – Enhancement Opportunity (Light Green). Level 1 and Level 3 areas flank Main Street and Park Avenue.



MAP 15 - OPEN SPACE AND NATURAL FEATURES

- Major Parks
- Small Parks
- Greenlands
- Woodlands Greater Than 0.5 ha
- Watercourse
- Buildings
- Downtown Boundary

destination downtown
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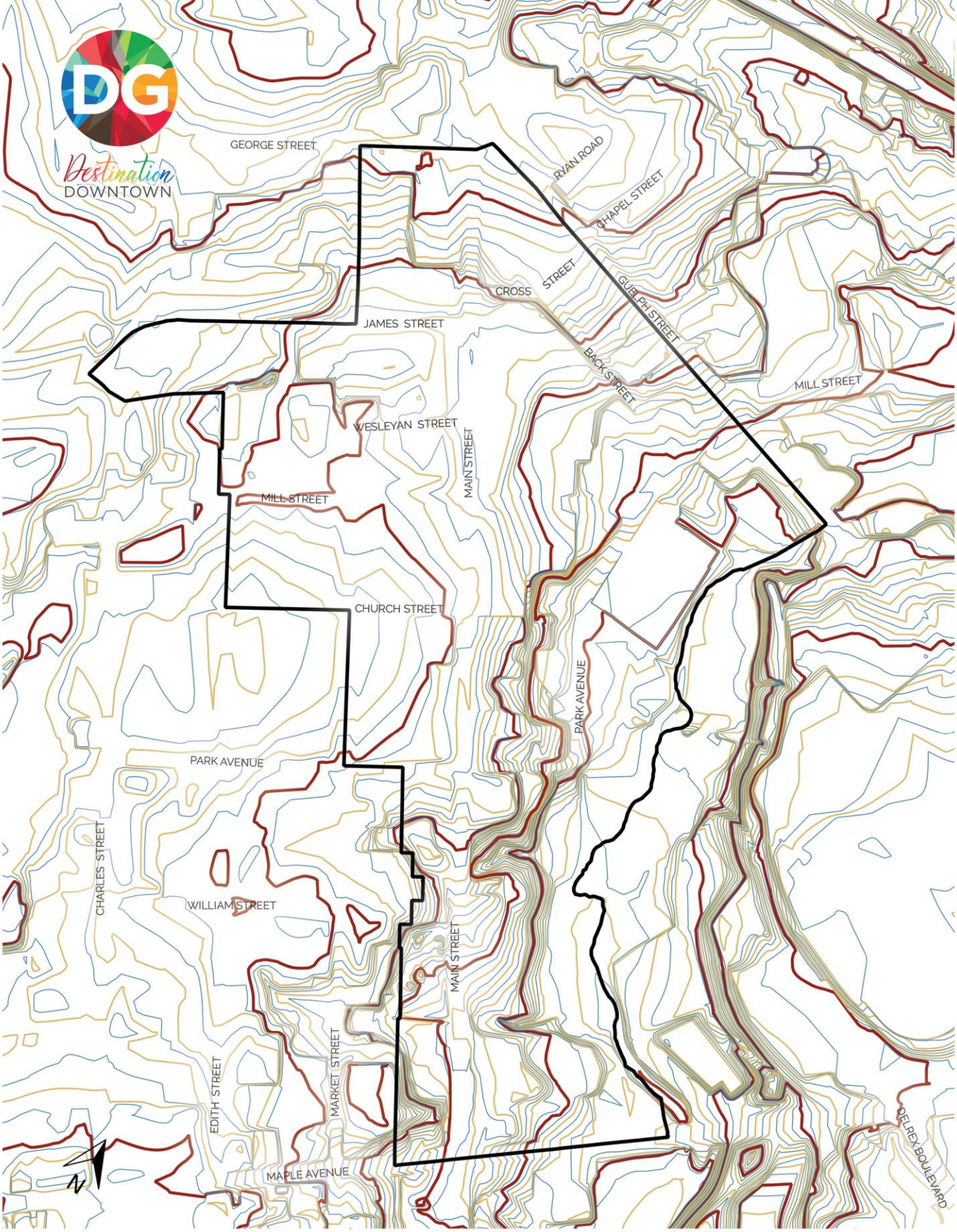


MAP 16 - TOPOGRAPHY

0.5 m
1 m
5 m

Downtown Boundary

destination downtown
DOWNTOWN GEORGETOWN PLANNING

Prepared by The Planning Partnership

10.0 HERITAGE
BRAY Heritage

10.0 Built Heritage and Cultural Resources

The preliminary Heritage review was completed by BRAY Heritage and was reformatted for its inclusion in the Background Paper.

10.1 Introduction

Key Elements in the Development of Downtown Georgetown

The early development of the downtown core was largely determined by topography, industry and access. Water-powered industry was the reason for the town's development, and a good source of water power was the reason for the town's location. Sloping topography on the flanks of a major stream (Silver Creek) made an ideal mill site. Establishment of the rural road system enabled Georgetown to serve a wider region and gain access to distant markets. Key to the town's success, as opposed to that of rival communities in the area, was the routing of a main regional highway (Guelph Street/Highway 7) through the north part of the downtown, followed by two main rail lines and, briefly, an electrified commuter railway linking the region to Toronto. Subsequent improvements to streets and highways in the 20th century enhanced these links.

Industry got the town started and made major changes to what had been forested upland and valleyland. Mills established in the Silver Creek valley made a significant impact on the topography and hydrology of the lands west of the creek and flanking what is now Main Street. Water to supply the mills came from two modified drainage channels. One was in the form of a mill race that looped north from what is now Emily Street along the south side of James Street, then proceeding under Main Street and down along Back Street to the creek. The other came south under Guelph Street, following the main channel of Silver Creek. Each mill race was dammed: the western one forming ponds west of Main Street; the other forming a large pond that straddled Guelph Street and terminated near the base of Park Street. The western pond behind Main Street was known as the Trout Pond ((stocked with trout by the mill owner, for his private use) while the valleyland pond was called Wilbur Lake and became a major recreational feature of late-19th and early-20th century Georgetown. Later development became established flanking the former locations of these watercourses.

Access networks were built along with industries in the valley lands and were greatly enhanced by the introduction of the railway in the mid-19th century and by improved road networks before and after that time. The street grid running west of Main Street was able to take advantage of level ground to develop in an orderly fashion. However, development east of Main Street not only had to respond to the steep slope into the valley but also to the diagonal route of Guelph Street, which resulted in an interrupted and skewed street pattern. Further complicating matters in the early 20th century was the insertion of the Toronto Suburban Railway through the downtown, running parallel to Guelph Street alongside Back Street. Incidentally, construction of its embankments resulted in the draining of Wilbur Lake and the subsequent re-vegetating of the valley. The environmental consequences of industrial activity (i.e. from a sawmill, tannery, iron foundry, glove works and a creamery in the immediate area, and mills and an abattoir upstream) may also have had a significant effect on the types of vegetation that grew back as well as on soil and water quality.

Commercial development in the downtown centred on the intersection of Main and Mill Streets. The first shops and hotels were built in the 1840s along Main Street but the first burst of commercial development began in the 1870s after a fire removed some of the early structures. Banks were built around this time.

Commercial building continued more or less steadily through the rest of the 19th century and into the 1920s, resuming again after WWII. By that stage, the dominant pattern of two-to-three storey buildings on narrow frontages began to change to one of single-storey commercial blocks on wide frontages. Banks replaced their landmark buildings at the Mill and Main Street intersection with generic, single-storey modernist buildings. Commercial development was essentially confined to Main Street, however, and there have only recently been commercial uses established more than one block west of Main Street (e.g. in conversions of former single-family residences).

Housing developed west of the commercial core on the flat land suited to that purpose. With the exception of some early housing overlooking the mills on the east side of Main Street, and some apartments over shops, there was no significant residential development in the east downtown until after WWII. Once the factories had closed and were demolished, high density apartments replaced them in the Silver Creek valley along Park Street and at the intersection of Main Street and Maple Avenue, at the southern end of the study area. One characteristic of the residential development in the downtown is its adjacency to the commercial core, often merging directly into a low density, single-family neighbourhood in the course of a single block (e.g. on Mill Street). Housing also spread along the major routes, so there is low density, detached housing along Guelph Street and at the north and south ends of Main Street, outside of the commercial core (there are also a few detached dwellings in the creek valley, along or near Water Street). An unusual feature of downtown residential development, compared to other Ontario towns of a similar age, is the lack of grand houses. Aside from Berwick Hall, there are no mansions on Main Street and the more upper middle-class housing is on streets west of Main Street.

Institutions are an essential part of any new community, and Georgetown acquired churches and schools in the early stages of downtown development. The first churches were developed in the 1840s but the main burst of church-building came in the mid-19th century. Church location has been important in defining the physical boundaries of the downtown. To the north, on the west side of Main Street, the Baptist Church is a landmark at one end of the downtown commercial core, while the former Congregational Church (now the public library and cultural centre) anchors the southern end. Outside the study area, but still prominent on the downtown skyline, are the Roman Catholic and United churches on the north side of Guelph Street and the Anglican Church on Guelph Street across Silver Creek. In a similar fashion, the east side of the downtown is bounded by the open space of the creek and the Public and Catholic High Schools on the terrace above. To the west, a similar role is played by Remembrance Park and, further west, by the Fairgrounds. Missing, but still resonant in local histories, are the locations of the former Town Hall at the intersection of Cross and Back Streets, and the former Central School on Chapel Street West, north of Guelph Street. The former Post Office on Mill Street was a later example of a major public building being constructed in the downtown core.

Recreational and cultural activities flourished in downtown Georgetown, especially in the later 19th century. Market Square was an early example of a public space that doubled as a commercial venue (as, now, does the divided portion of Main Street between Church and James Streets). While there were no public parks downtown before construction of Remembrance Park in the late 20th century, there were several places where informal recreation was available. Most popular was Wilbur Lake, the mill pond for the mills in the Silver Creek valley. In summer it was a popular venue for boating and swimming and, in winter, for skating. Main Street was one of the main settings for annual events such as those held on Victoria Day, Dominion Day, and the August Civic Holiday. On those occasions, there would be a calithumpian parade on Main Street, followed by events (presumably at the Fairgrounds) featuring races of various kinds, fireworks and a bonfire. The “Drummer’s Snack” was another annual event (perhaps unique to Georgetown), held in mid-July, that featured similar activities. Less boisterous were community activities such as the dramatic society, the library, as well as concerts (all held in the Town Hall). Meeting rooms were available at local hotels and there was a range of benevolent societies, such as the Masons, the IOOF and the Orange Order, each with their own hall (often located above a Main Street store). The Boy Scouts had a local branch, as did the Womens’ Institute, the IODE and the Farmers’ Institute.

Organized sports were offered in arenas and parks outside of the downtown. A movie theatre on Mill Street provided entertainment throughout most of the 20th century. And the Legion Hall on Mill Street continues to provide a public gathering place in the downtown, while Main Street remains the location for parades and other public celebrations.

10.2 Types of Heritage Resources Found in Downtown Georgetown

The cultural heritage resources of the downtown are not confined to buildings: they include areas of archaeological potential, cultural landscapes and intangible resources that involve associations with certain properties or areas. At present, only buildings are listed in the Town's Heritage Register.

Archaeological resources have not been inventoried or assessed in any systematic way. There is potential for discovery of pre-contact indigenous archaeological resources in the downtown on any relatively undisturbed properties, due to proximity to the creek. As for post-contact archaeological resources, sites of former industrial, institutional and residential buildings can be found throughout the eastern half of the downtown, on the slopes and into the valley, offering potential for discovery of various types of archaeological resources. There are also areas of archaeological potential in the western edges of the study area, where the mill race and ponds used to be.

Built heritage resources have been inventoried in the four phases of development of the Town's Heritage Register. The information for each property is provided in summary form and does not include a full analysis within the framework of the *Ontario Heritage Act* O. Reg. 9/06. Cultural landscape resources have not been inventoried. Intangible resources have been referenced in oral histories and in local histories prepared by Messrs. Rowe and McDonald, as well as by the Womens' Institute.

The potential heritage significance of these resources has been assessed, in a preliminary fashion, for built heritage resources. Research provided in the various phases of preparation of the Heritage Register includes the history of development and occupation, and makes reference to potentially significant elements of the physical fabric as well as to potentially significant historical associations with the property. The small number of designated properties in the downtown is not necessarily an indication of the lack of significance of properties Listed on the Register, but may be more related to the need for further research and assessment of these properties.

10.3 Locations of Heritage Resources

The following is an analysis of the component parts of the downtown study area with the greatest concentrations of existing and potential cultural heritage resources. The focus is on groupings of resources but individual properties of note are described in brief.

Sector 1: Back Street

This triangular area behind the properties on Main and Mill Street is characterized by a rim of house-form buildings along Guelph Street and a cluster of commercial buildings at the Guelph/Water Street intersection. Behind these is sloping, largely vacant land crossed by Alley and Back Streets and occupied in part by Hydro offices and a works yard. In terms of heritage resources, the area has potential significance for the archaeological remains of the former Town Hall (at the corner of Cross and Chapel Streets) and former mills in the interior and on the south side of Water Street. Underlying the area is the former route of the stream/mill race that originated west of Main Street and fed mills here and in the creek

valley. Paralleling this watercourse was the former ROW of the Toronto Suburban Railway, running from the local station on the east side of Main Street alongside the stream until it crossed the creek on a bridge and embankment. Potential built heritage resources that are currently Listed on the Heritage Register include the former industrial buildings at the Guelph/Water Street intersection as well as several house-form buildings facing Guelph Street. The landscape on the east side of Water Street has been significantly altered from the time when it was the site of several industries and now has a high density residential building, but there may be archaeological resources on portions of the site that were not redeveloped. The area has associations with the prominent 19th century businessmen Lawson and Arnold and incorporates the site of the former Lawson sawmill and the Arnold Glove Works.

Aside from areas of archaeological potential that warrant further investigation, individual properties worthy of consideration for designation include the former Glove Works and the Listed properties on Guelph Street. Thematically, this area ties together the civic, industrial, transport, residential and natural elements of the history of Georgetown.

Sector 2: Mill Street

As the name implies, this street was one of the earliest routes to and from the mills in the creek valley. Today the section east of Main Street contains three built heritage resources that are Listed on the Heritage Register, all of them constructed in the early 20th century: a former movie theatre and an Art Deco former Post Office on the north side, and a Craftsman bungalow ("the Birches") across the street. This area has associations with the Kennedys, one of Georgetown's founding families, who had a house in this part of the street, and with the Mackenzie family of building developers and contractors ("the Birches" was built by them as their family home). On Mill Street west of Main Street the large Listed buildings on both sides of the street have associations with Mackenzie (lumber yard) and with the Royal Canadian Legion (now occupants of the former livery stable, bakery, liquor store and garage). West of Market Street, Mill Street changes in development pattern, becoming lined with single detached house-form buildings, three of which are Listed on the Heritage Register (south side) and are the first group of substantial late 19th and early 20th century residential buildings that characterize the residential area west of Main Street.

Individual properties that are currently Listed but are worthy of consideration for designation include "the Birches", the former Post Office (the former movie theatre may be too much altered to warrant consideration) and the Listed properties flanking Mill Street between Main Street and Market Street (the commercial/residential buildings and the Legion). Thematically, this area relates to the industrial origins of the town and the intersection of commercial, residential and industrial activities.

Sector 3: Park Avenue to Church Street

This sector encompasses part of lower Main Street and includes Park Avenue as well as Market and Church Streets. Park Avenue, formerly named "Factory Street", was a key component of the Barber family's business empire. On the section east of Main Street, the family built two impressive houses: "Berwick Hall" and "Willowbank". The former was constructed in the 1880s to designs by prominent Toronto architects E. J. Lennox. It is now converted into an apartment building and still provides a landmark on its elevated site overlooking the south part of Main Street. "Willowbank" is a large frame structure placed into the side slope, facing Park Avenue. At the foot of the hill in the creek valley was the original Barber woolen mill and foundry as well as Wilbur Lake mill pond, and this is an area that would have archaeological potential. West of Main Street, Park Avenue is also characterized by substantial residential buildings and forms the entrance to the residential district that is south and west of the commercial core. The majority of the houses on this street are Listed on the Heritage Register. Market Street at Church Street was (and is) the site of the local market.

Going from south to north, Market Street runs up the seam between the commercial core and the adjacent residential district. From Park Avenue to Church Street it is primarily residential in character, with a transition as it approaches the cultural centre. The substantial houses on the left (outside the study area) were built in the 1890s by H.P. Lawson, a prominent early lumber mill owner, and they form a coherent streetscape in this block. Similarly, Church Street west of Main Street becomes a predominantly residential street flanked by substantial house-form buildings, many of which are Listed on the Heritage Register. The intersection of Church and Main Streets is anchored by the landmark heritage building of the former Presbyterian Church and, now, cultural centre. Main Street south of Church contains a diverse mix of brick and frame commercial and house-form buildings, most of which are Listed on the Heritage Register, that provide a transition to the predominantly residential section of Main Street as it descends the hill to Maple Avenue.

Aside from the areas of archaeological potential that warrant further investigation, individual Listed properties warranting consideration for designation include “Berwick Hall”, “Willowbank”, and all of the Listed properties on both sides of Main Street between Church and Park Avenue. Although outside of the study area, consideration should be given to designating the residential buildings on the west side of Market Street and the south side of Church Street west of Main Street. Thematically, this area represents the residential and cultural character of Georgetown at its economic and social height in the late 19th century (and recreational character, if Wilbur Lake is included).

Sector 4: Wesleyan/Market Street

This small section of the downtown core west of Main Street has a unique character because of its unusual street configuration. Wesleyan Street runs one block west of Main Street before turning south onto Market Street, terminating at the intersection with Church Street. Lined by commercial/residential buildings, this narrow street has a vista that terminates in a former chapel/lodge hall (Listed), creating a coherent and visually appealing streetscape. Just west of the street is the location of the former “Trout Pond” associated with the Lawson sawmill mill race and with Mackenzie and Son Ltd. lumber yard, thus the area has archaeological potential.

Aside from the areas of archaeological potential that warrant further investigation, individual Listed properties worthy of consideration for designation include the former chapel/lodge. Thematically, this area represents the early intersection of industrial and cultural aspects of the town (e.g. the “Trout Pond” and the chapel/lodge).

Sector 5: Main Street Between Church and James Streets

This is the most concentrated grouping of built heritage resources in downtown Georgetown. The majority of properties are Listed on the Heritage Register because of their design value but also because of their associations with important local residents and local events: all would be worthy of consideration for individual designation. However, the visual coherence of this part of Main Street suggests that this may be an area worthy of consideration as a Heritage Conservation District. Thematically, this collection of properties is representative of the apotheosis of economic prosperity in Georgetown as well as of Main Street’s role as the locus of community events (and of the former municipal offices and of the meeting rooms of various local organizations). Archaeological potential exists in the rear yards west of the street in the block south of James (former creek/mill pond) and in the rear yards of properties on both sides of the street.

10.4 Summary

The existing and potential cultural heritage resources in downtown Georgetown appear to be of two types: buildings and areas of archaeological potential. The former involves the commercial, institutional and residential buildings that remain from the 19th and early 20th centuries. There is little evidence left of the important industrial buildings and complexes that were predominant elements of the downtown streetscape until the mid-20th century, and thus their former sites are important for their archaeological potential. Other key landmarks in the downtown are missing, including the former Town Hall, the former bank buildings, and the former mill ponds. The only cultural heritage landscape that is evident within the study area is Remembrance Park, a relatively new addition to the downtown. The Silver Creek valley has potential as a cultural heritage landscape but is currently a re-naturalized watercourse flanked by post-WWII construction.

The current Listings on the Heritage Register appear to identify the properties having heritage potential, although further research will be required to determine if there are others. Within this group, there are few outstanding examples of architecture in the study area, and only a handful of buildings known to have been designed by prominent architects (e.g. a church by Langley, a house by Lennnox). Most often, the potentially significant buildings are vernacular interpretations of popular building styles of the mid-late 19th century and early 20th century (later designs are mundane or mediocre), constructed by local building contractors and developers.

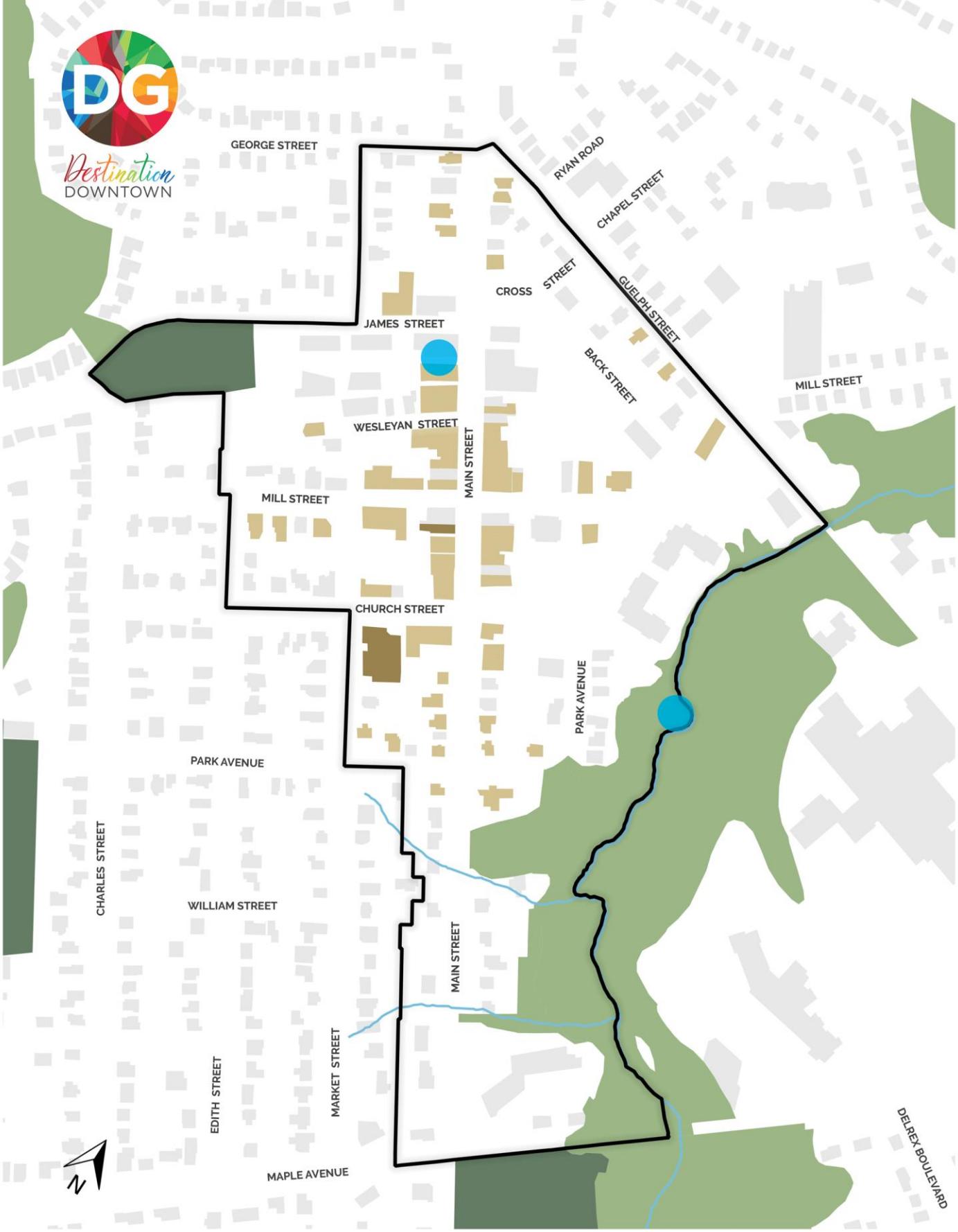
The foregoing analysis identifies the significant groupings and areas of cultural heritage resources. The remaining parts of the study area, such as the north and south ends of Main Street, have isolated buildings and sites that have potential for individual heritage significance but do not form a grouping of potentially significant properties. Conservation in these areas may be concerned primarily with individual designations or interpretation and commemoration of significant local events or persons. As a result, opportunities for redevelopment exist on properties lacking potential cultural heritage resources, or on properties where the archaeological potential can be assessed and, if possible, the property made available for new development.

<u>Sources:</u>
The following are the primary sources used to compile the information in this report:

- McDonald, John (2003): *Halton sketches revisited: historical tales of people and places.* Erin: Boston Mills Press.
- Rowe, John Mark Benbow (2006): *Georgetown: reflections of a small town.* Georgetown: Esquesing Historical Society.
- Tweedsmuir History (n.d.): *Georgetown: Halton County:* Halton District Womens' Institute.

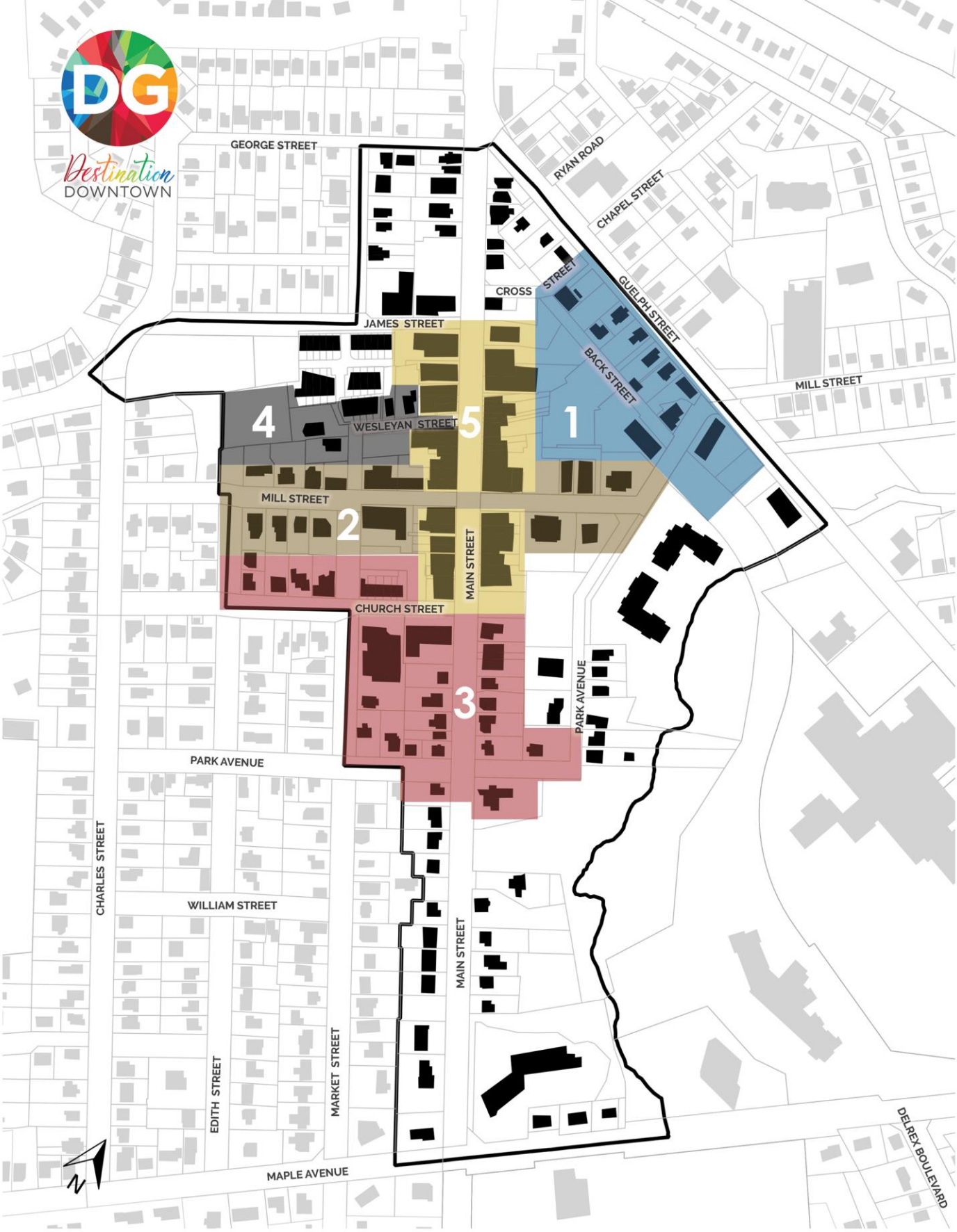
Also accessed in the Town archives:

- Fire insurance plans (1922/updated to 1934, 1960)
- *A Peek into Georgetown's Past* (1970-71) by pupils of the Grade 6A and 6F of Centennial Middle School
- *House Histories* (prepared by the Esquesing Historical Society)
- *Georgetown Urban Inventory* Phase I (November, 1994, by Barbara Szczepanik) and Phase III (2004, by Heritage Halton Hill/Katie Tuitman)
- *Oral History: Main Street* (transcripts of taped interviews made by the North Halton Literary Guild, 1990)
- *Reminiscences of Georgetown* (articles by C.W. Young in the Georgetown Herald newspaper, ca. 1920s)



MAP 17 - HERITAGE PROPERTIES

- Designated
- Listed
- Downtown Boundary
- Former Pond Location
- Park
- Greenlands and Woodlands
- Watercourse



MAP 18 -
HERITAGE RESOURCE
GROUPINGS

- Sector 1: Back Street
- Sector 2: Mill Street
- Sectpr 3: Park Avenue to Church Street
- Sector 4: Wesleyan/Market Street
- Sector 5: Main Street between Church and James Streets

Downtown Boundary

destination downtown
DOWNTOWN GEORGETOWN PLANNING

Prepared by The Planning Partnership

Destination
DOWNTOWN

What We Heard

Downtown Georgetown
Planning Study

The Planning Partnership

March 7, 2018

Table of Contents

Introduction

The Downtown Georgetown Planning Study will guide growth and development in the downtown over the next 20 years, to continue its evolution as a culturally and economically vibrant destination for residents, workers, and visitors.

Through development of the Plan, a clear vision for Downtown Georgetown will be developed as well as updated policies related to land uses, building heights, density and urban design. The study will consider the historic character, natural areas, housing, business and public spaces that make Downtown Georgetown great today, and how they can be enhanced in the future.

Meaningful and interactive public and stakeholder engagement and participation will form the foundation of the Downtown Georgetown Planning Study.

Public Visioning Session

February 20, 2018

The Public Visioning Session took place on Tuesday, February 20, 2018 and included multiple ways to connect with community members and collect input for the Downtown Georgetown Planning Study.

The main goal for the Visioning Session was to gather input and ideas for the creation of a Vision Statement and Design Principles.

The Visioning Session included the following events:

1 Technical Advisory Committee Meeting

The Technical Advisory Committee provides technical review and analysis and includes representatives with technical expertise in:

- Planning
- Heritage Planning
- Economic Development
- Engineering
- Transportation
- Parks and Open Space
- Conservation
- Utilities/Hydro

2 Steering Committee Meeting

The Steering Committee is tasked with providing input and raising the interests of the groups they represent. The Committee includes representatives from:

- Town Council
- Downtown Business Improvement Area
- Halton Hills Chamber of Commerce
- Halton Hills Heritage Committee
- Halton Hills Cultural Roundtable
- Halton Hills Library
- Halton Hills Hydro
- Sustainability Implementation Committee
- Active Transportation Committee
- Downtown Residents
- Downtown Business/Land Owners

3 Public Consultation Event

Each of these meetings began with a presentation (attached) followed by round table discussions to obtain input on a Vision Statement, Design Principles and preferences (based on photos) for Downtown Buildings, Public Space, and Streets/Streetscaping.

This report summarizes what we heard during the multiple consultation events on February 20, 2018 as well as a summary of the Downtown Design Tour.

Downtown Design Tour

Approach

On January 5, 2018 The Planning Partnership lead a Bus Tour of downtowns in the Greater Toronto Area for the Steering Committee, the Technical Advisory Committee, Town Council, and Town staff. The purpose of the tour was to assist in visualizing potential outcomes and learn about lessons/best practices from other downtown areas relevant to this study.

The Bus Tour departed from Georgetown and made stops in Downtown Port Credit (Mississauga), Oakville, and Guelph.

The tour highlighted key elements of built form and public realm design. Participants were encouraged to share their impressions, thoughts and suggestions on these elements and how they might be applicable to downtown Georgetown.

The following summary includes comments heard during the tour and comments received after via email.

Participants at the Downtown Design Tour

What We Heard

Port Credit – Mississauga

Like the urban square, mix of building types and styles

Like Tall Oaks Park along the waterfront

Dislike the buildings on the north side of Lakeshore Road and, in particular their design and their potential shadow impact

Downtown Oakville

Like the urban square

Loved the look of the blend of old and new buildings in Oakville's downtown

There were no tall buildings looming over the street

Downtown Guelph

Like the winter animation provided by the skating rink

Like the shared street and the angled parking

Dislike the angled parking

The presence of the civic building in Downtown Guelph was nice, it confirms the support and future of the downtown area

Roving Information Station

Approach

On February 20, 2018 a member of The Planning Partnership team visited numerous locations in Georgetown to speak with people directly, and find out which aspects of the downtown they love and what elements could make Downtown Georgetown even better.

Summary

Participants were passionate about the Farmers' Market and the many festivals held in Georgetown throughout the year. Participants also valued Georgetown's sense of community and local businesses.

With respect to what could improve Downtown Georgetown, participants showed a desire for an improved public realm, additional open space and new businesses and community amenities.

10 participants provided input

What We Heard

What do you love about Downtown Georgetown?

Events and Festivals

Farmers' Market

Rib-Fest and Fall Fair in the Fairgrounds

Winter and Scottish festivals

Car shows during Father's Day

Halloween Festival

When Main Street is closed to cars

Amenities

Gellert Community Centre and Mold Master SportsPlex Park are great for community initiatives

Variety of restaurants

Services offered at the downtown Cultural Centre and Library

Feeling

Downtown Georgetown is calm and relaxing

Feels safe, welcoming and there is a sense of community

Sense of community and like how welcoming residents are with new, local businesses

Small town feel

Smaller community

Value the local community and artisan/local businesses

Built Form

Love that it is mostly low-rise

Like that the McGibbon Site is using geothermal energy and the development is bringing young families to Georgetown

Open Space

Cedarvale Park is great for tubing during the winter

What would make downtown Georgetown even better?

Events and Festivals

Want more music festivals

Amenities

More businesses tailored to young professionals

Lots of residential development, but not enough businesses to support residential growth

Modern businesses in Downtown Georgetown

Something similar to the Alpine Centre in Milton

Movie theatre

Amenity spaces

Create a pedestrian area with restaurants, similar to The Distillery District

Parking and Transit

More reliable transit usage (a more frequent GO Train)

More parking spaces (currently hard to find any, especially when you have a toddler)

Open Space

Park spaces

Space where young people can hang-out. Silvercreek used to be tailored for a younger crowd, but has since switched to an older crowd

Parklettes for patio space and/or park space

Pond should be revitalized

Public Realm

More walkable spaces and improved public realm

More patio space for businesses during the summer

Visual Preference Survey

Approach

On February 20, 2018 participants at the Public Visioning Session were asked to complete a Visual Preference Survey. The survey consisted of a series of images that participants marked with a sticker to indicate preference and relevance for Downtown Georgetown.

Images were organized into three categories:

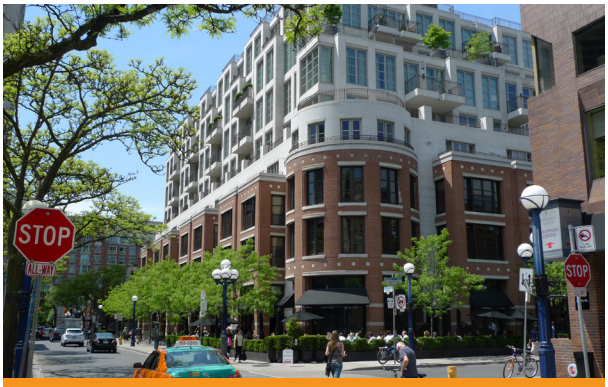
1. Downtown Buildings
2. Downtown Public Space
3. Streets/Streetscaping

What We Heard

The following images received the highest number of stickers (dots) in each category:

1. Downtown Buildings

21 dots

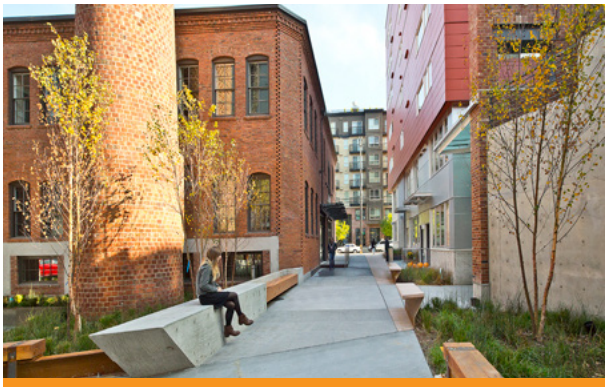


20 dots

13 dots

2. Downtown Public Space

17 dots



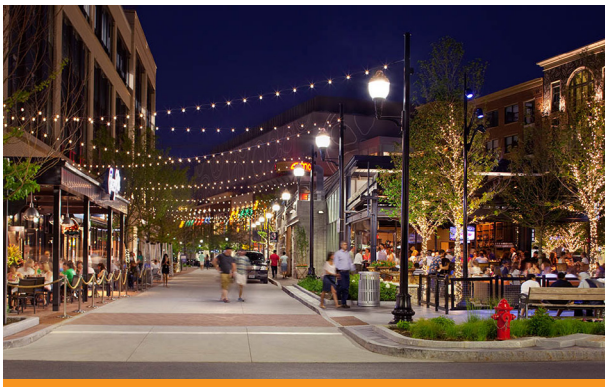
13 dots

13 dots

3. Streets/Streetscaping

22 dots

15 dots



15 dots

Vision Statement Input

Technical Advisory Committee

The Technical Advisory Committee met for a second time on February 20, 2018 to help shape the Vision Statement for the Planning Study. The meeting included a presentation from the project team followed by table group discussions. Committee members were asked for key words or phrases that should be captured in the Vision Statement.

What We Heard

Transportation

All modes of transportation

Active transportation and complete streets

Natural Environment

Opportunities for environmental enhancement

How do we improve the quality of the water that is going into the creek, on an individual site by site development basis?

How to improve current practices?

Need to assess the wooded areas on developable tableland, and whether they meet the criteria for definition of woodlots

Built Form

The current Official Plan encourages intensification (it is already permitted)

Some community members were not supportive of the increased height for the McGibbon (11-storeys); some even questioned the 8-storeys that was permitted

Heritage

Need to provide guidance to the community to understand what they love about the heritage in Downtown Georgetown

Define the character and maintain the elements that are key to it

There is no historic, civic focus anymore, which is unusual

Study should determine if there is an appetite for a Heritage Conservation District (HCD) for the 2-3 blocks of historic Main Street

Heritage Conservation District is part of the tool kit

Could mimic historic architecture or introduce high quality architecture that complements heritage buildings

A portion of the community preferred that the upper floors of the McGibbon be fully brick traditional architecture

Public Realm

Having a vision for parks would be desirable

Reconcile how the parks just outside of the study area are related/ connected to the Downtown

There was a vision/concept for the public space at the cultural centre/ church, however it was never acted upon due a funding issue

What type of parks are needed downtown?

Redevelopment will generate parkland or cash-in-lieu

Vision Statement Input

Steering Committee

The Steering Committee met for a second time on February 20, 2018 to help shape the Vision Statement for the Planning Study. The meeting included a presentation from the project team followed by table group discussions. Committee members were asked for key words or phrases that should be captured in the Vision Statement.

What We Heard

Community

People centered

Cultural

Creative, lively centre

Family-friendly and multi-generational

Public amenities

Thoughtful planning that benefits the community

Benefits people that are already there (not being ignored) and that development is welcoming, beautiful, special and draws people in

Downtown could be the centre of something, not just a quaint place to shop, but a great neighbourhood

Vibrant meeting place

Farmers market on Saturday (does not happen in the Winter, no indoor venue large enough within the BIA to accommodate)

There is a holiday market in December

Streetscape

Pedestrian oriented

Walkable environment

Pedestrian and bicycle connections

Natural Features

Environmental

Sustainable

Reconnection with Silver Creek

Businesses

Diverse, a source for many things

There are empty stores now (may be a combination of factors: increased rents, retired shop owners, McGibbon development)

In order to be vibrant, the stores need to be part of every day life (not just specialty boutiques)

How to attract businesses downtown – create a great downtown and they will come

Marketing Strategy for the interim while development is happening

Heritage

Historic

Historic character

Open Space

Great central place to gather and meet

Could have a great new public square behind the McGibbon (stratified park agreement)

Built Form

Live, work, play

Healthy mix of residential types

The Legion property has the potential to be redeveloped. There may be an opportunity for joint ventures.

Characteristics

Relevant

Relaxing

Affordable

Memorable

Entertainment

Distinct

Vision Statement Input

Public Consultation Event

The Visioning Session's Public Consultation Event included a presentation from the project team followed by table group discussions. Participants were asked to discuss and write down words and phases that should be captured in the Vision Statement.

What We Heard

Natural Features

Lots of greenery
Trees
Natural space
Park like setting

Open Space

Meeting and gathering place
Gathering centre
'People places'
Public open space
Public space
Places to socialize
Parkettes

Built Form

No overbearing buildings
Historic style design
Appropriate sized buildings
Controlled facade
Preserve the scale
Relate to buildings at ground level

Streetscape

Walkable
Awnings
Slow traffic down
Signage
Focus on pedestrians, not cars
Integrate cars and pedestrians
Historic streetscape

Community

Welcoming
Community benefits
Protect and enhance small town feel
'A town within a town'
Preserve central hub

Amenities

Services for local residences
Place to live, work and play
Parking garage
Park like setting

Characteristics

Classic
Sustainable
Vibrant
Unique
Attractive
Safe
Variety
Sense of place
Unique
Cultural gem
Character
Draws people in
Destination

Heritage

Gateway to history
Historic
Timeless preservation
Maintain the historic character
Preserve heritage (if worth saving)
Heritage facade
Retain heritage

Businesses

Night life
Business
Independent businesses

Design Principles Input

Technical Advisory Committee

During the Technical Advisory Committee meeting participants were also asked to discuss and write down words and phases to create Design Principles (building blocks of the planning and design for Downtown Georgetown).

What We Heard

Buildings

Vertical and horizontal articulation

Variety

Reflect the existing scale (podium) and massing

Sustainable from all aspects

Public Space

Acquisition (what are the acceptable tools to be used?)

Town is open to the full spectrum of tools

Civic Square

Cash-in-lieu may be used to acquire parts of greenlands

Get greenlands into public ownership

Character Districts could be defined by various physical elements: setbacks, types of landscaping, lot fabric, trees, sidewalks

Streets

Complete streets

Residential streets are spacious with mature planting

Overhead wires conflicts with the desire for large canopy street trees. Have co-existence of both within the right-of-way (reference Goderich strategy)

Steering Committee

The Steering Committee meeting was identical to the Technical Advisory Committee meeting and also included an opportunity to contribute to the creation of Design Principles.

What We Heard

Buildings

Beautiful, character buildings with a scale that fits within the downtown

BIA wants quality, interesting buildings (not necessarily all traditional designs)

Zoning isn't flexible (height, massing, setbacks)

Public Space

Distinctive, quaint, compact

Vignette settings

Small, outdoor cafes

Temporary cafes/parklets on parking spaces

Accessibility is an issue downtown

Streets

Active Transportation committee considering share-o, down the centre of the right-of-way (cycling)

Closing a street to pedestrians only, can be detrimental to businesses (Sparks Street, Ottawa)

Guelph Street is the one east-west collector and Main Street is used to as an alternate to by-pass this heavily used route

Other

How do you ensure we get what we've asked for during implementation?

Policy is statutory while guidelines are inherently flexible – need to decide at the end of this process where to 'put the teeth'

Design Principles Input

Public Consultation Event

The Public Consultation Event also included an opportunity to contribute to the creation of Design Principles. Participants wrote input onto note-taking panels with six categories:

1. Buildings
2. Public Space
3. Streets
4. Use
5. Heritage and Cultural Features
6. Natural Features

Summary

Should preserve and celebrate the Downtown's heritage buildings. New buildings should step back from the street and accommodate mixed-use

Create a central space for people to gather and for events (markets). Introduce more seating and patios

Streets should have special (cobblestone) paving, be pedestrian friendly, active, and 'green' (lots of trees and plantings)

Support the feeling of 'community' (cultural amenities, public art, public space)

Enhance natural features and green space, increase connectivity to the trail system and promote sustainable initiatives

What We Heard

Buildings

Heritage

Maintain historic character

Preserve historic facades where appropriate

Use traditional building materials

Buildings should have heritage style design

New buildings should reference Georgetown's history

New buildings should be complementary in character

Signage on storefronts should have a heritage 'standard'

Height

Would prefer a maximum of 2-3 storeys on Main Street

Maximum three storeys at street level, higher storeys should have a set back (and should set a maximum height)

Appropriate size buildings (maximum 6-7 stories)

Varied building heights

Buildings should be set back

Preserve the scale of the existing buildings

Building Use

Encourage affordable housing

Building should be mixed-use

Retail space, including electronic and hardware stores

Need a grocery store downtown

Need more restaurants

Public Space

Central Square

Create a new central square between Back Street, Mill Street, and Main Street (with underground parking)

A central square could serve as a gathering space and a farmers' market

Have a town square

Need meeting and gathering places

People places

Seating / Patios

Create a seating area behind the McGibbon, on top of a parking garage

Have temporary patios (parkettes)

Need more patios downtown

Need more patios

Need more places to sit

Greenspace

Maintain the existing greenspace

Introduce trails by the river

Amenities

Performance centre

Free WIFI

Outdoor chess set

Other

Enhance the existing sense of community

Promote 'sense of place'

The downtown should be attractive and vibrant

Create an indoor market space

Streets

Pedestrian Realm

Pedestrian friendly

Walkable

Safe crosswalks

Slow traffic down

Streetscaping

Enhance the streetscape on Main Street from James to Church Street and on Mill Street from Market to Park Avenue

Design Principles Input

Expand Main Street further down

Maintain view of streetscape

Bury power and telephone lines

Have more space for outdoor dining and patios

Have outdoor art displays and activities

Currently have beautiful street plantings

Have lots of trees and flowers

Attractive parking spaces (with trees)

Street Treatment

Cobblestone and brickwork

Cobblestone crosswalks

Consider special paving on Main Street and shut down the street for special events

Create new, single loaded street parallel to Main Street with frontage on a new public square

Use

Retail and Commercial

Create a balance of uses

Have more mixed-use retail space

Encourage independent businesses

Service local residents

Need a grocery store in the downtown

Different uses than the mall

Uses that draw people to visit

Residential

Build high-rises behind the downtown

Places to live, work and play

Open Space

Meeting and gathering places

Public events (farmers' markets)

Relocate municipal/civic uses adjacent to the new central square

Places to socialize

Connectivity

Parking lot off Mill and Edith Street should have more direct pedestrian connections to Main Street

Community

Community uses

The downtown should feel welcoming

Should feel like a town within a town

Heritage & Cultural Features

Heritage

Keep all of the heritage buildings

Retain the current heritage buildings

Maintain the heritage facades

Preserve historic buildings where appropriate

Consider a 'Heritage Conservation District' on Main Street (Church to James Street) and Mill Street (Mill to Park Avenue)

Heritage plaques would help to tell the area's story

Store signage should look old fashioned (signage with goose neck lighting or channel lettering)

Downtown is a 'gateway to history'

No more stucco buildings

Amenities

Performance Centre and Cultural Centre

Theatre

Art gallery

Public art and murals

Building Use

Have mixed-use buildings with retail below and apartments above

Natural Features

Trails

Connections to the trail system

Walking trail in the valley

Trail to the ravine connecting to Cedarvale and the south

Trees

Keep the trees

Have more trees and plantings

Have planters

Lots of greenery

Shade

Open Space

Green space

Parks and ponds

Create a park like setting

Sustainability

Green roofs

Environmentally friendly

Eco-friendly land uses

Map Comments

Comments

At the Visioning Session the following comments were recorded onto aerial maps of Downtown Georgetown:

Replace the Royal Canadian Legion building and parking lot with a new Town Square

Have a cinema beside the old post office

Park Avenue, Mill Street, Back Street and Cross Street should be a new boulevard

Have a park at the corner of Mill Street and Guelph Street

Create a trail from Park Avenue and Mill Street along the ravine to the ‘Hollow’

Sidewalk along Market Street (between Maple and Park Avenue)

Have an ice rink, splash pad band shell etc. in the parking lot behind the McGibbon Hotel

Online Comments & One-On-One Interview Comments

Comments

The following is a collection of comments received during one-on-one interviews and via email after the February 20, 2018 Public Visioning Session.

Concerned about impacts on Market Street and on the entire park area as a result of inappropriate development Downtown

Avoid projects that place no value on existing heritage, disregard the existing Official Plan and encourage development that is insensitive to what is a beautiful, fragile and significant area of the Town

The name “Destination Downtown” implies that the Town wishes to encourage a stampede of development proposals without regard for obvious infrastructure limitations including but not limited to existing roads, intersections and parking in the study area

Support “sense of community, community events, and small town feel” in tangible ways:

- Include infrastructure that supports people gathering in large and small groups and large-scale community events (ensure there is enough parking)
- Incorporate branding, reflective of ‘who we are’ as a community and heritage into new built structures (similar to the bronze leaves at the Dominion Gardens splash pad). Include local artists in doing this

Do not see how tall buildings would be compatible in our downtown setting

Development should be encouraged on the side streets along Main street

The large parking lot behind Main and Mill streets would make a lovely amphitheatre, skating rink, wading pool and park

All development plans should benefit the community as a whole

How will the people who live in the area be affected?

How long is a reasonable construction period?

Is there some kind of compensation available to people that are subjected to unreasonable and lengthy construction periods (i.e. property tax reduction, payments for developer)?

What infrastructure investment and changes are in place to support the increase in population?

No fantastic architecture in Downtown Georgetown, it’s the scale of the street that gives it its strength

Redevelopment opportunities off of Mill Street

Prefer to see mid rise development over townhouses

Not enough parking downtown

Accessibility is an issue

Need more clearly defined bike access

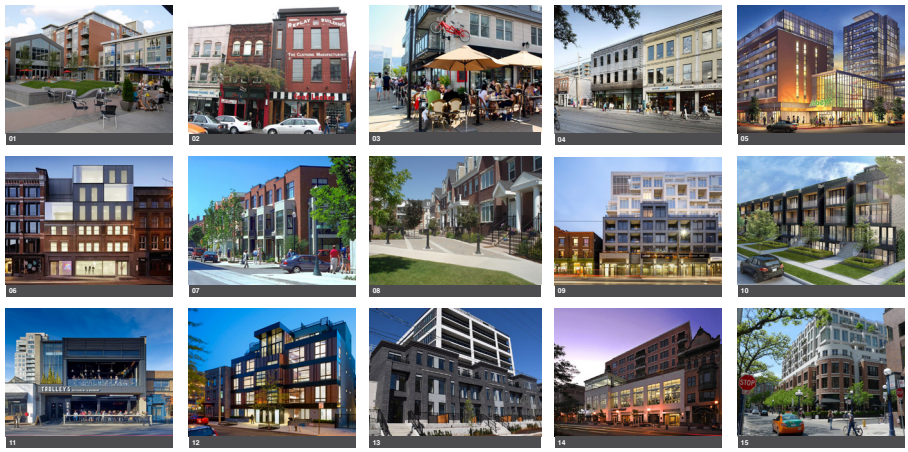
Great markets in Downtown Georgetown bring lots of people

Need dramatic marketing to clarify a single identify for Georgetown

Need an urban plaza as a focus for Downtown

Visual Preference Survey Panels

The following panels were displayed at the Visioning Session. Participants were encouraged to add a sticker to images with elements they liked.



Visual Preference Survey: **Downtown Buildings**

Downtown Georgetown Planning Study
Downtown Visioning Workshop #1

Visual Preference Survey: **Downtown Public Space**

Downtown Georgetown Planning Study
Downtown Visioning Workshop #1

Visual Preference Survey: **Streets / Streetscaping**

Downtown Georgetown Planning Study
Downtown Visioning Workshop #1

Design Principles Panel

The following panel was distributed at the Visioning Session. Participants recorded words and phrases for each of the six categories.

Downtown Georgetown Planning Study
Downtown Visioning Workshop #1

Input for Design Principles

Buildings	
Public Space	
Streets	
Use	
Heritage & Cultural Features	
Natural Features	

Presentation

DOWNTOWN
GEORGETOWN
PLANNING STUDY

Destination DOWNTOWN

Downtown Visioning Workshop #1
Tuesday, February 20, 2018

The Planning Partnership

1

INTRODUCTION TO PROJECT

THE TEAM

The Planning Partnership
Meridian Planning Consultants
PLAN B Natural Heritage
Cole Engineering Group Ltd.
Bray Heritage
N. Barry Lyon Consultants Ltd.
SCS Consulting Group

A vision and planning framework to make Downtown Georgetown the best place to **live, work and play**

Destination DOWNTOWN

2

OVERVIEW OF STUDY, PROCESS & MILESTONES

Destination DOWNTOWN

3

Purpose of the Study

- To develop a **clear vision and detailed planning framework** (land use and built form) for Downtown Georgetown – next 20-25 years (2041 planning horizon)
- To produce a **Secondary Plan** for Downtown Georgetown as a basis for evaluating the merits of future development applications, particularly intensification proposals, to ensure the heritage character and multi-faceted, mixed use function of the area is protected
- To comprehensively **evaluate the capacity of the area to accommodate intensification** of a magnitude and scale appropriate for the area

Destination DOWNTOWN

4

Technical Advisory Committee

to provide technical review and analysis

- Senior Policy Planner (Project Manager)
- Heritage Planner
- Development Review Planner
- Manager of Planning Policy
- Economic Development Representative
- Manager of Development Engineering
- Manager of Transportation
- Manager of Parks and Open Space
- Halton Region Planner
- Credit Valley Conservation Planner
- Halton Hills Hydro Representative

Destination DOWNTOWN

5

Project Steering Committee

provide input and to raise the interests of the groups/organizations they represent

- Mayor Rick Bonnette
- Regional Councillor Fogal (Chair)
- Councillor Kentner
- Councillor Johnson
- Downtown Georgetown BIA
- Halton Hills Chamber of Commerce
- Heritage Halton Hills Committee
- Halton Hills Cultural Roundtable
- Halton Hills Library
- Town Sustainability Implementation Committee
- Halton Hills Hydro
- Active Transportation Committee
- Two Downtown Georgetown Residents
- Downtown Georgetown Business/Land Owner

Destination DOWNTOWN

6

OVERVIEW OF PUBLIC ENGAGEMENT STRATEGY

1 What's important to you?

2 Design, design, design

3 Downtown Plan

Three milestones with 20+ ways to share thoughts and get involved

Destination DOWNTOWN

7

OPPORTUNITIES TO GET INVOLVED

- **Downtown Visioning Workshop** February 20
- **Kick-off Presentation**
- **Visual Preference Survey**
- **Table Group Discussions**
- **One on one interviews**
- **Roving destination downtown discussions**
- **Interactive displays at consultation events**
- **Social media**
- **Web site**
- **Downtown Design Summit** (April 2018)
- **Downtown Open House** (June 2018)
- **Wrap up presentation**
- **Displays of work in progress**

@_HaltonHills @dtowngtown

@TownOfHaltonHills

tarab@haltonhills.ca

haltonhills.ca/destinationdowntown

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PUBLIC ENGAGEMENT SO FAR

Ways we connected:

One-on-one conversations at the Georgetown Farmer's Market (October 7th, 2017)

Handout surveys

Comment postcards handed out at Masquerade on Main (October 28th, 2017)

The project web page: *letstalkhaltonhills.ca*

Bus Tour of downtown Guelph, Oakville, and Port Credit (January 5, 2018)

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WHAT WE'VE HEARD SO FAR

What's important to you:

- Sense of community
- Community events (farmer's market)
- Small town feel
- Variety of restaurants, shops, and local businesses
- Walkability and attractive streetscaping
- Historic charm

What could make Downtown Georgetown even better:

- More restaurants and patios
- More community events (live music)
- Cycling infrastructure
- Heritage preservation
- More public, gathering spaces
- More specialty shops (hardware store, bakery)
- Additional transit and parking options

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STEERING COMMITTEE & TECHNICAL ADVISORY COMMITTEE - WHAT WE'VE HEARD

1. Clarification of **the capacity of water and sanitary sewers** to accommodate intensification downtown
2. Ensure **study materials are available online**
3. Ensure that **setbacks to overhead utility wires** are considered when reviewing redevelopment opportunities
4. Clarify **parking available** downtown
5. Consider **"low impact development"**
6. Need to **understand why intensification is required**
7. Intensification must be **balanced** so as not to adversely impact the community
8. Main Street needs to **continue to evolve** - Downtown is the heart of Georgetown
9. Support advancing the Study to incorporate **three consultation events** before June 2018
10. Support **multi-faceted public engagement strategy**

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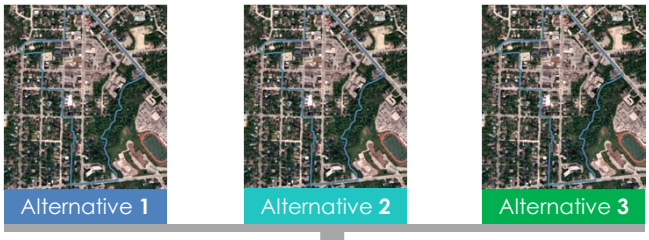
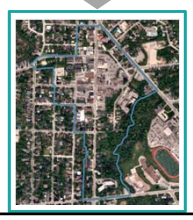
Downtown Planning Alternatives (to be developed in next stage of Study)



Many Inputs for Evaluation

- Public Input
- Technical Evaluation from Project Team
- Town Staff Comments
- Steering Committee Comments
- Technical Advisory Committee Comments

Preliminary Preferred Downtown Planning Alternative



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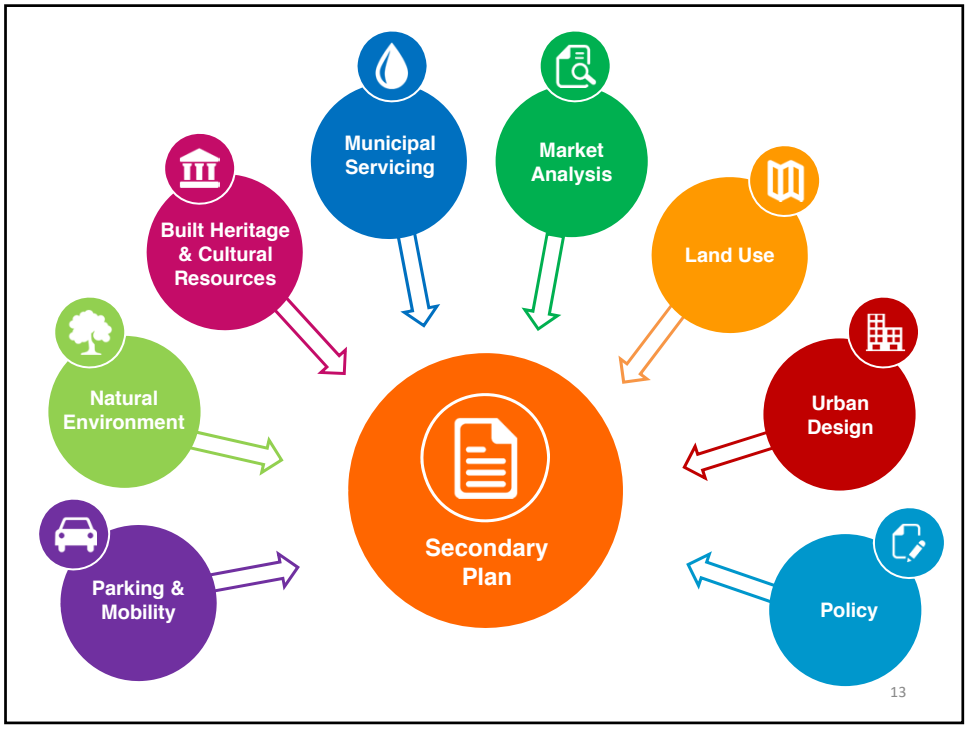

PLANNING POLICY

POLICY REVIEW

2017 Growth Plan and Provincial Policy Statement

- Encourages intensification and compact built form
- Intensification and higher densities, support of a range of housing options
- 2041 planning horizon
- Increased built boundary target of 60%
- Focus of intensification in strategic growth areas

Region of Halton Official Plan

- Town of Halton Hills is projected to grow to 94,000 people in 2031, with the majority of the growth directed to Georgetown
- Regional Official Plan must be brought into conformity with 2017 Growth Plan and 2041 population target

Town of Halton Hills Strategic Plan (2014-2018)

- Protection and adaptive reuse of built heritage
- Focus development in intensification areas
- Urban design for infill/intensification is important

Town Official Plan 'Intensification Area'

- Encourages new development, redevelopment, and a wide mix of uses
- Balance between new development downtown and preservation
- Intensification target of 340 units (Intensification Strategy)

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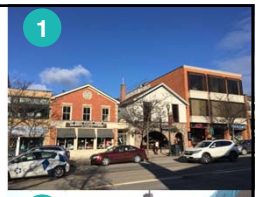
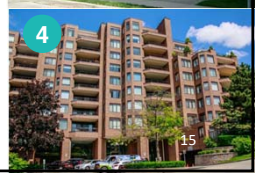
Bus Tour - January 5, 2018

Oakville





- Town Square park developed in association with 5 storey mixed use building.
- Residential intensification helps to support very successful main street on Lakeshore Road

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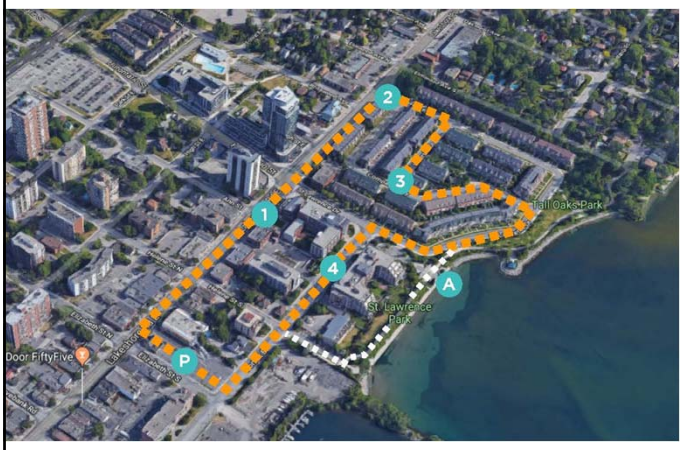
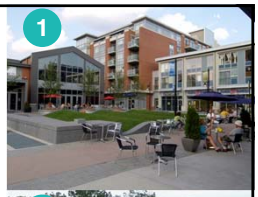
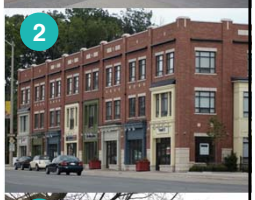
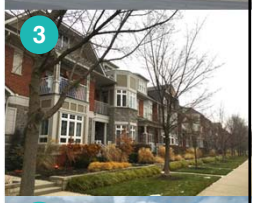
Bus Tour - January 5, 2018

Port Credit









- New Town Square park developed in association mixed use buildings.
- "Live-work" units built on Lakeshore Road – new model for new buildings on a main street

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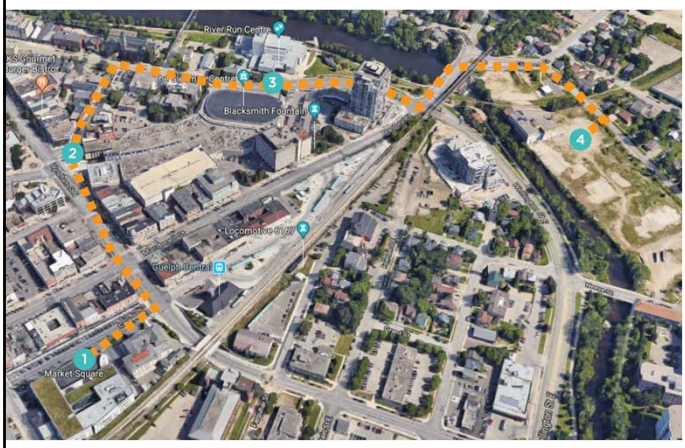
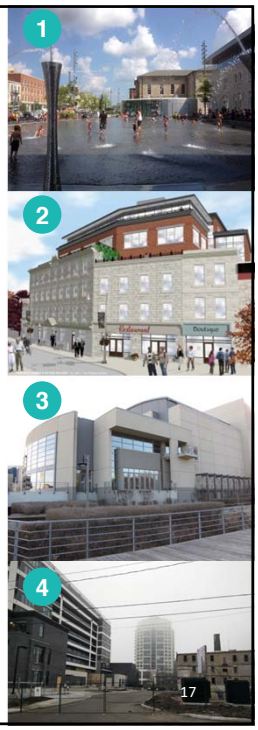
Bus Tour - January 5, 2018

Guelph



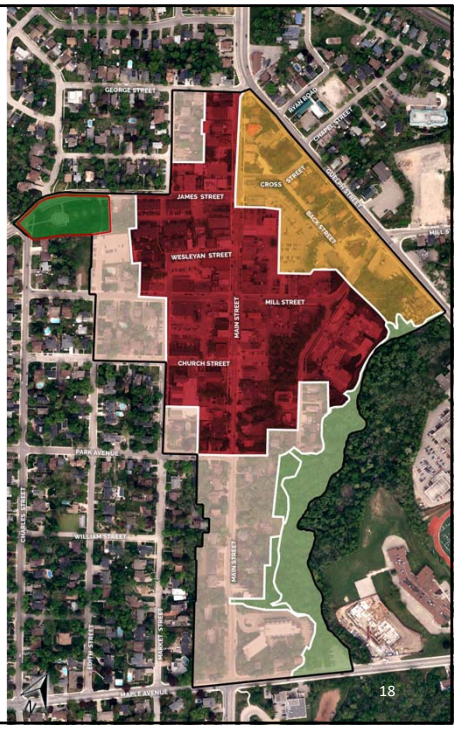


- Parking lot removed in front of City Hall and replaced with a town square
- Residential intensification on brownfield sites

PLANNING POLICY

OFFICIAL PLAN – LAND USE

- Downtown Core Sub-Area
- Downtown Complimentary Sub-Area
- Downtown Redevelopment Sub-Area
- Downtown Boundary
- Open Space (Remembrance Park)



Destination DOWNTOWN

PLANNING POLICY
OFFICIAL PLAN – PERMITTED HEIGHTS

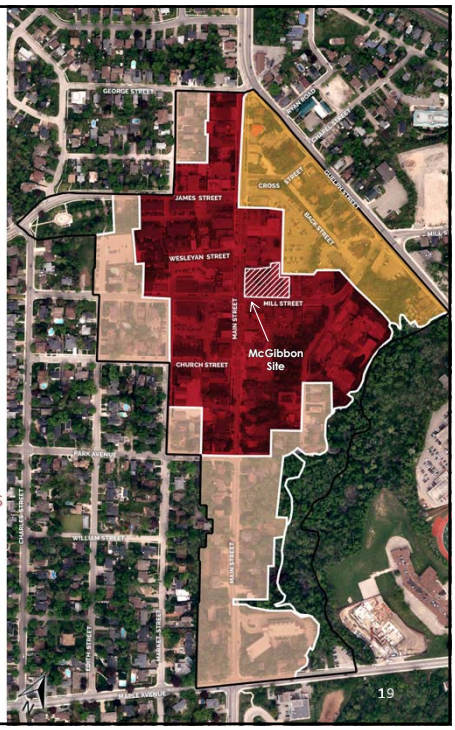
Downtown Core Sub-Area
Max Height along Main St: 4 Storeys
Max Residential Building Height: 8 Storeys
Max Density: 100 units/ha
OPA to permit 10 storeys on McGibbon site

Downtown Complimentary Sub-Area
Max Residential Building Height: 3 Storeys
Max Density: 30 units/ha

Downtown Redevelopment Sub-Area
Height for High Density Residential: 4-8 Storeys
Density: 75-150 units/ha for apartments
Min Density: 21-50 units/ha for townhouses

Downtown Boundary

Destination DOWNTOWN



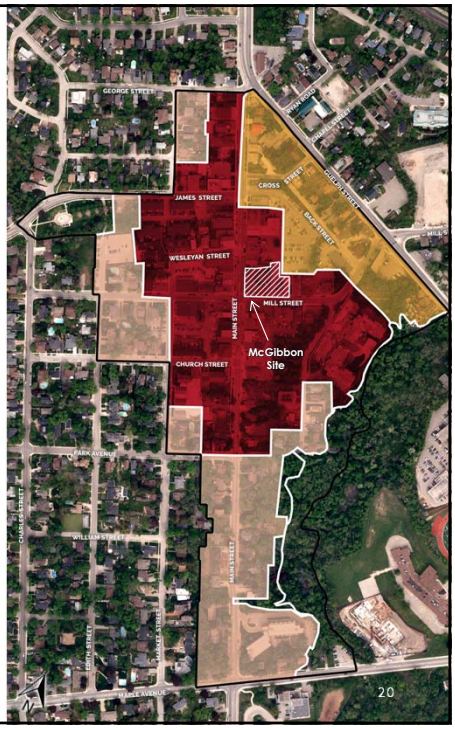
PLANNING POLICY
OFFICIAL PLAN – PERMITTED HEIGHTS

Downtown Redevelopment Sub-Area
Maximum height of buildings subject to Comprehensive Development Plan, which should consider:

- Nature and appropriateness of proposed uses;
- Location of buildings/structures;
- Location of landscaping;
- Location of parking;
- Topography; and,
- Heritage buildings conservation.

(Town OP, D2.5.1.6.5)

Destination DOWNTOWN

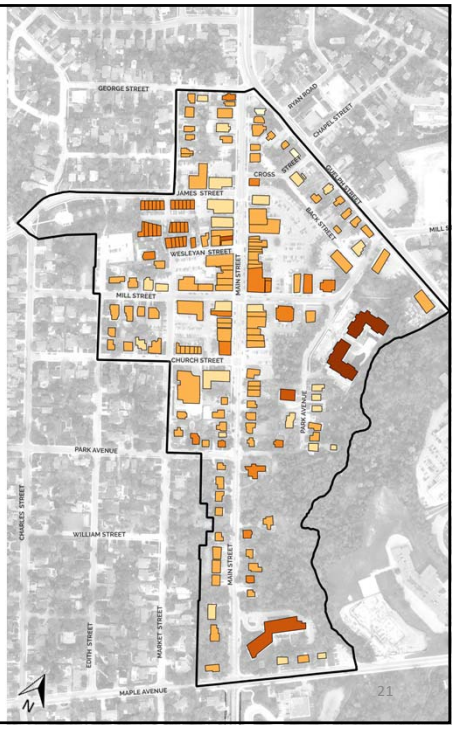


PLANNING
EXISTING BUILDING HEIGHTS

- Under Construction
- 1 Storey
- 2 Storeys
- 3 Storeys
- 4 Storeys
- 11 Storeys

- Downtown Boundary

Destination DOWNTOWN



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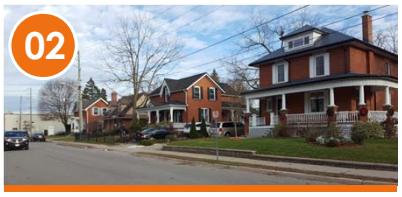
URBAN DESIGN
KEY STRENGTHS TO BUILD ON

Main street with a **mix of local businesses,** with few vacancies



Grid of streets create a very walkable neighbourhood

Location on a minor **arterial road**

Convenient on street and off street **parking**

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URBAN DESIGN
KEY STRENGTHS TO BUILD ON

05

Cultural facilities

06

Rich **heritage**, good **scale**, **consistency** in built form

07

Adjacent to beautiful **river valley**

08

An active **Business Improvement Area Association**

23

URBAN DESIGN
KEY STRENGTHS TO BUILD ON

09

Lots of **events and festivals**

10

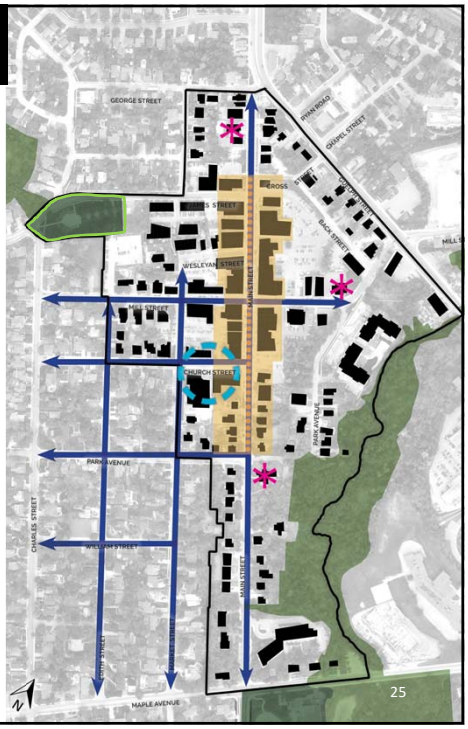
Beautiful streetscape

24

URBAN DESIGN
Key Character Defining Elements

- Historic Main Street
- Greenlands
- Open Space (Remembrance Park)
- Civic/Community Use Cluster
- Enhanced Streetscape
- Grid Street Pattern
- Heritage Landmarks
- Downtown Boundary

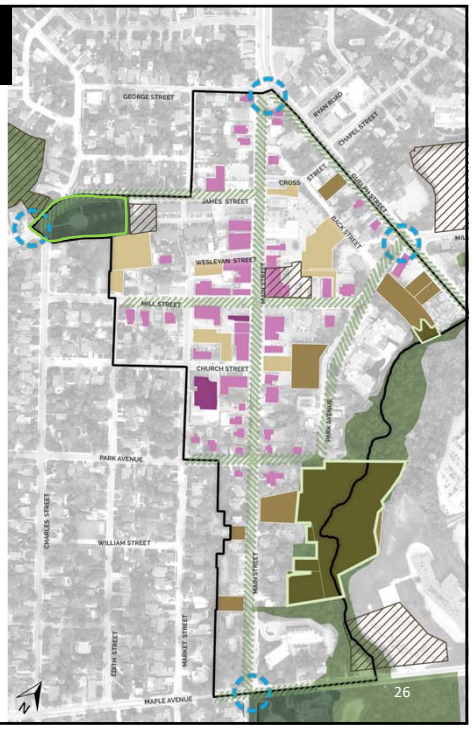
Destination DOWNTOWN



URBAN DESIGN
Existing and Planned Context

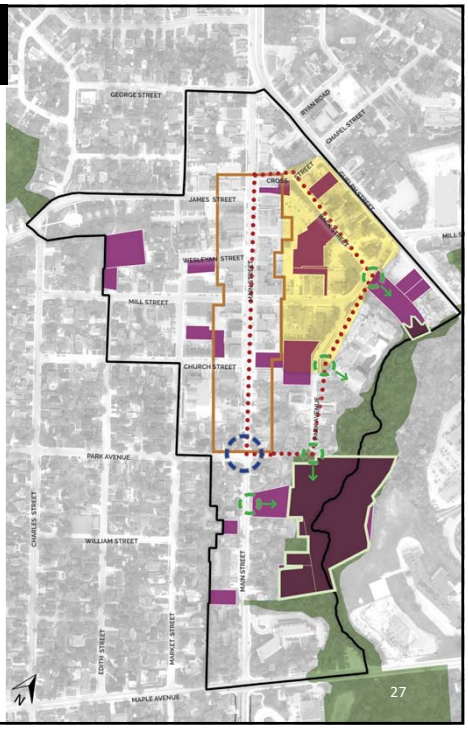
- Gateways as identified Urban Design Guidelines
- Proposed Cycling On-Road Routes
- Listed Heritage Property
- Designated Heritage Property
- Greenlands
- Open Space (Remembrance Park)
- Redevelopment Project
- Parking Lot
- Vacant Site w/ Greenlands
- Downtown Boundary

Destination DOWNTOWN



URBAN DESIGN
Opportunities

- Potential Downtown Gateway
- Downtown Walking 'Loop'
- Mixed-Use/Transit Supportive Node
- Public Realm Improvement and/or Potential Infill Opportunity
- w/ Greenlands
- Vistas to Greenlands
- Greenlands
- Main Street
- Downtown Boundary



Destination DOWNTOWN

URBAN DESIGN
HEIGHTS

- Sites abutting Guelph Street are appropriate for intensification to support GO Station
- Market demand is shifting to higher forms of development and the Downtown is an ideal location for a variety of residential uses
- Use angular plane and stepbacks is essential to determine the appropriate height and density

Destination DOWNTOWN

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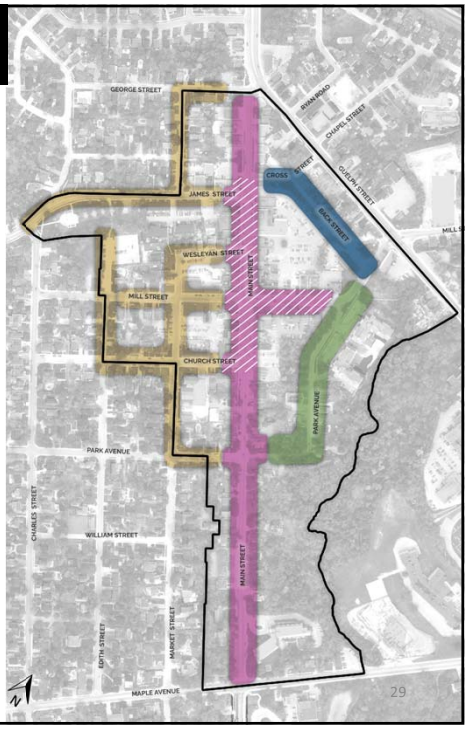
URBAN DESIGN
CHARACTER AREAS - Streetscape

- Main Street – Residential
- Main Street - Retail
- Residential Streets
- Park Avenue
- Back Street
- Downtown Boundary



Destination DOWNTOWN

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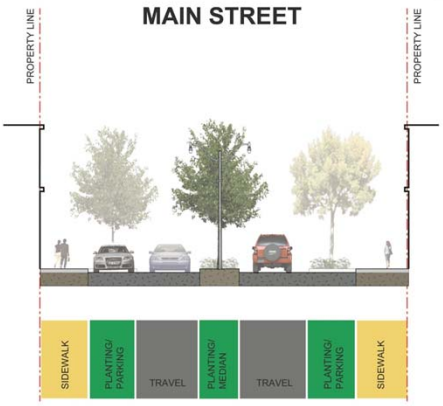
URBAN DESIGN
CHARACTER AREAS |



To consider in preparation for the Design Summit:

- Expanded streetscape planting
- Wider sidewalks
- Temporary outdoor patios
- Dedicated cycling lanes
- On street parking

Destination DOWNTOWN

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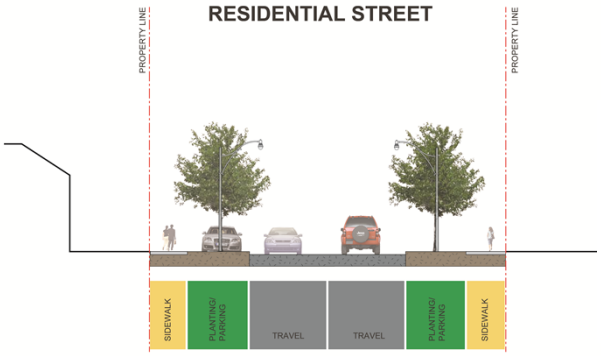
URBAN DESIGN
CHARACTER AREAS |



To consider in preparation for the Design Summit:

- Expanded streetscape planting
- Wider sidewalks
- Dedicated cycling lanes
- On street parking

Destination DOWNTOWN

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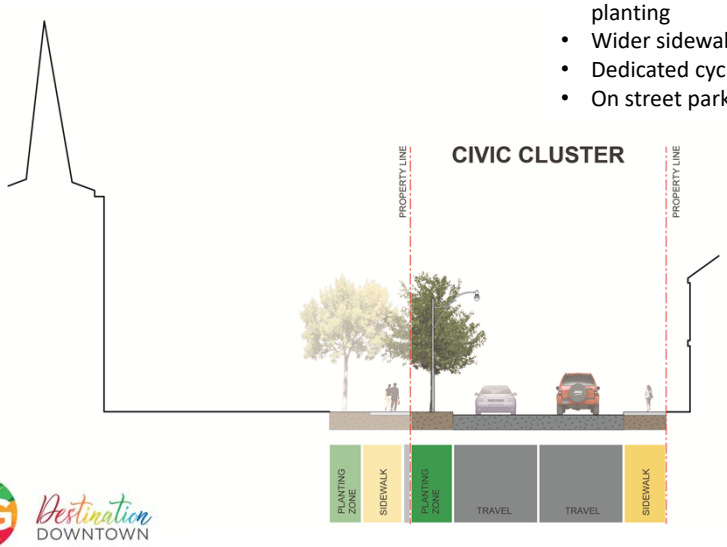
URBAN DESIGN
CHARACTER AREAS |

To consider in preparation for the Design Summit:

- Expanded streetscape planting
- Wider sidewalks
- Dedicated cycling lanes
- On street parking



Destination DOWNTOWN

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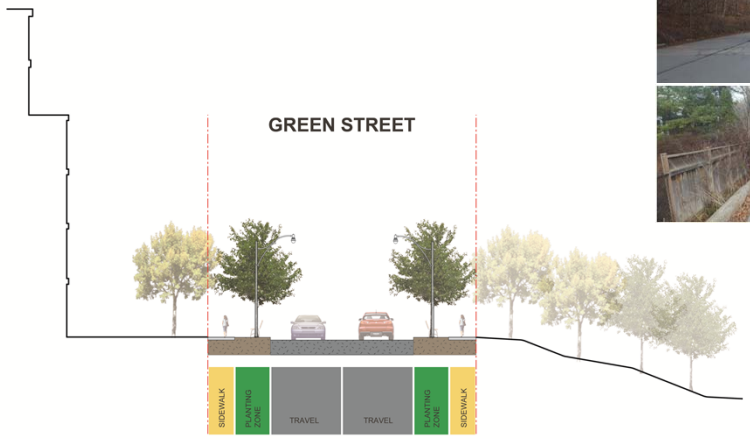
URBAN DESIGN
CHARACTER AREAS |



Destination DOWNTOWN

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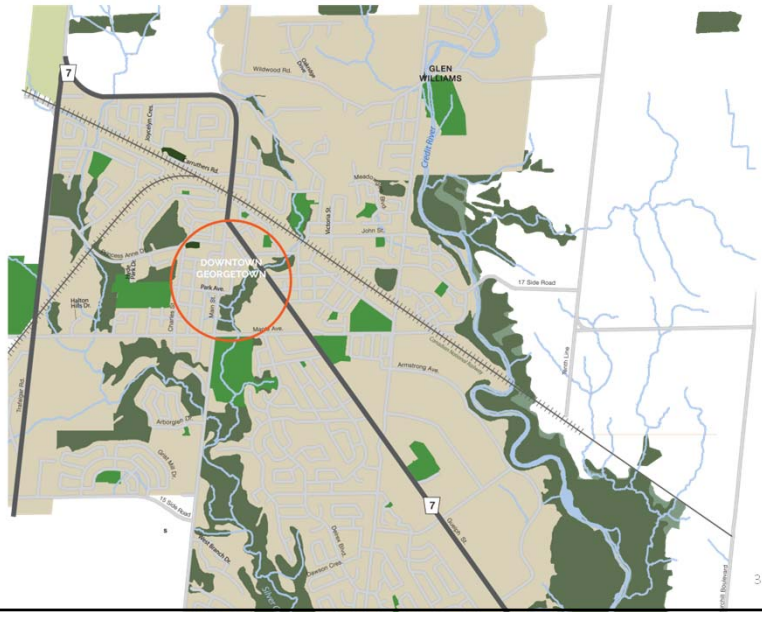
PLAN B Natural Heritage
NATURAL ENVIRONMENT
NATURAL SYSTEM



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PLAN B Natural Heritage

NATURAL ENVIRONMENT

GREEN SPACE

- Major Parks
- Greenlands
- Wooded Area
- Watercourse
- Downtown Boundary

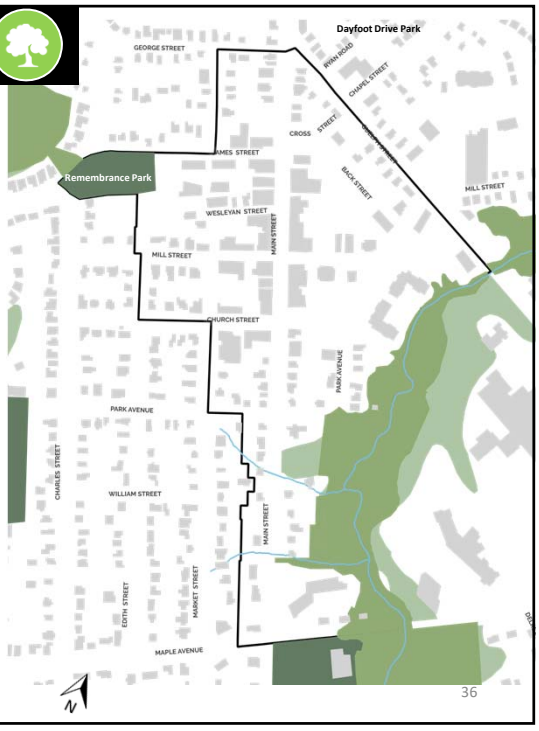
- Silver Creek Valley is identified in the Greenbelt Plan
- It provides an important corridor and link between the Niagara Escarpment and the Credit River Valley

PLAN B Natural Heritage

NATURAL ENVIRONMENT

NATURAL FEATURES

- Sensitive habitats in proximity to Downtown; Silver Creek supports a highly sensitive cold water fishery that is sensitive to change in groundwater and surface runoff
- Level 1 - High Priority Forest habitat abuts Main Street and Park Avenue



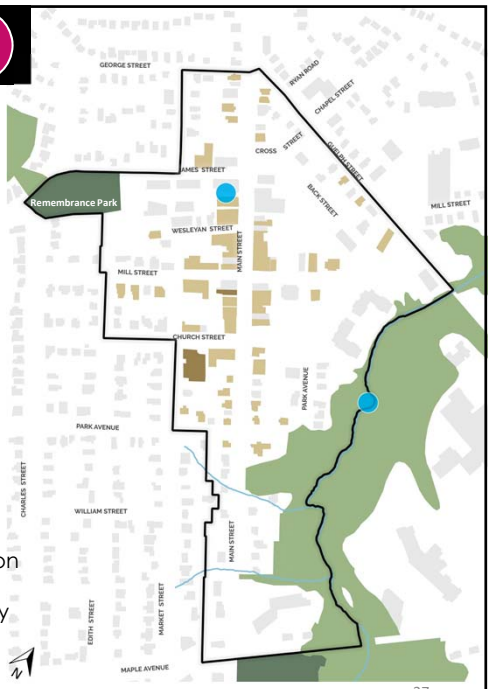
Bray Heritage

CULTURAL HERITAGE

HERITAGE PROPERTIES

- Many Listed buildings; few Designated
- Good examples remain of different building types
- Most of the undeveloped sites have archaeological potential (former industrial uses)
- 2 former ponds appear in many early photos, maps and personal accounts

Designated
Listed
Major Parks
Greenlands
Wooded Area
Watercourse
Former Pond Location
Downtown Boundary



Destination DOWNTOWN

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Bray Heritage

CULTURAL HERITAGE

HERITAGE RESOURCE GROUPINGS

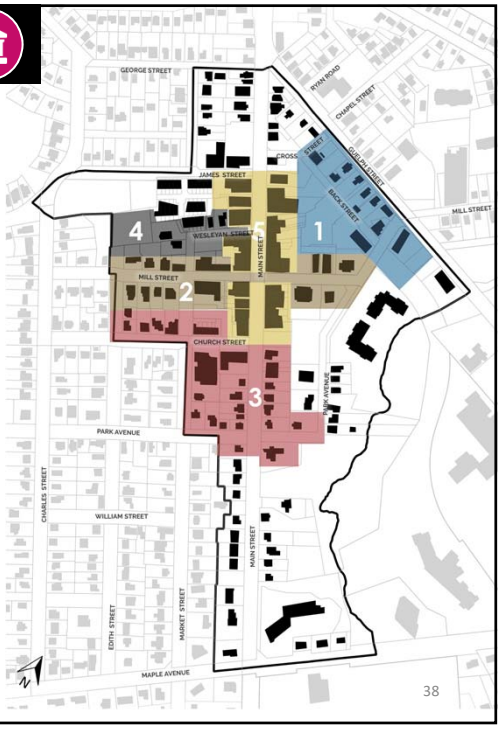
Sector 1: ties together key civic, industrial, transport, residential and natural elements

Sector 2: highlights main industries in the creek valley, includes examples of later housing, civic and commercial buildings

Sector 3: represents the residential and cultural character of downtown Georgetown at the height of its economic success

Sector 4: includes former commercial, industrial and institutional elements of 19th century downtown

Sector 5: contains historic centre of downtown commercial and community functions



Destination DOWNTOWN

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Bray Heritage

CULTURAL HERITAGE

OPPORTUNITIES

- Analyze former industrial sites/areas of archaeological potential
- Interpret layers of history, adding local voices from oral histories and interviews
- Integrate significant heritage buildings within new development
- Link natural areas with heritage resource groupings
- Focus redevelopment on properties of low heritage significance outside of the heritage resource groupings and on undeveloped sites that have been cleared of having archaeological potential
- Highlight the visual bookends of the downtown core (church, Post Office, Berwick Hall, Remembrance Park)

Main and Mill Street intersection
(Orange parade, July 12, 1961) (credit: Rowe, 2006, p. 74)

Wilbur Lake (former mill pond in Silver Creek valley)
(credit: Rowe, 2006, p. 51)

Destination DOWNTOWN

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SCS Consulting Group

ENGINEERING

SERVICING

OPPORTUNITY

- Water: By 2021, areas south of Hungry Hollow (Silver Creek) will be serviced by a lake based system; providing additional capacity
- Sanitary: By 2021, areas south Hungry Hollow (Silver Creek) will be serviced by a trunk sewer to the South Halton system; providing additional capacity in the existing system
- Enhanced stormwater quality control via:
  - oil and grit separators and infiltration/filtration facilities
  - parking lot, underground and/or roof top storage
- Erosion control via stormwater re-use for irrigation, green roof systems and underground storage

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Cole Engineering Group Ltd.

TRANSPORTATION

PARKING - Existing

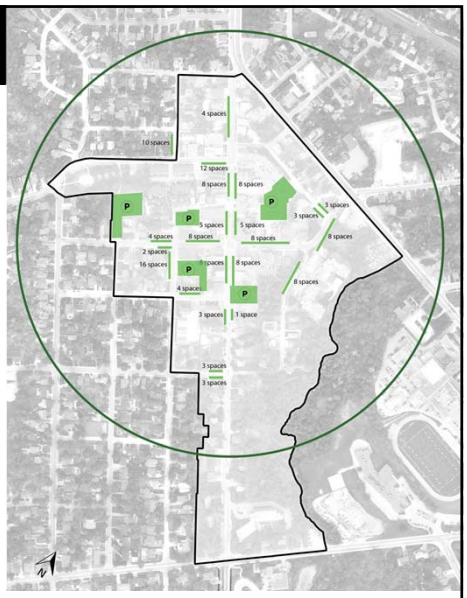
Off Street Parking

- Five surface parking lots with approximately 367 parking spaces

On Street Parking

- Street parking on Mill Street, Church Street, and Park Avenue.
- Approximate parking availability for on street parking in the downtown area is 134 spaces
- Parking, both public and private, is a challenge for new Downtown development



P Parking Lots

Downtown Boundary

On Street Parking

400m Radius

Cole Engineering Group Ltd.

TRANSPORTATION

HALTON HILLS CYCLING MASTER PLAN

Short Term

Mid Term

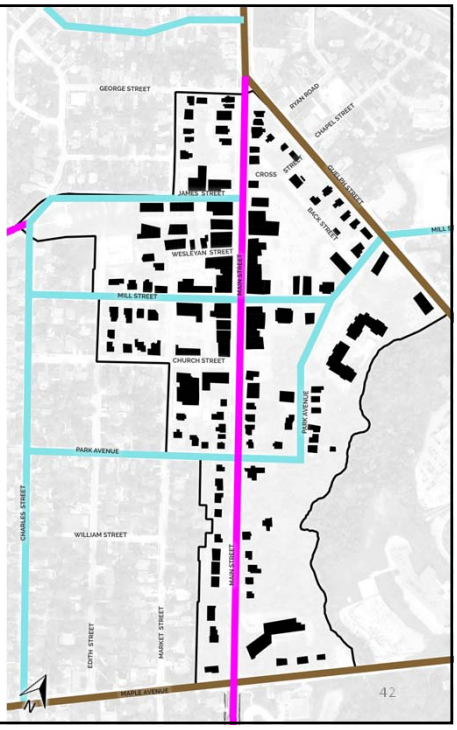
Long Term

Downtown Boundary

OPPORTUNITIES

- Opportunities for improvements through "complete streets"
- Improve access and connections to the GO Station through bike lanes, shuttles, expanded ActiVan services

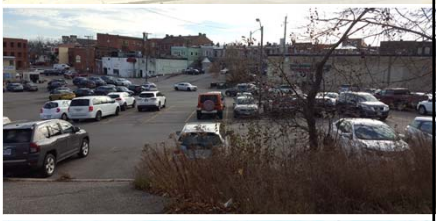
Destination DOWNTOWN



N. BARRY LYON CONSULTANTS LTD.

MARKET ANALYSIS

- Availability of land for development and land assembly is a challenge due to large number of narrow lots and multiple land owners
- Sites for new development include surface parking lots, vacant sites and underdeveloped properties
- The Urban Expansion Area will accommodate more than half of all future housing growth and three quarters of new retail space
- Downtown is missing a grocery store



Destination DOWNTOWN

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N. BARRY LYON CONSULTANTS LTD.

MARKET ANALYSIS

OPPORTUNITIES

- The retail/commercial market is very stable, with little turnover, niche market to differentiate downtown from other retail areas in Halton Hills
- Great location for higher density housing and townhouses
- Great location for intensification to help support GO Transit
- Increasing demand for residential units in this area as indicated by strong buyer response to the Residences of the Hotel McGibbon
- Co working spaces may attract entrepreneurs and younger working age population
- Temporary or pop-up businesses for underused or vacant units or spaces

Destination DOWNTOWN

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Next steps: Design Summit
April 2018

- Location to be confirmed
- Register to participate in one of two design sessions:
  3:00 – 5:30 pm OR 6:30 – 9:00 pm
- Join one of three design teams led by a designer from The Planning Partnership to develop an alternative for Downtown Georgetown: new buildings, public space, streets
- Drop in at 8:00 pm to preview the alternatives generated at the Design Summit

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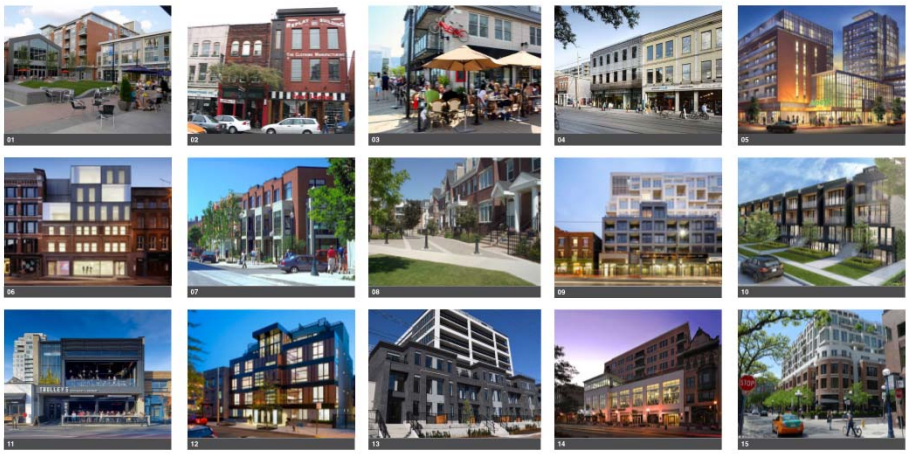

Visual Preference Survey: **Downtown Buildings**

Downtown Georgetown Planning Study
Downtown Visioning Workshop #1

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Visual Preference Survey: **Downtown Public Space**

Downtown Georgetown Planning Study
Downtown Visioning Workshop #1

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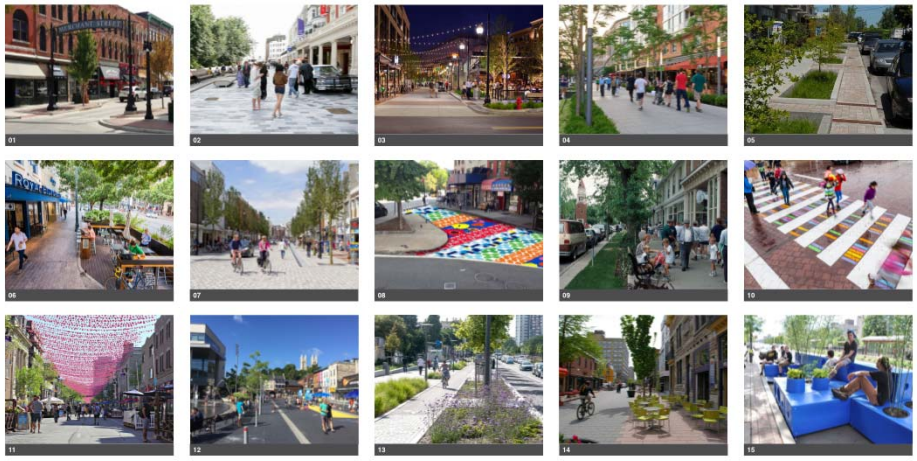

Visual Preference Survey: **Streets / Streetscaping**

Downtown Georgetown Planning Study
Downtown Visioning Workshop #1

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Table Group Discussions

A **vision statement** is a "word picture" that describes a preferred future condition or aspirational future for Downtown Georgetown – *what does it look like, what's it like to be there, how does it feel….*

Talk with others at your table.

Write a list of key words or phrases that should be captured in a vision statement.

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Table Group Discussions

Design principles are the building blocks of the planning and design for Downtown Georgetown. Principles direct, for example, the design of buildings, streets, public spaces, uses, and enhance natural and heritage features.

Talk with others at your table.

Using the note taking template, write the key words or phrases that should be captured in design principles that will direct the exploration of design alternatives for Downtown Georgetown.

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TOWN OF HALTON HILLS
Working Together Working for You!

REPORT

REPORT TO: Chair and Members of the Planning, Public Works and Transportation Committee

REPORT FROM: Rob Stribbell, Transportation Planner

DATE: April 10, 2018

REPORT NO.: TPW-2018-0014

RE: Active Transportation Master Plan Terms of Reference

RECOMMENDATION:

THAT Report No. TPW-2018-0014, dated April 10, 2018, regarding the Active Transportation Master Plan Terms of Reference, be received;

AND FURTHER THAT the Draft Terms of Reference for the Active Transportation Master Plan attached as Appendix A, be approved;

AND FURTHER THAT the Manager of Purchasing be authorized to issue a Request for Proposal (RFP) for the Active Transportation Master Plan, consistent with the Terms of Reference set out in this report;

AND FURTHER THAT staff report back to Council on the results of the Project Consultant selection process and contract award.

BACKGROUND:

The Halton Hills 2014-2018 Strategic Action Plan identifies Transportation and Mobility as a Strategic Priority for the 2014-2018 Term of Council. Under this Strategic Priority, the Action Plan directs staff to develop an Active Transportation Master Plan to support the use of all active modes of transportation.

Active Transportation refers to non-motorized or lightly-motorized travel, including walking, cycling, roller-blading and movements with mobility devices. An active transportation network includes sidewalks, crosswalks, designated road lanes and off-road trails to accommodate active transportation. The benefits of active transportation cover a range of topics including health, social well-being, transportation, environmental health, and economic prosperity.

The Town has invested in infrastructure and facilities to support active transportation and has Trails and Cycling Master Plans to guide future system development. The

Town's Pedestrian Charter outlines specific values to promote a walkable, healthy, active community and encourage a culture of walking. This includes development of walking routes and networks.

The development of an Active Transportation Master Plan is consistent with the following Town plans and policies:

- The Town's 2011 Transportation Master Plan outlines that the Town shall continue to implement an interconnected system of active transportation routes providing access to major activity and employment areas and to future public transit. The development of the Active Transportation Master Plan will build off a number of goals in the Transportation Master Plan.
- The Guiding Principles for the Vision Georgetown Secondary Plan, which includes ensuring that the cycling system in Halton Hills allows residents to "leave their cars at home" for trips within the Town, emphasizes active transportation for trips to schools, shops, errands and recreational facilities. As part of the Town's Strategic Plan process in 2007, members of Council articulated its own Vision for the Vision Georgetown Study Area which included that the new community be walkable, cycle-friendly and less auto dependent.
- The Halton Hills Cycling Master Plan (2010) guides the development of a cycling network throughout Halton Hills with one of the goals being an increase in availability of active transportation opportunities. The Cycling Master Plan will complement the approved Active Transportation Master Plan which will consider all modes of active transportation.

The following objectives will guide the development of the Active Transportation Master Plan. These objectives will be confirmed through the early phases of the project with the consultant and Town staff.

- Research and assess existing active transportation initiatives and policies currently within the town. This will include, but not be limited to; policy, programming, and infrastructure. The consultant will then consolidate this information in order to develop a basis for the active transportation strategy.
- Establish an active transportation network to be implemented by the Town. This network will include on and off-road facilities that encourage travel by cycling and walking. This will also include a written report as well as a map of the proposed network and timelines for implementation.
- Develop an implementation strategy which will guide staff on implementing the active transportation network.
- Conduct a policy and process review which will strengthen and change policies and processes to make implementation of the plan viable and streamlined.
- Improve and expand programs and promotions aimed to enhance the culture of active transportation.
- Develop and implement a Complete Streets Policy which will formalize the Town's intent to plan, design, and maintain its streets so they are safe for all uses of all ages and abilities and accommodate all anticipated users.

COMMENTS:

The study area for the Active Transportation Master Plan will include all lands located within the Town of Halton Hills and may cross municipal boundaries as they relate to linkages. The process has been designed to be consistent with, and should be implemented in a manner that fulfills the requirements of the Municipal Class Environmental Assessment Planning and Design Process for Master Plans.

The proposed work plan for the Active Transportation Master Plan has been broken down into four phases as outlined below.

Phase 1: Background Review and Project Kick Off

This phase will consist of a review of relevant Town of Halton Hills studies and policies regarding active transportation. It will also look at documents and policies of neighbouring municipalities including but not limited to; the municipalities within the Regions of Halton and Peel as well as documents available at the upper-tier level of government.

The consultant will also develop a study area profile looking at existing infrastructure and locations of existing active transportation and identify major generators of active transportation within the Town (i.e. GO stations).

It is expected that at this stage the consultant will conduct the first round of Public Consultation to gain an understanding of the community's wants and needs.

Phase 2: Development of the Active Transportation Network

During Phase 2 the consultant will identify desired active transportation routes for the Town which will include:

- The location and accommodation of active transportation facilities
- Potential connections to existing facilities and routes in the Town with neighbouring municipalities.
- A map showing the location and timing of new active transportation routes and facilities.

The consultant will also identify any barriers and constraints with the proposed network and develop a monitoring and reporting strategy. During this phase the consultant will also recommend any new policies or modifications to existing policies based on the work and information gathered as part of Phase 1.

As part of this phase the consultant will present the draft Active Transportation Master Plan to Council and the Senior Management Team, and conduct another round of public consultation to gain feedback.

Phase 3: Implementation Strategy

The consultant will outline how the proposed strategy will be implemented and recommend any phasing that is required. Information relating to costs, funding options and other initiatives (i.e. signage) as well as how the plan will be implemented into the Capital Works Program and future development applications will be presented. Detailed mapping outlining the implementation and associated timelines will be presented to Council during this phase.

Phase 4: Project Finalization and Documentation

The project team will consider all public input and Council feedback and develop the final Active Transportation Master Plan. A presentation to Council will take place to present the final Active Transportation Master Plan for consideration and adoption.

RELATIONSHIP TO STRATEGIC PLAN:

The recommendations of this report directly support the following Strategic Directions, Goals and Objectives of the Town of Halton Hills Strategic Plan:

A. Foster a Healthy Community
A.4 To provide accessibility throughout the community.
A.5 To ensure the use of appropriate design strategies to create safe communities.

G. Achieve Sustainable Growth
G.9 To ensure that new population growth takes place by way of identifiable, sustainable, healthy and complete communities and neighbourhoods that reflect excellence in urban design.

H. Provide Sustainable Infrastructure and Services
H.1 To provide infrastructure and services that meets the needs of our community in an efficient, effective and environmentally sustainable manner.
H.2 To ensure that infrastructure required for growth is provided in a timely manner.
H.4 To partner with other orders of government, and the private sector, to plan and finance infrastructure expansion and improvements.
H.6 To work with other orders of government to ensure the provision of a safe, diverse and integrated transportation system.

FINANCIAL IMPACT:

There is no direct financial impact as a result of this report.

CONSULTATION:

The Chief Administrative Officer and Senior Management Team were consulted throughout the development of this report and the Active Transportation Master Plan Terms of Reference.

The Manager of Purchasing was consulted and is in agreement with the recommendations of this report.

The Communications Department was consulted as part of the development of this report.

The Recreation and Parks Department was consulted as part of the Development of the Terms of Reference attached to this report.

PUBLIC ENGAGEMENT:

Public consultation and engagement will be a key component of the Study. Staff will adhere to the Public Engagement Charter throughout the duration of the study. Project information will be available on the Town's website with links to the online engagement platform 'Letstalkhaltonhills.ca' throughout all four phases of the study. Public meetings will be held during Phases 1 and 2 of the study in order to gain input and feedback on existing and planned active transportation infrastructure. After the feedback has been received from the public, the consultant will develop and present the Active Transportation Master Plan to Council.

Additionally, the consultant will be required to meet and present to the Active Easy Alliance, Bike Friendly Committee and the Active Transportation Advisory Committee in all phases of the project. The Active Transportation Advisory Committee will act as the Steering Committee throughout the duration of the project.

SUSTAINABILITY IMPLICATIONS:

The Town is committed to implementing our Community Sustainability Strategy, Imagine Halton Hills. Doing so will lead to a higher quality of life.

The recommendation outlined in this report advances the Strategy's implementation.

This report supports the Cultural Vibrancy, Economic Prosperity, Environmental Health and Social Well-being pillars of Sustainability and in summary the alignment of this report with the Community Sustainability Strategy is excellent.

COMMUNICATIONS:

A communications strategy will be developed and implemented as part of the Active Transportation Master Plan Study.

It is anticipated that there will be a minimum of two Public Information Sessions and three presentations to the Senior Management Team and Council. In addition, the project team will have monthly meetings through the duration of the study.

CONCLUSION:

The Halton Hills 2014-2018 Strategic Action Plan identifies Transportation and Mobility as a Strategic Priority for the 2014-2018 Term of Council. Under this Strategic Priority, the Action Plan directs staff to develop an Active Transportation Master Plan to support the use of all active modes of transportation.

In order to achieve this goal, this report outlines the proposed Terms of Reference for the Active Transportation Master Plan. It is staff's recommendation that Council approve these Terms of Reference, and that the Manager of Purchasing be authorized to issue a request for proposals to retain a qualified consultant to complete the Active Transportation Master Plan.

Reviewed and Approved by,

Simone Gourlay, Manager of Purchasing

Maureen Van Ravens, Acting Commissioner of Transportation and Public Works

Brent Marshall, CAO

Active Transportation Master Plan

Terms of Reference

March, 2018

Context

Active Transportation refers to non-motorized or lightly-motorized travel, including walking, cycling, roller-blading and movements with mobility devices. An active transportation network includes sidewalks, crosswalks, designated road lanes and off-road trails to accommodate active transportation. The benefits of active transportation cover a range of issues and include health, social, transportation, environmental and economic. Created by the Ministry of Transportation, Metrolinx is an organization which aims to improve the coordination and integration of all modes of transportation in the Greater Toronto and Hamilton Area. Metrolinx strongly encourages municipalities to increase the availability of cycling and walking as alternate modes of transportation. This will not only help alleviate the number of single occupant vehicles on the road but will also see other benefits including those noted above.

The Town has invested in infrastructure and facilities to support active transportation, and has Trails and Cycling Master Plans to guide future system development. The Town's Pedestrian Charter outlines specific values to promote a walkable, healthy, active community and encourages a culture of walking.

The Town's Transportation Master Plan outlines that the Town shall continue to implement an interconnected system of active transportation routes providing access to major activity and employment areas and to future public transit. The development of an Active Transportation Master Plan will build off of a number of goals in the Transportation Master Plan.

Background

Active Transportation Master Plan

The Town of Halton Hills is seeking the services of a consulting team to prepare an Active Transportation Master Plan which will build on the 2011 Transportation Master Plan and the 2010 Cycling Master Plan. The plan will establish and support a desired level of active transportation for residents in Halton Hills, and will facilitate their use as a viable alternative mode of transportation as well as recreational opportunities. The Active Transportation Master Plan will foster and promote active transportation where residents and visitors can easily access community and neighbourhood destinations as well as employment areas. The plan will consist of a safe and connected network of on-road and off-road active transportation opportunities.

Halton Hills Cycling Master Plan (2010)

In 2010 the Town of Halton Hills completed the Halton Hills Cycling Master Plan to guide the development of a cycling network throughout Halton Hills. This initiative was undertaken in order to meet the principles of environmental sustainability, and increase the availability of active transportation and active recreation opportunities to residents.

The Cycling Master Plan makes recommendations for a town-wide network of on-road and off-road cycling routes and facilities that are implementable as part of the Town's capital construction program, and to be included into new subdivision construction applications. The Cycling Master Plan network

includes the identification of routes and facilities to ensure that there is a well-connected system that ensures cycling connectivity and safety both for the existing and future development of the area.

The Town of Halton Hills implements the Cycling Master Plan Recommended Network when road resurfacing or reconstruction projects are undertaken as part of the Town's Pavement Management and Capital programs, or when funding is available for stand-alone projects that do not require road works.

The Cycling Master Plan will be superseded by the approved Active Transportation Master Plan Study which will consider all active modes of transportation.

Transportation Master Plan

The Town of Halton Hills Transportation Master Plan was adopted in November 2011. The plan is designed to develop an integrated transportation plan and associated strategies to meet the transportation challenges facing the Town to the year 2031. The Transportation Master Plan integrates municipal transportation planning with environmental assessment objectives and land use planning, ultimately providing for a transportation system that is sustainable, integrated and encourages a healthy and active lifestyle. The Goals and Objectives of the Transportation Master Plan are:

- Address existing transportation challenges;
- Identify the policies, programs and investments required to support planned growth and development;
- Identify and evaluate opportunities to increa/encourage active transportation modes (including cycling and pedestrian facilities);
- Identify required infrastructure improvements; and
- Provide a transportation system that offers travel choices, and balances the needs of all users.

The Transportation Master Plan speaks specifically to active transportation and a number of action items. They are:

- Implement the Cycling Master Plan;
- Update and implement the Trails Master Plan;
- Update the active transportation policies in the Official Plan;
- Continue to participate in the Active and Safe Routes to School Program;
- Development and implement a Complete Streets Policy;
- Develop and implement a policy and guidelines for conducting Walking and Cycling Reviews;
- Complete a Sidewalk Strategic Plan;
- Develop and implement a protocol for more effectively managing cycling events; and
- Create a new staff position to champion and coordinate active transportation and TDM initiatives locally and assist with the growing involvement of the community in traffic issues.

As part of the development of the Active Transportation Master Plan the consultant will be required to review the Transportation Master Plan as it relates to policies and goals related to active transportation. The completion of the Active Transportation Master Plan will help achieve a number of goals and objectives of the Transportation Master Plan and will also assist in the planned update of the Transportation Master Plan in 2019. The consultant will be expected to use the Transportation Master Plan as a reference document that will guide in the development of the Active Transportation Master Plan.

Purpose

The purpose of this study is to prepare and present the required strategy, initiatives, infrastructure and programs that will meet the needs of the Town and assist to reach the objective of creating an Active Transportation Master Plan that is safe, attainable and addresses the needs of residents.

The finalized Active Transportation Master Plan will outline the Town's short, medium and long-term actions and needs for bicycle and pedestrian transportation. In order to develop this strategy and achieve the goals in the Plan, the consultant will review existing policies, guidelines and programs from municipalities across the GTHA. The policies and plans shall include but not be limited to; Official Plans, Transportation Master Plans, Active Transportation Master Plans and other relevant plans and guidelines.

Objectives

The following objectives will guide the development of the Active Transportation Master Plan. These objectives will be confirmed through the early phases of the project with the consultant and Town staff.

- Research and assess existing active transportation initiatives and policies currently within the town. This will include but not be limited to; policy, programming and infrastructure. The consultant will then consolidate this information in order to develop a basis for the active transportation strategy.
- Establish an active transportation network to be implemented by the Town. This network will include on and off-road facilities that encourage travel by cycling and walking. This will include a written report as well as a map of the proposed network and timelines for implementation.
- Develop an implementation strategy which will guide staff on implementing the active transportation network.
- Conduct a policy and process review which will strengthen and change policies and processes to make implementation of the plan viable and streamlined.
- Improve and expand programs and promotions aimed to enhance the culture of active transportation.
- Develop and implement a Complete Streets Policy that will formalize the Town's intent to plan, design, and maintain its streets so they are sage for all users of all ages and abilities and accommodate all anticipated users, including pedestrians, cyclists, public transportation users, motorists, and freight vehicles.

Scope

Study Area

The study area for the creation of the Active Transportation Master Plan will include all lands located in the Town of Halton Hills and may cross borders into neighbouring jurisdictions as they relate to linkages.

Project Design

The development of the Active Transportation Master Plan will be undertaken following the process outlined below. This process has been designed to be consistent with, and should be implemented in a manner that fulfills the requirements of the Municipal Class Environmental Assessment Planning and Design Process for Master Plans (October 2000, as amended in 2007 & 2011). This includes, at a minimum, addressing Phases 1 and 2 of the Municipal Class EA process.

It is expected that public consultation in the way of on-line engagement through 'letstalkhaltonhills.ca' will occur throughout all phases of the project. Further, the consultant should be expected to present to Council and Senior Management on at least two occasions and conduct at a minimum two Public Meetings. Throughout each phase of the project the consultant will be required to meet with the Active Transportation Advisory Committee and the Bike Friendly Committee. The Active Transportation Advisory Committee will act as the Steering Committee throughout the duration of the project.

Meetings with the project lead should be expected to occur at least once a month.

Phase 1: Background Review and Project Kick-off

Tasks included in Phase 1 will consist of:

- Conduct a review of relevant Town of Halton Hills studies and polices regarding active transportation and determine the usefulness to the project. This review should also look at documents and policies in neighbouring municipalities and the Regions of Halton and Peel.
- Development of a study area profile, including the existing transportation network and locations of existing active transportation infrastructure.
- Identify major generators of active transportation within the Town (i.e. GO stations).
- Development of a communication and consultation plan for the study.

Deliverables of Phase 1 will consist of:

- A communication and consultation plan for the study that identifies key stakeholders, audiences and tactics;
- Public consultation in order to introduce the project and gain an understanding of the community's wants and needs; and
- A background review report including study area profile and summary of best practices.

Phase 2: Development of the Active Transportation Network

Tasks included in Phase 2 will consist of:

- Identify a desired active transportation route network for the Town which includes;
    - Location and accommodation of active transportation facilities
    - Potential connections to existing facilities and routes in the Town and with neighbouring municipalities
    - Map showing location and timing of new active transportation routes and facilities.
- Identify barriers and constraints within the proposed network.
- Recommend modifying or adopting new policies, procedures, standards and by-laws for the proposed network.
- Develop a monitoring and reporting strategy.
- Development of a complete streets policy with implementation plan.

Deliverables of Phase 2 will consist of:

- Draft Active Transportation Master Plan for internal review.
- Presentation of the Draft Active Transportation Master Plan to Council and the Senior Management Team.
- Public consultation consistent with the consultation strategy developed between the Consultant and Town staff and possible implementation.

Phase 3: Implementation Strategy

Tasks included in Phase 3 will consist of:

- Outline how the proposed strategy and will be implemented.
- Recommend a phasing plan for implementation. This should include information relating to costs, funding options and other initiatives (i.e. signage).
- Outline how the plan will be integrated into the Capital Works Program, construction, and development approvals.

Deliverables of Phase 3 will consist of:

- A presentation to Council detailing the implementation strategy and how it will be incorporated with the Capital Works Program.
- Detailed mapping outlining the implementation and associated timelines of the Active Transportation Master Plan.

Phase 4: Project Finalization and Documentation

Tasks included in Phase 4 will consist of:

- Project Team to develop the Active Transportation Master Plan. Comments from Council and the public will also be considered and incorporated where necessary.
- Make presentation to Council to present Final Active Transportation Master Plan.
- Provide Notice of Completion after review period.
- The consultant and project team will ensure that the finalized document is uploaded to the Town's website and implemented throughout the Town.

Deliverables of Phase 4 will consist of:

- Present Final Active Transportation Master Plan to Council.

The selected consultant will be responsible for each of the tasks and deliverables listed above for Phases 1 through 4 of the project. These terms of reference will serve as a framework to guide the preparation of consultant proposals, and a more detailed work plan by the selected consultant. All deliverables will be subject to review and approval by the Town's staff project lead, in consultation with staff from all Town departments and senior management as appropriate.

Consultation Strategy

Public consultation and engagement will be a key component of the Study. Project information will be available on the Town's website with links to the online engagement platform "Letstalkhaltonhills.ca" where all online consultation will be held. Consultation will also be available in-person through public information sessions.

The consultant will be expected to adhere to the Town's Public Engagement Strategy which can be found on the Town's website at: www.haltonhills.ca. All communication methods will support accessibility and active participants will be informed and educated of the results and/or decisions related to the Study.

In addition to presenting to Council and Senior Management as required, the consultant will also be expected to present and seek feedback on the Active Transportation Master Plan from the following groups/committees:

- Active Transportation Committee;
- Bike Friendly Committee; and
- Active Easy Alliance.

The consultant will be expected attend the following meetings, at a minimum:

- Twelve (12) meetings with the project team;
- Three (3) meetings with advisory groups/committees;
- Two (2) Public Information Centres;
- Three (3) presentations to Senior Management Team; and
- Three (3) presentations to Council.

Town Responsibilities

The Transportation Division of the Town of Halton Hills Transportation and Public Works Department will be responsible for managing the completion of the Active Transportation Master Plan, with input from the Town's Planning Policy, Engineering, and Communications divisions as required.

The responsibilities of Town staff in the completion of this project will include:

- Ensuring compliance with the Terms of Reference and Project Work Plan;

- Ensuring participation of all appropriate staff and stakeholders;
- Providing all relevant background information and technical information;
- Coordinating project communications;
- Updating the project website and online engagement platform;
- Coordinating venues and advertising associated with the project's communication and public consultation; and
- Preparing status and recommendation reports to Council.

Project Timeline

The project will commence in the fall of 2018 beginning with background research and initial work plan meetings. Public and Council engagement will begin in early 2019. The project is to be completed by the end of 2019.

Budget

The total budget for this study is $160,000. This fee includes all taxes and disbursement.

REPORT

REPORT TO: Chair and Members of the Planning, Public Works and Transportation Committee

REPORT FROM: Jeff Markowiak, Manager (Acting) of Development Review

DATE: April 13, 2018

REPORT NO.: PLS-2018-0033

RE: Planning & Sustainability Application Fees Review Update

RECOMMENDATION:

THAT Information Report No. PLS-2018-0033 dated April 13, 2018, regarding the "Planning & Sustainability Application Fees Review Update" be received;

AND FURTHER THAT Council direct staff to undertake consultation with development industry stakeholders regarding recommended changes to the Planning & Sustainability fee structure.

PURPOSE OF THE REPORT:

The purpose of this report is to provide Council with the draft Town of Halton Hills Planning Fees Review report completed by Watson & Associates following the conclusion of their review of the Town's current Planning & Sustainability fee structure; see **SCHEDULE 1**. The Watson report recommends changes to the fees collected by the Town for the review of planning development applications in order to balance the Town's need to maximize cost recovery with stakeholder interests, affordability and competitiveness with comparator municipalities.

This report also seeks direction from Council to present the recommended fee changes to development industry stakeholders for comment and feedback.

BACKGROUND:

In 2011 the Town initiated a review of its Planning application fees with a primary focus on the full cost recovery for the processing and review of development applications submitted under the *Planning Act*. A 5 year model was developed and adopted for the 2012 to 2016 time period that relied on estimates of application volume and type expected to be received during that 5 year time frame.

In 2016 the Town's Capital Budget approved funding to undertake a general review of all rates and fees being collected by each Town department. As a result of the review, a general fee update was approved at the end of 2016 for implementation at the beginning of 2017. However, Finance staff concluded that the Planning and Sustainability application fees required further review outside the scope of the 2016 general fee update given that:

- over the past 5 years the Town has experienced an increase in the number of complex development applications, especially infill proposals, which require more multifaceted reviews to be completed; and

- since the 2011 fee review the Town's development review and approval process has undergone substantial changes, including a greater emphasis on pre-consultation and increased community engagement.

As a result, in April 2017 Town Council approved the retention of Watson & Associates to assess the current costs of processing development applications in Halton Hills and make recommended changes to the Planning and Sustainability fee structure to ensure that fees are appropriately structured relative to full cost recovery and competitiveness with comparator municipalities (Report PI-2017-0052).

COMMENTS:

Through 2017 and into early 2018 Watson & Associates undertook a review of the Planning and Sustainability fee structure and the Town's development review process. The primary objective of their study was to:

- review the Town's current planning application fees and determine historical levels of cost recovery; and

- assess the current costs of processing development applications in the Town of Halton Hills.

Watson has completed their review and recommended new fees and fee structure improvements as a result of their findings. The fee changes recommended by Watson are intended to:

- balance the Town's need to maximize cost recovery with stakeholder interests, affordability and competitiveness with comparator municipalities;

- reflect industry best practices; and

- conform to applicable legislation and be defensible if challenged.

The recommended fee changes and the methodology for calculating the full cost of the Town's development review service delivery are outlined in Watson's draft Town of Halton Hills Planning Fee Review document attached as **SCHEDULE 1** to this report.

Watson's draft recommended fee structure is being brought before Council for consideration as municipalities are required to submit to Council for approval all rates and fees that they will impose for the year. As part of this approval the Municipal Act, 2001, S.O. 2001, c. 25, as amended, requires a by-law be adopted annually listing all fees and charges imposed by the Town of Halton Hills.

It should be noted that on May 10, 2018, Town staff and Watson & Associates intend to hold a consultation session with development industry stakeholders to present the recommended changes to the Planning & Sustainability fee structure in order to obtain their comments and feedback.

Following the consultation process staff and the consultant will consider any suggested changes and make any revisions to the recommended fee structure where deemed appropriate. The final recommended fee structure will then be brought back to Council for formal approval.

RELATIONSHIP TO STRATEGIC PLAN:

This report supports the following strategic directions outlined in Council's 2014-18 Strategic Action Plan:

Municipal Service Delivery:

- Effective, efficient and economical delivery of the Town's existing services.

Financial Sustainability:

- Establish sustainable financing, asset management, and master plans to acquire, operate, maintain, renew and replace infrastructure.

FINANCIAL IMPACT:

The revenue collected from the recommended fees will ensure appropriate full cost recovery of the Town's development review service delivery and the competitiveness of the Town's development review fee structure.

CONSULTATION:

Planning staff and Watson & Associates consulted with staff from the various Town departments involved in the development review function (ie. Development Engineering, Transportation, Rec & Parks, Buildings and Zoning) to determine the relative level of effort by those departments in processing planning applications. These effort estimates were important to help determine the current costs of processing development applications in the Town.

PUBLIC ENGAGEMENT:

A consultation session is scheduled for May 10, 2018, for Town staff and Watson & Associates to present the recommended changes to the Planning & Sustainability fee structure to development industry stakeholders to obtain their comments and feedback.

SUSTAINABILITY IMPLICATIONS:

The Town is committed to implementing our Community Sustainability Strategy, Imagine Halton Hills. Doing so will lead to a higher quality of life.

The recommendation outlined in this report is not applicable to the Strategy's implementation.

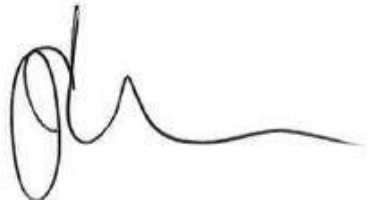
COMMUNICATIONS:

There are no communications impacts associated with this report.

CONCLUSION:

It is recommended that Council receive this report for information and direct Town staff to undertake consultation with development industry stakeholders regarding recommended changes to the Planning & Sustainability fee structure.

Reviewed and Approved by,



John Linhardt, Commissioner of Planning & Sustainability

Brent Marshall, CAO

Town of Halton Hills
Planning Fees Review

Incomplete Draft – For Discussion Purposes

April 6, 2018

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Planning for growth

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1. Introduction

1.1 Background

Planning application fees imposed by the Town of Halton Hills (Town) were last updated in 2011 for the 2012-2016 period. In 2017, Watson & Associates Economists Ltd. (Watson), was retained by the Town to assess the full costs of processing development planning applications and to make recommended changes to the Planning and Sustainability fee structure within the Town. Since the 2011 fee review, there have been changes in the Town's approval processes such as greater pre-application consultation and increased public consultation and community engagement. In addition, the Town has experienced an increase in the complexity and scale of applications including those concerning infill development. These changes have necessitated the need to re-assess the Town's planning application fees.

A planning fees review will also support the Town in determining a cost recovery budget/policy framework that balances the interest of new and existing development, and creates a pathway towards fiscal sustainability. Also, a full cost recovery fee review will ensure the Town achieves/maintains legislative compliance with Section 69 of the *Planning Act*, which established fee provisions limiting cross-subsidization of anticipated processing costs across application categories and fees. In this regard, the review will be useful in providing an evidence-based defense around any potential future planning application fee appeals to the Ontario Municipal Board (O.M.B.).

This study reviews all planning application fees, including Committee of Adjustment (C.O.A.) application fees. The primary objectives of the study are to:

- Review Town's current planning application fees and determine historical level of cost recovery;
- Determine full cost recovery fees;
- Recommend new fees and fee structure improvements that:
    - are defensible and conform with legislation;
    - balance the Town's need to maximize cost recovery with stakeholder interests, affordability, and competitiveness;
    - reflect industry best practices; and
    - considers the administrative implementation of fees
- Consider implementation of additional fees for service.

This technical report summarizes the legislative context for the fees review, provides in detail, the methodology utilized to assess the full costs of processing planning applications, and presents the full costs of service and recommended fee schedule.

1.2 Study Process

Set out in Table 1-1 is the project work plan that has been undertaken in the review of the Town's planning fees.

Table 1-1
Planning Fees Review Study Work Plan

Work Plan Component	***Description***
1. Project Initiation and Orientation	• Project initiation meeting with Project Team to review project scope, work plan legislative context, fee review trends, A.B.C. full cost methodology and refinements to fee categorization and service delivery
2. Review Background Information	• Review of cost recovery policies, by-laws, 2011-2016 cost recovery performance and application patterns • Establish municipal comparators
3. Municipal Policy Research and Municipal User Fee Comparison	• Municipal development fee policy research regarding development fee structures and implementation policies • Prepare municipal comparison survey for municipalities and fees identified in Task #2
4. Development Fee Application Processing Effort Review	• Meetings with Project Team members to review and refine fee design parameters and establish costing categories • Working sessions to review established costing categories with regard to processing distinctions by application type. • In collaboration with Town staff, develop process maps for categories/processes established through these discussions.
5. Design and Execution of Direct Staff Processing Effort Estimation	• Town staff conducted effort estimation workshops with participating divisions and sections to collect processing effort estimates • Process maps were populated by Town staff and reviewed with each of the departments to establish effort estimation data reflecting established processes • Effort estimates were examined to quantify and test overall staff capacity utilization (i.e. capacity analysis) for reasonableness
6. Develop A.B.C. model to determine the full costs processes	• Develop Town's A.B.C. model to reflect the current cost base (i.e. 2017$), fee costing categories, direct and indirect cost drivers, and full cost fee schedule generation
7. Calculation of Full Cost Recovery Fees and Financial Impact Analysis	• Modeled costing results were used to generate full cost recovery fee structure options • Full cost recovery fee structure calculated and compared to Halton Region municipal comparators in consultation with the Project Team • Recommended fee structure developed to increase costs recovery levels while maintaining market competitiveness • Overall financial impact and planning fee structure impact analysis was undertaken

Work Plan Component	***Description***
	• Provided impact analysis for sample development types and for municipal comparators • Draft fee structure and findings presented to the Town's Senior Management Team
8. Draft Report	• Preparation of Draft Report • Presentation of findings to Council
9. Development Industry Stakeholder Consultation	• Study results presented to development industry stakeholders
9. Final Report	• Final Report and Proposed Fee Schedules prepared for Council consideration

1.3 Legislative Context for Fees Review

The context for the fees review is framed by the statutory authority available to the Town to recover the costs of service. The *Planning Act*, 1990 governs the imposition of fees for recovery of the anticipated costs of processing planning applications. The following summarizes the provisions of this statute as it pertains to application fees.

Section 69 of the *Planning Act*, allows municipalities to impose fees through by-law for the purposes of processing planning applications. In determining the associated fees, the Act requires that:

> The council of a municipality, by by-law, and a planning board, by resolution, may establish a tariff of fees for the processing of applications made in respect of planning matters, which tariff shall be designed to meet only the anticipated cost to the municipality or to a committee of adjustment or land division committee constituted by the council of the municipality or to the planning board in respect of the processing of each type of application provided for in the tariff.

Section 69 establishes many cost recovery requirements that municipalities must consider when undertaking a full cost recovery fee design study. The Act specifies that municipalities may impose fees through by-law and that the anticipated costs of such fees must be cost justified by application type as defined in the tariff of fees (e.g. Subdivision, Zoning By-Law Amendment, etc.). Given the cost justification requirements by application type, this would suggest that cross-subsidization of planning fee revenues across application types is not permissible. For instance, if Site Plan application fees were set at levels below full cost recovery for policy purposes this discount could not be funded by Subdivision application fees set at levels higher than full cost recovery. Our interpretation of the Section 69 is that any fee discount must be funded from other general revenue sources such as property taxes.

The legislation further indicates that the fees may be designed to recover the "anticipated cost" of processing each type of application, reflecting the estimated costs of processing activities for an application type. This reference to anticipated costs represents a further costing requirement for a municipality. It is noted that the statutory requirement is not the actual processing costs related to any one specific application. As such, actual time docketing of staff processing effort against application categories or specific applications does not appear to be a requirement of the Act for compliance purposes. As such our methodology, which is based on staff estimates of application processing effort, meets with the requirements of the Act and is in our opinion a reasonable approach in determining anticipated costs.

The Act does not specifically define the scope of eligible processing activities and there are no explicit restrictions to direct costs as previously witnessed in other statutes. Moreover, recent amendments to the fee provisions of the Municipal Act and Building Code Act are providing for broader recognition of indirect costs. Acknowledging that staff effort from multiple departments is involved in processing planning applications, it is our opinion that such fees may include direct costs, capital-related costs, support function costs directly related to the service provided, and general corporate overhead costs apportioned to the service provided.

The payment of *Planning Act* fees can be made under protest with appeal to the O.M.B. if the applicant believes the fees were inappropriately charged or are unreasonable. The O.M.B. will hear such an appeal and determine if the appeal should be dismissed or direct the municipality to refund payment in such amount as determined by the Board. These provisions confirm that fees imposed under the *Planning Act* are always susceptible to appeal. Unlike other fees and charges (e.g. Development Charges) there is no legislated appeal period related to the timing of by-law passage, mandatory review period or public process requirements.

The *Building Better Communities and Conserving Watersheds Act, 2017* (Bill 139) received royal assent on December 12, 2017 and is anticipated to be proclaimed into force on April 3, 2018. Bill 139 fundamentally changes the planning appeal system in Ontario by introducing significant amendments to the *Planning Act* and other legislation including replacing the O.M.B. with the Local Planning Act Tribunal (L.P.A.T.). At the time of writing, the proposed regulation has not yet been finalized and the new L.P.A.T. rules have not yet been published. Potential changes in legislation have not been reflected in the planning processes, and to the extent that changes are required in the underlying application review processes, the fees may need to be reconsidered.

Moreover, once finalized, the implications of the new planning regime will need to be considered with regard to the rules surrounding appeals to planning applications.

2. Activity Based Costing Methodology

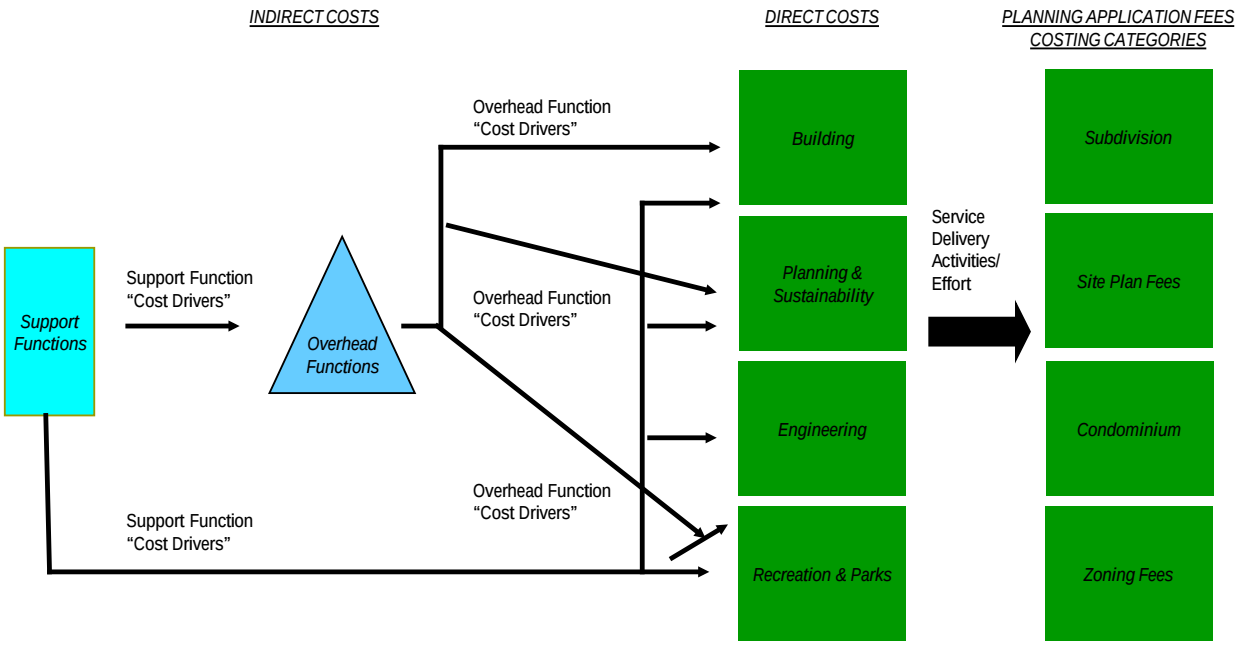
2.1 Methodology

An Activity-Based Costing (A.B.C.) methodology, as it pertains to municipal governments, assigns an organization's resource costs through activities to the services provided to the public. Conventional municipal accounting structures are typically not well suited to the costing challenges associated with development or other service processing activities, as these accounting structures are department focussed and thereby inadequate for fully costing services with involvement from multiple Town departments. An A.B.C. approach better identifies the costs associated with the processing activities for specific user fee types and thus is an ideal method for determining full cost recovery planning application fees.

As illustrated in Figure 2-1, an A.B.C. methodology attributes processing effort and associated costs from all participating municipal departments to the appropriate planning application categories. The resource costs attributed to processing activities and application categories include direct operating costs, indirect support costs, and capital costs. Indirect support function and corporate overhead costs are allocated to direct departments according to operational cost drivers (e.g. information technology costs allocated based on the relative share of departmental personal computers supported). Once support costs have been allocated amongst direct departments, the accumulated costs (i.e. indirect, direct, and capital costs) are then distributed across the various fee categories, based on the department's direct involvement in the processing activities. The assessment of each department's direct involvement in the planning application review process is accomplished by tracking the relative shares of staff processing effort across each fee category's sequence of mapped process steps. The results of employing this costing methodology provides municipalities with a better recognition of the costs utilized in delivering fee review processes, as it acknowledges not only the direct costs of resources deployed but also the operating and capital support costs required by those resources to provide services.

The following sections of this chapter review each component of the A.B.C. methodology as it pertains to the Town's planning application fees review.

Figure 2-1
Activity Based Costing Conceptual Cost Flow Diagram



2.2 Application Category Definition

A critical component of the full cost fees review is the selection of the planning application costing categories. This is an important first step as the process design, effort estimation and subsequent costing is based on these categorization decisions. It is also important from a compliance stand point where, as noted previously, the *Planning Act* requires application fees to be cost justified by application type consistent with the categorization contained within the Town's tariff of fees. Moreover, the cost categorization process will provide insight into any differences in processing costs for each costing category within an application type, which is informative to the fee structure design exercise.

Fee categorization decisions were made using the Town's existing fee structure to guide further disaggregation of application types into costing categories for fee review purposes. Each application type was disaggregated to understand the potential differences in processing effort based on application size, location (greenfield vs. infill), development type (residential vs. industrial vs. other non-residential), and application type (new vs. revision). The fee categorization process was developed during the initial working sessions with Town staff at the outset of this review.

Given the cost justification requirements of the *Planning Act* and comments of the O.M.B. with respect to marginal costing, this level of disaggregation within application types is in direct response to the comments of the OMB and reflects an evolution in the costing methodology to exceed the statutory requirements and to better understand the factors influencing processing effort.

Summarized in Table 2-1, are the planning application fee costing categories that have been included in the Town's model and used to rationalize changes to the Town's Planning and Sustainability fee schedules.

The following explains the rationale for the major planning application categorization decisions utilized in the fee review:

- Official Plan Amendments, Zoning By-Law Amendments, Site Plan Applications, and Subdivision applications were disaggregated to consider the impact of application location (infill vs. greenfield), development type (residential vs. industrial vs. other non-residential), and application size to reflect differences in processing effort typically experienced. The differences in effort for new applications compared to revision applications was also considered;
- For Condominium applications, the size of the application was considered as well as whether the application was for draft plan approval, conversion, or common elements;
- Cost of Legal staff related to by-law and agreement preparation was considered for Site Plan, Subdivision, Condominium, and Part-lot Control Applications, as well as Pre-Servicing Agreements;
- For Minor Variance applications, processing requirements for residential vs. non-residential development types was assessed; and
- For the majority of application types, the scope of the potential applications was also assessed by giving consideration to Minor vs. Major application types.

Table 2-1
Planning Application Fee Types and Costing Categories

Application Type	Costing Category
Official Plan Amnendment (OPA	OPA Processing Fee - Greenfield Residential, ≤50 dwelling units
	OPA Processing Fee - Greenfield Residential, >50 dwelling units
	OPA Processing Fee - Greenfield Industrial/Commercial/Institutional, ≤9,290m2 GFA / ≤2ha land area
	OPA Processing Fee - Greenfield Industrial/Commercial/Institutional, >9,290m2 GFA / >2ha land area
	OPA Processing Fee - Infill Residential, ≤50 dwelling units
	OPA Processing Fee - Infill Residential, >50 dwelling units
	OPA Processing Fee - Infill Industrial/Commercial/Institutional, ≤9,290m2 GFA / ≤2ha land area
	OPA Processing Fee - Infill Industrial/Commercial/Institutional, >9,290m2 GFA / >2ha land area
	OPA Revision
	Halton Region OPA Review
Zoning By-law Amendment (ZBA)	ZBA Application Fee - Greenfield Residential, up to 50 dwelling units
	ZBA Application Fee - Greenfield Residential, greater than 50 dwelling units
	ZBA Application Fee - Greenfield Industrial/Commercial/Institutional, ≤9,290m2 GFA / ≤2ha land area
	ZBA Application Fee - Greenfield Industrial/Commercial/Institutional, >9,290m2 GFA / >2ha land area
	ZBA Application Fee - Infill Residential, up to 50 dwelling units
	ZBA Application Fee - Infill Residential, greater than 50 dwelling units
	ZBA Application Fee - Infill Industrial/Commercial/Institutional, ≤9,290m2 GFA / ≤2ha land area
	ZBA Application Fee - Infill Industrial/Commercial/Institutional, >9,290m2 GFA / >2ha land area
	ZBA Revision
	Holding Removal Fee
	Holding Removal Fee - Special
	Deeming By-law
	Temporary Use By-law
	Request for Council Extension of Temporary Use
Site Plans	SPA Agreement
	SPA Application Fee - Greenfield Residential, up to 50 dwelling units
	SPA Application Fee - Greenfield Residential, greater than 50 dwelling units
	SPA Application Fee - Greenfield Industrial, gross area up to 2 hectares
	SPA Application Fee - Greenfield Industrial, gross area greater than 2 hectares
	SPA Application Fee - Greenfield Non-Residential, Non-Industrial, gross floor area up to 100,000 sq.ft.
	SPA Application Fee - Greenfield Non-Residential, Non-Industrial, gross floor area greater than 100,000 sq.ft.
	SPA Application Fee - Infill Residential, up to 50 dwelling units
	SPA Application Fee - Infill Residential, greater than 50 dwelling units
	SPA Application Fee - Infill Industrial, gross area up to 2 hectares
	SPA Application Fee - Infill Industrial, gross area greater than 2 hectares
	SPA Application Fee - Infill Non-Residential, Non-Industrial, gross floor area up to 100,000 sq.ft.
	SPA Application Fee - Infill Non-Residential, Non-Industrial, gross floor area greater than 100,000 sq.ft.
	SPA Revision
	Extension Fee

Table 2-1 (Cont'd)
Planning Application Fee Types and Costing Categories

Application Type	Costing Category
Subdivision (SUB) Fees	SUB Agreement
	SUB Application Fee - Greenfield Residential, up to 50 dwelling units
	SUB Application Fee - Greenfield Residential, greater than 50 dwelling units
	SUB Application Fee - Greenfield Industrial, gross area up to 10 hectares
	SUB Application Fee - Greenfield Industrial, gross area greater than 10 hectares
	SUB Application Fee - Greenfield Non-Residential, Non-Industrial, gross floor area up to 100,000 sq.ft.
	SUB Application Fee - Greenfield Non-Residential, Non-Industrial, gross floor area greater than 100,000 sq.ft.
	SUB Application Fee - Infill Residential, up to 50 dwelling units
	SUB Application Fee - Infill Residential, greater than 50 dwelling units
	SUB Application Fee - Infill Industrial, gross area up to 5 hectares
	SUB Application Fee - Infill Industrial, gross area greater than 5 hectares
	SUB Application Fee - Infill Non-Residential, Non-Industrial, gross floor area up to 100,000 sq.ft.
	SUB Application Fee - Infill Non-Residential, Non-Industrial, gross floor area greater than 100,000 sq.ft.
	SUB Reivision
	SUB Ext. of Draft Approval
	SUB Admimistrative Final Approval
Condominium	Condo Agreement
	Condominium Minor, up to 50 buildable lots/blocks or units or applies to a gross area up to 2 hectares
	Condominium Major, greater than 50 buildable lots/blocks or units or applies to a gross area greater than 2 hectares
	Condominium Conversion or Exemption
	Condominium Common Element
	Condominium Revision
	Condominium Ext. of Draft Approval
Part Lot Control By-law (PLCB) Fees	PLC By-Law Preparation
	PLCB Application Fee, up to 50 buildable lots/block or units or applies to a gross area up to 5 hectares
	PLCB Major Application Fee, greater than 50 buildable lots/block or units or applies to a gross area greater than 5 hectares
	PLCB Extension
Consent Fees	Consent Application Fee (1 lot)
	Consent Application Fee (Multiple lots)
	Consent Application Fee (Lot Line Adjustment, Easement)
	Consent Revision
	Consent Post Approval (Certification)
Minor Variance	Minor Variance Application Fee
	Minor Variance - Minor Residential Application fee

2.3 Processing Effort Cost Allocation

To capture each participating Town staff member's relative level of effort in processing planning applications, process templates were prepared for each of the above-referenced application costing categories. The process templates were generated using sample templates based on processes in neighboring municipalities and then refined and modified to reflect the planning application review process as it occurs in the Town.

The individual process maps were populated by Town staff in internal working sessions. The effort estimates used reflect the level of involvement by participating staff within each department on processing activities.

Annual processing effort per staff position was compared with available processing capacity to determine overall service levels. Subsequent to this initial capacity analysis, working sessions were held with the Town staff to further define the scope and nature of various departments' involvement in planning application fee review activities to reflect current staff utilization levels. These refinements provided for the recognition of efforts within the planning application fees review ancillary to direct processing tasks, i.e. departmental support activities and management and application oversight activities by departmental senior management. Effort related to planning policy and special projects related to planning applications were not included in the definition of planning application processing activities.

The capacity utilization results are critical to the full cost recovery fee review because the associated resourcing costs follow the activity generated effort of each participating staff member into the identified planning application fee categories. As such, considerable time and effort was spent ensuring the reasonableness of the capacity utilization results. The overall departmental fee recovery levels underlying the calculations are provided in Chapter 3 of this report.

2.4 Direct Costs

Direct costs refer to the employee costs (salaries and wages, employer contributions), stationery and office supplies, and consulting and professional fees that are typically consumed by directly involved departments. Based on the results of the resource capacity analysis summarized above, the proportionate share of each individual's direct costs is allocated to the respective fee categories. The direct costs included in the Town's costing model are taken from the Town's 2017 budget (subsequently indexed to

2018$ using the Town's 2018 cost of living increase of 3% and includes cost components such as:

- Labour Costs, e.g. salary, wages and benefits;
- Insurance Costs;
- Communication Costs;
- Hardware and Software Maintenance Costs;
- Utility Costs;
- Repairs and Maintenance Costs; and
- Materials, Supplies and Other Services.

It should be noted that transfers to reserves (reserve funds) and transfers to capital have been excluded from the direct service costs, as these reflect financing costs. Moreover, capital costs have been provided for separately within the analysis.

Based on the modelling results, the following departments have direct participation in the review and approval of planning applications.

- Planning and Sustainability
- Building;
- Engineering;
- Office of the CAO;
- Finance;
- Corporate Communications;
- Fire Services; and
- Recreation and Parks;

2.5 Indirect Cost Functions and Cost Drivers

An A.B.C. review includes both the direct service cost of providing service activities as well as the indirect support costs that allow direct service departments to perform these functions. The method of allocation employed in this analysis is referred to as a step-down costing approach. Under this approach, support function and general corporate overhead functions are classified separate from direct service delivery departments. These indirect cost functions are then allocated to direct service delivery departments based on a set of cost drivers, which subsequently flow to planning application fee categories according to staff effort estimates. Cost drivers are a unit of service that best represent the consumption patterns of indirect support and corporate overhead services by direct service delivery departments. As such, the relative share of a cost driver (units

of service consumed) for a direct department determines the relative share of support/corporate overhead costs attributed to that direct service department. An example of a cost driver commonly used to allocate information technology support costs would be a department's share of supported personal computers. Cost drivers are used for allocation purposes acknowledging that these departments do not typically participate directly in the development review process, but that their efforts facilitate services being provided by the Town's direct departments.

The indirect support and corporate overhead cost drivers used in the fees model reflects accepted practices within the municipal sector by municipalities of similar characteristics.

2.6 Capital Costs

The inclusion of capital costs within the full cost planning application fees calculations follow a methodology similar to indirect costs. The annual replacement value of assets commonly utilized to provide direct department services has been included to reflect capital costs of service. The replacement value approach determines the annual asset replacement value over the expected useful life of the respective assets. This reflects the annual depreciation of the asset over its useful life based on current asset replacement values using a sinking fund approach. This annuity is then allocated across all fee categories based on the capacity utilization of direct departments.

The annual replacement contribution applied for facility space is $4.84/square foot. This information derived from the Town's 2017 Development Charges Background Study. The capital replacement costs of staff work stations that would be in addition to facility replacement costs was also considered. The annual replacement contribution applied for work stations was $406 per work station. These annual capital costs estimates were then allocated to the fee categories based on resource capacity utilization.

3. Planning Application Fees Review

3.1 Staff Capacity Utilization Results

The planning application review process considered within this assessment involves to varying degrees, staff from multiple departments across the organization. The planning application processing effort estimates in this report reflect the Town's current business processes, 2011-2016 average application volumes, and staffing allocation patterns currently in place across Town departments. Moreover, the processing effort estimates were developed with regard to the typical application types within the 2011-2016 period.

Table 3-1 summarizes the staff capacity utilization and number of full time equivalent (F.T.E.) positions attributable to planning application processes. Currently, planning application processes consume approximately 13 F.T.E.s annually across the organization.

Table 3-1
Planning Application Resource Utilization by Department (in F.T.E.)

Department	No. of Staff	Staff Utilization	
		%	FTE
Planning & Sustainability	19	47.9%	9.09
Building	17.25	0.7%	0.12
Engineering	21	11.7%	2.46
Office of the CAO	15	3.6%	0.54
Finance	21	0.3%	0.06
Corporate Communications	2	1.4%	0.03
Fire Services	22	0.2%	0.04
Recreation and Parks	7	6.3%	0.44
Total			**12.78**

The following observations are provided based on the results of the capacity analysis presented in Table 3-1:

- On average approximately 48% of all available staff resources within the Planning & Sustainability department are fully consumed processing planning applications. Staff from this department provide the largest amount of effort to planning applications within the Town at 71% of the overall involvement. This level of planning recovery is comparable with levels of participation in other

Greater Toronto Area (G.T.A.) municipalities, reflecting a significant amount of non-planning application processing effort provided by planning departments for corporate management, policy initiatives, O.M.B. appeals, and public information tasks.

- Engineering Services provides the second largest allocation of staff resources (2.5 F.T.E.s) to planning application review, accounting for 12% of their available staff resources. Staff from the Engineering department provide 19% of the overall planning application review process.
- There are a number of other Town departments such as Recreation and Parks and the Building department that individually provide relatively small allotments of effort to planning application review. In aggregate, these other departments contribute 1.2 F.T.E.s or 10% of the overall effort.

3.2 Planning Application Type Impacts

As presented in the introduction, the *Planning Act* requires fees to be cost justified at the application type level. Moreover, recent O.M.B. decisions require that there is consideration given to the marginal costs of processing applications of varying size and complexity. In this regard, planning application review processes have been costed at the application type and sub-type level. This level of analysis goes beyond the statutory requirements of cost justification by application type to better understand costing distinctions at the application sub-type level to provide the basis for more a more defensible fee structure and fee design decisions. Application costs reflect the organizational direct, indirect and capital costs based on 2017 budget estimates, indexed to 2018$ values. Table 3-2, summarizes the per application processing costs compared with per application fees currently charged by the Town in 2018.

Table 3-2
Planning Fees Modelling Impacts by Application Sub-Type (2018$)

Application Type and Costing Category	Cost per Application	2018 Application Fees	Cost Recovery %
Official Plan Amendment (OPA)			
OPA Processing Fee - Greenfield Residential, ≤50 dwelling units	69,054	22,846	33%
OPA Processing Fee - Greenfield Residential, >50 dwelling units	69,054	22,846	33%
OPA Processing Fee - Greenfield Industrial/Commercial/Institutional, ≤9,290m2 GFA / ≤2ha land area	69,054	22,846	33%
OPA Processing Fee - Greenfield Industrial/Commercial/Institutional, >9,290m2 GFA / >2ha land area	69,054	22,846	33%
OPA Processing Fee - Infill Residential, ≤50 dwelling units	83,600	22,846	27%
OPA Processing Fee - Infill Residential, >50 dwelling units	83,600	22,846	27%
OPA Processing Fee - Infill Industrial/Commercial/Institutional, ≤9,290m2 GFA / ≤2ha land area	69,348	22,846	33%
OPA Processing Fee - Infill Industrial/Commercial/Institutional, >9,290m2 GFA / >2ha land area	69,356	22,846	33%
OPA Revision	26,748	19,057	71%
Halton Region OPA Review	3,365	9,070	270%
Zoning By-Law Amendment (ZPA)		-	0%
ZBA Application Fee - Greenfield Residential, up to 50 dwelling units	45,030	19,746	44%
ZBA Application Fee - Greenfield Residential, greater than 50 dwelling units	45,166	19,746	44%
ZBA Application Fee - Greenfield Industrial/Commercial/Institutional, ≤9,290m2 GFA / ≤2ha land area	44,894	19,746	44%
ZBA Application Fee - Greenfield Industrial/Commercial/Institutional, >9,290m2 GFA / >2ha land area	45,030	19,746	44%
ZBA Application Fee - Infill Residential, up to 50 dwelling units	67,935	19,746	29%
ZBA Application Fee - Infill Residential, greater than 50 dwelling units	68,074	19,746	29%
ZBA Application Fee - Infill Industrial/Commercial/Institutional, ≤9,290m2 GFA / ≤2ha land area	67,935	19,746	29%
ZBA Application Fee - Infill Industrial/Commercial/Institutional, >9,290m2 GFA / >2ha land area	68,074	19,746	29%
ZBA Revision	21,470	16,187	75%
Holding Removal Fee	14,516	5,166	36%
Holding Removal Fee - Special	18,732	574	3%
Deeming By-law	4,012	2,296	57%
Temporary Use By-law	43,775	12,284	28%
Request for Council Extension of Temporary Use	29,637	5,396	18%

Table 3-2 (Cont'd)
Planning Fees Modelling Impacts by Application Sub-Type (2018$)

Application Type and Costing Category	Cost per Application	2018 Application Fees	Cost Recovery %
Site Plan Application (SPA)			
SPA Agreement	5,114	4,707	92%
SPA Application Fee - Greenfield Residential, up to 50 dwelling units	49,035	12,284	25%
SPA Application Fee - Greenfield Residential, greater than 50 dwelling units	61,316	43,625	71%
hectares	47,422	12,284	26%
SPA Application Fee - Greenfield Industrial, gross area greater than 2 hectares	60,384	43,625	72%
SPA Application Fee - Greenfield Non-Residential, Non-Industrial, gross floor area up to 100,000 sq.ft.	47,422	12,284	26%
SPA Application Fee - Greenfield Non-Residential, Non-Industrial, gross floor area greater than 100,000 sq.ft.	60,384	43,625	72%
SPA Application Fee - Infill Residential, up to 50 dwelling units	54,574	12,284	23%
SPA Application Fee - Infill Residential, greater than 50 dwelling units	67,520	43,625	65%
SPA Application Fee - Infill Industrial, gross area up to 2 hectares	51,267	12,284	24%
hectares	61,169	43,625	71%
SPA Application Fee - Infill Non-Residential, Non-Industrial, gross floor area up to 100,000 sq.ft.	51,267	12,284	24%
SPA Application Fee - Infill Non-Residential, Non-Industrial, gross floor area greater than 100,000 sq.ft.	61,169	43,625	71%
SPA Revision	10,381	9,644	93%
Extension Fee	1,121	1,033	92%
Subdivision (SUB)		-	
SUB Agreement	29,818	6,314	21%
SUB Application Fee - Greenfield Residential, up to 50 dwelling units	171,998	43,739	25%
SUB Application Fee - Greenfield Residential, greater than 50 dwelling units	198,935	62,107	31%
SUB Application Fee - Greenfield Industrial, gross area up to 10 hectares	109,057	43,739	40%
SUB Application Fee - Greenfield Industrial, gross area greater than 10 hectares	109,057	62,107	57%
SUB Application Fee - Greenfield Non-Residential, Non-Industrial, gross floor area up to 100,000 sq.ft.	109,057	43,739	40%
SUB Application Fee - Greenfield Non-Residential, Non-Industrial, gross floor area greater than 100,000 sq.ft.	109,057	62,107	57%
SUB Application Fee - Infill Residential, up to 50 dwelling units	181,112	43,739	24%
SUB Application Fee - Infill Residential, greater than 50 dwelling units	209,702	62,107	30%
SUB Application Fee - Infill Industrial, gross area up to 5 hectares	119,426	43,739	37%
hectares	119,426	62,107	52%
SUB Application Fee - Infill Non-Residential, Non-Industrial, gross floor area up to 100,000 sq.ft.	119,426	43,739	37%
SUB Application Fee - Infill Non-Residential, Non-Industrial, gross floor area greater than 100,000 sq.ft.	119,609	62,107	52%
SUB Revision	32,081	28,586	89%
SUB Ext. of Draft Approval	3,671	1,033	28%
SUB Admimistrative Final Approval	1,335	2,870	215%

Table 3-2 (Cont'd)
Planning Fees Modelling Impacts by Application Sub-Type (2018$)

Application Type and Costing Category	Cost per Application	2018 Application Fees	Cost Recovery %
Condominium (CDM)			
Condo Agreement	26,394	6,314	24%
Condominium Minor, up to 50 buildable lots/blocks or units or applies to a gross area up to 2 hectares	45,947	24,452	53%
Condominium Major, greater than 50 buildable lots/blocks or units or applies to a gross area greater than 2 hectares	46,621	43,510	93%
Condominium Conversion or Exemption	31,025	20,779	67%
Condominium Common Element	26,589	24,452	92%
Condominium Revision	13,521	22,386	166%
Condominium Ext. of Draft Approval	3,344	4,133	124%
Part Lot Control By-Law (PLCB)		-	0%
PLC By-Law Preparation	1,800	1,837	102%
PLCB Application Fee, up to 50 buildable lots/block or units or applies to a gross area up to 5 hectares	6,630	5,970	90%
PLCB Major Application Fee, greater than 50 buildable lots/block or units or applies to a gross area greater than 5 hectares	6,763	6,774	100%
PLCB Extension	3,140	689	22%
Consent		-	0%
Consent Application Fee (1 lot)	14,022	9,758	70%
Consent Application Fee (Multiple lots)	14,539	9,758	67%
Consent Application Fee (Lot Line Adjustment, Easement)	16,134	4,707	29%
Consent Revision	2,729	1,891	69%
Consent Post Approval (Certification)	368	2,755	749%
Minor Variance		-	
Minor Variance Application Fee	8,218	4,936	60%
Minor Variance - Minor Residential Application fee	7,973	2,870	36%

As presented in Table 3-2, almost all planning application fees are recovering less than the average costs of processing. Table 3-3 summarizes the direct, indirect, and capital costs by application type and the cost recovery percentage after netting out the cost related to development agreements (costs recovered through separate fees). The overall recovery levels are based on the weighted average annual historical application volumes over the 2011-2016 period. Current application fees are on average recovering 40% of the annual costs of service

Table 3-3
Planning Fees Modelling Impacts by Application Type

Application Type	Annual Costs			Less:	Net Annual Costs	Net Modelled Revenue **(Current 2018 Fees)**	% Cost Recovery
	Direct	Indirect & Capital	Total	Annual Costs (Development Agreements)			
Condominium	33,256	17,791	51,047	18,124	32,924	18,178	55%
Consent	96,780	24,667	121,447		121,447	76,188	63%
H Removal	70,476	14,593	85,069		85,069	23,534	28%
Minor Variance	144,969	35,057	180,026		180,026	80,625	45%
Official Plan Amendment	80,891	16,431	97,322		97,322	30,692	32%
Part Lot Control By-Law	8,128	3,186	11,315	2,399	8,915	8,285	93%
Site Plan	653,051	157,568	810,619	65,629	744,989	285,554	38%
Subdivision	484,941	127,469	612,410	101,878	510,531	205,651	40%
Zoning By-Law Amendment	157,863	32,985	190,848		190,848	67,046	35%
Total	1,730,354	429,748	2,160,102	188,031	1,972,071	795,753	40%

3.3 Rate Structure Analysis

Fee structure recommendations were developed in regard to the cost and revenue impacts presented in Tables 3-2 and 3-3. The recommended fee structure seeks to align the recovery of processing costs to application characteristics to balance *Planning Act* compliance, applicant benefits and municipal revenue certainty. The recommended fee structure, which is presented in 2018$ values has been developed to increase cost recovery levels while being consistent with industry best practices and comparable to those of Halton Region area municipalities. The Town currently imposes a flat per application fee for all planning application fees. Although the costing categories examined the difference in costs between applications occurring in greenfield vs. infill areas, it was determined that the average cost by area would be assessed in the design of fees to reflect affordability concerns and to consider the administrative process of imposition. For most application types, the recommended fee structure includes a base fee and variable fee in recognition of the decreasing marginal costs of processing.

Table 3-4 displays the cost recovery levels by major application type based on the recommended fee structure. The fee structure recommendations are anticipated to increase overall planning application cost recovery performance from 40% currently to 71% (based on average historical application volumes and typical size characteristics) or an increase in revenue of 75%. Within the overall cost recovery levels, the performance by application types varies between 33% for H Removal and full cost recovery for Condominium and Part Lot Control By-law applications. This variation is related to the average application processing costs and considerations for affordability and competitiveness.

Table 3-4
Recommended Fee Structure Impacts by Application Type

Application Type	% Cost Recovery
Condominium	100%
Consent	80%
H Removal	33%
Minor Variance	48%
Official Plan Amendment	62%
Part Lot Control By-Law	100%
Site Plan	81%
Subdivision	61%
Zoning By-Law Amendment	83%
Total	71%

A summary of the recommended changes to fee structure is provided in section 3.3.1, while the complete fee schedule is provided in Appendix A.

3.3.1 Fee Structure Recommendations

Official Plan Amendment

For Official Plan Amendments (O.P.A.), currently the Town typically imposes a base fee of $22,846 depending on the scope of the application. Based on the results of the A.B.C. model, this application would cost on average $73,000 to process.

Fee Recommendations

- Impose base fee of $22,846 plus:
    - Implement a declining block rate structure for the variable portion of both residential and non-residential application fees to reflect the decreasing marginal cost of processing applications;
- Revision fee to be calculated as 37% of the full application fee ($8,959 minimum); and
- Decrease the Halton Region O.P.A. – Town Review fee to $3,366

Zoning By-law Amendment

Zoning By-law Amendment (Z.B.A.) applications are generally under recovering costs of processing. Smaller applications that would be charged the Minor and/or Technical fee have a lower level of cost recovery (17-25%) when compared to larger applications which would be imposed the full application fee (29-44%). Holding Removal applications are recovering 29% of costs, while Holding Removal applications charged the "special" fee are recovering only 3% of costs. Temporary Use fees are recovering between 18-28% of total costs.

As a result, the proposed fee structure proposed to maintain a similar entry point for smaller applications by maintaining the Minor and/or Technical fee and setting the base fee for full Z.B.A. applications at the same level as the current fee ($19,746). Consistent with fee structures in Halton Region and throughout the G.T.A., the recommended fee structure includes declining block variable fees for residential and non-residential development.

Fee Recommendations

- Maintain fee for Minor and/or Technical application fee of $11,365;
- Impose base fee of $19,746 for full applications and introduce declining block rate structure for residential and non-residential applications;
- Change Z.B.A. Revision fees to 40% of full application fees ($7,807 minimum);
- Maintain Holding Removal fees at current levels; and
- Increase the fee for Temporary Use or Deeming By-law to the same level as the Z.B.A. base fee ($19,746)

Site Plan Applications

The Town currently charges three Site Plan Application (S.P.A.) fees: $8,945 for minor applications, $12,284 for applications less than 50 units or 100,000 sq.ft. or gross floor area G.F.A.), and $43,625 for applications greater than 50 units or 100,000 sq.ft of G.F.A.). Consistent with industry best practices, the proposed fee structure includes base and declining block variable fees to provide the Town with a greater level of cost recovery while providing consideration for affordability and the decreasing marginal costs of processing.

Fee Recommendations

- Maintain fee for Minor applications fee of $8,954;

- Impose a base fee for all other S.P.A.s at the level of the current fee for applications of less than 50 units or 100,000 sq.ft of G.F.A. of $12,284;
- For applications not defined as Minor, introduce declining block rate structure for residential and non-residential applications; and
- Change S.P.A. Revision fees to 20% of full application fees ($5,127 minimum)

Plan of Subdivision

The current fees for Plan of Subdivision applications is $24,224 for minor applications, $43,739 for applications less than 50 buildable lots/block or units or 5 hectares of gross area, and $62,107 for applications proposing to develop more than 50 buildable lots/block or units or 5 hectares of gross area. Consistent with the recommendations for other application types, the fee structure revisions for Subdivision applications have been designed to have consideration for affordability and the fee structures imposed in other Halton Region municipalities.

Fee Recommendations

- Impose base for all minor and non-minor applications of $24,224;
- For non-minor applications, impose a declining per residential unit and per non-residential hectare fee; and
- Charge one Subdivision revision fee of 23% of full application fees ($2,526 minimum)

Plan of Condominium

The Town currently charges flat application fees for Draft Plan of Condominium, Condominium Conversion, and Condominium Common Element of between $20,779 and $43,510. Based on the A.B.C. results shown in Table 3-2, which indicate that the costs to process these different types of applications are similar, regardless of size, the recommended fee structure seeks to align the application fees among the different types of condominium applications for greater cost recover and administrative ease.

Fee Recommendations

- Impose fee of $28,051 for Draft Plan of Condominium applications, Condominium Conversion applications, and Condominium Common Element Condominium applications; and
- Revise Condominium Revisions application fee to be 35% of full application fees ($7,003 minimum)

Part Lot Control By-law

Part Lot Control By-law applications are recovering close to the full costs of processing (93%), and as such, only minor changes to the fee structure are proposed to improve cost recovery by sub-type. The fee structure recommendations include imposing one application fee in place of the disaggregated application fee for applications greater or less that 50 units and increasing the Extension fee from $689 to $1,340.

Consent

The Town currently charges Consent application fees for standard applications, Minor applications, Lot Line Adjustments and Easements, Revisions to Consent applications, and Post Approval Certification. With the exception of the fee for Post Approval Certification and Minor applications for which there is no increase recommended, Consent application fees are proposed to increase moderately.

Fee Recommendations

- Increase Consent application fee to $10,000;
- Increased the Consent Revision fee to $2,729; and
- Maintain minor application and Post Approval Certification fees at current rates

Minor Variance

The Minor Variance fees imposed by the Town currently are $2,870 for minor residential applications and $4,936 for all other Minor Variance applications. Minor Variance applications within the Town are recovering between 36-6% of the full costs of processing. Having regard for affordability and competitiveness, no changes have been recommended to the fee Minor Residential applications. The fee for other Minor Variance applications is recommended to increase from $4,936 to $5,750.

Combined Applications

In developing the recommended fee structure, the Town has also given consideration to total processing effort related reviewing Official Plan Amendment, Zoning By-law Amendment and Subdivision applications received concurrently. Compared to when these types of applications are received in separately, there are certain activities that only need to be undertaken once when received in combination (e.g. application intake and circulation). To recognize these processing efficiencies and the types of fee structures imposed in Halton Region area municipalities, the recommended fee structure includes reductions to the base application fees that would be imposed on these applications if received separately.

Fee Recommendations

- Official Plan Amendment and Zoning By-law Amendment applications received concurrently – Full Official Plan Amendment application fee plus Zoning By-law Amendment application base fee;
- Zoning By-law Amendment and Plan of Subdivision applications received concurrently – Full Subdivision application fee plus 75% of Zoning By-law application base fee; and
- Official Plan Amendment, Zoning By-law Amendment, and Subdivision applications received concurrently – Full Subdivision application fee plus Official Plan Amendment application base fee and 75% of Zoning By-law application base fee

4. Impact Analysis of Recommended Fee Structure

In order to understand the impacts of the recommended planning application fee structure recommendations, an impact analysis for sample developments has been prepared. Comparison graphs for planning application only, are provided in Appendix B.

4.1 Impact Analysis

Three development types have been considered, including:

- Official Plan Amendment, Plan of Subdivision and Zoning By-law Amendment applications for a residential subdivision of 100 single detached units;
- Site Plan and Zoning By-law Amendment applications for a retail building of 1,000 sq.mt.; and
- Site Plan application for an industrial building of 30,000 sq.mt.

In addition to providing the fee impacts for the Tow of Halton Hills, Tables 4-1 through 4-3 provide development fee comparisons for selected municipalities, highlighting the positions of the Halton Region area municipalities. The development fee comparison includes planning application fees, building permit fees and development charges for each of the three development types. The comparison illustrates the impacts of the planning application fee structure recommendations in the context of the total development fees payable to provide a broader context for the fee considerations.

4.1.1 Residential Single Detached (100 units) – Official Plan Amendment, Plan of Subdivision, and Zoning By-law Amendment Applications (Table 4-1)

A 100-unit single detached residential subdivision in the Town of Halton Hills would pay $360 per unit in Official Plan Amendment fees, $975 per unit in Subdivision fees, and $159 per unit in Zoning By-law Amendment fees under the Town's current fee structure.

Under the recommended fee structure, Official Plan Amendment fees would increase to $440 per unit (+22%) Subdivision fees would increase to $1,021 per unit (+5%). Zoning By-law Amendment fees would increase by 0.6% or $1/unit because of the application of the Town's proposed fee policy for combined applications. Including building permit fees and development charges, total development fees for this type of applicant would increase by 0.2% from $53,577/unit to $53,702/unit. The Town of would maintain their

position at 7th out of the 16 municipalities surveyed, lower than the Town of Oakville and Town of Milton, yet higher than the City of Burlington.

Table 4-1
Development Fee Impacts Survey for a Residential Subdivision (100 Single Detached Units

Rank	Municipality	Official Plan Amendment	Plan of Subdivision	Zoning By-Law Amendment	Building Permit Fees	Development Charges	Total	Planning Fees - % of Total
1	Toronto, City of	$ 55,707	$ 245,510	$ 124,542	$ 324,052	$ 8,970,000	$ 9,719,810	4.4%
2	Mississauga, City of	$ 48,986	$ 65,561	$ 121,750	$ 305,651	$ 8,526,608	$ 9,068,557	2.6%
3	Brampton, City of	$ 30,888	$ 93,510	$ 9,571	$ 219,809	$ 8,536,465	$ 8,890,242	1.5%
4	Oakville, Town of	$ 45,694	$ 72,262	$ 19,400	$ 307,509	$ 5,866,630	$ 6,311,495	2.2%
5	Whitby, Town of	$ 53,711	$ 77,036	$ 10,869	$ 223,897	$ 5,305,700	$ 5,671,212	2.5%
6	Milton, Town of	$ 39,754	$ 83,003	$ 14,310	$ 215,535	$ 5,243,430	$ 5,596,032	2.4%
7	Halton Hills, Town of - Proposed	$ 43,965	$ 102,080	$ 15,779	$ 315,871	$ 4,892,530	$ 5,370,224	3.0%
8	Halton Hills, Town of - Current	$ 36,026	$ 97,463	$ 15,876	$ 315,871	$ 4,892,530	$ 5,357,766	2.8%
9	Oshawa, City of	$ 40,883	$ 25,911	$ 5,068	$ 242,291	$ 4,785,200	$ 5,099,354	1.4%
10	Ajax, Town of	$ 68,447	$ 61,017	$ 24,947	$ 204,387	$ 4,718,200	$ 5,076,997	3.0%
11	Pickering, City of	$ 52,333	$ 50,183	$ 16,583	$ 232,258	$ 4,544,400	$ 4,895,758	2.4%
12	Burlington, City of	$ 35,902	$ 116,358	$ 14,903	$ 301,583	$ 4,219,930	$ 4,688,676	3.6%
13	Hamilton, City of	$ 19,040	$ 44,183	$ 17,509	$ 279,267	$ 3,933,700	$ 4,293,698	1.9%
14	Vaughan, City of	$ 95,061	$ 108,194	$ 39,931	$ 211,819	$ 3,750,600	$ 4,205,605	5.8%
15	Markham, City of	$ 103,980	$ 303,470	$ 37,510	$ 294,317	$ 3,242,599	$ 3,981,876	11.2%
16	Ottawa, City of	$ 18,227	$ 71,828	$ 15,215	$ 14,493	$ 3,536,400	$ 3,656,163	2.9%
17	Richmond Hill, Town of	$ 103,257	$ 66,189	$ 14,182	$ 261,987	$ 3,034,900	$ 3,480,515	5.3%

4.1.2 Retail Building (1,000 sq.mt.) - Site Plan and Zoning By-law Amendment Applications (Table 4-2)

The current planning fees for this retail development would be $38,801 ($18,086 Site Plan and $20,715 Zoning By-law Amendment). Imposing the recommended fee structure would increase the charge by 12% ($4,347) to $43,148 ($21,183 Site Plan and $21,965 Zoning By-law Amendment).

The impact of the recommended fee structure option on total development fees payable, including development charges and building permit fees, would result in a 1% increase. Planning fees currently comprise 8.6% of total development fees and would increase to 9.5% based on the recommended fee structure. The Town would maintain its competitive position in the mid range of the Halton Region area municipalities as well as the broader sample of municipalities.

Table 4-2
Development Fee Impacts Survey of 1,000 sq.mt Retail Development

Rank	Municipality	Site Plan	Zoning By-Law Amendment	Building Permit Fees	Development Charges	Total	Planning Fees - % of Total
1	Markham, City of	$ 24,880	$ 37,510	$ 14,880	$ 572,150	$ 649,420	9.6%
2	Richmond Hill, Town of	$ 18,849	$ 14,182	$ 15,100	$ 523,650	$ 571,781	5.8%
3	Toronto, City of	$ 24,782	$ 45,250	$ 19,200	$ 459,158	$ 548,390	12.8%
4	Vaughan, City of	$ 20,006	$ 10,492	$ 14,000	$ 498,300	$ 542,798	5.6%
5	Oakville, Town of	$ 18,766	$ 26,134	$ 23,060	$ 450,859	$ 518,819	8.7%
6	Burlington, City of	$ 8,698	$ 21,894	$ 22,650	$ 460,729	$ 513,971	6.0%
7	Halton Hills, Town of - Proposed	$ 21,183	$ 21,965	$ 16,100	$ 396,139	$ 455,387	9.5%
8	Halton Hills, Town of - Current	$ 18,086	$ 20,715	$ 16,100	$ 396,139	$ 451,040	8.6%
9	Milton, Town of	$ 9,567	$ 15,600	$ 10,620	$ 412,759	$ 448,546	5.6%
10	Mississauga, City of	$ 25,801	$ 54,350	$ 17,240	$ 328,626	$ 426,017	18.8%
11	Brampton, City of	$ 6,080	$ 10,297	$ 16,320	$ 325,460	$ 358,157	4.6%
12	Whitby, Town of	$ 16,747	$ 15,661	$ 13,920	$ 252,689	$ 299,017	10.8%
13	Oshawa, City of	$ 5,854	$ 10,506	$ 15,070	$ 244,709	$ 276,139	5.9%
14	Hamilton, City of	$ 11,515	$ 23,345	$ 16,470	$ 222,488	$ 273,818	12.7%
15	Ottawa, City of	$ 19,358	$ 15,215	$ 830	$ 236,160	$ 271,563	12.7%
16	Ajax, Town of	$ 9,108	$ 24,980	$ 13,000	$ 207,419	$ 254,507	13.4%
17	Pickering, City of	$ 7,650	$ 16,625	$ 10,000	$ 185,785	$ 220,060	11.0%

4.1.3 Industrial Building (30,000 sq.mt.) - Site Plan Application (Table 4-3)

The current planning fees for an industrial site plan of 30,000 sq.mt. would be $49,427. Imposing the recommended fee structure would result in a fee of $77,593 or an increase of $28,166 (+58%). Measuring the impact including building permit fees and development charges, the total input development application costs would increase by 0.7%. Moreover, planning application fees as percentage of total development fees payable would increase from 1.2% to 1.8%. Under this recommendation the Town's position relative to the comparator municipalities would remain unchanged at 13th out of 16 municipalities. For this development type, the Town's total development fees would be less than that in all Halton Region area municipalities.

Table 4-3
Development Fee Impacts for an Industrial Building (30,000 sq.mt.)

Rank	Municipality	Site Plan	Building Permit Fees	Development Charges	Total	Planning Fees - % of Total
1	Markham, City of	$ 131,310	$ 364,800	$ 10,201,976	$ 10,698,086	1.2%
2	Richmond Hill, Town of	$ 18,849	$ 414,000	$ 8,056,496	$ 8,489,345	0.2%
3	Mississauga, City of	$ 69,990	$ 376,000	$ 7,825,278	$ 8,271,268	0.8%
4	Vaughan, City of	$ 21,029	$ 285,000	$ 7,847,996	$ 8,154,025	0.3%
5	Oakville, Town of	$ 197,696	$ 432,850	$ 6,678,630	$ 7,309,176	2.7%
6	Brampton, City of	$ 6,258	$ 337,800	$ 6,039,300	$ 6,383,358	0.1%
7	Burlington, City of	$ 47,268	$ 206,157	$ 5,634,330	$ 5,887,755	0.8%
8	Whitby, Town of	$ 64,613	$ 299,700	$ 5,308,170	$ 5,672,483	1.1%
9	Ajax, Town of	$ 32,988	$ 270,000	$ 5,360,370	$ 5,663,358	0.6%
10	Pickering, City of	$ 15,550	$ 255,000	$ 4,711,364	$ 4,981,914	0.3%
11	Milton, Town of	$ 38,067	$ 212,400	$ 4,295,730	$ 4,546,197	0.8%
12	Hamilton, City of	$ 11,515	$ 346,800	$ 4,162,404	$ 4,520,719	0.3%
13	Halton Hills, Town of - Proposed	$ 77,593	$ 294,090	$ 3,830,430	$ 4,202,113	1.8%
14	Halton Hills, Town of - Current	$ 49,427	$ 294,090	$ 3,830,430	$ 4,173,947	1.2%
15	Oshawa, City of	$ 5,854	$ 262,796	$ 3,749,070	$ 4,017,720	0.1%
16	Ottawa, City of	$ 21,509	$ 19,500	$ 3,374,486	$ 3,415,495	0.6%
17	Toronto, City of	$ 229,232	$ 430,500	$ 303,542	$ 963,275	23.8%

4.2 Impact Analysis Summary

Based on the survey results, the recommended fees produce development fees greater than those provided under the current fee structure. However, the Town's ranking amongst the municipal comparators remains unchanged, and for the most part below that of the other Halton Region area municipalities. Finally, while the total planning impacts are significant in the case of the industrial development type surveyed, for each development type when measured on a total development cost basis, including building permits and development charges, the overall cost impacts are nominal (0.2% to 1% crease).

5. Conclusions

5.1 Conclusions

Summarized in this technical report is the legislative context for the planning application fees review, the methodology undertaken, A.B.C. results and full cost of service, and fee structure recommendations. In developing the recommended fee structure, careful consideration was given affordability, market competitiveness, and to the recent trends pertaining to planning fees, including recent comments of the O.M.B. concerning planning application fees.

The recommendations of the planning application fees review have been designed to provide the Town with a recommended fee structure for Council's consideration to increase the planning application cost recovery levels by recovering the service costs from benefiting parties. The municipality will ultimately determine the level of cost recovery and phasing strategy that is suitable for their objectives.

Appendix A – Recommended Fee Structure

Combined Application Fees	Current	Recommended Fees
Official Plan Amendment and Zoning By-law Amendment Applications received concurrently		Full OPA application fee plus ZBA application base fee
Zoning By-law Amendment and Plan of Subdivision Applications received concurrently		Full SUB application fee plus 75% of ZBA application base fee
Official Plan Amendment, Zoning By-law Amendment and Plan of Subdivision Applications received concurrently		Full SUB application fee plus OPA application base fee and 75% of ZBA application base fee

Official Plan Amendment (OPA)	Current 2018 Fee	Recommended Fees								
		Base Fee	Variable Fee							
			Per Residential Unit				Per Non-Residential Hectare			
			0-25	26-100	101-200	201-1,000	0-1	1-10	10-20	20-40
OPA - Processing Fee										
Average Cost Fee	22,846	22,846	120	100	80	70	6,000	3,000	1,500	750
Minor and/or Technical	12,858	12,858								
OPA Deferral Removal Fee - Town	4,707	4,707								
OPA Revision Fee	19,057 / 8,959	37% of full application fees ($8,959 minimum)								
Halton Region OPA - Town Review Fee	9,070	3,365								
Halton Region OPA when filed with consolidated Town OPA/ZBA	6,349	2,356								

Zoning By-Law Amendment (ZBA)	2018 Fee	Recommended Fees								
		Base Fee	Variable Fee							
			Per Residential Unit				Per Non-Residential Hectare			
			0-25	26-100	101-200	201-1,000	0-1	1-10	10-20	20-40
ZBA Fee										
Average Cost Fee	19,746	19,746	500	300	200	100	5,000	3,000	2,000	500
Minor and/or Technical	11,365	11,365								
ZBA Revision	16,187 / 7,807	40% of full application fees ($7,807 minimum)								
Holding By-Law Amendment Removal - Major	5,166	5,500								
Holding By-Law Amendment Removal - Minor	2,870	2,870								
Holding By-Law Amendment Removal - Special	574	574								
Temporary Use	12,284	19,746								
Council Extenstion of a Temporary Use By-law	5,396	5,396								

Site Plan Application (SPA)	2018 Fee	Recommended Fees								
		Base Fee	Variable Fee							
			Per Residential Unit				Per Non-Residential Sq.M. GFA			
			0-25	26-100	101-200	201-1,000	0-5,000	5,001-20,000	20,001-45,000	45,001-100,000
Site Plan Agreement	4,707	5,114								
Site Plan Application Fee										
Average Cost Fee	12,284 / 43,625	12,284	400	200	125	90	2.69	2.15	1.34	0.67
Minor Application Fee	8,954	8,954								
Site Plan Revision	9,644 / 5,281	20% of full application fees ($5,127 minimum)								
Site Plan Extension Fee	1,033	1,121								

Subdivision (SUB)	2018 Fee	Recommended Fees: Base Fee	Variable Fee: Per Residential Unit 0-25	26-100	101-200	201-1,000	Per Non-Residential Hectare 0-1	1-10	10-20	20-40
SUB Agreement	6,314	6,314								
SUB Application Fee										
Average Cost Fee	62,107 / 43,739	24,224	500	400	350	300	5,000	4,500	3,500	3,000
Minor fee	24,224	24,224								
SUB Final Approval Fee	16,991	16,991								
SUB Final Approval Fee - Administrative	2,870	2,870								
SUB Revision	2,526 / 12,169 / 28,856	23% of full application fees ($2,526 Minimum								
SUB Ext. of Draft Approval (Council)	4,133	3,671								
SUB Ext. of Draft Approval (Staff)	1,033	917								

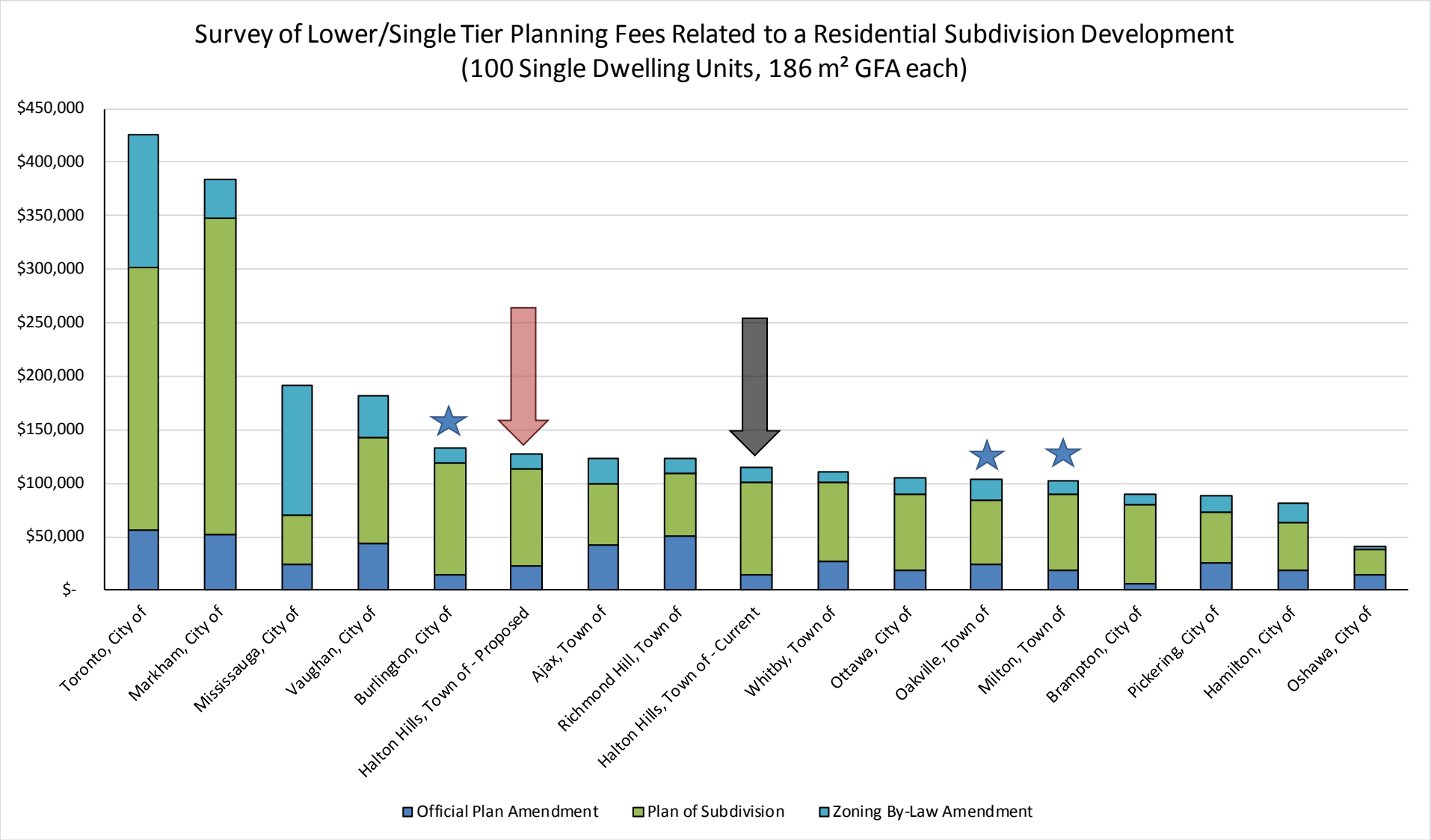
Condominium (CDM)	2018 Fee	Recommended Fees: Base Fee
CDM Agreement	6,314	6,314
CDM Application Fee	24,452 / 43,510	28,051
CDM Final Approval Fee - Primary	17,909	17,909
CDM Final Approval Fee - Secondary	5,740	5,740
CDM Revision	22,386 / 7,003	35% of full application fees ($7,003 minimum)
CDM Ext. of Draft Approval (Council)	4,133	3,344
CDM Ext. of Draft Approval (Staff)	919	744
CDM Conversion or Exemption Fee	20,779	28,051

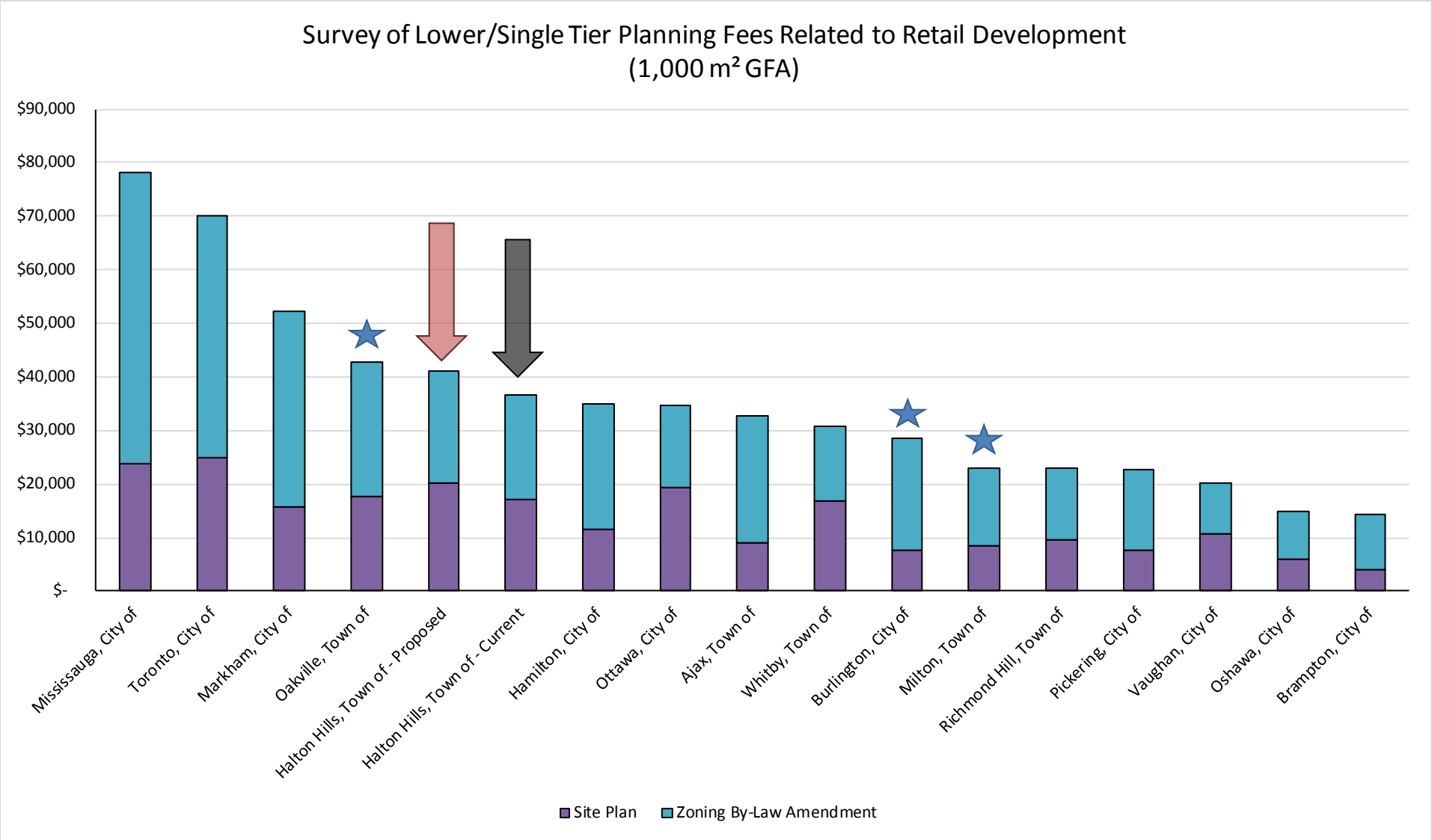
Part Lot Control By-Law (PLCB)	2018 Fee	Recommended Fees: Base Fee
Part Lot Control Exemption By-Law Preparation and Registration	1,837	1,800
Part Lot Control Exemption By-Law Preparation and Registration - Extension Request	1,837	1,800
PLCB Application Fee	5,970 / 6,774	6,663
PLCB Application Fee - Extension	689	1,340
Deeming By-law	2,296	4,012

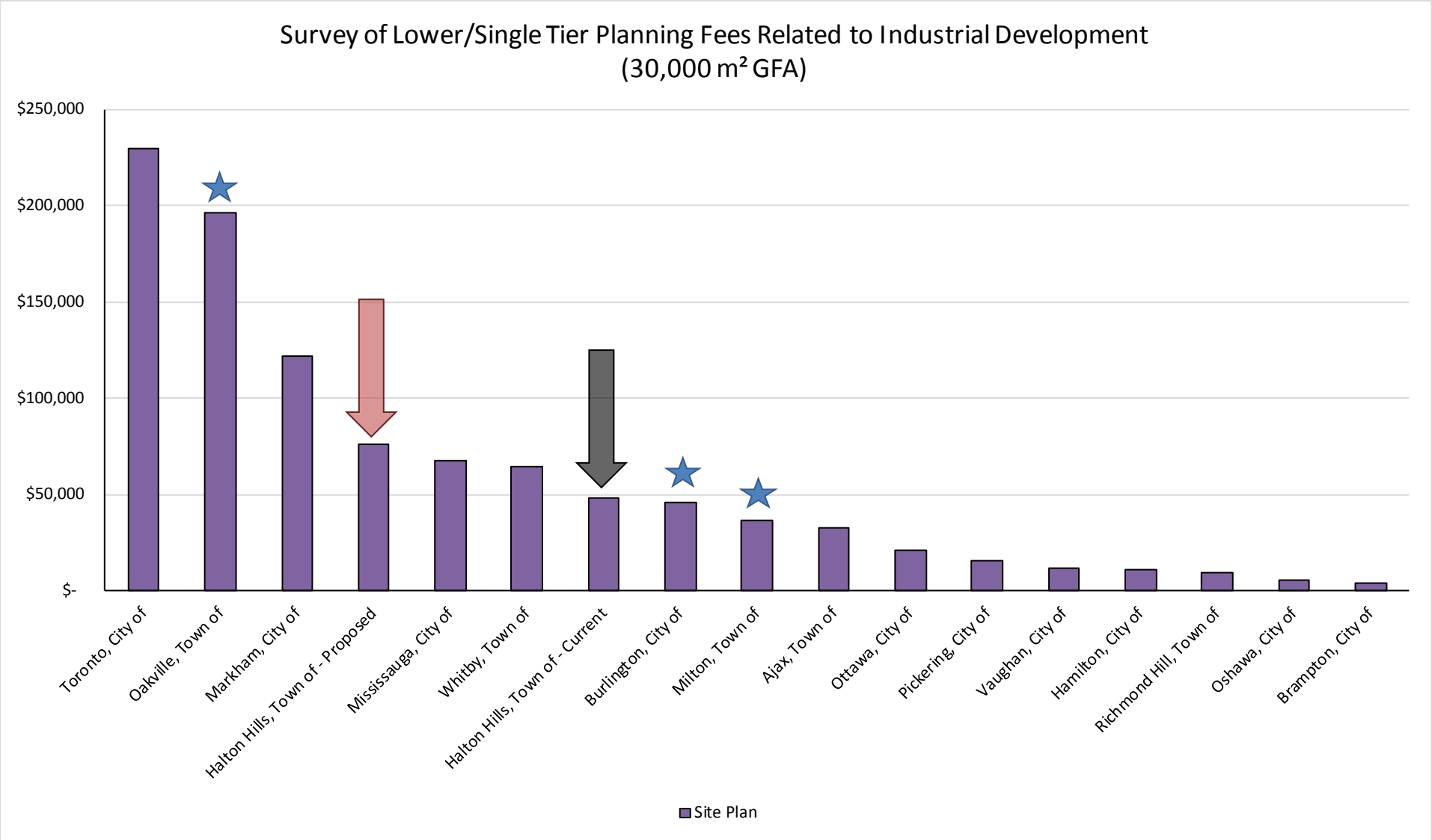
Consent	2018 Fee	Recommended Fees: Base Fee
Consent Application	9,758	10,000
Consent Minor Application Fee (Lot Line Adjustment, Easement)	4,707	4,707
Consent Revision	1,891	2,729
Consent Post Approval (Certification)	2,755	2,755

Minor Variance	2018 Fee	Recommended Fees
Minor Variance Application Fee	4,936	5,750
Minor Variance - Minor Residential Application fee	2,870	2,870

Appendix B - Planning Application Fee Survey


Survey of Lower/Single Tier Planning Fees Related to a Residential Subdivision Development
(100 Single Dwelling Units, 186 m² GFA each)
$450,000
$400,000
$350,000
$300,000
$250,000
$200,000
$150,000
$100,000
$50,000
$-
Toronto, City of
Markham, City of
Mississauga, City of
Vaughan, City of
Burlington, City of
Halton Hills, Town of - Proposed
Ajax, Town of
Richmond Hill, Town of
Halton Hills, Town of - Current
Whitby, Town of
Ottawa, City of
Oakville, Town of
Milton, Town of
Brampton, City of
Pickering, City of
Hamilton, City of
Oshawa, City of
Official Plan Amendment
Plan of Subdivision
Zoning By-Law Amendment


Survey of Lower/Single Tier Planning Fees Related to Retail Development
(1,000 m² GFA)
$90,000
$80,000
$70,000
$60,000
$50,000
$40,000
$30,000
$20,000
$10,000
$-
Mississauga, City of
Toronto, City of
Markham, City of
Oakville, Town of
Halton Hills, Town of - Proposed
Halton Hills, Town of - Current
Hamilton, City of
Ottawa, City of
Ajax, Town of
Whitby, Town of
Burlington, City of
Milton, Town of
Richmond Hill, Town of
Pickering, City of
Vaughan, City of
Oshawa, City of
Brampton, City of
Site Plan
Zoning By-Law Amendment


Survey of Lower/Single Tier Planning Fees Related to Industrial Development
(30,000 m² GFA)
$250,000
$200,000
$150,000
$100,000
$50,000
$-
Toronto, City of
Oakville, Town of
Markham, City of
Halton Hills, Town of - Proposed
Mississauga, City of
Whitby, Town of
Halton Hills, Town of - Current
Burlington, City of
Milton, Town of
Ajax, Town of
Ottawa, City of
Pickering, City of
Vaughan, City of
Hamilton, City of
Richmond Hill, Town of
Oshawa, City of
Brampton, City of
Site Plan

TOWN OF HALTON HILLS
Working Together Working for You!

REPORT TO: Chair and Members of Planning, Public Works & Transportation Committee

REPORT FROM: Melissa Ricci, Planner – Policy

DATE: April 10, 2018

REPORT NO.: PLS-2018-0031

RE: **Watershed Planning Guidance – HAPP Joint Submission**

RECOMMENDATION:

THAT Report No. PLS-2018-0031, dated April 10, 2018, and titled "Watershed Planning Guidance – HAPP Joint Submission", be received;

AND FURTHER THAT Council formally endorses the comments contained in the HAPP Joint Submission(attached as Schedule A of this Report) dated April 6, 2018, from the Halton Area Planning Partnership to the Ministry of the Environment and Climate Change (MOECC) regarding the document released on February 6, 2018, and titled "Watershed Planning in Ontario: Guidance for Land-use Planning Authorities" (available as Schedule B to this report);

AND FURTHER THAT a copy of Report No. PLS-2018-0031 be forwarded to the Ministry of the Environment and Climate Change (MOECC), the Region of Halton, the City of Burlington, and the Towns of Oakville and Milton, as the comments of Council for the Town of Halton Hills on the Watershed Planning Guidance.

BACKGROUND:

On February 6, 2018, the Province released the Draft Watershed Planning in Ontario: Guidance for Land-use Planning Authorities to support the implementation of policy amendments made through the Coordinated Plan Review (2017), which includes revisions to the Growth Plan for the Greater Golden Horseshoe, the Greenbelt Plan and the Niagara Escarpment Plan.

These new Plans set stronger requirements for municipalities and other planning authorities to undertake watershed planning to inform key land use planning and infrastructure decisions. For instance, the 2017 Growth Plan requires municipalities to complete watershed planning to inform land use decisions related to settlement area expansion, major developments and planning for municipal infrastructure. The Watershed Planning Guidance also supports the Provincial Policy Statement (2014) which requires planning authorities to protect, improve or restore the quality and quantity of water by using the watershed as the ecologically meaningful scale for integrated and long-term planning.

This report summarizes the content of the Halton Area Partnership (HAPP) Submission on the draft Watershed Planning Guidance. The Joint Submission has already been submitted to the Ministry of the Environment and Climate Change (MOECC), in order to meet the April 6 deadline for comments. Through this submission, HAPP provided general comments related to the Guidance document and comments specific to individual sections of the Guidance documents.

Specifically, Town staff highlighted that the Guidance document should:

- Clearly distinguish the scale, scope and deliverables of watershed planning/subwatershed planning and watershed plans/subwatershed plans;
- Provide specific transition timelines to ensure that new requirements do not negatively impact ongoing projects; and
- Clarify the distinction between adaptation and mitigation for integrating climate change and watershed/subwatershed planning processes

Watershed Planning in the Town

It is important to note that the Town has a long history of undertaking subwatershed planning. Recently, subwatershed plans are underway for secondary plan processes such as Vision Georgetown and Premier Gateway (Phase 1B). The Town through its Official Plan supports the preparation and implementation of watershed and subwatershed plans within the Town and the surrounding areas (Section C7.1). Watershed plans are related to an area of land that drains into a watercourse or body of water while subwatershed plans are specifically related to an area of land that drains into a tributary of a large watercourse or body of water. The intent of these plans is to provide direction on how to improve water quality, reduce flood damage and protect natural resources in a watershed or subwatershed.

Generally, the responsibility of preparing watershed plans rests with the Region in partnership with the appropriate Conservation Authority and in consultation with the Town (e.g. Sixteen Mile Creek Watershed Plan). Subwatershed plans are prepared by the Town in cooperation with the appropriate Conservation Authority and are typically prepared prior to the approval of a Secondary Plan, which guides development of greenfield areas (e.g. Vision Georgetown, Premier Gateway Phase 1B). Subwatershed Studies can also be led by the Conservation Authority as part of an overall program not directly related to development (e.g. Silver Creek, Black Creek)

COMMENTS:

The Watershed Planning Guidance contains information to assist municipalities and planning authorities in carrying out watershed planning including direction on how to prepare elements of a watershed and subwatershed plan and how to use watershed and subwatershed planning to inform land use, infrastructure planning and decision making. In general, HAPP supports the Province's goals and objectives related to the protection of water resources and the need for watershed planning to inform land use planning. The key points of the joint submission, which address the concerns of the Town of Halton Hills and the other local municipalities, can be summarized as follows:

1) Scope and Scale

HAPP recommends that the Guidance document should clearly distinguish between watershed and subwatershed planning. The distinction between the two terms is unclear throughout the document and the overlaps in terminology makes it difficult to determine the differences in deliverables, level of detail expected, roles and responsibilities and applicable timelines for watershed plans versus subwatershed plans.

The Province is encouraged to provide flexibility for municipalities to undertake watershed planning for the purpose of delineating a water resource system and scoping future subwatershed plans within their own jurisdictional boundaries. The preparation of larger watershed plans should be optional, if the requirements can be met in other ways.

Lastly, HAPP highlights that delineating water resource systems including ground water features and areas, surface water features and key hydrologic functions at the watershed level may result in unrefined data. Refinements will need to be conducted by municipalities at a subwatershed level as part of area-specific planning processes, where applicable.

2) Distinguishing Guidance from Policy

HAPP recommends that the Guidance document avoid using overly prescriptive language that could be interpreted as creating unintended new policy requirements and clarify the difference between undertaking watershed ‘planning’ as an informative process versus developing an actual watershed ‘plan’.

3) Transition

HAPP suggests that transitions provisions should acknowledge the importance of avoiding delays to ongoing review processes while maintaining flexibility for municipalities to determine the appropriate timing/sequencing of integrating updated requirements into the official plan review process.

The Province should also clarify if there are triggers for the initiation/updating of studies/plans, content, process and baseline standards for all scenarios that require watershed planning including for established settlement areas and greenfield areas.

4) Funding

Implementing new watershed planning processes will likely require additional staff and financial resources to support long-term planning studies in coordination with conservation authorities, upper-tier municipalities and municipalities sharing watershed boundaries. Monitoring processes requirements, identified in the Guidance document, will also need long term funding. The HAPP Joint Submission notes that the Province should commit additional funding to support municipalities in implementing new watershed planning requirements.

RELATIONSHIP TO STRATEGIC PLAN:

This report relates directly to the implementation of the Town Strategic Plan, in particular, **Strategic Direction I: Provide Responsive, Effective Municipal**

Government; the **Goal** to provide strong leadership in the effective and efficient delivery of municipal services, and the following Strategic Objectives:

> **I.6** To Participate fully in Region-wide initiatives to protect and promote the Town's objectives; and
>
> **I.7** To foster a greater understanding of the Town's roles and responsibilities and relationships with other orders of government.

This report also relates directly to **Strategic Direction B: Preserve, Protect and Enhance our Environment** and the follow Strategic Objective:

> **B.1** To protect and conserve the quantity and quality of our ground and surface water resources, and ensure the integrity of our watersheds and aquatic ecosystems through integrated watershed planning and management.

FINANCIAL IMPACT:

There is no direct financial impact associated with this report.

CONSULTATION:

The Joint Submission to which this report relates was the result of consultation with the Halton Area Planning Partnership, represented by planning staff from the Region of Halton, the City of Burlington, and the Towns of Oakville, Milton, and Halton Hills.

PUBLIC ENGAGEMENT:

The Province published the Watershed Planning Guidance in the Environmental Registry of Ontario on February 6, 2018. The registry allows the public to comment and share thoughts on proposed acts, regulation and policies. The consultation was open until April 7, 2018.

SUSTAINABILITY IMPLICATIONS:

The Town is committed to implementing our Community Sustainability Strategy, Imagine Halton Hills. Doing so will lead to a higher quality of life.

The recommendation outlined in this report **advances** the Strategy's implementation.

This report supports the **Environmental Health Pillar** which emphasizes water resource conservation, particularly, the goal to protect and enhance water resources over the long-term and in the face of population growth, climate change and other challenges. In summary the alignment of this report with the Community Sustainability Strategy is **Good**.

If the Province considers the comments and addresses the concerns presented in the Joint Submission, the Draft Watershed planning Guidance will ultimately support the

Town's sustainability goal to prepare and implement watershed plans that can protect, enhance, and rehabilitate local water resources.

COMMUNICATIONS:

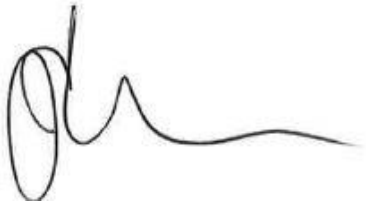
A copy of this report will be forwarded to the Ministry of Environment and Climate Change (MOCC), the Region of Halton, the City of Burlington, the Towns of Milton and Oakville, the Niagara Escarpment Commission, Conservation Halton and Credit Valley Conservation.

CONCLUSION:

This report summarizes the comments of Town Staff with regard to the draft Watershed Planning Guidance. It is recommended that this report be received by Council and that the HAPP Joint Submission (attached as Schedule A of this report) be endorsed.

Reviewed and Approved by,

Steve Burke, Manager of Planning Policy



John Linhardt, Commissioner of Planning and Sustainability

Brent Marshall, CAO

Halton Area Planning Partnership (HAPP)

Watershed Planning Guidance Joint Submission

April 6, 2018

Introduction

The Halton Area Planning Partnership (HAPP) is comprised of Halton Region and the following Local Municipalities: the City of Burlington, the Town of Halton Hills, the Town of Milton, and the Town of Oakville.

This submission represents HAPP's response to the document "Watershed Planning Guidance" which was placed on the Environmental Registry as a Policy Proposal Notice (EBR Registry Number: 013-1817) on February 6, 2018. The Guidance document has been prepared by the Province and is intended to help municipalities in implementing Provincial direction related to watershed planning.

The Halton Area Planning Partnership welcomes this opportunity to have its collective voice heard by responding to the proposed Watershed Planning Guidance document. HAPP's response includes:

1. This letter, which contains general comments regarding the whole of the Guidance document.
2. Appendix 1, which contains in table form comments specific to individual sections of the Guidance document.

Background

The proposed Watershed Planning Guidance primarily supports the implementation of policy amendments made through the Coordinated Plan Review (2017), which includes revisions to the Growth Plan for the Greater Golden Horseshoe, the Greenbelt Plan, the Niagara Escarpment Plan and the Oak Ridges Moraine Conservation Plan. These policy amendments set stronger requirements for municipalities and other planning authorities to undertake watershed planning to inform key land use planning and infrastructure decisions.

The Watershed Planning Guidance also supports the Provincial Policy Statement, 2014 which requires planning authorities to protect, improve or restore the quality and quantity of water by using the watershed and the subwatershed as the ecologically meaningful scale for integrated and long-term planning.

Watershed planning is an opportunity for municipalities and other planning authorities to work collaboratively towards watershed objectives by creating a framework for the management of human activities, land, water, aquatic life and resources within a watershed, and for the assessment of cumulative, cross-jurisdictional and cross-watershed impacts. The proposed Watershed Planning Guidance contains the following information to assist municipalities and planning authorities in carrying out watershed planning:

- Overview of watershed and subwatershed planning, including policy context, key principles, process and components of a watershed plan.
- Direction on carrying out effective and meaningful engagement.
- Indigenous interests and considerations in watershed planning.
- How to prepare elements of a watershed and subwatershed plan.
- How to use watershed and subwatershed planning to inform land use and infrastructure planning and decision-making.

Key Points of HAPP's Response

1. Scope and Scale

a) According to the Guidance document, a watershed plan is a broad document that identifies current conditions and challenges, and sets out goals and objectives. Subwatershed plans, typically prepared in support of area-specific secondary plans, are informed by a watershed plan and determine the potential impacts of proposed land use changes. Sections 2.5 and 7.1 provide definitions for both "watershed planning" and "subwatershed planning", yet the distinction between the two terms is often unclear throughout other sections of the Guidance document (see Appendix I for specific examples). Overlaps in terminology make it difficult to determine the differences in deliverables, level of detail expected, roles and responsibilities, and applicable timelines for watershed plans versus subwatershed plans. The Guidance document should clearly distinguish between the scope and scale of watershed and subwatershed plans, as well as the extent to which land use planning should be "informed by" watershed planning, according to each type of plan.

b) As noted in section 2.7 of the Guidance document, some municipalities may have a footprint in multiple watersheds or a given watershed might contain all or part of multiple municipalities. Section 2.7 also states that upper and single-tier municipalities and partner organizations in the Greater Golden Horseshoe will need to coordinate watershed planning across jurisdictional boundaries, although it is unclear if municipalities with shared watershed boundaries are expected to develop a joint watershed plan. The Guidance document should maintain flexibility for municipalities to undertake watershed planning for the purposes of delineating a water resource system and scoping future subwatershed plans within their own jurisdictional boundaries, and that the preparation of larger watershed plans should be optional.

c) Section 6.6 of the Guidance document introduces the process of Cumulative Effects Assessment (CEA), which is a method of assessing how much the environment has changed up until today, and what might occur in the future due to development as well as stressors such as climate change. The implementation of CEA as an integral part of the watershed planning process is generally a welcome addition, since it provides a reliable quantitative method for protection, enhancement or restoration of the quality and quantity of water within the watershed. However, additional details regarding scale, budgeting, timelines and intended use would be beneficial. The Guidance document should also clarify whether the resulting data should be used as a higher level, conceptual decision-making tool (similar to the approach used for Source Water Protection) or if the intent is to evaluate the impacts of individual development applications as a part of the approvals process.

d) Section 4.2 of the Guidance document directs municipalities to identify water resource systems as part of watershed characterization work. Although there are slight variations across Provincial policies and plans, water resources systems generally include ground water features and areas, surface water features, hydrologic functions, key hydrologic features and areas, and natural heritage features and areas. As delineating these features and functions at a watershed scale may result in unrefined data, municipal data should be used to refine the delineation of water resource systems and natural heritage

systems where appropriate municipal policies are in effect,. For example, section 145(9) of Halton Region's Official Plan contains policies directing local municipalities to conduct refinements at a subwatershed level as part of area-specific planning processes, where applicable.

2. Distinguishing Guidance from Policy

e) The Guidance document contains several examples of overly prescriptive language that introduces requirements beyond Provincial policy (see Appendix 1 for specific examples). The Growth Plan, 2017 (Section 1.2.3) outlines that, although guidance material may be issued to assist decision-makers with implementing Provincial policies, the information, technical criteria, and approaches outlined in guidance material are meant to support, but not add to or detract from, Provincial policy. It is strongly recommended that the Guidance document be reviewed to remove overly prescriptive language and replace it with more discretionary language to enable flexible application.

f) The differences between undertaking watershed 'planning' as an informative process versus developing an actual watershed 'plan' should be clarified in terms of deliverables, as well as cross-jurisdictional coordination across spatial and temporal scales. For example, while section 2.1 of the proposed Guidance document indicates that a watershed plan document *can* be produced as the key deliverable of Phase 3, the rest of the document generally refers to the processes of "watershed planning" and "subwatershed planning" (subwatershed planning being a component of watershed planning). Further, neither the Growth Plan nor the Greenbelt Plan reference watershed "plans" as a required deliverable of undertaking watershed "planning". The components/outcomes of "watershed planning" should be outlined in a manner that more clearly communicates that "watershed plans" are only one possible output. The Guidance document should also better distinguish which components link to the Provincial policy conformity requirements contained in section 2.6 and Appendix A.

g) The Guidance document indicates that the water resource system should be identified through the process of "watershed planning", which mirrors the language of both the Growth Plan, 2017 (section 4.2.1) and the Greenbelt Plan, 2017 (section 3.2.3). As the Guidance document indicates that water resource system mapping can be completed during Phase 1, it should be clarified that the preparation of a watershed plan is not necessary to attain conformity with Provincial policy. To reinforce this distinction, it is strongly recommended that "Water Resource Systems" also be included as a separate section outside of Phases 1 to 3 of watershed plan development (see Appendix 1 for specific suggestions regarding the proposed content of this section). Including this material in a separate section is critical to providing clarity that such systems can be developed without having to complete all phases of watershed/subwatershed plan development; their development can also be informed by watershed planning or other available information.

3. Transition

h) Section 7.1, Step 3 of the Guidance document indicates that watershed planning should be undertaken alongside official plan reviews and official plan amendments, and section 2.7states that the Provincial One Window Planning Service will review applicable land use planning decisions (eg. Official Plans and Plans of Subdivision) to ensure that they

have been informed by watershed planning in accordance with the Guidance document. Transition provisions should acknowledge the importance of avoiding delays to ongoing review processes, while maintaining flexibility for municipalities to determine the appropriate timing/sequencing for integrating updated watershed planning requirements (i.e. water resource system mapping) into their official plan review processes

i) The Growth Plan, 2017 (sections 4.2.1.3) requires that growth allocation and planning for water, wastewater, and stormwater infrastructure be informed by applicable watershed planning, and that planning for designated greenfield areas be informed by a subwatershed plan or equivalent. As the complexity and scale of watershed planning exercises for established settlement areas can vary significantly from those in greenfield areas, the Guidance document should clarify if there are triggers for the initiation/updating of studies/plans, content, process and baseline standards for both scenarios. Transition provisions should acknowledge the importance of avoiding delays to ongoing studies, while also clarifying how existing watershed plans (e.g. Bronte Creek, Sixteen Mile Creek, etc.) should be revised/scoped to reflect/accommodate redevelopment and intensification within established settlement areas. This guidance would enable more effective scoping of municipal review processes.

4. Funding

j) The Guidance document represents a substantial expansion to municipal responsibilities and introduces additional complexities pertaining to watershed planning processes. Implementation of updated Provincial requirements will likely to require additional staff and financial resources to support long term planning studies in coordination with conservation authorities, local municipalities and municipalities sharing watershed boundaries. Monitoring processes for adaptive management requirements will also require long term funding. It is recommended that the Province commit funding to support municipalities in managing the additional costs to implement new watershed planning guidance.

5. Document Structure

k) Due to the length and complexity of the Guidance document, it is challenging to distinguish technical content from general background information. Usability would be improved if Phases 1 through 3 in the document were contained in a succinct technical guide with illustrated process flow charts summarizing each phase.

l) Background information outlining higher level concepts would be better contained in a separate yet complementary document or appendix (the Natural Heritage Reference Manual is a good example of this structure), along with additional case studies demonstrating best practice examples of implementation.

m) Continuation of section number references on each page (e.g. sidebar) would also make it easier to navigate the Guidance document.

Conclusion

HAPP supports the Province's goals and objectives related to the protection of water resources and the need for watershed planning to inform land use planning. Although there is a long history of undertaking watershed planning in Halton Region, HAPP recognizes that the degree to which municipalities undertake watershed planning varies across the Province.

HAPP also recognizes that the purpose of the Guidance document is to aid municipalities and other planning authorities in fulfilling Provincial land use planning requirements, as it relates to watershed planning. To ensure effective implementation of Provincial direction, the Guidance document should concisely distinguish the scale, scope and deliverables of watershed planning/subwatershed planning and watershed plans/subwatershed plans, while also providing specific transition timelines to ensure that new requirements do not negatively impact ongoing projects. It should also be explicit that the Guidance document is a support tool, and should not introduce additional requirements beyond Provincial policy. HAPP recommends that additional consultation regarding the proposed Watershed Planning Guidance be undertaken, to ensure that the document fully reflects practical municipal input.

Thank you for providing the Region and its local municipalities the opportunity to comment on this important implementation tool for the 2017 Provincial land use plans. We welcome the opportunity to have further discussions with Provincial staff to address our recommendations prior to the release of the final Guidance document.

Respectfully submitted,

Curt Benson, MCIP, RPP
Director of Planning Services &
Chief Planning Official
Halton Region

Bill Janssen, MCIP, RPP
Interim Director and Chief Planner
Department of City Building
City of Burlington

John Linhardt, MCIP, RPP
Commissioner of Planning & Sustainability
Town of Halton Hills

Barb Koopmans, MCIP, RPP
Commissioner of Planning & Development
Town of Milton

Mark H. Simeoni, MCIP, RPP
Director of Planning Services
Town of Oakville

Watershed Planning Guidance – Draft Document Review APPENDIX 1

Guidance Document Section Reference	Guidance Document Text Reference	HAPP Comments
Introduction		
1 How to Read This Document	*Not applicable*	Section 1 should incorporate additional content mirroring the "How to Read this Plan" component of Provincial Plans such as the Growth Plan, 2017 (section 1.2.3) to clarify the relationship between the Guidance document and the Provincial policy requirements outlined in section 2.6 and Appendix A. This addition would help to clarify, at the outset of the document, that guidelines are a support tool only and are not intended to introduce new policy requirements.
2 Introduction	*Not applicable*	*No comment*
2.1 Watershed Planning Process	*Not applicable*	a) The definition of watershed planning should be in alignment with the definition contained in the Growth Plan, 2017. c) It would be beneficial to consider adding a principle relating to the repurposing of existing background data wherever possible to facilitate more cost efficient watershed planning and avoidance of unwarranted, resource intensive and time consuming additional studies. d) The Phase 2 work will essentially form the assessment of impacts and management of natural resources. Determining "cumulative effects" is listed as an outcome of this work. It should be recognized that the results (or "cumulative effects") could appear much different between a watershed and subwatershed study. The Guidance document should be specific as to how impact should be assessed and which

Guidance Document Section Reference	Guidance Document Text Reference	HAPP Comments
		targets are critical at a watershed versus subwatershed scale. e) The guidance document suggests that past studies represent "work already completed" in the context of a new watershed/subwatershed plan. However, it should be recognized that various studies within the same watershed/subwatershed may have used slightly different assumptions and assessment tools. When undertaking a new watershed plan, in the context of the Guidance document, it should be recognized that additional work may be required to integrate "work already completed" with new assessments, with a reliance on the comprehensive assessments of impacts to base management decisions.
2.2 Principles	*Not applicable*	*No comment*
2.3 Brief History of Watershed Planning in Ontario	*Not applicable*	*No comment*
2.4 Current Framework	*"The approval framework for watershed planning and subwatershed plans has not changed as a result of the Coordinated Land Use Planning Review."*	a) Suggested modification: *"The approval framework for watershed **plans** and subwatershed plans has not changed as a result of the Coordinated Land Use Planning Review."* This modification is suggested to maintain consistency in terminology, and because there is no approval framework for the <u>process</u> of watershed planning. b) The Guidance document should outline the current

Guidance Document Section Reference	Guidance Document Text Reference	HAPP Comments
		municipal approval framework for watershed planning [plans] and subwatershed plans.
2.5 Definitions of Watershed Planning	*Not applicable*	"Watershed planning" is the process through watershed and subwatershed plans are developed, each containing a different level of scale and detail. Subwatershed plans are therefore understood as being developed through "watershed planning", yet the undefined term "subwatershed planning" has been introduced, causing some confusion. The term "subwatershed planning" should be removed and replaced with "watershed planning" throughout the Guidance document, for consistency with Provincial definitions for watershed planning, watershed plans and subwatershed plans. The elements listed in the definition of "watershed planning" are those that are <u>typically</u> included in watershed planning; they should not be considered required elements. Notwithstanding this distinction, Section 2.6 of the Guidance includes a table under the heading "Checklists for meeting Provincial Policy Requirements". It is not appropriate to present the typical elements contained within such a study as actual study requirements through a guidance document.
2.6 Summary of Policy Requirements	*Not applicable*	*No comment*
2.7 Roles & Coordination	*Not applicable*	It may be beneficial to include a figure illustrating the roles and responsibilities of each participant as they relate to Phases 1 to 3 of watershed planning and their ultimate approval and implementation.

Guidance Document Section Reference	Guidance Document Text Reference	HAPP Comments
2.8 Equivalency & Transition Provisions	a) *"Municipalities and planning authorities should assess the components of watershed planning that are outlined in this section and determine whether the assessments and studies they currently have would meet the components required under each plan. If not, then the assessments and studies need to be updated accordingly."* b) *"While developing a watershed or subwatershed plan, municipalities and planning authorities can use equivalent studies to inform their planning and decision- making."* c) *"At its core, an equivalent study to watershed planning will need to:"*	a) Transitional timelines should ensure that ongoing watershed/subwatershed plans are not impacted, as re-evaluating studies currently underway may result in new study requirements and possible approval delays. b) Considering that sub-watershed plans are typically development driven and do not always align with the boundaries of a singular drainage area, additional criteria and case studies relating to equivalent studies should be provided. c) This choice of language removes the flexibility intended in associated policy. It is recommended that the term "need" be replaced with "may" or "should".
3 Engagement and Indigenous Perspectives	*Not applicable*	For consistency with section 7.2, section 3 should address alignment between watershed planning and the Class Environmental Assessment process, in relation to engagement.
3.1 Effective Engagement & Committees	*Not applicable*	*No comment*
3.2 Partnering with Indigenous Communities	*Not applicable*	*No comment*

Guidance Document Section Reference	Guidance Document Text Reference	HAPP Comments
4 Watershed Delineation and Characterization	*Not applicable*	*No comment*
4.1 Delineation of Watersheds & Subwatersheds for Land Use Planning	*Not applicable*	*No comment*
4.2 Identification of the Water Resource System	a) *"With key features identified, there is now a need to determine functions and linkages within the system."*	a) Suggested modification: *"With key features identified, there is now a need to determine functions and* ***interrelationships*** *within the system."* This modification is suggested to maintain consistency in terminology, as the title of this section uses the term "functions and interrelationships". b) The Guidance document should specifically reference municipal natural heritage system mapping, where available, as a source of information under Step 4 "Watershed Information Sources". c) The Guidance document should include flexibility regarding the equivalency criteria and water resource system components outlined in section 2.8, to acknowledge the limitations faced in existing serviced settlement areas and/or areas without proposed development activity to trigger a study or review. d) While some aspects of Halton Region's water resource system can be delineated based on existing data (e.g. key

Guidance Document Section Reference	Guidance Document Text Reference	HAPP Comments
		hydrologic features), others would require new or additional mapping (e.g. key hydrologic areas). The Guidance document should specify whether such mapping is to be conducted as part of the development of a watershed plan, or through watershed planning generally (i.e. subwatershed plan or secondary plan processes). e) The Guidance document should elaborate on the relationship of the water resource system to other systems that the Province has directed municipalities to identify (e.g. natural heritage and agricultural) in terms of mapping and policy application. A figure illustrating the various components of the water resource system and how to map areas of overlap (particularly in terms of the natural heritage system) would provide clarity in this regard. f) To better guide the identification the water resource system outside of watershed plan development, it is recommended that the Guidance document include additional direction in a separate section. This section should elaborate on the actual policy requirements relating to water resource system development (including that elements listed in the definition are typical and not necessarily required in all instances), list the various components features and areas to be incorporated within such systems, identify the data sources for these components and describe how they can be developed under multiple scenarios (1 – through watershed/subwatershed plan development , 2 – informed by watershed/subwatershed planning, and 3 – using other available information).
4.3 Characterization of	a) *"Monitoring the watershed (e.g., in*	a) Additional detail should be provided to explain which

Guidance Document Section Reference	Guidance Document Text Reference	HAPP Comments
Existing Conditions	*activities such as monitoring amphibians and participating in bird census) helps to build stewardship."* b) c) *"Five years of pre-development monitoring is appropriate to achieve a baseline condition;"*	aspects of watershed monitoring build stewardship and at what levels. b) The Guidance document should avoid the use of language that could be interpreted as prescriptive language, for example "is appropriate". c) For single and upper-tier municipalities to achieve conformity with the 2017 Provincial plans by 2022, pre-development monitoring would have had to commence in 2017. Additional guidance regarding transition provisions is required in this regard.
5 Setting the Vision, Goals, Objectives & Targets	*Not applicable*	*No comment*
6 Watershed Planning Elements & Best Practices	*Not applicable*	*No comment*
6.1 Water Quantity, Water Budget, & Water Conservation Plans	*Not applicable*	Section 6 is focused on Phase 2 activities, yet section 6.1 makes reference to preparing a water conservation plan, components of which are also carried during in Phase 3 (Implementation). This is an example of how the activities/studies listed throughout the Guidance document are not clearly and consistently linked to each of the Phases (1-3).
6.2 Water Quality & Nutrient Load Assessment	*Not applicable*	Discussion related to Source Water Protection and the development of Risk Management Plans by municipalities is provided on page 66. The following text is included in this section: "*Municipalities are required to develop risk management plans for chloride and pathogens in identified*

Guidance Document Section Reference	Guidance Document Text Reference	HAPP Comments
		vulnerable areas for Source Protection Planning.". Further detail on other water quality threats (e.g., sewage systems, agricultural and non-agricultural source material) that may be the subject of risk management plans and also relevant to water quality characterization and assessment through watershed studies would be helpful. For the sake of clarity, the text could also note that chloride, pathogens, and other threats are evaluated against quantities and vulnerability scores before it is determined that a Risk Management Plan is required. Discussion related to best management practices for road salt application by municipalities is provided on page 66. The following text is included in this section: "*Municipalities should continue to proactively manage the use of chloride in the watershed by following ECCC's Code of Practice for the Environmental Management of Road Salt, participating in programs like "Smart about Salt' and promoting salt and water efficient water softeners.*". The discussion of particular road salt management practices in this section under the heading of Source Water Protection may be confusing to the reader as specific management practices for road salt are not specified in the Clean Water Act, 2006. It is recommended that the discussion of road salt management be moved elsewhere in this section under the heading of "*What Is It?*"
6.3 Natural Hazards in Watershed Planning & Subwatershed Plans	*"The policies generally direct development outside of particular hazardous lands, such as adjacent to rivers, streams and small inland lake systems impacted by flooding*	a) Section 6.3 indicates that development should generally be directed away from hazards, but also includes discussion surrounding measures for mitigation. The Guidance document should provide additional detail the types of scenarios where mitigation would be an appropriate consideration.

Guidance Document Section Reference	Guidance Document Text Reference	HAPP Comments
	and/or erosion hazards (PPS 3.1.1), and also restrict development and site alteration in defined hazards areas, such as the dynamic beach hazard and a floodway (PPS 3.1.2)." *"By understanding the function and susceptibility of various river, stream, and lake systems to disturbance, the potential impacts of proposed developments or remedial measures can be identified, and methods of reducing these impacts through design changes or mitigative measures can be implemented. This can involve inclusion of measures to enhance the overall health of the watershed in relation to mitigating risks due to natural hazards."*	b) Section 6.3 discusses hazards related to erosion and flooding but does not address other hazards such as wildlands fire. The Guidance document should reflect that subwatershed studies identify all constraints and hazards, which goes beyond water resources.
6.4 Climate Change & Watershed Management	*Not applicable*	Section 6.4 should provide tangible direction regarding the integration of climate change and watershed/subwatershed planning exercises. Although the introduction discusses the distinction between mitigation and adaptation, the methodology does not clearly distinguish between the two. Recommended additions are as follows: <u>Mitigation</u>: Conduct a GHG emission modelling/inventory exercise for potential land development scenarios and prioritize scenarios with lower GHG emission profiles.

Guidance Document Section Reference	Guidance Document Text Reference	HAPP Comments
		Adaptation: Complete a GHG modelling exercise to produce a future outlook for climate change and identify priority climate impacts facing the watershed/subwatershed (i.e. those that produce major adverse impacts and have a high probability of occurrence). Prioritize scenarios with lower climate impacts. Integration: Integrate findings from mitigation and adaptation exercises into one or more "climate ready" development scenarios and evaluate them against other economic, social and environmental considerations.
6.5 Connections to Natural Systems	a) *"In the Performance Indicators for the Growth Plan, these features were considered as indicators to assess performance in relation to minimum guidelines for watershed coverage outlined by ECCC…"* *"The targets outlined in HMHE? could form the basis for developing goals and targets in local watershed plans and subwatershed plans."* b) "*Criteria for identification of core and linkage areas are provided in Development of the Regional Natural Heritage System for the Growth Plan for the Greater Golden Horseshoe, building on the NHRM and HMHE?."*	a) It is not clear which Performance Indicators the Guidance document is referencing, as the Performance Indicators for the Growth Plan, 2017 have not yet been released or circulated for comment, to HAPP's knowledge. Further, the Guidance document should indicate how these performance indicators would link to the targets outlined in How Much Habitat is Enough. b) This section should also state that municipal criteria may also exist and should be considered as appropriate. c) Both Phase 1 and 2 indicate that connections to natural heritage systems should be identified. The Guidance document should be streamlined to eliminate repetition of actions across phases.

Guidance Document Section Reference	Guidance Document Text Reference	HAPP Comments
6.6 Cumulative Effects Assessment	a) *"The Ministry of the Environment and Climate Change Permit to Take Water program takes cumulative effects into account when decisions are made on permitted water takings. The program follows a set of six principles, of which cumulative effects is Principle 4: The Ministry will consider the cumulative impacts of water takings."* b) *"The credibility of a watershed plan is dependent upon its approach to CEA. Many believe that CEA is an overwhelming and unrealistic task to complete. This however, is based on an assumption that CEA involves monitoring and assessment of everything, everywhere all of the time. CEA can be directed, focused and adaptively managed to key indicators and risks within a watershed."* c) *"The way this Watershed Planning Guidance is structured might suggest CEA is something independent of the other sections of this guidance document. In fact, CEA is the integrator of all of it."* d) *"Step1: This component of CEA*	a) Based on experience within Halton Region, MOECC considers CEA in the area surrounding the PTTW property through studies conducted by consultants on behalf of the applicant. These studies do not take into account the cumulative impact on the watershed or subwatershed as a whole. As such, it is not clear how this approach can be expanded to the watershed scale. Any predictive model, CEM method or DSS used by the ministry in the PTTW process that could be used for watershed planning should be included in the guidance document. b) Current studies conducted through development driven secondary plan process, consider key indicators relevant to land use change. It is unclear whether they would be considered equivalent CEAs, or a building block of a watershed scale CEA. c) Based on the current structure of the Guidance document, CEA does appear to be an independent element in the watershed planning process. The Guidance document should be restructured to demonstrate how different elements in each phase of the watershed planning process are interrelated with CEA. An example of CEA done through the watershed planning process would be very helpful. d) The definition of boundaries for CEA seems to allow for different scales than of that discussed in the rest of the Guidance document. As such it is unclear whether the CEA requirement applies to the entire watershed plan area. e) The Guidance document highlights an issue regarding the

Guidance Document Section Reference	Guidance Document Text Reference	HAPP Comments
	begins with defining the boundaries of the study area for the assessment. These boundaries are application specific and can be political or administrative, watershed, or regional. In the context of watershed planning by municipalities, one would assume that the boundary would be the watershed (as delineated in the early steps of watershed planning). However, depending upon the question or the development pressures, boundaries of a CEA could be at a sub-watershed scale or could also include multiple jurisdictions depending upon the watershed size." e) *"It has been discussed in the literature of who should be responsible for development of such a system. Industry for example, has raised the issue in the literature a number of times indicating how difficult, expensive and unrealistic it is for project proponents to carry the burden of assessing their project application relative to cumulative effects where they are required to conduct regional CEA as a single project proponent. The jurisdictional complexity in Canada also makes it*	reported challenges faced by industry in undertaking CEAs and provides a series of recommendations. More clarification is required on how municipalities can work with the private sector to accomplish these recommendations and/or what role the Province could play to facilitate these interactions.

Guidance Document Section Reference	Guidance Document Text Reference	HAPP Comments
	difficult for a single government agency to implement and manage the DSS tools."	
6.7 Assessment of Land Use & Management Scenarios	*Not applicable*	*No comment*
7 Implementation	*Not applicable*	*No comment*
7.1 Watershed Plan & Subwatershed Plan Development	*Not applicable*	*No comment*
7.2 Informing Land Use Planning & Integrated Planning for Water, Wastewater & Stormwater	"*Municipalities and watershed practitioners interested in harmonizing the subwatershed and EA planning processes should review the current EA requirements for the types of projects that could be anticipated as a result of subwatershed planning, and integrate climate change considerations into EA processes."* *"Ongoing monitoring during implementation and adaptive management will help to determine if planning, design, and development restrictions are successful in protection of water and management of land uses and resources."*	Discussion related to the Environmental Assessment Act and the Municipal Class Environmental Assessment (MCEA) process is provided on pages 118 and 119. More clarification is required regarding what is meant by the term "*harmonizing*", and specifically how subwatershed plans are intended to inform and serve as inputs to EAs, or vice versa. Discussion related to ongoing monitoring during plan implementation is provided on pages 117 and 118. What is the scope of this monitoring, and would it be in addition to the area-specific recommendations for monitoring typically included in Subwatershed Plans? Who would be responsible for coordinating and executing monitoring programs? More detail regarding the scope and nature of proposed monitoring to support plan implementation is required in this section and throughout the document.

Guidance Document Section Reference	Guidance Document Text Reference	HAPP Comments
7.3 Implementing The Plans Beyond Municipal Policy & Land Use Decision-Making	*Not applicable*	*No comment*
8 Monitoring & Adaptive Management	*Not applicable*	Watershed plans typically lack robust 'contingency' provisions requiring area-specific corrective responses or additional management actions post development. For example, if monitoring data indicates that stream temperature has increased as a result of development, rather than adding infiltration trenches to cool runoff, such measures are usually only applied to future development scenarios. The Guidance document should be clear on the expectations and implications of adaptive management by specifying minimum data standards and recommending provisions for additional measures that may be required post-development, established through the development approvals process.
9 Resources	*Not applicable*	As currently formatted, this section constitutes a reference list for the sources used to prepare the Guidance document. To be functional as a "resource" section, the contents should either be organized by theme or provided as an annotated bibliography.
10 Abbreviated Terms	*Not applicable*	*No comment*
11 Appendix A	*Not applicable*	*No comment*

Watershed Planning in Ontario

Guidance for land-use planning authorities

DRAFT February 2018

Ontario

Table of Contents

Please note that this guidance is a draft for engagement purposes. The Province continues to work with municipalities, other interested parties, and First Nations and Metis communities and organizations in developing this document. Any examples are for illustrative purposes of the concepts proposed for watershed planning.

1 How to Read this Document

Watershed Planning Guidance is intended to support municipalities in watershed planning throughout Ontario, to support the implementation of the four provincial land use plans – the Growth Plan for the Greater Golden Horseshoe, 2017 (Growth Plan), the Greenbelt Plan, 2017 (Greenbelt Plan), the Oak Ridges Moraine Conservation Plan, 2017 (ORMCP), and the Niagara Escarpment Plan, 2017 (NEP) and the Provincial Policy Statement, 2014 (PPS). The PPS provides policy direction for communities across Ontario, while provincial land use plans provide policy direction for specific areas.

The Watershed Planning Guidance document is divided into seven main sections, plus additional resources, as outlined in the following paragraphs.

Section 2 Introduction

This section should be consulted for background information and context for watershed and subwatershed planning.

Requirements for watershed planning and subwatershed plans in Ontario's existing legislative and strategic contexts are identified in section 2.1, taking into account province-wide and geographically-specific policies (i.e. PPS and the provincial plan areas). The remainder of section 2 addresses principles, history, current framework, definitions, policy requirements, roles and equivalency provisions.

Section 3 Engagement and Indigenous Perspectives

This section should be consulted to gain an understanding of potential engagement approaches, considerations and Indigenous perspectives.

This section provides best practices and resources for engagement in section 3.1, including public and stakeholder engagement, steering committees, and partnerships.

Guidance is provided for Indigenous engagement in municipal watershed planning in section 3.2, including determining interests and considerations, and traditional knowledge.

Section 4 Watershed Delineation & Characterization

This section should be consulted to determine best practices, approaches, and resources for watershed characterization.

This section provides resources to support watershed characterization, which is a fundamental component of watershed and subwatershed planning. Connections are provided to various watershed planning elements section 6, such as water quality, climate change, and natural systems.

Delineation of watersheds and subwatersheds for municipal planning is outlined in section 4.1.

Identification of water resource systems, as defined in the PPS, Growth Plan, and Greenbelt Plan, is outlined in section 4.2.

Characterization of existing conditions is outlined in section 4.3.

Section 5 Setting the Vision, Objectives, Goals, & Targets

This section should be consulted to determine approaches for visioning and setting objectives, goals, and targets in watershed and subwatershed planning.

This section provides resources to support setting watershed-specific visions, objectives, goals, and targets. Connections with monitoring and adaptive management are provided, to ensure that objectives, goals, and targets for management actions and ecological state can be effectively monitored and adapted.

Section 6 Watershed Planning Elements & Best Practices

This section should be consulted for guidance in undertaking elements of watershed planning.

This section provides resources to support the following components:

- Water budget and water conservation plans are outlined in section 6.1
- Water quality and nutrient load assessments are outlined in section 6.2
- Natural hazards, as they relate to municipal watershed planning, are outlined in section 6.3
- Climate change and extreme weather event considerations, which have been incorporated throughout the document, are outlined in section 6.4.
- Natural systems, and interconnections with water systems and watershed planning, are outlined in section 6.5.
- Cumulative impact assessment approaches are outlined in section 6.6.
- Land use and management scenario analysis methods and best practices are outlined in section 6.7.

Section 7 Developing the Plan & Implementing Provincial Policy

This section should be consulted for guidance to support implementation of watershed planning to inform land use and infrastructure planning.

Development of watershed plans and subwatershed plans, and connections to implementation considerations, are outlined in section 7.1.

Water, wastewater, and stormwater planning considerations are outlined in section 7.2.

Integration of watershed planning with land use planning and development decision-making is also outlined in this section.

Considerations and best practices for implementing watershed planning beyond municipal land use planning are outlined in section 7.3.

Section 8 Monitoring & Adaptive Management

This section should be consulted for guidance in developing environmental monitoring plans and adaptive management strategies.

This section provides guidance regarding environmental monitoring plans; data and communication; adaptive management; watershed plan review and updates; and planning, design, and development approaches to adaptively manage land and water resources.

Section 9 Resources Considered

This section should be consulted for bibliographic references, additional information, and external resources and links related to watershed planning.

This section lists the resources that were considered in the development of the watershed planning guidance, and directs users to additional resources relevant to implementation of watershed planning.

Abbreviated Terms

Appendix A

Summary of requirements by policy area.

2 Introduction

Watershed Planning Guidance is intended for use by municipalities and other planning authorities, in fulfilling provincial land use planning requirements related to watershed and subwatershed planning. The Watershed Planning Guidance will be of interest to those undertaking watershed planning and developing subwatershed plans, as well as those involved in the development and review of policy documents, and the review and approval of development applications.

2.1 WATERSHED PLANNING PROCESS

Watershed planning is an ongoing process involving the development, implementation and regular updating of a watershed plan, and should generally involve the following steps:

Phase 1 Existing Conditions

- Watershed Delineation & Characterization (Section 4)
- Setting the Vision, Objectives, Goals, & Targets (Section 5)

Phase 2 Impacts, Scenarios, and Directions

- Watershed Planning Elements & Best Practices (Section 6)

Phase 3 Watershed Plan Implementation

- Developing the Plan & Implementing Provincial Policy (Section 7)
- Monitoring and Adaptive Management (Section 8)

At the end of Phase 1, an 'existing conditions report' can be produced as a deliverable. During Phase 2, management alternatives can be presented to the public for feedback. In Phase 3, a watershed plan document can be produced as the key deliverable.

More phases can be added to the three listed above in order to respond to local concerns and needs. In some situations, because of resource limitations, an initial phase could be simply the gathering of background data, and establishment and preparation of terms of reference.

Phase 1 will:

- outline the location, extent, sensitivity and significance of all components of the natural systems;
- examine current land uses and extent of pervious/impervious cover;
- identify land/water features, linkages, and processes;

- identify factors and influences that are important to the integrity of various existing or desired components of the environment;
- identify watershed and subwatershed goals, objectives, and targets;
- identify opportunities for protection, enhancement, rehabilitation, and development;
- identify monitoring needs; and
- identify plan review and update schedules.

The complexity of Phase 1 work depends on whether watershed plans or other relevant environmental planning studies have been completed. For example, watershed and subwatershed objectives and targets may already be established and information on natural features to be protected may already exist in environmental or greenspace planning studies. Phase 1 of a watershed or subwatershed plan should incorporate or complement not duplicate previous relevant work. If no previous studies are available, some aspects of the watershed plan could be done as part of Phase 1 activities.

Phase 2 will:

Involve undertaking watershed planning elements specific to requirements outlined in the Growth Plan, Greenbelt Plan, ORMCP, and NEP, including but not limited to:

- water quantity, water budget, and water conservation plans;
- water quality and nutrient load assessment;
- natural hazards;
- climate change;
- natural systems;
- cumulative effects; and
- assessment of land use and management scenarios.

The scope of work undertaken in Phase 2 will depend on local watershed conditions, work already completed on a watershed basis, the applicable policy context, and identified issues and goals.

Phase 3 will:

Develop a plan that will provide

- areas to be protected, enhanced and rehabilitated;
- various types/intensities of proposed development and development criteria;
- water, wastewater and stormwater servicing requirements (existing and future) and related water supply and assimilative capacity needs;
- land and water use management practices and performance measures;
- targets for protection and restoration of riparian areas;
- best management practices and designs for the management of the quantity and quality of surface water and ground water; and

- an implementation strategy to guide development, those responsible for designing and building recommended works at what time, and responsibilities and requirements for cost-sharing, future studies, monitoring and maintenance;
- direction for implementation in municipal official plan policies, informing land use planning and decision-making, and other implementation considerations; and
- a strategy for adaptive management, including ongoing monitoring.

2.2 PRINCIPLES

Watershed planning and subwatershed plans should be guided by commonly accepted and held principles underlying watershed and subwatershed planning, including the following:

Ecosystem Based Approach. The ecosystem approach recognizes the interdependence of land, air, water and living organisms, including humans. The ecosystem approach uses best available science, considers cumulative impacts, encourages conservation of resources and promotes watershed and sub-watershed approaches.

Landscape Based Analysis. A modern and sustainable approach to managing Ontario's natural resources by managing over broader areas and longer time periods. Elements include: managing at appropriate scales; integrating and coordinating; assessing, managing, and mitigating risk; focusing science and information resources; and managing adaptively.

Precautionary Approach. Caution will be exercised to protect the environment when there is uncertainty about environmental risks.

Adaptive Management. Continuously improve and adapt policies and management approaches by monitoring impacts, assessing effectiveness, and adjusting actions while considering new science, traditional ecological knowledge and innovative design, practices and technologies, and the need to adapt to a changing climate.

Sustainable Development. The right to development should be fulfilled to equitably meet economic and societal needs while not compromising the environment for present and future generations.

Collaboration and Engagement. Municipalities are encouraged to engage the public, Indigenous communities and stakeholders in local efforts to implement watershed planning, and to provide the necessary information to ensure the informed involvement of local citizens.

Recognition of Indigenous Communities. Indigenous communities maintain a spiritual and cultural relationship with water. Their identity, cultures, interests, knowledge and traditional practices are considered in watershed planning initiatives.

2.3 BRIEF HISTORY OF WATERSHED PLANNING IN ONTARIO

Watershed planning has been evolving in Ontario for decades. In the early 1900s, binational legislation such as the 1909 *Boundary Waters Treaty* recognized the need for water management on a watershed basis. Introduction of the Grand River Conservation Commission in 1932 and the subsequent enactment of the *Conservation Authorities Act* in 1946 represented the emergence of a watershed management framework in Ontario. Conservation authorities have since been established in 36 watersheds, including five in northern Ontario and 31 in southern Ontario.

Watershed management efforts in Canada largely focused on flooding, drought, water quality, erosion, and hazards until the 1970s. The 1972 *Great Lakes Water Quality Agreement* (GLWQA) addressed a number of emerging concerns, such as chemical contamination and aquatic habitats.

Master drainage plans in the 1980s had a main objective of managing development impacts, by addressing issues related to floodplain management, runoff quantity control, erosion and flood control works, major/minor system design, and culvert improvements. Through the 1980s and into the 1990s, objectives for environmental management shifted towards a subwatershed approach, with objectives to maintain and enhance natural systems, rather than simply avoiding development impacts. New issues were addressed in subwatershed studies, including water quality considerations, enhancement opportunities, and fisheries/aquatic habitat.

Since 1993, watershed planning has been guided by a trilogy of documents released by the province. *Water Management on a Watershed Basis: Implementing an Ecosystem Approach* provides an outline of the broad provincial context for a landscape approach to planning, and how the watershed management plan provides an appropriate avenue for integration of human activities and the hydrologic cycle. Subwatershed Planning describes the planning framework for subwatershed planning, direction for undertaking technical assessments, an outline of information needs, public participation considerations, and information to support monitoring programs. *Integrating Water Management Objectives into Municipal Planning Documents* provides guidance for the critical step of integrating watershed planning objectives into municipal planning documents and processes at various geographic scales.

In the early 2000s, the Walkerton Inquiry reignited engagement in a watershed approach to planning, specifically through a multi-barrier approach to protection of drinking water and the resultant source water protection planning processes that ensued. Ontario's Source Water Protection Program reached a significant milestone with all source water protection plans being approved by the Ministry of the Environment and Climate Change (MOECC) as of January 2016. The ORMCP, 2002 required municipalities to undertake watershed planning, which was supported by technical

guidance from the province. Development of the Lake Simcoe Protection Plan (LSPP) under the *Lake Simcoe Protection Act*, 2008, was a key achievement in watershed planning in Ontario.

2.4 CURRENT FRAMEWORK

Currently, Ontario's land use planning system is policy led, meaning that the province sets out the legislative and policy framework, which is then implemented by municipalities. The PPS provides province-wide direction on matters of provincial interest, including the protection and efficient management of water resources through watershed planning. Within the Greater Golden Horseshoe, the Growth Plan, Greenbelt Plan, ORMCP, and NEP offer more specific direction than the PPS.

The PPS requires that planning authorities shall protect, improve or restore the quality and quantity of water by: using the watershed as the ecologically meaningful scale for integrated and long-term planning, identifying water resource systems, and ensuring stormwater management practices minimize stormwater volumes and contaminant loads, among other requirements. Municipalities are encouraged to coordinate planning for ecosystem, shoreline, watershed, and Great Lakes related issues across municipal boundaries and with other orders of government, agencies, and boards.

Provincial land use plans that are applicable within the Greater Golden Horseshoe area provide direction for municipalities to ensure that watershed planning is undertaken to inform municipal policy and decision-making. Policies in the Growth Plan and Greenbelt Plan require that upper and single tier municipalities, in partnership with conservation authorities, as appropriate, shall ensure that watershed planning is undertaken to support a comprehensive, integrated, and long-term approach to the protection, enhancement or restoration of the quality and quantity of water within a watershed.

Policies in the Growth Plan and Greenbelt Plan include direction for:

- identification of a water resource system across the Greater Golden Horseshoe;
- strengthened requirements for watershed planning and subwatershed plans to inform land use planning and infrastructure decision-making; and
- requirements for water, wastewater, and stormwater master planning to be informed by watershed planning, among other requirements.

Note: the above list is not exhaustive and the applicable plans should be consulted for all policies that apply to watershed planning.

Policies in the ORMCP continue to require that upper tier and single tier municipalities have a watershed plan, which is implemented in the municipal official plan.

The approval framework for watershed planning and subwatershed plans has not changed as a result of the Coordinated Land Use Planning Review.

2.5 DEFINITIONS OF WATERSHED PLANNING

Watersheds. Watersheds are defined as an area that is drained by a river and its tributaries.

Subwatersheds. Subwatersheds are defined as an area that is drained by a tributary or some defined portion of a stream.

Figure 1 illustrates how water flows within a watershed. Natural processes and anthropogenic processes can result in impacts to hydrologic features, areas, and functions in a watershed.

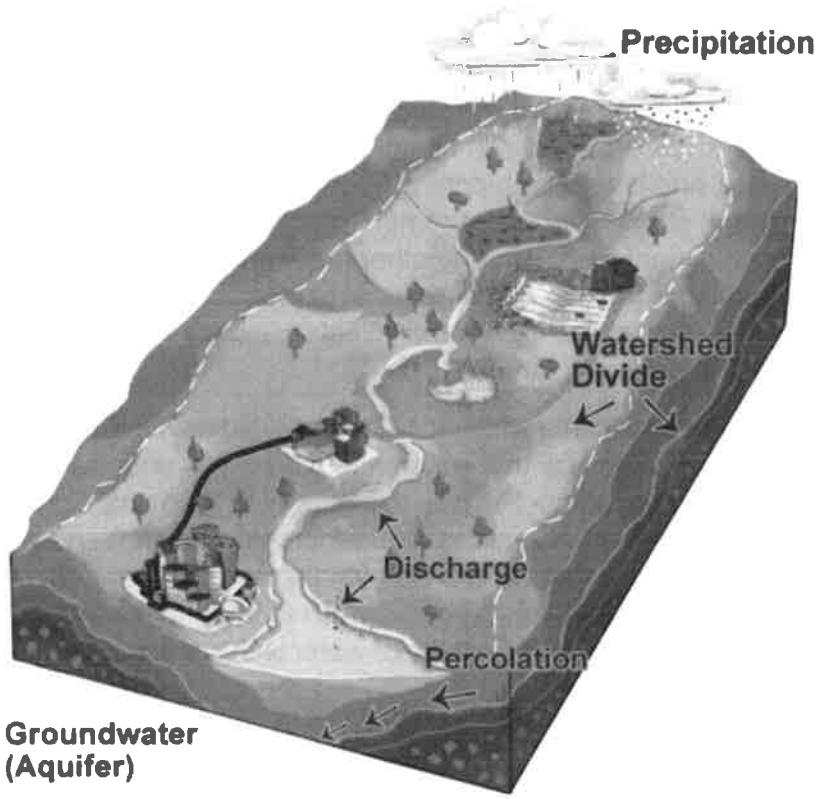


Figure 1 - A simple watershed with the boundary determined at the watershed divide

Watershed Planning

The Growth Plan and Greenbelt Plan share the same definition for watershed planning, which is defined as follows:

Watershed Planning

Planning that provides a framework for establishing goals, objectives, and direction for the protection of water resources, the management of human activities, land,

water, aquatic life, and resources within a watershed and for the assessment of cumulative, cross-jurisdictional, and cross-watershed impacts.

Watershed planning typically includes: watershed characterization, a water budget, and conservation plan; nutrient loading assessments; consideration of climate change impacts and severe weather events; land and water use management objectives and strategies; scenario modelling to evaluate the impacts of forecasted growth and servicing options, and mitigation measures; an environmental monitoring plan; requirements for the use of environmental best management practices, programs, and performance measures; criteria for evaluating the protection of quality and quantity of water; the identification and protection of hydrologic features, areas, and functions and the inter-relationships between or among them; and targets for the protection and restoration of riparian areas.

Watershed planning is undertaken at many scales, and considers cross-jurisdictional and cross-watershed impacts. The level of analysis and specificity generally increases for smaller geographic areas such as subwatersheds and tributaries.

Subwatershed Planning

The Growth Plan and Greenbelt Plan share the same definition for subwatershed plan, which is defined as follows:

Subwatershed Plan

A plan that reflects and refines the goals, objectives, targets, and assessments of watershed planning for smaller drainage areas, is tailored to subwatershed needs and addresses local issues.

A subwatershed plan should: consider existing development and evaluate impacts of any potential or proposed land uses and development; identify hydrologic features, areas, linkages, and functions; identify natural features, areas, and related hydrologic functions; and provide for protecting, improving, or restoring the quality and quantity of water within a subwatershed.

A subwatershed plan is based on pre-development monitoring and evaluation; is integrated with natural heritage protection; and identifies specific criteria, objectives, actions, thresholds, targets, and best management practices for development, for water and wastewater servicing, for stormwater management, for managing and minimizing impacts related to severe weather events, and to support ecological needs.

Similarities and Differences across Provincial Plans

Definitions for watershed planning are consistent across the Growth Plan and Greenbelt Plan, but not the ORMCP. ORMCP policies in subsections 24(3), 24(4), and 24(8) in particular overlap with many components of watershed planning, except for: watershed characterization, nutrient loading assessments, and assimilative capacity respecting sewage. Watershed planning is not a defined term in the NEP and PPS, although the NEP does define watershed management.

Definitions for subwatershed plans are consistent across the Growth Plan and Greenbelt Plan, but not the ORMCP. ORMCP provides policies in subsections 27(1), 27(2), and 27(3) with respect to development and site alteration inside and outside of settlement areas in subwatersheds; the policies provide direction for percentage of subwatershed area covered by impervious surfaces and self-sustaining vegetation. Subwatershed plan is not a defined term in the NEP and PPS.

The following tables provide a comparison of watershed planning and subwatershed plan definitions across the Growth Plan and Greenbelt plan, compared to policies in subsection 24(3) of ORMCP:

Comparison of Watershed Planning Definitions and Policies

Watershed Planning	
Growth Plan & Greenbelt Plan	**ORMCP**
Planning that provides a framework for establishing goals, objectives and direction for the protection of water resources, the management of human activities, land, water, aquatic life and resources within a watershed and for the assessment of cumulative, cross-jurisdictional and cross-watershed impacts. • a water budget and conservation plan; • land and water use management objectives and strategies; • an environmental monitoring plan; • requirements for the use of environmental best management practices, programs, and performance measures; • criteria for evaluating the protection	24. (3) A watershed plan shall include, as a minimum: • (a) a water budget and a water conservation plan as set out in section 25; • (b) land and water use and management strategies; • (c) a framework for implementation, which may include more detailed implementation plans for smaller geographic areas, such as subwatershed plans, or for specific subject matter, such as environmental management plans; • (d) an environmental monitoring plan based on a minimum of five years of monitoring; • (e) provisions requiring the use of environmental management practices and programs, such as

of quality and quantity of water; • consideration of climate change impacts and severe weather events; • watershed characterization • nutrient loading assessments; • scenario modelling to evaluate the impacts of forecasted growth and servicing options, and mitigation measures; • the identification and protection of hydrologic features, areas and functions and the inter-relationships between or among them; and • targets for the protection and restoration of riparian areas.	programs to prevent pollution, reduce the use of pesticides and manage the use of road salt; • (f) criteria for evaluating the protection of water quality and quantity, hydrological features and functions, including criteria for evaluating the impacts of proposed development and infrastructure projects within and outside the Plan Area on water quality and quantity and on hydrological features and functions; • (g) an evaluation of the assimilative capacity of the watershed to deal with sewage from surrounding areas; • (h) an assessment of climate change impacts on sewage and water service systems and stormwater management systems.

Comparison of Subwatershed Plan Definitions and Polices

Subwatershed Plan	
Growth Plan & Greenbelt Plan	**ORMCP Policy**
A plan that reflects and refines the goals, objectives, targets, and assessments of watershed planning for smaller drainage areas, is tailored to subwatershed needs and addresses local issues. A subwatershed plan should: • consider existing development and evaluate impacts of any potential or proposed land uses and development; • identify hydrologic features, areas, linkages, and functions; • identify natural features, areas, and related hydrologic functions; • and provide for protecting, improving, or restoring the quality	27.(1) Except with respect to land in Settlement Areas, all development and site alteration with respect to land in a subwatershed are prohibited if they would cause the total percentage of the area of the subwatershed that has impervious surfaces to exceed, (a) 10 per cent; or (b) any lower percentage specified in the applicable watershed plan or subwatershed plan. 27.(2) Except with respect to land in Settlement Areas, in considering applications for development or site alteration with respect to land in a subwatershed the approval authority shall take into account the desirability of

and quantity of water within a subwatershed. A subwatershed plan: • is based on pre-development monitoring and evaluation; • is integrated with natural heritage protection; and • identifies specific criteria, objectives, actions, thresholds, targets, and best management practices for development, for water and wastewater servicing, for stormwater management, for managing and minimizing impacts related to severe weather events, and to support ecological needs.	ensuring that at least 30 per cent of the area of the subwatershed has self-sustaining vegetation. 27.(3) With respect to land in Settlement Areas, in considering applications for development or site alteration with respect to land in a subwatershed the approval authority shall consider the importance of, (a) ensuring that natural vegetation is maintained, and where possible improved or restored; and (b) keeping to a minimum impervious surfaces and their impact on water quality and quantity.

Municipalities need to follow direction outlined in the respective provincial plan, or policies that applies to them.

2.6 SUMMARY OF POLICY REQUIREMENTS

The key driver for watershed planning by municipalities is applicable policy direction of the PPS, Growth Plan, Greenbelt Plan, ORMCP, and NEP. The LSPP also provides requirements for watershed planning in the Lake Simcoe watershed.

Watershed planning in Ontario should also consider the *Great Lakes Protection Act* and Great Lakes Strategy, as well as water-related legislation, plans, and agreements.

In summary:

- **PPS policies encourage a coordinated approach to planning, within and across municipalities, on water, ecosystem, shoreline, watershed and Great Lakes matters. The policies require planning authorities to protect, improve or restore the quality and quantity of water by, among other things, using the watershed as the ecologically meaningful scale for integrated and long-term planning. The PPS is an outcome based policy document.**

- **Growth Plan and Greenbelt Plan policies require watershed planning to be undertaken to inform the protection of water resource systems and decisions related to planning for growth and subwatershed planning to inform site-specific land use planning decisions.**

- **ORMCP policies require watershed planning by municipalities, as well as development requirements based on impervious cover and natural cover in subwatersheds.**

- **NEP does not require watershed planning specifically, although approved watershed planning/subwatershed plans can inform land use, infrastructure, and development decision-making.**

- **LSPP applies to the Lake Simcoe watershed, which is defined in the *Lake Simcoe Protection Act.* The Plan speaks in detail about actions to be taken to protect and restore the ecological health of the Lake Simcoe watershed/subwatersheds.**

Refer to **Appendix A** for a summary chart of watershed planning/subwatershed plan requirements, and matters to be informed by watershed planning/subwatershed plans.

Checklists for Meeting Provincial Policy Requirements

Watershed planning components, as defined in the Growth Plan and Greenbelt Plan, are typical, or recommended components to provide municipalities with flexibility. Watershed plans must always be properly scoped to reflect local circumstances, capacity and reflect existing equivalent studies. However, in ORMCP, watershed plan contents as provided in 24(3) are required as a minimum. Municipalities may consider integrating requirements under ORMCP with components outlined in Growth Plan and Greenbelt Plan definitions, to ensure adequate consideration of cross-jurisdictional and cross-watershed impacts of growth, development, and infrastructure across plan areas.

The following table provides a consolidated list of watershed planning elements and the corresponding policy basis across the PPS and land use plans, organised by elements of the watershed planning process:

Matrix of Watershed Planning Policy Direction

****Note: Consult applicable provincial policies or plans to ensure complete requirements are met. This is only an overview of policies and their applicability to watershed planning.***

If a definition is listed, it means that element is a component of the definition.

Watershed Planning Element	Growth Plan	Greenbelt Plan	ORMCP	NEP	PPS
3.1 Effective Engagement & Committees					PPS 1.2.1.e

Watershed Planning Element	Growth Plan	Greenbelt Plan	ORMCP	NEP	PPS
3.2 Partnering with Indigenous Communities					PPS 1.2.2 & 4.3
4.1 Delineation of Watersheds & Subwatershed for Land Use Planning	Growth Plan 4.2.1.1	Greenbelt Plan 3.2.3.2 & 3.2.6.1.c & 3.2.6.2.c	ORMCP 24		PPS 2.2.1.a
4.2 Identification of the Water Resource System	Growth Plan definition & 4.2.1.2	Greenbelt Plan 3.2.3.3 (protected countryside only) & 5.3			PPS 2.2.1.c & 2.2.1.d
4.3 Characterization of Existing Conditions	Growth Plan definition	Greenbelt Plan definition	ORMCP 24(3)d		
5.1 Vision, Objectives, Goals & Targets	Growth Plan definition	Greenbelt Plan definition	ORMCP 24(3)b and 24(3)f		
6.1 Water Quantity, Water Budget & Water Conservation Plans	Growth Plan definition	Greenbelt Plan definition	ORMCP 24(3)a (as set out in ORMCP 25)		PPS 2.2.1.f
6.2 Water Quality & Nutrient Load Assessments	Growth Plan definition	Greenbelt Plan definition	ORMCP 24(3)g		PPS 2.2.1.g & 2.2.1.h
6.3 Natural Hazards in Watershed Planning & Subwatershed Plans					PPS 3.1.3

Watershed Planning Element	Growth Plan	Greenbelt Plan	ORMCP	NEP	PPS
6.4 Climate Change & Watershed Management	Growth Plan definition, 3.2.1.2.d & 3.2.1.4	Greenbelt Plan definition	ORMCP 24(3)h		
6.5 Connections to Natural Systems	GP 4.2.3.2 & 4.2.4.5	GB 3.2.5 & 3.2.6			
6.6 Cumulative Effects Assessment	Growth Plan definition and 3.2.6.4	Greenbelt Plan definition & 3.2.3.5			PPS 2.2.1.a & 2.2.1.b
6.7 Assessment of Land Use & Management Scenarios	Growth Plan definition	Greenbelt Plan definition	ORMCP 24(3)f		
7.3 Informing Land Use Planning & Decision Making	GP 3.2.1.2				
7.3 Informing Land Use Planning & Decision Making	Growth Plan 2.2.8.3.e & 4.2.1.3	Greenbelt Plan 3.4.3.3 & 3.2.3.4		NEP 1.6.8, 1.7.5, 2.6 & 2.6.3	
7.4 Implementing the Watershed & Subwatershed Plan	Growth Plan definition	Greenbelt Plan definition	ORMCP 24(3)c & 24(3)e	NEP 2.6.9	PPS 2.2.1 & 2.2.2
8 Monitoring & Adaptive Management	Growth Plan definition	Greenbelt Plan definition	ORMCP 24(3)d		

Interconnections with Other Policies and Strategies

Watershed planning is inherently connected to other provincial policies and strategies regarding natural heritage systems, as well as climate change, wetlands, biodiversity, agricultural systems, source water protection, stormwater management, shorelines, natural hazards, and Great Lakes water quality and ecosystem health. These other

policies and strategies inform objectives and actions in watershed and subwatershed plans.

Natural Heritage. Ontario's regional Natural Heritage System (NHS) contains natural heritage features, natural heritage areas, and linkages intended to provide connectivity and support natural processes which are necessary to maintain biodiversity and ecosystems. Ontario`s regional NHS applies to the Growth Plan areas outside of the Greenbelt Plan and settlement areas. Characterization of watersheds as a part of watershed planning typically considers natural heritage features and linkages, and their connections to hydrologic features and areas. The *Natural Heritage Reference Manual* (NHRM) provides guidance for implementing natural heritage policies of the PPS, which can be useful to consider in watershed planning. *How Much Habitat is Enough?* (HMHE?) can also assist with municipal target-setting.

Natural Hazards. Natural hazards, such as flooding hazards and erosion hazards, affect all regions of Ontario. On the Great Lakes shoreline, dynamic beaches are also considered as hazards. *Understanding Natural Hazards* provides introductory information on the Great Lakes-St. Lawrence River System and large inland lakes, as well as river and stream systems hazardous sites.

Climate Change. Climate change and the impacts of severe weather events must be considered in watershed planning (see Section 6.4 for more details). Ontario released its Climate Change Strategy in 2015, followed by Ontario's five-year Climate Change Action Plan, which aims to fight climate change, reduce greenhouse gas pollution and transition to a low-carbon economy over the long term. Environmental Assessment processes and planning processes need to consider the effects of a changing climate. MNRF has also released a *Guide for Assessment of Hydrologic Effects of Climate Change in Ontario*, which addresses climate change impacts on water resources. The Lake Simcoe Climate Change Adaptation Strategy, released in February 2017, takes a multi-faceted approach to drive actions in the Lake Simcoe watershed to adapt to our changing climate. Actions to address climate change and its impacts are being implemented throughout the watershed in collaboration with a range of stakeholders.

Wetlands. The *Wetlands Conservation Strategy for Ontario 2017-2030* provides a framework to conserve wetlands across the province, and identifies actions for the provincial government to undertake. A guiding principle of the strategy is that wetlands are integral components of their watersheds, natural heritage and hydrologic features and areas, and part of the larger landscape.

Biodiversity. *Biodiversity: It's in Our Nature 2012-2020* aims to reduce threats to biodiversity and enhance resilience, which includes landscape-level conservation planning and promotion of urban biodiversity and green infrastructure strategies.

Source water protection. Source water protection plans are required under the *Clean Water Act*, 2006. They identify areas where an activity is or would be a significant drinking water threat, through assessment reports, and then provide policies and

approaches to protect against significant drinking water threats. Assessment reports and water budgets prepared in support of source water protection plan development provide information for understanding watersheds and threats to water quality and quantity. Source protection committees, conservation authorities, environmental organizations, and municipalities all have important roles in implementation of source water protection in Ontario.

Stormwater Management. A shift towards an ecosystem-based water balance approach to stormwater management has emerged in Ontario, which is being successfully applied. Green Infrastructure (GI) and Low Impact Development (LID) have emerged as new approaches and techniques in stormwater management, which are also supported by provincial land use policies. Watershed planning and subwatershed plans will inform stormwater master plans, water and wastewater master plans, and stormwater management plans.

Great Lakes. The Great Lakes Water Quality Agreement (GLWQA) was originally signed in 1972 to commit Canada and the United States to coordination of actions to restore the chemical, physical, and biological integrity of the waters of the Great Lakes basin. The GLWQA was amended in 2012 to identify new priority challenges, including: aquatic invasive species, habitat and species, and climate change impacts. A new focus on nearshore areas and adaptive management is articulated in the updated GLWQA. The Canada-Ontario Agreement (COA) on Great Lakes Water Quality and Ecosystem Health 2014 assists with protecting waters from high nutrient levels, harmful pollutants, and invasive species. Phosphorus reduction in the Lake Erie basin is a priority outlined in the proposed Canada-Ontario Action Plan for Lake Erie. The *Great Lakes Protection Act,* 2015 provides a framework to protect and restore the health of the Great Lakes-St. Lawrence River basin. The Great Lakes Strategy provides direction on actions to protect the Great Lakes-St. Lawrence River basin, as new threats and stressors are resulting in cumulative impacts that are diminishing the adaptive capacity of the Great Lakes. The Strategy recognizes challenges facing the Great Lakes across various areas, including: growth, natural heritage, invasive species, climate change, chemicals of emerging concern, water levels, algae, and beaches.

2.7 ROLES & COORDINATION

Municipal Role

Across the Province, there will be differences in scope, scale, and complexity of watershed planning and subwatershed plans, which need to be addressed. Some municipalities might have a footprint in multiple watersheds or a given watershed might contain all or part of multiple municipalities. Provincial policies direct planning authorities to coordinate planning matters and consider cross-jurisdictional and cross-watershed impacts.

Management at a watershed scale has traditionally been undertaken by conservation authorities, where they exist. In southern Ontario, particularly in the Greater Golden Horseshoe area, conservation authorities have experience in watershed management, and many upper-tier and single-tier municipalities have included policies in their official plans to implement watershed planning. Conservation authorities have differing levels of resources and financial support, depending on their proximity to populated urban areas with development pressures. However, in the Greater Golden horseshoe area, where development pressure is high, conservation authorities can be valuable partners in planning and implementation efforts, especially beyond the scope of land use policy direction.

Upper and single-tier municipalities and partner organizations in the Greater Golden Horseshoe will need to coordinate watershed planning across jurisdictional boundaries. Municipalities can partner with conservation authorities to undertake watershed and subwatershed planning, where conservation authorities exist, at municipal discretion. In southern Ontario, coordination of watershed planning has largely been organized by conservation authorities in the past, although other models and approaches do exist, such as community-based environmental organizations, committees established under legislation, Joint Services Boards, and others.

Coordination must be accompanied by clearly articulated objectives with an explicit decision-making framework that is involved with purposeful data. Development of agreements or clear Terms of Reference for watershed planning and subwatershed plan development among stakeholders, participants, and agencies will be useful for coordinating roles and tasks. The use of various committees or working groups, with clear leadership for multi-jurisdictional coordination, will support watershed planning endeavours, as outlined in **Section 3.1** of the Watershed Planning Guidance.

A 'layered' approach which first considers the broadly applicable PPS, then provides additional layers of watershed planning elements in the Greater Golden Horseshoe area, can assist with addressing regional variations in scope and complexity of watershed planning undertakings. Within the GGH, if the plans are silent on a matter the municipality must defer to the PPS for direction. PPS is a legislative requirement and must always be considered. The PPS provides overall policy directions on matters of provincial interest related to land use and development in Ontario, and applies to the GGH, except where the Growth Plan or another provincial plan provides otherwise. Additionally, if there is a conflict between the Growth Plan and the PPS, the Growth Plan prevails unless the conflict is between policies relating to the natural environment or human health. In that case, the direction that provides more protection to the natural environment or human health prevails.

Provincial Role

Existing and updated policies in the Growth Plan and Greenbelt Plan include requirements for watershed planning and subwatershed planning to inform land use

planning and infrastructure decisions. The Province has a role in reviewing land use planning and infrastructure decisions to ensure that they are informed by watershed or subwatershed planning. Following are some examples of this:

The provincial One Window Planning Service is the process whereby the Ministry of Municipal Affairs provides municipalities, municipal planning authorities, planning boards, developers and the public with one-stop access for provincial planning services. The provincial One Window Planning Service will review applicable land use planning decisions (eg. Official Plans and Plans of Subdivision) to ensure that they have been informed by watershed planning in accordance with this guidance document.

The Ministry of Environment and Climate Change also has approval and/or review authority over environmental assessments for water-related infrastructure decisions (eg. water and wastewater master plans and stormwater master plans) under the Environmental Assessment Act and approvals for new or expanded infrastructure of this type under the Environmental Protection Act and Ontario Water Resources Act. During this review and approval process, MOECC may review these decisions where appropriate to ensure that they have been informed by watershed planning in accordance with this guidance document.

2.8 EQUIVALENCY & TRANSITION PROVISIONS

The Growth Plan and Greenbelt Plan speak to allowing equivalent master plans, assessments and studies to be used by municipalities and planning authorities to inform land use and infrastructure planning and decision-making. Equivalent studies are collectively, existing, enhanced, or new assessments, studies, and plans, provided that they achieve or exceed the same purposes as required by policies within the plans. Municipalities and planning authorities should assess the components of watershed planning that are outlined in this section and determine whether the assessments and studies they currently have would meet the components required under each plan. If not, then the assessments and studies need to be updated accordingly.

While developing a watershed or subwatershed plan, municipalities and planning authorities can use equivalent studies to inform their planning and decision-making.

The terms watershed planning, subwatershed plan, water and wastewater master plan, and stormwater master plan are defined in provincial plans. However, the use of "or equivalent" provides flexibility while ensuring the intent of these terms is maintained.

At its core, an equivalent study to watershed planning will need to: use the watershed as the logical ecological scale for planning; identify and provide for protection of water resource systems including key hydrologic features, areas, functions and interrelationships; and consider existing and proposed land uses and developments, development criteria and associated impacts on quality and quantity of water. Subwatershed plans may be considered partially equivalent to watershed planning, provided that they achieve or exceed the same purposes and are protective of water at

the broader watershed scale, since they refine the goal, targets, and assessments of watershed planning for smaller drainage areas, and are based on pre-development monitoring and evaluation.

3 Engagement and Indigenous Perspectives

3.1 EFFECTIVE ENGAGEMENT & COMMITTEES

What is it?

Engagement is about the communication and outreach activities undertaken to deliver on a particular proposal or project. In the case of watershed planning, municipalities and watershed practitioners should establish an approach to public, stakeholder, and Indigenous engagement at the outset of developing a watershed plan.

Why is it important?

Engagement can support a sense of ownership in the watershed planning process by participants and stakeholders. Engagement also provides opportunities for public education and outreach, as well as data collection through citizen science. Engagement of communities is important for relationship building and stewardship.

Engagement of communities, interested parties, agencies, all levels of government, and Indigenous communities will be vital to a successful watershed planning process, and to support long-term, ongoing implementation, monitoring, and adaptation. Engagement is a flexible process ranging from general information sharing to meaningful dialogue and collaboration. The scope and objectives of engagement will vary depending on the level of interest from stakeholders and Indigenous communities.

Public involvement in plan development increases the likelihood of public understanding of and support for the plan. This support translates directly into stakeholder willingness to advance the plan, fund plan implementation, and to carry out their mandates/responsibilities in accordance with the plan.

Provincial policies encourage a coordinated and integrated approach to watershed planning, in which, municipalities of all levels work with other orders of government, Indigenous organizations, agencies, boards and conservation authorities. As such, engagement activities need to consider roles and responsibilities of the various stakeholders.

How to do it?

Engagement is not limited to the development of the watershed plan and its subsequent incorporation into municipal policies – there are roles across the planning, implementation, monitoring, and adaptive management aspects of the watershed planning framework.

Municipalities and planning authorities can partner with other groups in carrying out watershed and subwatershed planning, including conservation authorities, watershed councils, environmental organizations, committees, and other organizations within and outside of government.

The conservation authority model is one approach for integration across scales and jurisdictions in southern Ontario; however, where there is no conservation authority, other environmental organizations are usually needed to facilitate a similar level of coordination on a watershed basis. Engagement with source water protection committees and regions will be helpful to avoid duplication and build on successes.

Developing an Effective Engagement Strategy

Step 1: Establishing Your Steering Committee and/or Working Groups

- Determine membership:
  - Municipality(ies)
  - Planning authorities
  - Conservation authorities
  - Indigenous communities and organizations
  - Watershed councils and/or source protection committee
  - Government Ministries and/or Agencies
  - Environmental organizations
  - Other interest groups
- Prepare a Terms of Reference
- Define study area

Once your committee and/or working groups are established you can begin to develop an engagement strategy as part of your watershed planning process. The committee and/or working groups will be effective avenues for integrating a range of partners throughout the watershed planning process.

As you progress through the watershed planning process, you may want to establish topical/subject matter working groups to address particular components of the watershed plan. These topical working groups could then report to the steering committee.

***Note:** It is important to ensure appropriate and meaningful Indigenous involvement. Indigenous representation on a steering committee may help to inform an appropriate

Indigenous engagement approach for communities and organizations. See **Section 3.2** for more details.

Step 2: Engagement Planning

Your steering committee and/or working groups may not necessarily include all possible interested stakeholders. You will need to develop an engagement strategy to ensure you engage all potentially affected stakeholders and interested members of the public within your watershed area.

Your engagement strategy should:

- Describe your methods of engagement (written notification, one-on-one meetings, public meetings, workshops, online surveys, watershed tours, etc.);
- Outline a frequency of engagement for relevant and timely information sharing;
- Establish a process for interested stakeholders or individuals to raise concerns or issues, and provide suggestions or recommendations;
- Outline anticipated timelines and opportunities for additional engagement; and
- Establish how you intend to address feedback received.

Engagement Best Practices:

- Be respectful and transparent
- Be very clear about intentions and expectations
- Know your audience and design engagement materials around them
- Consider cultural and linguistic differences
- Maintain regular communication with all interested parties to foster good relationships
- Identify human and financial resources required at an early stage to carry-out effective engagement

***Note:** There may be an opportunity to align watershed engagement activities with regular municipal planning processes. For example, public open houses for official plan reviews and amendments could be scheduled to coincide with key points of the watershed planning process.

Step 3: Engagement Record

An engagement record outlines details of all engagement activities. It is useful to keep a record of all feedback received and how issues were addressed. This will help to ensure a representative and collaborative final product.

Example Engagement Record Template:

Name of Organization/ Individual/Community	Date of Engagement	Overview of Issues/ Concerns/ Recommendations	Response

Step 4: Conduct Effective Engagement

Carry out your engagement activities as outlined in your engagement strategy. If issues arise, be prepared to adapt your original plans. Maintain your engagement record and report back to interested stakeholders and Indigenous communities on the results of your engagement and how that engagement affected the plan.

Involving the Public

During watershed characterization and/or monitoring it may help to involve community groups in data collection to ensure effective and efficient implementation. This can be achieved through the use of citizen science.

Citizen Science. The collection and analysis of data by members of the general public in collaboration with professional scientists.

In undertaking watershed planning, involvement with existing citizen science networks and protocols can be beneficial. Also, new citizen science programs can be established for the specific watershed.

3.2 PARTNERING WITH INDIGENOUS COMMUNITIES

What is it?

A partnership approach with Indigenous peoples can lead to a more comprehensive watershed plan.

Indigenous peoples in Ontario consist of numerous First Nations and Métis communities and peoples.

Ontario is covered by many treaties and other agreements. Understanding treaty areas and the locations of First Nation communities is important for watershed planning.

First Nations and Treaties maps are available through the Government of Ontario.

More information on First Nations in Ontario can be obtained by contacting Chiefs of Ontario, or from other Provincial and Territorial Organizations that a local First Nation may be part of.

More information on Métis in Ontario can be obtained by contacting the Métis Nation of Ontario, or through liaising with Independent Métis communities.

Why is it important?

Relationship building and meaningful engagement with Indigenous peoples is important for watershed planning. Municipalities should recognize and respect Indigenous communities' relationship to, and customary stewardship of, land, water and resources, and the specific knowledge and history they can bring to watershed planning. Working with Indigenous partners helps to promote respectful and mutually beneficial relationships in the management and protection of watersheds.

Examples of Declarations Recognizing the Importance of Indigenous Partnerships:

- **United Nations Declaration on the Rights of Indigenous Peoples** – is a comprehensive statement addressing the human rights of Indigenous peoples. The values reflected in the Declaration are consistent with Ontario's approach to Indigenous relations and reconciliation, which is rooted in a commitment to establish and maintain constructive, co-operative relationships based on mutual respect that lead to improved opportunities for all Indigenous peoples.
- **Water Declaration of the Anishinaabek, Mushkegowuk and Onkwehonwe** – in 2008, the Chiefs of Ontario released the Water Declaration. The Water Declaration speaks to the relationship of First Nation peoples to the waters, the condition of the waters, water rights and treaties and self-determination.

Potential Risks of Ineffective Indigenous Engagement:

- Inadequate consideration of traditional ecological knowledge could lead to incomplete watershed planning information
- Loss of community support for plan
- Potential delays to project developments

How to do it?

Municipalities are encouraged to work with Indigenous communities who may be interested in and affected by watershed planning. Municipalities should reach out to local Indigenous communities within the watershed, as well as Indigenous communities that have traditional or treaty rights in the watershed – some of these communities may

be located relatively far from the subject watershed (refer to the referenced First Nations and Treaty maps, or contact Chiefs of Ontario and Métis Nation of Ontario). In-person visits, phone calls, emails and letter circulation can help with determining if there is an interest in working together and how this will be accomplished. **Early engagement is vital. Interested, or potentially affected, Indigenous communities should be partners in watershed planning.**

It is important to remember that many Indigenous communities and their staff often face resource and capacity pressures. Municipalities should consider how to equitably partner with Indigenous communities. **Meaningful Indigenous engagement can lead to a more comprehensive and robust watershed plan.**

Indigenous Engagement Best Practices:

- Early engagement is vital and contact with Indigenous communities should be made prior to commencement of watershed planning
- Meaningful representation on steering committees/watershed planning governance structures
- Consideration of traditional ecological knowledge, if offered
- Support for capacity building through watershed planning development and implementation
- Discuss with each Indigenous community how best to work together
- Learn from each other and foster relationship building

Partnership/Collaboration:

- Explore development of stewardship programs that support Indigenous community studies, restoration and involvement, with a focus on Elders, women and youth participation
- Further develop conservation partnerships with Indigenous communities to encourage conservation, implement best management practices and identify restoration opportunities within watersheds
- Work with Indigenous communities to develop targeted initiatives and materials, and include Indigenous perspectives in watershed awareness initiatives
- Involve Indigenous communities in environmental monitoring to provide input into current and future watershed planning efforts
- With respect to water quality and quantity, share information and promote opportunities to work collaboratively with Indigenous communities to address the maintenance of water quality and quantity within watersheds
- Provide opportunities for Indigenous youth to network with non-Indigenous youth in municipalities regarding watershed planning
- Promote mentorship opportunities for Indigenous youth to meet and work with experienced individuals with expertise in watershed management

Traditional Ecological Knowledge

Respectful consideration of traditional ecological knowledge in watershed planning undertakings, as appropriate, can contribute to positive environmental management outcomes and relationship-building.

Effective engagement with Indigenous communities may include the consideration of traditional ecological knowledge as part of watershed delineation and characterization. This knowledge can, for example, help determine historical water levels, historical and cultural land uses, significant cultural sites, ecologically sensitive areas and important times of year for a variety of species. Traditional ecological knowledge may help to define research questions and data collection for any monitoring programs.

Municipalities should discuss with the appropriate Indigenous knowledge holders how traditional ecological knowledge may be shared and how it may be used.

Indigenous Watershed Planning Resources

The Centre for Indigenous Environmental Resources (CIER) has created a series of *First Nations Integrated Watershed Planning Guidebooks.* These can be useful resources on the topic of Indigenous involvement in watershed planning.

Examples of Indigenous Engagement in Watershed Planning Initiatives:

Georgina, Fox and Snake Islands The subwatershed plan for Georgina, Fox, and Snake Islands was prepared in partnership with Chippewas of Georgina Island First Nation, and provides a case study for coordinated, integrated planning among municipalities, conservation authorities, the public, and First Nations communities.
Greater Sudbury Source Protection Plan (2014) The *Clean Water Act, 2006* prescribes a multi-stakeholder, science-based process for source protection planning. In 2007, the Greater Sudbury Source Protection Committee was established to guide source protection planning for this region. Both First Nations communities in the Greater Sudbury area (Atikameksheng Anishnawbek and Wahnapitae First Nations) had representatives on the Committee.

4 Watershed Delineation & Characterization

Watershed delineation and characterization consists of three core components:

- Delineation of Watersheds and Subwatersheds for planning and management
- Identification of the Water Resource System
- Characterization of Existing Conditions

4.1 DELINEATION OF WATERSHEDS & SUBWATERSHEDS FOR LAND USE PLANNING

What is it?

Watershed delineation involves the identification of watershed, subwatershed, and/or catchment area boundaries for planning and management purposes. Fundamentally, watersheds and subwatersheds can be delineated based on drainage basin divides.

Why is it important?

Watershed scale planning provides a foundation for municipalities to protect the quality and quantity of water based on logical ecological boundaries, and to consider cross-jurisdictional and cross-watershed impacts. Watershed boundaries often cross over multiple political jurisdictions, such as municipal boundaries, since they are based on functional drainage areas in the natural environment.

Watershed planning typically includes smaller nested drainage areas, such as subwatersheds and tributaries, so these boundaries should be identified through watershed planning. In many watershed planning processes undertaken to date in southern Ontario, priority subwatersheds are identified for further studies and management efforts, especially in areas subject to high development pressure or ecosystem degradation.

Where watershed planning typically focuses on geographically large units (> 1000 km^2), subwatershed planning provides for a more detailed approach to planning based on a local subbasins. Stormwater management planning, planning for designated greenfield areas and planning for major development/large-scale development will typically be based on smaller geographic basins such as subwatersheds.

How to do it?

Step 1: Determine watershed boundaries based on existing data

Watershed delineation will typically be based on existing boundaries mapped through ongoing provincial, municipal, or conservation authority efforts. For example, upper-tier municipalities and conservation authorities typically have existing GIS mapping or shapefiles available for watersheds, subwatersheds, and smaller drainage catchments. Subwatershed studies and master environmental servicing plans undertaken in support of development and land use change should also be consulted for existing watershed boundaries.

The Ontario Flow Assessment Tool (OFAT) can be used to assist in watershed delineation as part of municipal watershed planning. Figure 2 demonstrates the boundaries of Ontario's primary watersheds, secondary watersheds, and tertiary watersheds, as mapped using OFAT.

Figure 2 - Ontario Flow Assessment Tool

Watershed-based organizations in Ontario are generally based around tertiary watersheds or smaller geographic. Municipalities may choose to work with conservation authorities and watershed-based environmental organizations to confirm the boundaries of smaller drainage basins.

Delineation can also be undertaken manually using topographic mapping to establish drainage basins. Using paper mapping or GIS tools, municipalities and watershed practitioners can identify drainage areas based on surface water drainage patterns and topographic boundaries and features.

Watershed Information Sources

Municipalities and watershed practitioners are encouraged to maximize the use of existing information as opposed to carrying out exhaustive new studies and inventories.

In using existing information and inventories, practitioners should identify crucial gaps in information and establish programs to acquire this information.

Watersheds and subwatersheds can be delineated and characterized using data and information available from the province, environmental organization, conservation authorities, municipal studies, and other sources. There is a wealth of existing information to assist municipalities in identifying watershed and subwatershed boundaries and characterizing features and functions, including:

- Land Information Ontario (LIO) – primary, secondary, tertiary, and quaternary watersheds;
- OFAT – create watershed maps, characterize the watershed, estimate stream flows;
- MNRF Arc Hydro Quaternary Watersheds – Consult MNRF Guidelines for Getting Started with MNRF's Arc Hydro Quaternary Watershed Sessions for detailed instructions;
- Conservation authority watershed and subwatershed mapping, publications, and GIS files;
- Source protection assessment reports and Water Budgets prepared as part of source protection planning; and
- Existing watershed plans, subwatershed plans, water and wastewater master plans, stormwater master plans, environmental impact studies, sustainability plans, etc.

4.2 IDENTIFICATION OF THE WATER RESOURCE SYSTEM

What is it?

As part of watershed characterization, water resource systems need to be identified, depending on the applicable policy framework in the watershed or subwatershed (PPS, Growth Plan, or Greenbelt Plan). ORMCP and NEP do not specifically outline components of water resource systems; however, natural heritage systems and hydrologic features of the ORMCP and NEP are significant elements of water resource systems in the province.

PPS

The water resource system, as provided in PPS policies, is a system which consists of:

- **ground water features**;
- **hydrologic functions**;
- **natural heritage features and areas**;
- **surface water features**, including shoreline areas;

Growth Plan

The *water resource system*, as defined in Growth Plan, is a system which consists of:

- **ground water features and areas**;
- **surface water features (including shoreline areas)**;
- **hydrologic functions**, which provide the water resources necessary to sustain healthy aquatic and terrestrial ecosystems and human water consumption; and
- The water resource system will comprise **key hydrologic features** and **key hydrologic areas**.

Greenbelt Plan

The *water resource system*, as provided in Greenbelt Plan, is a part of the Protected Countryside's Natural System, along with the NHS.

The water resource system is comprised of both **ground and surface water features and areas** and their **associated functions**, and it provides the water resources necessary to sustain healthy aquatic and terrestrial ecosystems, as well as human water consumption. **Areas of hydrological significance** in the Greenbelt function together with **other hydrological features and areas** within the remainder of watersheds that extend outside of the Greenbelt, to form water resource systems. These areas of hydrological significance could include:

- The upper reaches of watersheds draining to Lake Ontario to the west of the Niagara Escarpment;
- Lands around the primary discharge zones along the toe of the Niagara Escarpment and base of the Oak Ridges Moraine;
- The major river valleys that flow from the Oak Ridges Moraine and the Niagara Escarpment to Lake Ontario;
- The portions of the Lake Simcoe watershed and the former Lake Algonquin Shoreline within York and Durham Regions; and
- The former Lake Iroquois shoreline in Durham and Niagara Regions.

Water Resource System Components

Please refer to the applicable provincial policy or plan for definitions of water resource system components.

Why is it important?

Water resource systems, similar to natural heritage systems, provide a systems-based approach to protection of valuable ecosystems and functions.

Planning authorities shall protect, improve or restore the quality and quantity of water by:

- identifying water resource systems consisting of ground water features, hydrologic functions, natural heritage features and areas, and surface water features including shoreline areas, which are necessary for the ecological and hydrological integrity of the watershed (PPS 2.2.1.c);
- maintaining linkages and related functions among ground water features, hydrologic functions, natural heritage features and areas, and surface water features including shoreline areas (PPS 2.2.1d); and,
- implementing necessary restrictions on development and site alteration to: protect all municipal drinking water supplies and designated vulnerable areas; and, protect, improve or restore vulnerable surface and ground water, sensitive surface water features and sensitive ground water features, and their hydrologic functions (PPS 2.2.1.e).

Growth Plan and Greenbelt Plan provide that water resource systems will be identified, informed by watershed planning and other available information, and the appropriate designations and policies will be applied in official plans to provide for the long-term protection of key hydrologic features, key hydrologic areas, and their functions (Growth Plan 4.2.1.2 & Greenbelt Plan 3.2.3.3).

How to do it?

Step 1: Determine what information already exists and identify gaps

Many features of the water resource system have been identified through municipal natural heritage planning, the provincial Natural Heritage System, source protection planning, environmental studies supporting development applications, conservation authority watershed management and monitoring, and other studies and reports.

Existing information is available in source protection plans and assessment reports, as well as municipal official plan schedules. Existing information may be available from other municipal plans and studies, as well as conservation authorities. The provincial NHS will be considered in watershed planning processes at the municipal level.

Step 2: Undertake reviews or studies to identify water resource system features

Where information does not exist, field studies may be required. A range of accepted protocols for identification of these features and areas, such as OSAP, OWES, and ELC classification, can be used.

As provided in the definitions for **ground water features**, these features can be defined by surface and subsurface hydrogeologic investigations.

As identified in the definition for **surface water features**, these features can be defined by their soil moisture, soil type, vegetation or topographic characteristics.

Methods for identifying and protecting water resource system features are outlined in source protection plans (and associated assessment reports and water budgets), ORMCP Technical Papers, and various conservation authority-published supplemental technical guidelines.

Methods for identifying and protecting these features are also outlined in the NHRM, HMHE?, *Significant Wildlife Habitat Technical Guidelines* (and updated eco-region criteria schedules), *ORMCP Technical Papers,* and various conservation authority-published supplemental technical guidelines.

To assist with identification of significant groundwater recharge areas, MNRF and North Bay Mattawa Conservation Authority published *Delineation of Significant Groundwater Recharge Areas Supplemental Technical Guide* to assist with identification and protection of these significant areas. Municipalities should consult the Technical Guide for direction in delineating SGRAs. In the *Technical Guide,* guidance is provided for identification of SGRAs, including information regarding: SGRA thresholds, spatial scale for averaging, linking high recharge areas to a drinking water system, and professional judgement relating to SGRAs (smoothing/infilling, modifying mapping based on geologic features, discharge areas, and wellhead capture zone considerations). The *Technical Guide* also provides a section regarding secondary analysis to confirm SGRA thresholds, as well as a section regarding refinements of SGRAs, and a section outlining other SGRA considerations. It is noted that all information contained in the supplemental *Technical Guide* is based on information taken from Assessment Reports prepared under the *Clean Water Act* and supporting Water Budget and Risk Assessment Reports.

Step 3: Identify functions and interrelationships

Identification of functions requires consideration of relationships and water-related dependencies, as well as consideration of factors which may influence viability of water resources.

With key features identified, there is now a need to determine functions and linkages within the system. One method of completing this is through concept mapping within a **pressure-state-response framework**. Watershed and subwatershed studies undertaken to date in Ontario often utilize a pressure-state-response framework which: describes the current condition (state), describes the stressors likely leading to the current condition (pressure), and recommends management responses in the context of the current management framework (response). At this stage in watershed planning, concept mapping will be used to determine the relationship between state and pressures. This information can be linked to management actions in later stages of the watershed planning process.

Step 4: Identify linkages to support connectivity

In natural heritage and watershed planning, areas with high concentrations of key features can be considered as 'core areas', and broader areas and connections can be identified as 'linkages' or 'corridors'.

Information for natural heritage system identification provided in *Development of the Proposed Natural Heritage System for the Growth Plan for the Greater Golden Horseshoe Summary of Criteria and Methods* will be useful to consider in undertaking watershed planning.

The *Natural Heritage Reference Manual* will also provide valuable information.

Core areas are the building blocks of an NHS and should be the most enduring natural areas within the landscape. Linkages provide the connections between core areas, which provide corridors and functional routes for the movement and viability of populations of plant and animal species. Linkages enable ecological processes to continue across a landscape by reducing habitat fragmentation and isolation.

Connectivity is the degree to which key natural heritage features are connected by species movement corridors, hydrological and nutrient cycling, genetic transfer, and energy flows through food webs. Connectivity between key features and areas can be supported through identification of existing and potential linkages. Watershed planning should endeavour to maintain or increase the level of connectivity between key hydrologic features and areas and key natural heritage features and areas. Geospatial analysis of core features and supporting features can provide a means of assessing connectivity.

Watershed Information Sources

- MNRF, 2010. Natural Heritage Reference Manual.
- ECCC, 2013. How Much Habitat is Enough?
- MNRF, 2000. Significant Wildlife Habitat Technical Guide.
- ORMCP, 2007. Technical Papers.
- MNRF Make a Map online tools
- MNRF, 2013. Water Budget Reference Manual.
- MNRF, 2013. Guide to Assessment of Hydrologic Effects of Climate Change.
- MNRF Lakeshore Capacity Assessment Handbook
- MOECC, 2003. Stormwater Management Planning and Design Manual.
- Southern Ontario Land Resource Information System (SOLRIS) - which is publicly available through Land Information Ontario (LIO).
- Jones, N.E. and B. Schmidt, 2017. Aquatic ecosystem classification system for Ontario's rivers and streams. Ontario Ministry of Natural Resources and Forestry,

Science and Research Branch, Peterborough, ON. Science and Research Technical Note TN-04. 19 p.
- Provincial Natural Heritage System and background studies.
- Completed watershed plans and subwatershed plans.
- Conservation authority mapping, monitoring data, and programs.
- Source Protection Planning Assessment Reports and background technical work.

4.3 CHARACTERIZATION OF EXISTING CONDITIONS

What is it?

Characterization is a vital component of watershed planning which involves establishing a baseline of existing watershed conditions. The baseline can be re-visited to evaluate progress towards environmental objectives and track success of management efforts. Existing conditions for quality and quantity of water will need to be determined, and locations and status of features and linkages will need to be identified, and then issues can be identified for further analysis.

Baseline characterization of a watershed is a necessary initial step which provides the foundation for ongoing watershed monitoring, and will include the collection of existing and/or new data directly related to various aspects of the watershed study area. By completing this initial step, water practitioners are empowered to both set realistic and achievable future program targets and track changes in the watershed over time under the context of adaptive management.

Watershed characterization includes:

- Describing the **Form**, **Function,** and **Linkages** within the watershed;
- Identifying **Issues and Opportunities**, especially regarding the need for protecting, restoring, or enhancing watershed features and functions;
- Prioritizing **Needs**; and
- Establishing Preliminary **Goals and Objectives**, which can be refined as the watershed planning process progresses

Watershed characterization should provide an image of the current conditions of indicators associated with quality and quantity of water, so impacts as a result of planning, development, and management actions can be evaluated and adaptively managed. Since the watershed scale is the ecologically-meaningful basis for integrated and long-term planning, and a foundation for considering cumulative impacts, watershed characterization should consider indicators outlined in the PPS definition for quality and quantity of water, including:

- minimum base flow;
- depth to water table;

- aquifer pressure;
- oxygen levels;
- suspended solids;
- temperature;
- bacteria; and
- nutrients and hazardous contaminants.

Characterizing the watershed can include a range of elements, depending on local watershed issues and conditions, such as:

- Identifying aquatic and terrestrial habitats;
- Identifying the quantity of surface and groundwater resources, relationships, and water related dependencies;
- Quantifying precipitation (rainfall and snowfall);
- Quantifying groundwater;
- Quantifying surface water,
- Identifying existing flow regimes (peak flow volume and rates);
- Identifying existing water balance (recharge areas, rates and sensitivity);
- Identifying features and functions of the natural heritage system (interconnections between and among aquatic, terrestrial and groundwater systems, buffers and linkages); and
- Identifying constraints (floodplains, steep slopes, erosion areas, wetlands, forests, habitat, corridors, buffers, wellheads).

Many examples of scoped watershed and subwatershed characterization studies currently exist, which provide models that municipalities can build on. For example, Central Lake Ontario Conservation Authority (CLOCAs) subwatershed plans and associated background studies are available on their website, and many of GRCA's previous and current studies are available in digital format upon request.

Why is it important?

Watershed characterization is an essential component of watershed planning, and provides the basis for developing goals and targets, evaluating land use and management scenarios, and developing management approaches. An understanding of the features, functions, and linkages within a catchment can also be used in monitoring effectiveness of management actions and ecological change.

Ecological monitoring can fill gaps in areas where there is no existing information or data available, especially in areas where growth and development are directed.

Watershed planning will take an integrated approach to identifying, protecting, and restoring key features and functions of the watershed.

How to do it?

Step 1: Determine what information is available, and what information is needed, to "paint a picture" of the state of the watershed

The use of existing data is encouraged, where it exists and is appropriate for the watershed. Monitoring and field work may be necessary to fill gaps in data.

Existing conditions for quality and quantity of water will need to be known, and locations and status of features and linkages will need to be identified, so that issues can be identified for further analysis.

Previously undertaken characterization studies, watershed monitoring and report cards, and environmental evaluations in support of planning and development applications may provide enough information to develop goals, targets, and actions; however, additional information may be needed to understand emerging issues and threats. Planning authorities should review all relevant information prior to developing a watershed monitoring program.

Watershed characterization provides information necessary for creating goals and targets (as outlined in **section 5**), undertaking more detailed watershed planning elements (as outlined in **section 6**), and assessing impacts, implementation progress, and adaptive management (as outlined in **section 7** and **section 8**).

Watershed planning elements outlined in **section 6** of the Watershed Planning Guidance are also associated with watershed characterization, depending on the needs and conditions of the watershed, and the policy frameworks which apply. Watershed characterization can occur before, concurrent with, or after visioning and goal-setting, depending on the needs of the watershed, available information, and capacity of the organization undertaking the tasks.

Step 2: Undertake a Watershed Monitoring Program

A long-term watershed monitoring program must be developed to continually assess performance against baseline characterization data and set targets. Generally defined as the periodic or continuous collection of measured parameters through the use of methods remaining consistent over time, long-term watershed monitoring involves a comprehensive approach to data collection, incorporating water quality with other watershed conditions indicators.

How Should Watershed Monitoring be Carried Out?

- Watershed monitoring requirements (e.g., a monitoring and reporting plan) should be developed during the watershed/subwatershed planning process, not afterwards;

- Watershed monitoring should measure changes against baseline conditions (e.g., before land development takes place or before restoration work occurs);
- Watershed monitoring should be timely. It should be carried out at the right times of year and at a frequency that reflects the response time for the component being measured;
- Watershed monitoring should be cost-effective. It should return significant information for the money invested;
- Watershed monitoring should yield useful information (e.g., it should provide answers to the questions that are being asked);
- Five years of pre-development monitoring is appropriate to achieve a baseline condition; and
- Watershed monitoring should be carried out on a coordinated, partnership basis, using data and information from various sources (e.g., municipalities, provincial and federal agencies, organizations, institutions and the public). The public should be involved in the development of the monitoring and reporting plan.

Monitoring the watershed (e.g., in activities such as monitoring amphibians and participating in bird census) helps to build stewardship.

As with the initial task of baseline characterization, continual watershed monitoring for water quality would include data on the physical, chemical, and/or biological conditions for all waterbodies within the watershed study area. Additionally, specific watershed characteristics including stream corridor traits, wetlands, and watershed land use/land cover patterns would also be collected and compared to baseline data as they relate to observed water quality.

Baseline Data, Conditions, and Indicators

The collection of baseline data is required to: capture an accurate "first look" at ecological characteristics and processes within the watershed, quantify various watershed specific parameters, and assist water practitioners in setting and implementing realistic and achievable future program targets. This data, collected at the outset of implementing a watershed management plan, can be sourced from a variety of places. For example, monitoring for water quality on a watershed basis would include the collection of physical, chemical and/or biological condition data as well as the recording of water quality characteristics specific to the watershed (e.g. stream corridor traits, wetlands, and watershed land use/land cover patterns). Canadian researchers and water practitioners are also able utilize baseline data from a variety of open databases, which are developed from national surveys of water and climate and maintained by the federal government. In many cases, data collected by provincial agencies are either maintained in-house or amalgamated with relevant federal databases, which in turn provide researchers with sufficient resources for completing baseline characterization and implementing any monitoring practices.

For more information on sources and collection methods of baseline data, please refer to **Section 8** of this document.

Data Typically Used for Watershed Characterization

Data Type	Typical Uses of Data
Physical and Natural Features	
Watershed boundaries	• Provide geographic boundaries for elevation and source control • Delineate drainage areas at desired scale
Hydrology	• Identify the locations of waterbodies • Identify the spatial relationship of waterbodies including what segments are connected and how water flows through the watershed (e.g., delineated drainage areas contributing to wetlands)
Topography	• Derive slops of stream segments and watershed areas (e.g., to identify unstable areas, to characterized segments and subwatersheds in watershed modeling) • Evaluate altitude changes (necessary when extrapolating precipitation from one area to another)
Soils	• Identify potential areas with higher erosion rates, poor drainage, or steep slopes • Use to delineate subwatersheds and develop input data for models
Climate	• Provide information about loading conditions when evaluated with instream data (e.g., elevated concentrations during storm evens and high flow) • Drive simulation of rainfall-runoff processes in watershed models
Habitat	• Describe area's ability to support aquatic life, and identify areas at risk of impairment • Support defining stressors that could be contributing to impairment • Identify shading or lack of riparian cover • Support identification of potential conservation, protection, or restoration areas • Identify any in-stream flow alterations of stream fragmentation
Wildlife	• Identify special wildlife species to be protected • Identify potential sources of bacteria and nutrients
Land Use and Population Characteristics	
Land use and	• Identify potential pollutant sources (e.g., land uses, pervious vs. impervious surfaces)

land cover	• Provide basis for evaluation of sources, loading, and controls • Provide unit for simulation in watershed models • Identify environmentally protected areas and other relevant land uses under provincial policy
Existing land management practices	• Identify current control practices and potential targets for future management • Identify potential watershed pollutants sources
Waterbody and Watershed Conditions	
Water quality standards	• Identify protected uses of the waterbody and associated water quality standards
305(b) report	• Identify the status of designated use support in watershed waterbodies • Identify potential causes and sources of impairment
303(d) list	• Identify known pollutant impairments in the watershed • Identify geographic extent of impaired waterbody segments • Identify potential causes and sources of impairment
Existing TMDL reports	• Provide information on watershed characteristics, waterbody conditions, sources, and pollutant loads (for specific waterbodies and pollutants)
Source Water Assessments	• Identify water supply areas to be protected • Identify potential sources of contamination to the water supply

In identifying information needs for watershed and subwatershed studies, a clear understanding is needed of the issues the plan will address, and the types of recommendations that might be forthcoming from the plan. The definitions and policy directions for watershed and subwatershed planning provided in the provincial plans will assist with scoping information needs inside the Greater Golden Horseshoe Area; the direction of the PPS regarding water resources will assist with scoping information needs outside of the Greater Golden Horseshoe area. Consideration of Great Lakes agreements and the Great Lakes Strategy will also inform information needs and information gathering.

There will be circumstances when the planning team has no option but to undertake technical studies or an environmental monitoring program to evaluate sensitive land use interactions with subwatershed ecosystem features and functions.

Some considerations for establishing information needs and developing environmental monitoring plans include the following:

- Focus on collecting information that will identify potential management opportunities and solutions, rather than just issues or problems;
- Determine whether any missing information is essential for preparing the watershed or subwatershed plan;
- Determine if information needs can be cross-referenced with existing or proposed watershed, subwatershed, and subdivision plans;
- Assess the possibility of better coordinating the gathering of information to improve the efforts of the watershed or subwatershed planning team; and
- Determine what information was important in successful plans, and learn about lessons in less successful efforts.

Watershed Indicators

During the early stages of indicator selection, there are a variety of factors that must be considered to ensure a holistic and broad approach to watershed characterization.

Some factors to consider when selecting watershed indicators include the following:

Validity

- Is the indicator related to your goals and objectives?
- Is the indicator appropriate in terms of geographic and temporal scales?

Clarity

- Is the indicator simple and direct?
- Do the stakeholders agree on what will be measured?
- Are the methodologies consistent over time?

Practicality

- Are adequate data available for immediate use?
- Are there any constraints on data collection?

Clear Direction

- Does the indicator have clear action implications depending on whether the change is good or bad?

When measured in the urban environment, water quality measurements capture the various pollutants from roads and private properties washed into the storm drain system, as well as the cross connections to sanitary sewer lines or leaky sanitary sewer lines infiltrating into storm drain systems. Pollutants associated with the above can include metals from vehicle wear and leakages (e.g. copper, zinc, cadmium and lead), fuels and other petroleum products. Elevated levels of nutrients (phosphorus and nitrogen) and sediment from construction activities and soil erosion are also commonly found in urban runoff. When untreated stormwater runoff is discharged directly to receiving waters, pollutant loadings can be much higher than those attributed to

domestic sewage and have been found to cause significant impacts to aquatic life in receiving waters. Stormwater runoff and pollutant discharges increase steadily with urbanization because of the increase in impervious surfaces, which reduces infiltration of rainfall and runoff.

Provincial Water Quality Objectives and the CCME Canadian Water Quality Guidelines

Ontario's Provincial Water Quality Objectives (PWQO) and the CCME Canadian Water Quality Guidelines (http://st-ts.ccme.ca/en/index.html) are useful references for water practitioners to consider when selecting indicators. These objectives include numerical and narrative criteria serving as physical indicators to represent satisfactory levels for both surface water features (i.e. lakes and rivers) and, when discharges to the surface, the ground water of the Province. The PWQOs are set at a level of water quality which is protective of all forms and aspects of aquatic life cycles during indefinite exposure to the water. Objectives associated with the protection of recreational water uses are based on public health and aesthetic considerations.

The PWQOs are also intended to provide guidance towards water quality management decisions, such as the designation of provincial surface waters to reduce further environmental degradation. These objectives are often used as a starting point to derive waste effluent requirements included in Certificates of Approval and other instruments issued to regulate effluent discharges. Additionally, they can also be utilized to assess ambient water quality conditions, infer use impairments, and assist in assessing spills and monitoring the effectiveness of remedial actions. Reference documents providing details on the development of each PWQO are available from the MOECC. Please note, the PWQO listing is routinely updated to reflect new or revised Objectives.

Where no PWQO or CWQG exist, other sources of guidelines (in order of preference) are the Federal Environmental Quality Guidelines and the British Columbia Water Quality Guidelines.

Where existing data is unavailable, field investigations can be used to fill data gaps. Field investigations can be focused to areas such as settlement areas and designated greenfield areas within broader subwatersheds, to manage the scope of activities. Ecological monitoring will be able to provide data for characterization, plan development, and adaptive management.

Sources of Available Baseline Data

Although physical monitoring of the watershed is necessary to understand specific baseline details of the area, a wide variety of public baseline data sets are also available for developers of Watershed Plans to utilize. In Canada (and Ontario), this data is collected and held by a variety of agencies. Please refer to the below for a list of available datasets that should be considered in advance of implementing a "boots on the ground" monitoring plan.

Environment and Climate Change Canada (ECCC) provides the following list of sources containing pre-existing baseline data which may be useful in undertaking watershed planning:

- Canadian researchers use **baseline data** from databases developed from **national surveys of water and climate** and maintained by the federal government. In many cases, data collected by provincial agencies are maintained by the provinces or contributed to the federal database, thereby providing research with a solid basis;
- **Water quantity and climate monitoring** are carried out across the country through national programs under the responsibility of ECCC;
- **Water quantity monitoring** is undertaken through ECCC's hydrometric program and carried out under formal agreements with the provinces and territories;
- For **water quality monitoring**, several federal-provincial/territorial agreement-based networks exist, and some provinces have their own networks in place; however, a more coordinated and comprehensive approach is needed. To that end, collective efforts are being made through the **Canadian Council of Ministers of the Environment (CCME)** to revitalize capacities and build a Canada-wide integrated network for water quality monitoring;
- **Groundwater Quality Monitoring** is undertaken through the Provincial Groundwater Monitoring Network (PGMN), which began in 2000 and is designed to monitor ambient groundwater level and chemistry conditions across Ontario. There are currently 474 wells in the PGMN program that monitor groundwater levels on an hourly basis. These wells are not used to supply water and are used for monitoring groundwater conditions only; and
- With respect to drinking water quality, Health Canada, provincial/territorial health departments, and their partners are monitoring waterborne disease under the **National Enteric Surveillance Program**. Health Canada and the provinces/territories also collaborate in the development of the Guidelines for Canadian Drinking Water Quality.

Over 300 **Canadian Environmental Quality Guidelines** have been developed collaboratively by jurisdictions, which are related to the protection of aquatic ecosystems, the quality of sediment and soil, and the assessment of contamination in aquatic life.

Connection to Watershed Planning Elements

Characterization of watersheds will provide a basis for setting goals, objectives, targets, and indicators, as discussed in **Section 5** of the Watershed Planning Guidance.

Characterization of watersheds will be linked to applicable watershed and subwatershed planning components outlined in **Section 6** of the Guidance (Watershed Planning Elements & Best Practices).

Monitoring and adaptive management considerations, as set out in **Section 8** of the Watershed Planning Guidance, should be considered early in the watershed planning process since these considerations will be ongoing.

5 Setting the Vision, Goals, Objectives, & Targets

What is it?

Essentially, the vision, goals, objectives and targets of a watershed plan set the parameters for the actions and land-use planning decisions made under that plan. It is essential that they align with applicable provincial policies, plans and reflect local conditions.

Why is it important?

Visioning will help to determine priorities, values, and issues in a given watershed. Setting early goals will help to guide and scope watershed planning processes. Goals and objectives will evolve through the planning process, as a result of information gained through watershed characterization.

How to do it?

Step 1: Determining a Vision and Developing Goals

Vision – is your aspirational statement of where you want to be in the future. Your vision sets the framework for your goals, objectives and targets.

> The Province's natural heritage resources, water resources, including the Great Lakes, agricultural resources, mineral resources, and cultural heritage and archaeological resources provide important environmental, economic and social benefits. The wise use and management of these resources over the long term is a key provincial interest.
>
> *— Excerpt from Part IV: Vision for Ontario's Land Use Planning System, Provincial Policy Statement, 2014.*

A vision should be realistic, credible and easy to understand. It is important to revisit the vision from time to time as your Watershed Plan is modified, or you have to adapt to changed realities.

Tips for developing a vision:

Use your steering committee to brainstorm words or short expressions of expectations for your applicable watershed:

- Pick a time period in the distant future; imagine your watershed at that time.
- Collect all the words or expressions, grouping them into themes.
- Based on themes, collectively agree to a vision statement.

Goals – are the outcomes you want to achieve. Goals tend to be broad expressions of values and aspirations. In the case of a watershed, your goals will relate to the aspirational outcomes anticipated for your watershed if you accomplish everything that will be set out in your objectives and targets.

There are several ecosystem planning principles to consider when developing goals for watershed planning, including:

- Ecosystem-based approach
- Precautionary approach
- Landscape-based analysis
- Adaptive management
- Sustainable development
- Collaboration

Watershed planning goals should address the various features, values, or threats to a watershed including; water quality, water quantity, aquatic species, flood protection, natural features, recreational values, etc.

Goals should be attainable, economically achievable, have stakeholder and political endorsement, and be flexible enough to accommodate shifting natural conditions.

Tips for developing goals:

- Goals should be few in number, since each goal may have several objectives, and each objective may have numerous targets.
- Goals can be short-term or long-term. When developing your plan, consider what your short-term and long-term time horizons are, which will impact your goals, objectives and targets. For example, a short-term time horizon may be one to five years, while long-term is greater than five years. Goals should be articulated to provide measurable results based on chosen time horizons.
- After characterizing and delineating your watershed, you may have specific problems that you wish to address. Your goals could be specific to the issues arising from the watershed characterization and delineation.

Step 2: Developing Objectives and Targets

Goals, objectives and targets can be developed simultaneously as they branch out from each other in varying levels of specificity.

Objectives – are precise outcomes necessary to achieve your goals. They are detailed statements of qualitatively or quantitatively measurable results you hope to accomplish. They are more concrete and narrow than goals. Objectives should be **S.M.A.R.T**:

S	• **Specific**: who, what, where, and why?
M	• **Measurable:** how will you demonstrate success?
A	• **Achievable:** what is the action-oriented verb?
R	• **Relevant:** how does it relate to the goal?
T	• **Time-bound:** when?

Tips for developing objectives:

- Similarly to goals, objectives can be short-term or long-term. Ensure the objective's time-horizon aligns with whatever time-horizon you chose for your goal. Since objectives are more specific and concrete than goals, you could have both short-term and long-term objectives under a single goal.
- Keep objectives to a manageable and realistic number under each objective.
- Use the S.M.A.R.T. acronym to help develop objectives.

Targets – allow you to set more specific time-based, percentage-based, or other quantitative measures to meet their particular objective. Targets allow you to measure progress towards the relevant objective.

There are different types of targets that could apply to watershed planning:

Process	• Measures a process, policy or activity • Example: Stream corridors are publicly owned and protected
Inputs	• Measures resources invested or used • Example: Invest $xx.xx over five-year period in streambank restoration activities
Outputs	• Measures the level of use or activity • Example: Maintain long-term stable water levels
Outcomes	• Measures the end results • Example: Greater than 75% of surface water samples meet the PWQO.

Municipalities undertaking watershed planning should keep the following tips in mind for developing targets.

Tips for developing targets:

- What kinds of data are you collecting or measuring that can help determine whether you have met your objectives?
- Ensure you can reliably collect the information necessary to determine whether you have reached the target.
- Targets for watershed planning can make use of existing provincial policies and guidelines for indicators like water quality parameters, water quantity metrics, and habitat percentage requirements.
- Targets can be developed that consider both spatial and temporal scales.

Step 3: Tying it All Together

Once you have developed your vision, goals, objectives and targets, determine whether they align. Ensure you have considered the financial and human resource implications of your expected results to make sure this is something you can accomplish.

Here is a hypothetical example:

Goal: A healthy aquatic ecosystem with sustainable biodiversity.

Objective: Protect or restore the health of wetland ecosystems.

Targets: Increase wetland cover to 15% of total watershed area (all watersheds).

***Remember:** There can be more than one objective under each goal, and more than one target under each objective. The above example is to illustrate the varying levels of specificity between goals, objectives and targets.

6 Watershed Planning Elements & Best Practices

Watershed planning elements include eight components outlined in the following sub-sections:

- Water budgets, water conservation plans, and surface and groundwater quantity considerations are outlined in **Section 6.1**.
- Water quality for surface and ground water, nutrient loading, and assimilative capacity assessments are outlined in **Section 6.2**.
- Natural hazards are outlined in **Section 6.3**.
- Climate change considerations are incorporated through the Watershed Planning Guidance, although more specific guidance is outlined in **Section 6.4**.
- Interconnections with natural heritage features, areas, and systems, as well as the benefits of green infrastructure, are outlined in **Section 6.5**.
- Consideration of cumulative impacts is outlined in **Section 6.6**.
- Analysis of land use and management scenarios is outlined in **Section 6.7**.

Not every component of watershed planning will be applicable to every watershed, so readers should consult the sections which address the needs of their local communities and watersheds.

6.1 WATER QUANTITY, WATER BUDGET, & WATER CONSERVATION PLANS

What is it?

Provincial policies with regard to water resources require that planning authorities protect, restore, or enhance the quality and quantity of water. This section of the Watershed Planning Guidance deals with water quantity considerations, and specifically water budgets and water conservation plan.

A **water budget** quantifies elements of the hydrologic cycle within a watershed or subwatershed study area at an appropriate level of detail. These elements include precipitation, interception, evapotranspiration, infiltration, storage and surface runoff amounts on an annual average basis. A water budget model can project the impacts of proposed land use or management changes on the water budget/water resource availability and to assess mitigation measures intended to maintain a given water

budget state. A water budget can be used to assess if water use is sustainable, if resources are stressed, or likely to become stressed.

Figure 3 illustrates elements of water budgets:

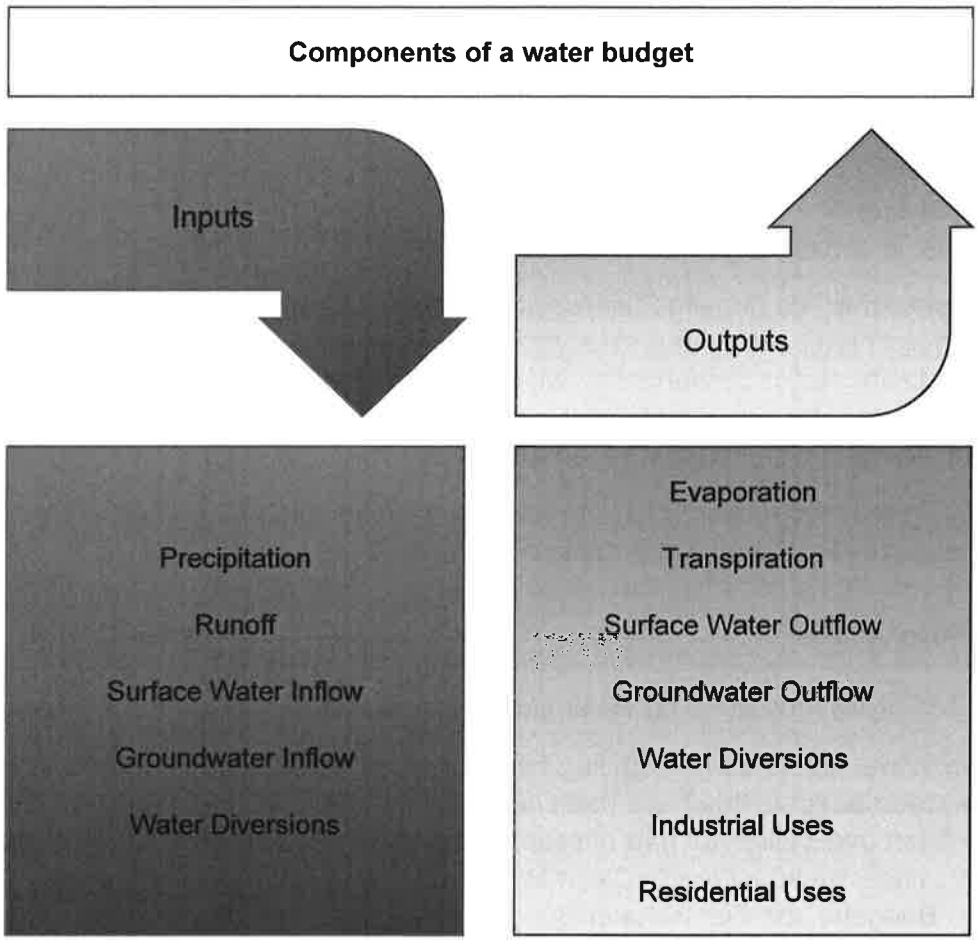


Figure 3 - Basic components of a water budget (draft)

More detailed water budgets might consider seasonal conditions, extremes based on historical data and projections that account for climate change impacts. Water budgets should include accounting for cumulative effects of existing and future conditions.

Changes in hydrology can impact the quantity and quality of water reaching natural features, public and private property habitat, water flows (flooding, drought), and erosion potential. Understanding how water moves within a water resource system is important to understanding the cumulative impacts of land use activities, such as development projects (proposed and existing).

Uses of a Water Budget

- to set water allocation targets and recharge rates within local watersheds;
- as a decision-making tool to evaluate land and water uses such as restoration and rehabilitation;
- projects identified in management plans;
- evaluate the cumulative effects of land and water uses within watersheds;
- to provide a watershed scale framework for site scale studies (e.g. evaluation of a sewage & water system plan);
- to help make informed decisions about the design of environmental monitoring programs; and
- to assist in setting targets for water conservation.

Water conservation The Growth Plan requires that municipalities will develop and implement official plan policies and other strategies in support of the conservation objectives, including water conservation, which can achieved through water demand management for the efficient use of water, and through water recycling to maximise reuse and recycling of water (Growth Plan 4.2.9.1.a).

In the ORMCP area, subsection 25(2) provides specific direction for the minimum contents of water budgets and water conservation plans.

Why is it important?

Legislation and policy incorporating water budget assessments include the following:

- ***Clean Water Act*** is a major driving force for the watershed and subwatershed scale water budgets that have been carried out in the province. Water budgets have been undertaken as part of source protection planning processes across the province, pursuant to the *Clean Water Act*. Conceptual Water Budgets, Tier 2 Water Budgets, and Tier 3 Water Budgets have been undertaken, depending on the characteristics and needs of the watershed.
- **The Water Budget and Water Quantity Risk Assessment Guidance Module** provide the basic direction to carry out the technical water budget characterization. These water budgets, once incorporated into a provincially approved assessment report will be used to set policies to manage water uses within local areas to protect sources of municipal drinking water. MNRF's Water Quantity Geodatabase project developed a water budget model in support of source protection planning. The Water Quantity Geodatabase will be useful for municipalities undertaking watershed planning in southern Ontario.
- **The Oak Ridges Moraine Conservation Plan** specifies that detailed water budgets and water conservation plans be carried out to support land use plans and development (ORMCP 25). Water budgets and water conservation plans were both required as part of watershed plans in ORMCP, and have been

supported by *ORMCP Technical Paper #10 – Water Budgets and #11 – Water Conservation Plans*. Also, where water budgets have been previously completed for watershed planning in ORMCP, these water budgets may need to be updated to reflect climate change considerations as outlined in MNRF's *Water Budget Reference Manual*.

- **The Provincial Policy Statement, 2014** states that the diversity and connectivity of natural heritage features in an area should be maintained, restored or, where possible, improved (2.1.2), and the quality and quantity shall be protected, improved or restored (2.2.1). Water budgets are encouraged to meet these requirements.
- **Provincial plans**, such as Growth Plan, Greenbelt Plan, and ORMCP identify water budgets and water conservation plans as some of the typical components of watershed planning.
- **The Lake Simcoe Protection Plan** has requirements for Tier 2 water budgets, where not already completed under the *Clean Water Act*, and water conservation plans for specific municipalities.

To a limited extent and without formal water budget guidance, the following provincial guidelines and manuals inherently promote the use of water budgets to meet their technical objectives:

- **Stormwater Management Planning and Design Module**;
- **Hydrogeological Technical Information Requirements for Land Development Applications**;
- **Guidelines for the Preparation of a Rural Servicing Report for Development to be Serviced by On-Site Sewage Systems**;
- **Permit to Take Water Manual**; and,
- **Official Plans** across Ontario mention water conservation, environmental protection and other things related to the protection and enhancement of ground and surface water quantity. **Water budgets** are a basic tool to fulfill the objectives and are commonly used in support of water supply and land use management.

How to do it?

Water Budget

In 2013, MNRF released its *Water Budget Reference Manual,* which provides direction for hydrology and water budget analysis, including climate change considerations with regard to water budgets. The *Water Budget Reference Manual* describes applications of water budgets, including: source water protection, watershed and subwatershed studies, permits to take water, aggregate extraction, and others. Municipalities should refer to this document when undertaking water budget analyses.

A water budget for a given area can be conceptualized as water inputs, outputs, and changes in storage. The inputs (precipitation, groundwater or surface water inflows, anthropogenic inputs) must be equal to the outputs (evapotranspiration, water supply removals or abstractions, surface or groundwater outflows) as well as any changes in storage within the area of interest.

The water budget process can encompass various levels of assessment, from simplistic to complex, depending on level of concern about how much water is available. The higher the tier, the more complex the science involved and the narrower the geographic focus. Water budgets need to consider this information on a variety of spatial and temporal scales.

Numerical models use simplified representations of these processes and enable quantification and evaluation of the hydrologic system at various levels – watershed, subwatershed and site scale. They may operate at different time steps and spatial resolutions and use a variety of approaches to represent key hydrologic processes.

Although these models can provide quantitative values, it is important to recognize the uncertainty in numerical modeling and use the models appropriately in making water management decisions. The most appropriate model for water budget analysis will depend on the type of questions that the model is required to answer.

Water budgets can be described according to the following generalized equation:

In the simplest form this can be expressed as:

Inputs = Outputs + Change in storage

$$P + SW_{in} + GW_{in} + ANTH_{in} = ET + SW_{out} + GW_{out} + ANTH_{out} + \Delta S$$

Where;

- P = precipitation;
- SW_{in} = surface water flow in;
- GW_{in} = groundwater flow in;
- $ANTH_{in}$ = anthropogenic or human inputs such as waste discharges;
- ET = evaporation and transpiration;
- SW_{out} = surface water flow out;
- GW_{out} = groundwater flow out;
- $ANTH_{out}$ = anthropogenic or human removals or abstractions; and
- ΔS = change in storage (surface water, soil moisture, groundwater).

Conceptually, there are three compartments to consider in the water budget determination as shown in the following figure: the ground surface; the unsaturated zone and the saturated zone:

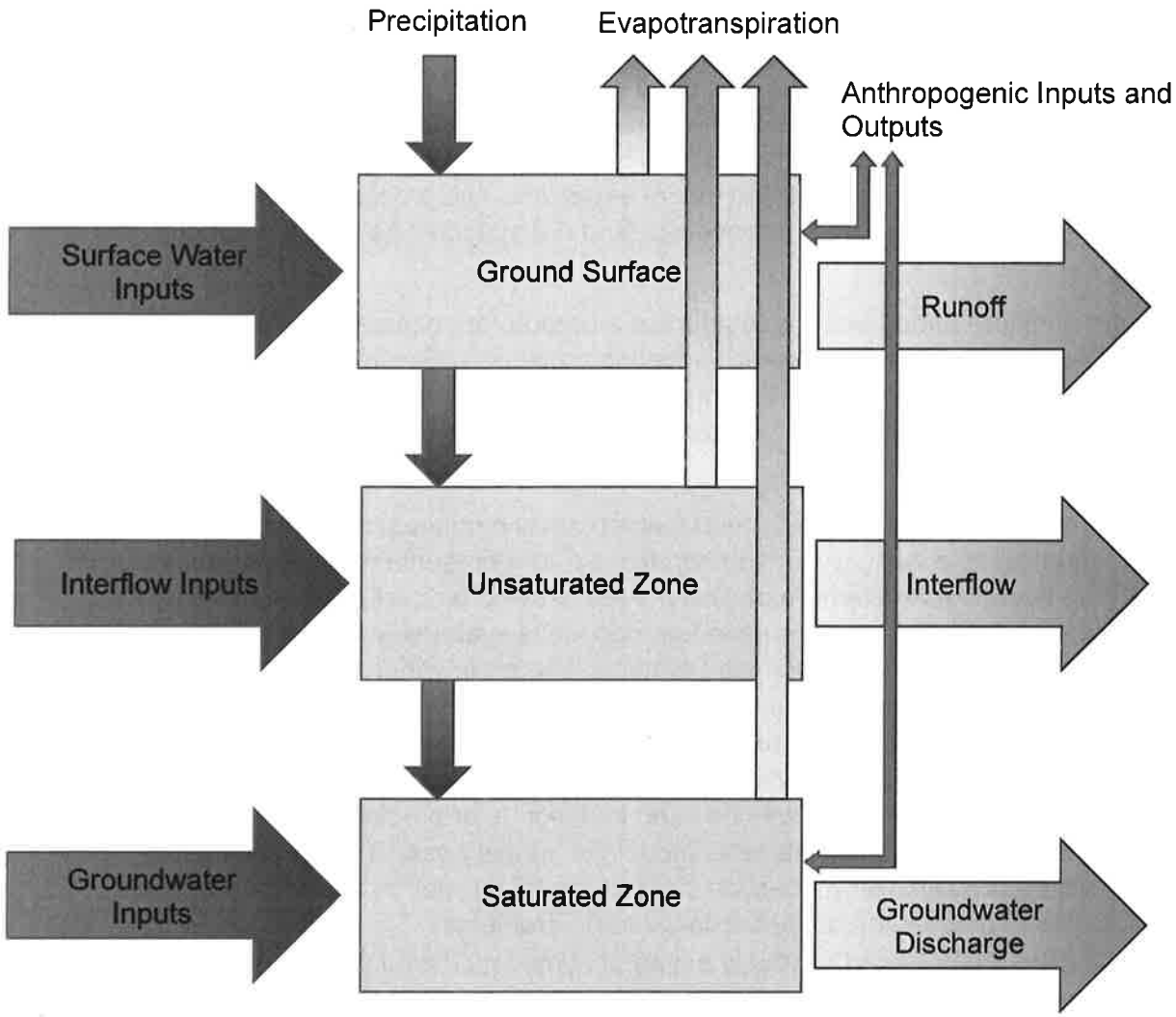


Figure 4 - The three conceptual storage zones in a water budget

The above figure shows that evapotranspiration can occur from any of the three (3) conceptual storages, as well as relevant anthropogenic inputs. Anthropogenic inputs and outputs of water involve some form of water transport across catchment or watershed divides. Human interventions are often difficult to account for in a water budget owing to the fact that a certain portion of the withdrawn water is likely re--circulated back within the same watershed (e.g. through lawn watering or through leakage from municipal infrastructure, etc.).

Water Budget Models and Types

The three basic types of numerical models that are built and used for water budget analysis are:

- Groundwater models;

- Surface water models; and
- Conjunctive or integrated continuum models.

Commonly, an integrated approach is used where output from both a surface water model and a groundwater flow model is iteratively compared. Traditionally, assumptions are made about all processes in a model. The processes of greatest interest are those that are explicitly represented in the model equations. The processes considered least important are treated as lumped processes and are specified as inputs or outputs to the model.

A range of different models exist to address a breadth of needs and requirements for local watershed planning and water budgeting processes. Essentially, models can be developed and used to account for, the fluxes through the various components of the hydrologic cycle. An overview of numerical models, lumped parameter models, and physically-based models follows:

- **A numerical model** is a type of mathematical model used to approximate a field situation by solving governing equations that represent the physical processes of the hydrologic system. Analytical models provide a direct solution of the governing equations for simple homogeneous systems, whereas numerical models simulate more complex systems where the various parameters can vary spatially and temporally and the governing equations are solved approximately.
- **A lumped parameter model** is a type of numerical model that solves the equations describing a system at a large scale by assuming that average values for physical parameters can be used to describe or predict the behaviour of a system. In a lumped parameter model the spatial position is not considered important to answer a question such as the total runoff in a watershed. These types of models are applied to large scale problems.
- **A physically based model** is a type of numerical model that solves equations where spatial position is an important consideration. Physically based model equations are derived from fundamental physical principles and/or extensive observations to describe the causes and effects of the system processes and their combined effects on the system behaviour. In these models, the actual rather than average (lumped) physical parameter value is important. Physically based models simulate small-scale to large-scale problems by incorporating spatial variability and interdependence of processes.

Selecting a Model

The most appropriate model for water budget analysis will depend on the dominant flow processes; whether it is dominated by surface water or groundwater. In most watersheds in Ontario, changes in groundwater discharge and storm event processes will affect the flow in the river such that linking of surface water – groundwater models, or the use of conjunctive models is most appropriate for water budget analysis. The effective application of a numerical model for water budget analysis requires:

- definition of specific objectives of the analysis at the start;
- identifying the characteristics of the hydrologic system through development of a conceptual model (review existing reports: size, spatial variations, land use variability, topography, geologic structure, etc.);
- determination of the "Scale of the Problem" or the level of detail that needs to be included (e.g. subwatershed versus site scale or forested versus open areas) depends on processes;
- determination of the appropriate time scale;
- collection or compilation of sufficient data to evaluate each process;
- suitability for linkage to GIS;
- ease of calibration and validation;
- recognition and minimization of the uncertainty in the analysis; and
- re-evaluation of the applicability of the analysis prior to addressing new objectives.

Secondary considerations include:

- available resources (e.g. for model application, training and maintenance, etc.); and
- model availability, preferably from an organization that provides regular updates and technical assistance.

Commonly Applied Models

A summary of models used in Ontario for water budgets is provided in Table 4-3 of MNRF's *Water Budget Reference Manual.* This table identifies the name, developer, and a brief description of common surface water, groundwater, and integrated groundwater-surface water models used in Ontario. The ORMCP Technical papers also serve as a valued source of information regarding models used for water budgets in Ontario. To account for climate change and severe weather considerations in water budgets, the *Water Budget Reference Manual* should be consulted. It provides potential hydrologic impacts due to climate change, and it outlines a guide to hydrological assessment incorporating climate change. The *Guide for Assessment of Hydrologic Effects of Climate Change in Ontario* can also assist with incorporating climate change considerations into watershed planning.

Water Conservation Plans

Watershed plans should also include water conservation plans which are important for Municipalities to undertake to maintain water resources. Recognizing water as a valuable and non-renewable resource which must be utilized efficiently and cost-effectively is necessary when looking to sustain related social, environmental, and economic drivers within the watershed study area. Water conservation systems can help in avoiding, downsizing, or postponing water and wastewater projects.

Key Steps for Water Conservation Plans

The ORMCP Technical Paper 11 – Water Conservation Plans also recommends that Water Conservation Plans include additional conservation goals, measures and incentives to ensure long-term success. These items include:

- Incorporate an ecosystem (holistic) and an adaptive environmental management approach;
- Illustrate anticipated effects of conservation measures on water demand and supply capacity (e.g. as a result of reducing leaks and losses);
- Develop an implementation plan for the water conservation plan, including any barriers that may affect its implementation;
- Develop a plan for public consultation;
- Develop a plan for monitoring and evaluating effectiveness of the plan; and
- Specify how results of plan implementation will be reported.

ORMCP Technical Paper 11 – Water Conservation Plans provides a useful framework to follow. The process outlined in this technical paper separates the development of a water conservation plan into three phases: defining conservation needs, choosing appropriate measures and incentives, and drafting the plan. Additionally, it is recommended that approval authorities, such as Conservation Authorities or other approval authorities in the same watershed, be included in the conservation planning process.

Defining Conservation Needs

- Develop Water Use Profile and Forecast
- Identify Water Conservation Goals - Link to Water Budget Analysis

Choosing the Appropriate Measures and Incentives

- Identify and Evaluate Water Conservation Measures
- Identify and Evaluate Water Conservation Incentives
- Analyze Relative Benefits and Costs of Measures and Incentives
- Select Conservation Measures and Incentives

Drafting the Plan

- Prepare Water Conservation Plan - plan should be a written account of the previous six steps, plus:
    - Illustration of anticipated effects of conservation measures and incentives on water demand and supply capacity;
    - An implementation plan; and
    - A plan for monitoring and evaluating effectiveness.

Revising the Plan

Review and re-evaluate the plan to ensure water conservation goals are being met.

For additional information on key steps associated with the above information, please refer to Section 5 of the *ORMCP Technical Paper 11 – Water Conservation Plans.*

Planning, Design, and Development Restrictions and Requirements

As previously noted, Water Conservation and Budgeting is a significant factor in the long-term health of a watershed study area. Supporting vital storage reservoirs and recharge zones for groundwater, which in turn feed wetlands, lakes, streams, and rivers, active conservation measures are crucial to ensuring sustainable demand from local residents as well as agricultural, industrial, commercial and recreational facilities. Inefficient water use practices, large drawing activities from surface and groundwater sources and climate change can also have long-term impacts on environmental, public health and local economies. As a result of the above, it is necessary for water practitioners to consider a variety of planning, design and development restrictions and requirements, based on best practice examples related to water, wastewater, and stormwater master planning to ensure efficiency and optimization of water use across the watershed.

Examples

1) Enhancing Stormwater Capture / Infiltration to Maintain Ecological Flows

With significant advances in watershed management over the past three (3) decades, water practitioners now must address a broad suite of technical issues including maintenance of hydrologic processes and the natural water balance, as well as the enhancement of fish habitat, stream morphology, and terrestrial habitats and the mitigation of the observed and forecasted impacts of climate change. Through the use of Green Infrastructure and Low Impact Development (LID) technologies, planners, engineers, landscape architects and designers have a variety of tools available to enhance Stormwater capture and infiltration to maintain ecological flows.

Draft LID Stormwater Management Guidance Manual (2017)

Ontario is developing new guidelines that could recommend stormwater flow attenuation through the use of LID to better maintain the natural hydrologic cycle.

Low Impact Development Stormwater Management Planning and Design Guide (2010.)

The intent of this guide is to act as a tool to help developers, consultants, municipalities and landowners understand and implement sustainable stormwater planning and practices in the Credit Valley Conservation (CVC) and Toronto and Region Conservation Authority (TRCA) watersheds. The use of sustainable stormwater planning and practices will help ensure the continued health of the streams, rivers, lakes, fisheries and terrestrial habitats in our watersheds.

Policy Example: Lake Simcoe Protection Plan.

Relevant policies, such as those presented in the LSPP (Recommendation 4-1) can include the promotion and support of low impact design (LID) solutions such as rainwater harvesting, rain gardens, and grey water reuse to manage stormwater and supplement residential water use.

2) Water Reclamation

While there are currently no provincial guidelines policies or regulations enacted by the Province for water reclamation and reuse, taking a proactive approach to increase efficiencies within these systems can result in significant savings for both water and power consumption.

Water and Energy Conservation Guidance Manual for Sewage Works (Chapter 4).

The intent of this manual is to inform sewage works owners, managers, process engineers and operators on measures that can be taken to reduce energy and water use at their facilities, and on options and considerations for water reclamation and reuse. Chapter 4 of this Guidance Document provides a comprehensive outline of various options for reusing or reclaiming water, including a helpful comparison of the level of treatment and economic, social and environmental factors for various water reuse options for water practitioners to consider.

6.2 WATER QUALITY & NUTRIENT LOAD ASSESSMENT

What is it?

Water quality and nutrient load assessment involves developing an understanding of nutrient and other pollutant concentrations and loading rates in lakes and rivers as well as groundwater.

Quality of water can be measured by indicators associated with hydrologic function, including: oxygen levels, suspended solids, temperature, bacteria, nutrients, and hazardous contaminants. Negative impacts on quality of water can be assessed through environmental studies, such as water quality impact assessments in accordance with provincial standards.

Nutrients such as phosphorus can contribute to negative impacts on quality of water as well as degradation of sensitive surface water features, sensitive groundwater features, and their related hydrologic functions. Phosphorus loading and phosphorus concentration targets should be considered in watershed planning. Nutrient loading assessments may consider a range of nutrients which may be contributing to issues in the watershed.

Human activities are impacting water quality, compromising conditions for aquatic life, recreation and other opportunities that rely on clean water. By assessing the sources and means by which nutrients and pollutants are getting into water, better planning and mitigation practices can be incorporated into watershed planning.

Why is it important?

Nutrients and other pollutants play an important role in watershed health. For example, Lake Erie and Lake Simcoe have experienced issues with excess phosphorus resulting in eutrophication, hypoxia, nuisance algae blooms, and other impacts. Other lakes and rivers are experiencing similar issues with increasing frequency.

Green Book and Blue Book

The Provincial Water Quality Objectives (PWQOs) are intended to ensure that surface water quality is satisfactory for aquatic life and recreation and that water uses requiring more stringent water quality are served on a site-specific basis. Ground water quality is to be preserved to protect the greatest number of uses.

MOECC's 'Green Book' provides guidance with regard to deriving effluent requirements and deriving receiving water based effluent requirements. MOECC's 'Blue Book' provides direction with regard to managing the quality and quantity of both surface and ground waters, and provides PWQO, which will be important to consider in assessment of land use planning and development decisions on a watershed basis.

GLWQA, COA, and Canada-Ontario Action Plan

The GLWQA and associated agreements and strategies (e.g. COA, Canada- Ontario Action Plan to Reduce Phosphorus Loadings in Lake Erie, etc.) point to phosphorus and algal blooms as a threat to the Great Lakes. Ontario has adopted a target of 40% phosphorus load reduction by 2025, and Ontario is also working with provincial, national, and binational partners to reduce nutrient-related impacts from both urban and rural watersheds.

Ontario's Great Lakes Strategy

Ontario's Great Lakes Strategy provides an overview of the binational phosphorus reduction target set through the most recent COA. Recommended phosphorus loading targets are also outlined in the Annex 4 Objectives and Targets Task Team's final report to the Nutrients Annex Subcommittee (Annex 4 Objectives and Targets Task Team, 2015).

Source Water Protection

Water sources are secured from a water quality perspective by the implementation of policies in respective Source Protection Plans to reduce the risk of contamination from activities, existing or future, that are deemed to be significant drinking water threats. These policies and plans direct municipal land use planning and prescribed provincial instruments, as well as establish a formal process to provide for risk management planning.

Municipalities are required to develop risk management plans for chloride and pathogens in identified vulnerable areas for Source Protection Planning. Municipalities should continue to proactively manage the use of chloride in the watershed by following ECCC's Code of Practice for the Environmental Management of Road Salt, participating in programs like "Smart about Salt' and promoting salt and water efficient water softeners.

How to do it?

Step 1. Assemble and Map Monitoring Data

- Include watercourses and water bodies;
- Include drainage areas and landmarks such as roads and communities;
- Show land use classifications, point sources and other likely contributors to water quality conditions;
- Determine appropriate indices of water quality – chemical and biologic monitoring data;
- Compute indicator values from monitoring data; and
- Map indicators and identify spatial trends.

Mapping of indicators provides an invaluable means of communicating information that can be difficult to convey in any other way. Because water quality has such a geographic aspect to it, where there is a progression of flow from headwaters to downstream, understanding how conditions change from reach to reach is critical to understanding where impairments are and what influences are involved.

Indicators are an effective means of summarizing, quantifying and comparing relative states. Indicators of water quality include biologic data such as benthic and fisheries

surveys, concentrations of chemical constituents, and field measurements of parameters such as pH, dissolved oxygen, temperature, turbidity and conductivity. More physical indicators such as buffering of water courses, forest and canopy cover and stream bank stability may also be used to characterize influences on water quality conditions. Indicators might be used to track changes over time or indicate spatial distribution or patterns. Some indicators might be used as proxies for other important criteria that lack data to quantify directly.

Indicators form the basis of a target setting approach as they can be used to define the past, present, target and alternative scenario states.

Step 2. Identify Trends in Time

- Are there changes in water quality over time that suggest response to human activities?
- Are there gaps in the data that prevent adequate assessment of conditions?

Examining data for trends and gaps begins to tell the story of what is happening in the watershed over time. There are numerous ways of analyzing and viewing data sets to try to identify trends.

Step 3. Consider the Influence of Flow Regime

- Use hydrologic models, stream gauging and statistical approaches to characterize flow regime upstream and downstream of points of interest;
- Low flow conditions may limit dilution potential from existing or proposed point sources; and
- High flow conditions may exhibit high concentration of nutrients and pollutants from rural and urban runoff during storm and snow melt events.

Water quality and quantity are often related. Higher flows resulting from storm events and snow melt runoff often carry higher concentrations of sediment, nutrients and other pollutants. Pollutant concentrations tend to spike shortly after a significant runoff event begins as accumulated material on streets and other hard surfaces washes off into storm sewers and water courses. Higher flow volumes exhibit higher speeds with greater scour potential to erode stream banks, fields and construction sites.

Pollutant loading can be estimated using regression techniques with long-term continuous monitored stream flows and less frequent water quality grab samples that are distributed across high and low flow conditions. It is, however, highly dependent on availability of adequate data.

Water quality is often highly influenced by flow. High runoff might dilute point source loads, but increased concentrations may result from runoff. Low flows have less dilution potential but may exhibit higher quality because they may be comprised of higher proportions of groundwater. Load analysis provides a more consistent assessment.

Step 4. Assess Capacity of Receiving Waters to Assimilate Point and Non-Point Source Loads

- Point source discharge cannot be acutely toxic to aquatic life;
- Water quality downstream of point and non-point sources of nutrients and pollutants should achieve PWQOs under appropriate design conditions;
- Where PWOQs are already exceeded, any new development or discharges should not further impair water quality;
- Where PWQOs are currently achieved, any new development or discharges should not cause impairment of water quality above PWQO's;
- The mixed concentration in the receiving waters can be assessed by adding the ambient load with the waste load and dividing by the combined flow; and
- Consider other water quality goals and targets and objectives that have been agreed to by watershed management stakeholders and partners. For example, if there is a goal to improve fisheries habitat, consider factors that influence dissolved oxygen, temperature and other factors contributing to habitat viability. Determine how existing and proposed human activities influence these factors and develop planning that addresses them.

Step 5. Plan for Minimal Impact

- Consider where there is assimilative capacity in the watershed and where limits have been reached both at the point of interest and looking further downstream, using a cumulative effect approach;
- Address Provincial effluent discharge requirements;
- Require the adoption of technologies that address point and non-point source contributions to water quality conditions such as low impact development features, wastewater treatment systems and agricultural best management practices; and
- Apply modeling decision support approaches were appropriate to evaluate complex contributions from multiple sources.

Point Source

The 'Green Book' provides guidance for point source discharge to receiving waters. Policies are provided for areas with conditions that are better than objectives, and those areas not meeting objectives. Implementation procedures for effluent requirements, especially guidance for establishing effluent requirements, will be valuable for consideration through municipal watershed planning processes. Requirements include:

- In areas which have water quality better than the PWQO's, water quality shall be maintained at or above the Objectives;

- Water quality which presently does not meet the PWQO's shall not be degraded further and all practical measures shall be taken to upgrade the water quality to the Objectives;
- Prevent the release, in any concentration, of hazardous substances that have been banned;
- Ensure that special measures are taken on a case by case basis to minimize the release of hazardous substances that have not been banned; and
- Mixing zones should be as small as possible and not interfere with beneficial uses. Mixing zones are not to be used as an alternative to reasonable and practical treatment.

General procedures for establishing effluent requirements are outlined as follows:

General Procedures for Establishing Effluent Requirements

In establishing effluent requirements for discharges to surface waters, the procedures outlined below should be followed:

1) Site-specific receiving water assessments will be conducted to assess existing conditions and determine effluent requirements based on the waste assimilative capacity of the receiver. To make an assessment historical upstream water quality concentrations are assessed using the 75th percentile concentration.

2) The site-specific effluent requirement, so derived, will be compared, where applicable, to appropriate federal or provincial regulations or guidelines for effluent discharges and the most stringent requirement will be applied.

3) The effluent requirement derived from the above procedures, expressed as waste loadings and/or concentrations, will be incorporated into a Certificate of Approval or other control document.

4) For existing discharges in areas where water quality is degraded and does not meet the PWQOs, the Ministry may develop a pollution control program with each discharger to meet the effluent requirement determined from the above procedures.

Through the incorporation of water quality based limits into legally enforceable control documents such as a Certificate of Approval, the policies for water quality management become enforceable. These limits most commonly are for municipal or industrial point sources, but may also be applied to cooling water, stormwater or other polluting sources.

Rural Nonpoint Source

Non-point source pollution reduction strategies should aim to improve soil health and reduce soil and nutrient loss from rural lands. These strategies need to aim to reduce

nutrient and sediment loss and protect surface and groundwater. Non-point source pollution reduction should use a range of site appropriate management practices. Those practices eligible to receive stewardship funding should be increased over time as new technologies become available. Assistance should be directed to priority areas and monitoring and load reduction quantification procedures should be used to determine effectiveness of best management practices.

Nitrogen application to the land in areas of high groundwater recharge should be optimized to maintain productivity while minimizing environmental losses in priority subwatersheds.

There are many best management practices (BMPs) that can be implemented in a rural setting to help improve water quality and quantity:

- manure storage and management;
- private septic system repair or replacement;
- construction of bypass channels or bottom draws for online ponds;
- streambank erosion control and stabilization;
- cover cropping;
- tree and shrub planting;
- installation of cropland erosion control structures;
- clean water diversion;
- livestock access restriction and watercourse exclusion fencing;
- completion of nutrient management plans;
- crop residue management;
- strip cropping/contour farming;
- crop rotation;
- cover crops;
- hay/pasture;
- nutrient management;
- vegetated buffer strips along watercourses; and
- best practices for municipal drain design and maintenance.

Measures that are intended to address pollutants from non-point sources are inherently more difficult to quantify benefits from. As a result, many programs that promote non-point source management practices tend to be process based; meaning they measure success based on the number of projects implemented. A better means would be the adoption of more outcome based programming where funding and resources and provided per kilogram of load reduction. This approach is also consistent with the growing realization of a need for monetary valuation of ecological goods and services.

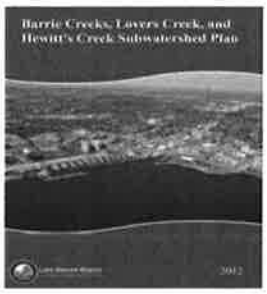
Urban Nonpoint Source

Municipalities should implement urban best practices that:

- Provide sustainable funding to support appropriate stormwater management programs;
- Develop and implement stormwater management master planning;
- Require proper sediment and erosion control measures be implemented for developing sites and ensure that requirements are enforced;
- Develop and deliver enhanced communication and education programs;
- Identify opportunities to retrofit existing uncontrolled areas;
- Allocate long-term funding for regular maintenance and operations of SWM facilities; and
- Reduce urban runoff at the source.

Where there are multiple complex point and non-point stresses on water quality, a modeling approach may be appropriate. Watershed modeling provides a means of evaluating how water quality conditions and pollutant loads might respond under different management or land use scenarios. It allows users to assess how land use and infrastructure changes could influence conditions both locally and further downstream as part of a cumulative effects assessment approach. Watershed modeling of water quality usually requires more complex models that consider hydrologic and shallow groundwater processes as well as sources and processes for water quality parameters of interest. Point and non-point sources are considered together with mixed land use types. More simplified approaches exist such as application of land use based export coefficients to estimate nutrient loads from a subject site for pre- and post-development conditions.

Example: Assessing Scenarios for Phosphorus Loading



An example of the assessment of land use and management scenarios with respect to nutrient loading can be found in the *Barrie Creeks, Lovers Creek, and Hewitt's Creek Subwatershed Plan*.

In the development of the subwatershed plan, consideration of phosphorus loading and assimilative capacity was necessary. The scenario analysis considered current land uses and sources of phosphorus, and then modeled phosphorus under: the current conditions, the approved growth scenario, and the approved growth scenario with implementation of agricultural BMPs. Urban BMPs were not modelled. The subwatershed plan provides the following commentary and process for phosphorus load estimates:

Surface Water – Phosphorus

Phosphorus occurs naturally in the environment and is a vital nutrient needed by both plants and animals. However, current land uses have increased the phosphorus loading to Lake Simcoe from an estimated 32 T/yr (prior to settlement and land clearing in the 1800s) to a current estimated 72 T/yr. Rural and agricultural land uses make up 5%, 36%, and 54% of the Barrie Creeks, Lovers Creek, and Hewitt's Creek subwatersheds, respectively. Runoff from pastures and crop land, as well as wind, which erodes topsoil, contributes to the phosphorus loading in mostly the Lovers Creek and Hewitt's Creek subwatersheds. Urban land use on the other hand use makes up 63%, 21%, and 18% of the Barrie Creeks, Lovers Creek, and Hewitt's Creek subwatersheds, and a considerable contribution to the phosphorus loading (particularly in Barrie Creeks) through stormwater runoff (discussed further in Section 3.3.2.9 [of the subwatershed plan]).

Phosphorus load estimates were originally calculated in the Assimilative Capacity Studies (ACS), 2006, but have since been updated by the original authors, the Louis Berger Group, in a report completed in September, 2010, entitled 'Estimation of the Phosphorus Loadings to Lake Simcoe'. A watershed model that estimates nutrient loads based on inputs such as land use, precipitation, and soil type was used for both the ACS and the updated study. The following tables (Table 3-7 to Table 3-9) present the average yearly phosphorus loads derived from each source in the subwatersheds under current conditions, the approved growth scenario, and the approved growth scenario with implementation of agricultural BMPs. Urban BMPs are not considered in this particular study as the model used did not consider them, but the model is currently being updated and future versions of this Plan will include the amount of phosphorus that can be reduced through urban BMPs, which are particularly important in the highly urbanized subwatersheds, such as Barrie Creeks. However, in Section 3.3.2.9 (Uncontrolled stormwater and impervious surfaces) [of the subwatershed plan], BMPs related to retrofit opportunities for stormwater ponds and the resulting phosphorus reduction is presented for each subwatershed.

The primary source of phosphorus in the Barrie Creeks subwatershed under existing conditions is derived from high intensity development land uses (58%) and point sources (38%). Under the approved growth scenario, there is a projected increase in total phosphorus loads of 6.5% without the implementation of agricultural BMPs (does not consider urban BMPs). The projected phosphorus load under the approved growth scenario can be reduced by 0% through the implementation of agricultural BMPs (Table 3-7). Under existing conditions, the Barrie Creeks subwatershed is the highest contributor of total phosphorus to Lake Simcoe (Figure 3-9). Under the committed growth scenario it is expected to be third highest contributor of total phosphorus, as the growth and development expected in both the East and West Holland subwatersheds puts them as the top two contributors to the lake (Figure 3-10) (Berger, 2010a).

6.3 NATURAL HAZARDS IN WATERSHED PLANNING & SUBWATERSHED PLANS

What is it?

Natural hazards, such as flooding hazards and erosion hazards, affect all regions of Ontario. On the Great Lakes shoreline, dynamic beaches are also considered as hazards. *Understanding Natural Hazards* provides introductory information on the Great Lakes-St. Lawrence River System and large inland lakes, as well as river and stream systems hazardous sites. Municipalities have a role in identifying areas subject to natural hazards, managing exposure to public health and safety risks, and directing development outside of hazardous lands and sites.

Regarding natural hazards, some key terms defined in the PPS include hazardous lands and hazardous sites. Hazardous lands are unsafe for development due to naturally occurring processes. Hazardous lands have different features in the Great Lakes-St. Lawrence River System, along the shorelines of large inland lakes, and along river, stream, and small inland lake systems. Hazardous sites are unsafe for development due to naturally occurring hazards, which could include unstable soils or unstable bedrock. From a watershed planning perspective, municipalities need to ensure that PPS policies and provincial plan policies are addressed, such as climate change considerations.

Why is it important?

PPS policies understand that Ontario's long-term prosperity, environmental health, and social well-being depend on reducing the potential for public cost or risk to Ontario's residents from natural or human made hazards. Directing development away from areas of natural or human-made hazards where there is unacceptable risk to public health and safety or to property damage, and not creating or aggravating existing hazards, are fundamental approaches of the PPS. The policies generally direct development outside of particular hazardous lands, such as adjacent to rivers, streams and small inland lake systems impacted by flooding and/or erosion hazards (PPS 3.1.1), and also restrict development and site alteration in defined hazards areas, such as the dynamic beach hazard and a floodway (PPS 3.1.2). Other hazards, such as ice storms, tornadoes, and droughts, are dealt with by MNRF.

Municipalities are delegated the responsibility of identifying areas subject to natural hazards, and developing management plans to limit exposure to public health and safety risks. This includes identifying hazard lands in municipal plans and incorporating policies to address new development consistent with PPS policies. Municipalities are

also responsible for the identification of hazard lands and adoption of land use mechanisms to prevent risks from inappropriate or unsafe development of these lands. Where they exist, conservation authorities have been delegated a commenting responsibility for the Natural Hazards policies. Depending on the nature of a proposal for development or land use change, approvals or work permits may be required by other agencies.

Understanding natural hazards is an important and necessary consideration in watershed planning. Flooding and erosion are naturally occurring processes influenced by local watershed conditions. Addressing these local physical processes and understanding their watershed scale affects is important from a watershed planning perspective. By understanding the function and susceptibility of various river, stream, and lake systems to disturbance, the potential impacts of proposed developments or remedial measures can be identified, and methods of reducing these impacts through design changes or mitigative measures can be implemented. This can involve inclusion of measures to enhance the overall health of the watershed in relation to mitigating risks due to natural hazards. Watershed planning plays an important role in defining, understanding, and managing these linkages and measures.

The location and extent of natural hazards can be outlined through such actions as floodplain mapping to identify regulatory flood lines, or for instance through soil and slope stability analyses to identify erosion and erosion potential. These considerations are important for informing where development may and may not occur, as well as for managing its associated impacts on natural watercourses, specifically regarding flooding and erosion — including where and how to focus mitigative measures.

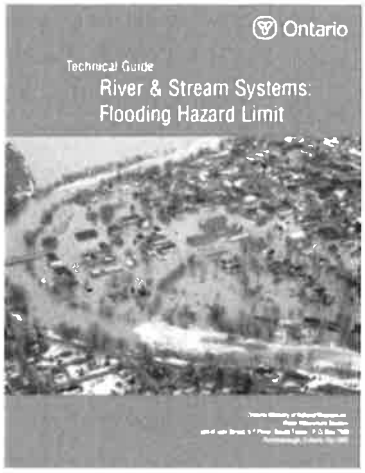
When information does not exist concerning the location of defined hazardous lands, or when existing information is identified as being out of date, municipalities and other planning authorities are advised to undertake studies to identify potential risks from natural hazards.

How to do it?

The sections provided below include a brief overview of how to address natural hazards in watershed planning.

Defining flood hazards limits, preparing flood plain maps and developing appropriate land use planning policies is the MNRF's preferred and most effective approach to hazard mitigation and management in Ontario.

Technical Guide – River and Stream Systems: Flooding Hazard Limit



The Province sets minimum standards to ensure that flood risks and costs to society resulting from riverine and lake flooding are reduced. The *Technical Guide - River & Stream Systems: Flooding Hazard Limit* (2002) provides the standards for defining flood hazards and describes the hydrologic and hydraulic work involved in defining flood hazards.

It is up to the municipality to determine how to best to identify floodplains in municipal plans and incorporate policies to address new development consistent with the PPS policy; the use of floodplain mapping is one tool available to demonstrate hazard areas. Municipalities may choose to rely on the services of conservation authorities to undertake floodplain mapping, where conservation authorities exist, but are not required to do so.

Seven general steps are outlined in *the Technical Guide - River & Stream Systems: Flooding Hazard Limit* and are intended to provide assistance to technical staff in the selection of procedures and implementation methods for floodplain studies, including the following:

Floodplain Study Tasks

Step 1. Select flood plain standard

- Identify study area to determine Zone* (*Refer to Figure B-1 Flood Hazard Criteria Zones of Ontario) and corresponding flood standard; and,
- Select flood standard from: Historical Storm (Hazel, Timmins), 100 year flood, or a historical storm observed in the area provided it exceeds the 100 year flood.

Step 2. Review data requirements, methods of hydrologic and hydraulic calculations

- Data requirement: streamflows, water levels, meteorological and physiographic data;
- Flood magnitudes: flood frequency analysis for 100 year floods, or hydrologic modelling of flood from a specified meteorological event;
- Hydraulic modelling, type of flow, cross-section data, roughness, bridge and culvert losses, plotting; and
- Select mapping.

Step 3. Select hydrologic modelling parameters

- Select rainfall input to modelling of flood standard: Hazel, Timmins, 100 year storm depth, duration, distribution, snowmelt;
- Select soil data; and
- Select land use.

Step 4. Select methods of computing flows

- Hydrologic models: single and continuous models;
- Computational procedures: snowmelts, infiltration, soil moisture account, base flow, watershed routing;
- Recommended model selection; and
- Model calibration.

Step 5. Select method of computing water levels for open water conditions

- Recommended models;
- Flood routing;
- Reservoir routing;
- Effect of lakes and reservoirs;
- Waterway crossings and encroachments; and
- Model calibration and sensitivity.

Step 6. Compute ice jam levels, where appropriate

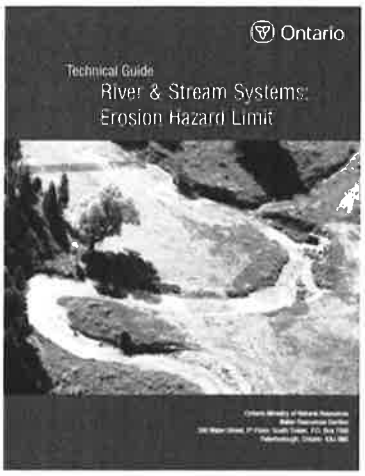
- Determine the need to compute ice jam levels for the site;
- Select ice jam computational method; and
- Estimate frequency of ice jams.

Step 7. Prepare technical report.

Hydrologic calculations to be completed to inform flood plain hazard analyses should include methods to evaluate and estimate flood flows through the use of models to simulate flow conditions. Hydraulic calculations are completed using a model that can determine corresponding water surface elevations and the flood profile through the use of backwater analyses. The resulting water surface elevations are mapped to produce floodplain maps.

For detailed technical information regarding the steps outlined above and associated methodologies and procedures, refer to the *Technical Guide – River & Stream Systems: Flooding Hazard Limit.*

Technical Guide – River and Stream Systems: Erosion Hazard Limit



River and stream systems are continuously changing in configuration and form as a result of natural processes such as erosion, transport, and deposition of sediment under varying hydrologic and hydraulic conditions. Land use change and watershed alterations affecting the hydrologic cycle have the potential to accelerate impacts. The interactions amongst the physical, biological, and human induced processes and their inter-relationships should be understood, assessed, and integrated as part of any implementation strategy or option aimed at sound planning and integrated management of watershed ecosystems and hazard lands.

The primary purpose of the *Erosion Hazard Limit Technical Guide* is to provide a consistent and standardized procedure for the identification and management of riverine erosion hazards in Ontario. The Guide is based on a standard and relatively simplistic methodology that is intended to be applied to two generalized landform systems through which river and stream systems flow; specifically, confined streams and unconfined systems. The Guide serves to assist technical staff experienced in natural hazard management to select the most appropriate methods and flexible implementation measures in the identification of riverine erosion lands.

Specific information highlighted in the document includes direction on classifying river and stream systems into two simplified basic types, including confined or unconfined river and stream systems. For confined systems, a toe erosion allowance, allowance for stable slope, and erosion access allowance are identified. For unconfined systems, an allowance for the flooding hazard limit or a meander belt allowance is identified, in addition to an erosion access allowance. The Guide also provides guidance regarding describing the study and site and field investigation information, as well as direction on how to address the hazards in a watershed context, and an introduction to environmentally sound hazard management approaches.

Increasing pressure to develop along river and stream systems requires sound planning and management within the erosion hazard. The Guide documents a valuable procedure to aid decision makers in evaluating areas, or a particular location, to ensure that particular consideration is given to both the physical and ecological influences and impacts when selecting which if any natural hazard response would provide the best management practice given local site conditions. This includes:

Addressing the Erosion Hazard

Step 1. Identify the Hazards

Step 2. Identify Development Proposed Within the Hazardous Lands or Hazardous Sites

Step 3. Identify Appropriate Hazard Management Response

Step 4. Determine Potential Impacts to Physical Processes and Characteristics

Step 5. Assess Off-Site Physical Impacts

Step 6. Assess Biological or Environmental Impacts

Step 7. Mitigate Minor Impacts of Preferred Hazard Management Response

For additional details, refer to the *Technical Guide – River and Stream Systems: Erosion Hazard Limit* document.

If your municipality borders a Great Lake or large inland lake, or has occurrences of unstable soils (sensitive marine clays, organic soils) or unstable bedrock (karst bedrock) classified as hazardous sites, please refer to the following applicable Technical Guides, pertinent to those situations:

- MNRF, 2001. Technical Guide for Great Lakes St. Lawrence River Shorelines, Flooding, Erosion and Dynamic Beaches.
- MNRF, 1996. Technical Guide for Large Inland Lakes, Flooding, Erosion and Dynamic Beaches.
- MNRF, 1996. Technical Guide for Hazardous Sites.

Climate Change: Risks for Infrastructure and Land Use Planning

Infrastructure is particularly vulnerable to increased risk from natural hazards, such as flooding and erosion, and it is anticipated that climate change will increase this risk.

PPS policies for Natural Hazards provide that planning authorities shall consider the potential impacts of climate change that may increase the risk associated with natural hazards (PPS 3.1.3). For infrastructure and land use planning, this could involve: re-visiting flood mapping during the development review and approval process, ensuring that climate change considerations are incorporated, and ensuring that land use planning is integrated with municipal asset management planning.

Consideration of infrastructure vulnerability and adaptation in the land use planning process should take into account, for example: whether there is infrastructure in areas that may become prone to flooding, whether flooding or drought will impact existing and planned servicing, and whether existing grey infrastructure can be augmented by green infrastructure. Provincial policies require water, wastewater, and stormwater management planning to be informed by watershed planning, or to demonstrate a

proposed development's compliance with applicable watershed plan or subwatershed plan criteria. As such, watershed planning can look ahead towards ways it can inform watershed-wide infrastructure strategies to promote resilience, rather than reacting to site-by-site development needs.

Information Sources

- MNRF Natural Hazards Technical Guides:
  - MNRF. 2001. Understanding Natural Hazards.
  - MNRF. 2002. Technical Guide – River & Stream Systems: Flooding Hazard Limit.
  - MNRF. 2002. Technical Guide – River & Stream Systems: Erosion Hazard Limit.
  - MNRF. 2001. Technical Guide for Great Lakes-St. Lawrence River Shorelines, Flooding, Erosion and Dynamic Beaches.
  - MNRF. 1996. Technical Guide for Large Inland Lakes, Flooding, Erosion and Dynamic Beaches.
  - MNRF. 1996. Technical Guide for Hazardous Sites.
- MNRF. 1998. Geotechnical Principles for Stable Slope
- Existing municipal data, mapping and programs
- Conservation authority data, mapping, and programs
- Existing official plans, zoning by-laws, plans of subdivision and condominium

6.4 CLIMATE CHANGE & WATERSHED MANAGEMENT

What is it?

As atmospheric levels of greenhouse gases (GHG) increase, stresses are placed on natural landforms and hydrologic systems in the form of increased natural hazards and extreme weather events. Variations in weather and precipitation patterns, lake levels, and stream flow regimes are anticipated as a result of a changing climate, which may result in negative impacts on hydrologic features and functions. Such stresses are exaggerated when anthropogenic influences and development pressures reduce the physical areas available to allow natural systems to perform functions that maintain components of the hydrologic cycle.

While the theoretical impacts of such stresses have been extensively researched and modelled, the consequences of future negative potential impacts associated with climate change are still growing areas of expertise. Climate change presents both challenges and opportunities for communities in Ontario. Scientific research and practical experience with regard to mitigation, adaptation, and resilience has highlighted the need for increased capacity to plan and adapt to less predictable environmental conditions and risks.

Why is it important?

Watershed planning can provide an ecological framework for managing impacts of climate change and developing more resilient communities, since it is an ecosystem-based, integrative approach to protection of water for both communities and the environment. Integration of watershed planning with natural hazard management will also assist with reducing risks associated with climate change impacts and severe weather events. Ontario's Climate Change Strategy and Action Plan recognise the role of watershed planning in addressing climate change.

Mitigation of greenhouse gas emissions and adaptation to a changing climate is a matter of provincial interest under section 2 of the *Planning Act*. Section 6 of the *Planning Act* requires that official plans contain policies that identify goals, objectives, and actions to mitigate GHG emissions and to provide for adaptation to a changing climate, including through increasing resiliency. Watershed planning provides a framework for development of such goals, which can be included in official plans to implement provincial policy directions.

Watershed planning, as defined in the Growth Plan and the Greenbelt Plan, typically includes consideration of climate change impacts and severe weather events, and scenario modelling to evaluate forecasted growth and servicing options, among other components.

Natural features and green infrastructure provide ecological services which can mitigate impacts of climate change, and such features are typically cheaper to protect and manage compared to the lifecycle costs of traditional grey infrastructure approaches. Many natural systems are inherently well positioned to attenuate the effects of extreme conditions if they are not already compromised or stressed. Increased canopy cover and greater amounts of green space can reduce the impact of urban heat island effect by measurable amounts, reducing cooling needs. Natural wetlands also reduce flood peaks and retain nutrients and other pollutants. Provincial policy support for green infrastructure and low impact development demonstrates the importance of natural heritage systems and water resource systems in mitigating and adapting to climate change.

The concern for the potential impacts of climate change, as well as the need for early assessment and mitigation planning, have been considered in recent provincial documents and existing frameworks. Applicable policies for the reduction of greenhouse gases and emissions, and for reduction of the future risk of climate change-related hazards, are identified within the PPS. In brief, these policies:

- Encourage the use of green infrastructure and require stronger stormwater management practices during development (PPS 1.6.2, 1.6.6.7);

- Mandate that energy conservation, including improved energy efficiency, reduced emissions of GHG, and adaptation to climate change be considered (PPS 1.8); and
- Require that the increased risks of the potential effects of climate change, primarily those associated with natural hazards be considered during development (PPS 3.1.3).
  ***Note:** This is generalized wording of these policies.*

The PPS policies above were considered during the development of the draft Guidance for the Consideration of Climate Change in Environmental Assessment in Ontario, as some class environmental assessments have requirements under the *Planning Act.* Together these PPS policies require planning and infrastructure proposals to identify a wider range of factors to improve the ability of such projects to respond and resist hazards imposed by the potential impacts of climate change. Additionally, infrastructure required for flood control and migration, such as dams and dykes, are typically subject to Class EA processes, so alignment between watershed planning/subwatershed plan processes should be considered in order to streamline future approvals and development.

How to do it?

Currently, there is no common list of best practices for climate adaptation, since climate change and its impacts vary from one location to another, and communities vary in their exposure and capacity to cope. Visions, risk tolerance, capacities, and other factors vary from community to community, so even those facing similar risks and opportunities may make different adaptation choices on a watershed basis.

Organizations such as ICLEI Canada have been working to assist municipalities and other planning authorities with climate change mitigation and adaptation. ICLEI has a range of useful resources and programs for municipalities to consult in undertaking climate adaptation projects. Also, organizations such as Federation of Canadian Municipalities have provided support to communities seeking to plan for and adapt to impacts of climate change. Information sources provided in this section should be consulted to gain insight into potential impacts of climate change, and potential mitigation/adaptation strategies.

The following steps provide considerations and tools for addressing climate change on a watershed basis:

Step 1: Consider the Potential Effects of Climate Change on Existing and Proposed Land Uses, Infrastructure, and Developments

The following are considered potential effects of climate change within a watershed/subwatershed boundary, and should be considered by municipalities in watershed planning, management, and infrastructure planning:

Drought

Trends indicate increased precipitation in winter, decreased precipitation in summer, increased evapotranspiration rates, reduced snow accumulation and earlier snow melt.

Extended Periods of Extreme Heat and Cold

Extreme temperature conditions are expected as a result of climate change, putting pressure on our energy supplies through our increased dependence on heating and cooling systems.

Flooding

Climate change is expected to result in more intense and frequent precipitation events. Increased infrastructure and impervious surface area coverage will increase runoff, as well as the potential for severe flooding and erosion. Greater amounts of precipitation in the winter could see higher amounts of snow accumulation in some years followed by rapid melt with the potential to increase flood risk especially when coupled with the possibility of more intense spring rainfall events. The decline in natural systems such as wetlands, that are inherently good moderators of runoff, leaves settlement areas more susceptible.

Changes to Water Supply

Less water may be available for residential, agricultural, industrial, power generation and transportation due to changes in seasonal changes in precipitation, as well as an increased frequency of use. Decreased availability of water supply will impact ecosystems, including biodiversity, shoreline, and wetland stability.

Water Quality

Warmer air temperature and reduced summer stream flows could result in impacts to cold water fisheries. Current initiatives to store and infiltrate more urban stormwater will provide some ability to counteract effects of heated urban runoff. Rising water temperatures have implications for increased growth of algae, lower dissolved oxygen concentrations, higher concentrations of unionized ammonia and higher E-coli concentrations. Reduced flows can reduce the dilution potential and assimilative capacity of water courses that receive treated wastewater.

For water, wastewater, and stormwater servicing and infrastructure, the increasing uncertainty and unpredictability of events such as droughts and floods will make it more

difficult to provide for an integrated, coordinated approach to land use and infrastructure planning. For example, where a municipality depends on groundwater for municipal drinking water in a quantity-stressed area, it will be difficult for the municipality to determine if a proposed development can be sustainably serviced or how it will impact downstream developments.

Municipalities should ensure that visioning/goal-setting as part of watershed planning successfully incorporates considerations for risks and vulnerabilities associated with climate change, as listed above.

Step 2: Consider the Effects of Existing and Proposed Land Uses and Water/ Wastewater/ Stormwater Management Infrastructure on Exacerbating Climate Change Impacts

Municipalities should assess how current water uses and existing infrastructure could negatively impact the watershed by exaggerating climate change effects. Such impacts imposed by changes in land use, new developments, and planning could include:

- Decreasing pervious surface areas (paving);
- Removing vegetation and habitats;
- Increasing or decreasing water takings from local sources; and
- Increasing or decreasing water temperature.

In the assessment, water uses and existing infrastructure should be evaluated to determine:

- **The volume of GHG emissions produced;**
- **Contributions to carbon storage and sequestration;**
    - Consider indirect and direct sources of greenhouse gases; and
    - Changes in local hydrology over time due to predicted future land uses and topography (through development, changes in vegetation coverage, etc.).
- **The incorporation of mitigation features in past and current project planning within these land uses and infrastructure;**
    - impact management measures.
- **The presence of alternative land use methods that consider the potential effects of climate change more effectively; and**
    - Operational changes to reduce the overall carbon footprint of land uses (time of year when operations are less laborious, less vegetation is destroyed, etc.); and
    - Make use of industry standards, best management practises, most efficient technology.
- **If potential effects of climate change arising from current land uses have the potential to impact First Nations communities in the future.**

- Regular engagement to ensure potential effects of climate change imposed by current land uses are transparent and known. Incorporate traditional knowledge from these communities into municipal planning to identify areas of concern requiring protection.

Step 3: Determine Impacts of Alternative Land Use and Management Scenarios Under Various Climate Models

There are numerous global climate models being developed and used around the world to better understand the impacts of climate change. Each model has its own boundary conditions and means of representing complex processes. Over time, these models are enhanced by accessing more computing power and increasing scientific understanding of the many sources and sinks and dynamic processes of GHGs and feedback loops.

Although many of the available models show agreement on the direction of climate trends, they often differ in their estimates of the magnitude of change that can be expected. Communicating the results of these predictions is also complex because of the variance between models, the spatial and temporal resolutions they use and the lengthy periods of time they are trying to characterize. Running climate change models necessitates the use of scenarios that make assumptions regarding the future rate of release of GHGs. The most recent findings suggest future trends will be punctuated with numerous seeming exceptions. An average of 3 degree C warmer winters might include numerous instances of record breaking cold within the same period.

Climate change mitigation and adaption are important parts of protecting and restoring a watershed. For example, historical climate data may no longer be relevant to setting performance standards for stormwater management facilities. As part of the Climate Change Action Plan, the province is working to enhance climate data for stormwater infrastructure decision-making, by updating future projected rainfall IDF curves (intensity-duration-frequency curve graphs) for the 2030s, 2050s, and 2080s in local Ontario communities, which are available through the Ontario Climate Change Portal.

Information from climate change models tends to predict long term trends relative to a historic baseline condition. They are able to estimate relative changes to temperature and precipitation and suggest adjustment factors for intensity-duration-frequency curves. In order for these projections to be meaningful in watershed management and inform planning, design and identification of potential development restrictions, these projections need to be used as inputs to other tools used to model watershed response. Bridge designs need to account for higher flow volumes and velocities with greater potential to undermine structures and river banks. Similarly, low flow and drought conditions characterized by a future climate should be part of the design of water intakes and effluent discharge systems to ensure adequate volumes under drought conditions. Water conservation should be built into watershed and subwatershed planning to lessen the effects of water shortage. For more information on Water Conservation, please refer to **Section 6.1** of the Watershed Planning Guidance.

A common approach used to address uncertainty in individual climate change models is to apply an ensemble approach where multiple models are applied and the results are used together to better understand the range of potential impacts or changes that might be expected. This adds to the complexity of modeling watershed processes because now there are multiple simulated watershed responses to consider that must be compared against baseline or historic conditions when making design decisions. Since climate change models are attempting to characterize conditions over long periods of time, a frequency of exceedance type approach might be used where an acceptable threshold is identified and results from the multiple scenario models are used together to assess the probable frequency that a threshold might be exceeded.

As recommended in the draft Consideration of Climate Change in Environmental Assessment in Ontario (2016) guide, historical and present climate data, as well as modelled projections should be consulted to evaluate the broad effects of climate change on long-term water management within the watershed, including:

- The vulnerability of current water management strategies, land uses, existing infrastructure, and surrounding ecosystems to the potential impacts of climate change;
- Assess if current water use, storage, and management could cause future impacts to the natural environment if negative climate change impacts do occur;
- Evaluate if modelled consumption and management trajectories will impact water or lands associated with First Nation communities; and
- Assess the availability of technology, infrastructure, or methods that could withstand the potential impacts of climate change more efficiently.

All components regarding water use and management within the watershed/subwatershed should be evaluated against all estimated severities, and frequencies of weather events. Results from completing these queries will identify areas within existing frameworks that are most sensitive to the potential effects of climate change. Buffers and mitigation should be developed to assist management frameworks in becoming more resilient.

Examples of queries designed to assess the capacity of existing management frameworks against the potential effects of climate change are as follows:

- At what volume could a surge in precipitation and runoff exceed the capacity of existing wastewater management infrastructure?
- Will current water use be sustainable if the driest estimated drought conditions are reached?
- Will present structures used to contain and store stormwater withstand future predicted storm events?

Mitigation plans and objectives resulting from the above queries may include developing infrastructure or management plans that can withstand a wider range of potential natural hazards and conditions impacting water supply and water quality, such as:

- Develop water conservation and/or drought management plans;
- Reduce demand through conservation measures or more efficient water use;
- Expand the storage capacity of existing water supplies;
- Develop new water supplies or retention structures;
- Change design capacity of drainage infrastructure such as storm sewers, catch basins, and erosion protection structures; and
- Manage rainwater on-site to ease demands on drainage infrastructure.

Step 4: Document Climate Effects on Water Use and Management within the Watershed or Subwatershed Plan

Within existing water management plans, long-term measures should be taken to document the potential effects of climate change, as well as to identify the efficacy of qualitative and quantitative information identified in previous steps recommended by the draft Consideration of Climate Change in Environmental Assessment in Ontario (2016) guidance document.

Documentation should consider all components of the watershed/subwatershed system, such as changes in hydrology, water supply and quality, natural land forms, the occurrence of natural hazards, as well as water use. Data for this documentation should include:

- Historical data and baseline conditions,
- Data collected from conservation and/or drought management plans,
- Data collected from water quality monitoring programs,
- Annual and seasonal patterns for temperature and precipitation,
- Freeze/thaw cycles of water bodies, and
- Changes in flood plain mapping (contours, location, and extent of flood plain boundaries).

To maintain the resiliency of watershed management plans over time, documented data as well as ongoing scientific research within the watershed should be evaluated to re-assess mitigation strategies through adaptive management. More information regarding adaptive management can be reviewed in **Section 8** of this Guidance Document.

Information Sources

Other relevant resources to inform watershed planning in setting out potential future conditions include the following:

- MOECC, 2016. Draft Guidance for Consideration of Climate Change in Environmental Assessment in Ontario

- CCME, 2015. Implementation Framework for Climate Change Adaptation Planning at a Watershed Scale
- MOECC, 2016. Climate Change Strategy
- MOECC, 2017. Climate Change Action Plan
- MOECC, 2017. Lake Simcoe Climate Change Adaptation Strategy
- Ontario Climate Change Data Portal

6.5 CONNECTIONS TO NATURAL SYSTEMS

What is it?

Natural Heritage Systems are made up of natural heritage features and areas (core areas), linked by corridors (linkages), to maintain biological and geological diversity, natural functions, and viable populations of native species and ecosystems.

Watersheds, subwatersheds, and groundwater resources, including the network of tributaries that support major river systems are critical to long term health and sustainability of water resources, biodiversity, and ecological integrity.

Watershed planning provides a logical ecological basis for consideration of interconnected natural and hydrologic features and functions.

Why is it important?

A coordinated, integrated, comprehensive approach to NHS planning has been implemented province-wide, as directed by PPS policies and the provincial plans, and supported by resources such as the NHRM, HMHE? and the *ORMCP Technical Paper Series*.

Since natural heritage features and water should be considered together because they are inherently linked natural systems, emphasizing the importance of consideration on a watershed basis.

Watershed planning at the upper-tier and single-tier municipal levels should be integrated with the province's regional NHS approach.

Growth Plan policies require municipalities to incorporate provincially identified NHS, outside of settlement areas and the Greenbelt Plan, and to apply appropriate policies to maintain, restore or improve its diversity and connectivity. Greenbelt Plan policies for the Protected Countryside area provide that official plans will contain policies and mapping regarding: the boundaries of the Greenbelt area, Protected Countryside, NHS, agricultural land base, key natural heritage features, key hydrologic areas, associated minimum vegetation protection zones, and wellhead protection areas.

In addition to identification and protection of the key hydrologic areas through watershed planning, a number of indicators should be considered from a subwatershed perspective. Specifically, natural cover, wetland cover, woodland cover, and hardened/impervious surfaces should be considered on a subwatershed basis, in alignment with ORMCP requirements for permitting major development in subwatersheds and provincial performance indicators for subwatersheds. In the Performance Indicators for the Growth Plan, these features were considered as indicators to assess performance in relation to minimum guidelines for watershed coverage outlined by ECCC:

- 10% or less hardened/impermeable surfaces for newly urbanizing watersheds;
- 10% or more wetland cover; and
- 30% or more forest cover.

How to do it?

Step 1: Determine Existing Natural Heritage System on a Watershed Basis

Refer to existing mapping and official plan policies for natural heritage systems, water resource systems, key hydrologic features and areas, the results of watershed characterization including identification of the water resource systems, and other studies or evaluations.

Determine interconnected features, areas, and functions across watersheds and jurisdictions, to support protection of quality and quantity of water and to support watershed ecological objectives. GIS mapping and analysis can provide insight into connectivity and gaps.

Watershed characterization undertaken as part of watershed planning should provide relevant information to identify and protect features and linkages between natural heritage systems and water resource systems. At the subwatershed level, information regarding impervious surfaces and natural cover (including wetland cover and woodland cover) should be documented, and targets should be identified in accordance with provincial and national guidelines.

Step 2: Determine Additional Information Required (If Needed), and Map Interconnected Natural Systems and Water Resource Systems

Ensure that there is adequate data and information to identify and map core features, linkages/corridors, natural features, water features, and potential areas for protection/restoration/enhancement. Criteria for identification of core and linkage areas are provided in *Development of the Regional Natural Heritage System for the Growth Plan for the Greater Golden Horseshoe*, building on the NHRM and HMHE?.

Step 3: Consider Adequate Goals, Objectives, Targets, Criteria, and Indicators for Protection of Natural Systems on a Watershed Basis

Ensure that watershed delineation and characterization provide for protection of natural heritage features and areas. Also ensure that watershed characterization takes into account existing and proposed natural heritage systems, and the location of existing and proposed land use changes and development. Setting the vision, objectives, goals, and targets for the watershed or subwatershed will require consideration of provincial and national guidelines, as well as local watershed conditions.

Targets for restoration and protection of riparian areas are often a part of watershed planning. Maximizing extent of riparian vegetation can contribute to watershed ecological objectives, and provide habitat and ecosystem services.

HMHE? provides resources in section 2.2 (Riparian and Watershed Habitat Guidelines) which are relevant to watershed planning. HMHE? describes riparian areas as areas containing vegetation communities and soils with attributes of both wetland and upland areas, which also provides the transition between forest and stream, hillside and valley, as well as terrestrial and aquatic ecosystems. Targets and rationale are outlined, and the document should be consulted by municipalities and others undertaking watershed planning. The targets outlined in HMHE? could form the basis for developing goals and targets in local watershed plans and subwatershed plans.

Information Sources

A range of resources and tools exist to assist with identifying and protecting natural heritage features, areas, and functions. Background resources also outline context and rationale for protection, and link to other strategies across scales and jurisdictions.

Additional relevant information sources for natural heritage include:

- MNRF, 2010. Natural Heritage Reference Manual.
- ECCC, 2013. How Much Habitat is Enough?
- Significant Wildlife Habitat Technical Guide (and associated Ecozone Guides).
- ORMCP Technical Papers.
- MNRF mapping products and Make a Map.
- Ontario's Biodiversity Strategy.
- Ontario's Wetland Conservation Strategy.
- Ontario Protected Area Planning Manual 2014.
- SOLRIS.
- MNRF data layer for landscape level inventory of natural, rural and urban lands in southern Ontario.
- Development of Regional Natural Heritage System for the Growth Plan for the Greater Golden Horseshoe – Summary of Criteria and Methods (MNRF, 2017) & Development of the Regional Natural Heritage System for the Growth Plan for

the Greater Golden Horseshoe – Technical Report on Criteria, Rationale and Methods (MNRF, 2017).

- Conservation Authority mapping, and existing plans and studies.
- Municipal official plan mapping, zoning mapping, plans of subdivision/condominium, site plans, and draft-approved development documentation (i.e. background studies).

ECCC Habitat Guidelines

Summary of Wetland, Riparian, Forest, and Grassland Habitat Guidelines	
Wetlands	
Percent wetlands in the watershed and subwatersheds	Ensure no net loss of wetland area, and focus on maintaining and restoring wetland functions at a watershed and subwatershed scale based on historic reference conditions. At a minimum, the greater of (a) 10% of each major watershed and 6% of each subwatershed, or (b) 40% of the historic watershed wetland coverage, should be protected and restored.
Wetland location in the watershed	Wetlands can provide benefits anywhere in a watershed, but particular wetland functions can be achieved by rehabilitating wetlands in key locations, such as headwater areas (for groundwater discharge and recharge), floodplains and coastal wetlands. Consideration should also be given to protecting networks of isolated wetlands in both urban and rural settings.
Amount of natural vegetation adjacent to the wetland	Critical Function Zones should be established around wetlands based on knowledge of species present and their use of habitat types. Protection Zones should protect the wetland attributes from stressors. Recommended widths should consider sensitivities of the wetland and the species that depend upon it, as well as local environmental conditions (e.g., slopes, soils and drainage), vegetative structure of the Protection Zone, and nature of the changes in adjacent land uses. Stressors need to be identified and mitigated through Protection Zone design.
Wetland proximity	Wetlands that are in close proximity to each other, based on their functions, or that are in close proximity to other natural features, should be given a high priority in terms of landscape planning.
Wetland area, shape and	Capture the full range of wetland types, areas and hydroperiods that occurred historically within the watershed. Swamps and marshes of

diversity	sufficient size to support habitat heterogeneity are particularly important, as are extensive swamps with minimum edge and maximum interior habitat to support area-sensitive species.
Wetland restoration	Focus on restoring marshes and swamps. Restore fens under certain conditions. For effective restoration, consider local site conditions, have local sources to propagate new vegetation, and wherever possible refer to historic wetland locations or conditions. Prioritize headwater areas, floodplains and coastal wetlands as restoration locations.
Riparian	
Width of natural vegetation adjacent to stream	Both sides of streams should have a minimum 30-metre-wide naturally vegetated riparian area to provide and protect aquatic habitat. The provision of highly functional wildlife habitat may require total vegetated riparian widths greater than 30 metres.
Percent of stream length naturally vegetated	75% of stream length should be naturally vegetated.
Percent of an urbanizing watershed that is impervious	Urbanizing watersheds should maintain less than 10% impervious land cover in order to preserve the abundance and biodiversity of aquatic species. Significant impairment in stream water quality and quantity is highly likely above 10% impervious land cover and can often begin before this threshold is reached. In urban systems that are already degraded, a second threshold is likely reached at the 25 to 30% level.
Forest	
Percent forest cover	30% forest cover at the watershed scale is the minimum forest cover threshold. This equates to a high-risk approach that may only support less than one half of the potential species richness, and marginally healthy aquatic systems; 40% forest cover at the watershed scale equates to a medium-risk approach that is is likely to support more than one half of the potential species richness, and moderately healthy aquatic systems; 50% forest cover or more at the watershed scale equates to a low-risk approach that is likely to support most of the potential species,

	and healthy aquatic systems.
Area of largest forest patch	A watershed or other land unit should have at least one, and preferably several, 200-hectare forest patches (measured as forest area that is more than 100 metres from an edge).
Forest shape	To be of maximum use to species such as forest breeding birds that are intolerant of edge habitat, forest patches should be circular or square in shape.
Percent of watershed that is forest cover 100 m from forest edge	The proportion of the watershed that is forest cover and 100 metres or further from the forest edge should be greater than 10%.
Proximity to other forested patches	To be of maximum use to species such as forest birds and other wildlife that require large areas of forest habitat, forest patches should be within two kilometres of one another or other supporting habitat features. "Big Woods" areas, representing concentrations of smaller forest patches as well as larger forest patches, should be a cornerstone of protection and enhancement within each watershed or land unit.
Fragmented landscapes and the role of corridors	Connectivity width will vary depending on the objectives of the project and the attributes of the forest nodes that will be connected. Corridors designed to facilitate species movement should be a minimum of 50 to 100 metres in width. Corridors designed to accommodate breeding habitat for specialist species need to meet the habitat requirements of those target species and account for the effects of the intervening lands (the matrix).
Forest quality – species composition and age structure	Watershed forest cover should be representative of the full diversity of naturally occurring forest communities found within the ecoregion. This should include components of mature and old growth forest.
Grasslands	
Where to protect and restore	Focus on restoring and creating grassland habitat in existing and potential grassland landscapes.
Habitat type	Maintain, restore and create native grassland patches to their historic extent and type at a county, municipal and/or watershed

and area	scale considering past presence and current conditions.
Landscape configuration, heterogeneity and connectivity	Grassland habitat patches should be clustered or aggregated, and any intervening land cover should be open or semi-open in order to be permeable to species movement.
Patch size	Maintain and create small and large grassland patches in existing and potential local grassland landscapes, with an average grassland patch area of greater than or equal to 50 hectares and at least one 100-hectare patch.
Landscape heterogeneity	Some grassland habitat should be located adjacent to hedgerows, riparian and wetland habitats for species that require different habitat types in close proximity.

6.6 CUMULATIVE EFFECTS ASSESSMENT

What is it?

Cumulative environmental effects are accumulating changes in the environment caused by the combined effects of developments, land use changes, permits, licences, climate change, and infrastructure over time.

Watersheds provide a foundation for cumulative effects assessment, since the boundaries provide a logical ecological unit and geographic scale for consideration of environmental, social, and economic impacts of land use changes and development applications.

Cumulative effects assessment (CEA) is the process or method of assessing how much the environment has changed up until today, as well as what we think might occur in the future due to development as well as stressors such as climate change. Change in the environment is assessed relative to thresholds and targets to identify areas of higher impact and risk.

Cumulative effects management (CEM) is the process of using CEA information to inform decision-making, including watershed planning.

Development decisions are approved by government and regulatory agencies on a project by project basis (e.g., check marks in the figure). Each project on its own may not cause environmental effects but cumulative effects may occur when each project is considered in combination with other past, present and future projects.

Why is it important?

CEA tracks changes in environmental indicators over time and space and relative to targets, objectives, or thresholds. It considers natural variation in the assessments of the accumulated environmental condition as well as stressors such as forest fires and climate change. In the watershed planning context, this can be focused to particular risks of concern to the municipality or its stakeholders as identified in the watershed plan. CEA also tracks changes in development activities over time and space and relative to targets, objectives, or thresholds. The main outcome of the CEA is to identify areas and indicators of concern and options for mitigation and management. From a watershed planning perspective, CEA addresses assessment of cumulative, cross-jurisdictional, and cross-watershed impacts, which could be due to single, multiple, or successive development/site alteration activities.

PPS policies direct planning authorities to use the watershed as the ecologically meaningful scale for integrated and long-term planning, which can be a foundation for considering **cumulative impacts** of development and considering cross-jurisdictional and cross-watershed impacts. Similarly, Growth Plan and Greenbelt Plan definitions for watershed planning describe it as being a framework for establishing objectives and direction for management of resources as well as for the assessment of **cumulative, cross-jurisdictional and cross-watershed impacts**. The Ministry of the Environment and Climate Change Permit to Take Water program takes cumulative effects into account when decisions are made on permitted water takings. The program follows a set of six principles, of which cumulative effects is Principle 4: The Ministry will consider the cumulative impacts of water takings.

Cumulative impacts and downstream impacts beyond a single development site or planning application need to be considered as part of a comprehensive approach to management of human activities, land, water, aquatic life, and resources within a watershed. This is also important for informing growth and servicing allocations and determining actions to minimize negative impacts on quality and quantity of water and hydrologic functions.

A key purpose of watershed planning is to establish what the current watershed "condition is", where areas of concern and opportunity are and what the risks may be to the watershed given different development trajectories. If planning is successful, stakeholders in the watershed understand the watershed condition now, what it was in the past, what it may look like into the future, what the risks might be, and how those risks will be mitigated and managed. CEA is fundamental to watershed protection and watershed planning. In fact, watershed planning is driven by solid and defensible CEA.

The credibility of a watershed plan is dependent upon its approach to CEA. Many believe that CEA is an overwhelming and unrealistic task to complete. This however, is based on an assumption that CEA involves monitoring and assessment of everything,

everywhere all of the time. CEA can be directed, focused and adaptively managed to key indicators and risks within a watershed.

How to do it?

The key steps to a watershed CEA are illustrated in the following figure. Assessment of the existing state quantifies how key environmental and stressor indicators have changed over time until today to identify indicators and areas of higher risk. This information is very valuable to inform stakeholders in the watershed of areas of concern for mitigation and management. This information then feeds into predictive models that examine what the future predicted environmental state might look like under different watershed planning development scenarios and considering important stressors such as climate change. As the environmental conditions continue to be measured over time, one can determine if predictions of the models were accurate and where adaptive management is required. Both of these phases of CEA require decision support tools to implement; one to assess and report on existing accumulated state and one to build from this state to model different scenarios into the future to support watershed planning and risk mitigation for stakeholders. Municipalities and watershed planners should keep in mind that CEA can be focused to a scope and scale specific to areas, indicators, timeframes and stressors within the watershed or sub-watershed undergoing planning.

The way this Watershed Planning Guidance is structured might suggest CEA is something independent of the other sections of this guidance document. In fact, CEA is the integrator of all of it. Individual disciplines involved in planning are brought together through CEA to construct a plan and to then measure progress along a trajectory towards the planning outcome.

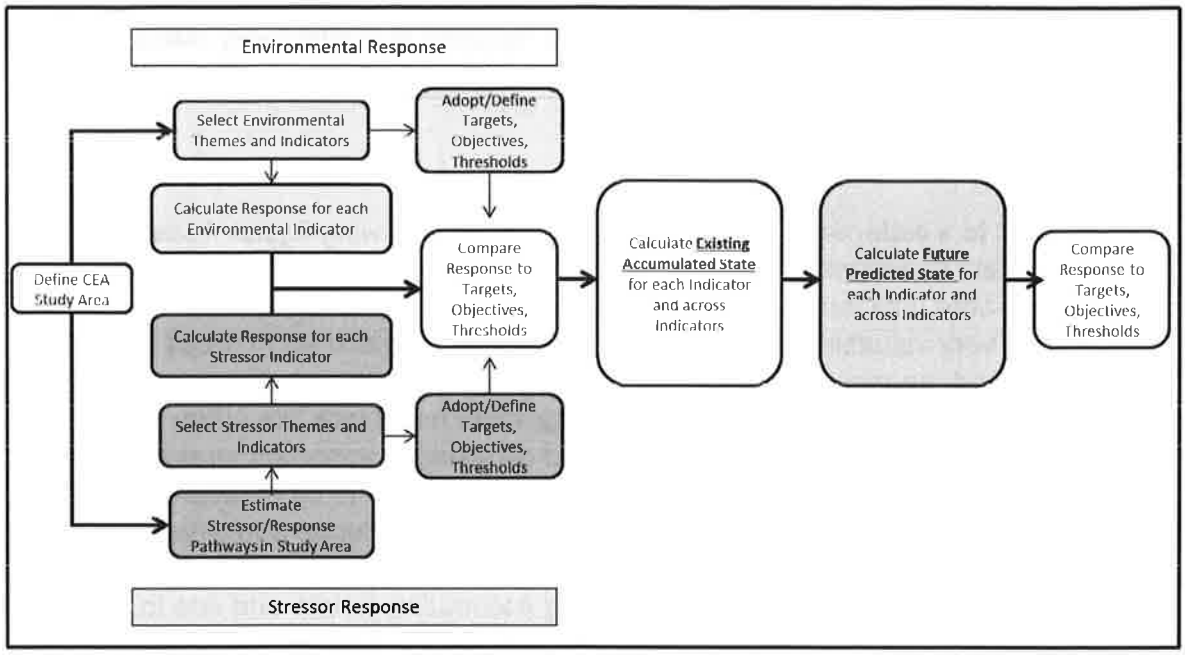


Figure 5 - Steps in the CEA process

Step 1: Definition of boundaries

This component of CEA begins with defining the boundaries of the study area for the assessment. These boundaries are application specific and can be political or administrative, watershed, or regional. In the context of watershed planning by municipalities, one would assume that the boundary would be the watershed (as delineated in the early steps of watershed planning). However, depending upon the question or the development pressures, boundaries of a CEA could be at a sub-watershed scale or could also include multiple jurisdictions depending upon the watershed size.

Boundaries can also be based on the spatial and temporal scale of a particular project, the habitat of a particular species of interest, or areas for industrial development (e.g., energy reserve boundaries). Boundaries must consider the spatial location but also the period of time. It is important that the boundaries of the study area remain consistent over time for CEA.

Step 2: Selection of environmental response indicators

This can be a seemingly overwhelming component of the assessment, given the number of possible indicators and can lead to misunderstandings at multi-stakeholder tables because the hierarchical embeddedness of indicators is not organized in the same way by different participants. That said there are only a handful of environmental themes to consider as well as core indicators under each theme which narrows the field

for CEA without compromising the quality of the assessment. In addition, not all indicators and themes are necessary for all areas as mentioned above.

When different knowledge systems are included within a watershed CEA, such as Indigenous knowledge, the organizational structure of indicators requires significant thought to demonstrate the related and inclusive nature of indicators and where linkages across knowledge systems may or may not occur.

Step 3: Measure changes in environmental response indicators relative to benchmarks

Environmental indicators measure the environmental response. Simply tracking changes in water quantity over time or across a watershed is one way to measure the environmental response based on one indicator under one environmental theme. Measuring the environmental response across multiple indicators starts to build the broader assessment for CEA. Reporting on environmental response is often called an effects-based assessment in the published scientific literature. It can indicate areas and indicators of higher environmental risk based on the magnitude, direction and type of change in environmental response relative to a baseline. At times, this is the only output of interest to a particular stakeholder group or end user.

Step 4: Estimate stressor/environmental indicator response pathways

Indicators are used to inform decision-making about environmental conditions and risks, so they must be based on a reasonable understanding of relationships (and potential change) between the environmental indicator and effects on that indicator from development (stressors). Mapping out stressor to environmental response pathways is one way to focus a CEA to development types, stressor indicators associated with the development type, and the environmental responses one might expect to be potentially affected by this development type. Some call these stressor/response pathways or adverse outcome pathways.

Step 5: Selection of stressor indicators

Stressor indicators associated with different development types measure the stressor response. These can include linear features (e.g, roads, seismic lines), point source discharges (e.g., effluent discharges, air emissions), non-point source discharges (e.g., agricultural run-off), etc. Stressor indicators are selected based on known and planned developments within the watershed or sub-watershed. Not all stressors must be measured to conduct a CEA for a watershed. The stressors of highest risk or known priority serve as a starting point.

It is important to note that the condition of the environment can be changed by anthropogenic stressors from specific developments, and also by natural stressors such as fire, disease, and insects. Climate change is also a major factor requiring

consideration in both existing accumulated state assessments and future predicted state assessments. Hence many decision support or Decision Support Software (DSS) tools include different climate change models to "adjust" response estimates in consideration of the cumulative effects of contributing changes in climate.

Step 6: Measure changes in stressor indicators relative to benchmarks

It is important to measure and report on the changes in stressors over time and space on the landscape and within the watershed boundary to understand how the land use has changed and the drivers that may be contributing to changes in environmental response indicators. Measurement and reporting on the stressor response for one or many indicators is the second core output of a CEA and associated decision support tools. Reporting on the stressor response is often called a stressor-based assessment in the published literature. It can indicate areas and indicators of higher development pressure relative to a baseline. Many regulatory agencies have approval limits and planning thresholds associated with stressor response indicators (e.g., SO_2 emission limits for example). At times, this is the only output of interest to a particular stakeholder group or end user in a watershed.

Step 7: Calculate existing environmental state or condition

The stressor and response assessments are then integrated to generate the existing accumulated state assessment. This assessment illustrates what has changed where and by how much for both stressor indicators and environmental response indicators. A simple example is shown below. Understanding the key stressors that may be affecting the environmental response is fundamental to understanding risk within a watershed due to development e.g., trends in nutrient loadings over time within a watershed (environmental response), resulting in increased algal biomass (environmental response) due to point and non-point source releases (stressors) and the risk this poses to assimilative capacity of the watershed to increased population growth or a proposed additional nutrient load which may be a component of a watershed plan.

Targets, Objectives and Thresholds

Measuring the environmental response and determining if changes have occurred due to development stress is not sufficient in and of itself to evaluate risk or to trigger management actions. Changes in the response of environmental indicators as well as stressor indicators must be evaluated against targets, objectives and/or thresholds (i.e., benchmarks) in order for the significance, magnitude and direction of the responses to be determined.

If government policy or planning exists within an area, often indicators are identified in those plans and have objectives and thresholds assigned to them. An example may be a land use plan or in this case a watershed plan with associated indicators and

thresholds assigned to that plan. Another example may be water quantity limits for a particular reach or watershed. An inventory of existing government policies, plans, indicators and benchmarks within an area is always the first place to start to support both indicator selection as well as benchmark selection.

Benchmarks that are familiar to many are water quality guidelines. National or provincial criteria applied to an environmental response indicator (in this case a water quality parameter or parameters, such as those outlined in PPS are often used to assess if changes in water quality pose a risk. While these are a quick and ready for use approach, these benchmarks often do not consider the site, reach, sub-watershed or watershed specificity.

Watersheds are dynamic systems with indicators that operate within a range specific to that watershed, sub-watershed and/or reach. Applying benchmarks that do not consider this specificity often result in false positives with respect to environmental change (e.g., guidelines are exceeded in the absence of a stressor effect simply because of natural surficial geology for example). Benchmarks specific to the study area are often calculated from monitoring data within that area as a baseline. This can be done using data from a "lesser developed site" in the area or from the area at a time period where development was less. These benchmarks capture the natural variability of the indicator considering a lesser developed condition of the watershed in space or time. If the indicator then changes outside of that natural variation of the baseline condition, this can be a very effective and specific way to assess the risk of a change or potential change in a watershed.

Finally, the outcomes predicted from a predictive model can also be plotted on the same tracking graphs as targets, so the trajectory or differences between actual and predicted can be assessed regularly; are we on course or off course to our predictions or planning targets?

Changes in an indicator can only be assessed relative to a benchmark. Thus, benchmarks are essential to CEA and to measure the magnitude, direction and hence significance of change in both environmental response indicators and stressor indicators. If changes are occurring but the condition of the indicator remains below a benchmark, then this is of lower risk than a change that has resulted in an increase over a benchmark. Translation of CEA results into risk based on the changes measured in indicators is critical to support risk-based decision-making and cumulative effects management within a watershed.

There is another important element of the use of benchmarks that creates the opportunity for CEA. The challenge most often faced in CEA is not in assessing change in a single indicator, but how to integrate change assessments across multiple indicators for a true assessment of cumulative effects. The location, distance or deviation of an indicator relative to its benchmark is a measure that can be applied to any indicator/benchmark and hence can be used to integrate measures of change

across many different indicators and their associated benchmarks within the study area. This essentially results in the key output of the existing accumulated state assessment which is a "change map" or a risk map by indicator or across indicators for an area. The indicators which are showing the greatest changes in an area are typically of higher concern requiring some form of action or further investigation.

Predicted Future State

The previous section discussed the process of assessing the current or existing environmental state. This is important to track changes and to support current management of the landscape and watershed. It identifies areas of higher and lower risk and indicators that may require more protection or attention than others. This change assessment can be used to respond to new developments proposed in an area. It also requires monitoring data to implement.

Watershed planners examine future developments on a landscape and predict what the environmental responses might be (or not) relative to the development activities. This is where predictive models are used to forecast what the future might look like under different scenarios and considering the current trajectory of development (changes in stressor indicators) and associated environmental response (as measured in the existing accumulated state assessment).

Predictive models often play a role to support land use and watershed planning and accumulated state assessments. Using monitoring data can help track over time if predictions were accurate. There are many different types of predictive models; some can predict river flows using different parameters that affect surface water quantity (e.g., precipitation, soil moisture, runoff, etc). Others can show different species modelled on the landscape reflecting intactness of biodiversity.

The same steps used in the accumulated state assessment also apply in the predicted future state assessment.

Cumulative Effects Management (CEM)

CEA translates into enhanced environmental protection and management of cumulative effects (CEM) when the context of environmental risk informs decision-making within government, industry or with stakeholders. CEA produces risk maps for indicators and in areas where environmental change is occurring due to development activities and relative to benchmarks. Working with stakeholders, one can determine no action, low action, moderate and high action responses to movement towards or exceedances of benchmarks.

The first step is always to conduct quality assurance and quality control (double check) of the data and analysis to confirm the result. One might then continue to monitor the situation, increase monitoring, decrease monitoring, apply mitigation, or initiate stakeholder discussions. If information is tracked and reported but changes are not

linked to actions, then the value of the exercise is arguably academic. Decision-makers and stakeholder appreciate receiving `flags` of changes that are occurring and suggested actions to take. Having this automated through a decision support system is ideal. It is also ideal as part of a project to discuss and outline actions tied to benchmarks at the beginning of the project with agreement to adapt over time as necessary.

Decision Support Software Tools

Data and information systems and decision support tools are critical for implementation of the cumulative effects framework. With the advance of big data, public access to government data, the volumes of different stressor and monitoring data sets, advancement of technology and real time monitoring, the sophistication of comparative analysis and calculation of benchmarks and the need for geospatial representation-software systems are the only way CEA can be effectively and systematically implemented on the ground and within watersheds.

A system must enable the integration of monitoring data, spatial data, environmental and stressor indicator status, predictive modelling, benchmarks (objectives, targets and thresholds), and risk and action communication (CEM). It has been discussed in the literature of who should be responsible for development of such a system. Industry for example, has raised the issue in the literature a number of times indicating how difficult, expensive and unrealistic it is for project proponents to carry the burden of assessing their project application relative to cumulative effects where they are required to conduct regional CEA as a single project proponent. The jurisdictional complexity in Canada also makes it difficult for a single government agency to implement and manage the DSS tools.

The private sector can play a significant role in development and implementation of DSS tools for CEA and CEM to serve different end users by:

- Accessing consistent data from environmental monitoring programs across sectors and jurisdictions,
- Calculating existing accumulated state using consistent indicators, benchmarks and methods,
- Using consistent modelling approaches to predict future environmental state due to different development trajectories,
- Developing long term relationships with science, technology and data providers to support on-going access and innovation for tool development,
- Working with Indigenous peoples to integrate western science with traditional ecological knowledge into environmental monitoring data, and
- Creating a data and analysis platform that is open, transparent and informed to assess environmental change and risk due to development, consider the implications of factors such as climate change to these assessments, report out

on conditions in an unbiased, science-based manner, and to identify and flag management actions for end users as changes are detected.

6.7 ASSESSMENT OF LAND USE & MANAGEMENT SCENARIOS

What is it?

This phase of plan development considers alternative measures that may be used to protect, enhance, or rehabilitate the environmental features identified in the watershed issues and goals. Watershed planning is a strategic planning exercise where the intent is to maximize benefits to the watershed as a whole, and to minimize the efforts and costs needed to formulate planning decisions and provide for protection of hydrologic features, functions, and linkages.

A key part of this strategic planning exercise is to consider alternatives – i.e. alternative approaches, alternative scenarios, alternative measures. It needs to explore what is needed to achieve the goals in terms of actions and policies. These considerations might include costs, affordability, public acceptance, timing, legitimacy, feasibility, likely effectiveness, and the degree of ease or difficulty of implementing certain measures.

Before alternative scenarios are considered for various resource features, for example, different general approaches to resource management can be identified as possible courses of action, including: pollution prevention, pollution control, regulatory control, land use policy/planning, water conservation, and habitat enhancement.

The assessment of land use and management scenarios, and determination of preferred alternatives, is based on watershed characterization and watershed-specific targets or thresholds. Public, stakeholder, and Indigenous engagement will also provide valuable direction for assessing and selecting management approaches and scenarios. Assessments will consider existing and proposed land uses and servicing, as well as options for potential management alternatives, to identify recommended watershed plan actions and policies.

Typically, land use and management scenarios consider the **state** of the watershed under current conditions (e.g., baseline characterization), and also from **pressures** and **impacts** associated with future land use (e.g., approved growth and development) and management scenarios and actions (e.g., watershed plan recommendations, protected natural heritage system, BMPs implemented, etc.). From simple desktop analyses with existing information to complex computer models, these scenarios can be developed through a range of approaches depending on the development pressures on the watershed, geographic scale, and complexity of contributing factors.

Land use and management scenarios and alternatives can be mapped as a 'blueprint for change', showing the desired future condition of the healthy, resilient watershed as

well as areas for protection, restoration, and enhancement. This type of mapping can present a cumulative illustration of land use, growth, development, natural heritage and riparian protection, and resource management across the entire watershed. In turn, this allows for a coordinated systems approach to managing ecosystem impacts rather than reacting to project-specific development impacts.

For example, land use and management scenarios can illustrate the identification and protection of water resource systems (surface water features and areas, ground water features and areas, hydrologic functions, key hydrologic features, and key hydrologic areas), interconnections and linkages with natural heritage systems, and approved or proposed land use changes and development. Areas in the watershed can be identified where growth should or should not be accommodated, where servicing or infrastructure will not result in negative impacts to quality and quantity of water, and areas where restoration or best management practices should be implemented.

Why is it important?

Assessment of land use and management scenarios will assist municipalities with implementing PPS direction regarding water by supporting decisions on watershed plan recommendations for minimizing impacts, and by supporting decisions on potential development restrictions or alternative development approaches. PPS requires that planning authorities: minimize potential negative impacts; and implement necessary restrictions on development and site alterations to protect vulnerable surface and groundwater, sensitive surface water features and sensitive groundwater features, and their hydrologic functions. Also, mitigative measures or alternative development approaches may be required to protect, improve, or restore sensitive surface water features, sensitive groundwater features, and their hydrologic functions (PPS 2.2.2). By assessing existing and proposed land uses/development/infrastructure and potential mitigative actions/policies, municipalities can determine preferred management approaches which will meet watershed objectives and targets.

Growth Plan and Greenbelt Plan definitions for watershed planning provide that watershed planning typically includes scenario modelling to evaluate the impacts of forecasted growth and servicing options and mitigation measures.

Growth Plan and Greenbelt Plan definitions for subwatershed plans provide that a subwatershed plan should consider existing development and evaluate the impacts of any potential or proposed land uses and development. A subwatershed plan also identifies specific criteria, objectives, actions, thresholds, targets, and best management practices for: development, water and wastewater servicing, stormwater management, managing and minimizing impacts related to severe weather events, and supporting ecological needs. Assessment of land use and management scenarios will assist municipalities in determining impacts of development and mitigation measures, as well as pinpointing specific actions and best management practices.

ORMCP requires that watershed plans must include criteria for evaluating the impacts of proposed development and infrastructure projects within and outside the plan area on water quality and quantity and on hydrological features and functions. Evaluations of the assimilative capacity of the watershed to deal with sewage, and assessments of climate change impacts on sewage and water systems and stormwater management systems, are also necessary. With regard to development and site alteration in subwatersheds, it is necessary to consider extent of vegetated and pervious surfaces, and whether a development proposal will contribute to meeting these targets.

There is a wealth of available information regarding existing land uses, allocations of growth and servicing, approved and proposed development, and infrastructure strategies at the provincial, upper-tier, and lower-tier municipal levels. For example, where growth forecasts and intensification targets have been set out in the Growth Plan Schedule 3 and subsection 2.2.2, municipalities are able to undertake a land needs assessment to determine the amount of land needed to accommodate forecasted growth and associated infrastructure (preferably within settlement areas). Layered on the land use and growth management analyses, natural heritage and hydrologic features and areas can be identified in terms of areas for protection, restoration, or enhancement. Factoring in potential best management practices and potential criteria for development and infrastructure, municipalities can identify whether or not proposed land use and management alternatives will be successful in meeting stated watershed/subwatershed objectives or targets. In the case of an urbanizing watershed, for example, scenario analyses might indicate that there is insufficient natural cover (wetlands and woodlands) to meet targets, and management alternatives such as increased minimum vegetated areas in plans of subdivision might be identified as a watershed plan recommendation to inform land use planning.

As described previously, natural heritage and hydrological scenarios can be conceptualized in the form of mapping. Municipalities can identify elements of the water resource system and key hydrologic features and areas, including areas for protection and restoration, to determine if the proposed scenario will achieve their outlined watershed objectives. The watershed plan for Bowmanville/Soper Creek provides a useful example of an outlined scenario development process for its natural heritage system and hydrologic systems, and is described in a case study in this section of the Watershed Planning Guidance.

Many municipalities and conservation authorities have experience with management of natural hazard risks through analysis of flooding scenarios, and application of policies and land use designations to direct growth away from flooding hazards and other natural hazards and constraints. A similar approach can be used in watershed planning at the municipal level, where features and linkages of the water resource system are identified, and analysis of growth scenarios highlight areas where growth should be carefully managed to avoid negative impacts.

How to do it?

Step 1: Identify, Map, and Evaluate Existing Land Uses, Development/Infrastructure Approvals, and Growth Forecasts

All upper and single tier municipalities within the Growth Plan area must determine growth management strategies and land budget approaches for accommodating projected future population and employment forecasts.

The Growth Plan now requires upper- and single-tier municipalities to assess the quantity of land required to accommodate forecasted growth, including decisions about settlement area boundary expansion and the quantity of excess land, using a standard methodology to be issued by the Province. Additionally, in the Growth Plan, minimum targets for intensification and density have been identified.

Official plans, zoning bylaws, source protection plans, draft approved development, and land budget analyses can provide information on existing and proposed land uses and development on a watershed basis.

Step 2: Identify, Map, and Evaluate Water Resource Systems, Key Hydrologic Features and Areas, Hydrologic Functions and Linkages, Associated Natural Heritage Features, and Impervious Surfaces

As identified through watershed characterization, the features, functions, and linkages of the water resource system, key hydrologic features and areas, natural heritage features and areas, source protection areas, riparian areas, and impervious surfaces, should be mapped.

Building on the existing and proposed land use analysis, an evaluation of whether areas for protection, restoration, or enhancement can assist with determining whether management alternatives will meet stated watershed objectives and targets. For example, in a watershed where key hydrologic features and natural heritage features are identified, a management alternative such as protection of these features and enhancement of linkages between these features might assist with meeting a target for minimum natural cover and riparian areas within the watershed.

Step 3: Determine Management Alternatives and Actions

Recommended actions will be determined as a result of the evaluation of watershed conditions and issues relative to goals by means of management scenarios with alternative actions. At this point, there should be a fairly clear notion of what actions are needed to meet management goals and objectives in each part of the watershed. To promote ecosystem protection, appropriate initiatives by municipalities should be developed and stated for key natural heritage and water-based elements that are necessary for protecting ecosystem health. Within their watershed management plans,

municipalities should set out recommended actions for each ecological area in the watershed in terms of:

Management Categories

- protection;
- enhancement/improvement; and
- rehabilitation/restoration.

Natural and Hydrologic Areas

- water resource systems;
- key hydrologic features and areas;
- key natural heritage features;
- natural heritage systems; and
- parks, open spaces, and green infrastructure.

Natural resource managers can take advantage of overlaps and interrelationships among categories of management goals to maximize the use of available fiscal and human resources. For example, a **protection** action might be aimed at maintaining ground water discharge characteristics and habitat quality for an existing brook trout population. An **enhancement** initiative might be aimed at constructing five brook trout spawning areas, while a **rehabilitation** action could be aimed at restoring ten kilometres of lost brook trout habitat. Finally, the plan should provide a description of how environmental monitoring should be used to measure the success of watershed management decisions or actions.

The plan can provide technical guidance for **rehabilitation**. Criteria for prioritizing site rehabilitation should also be established by municipalities, including estimated time, fiscal and human resources required for each site. Corrective actions for existing problems should be described, including technical descriptions of how these proposed changes are expected to occur. The watershed management plan can outline preferred measures or strategies for improved land management and for the abatement of all point and non-point sources (e.g., stormwater management facilities, water pollution control plant facilities).

When developing watershed plans, municipalities and watershed practitioners should also take into account whether the proposed management actions will be sufficient to meet stated watershed targets, as well as applicable federal and provincial standards (if these have not been incorporated into targets already). Management actions which contribute to watershed goals and are realistic for the local watershed context/capacity should be incorporated into watershed plans as recommendations and policies, which can then be integrated into land use planning documents and approval processes.

A desired management approach will:

- Use the best available information;

- Address the needs of the ecosystem as well as human needs;
- Involve all stakeholders and interested parties;
- Recognize and account for uncertainties;
- Recognize cumulative effects;
- Use an adaptive management approach; and
- Be realistic for the watershed conditions and capacities of implementing authorities.

It is important that municipalities within a particular watershed collaborate to ensure collective consideration and incorporation of information on potential effects on or responses by (positive, neutral and negative) the watershed environment into decisions on land use planning as guided by their Official Plans. The intent of which is to find creative solutions that ensure future land use changes make a positive contribution to the ecosystem as a whole, rather than achieve the narrow ends of certain isolated interests.

In developing watershed plans, municipalities and watershed practitioners will take into account whether the proposed management actions will be sufficient to meet stated watershed targets, as well as applicable federal and provincial standards. Management actions which contribute to watershed goals and are realistic for the local watershed context/capacity should be incorporated into watershed plans as recommendations and policies, which can then be integrated into land use planning documents and approval processes.

Step 4: Costs and Benefits

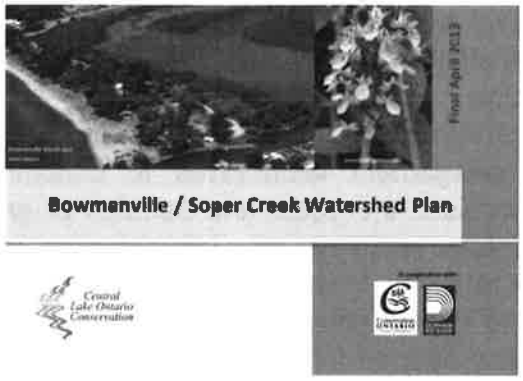
It is recommended that municipalities also consider a cost-benefit approach to evaluating land use and management scenarios. This includes consideration of ecological and human benefits of various land use and management scenarios, while also evaluating the lifecycle costs and risks associated with different servicing/infrastructure alternatives. For example, in the case of stormwater management alternatives to accommodate forecasted growth, municipalities may consider the costs and benefits of green infrastructure and low impact development versus traditional grey infrastructure. In this example, there is a high level of benefit for a relatively lower lifecycle cost by opting for a management strategy which maximises the role of green infrastructure and source-level controls and reduces the amount of land needed for dedicated stormwater management facilities. However, a cost may be that there is decreased municipal control and certainty over stormwater volume and contaminant attenuation in areas with low levels of permeability and vegetative cover.

A mixed qualitative / quantitative approach may be effective in assigning cost and benefit values to a comprehensive list of key components in each land use or management scenario. This analysis would compare existing and proposed conditions and, similar to the Class Environmental Assessment process, alternative scenarios

would be tested and the highest scoring options against a series of criteria (i.e. cost-benefit) would be short listed for further consideration. Municipalities can therefore undertake a scenario analysis that broadly considers costs and benefits with regard to the following features:

- Peak flow attenuation and floodplain management
- Water quality
- Erosion and stream morphology
- Natural heritage features
- Water balance and infiltration
- Urban stormwater runoff
- Agricultural / rural runoff
- Groundwater quality and quantity
- Socio-economic opportunities
- Health and well-being
- Carbon foot print
- Preservation of EG&S

Example of Scenario Analysis: Bowmanville/Soper Creek Watershed Plan Scenarios



An example of the assessment of land use and management scenarios in watershed planning can be found in the *Bowmanville/Soper Creek Watershed Plan*.

The watershed plan outlines ORMCP requirements for development of watershed plans, highlighting that "ORMCP requires Authorities developing watershed plans to set watershed targets and develop management alternatives to assess whether or not the existing or predicted conditions within the watershed satisfy the targets identified. The examination of the management options is meant to evaluate the ability of each option to maintain, improve or restore water quality and quantity, ecological integrity, feasibility of the alternative, and implementation mechanisms.

In compliance with the requirements of ORMCP and technical guidance provided in ORMCP Technical Paper #9, the analysis of land use and management scenarios was undertaken in four steps:

- Step 1: Set watershed health targets;
- Step 2: Develop computer models as tools to illustrate potential changes in the watershed;
- Step 3: Develop scenarios for use with the models to predict ecological changes in the watershed; and
- Step 4: Analyze the scenarios with the data provided from the models to determine what future scenario(s) provides the opportunity to achieve the watershed health targets.

Scenarios for analysis were outlined as follows:

Bowmanville/Soper Creek Watershed Planning Scenarios for Analysis

#	Scenario	Description
1	Existing Conditions	2011 watershed conditions (provides baseline conditions for comparison)
2a	Full Official Plan (OP) Build-out	Conditions of the watershed if all of the development approved in the OP occurred
2b	Full Official Plan (OP) Build-out + Natural Heritage System (NHS)	Conditions of the watershed with full OP Build-out plus protection of the NHS
2c	Full Official Plan Build-out + the Natural Heritage System + High Volume Recharge Areas (HVRAs)	Scenario 2b + the protection of HVRA function
3a	Full Official Plan and Whitebelt Build-out	Scenario 2a + full Whitebelt development
3b	Full Official Plan and Whitebelt Build-out + the Natural Heritage System	Scenario 3a + protection of the NHS
3c	Full Official Plan and Whitebelt Build-out + the Natural Heritage System + the High Volume Recharge Areas	Scenario 3b + protection of HVRA function
3d	Full OP and Whitebelt Build-out under Climate Change conditions	Scenario 3a under Climate Change conditions

(CLOCA, 2013, p.33 Table 1)

7 Implementation

7.1 WATERSHED PLAN & SUBWATERSHED PLAN DEVELOPMENT

What is it?

Contents of watershed plans and subwatershed plans will vary according to local watershed drivers, issues, and recommendations; however, alignment between plans across various watersheds will be valuable for understanding broader landscape-level trends across spatial and temporal scales. As such, municipalities should balance local conditions and needs with opportunities to standardize contents and formats, to support analysis of cross-watershed and cross-jurisdictional impacts across temporal and spatial scales.

A watershed plan is a product of the watershed planning process, which will generally present:

- findings of watershed characterization (baseline conditions);
- goals, objectives, and directions for protecting water resources and managing activities and resources;
- identified issues and impacts;
- preferred land use and management scenarios; and
- implementation approaches.

A subwatershed plan reflects and refines the goals, targets, and assessments of watershed planning for smaller geographic areas, having regard for local issues. It will generally outline:

- existing and proposed development/land uses and associated impacts;
- identified natural heritage features and areas, and hydrologic features, areas, and functions;
- approaches for protecting, improving, or restoring quality and quantity of water in the subwatershed; and
- specific criteria, objectives, targets, and best management practices for development, for water and wastewater servicing, for stormwater management, for minimizing risks and impacts related to severe weather, and for ecological needs.

There are many examples of completed watershed plans and subwatershed plans in Ontario and beyond (see resource section). A generic sample Table of Contents for a watershed plan might include the following sections:

Table of Contents Example

Section	Examples of Contents
Background	• Policy basis and rationale for plan development
Vision, Objectives, and Goals	• Description or 'blueprint' or desired future state • Specific objectives and goals
Watershed Planning Process	• Overview of the planning process and underlying principles guiding the planning process
Engagement and Communications	• Participants and roles • Methods and timing of input from committees, agencies, stakeholders, the public, and Indigenous communities
Watershed Conditions, Water Resource System, and Key Hydrologic Features, Areas, and Functions	• Description of watershed conditions, and/or connection to state of the watershed reporting • Description of the quality and quantity of water • Description of the water resource system • Identification of key hydrologic features, areas, functions, and linkages
Targets, Indicators, and Actions	• Agreed-upon targets, and objectives and actions identified to meet targets • Ecosystem indicators • Performance indicators • Recommended management actions • Criteria and policy recommendations for inclusion in municipal planning documents
Implementation, Monitoring, and Adaptive Management	• Timelines, roles, and responsibilities for implementation • Performance monitoring • Ongoing engagement and communication with implementing actors and stakeholders • Adaptive management strategy to keep the plan up to date
References and Resources	• Sources and further resources • Terms of Reference for watershed planning

Appendices	• Background studies and information, glossary

Why is it important?

The watershed plan development phase essentially confirms the preferred management scenario, and provides an implementation plan. Consultation efforts, including public open houses, surveys, online engagement, and other techniques, will be instrumental to plan development and buy-in.

In developing the watershed plan, the work undertaken in previous tasks — including watershed characterization, goals and targets, scenario assessment outcomes, and monitoring and adaptive management strategies — should be consolidated into a readable, actionable watershed plan. Watershed plans are meant to be readable documents which can be widely understood by municipalities, stakeholders, and the public, while also providing specific direction for implementation by various actors.

How to do it?

At this point in the watershed planning process, tasks including watershed characterization, goal-setting, development and assessment of scenarios, and development of recommended management approaches have been completed. These elements should be consolidated into a plan. The goals, objectives and targets set through watershed planning should be used to guide the design of an implementation plan or strategy. At the most basic level, an implementation plan should consist of:

- Developing an implementation schedule (when do you anticipate meeting your targets);
- Develop monitoring components to track and evaluate progress;
- Identify technical, financial and human resource requirements to implement the watershed plan;
- Implement your management actions developed throughout section 6;
- Prepare annual work plans based on the implementation schedule, monitoring components, resources required and management actions; and
- Be prepared to report on your results and adjust as necessary.

Considerations when developing an implementation work plan:

- Does the implementation plan align with the goals, objectives and targets of your watershed plan?
- Does the implementation plan identify responsibilities and resources required?
- Does it identify a monitoring schedule?
- Are the management actions clear and implementable with dedicated resources?

- How will monitoring be conducted?
- What information will be compiled for reporting purposes?

Step 1: Determine Preferred Format and Contents

Municipalities should consider overall readability, as well as accessibility (i.e. AODA), when identifying a preferred format for their watershed plan. Conservation authorities and municipalities with completed watershed and subwatershed plans in place can provide many excellent examples of formats and contents.

Watershed planning needs to provide a framework for implementation across smaller geographic areas, such as subwatersheds. The watershed plan can be seen as an 'umbrella' plan for constituent subwatershed plans, and can provide direction on refined goals, consideration of existing and proposed development, identification of features and functions, and provisions for protecting and restoring the quality and quantity of water in a watershed or subwatershed. Watershed planning should be translatable into subwatershed-scale evaluations and plans, in support of planning and infrastructure decision-making.

Steering Committees or Working Groups will need to work to ensure that the plan is completed in a format that can be revisited and updated through adaptive management over time.

Step 2: Consider Other Deliverables and Reports Produced through Watershed Planning

Other potential deliverables as part of watershed planning might include, for example, background reports, state of the watershed reports, communications/engagement materials, and watershed report cards. Municipalities should determine how to consolidate these elements into their final plans, or provide summaries while keeping other deliverables under separate cover.

During the initial steps of watershed planning, watershed characterization can lead to the development on an 'existing conditions report' or 'characterization study report', which will provide all relevant data and information. This information is typically kept under separate cover from the watershed plan itself, or included as an appendix, to promote readability of the watershed plan.

Separate background reports for particular elements of watershed planning, such as water budgets or nutrient loading assessments, may also be required to support development of the watershed plan, depending on local watershed conditions and needs. Reports detailing engagement efforts and feedback, including Indigenous engagement, may also be produced as watershed planning progresses.

Formats and contents of Watershed Report Cards should also be discussed. Generally, indicators monitored in watershed report cards include:

Surface Water Quality

- Total phosphorus
- Bacteria (e. coli)
- Benthic macroinvertebrates

Forest Conditions

- % forest cover
- % forest interior
- % riparian zone

Groundwater Quality

- Nitrite & nitrate
- Chloride

Other potential deliverables may include a project web page, meeting minutes and reports of the Steering Committee or Working Group, fact sheets/brochures for consultation, and more.

Step 3: Develop the Plan (and Potential Official Plan Policies/Amendments), and Seek Appropriate Approvals

Once a watershed or subwatershed plan has been developed in an appropriate format, the plan should be endorsed or approved.

Official Plan Amendments or other appropriate implementation mechanisms also need to be considered.

The Watershed Planning Guidance does not intend to set specific timeframes for review and update of watershed plans. However, watershed plans need to be kept up to date to inform planning and decision-making at the municipal level. Typically, watershed planning should be undertaken alongside official plan reviews and official plan amendments so objectives and recommendations can be incorporated into municipal policy.

7.2 INFORMING LAND USE PLANNING & INTEGRATED PLANNING FOR WATER, WASTEWATER, & STORMWATER

What is it?

Watershed planning must be undertaken by municipalities, which will inform land use, development, and infrastructure planning for:

- location and feasibility of settlement area boundary expansions;
- water infrastructure planning;
- planning for new or expanded infrastructure;
- comprehensive water or wastewater master plans;
- planning for potable water, stormwater and wastewater systems;
- stormwater master plans for serviced settlement areas;
- the protection of water resource systems and decisions related to planning for growth;
- allocation of growth and planning for water, wastewater, and stormwater infrastructure;
- proposals for large-scale development outside of settlement areas by way of a secondary plan, plan of subdivision, vacant land plan of condominium or site plan; and
- infill development, redevelopment and resort development outside of settlement areas in developed shoreline areas of inland lakes.

Goals, objectives, and direction contained in watershed plans and municipal official plans for protection of water resources and management of human activities, land, water, aquatic life, and resources, will provide a basis for municipalities when evaluating growth and servicing options.

Subwatershed planning will inform land use, development, and infrastructure planning for:

- proposals for large-scale development proceeding by way of a secondary plan, plan of subdivision, vacant land plan of condominium or site plan;
- planning for designated greenfield areas;
- proposals for large-scale development outside of settlement areas; and
- infill development, redevelopment and resort development outside of settlement areas in developed shoreline areas of inland lakes.

Subwatershed plans identify specific criteria, objectives, actions, thresholds, targets, and best management practices for development, for water and wastewater servicing, for stormwater management, for managing and minimizing impacts related to severe

weather events, and to support ecological needs. Based on pre-development monitoring, the subwatershed plan considers existing development and evaluates impacts of potential land uses and developments.

"Informed by" is not a defined concept or term in provincial land use planning policy. However, there are a range of requirements for land use planning and infrastructure decision-making to be informed by watershed planning or subwatershed plans, as applicable. "Informed by" should generally mean that watershed conditions, objectives, targets, criteria and other direction of watershed/subwatershed planning provide the basis for decisions on protecting, improving or restoring water quality and quantity.

Why is it important?

Watershed planning processes typically include the development and assessment of scenarios, and development of recommended management approaches, which may be included in official plan amendments, zoning bylaw amendments, subdivision agreements, and more detailed subwatershed studies, among other implementation approaches.

Objectives and requirements identified through watershed planning will be implemented into municipal official plans, to inform decisions on land use, growth, and infrastructure. Official plan designations and policies relating to long-term protection of key hydrologic features, areas, and functions, as well as the water resource system, will also be applied in official plans. Hydrologic functions, including quality and quantity of surface and ground water, will need to be protected where applications for development or infrastructure are anticipated or underway. Watershed plans and subwatershed plans will provide applicable standards, criteria, targets, or direction for development of new infrastructure and for supporting applications for major development. Consistency of water, wastewater, and stormwater management planning with applicable watershed and subwatershed plans, will need to be determined by municipalities where there are applications for major development or new/expanded infrastructure.

Typically, higher-level watershed planning will inform water, wastewater, and stormwater master plans as well as settlement area boundary expansions and decisions on allocation of growth. Land use designations and policies implemented in municipal official plans will show areas where growth can be accommodated without causing a negative impact to water resource systems and hydrologic functions.

Under the framework of a watershed plan, locally-specific subwatershed plans will inform stormwater management plans, proposals for major development in key hydrologic areas outside of settlement areas, proposals for development in developed shoreline areas, and planning for designated greenfield areas. This will be achieved by consideration of standards, criteria, and objectives outlines in the plans themselves along with official plan policies and designation recommended through watershed/subwatershed planning. Alignment of municipal comprehensive reviews,

official plan reviews/zoning by-law reviews, master planning/secondary planning processes, major development applications, and infrastructure planning with watershed or subwatershed planning, will contribute to an integrated approach to protection of quality and quantity of water and hydrologic features, areas, and functions.

The *Environmental Assessment Act* provides for protection, conservation, and wise use and management of the environment by setting out a decision-making process to address potential effects of municipal infrastructure projects, which may be either Individual or Municipal Class Environmental Assessments (EAs). Watershed planning and subwatershed plans should be undertaken in a way that is complimentary to EA processes, which may streamline infrastructure approvals in the future.

How to do it?

Step 1: Determine whether watershed planning, subwatershed planning, or both are relevant to the development or land use proposal

Land use, development, and infrastructure planning and decision-making will be informed by **watershed planning**, by **subwatershed planning**, or by **either watershed planning *or* subwatershed planning**. In some cases, municipal official plan policies will be implemented to provide for protection of quality and quantity of water, key hydrologic features and areas, water resource systems, and hydrologic functions. Other criteria may need to be met as well to guide decisions on development, such as consistency with stormwater management plans, water/wastewater/stormwater master plans, water budgets, approved source protection plans, environmental assessment, or other relevant studies.

Planning, design, and development restrictions and requirements should be rooted in the findings of watershed characterization,

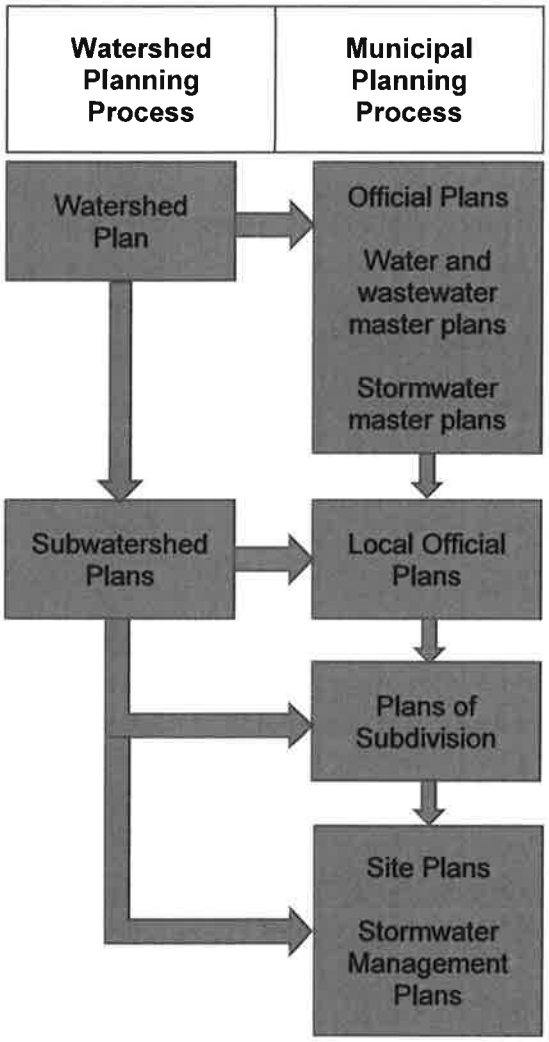


Figure 6 - Watershed and municipal planning (draft)

watershed goals and targets, and detailed studies addressing watershed-specific issues. Ongoing monitoring during implementation and adaptive management will help to determine if planning, design, and development restrictions are successful in protection of water and management of land uses and resources. The results of other watershed pilot projects, academic studies, and implementation experiences in other jurisdictions will assist with developing planning, design, and development requirements.

The integration of watershed planning with municipal land use planning, is illustrated in Figure 6. Timing and sequencing of growth allocation and boundary expansion decisions should be aligned with watershed and subwatershed planning. Where growth is anticipated, watershed planning should be initiated as early as possible in the process. For example, where development and secondary planning are proposed for a designated greenfield area, subwatershed planning will need to be undertaken in concert with the secondary planning process and stormwater management planning processes.

This integration allows for implementation of watershed planning through land use planning and policy at various stages of planning and development processes. For example, where development and secondary planning are proposed for a designated greenfield area, subwatershed planning will need to be undertaken in concert with the secondary planning process and stormwater management planning processes.

A key implementation mechanism for watershed planning at the municipal level is integration of watershed planning objectives and recommendations into municipal planning processes and documents.

Step 2: Consider alignment with Environmental Assessment approaches

The *Environmental Assessment Act* provides for protection, conservation, and wise use and management of the environment by setting out a decision-making process to address potential effects of municipal infrastructure projects, which may be either Individual or Municipal Class Environmental Assessments. If an application pertains to a municipal sewage or water infrastructure proposal, it may be subject to the environmental assessment process.

Municipal Class EAs typically apply to routine public sector projects, such as municipal water and wastewater infrastructure upgrades and transportation projects. The Class EA process allows municipalities to plan, design, construct, maintain, rehabilitate, or decommission municipal infrastructure projects without the need for project approval under the *Environmental Assessment Act.*

Currently, Class EA projects are classified in terms of their environmental impact in Schedules A, A+, B, and C, which each have corresponding requirements to complete

Phases 1 through 5 depending on the project's Schedule. The Phases of Class EAs are provided in the Municipal Class EA Manual.

With regard to source water protection considerations, development proponents undertaking a Municipal Class EA must identify early in the process whether the project is or could potentially be in a vulnerable area (i.e., WHPA or IPZ), and projects which create new vulnerable areas will be incorporated into source protection plans and assessment reports. Engagement with conservation authorities or source protection regions/areas is also recommended.

EA principles can be aligned with the subwatershed planning process, to increase efficiency; many of the Act requirements for specific projects could be met through the subwatershed plan. The information developed through this planning process could be subsequently built upon to satisfy outstanding EA requirements. Municipalities and watershed practitioners interested in harmonizing the subwatershed and EA planning processes should review the current EA requirements for the types of projects that could be anticipated as a result of subwatershed planning, and integrate climate change considerations into EA processes. This will help to determine what specific EA requirements need to be incorporated into subwatershed planning.

Step 3: Use watershed or subwatershed planning objectives, targets, monitoring, scenarios, and recommended official plan policies to evaluate feasibility and impacts of development or infrastructure

Timing and sequencing of master planning, growth allocation, and boundary expansion decisions should be aligned with watershed and subwatershed planning. Where growth is anticipated, starting watershed planning as early as possible in the process is beneficial, since baseline monitoring and engagement aspects will take time.

Where watershed or subwatershed plans (or equivalent) are not yet in place, the transition provisions of the provincial plans address how to proceed with development applications.

- **Location and feasibility of settlement area boundary expansions, and planning for water, wastewater, and stormwater master plans/management plans**

Watershed planning will inform settlement area boundary expansions by outlining land uses and areas where protection, restoration, or enhancement are required to meet objectives for protection of quality and quantity of water, water resource systems, and hydrologic functions. For example, in undertaking a municipal comprehensive review and determining the need for a settlement area boundary expansion, a municipality can look to the watershed planning 'blueprint map' to identify areas appropriate for accommodating forecasted growth.

- **Protection of water resource systems**

Water resource systems will be identified, informed by watershed planning. This means that watershed characterization will provide background information for identification of water resource system components and linkages, and municipal official plans will provide for their long-term protection (through land use designations and policies).

- **Allocation of growth and planning for water, wastewater, and stormwater infrastructure**

Decisions will be informed by watershed planning. Growth should be directed to areas outside of identified areas for protection, restoration, or enhancement, outside of water resource systems, and outside of key hydrologic features and areas and linkages. Infrastructure and servicing should be assessed to ensure that there will be no negative impacts, including cumulative, cross jurisdictional, and cross watershed impacts.

- **Proposals for large-scale development outside of settlement areas by way of a secondary plan, plan of subdivision, vacant land plan of condominium or site plan**

Outside of settlement areas, proposals for large scale development in key hydrologic areas proceeding by way of subdivision, vacant land condominium, or site plan, may be permitted within a key hydrologic area where it has been demonstrated that hydrologic functions (including quality and quantity of water) will be protected, enhanced, or restored through meeting criteria and direction set out in applicable watershed planning or subwatershed plans.

- **Infill development, redevelopment and resort development outside of settlement areas in developed shoreline areas of inland lakes**

Infill development, redevelopment, and resort development may be permitted in developed shoreline areas of inland lakes (that are designated and zoned for concentrations of development as of July 1, 2017) subject to *meeting criteria and direction* set out in applicable watershed planning or subwatershed plans.

- **Proposals for large-scale development proceeding by way of a secondary plan, plan of subdivision, vacant land plan of condominium or site plan**

Decisions will be informed by watershed or subwatershed planning. Growth should be directed to areas outside of identified areas for protection, restoration, or enhancement, outside of water resource systems, and outside of key hydrologic features and areas.

- **Planning for designated greenfield areas**

Decisions will be informed by subwatershed planning. Growth should be directed to areas outside of identified areas for protection, restoration, or enhancement, outside of water resource systems, and outside of key hydrologic features and areas.

Infrastructure should be assessed to ensure that there will be no negative impacts, including cumulative, cross jurisdictional, and cross watershed impacts.

- **Proposals for large-scale development outside of settlement areas**

Decisions will be informed by subwatershed planning. Growth should be directed to areas outside of identified areas for protection, restoration, or enhancement, outside of water resource systems, and outside of key hydrologic features and areas.

- **Infill development, redevelopment and resort development outside of settlement areas in developed shoreline areas of inland lakes**

Decisions will be informed by watershed **or** subwatershed planning.

- **Permitting development in subwatershed (in ORMCP)**

Municipalities should monitor and ensure that development applications inside and outside of settlement areas meet minimum requirements for vegetated and pervious surfaces.

Information Sources

Additional information on approaches and tools can be found in the following publications:

- MOECC, 2003. Stormwater Management Planning and Design Manual
- MOECC, 2017. Guide for Consideration of Climate Change in EAs
- MOECC, 1994. 'Blue Book'
- MOECC, 1994. 'Green Book'
- Totten Sims Hubicki Associates (2001) Stormwater Pollution Prevention Handbook

Examples of integration of watershed planning with municipal land use and infrastructure planning

Municipalities of the Grand River Watershed – Integrated Water Management Plan

The plan is an integrated water management plan with goals to ensure sustainable water supplies, improve water quality, reduce flood damage potential and increase resiliency to climate change impacts. It is a joint, voluntary plan by municipalities, First Nations, local conservation authority, provincial and federal governments. The plan identifies objectives, targets and indicators to measure changes in water conditions and the effectiveness of the plan recommendations, and includes a wide

range of actions involving planning (including land use, infrastructure, watershed related), operations and research. Some key recommendations focus on protecting groundwater recharge and discharge areas, promoting water efficiency, and maintaining up-to-date long-term water supply master plans, drought management plans (including low-flow thresholds for aquatic life), wastewater treatment plans through subwatershed studies, stormwater management plans, and stormwater infrastructure vulnerability assessments to consider climate change impacts.

Municipality of Clarington – Watershed Plans

As part of their official plan review, the Municipality of Clarington undertook a watershed planning study of two small urban watersheds (Robinson and Tooley Creek watersheds) which are key areas for future growth in the municipality. The watershed management plan had two main objectives: 1) protect the integrity of the existing ecological and hydrological functions, and 2) to provide the management framework to inform the Secondary Plans for employment lands within the watersheds. The planning process assessed existing conditions and future scenarios using modelling for natural heritage system planning, water budgets and impervious analysis. The plan sets a variety of targets and objectives (such as natural cover, wetlands, surface water quality, impervious area) and recommendations such as protection of a natural system and groundwater features (including significant groundwater recharge areas), minimize impervious surfaces and enhance stormwater management and on-site infiltration using low impact development techniques.

7.3 IMPLEMENTING THE PLANS BEYOND MUNICIPAL POLICY & LAND USE DECISION-MAKING

What is it?

Beyond recommendations implemented through municipal official plan policies and designations, and targets/criteria to evaluate impacts of proposed land uses and development, watershed planning may result in other recommended actions beyond the scope of municipal land use planning.

Through partnerships with other municipalities, conservation authorities, watershed planning stakeholders, the public, private development industry, Indigenous communities, and other, additional actions can be implemented.

Why is it important?

While incorporation of watershed planning recommendations into municipal policies is the primary implementation mechanism at the municipal level, it is recognized that there may be broader management actions and partnerships needed to protect, enhance, or restore water quality and water quantity beyond the specific scope of municipal watershed planning to implement provincial policy direction.

There are many implementation approaches which may be necessary to put watershed planning into action, beyond incorporation of recommendations into municipal policies and decision-making, such as engagement, education and outreach, and reporting. For example, many existing watershed plans and subwatershed plans in Ontario address air quality considerations and recreation considerations, which often fall beyond the scope of municipal land use policy and planning (unless there are recommendations for land use designation and policies in official plans to address these matters).

How to do it?

There are many programs or approaches which may be considered as part of watershed planning which fall outside the scope of municipal land use planning.

Typically, additional actions or recommendations can be undertaken by a Working Group/Implementation Committee, Steering Committee, stakeholders and partners in the watershed planning process (e.g. members of the public and conservation authorities), Indigenous community members, the public, businesses, and other levels of government.

Through the watershed planning process, the range of actions, timelines, and responsibilities should be assigned to parties with clear timelines and targets for implementation.

Progress should be tracked toward implementation of actions, as well as progress towards meeting environmental targets.

Stewardship, Education, and Outreach

Stewardship, engagement, and outreach are important considerations in implementation of watershed planning. These activities provide valuable buy-in for watershed plan implementation, as well as offering opportunities to support voluntary watershed plan recommendations and programs outside of informing land use planning and decision-making.

For example, the LSPP outlines actions and policies for developing watershed-wide stewardship networks, educations and incentive-based programs, and agri-environmental programs, which include the following:

Provincial support for agricultural and community initiatives

The Province has provided financial and technical support to agricultural and community initiatives through the Environmental Farm Plan, the Lake Simcoe Farm Stewardship Initiative, the Community Fisheries and Wildlife Involvement Program, the Managed Forest and Conservation Land Tax Incentive Programs, the Ontario Stewardship Program and other conservation and green community programs.

Through the Ontario Stewardship program, the Province provides support to county-based stewardship councils that represent the broad base of landowner and community interests in their areas. The Province facilitates partnerships and levers financial and in-kind resources for a wide variety of stewardship, education and outreach projects.

For water quality stewardship, the LSPP provides the following examples, which will be useful to consider in undertaking watershed planning:

Stewardship programming

Stewardship programming is intended to promote phosphorus reduction and pollution management by using best management practices that can be implemented by individuals on single or multiple properties. Examples include shoreline and riparian management (e.g. planting of native species) by appropriate shoreline and streamside landowners, nutrient management by farmers and municipalities, innovative and 'green' design by developers, urban planners and engineers (e.g. innovative stormwater infrastructure), and soil conservation and management on farms, mineral and aggregate resource operations, golf courses and municipal lands.

Research, Monitoring, and Reporting

Adaptive management on a watershed basis will require ongoing learning from scientific research and monitoring, and implementation experience. Research into emerging issues and innovations, such as addressing climate change or incorporating new development and design best practices, can be incorporated into watershed planning in an iterative way, as watershed plans are reviewed and updated. Municipalities should keep abreast of opportunities for research pilot projects, and partnerships with other municipalities, conservation authorities, NGOs, and academic institutions.

Citizen science programs, whether administered by large national or regional agencies, or administered through locally-developed programs, can assist with long-term monitoring and protection of hydrologic features and functions.

As previously discussed, watershed report cards provide an excellent reporting and communication tool, which should be considered in support of long-term watershed plan implementation and stewardship.

Some municipalities will have capacity to undertake targeted research programs, while others will rely on data and knowledge gained through previous watershed planning processes and external sources. Partnerships should be formed to support research, monitoring, and reporting. Coordination of reporting will minimize duplication of results, and allow for more efficient use of limited resources. Municipalities and watershed practitioners undertaking watershed planning should share data, coordinate monitoring needs, and align reporting schedules with municipal land use planning updates or new strategies.

8 Monitoring & Adaptive Management

What is it?

Monitoring

Environmental monitoring is undertaken to collect information that can impact decision-making. For example, a water quality parameter such as level of dissolved oxygen should be considered for determining if there are oxygen issues in the watershed, and if management actions to restore oxygen levels are successful. Monitoring is an important part of watershed characterization, as well as determining whether water quality and quantity parameters are changing, and whether management actions are performing effectively. Watershed planning needs to involve measurements of water parameters as well as indicators:

- **Water Measurement Monitoring:** Water measurements can include the components of the hydrologic cycle, including hydrologic features and functions. Water measurement includes climatological measurements as well as water quantity and quality measurements. It can also include groundwater quantities, surface water quantities, flow rates, and the withdrawal and discharge of water for human uses.
- **Performance Monitoring:** Performance monitoring can include developing indicators to be used to measure the success of the implementation plan, the target values, and knowing the variability of these indicators. The proponents of water management plans are responsible for monitoring and reporting.

Adaptive Management

Adaptive management is an approach associated with flexible and continuous improvement and adaptation of approaches, policies and management that should be undertaken by incorporating new knowledge and innovative design, practices and technology. Adaptive management approaches are widely utilized in resource management and ecosystem-based planning, since these approaches will help with addressing uncertainties and risk, especially in the face of climate change and other threats. In the *Great Lakes Protection Act* and Great Lakes Strategy, adaptive management is a vital principle, as described in section 2.2 of the Watershed Planning Guidance.

The key to managing uncertainty through adaptive management is the definition of watershed-specific goals, which has been completed through earlier phases of watershed planning, and the implementation of a monitoring plan to assess progress. Monitoring therefore becomes the driver for adaptive management, as it opens a feedback loop whereby iterative management processes can be evaluated.

Goals and objectives that are established during characterization and monitoring must reflect that there are limits to changes that the ecosystem can withstand and that these limits should be considered before mitigation measures are developed to accommodate future changes. Adverse effects of land use and development activities cannot always be eliminated through mitigation; criteria and restrictions for development and site alteration in certain areas may be required to protect key hydrologic features and functions.

In undertaking watershed planning, watershed characterization should be linked to environmental monitoring and performance monitoring over the course of plan development and implementation, to assist with determining the effectiveness of management strategies and providing for adaptive management. This means that comparable indicators should be considered in both characterization and monitoring, to "paint a picture" of the state, pressures, and responses of the watershed.

Why is it important?

Provincial plans provide that watershed planning and subwatershed plans are typically based on environmental monitoring plans, or pre-development monitoring. In ORMCP particularly, watershed planning policies provide for environmental monitoring plans, including a minimum of five years of pre-development monitoring. This will be helpful for municipalities in determining whether development or land use change is resulting in negative impacts to the quality and quantity of water, the water resource systems, and key hydrologic features and areas.

As provided in ORMCP Technical Paper #9, a watershed monitoring plan should be designed to evaluate the success of the watershed plan's land and water use and management strategies in achieving watershed goals and objectives. Consistent with an adaptive management approach, feedback from the monitoring should be used to:

- assess progress with respect to meeting the targets established for protecting water quality and quantity, hydrologic features, and hydrologic functions;
- trigger corrective responses or additional management actions; and
- identify if any revisions to the management goals, objectives, or targets are necessary.

Adaptive management is a fundamental part of watershed planning, including keeping the plan up to date as development and land use changes, as well as watershed plan recommendations, result in ecosystem changes.

How to do it?

Monitoring Steps

Monitoring Steps
Analyze the issues
Develop specific objectives and questions
Define impact models, indicators, protocols, sites
Establish an information management system
Establish rigorous quality assurance program
Prepare an implementation program
Analyze data and prepare reports
Practice adaptive management

To support monitoring, the watershed plan should also specify who will take responsibility for ongoing environmental monitoring within the watershed. Approval authorities may wish to consider working together to implement monitoring programs over a number of watersheds, similar to source protection areas and regions, for example.

To support adaptive management, the frequency of watershed plan revisions will depend on how often the data from the monitoring plan is reviewed and evaluated against past data (including baseline). This can be completed through reporting, which can be undertaken biannually to update stakeholders and watershed residents on progress made towards the Watershed Plan objectives and goals. Additionally, mutual collaboration through the sharing of data, lessons learned and future goals with external water practitioners can also be useful in the context of adaptive management.

Implementing Monitoring: Roles

Upper and single tier municipalities have primary responsibility for ensuring watershed planning is undertaken, partnering with conservation authorities as appropriate, as outlined in the Growth Plan and Greenbelt Plan. This means that municipalities and conservation authorities can work together to ensure that watershed plan review cycles are aligned with municipal policy review cycles, and that monitoring data is iteratively incorporated into planning and decision-making.

Watershed planning requires multidisciplinary cooperation and a range of actors along the process – from planning, to implementation, to monitoring and reporting, and finally

reviewing and evaluating plans. Continuous engagement of stakeholder committees and working groups, as well as those involved in plan development and implementation, will support monitoring and adaptive management undertakings.

Communicating Results: Watershed Report Cards

Watershed report cards are an important communication tool beyond simply monitoring and reporting. There must be buy-in for watershed planning and management at the local level, and this buy-in can be supported through effective communication and reporting with stakeholders and partners. Communications and education will be necessary to communicate the progress and success of watershed planning. Watershed report cards have potential to communicate aspects of watershed planning, especially monitoring, evaluating, and reporting. However, watershed report cards may need some revisions to improve standardization of collection protocols and comparability of indicators between watersheds.

Updating Watershed Plans

Watershed plans are living documents, which must be kept up to date as land use changes and provincial and municipal policies change. Timing of plan review and adaptation should align with municipal planning exercises, such as Official Plan Reviews, major Official Plan and Zoning By-law Amendments for secondary plans and settlement area boundary expansions etc.

Lessons learned from performance monitoring during implementation should be used to make appropriate revisions in watershed management programs.

Watershed and subwatershed plans should be up to date in order to inform land use and development decision-making.

Watershed management processes and municipal planning processes should be integrated to provide a consistent approach to protection of water resources, management of human activities, land, water, aquatic life, and resources.

9 Resources

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REPORT

REPORT TO:	Chair and Members of the Planning, Public Works and Transportation Committee
REPORT FROM:	Matt Roj, Traffic Coordinator
DATE:	April 17, 2018
REPORT NO.:	TPW-2018-0015
RE:	Travel Time and Delay Study

RECOMMENDATION:

THAT Report No. TPW-2018-0015, dated April 17, 2018, regarding the Travel Time and Delay Study, be received.

BACKGROUND:

Since 2015, staff have been conducting a Travel Time and Delay Study to review seven major corridors. This annual study utilized travel time information to determine the efficiency and traffic flow conditions within each corridor.

The findings of previous two studies were reported on Report No. PI-2016-0015 and Report No. PI-2017-0063, with a list of recommended projects to improve the overall operation of the corridors.

The following projects were included in the 2018 Capital Budget and 2019-2027 capital forecast summary:

- Guelph Street (Hwy 7)/Maple Avenue – installation of the southbound right turn lane and extension of the northbound right turn lane.
- Maple Avenue/Main Street – installation of the northbound right turn lane.
- Guelph Street (Hwy 7)/Mountainview Road – installation of the dual left turn lanes on Mountainview Road approaches.

In addition, the following improvements were also recommended, but future funding has not been allocated:

- Guelph Street (Hwy 7)/Sinclair Avenue – installation of the northbound right turn lane.

- Guelph Street (Hwy 7)/Albert Street – installation of the eastbound right turn lane at the Georgetown High School entrance.

- Main Street North (Hwy 7)/School Lane – upgrade of the existing Intersection Pedestrian Signal (IPS) to the full traffic signal.

Staff has commenced with the implementation of the Centracs traffic signal management system on Mountainview Road between Delrex Boulevard and River Drive. This will improve the overall signal progression along this corridor.

COMMENTS:

In November 2017, the Town retained Paradigm Transportation Solutions Ltd. to undertake the third Travel Time and Delay Study with the purpose of monitoring and comparing the study results on an annual basis.

The following seven major corridors were reviewed:

1. Guelph Street (Hwy 7) between Hall Road and Caseley Drive
2. Guelph Street (Hwy 7) between Main Street South and Delrex Boulevard
3. Main Street North (Hwy 7) between Guelph Street West and Kingham Road
4. Maple Avenue between Trafalgar Road and Mountainview Road North
5. Mill Street / Young Street / Queen Street (Hwy 7) between Main Street and Tanners Drive
6. Mountainview Road N. between Guelph St. (Hwy 7) and River Drive
7. Mountainview Road S. between Guelph St. (Hwy 7) and 10 Side Road

Data Collection

Data collection was undertaken using the Average Vehicle Method. The surveyors were required to drive the routes according to the “average-car” technique. The data was collected in December 2017 during A.M. and P.M. peak hours, between the hours of 7:00 – 9:00 A.M. and 4:00 – 6:00 P.M. A total of 88 directional survey runs were completed, collecting approximately 210 kilometres of travel time and delay data.

The “average-car” technique requires the driver to operate the vehicle in any available lane, at a speed that is equivalent to the average speed of the traffic stream. Surveyors were instructed to select a safe travel speed with consideration for the posted speed limit under minimal traffic conditions.

Performance Measures

Average Travel Speeds:
Using the continuous speed values reported in the raw GPS data, average vehicle speeds were calculated for 200 metre intervals for the duration of each run.

Level of Service (LOS):
Highway Capacity Manual (HCM) uses methods for qualitatively characterizing the operational conditions of various highway facilities. These methods rate flow quality using an A to F scale to designate LOS. The scale ranges from LOS A, which represents the best operating conditions to LOS F the worst conditions.

LOS for urban streets as outlined in the HCM uses the average speed data and assumed Free Flow Speed, in this case the posted speed limits. Appendix A illustrates the LOS criteria by Urban Street Class.

Measures of Delay:
Types of delays calculated in the study included the Total Corridor Delay, Signal Delay and Congestion Delay.

Corridor Results

The Performance Measures Summary table included in this report as an Appendix B provides a summary of results based on performance measures.

The following represents the results for each road corridor:

1) **Guelph Street (Highway 7) between Hall Road and Caseley Drive (2.1 km)**

   During the A.M. peak hours, both the eastbound and westbound directions had average speeds of 52-56 km/h, respectively. During the P.M. peak hours, the eastbound and westbound directions had average speeds of 51-56 km/h, respectively.

   LOS during A.M. peak hours: Eastbound and Westbound, LOS A for both directions.

   LOS during P.M. peak hours: Eastbound and Westbound, LOS A for both directions.

   This road segment of Guelph Street (Highway 7) is under the jurisdiction of the Ontario Ministry of Transportation (MTO). Future operational improvements to this segment of Highway 7 are within the MTO's jurisdiction.

   The study results comparison between 2016 and 2017 indicates an overall improvement in the Level of Service in both directions from LOS C and B to LOS A.

   However, it is staff's opinion that the study results were affected by the Halton Region's Guelph Street Watermain Replacement Project. The study was completed immediately following the project completion, and surveyors would experience lower than usual traffic volumes and congestion delays on Guelph Street (Highway 7).

2) **Guelph Street (Highway 7) between Main Street South and Delrex Boulevard (3.9 km)**

This road segment consists of 12 signalized intersections. During the A.M. peak hours, both the eastbound and westbound directions had an average speed of 42 km/h. During the P.M. peak hours, the eastbound and westbound direction had average speeds of 45-43 km/h, respectively.

LOS during A.M. peak hours: Eastbound and Westbound, LOS B for both directions.

LOS during P.M. peak hours: Eastbound and Westbound, LOS B for both directions.

The study results comparison between 2016 and 2017 indicates the change of Level of Service in the P.M. peak hours; the westbound direction improved from LOS C to LOS B.

3) **Main Street North (Highway 7) between Guelph Street West (Highway 7) and Kingham Road (1.3 km)**

During the A.M. peak hours, the northbound and southbound directions indicated average speeds of 35-38 km/h, respectively. During the P.M. peak hours, the northbound direction indicated an average speed of 28 km/h, which is the lowest speed recorded during the PM peak period of all corridors. The southbound direction had an average speed of 39 km/h.

LOS during A.M. peak hours: Northbound and Southbound, LOS C for both directions.

LOS during P.M. peak hours: Northbound and Southbound, LOS C for both directions.

The study results comparison between 2016 and 2017 indicates the change of Level of Service in the A.M. peak hours; the northbound and southbound direction decreased from LOS B to LOS C.

4) **Maple Avenue between Mountainview Road North and Trafalgar Road (2.8 km)**

During the A.M. peak hours, the eastbound direction indicated an average speed of 26 km/h. This road segment has the lowest A.M. peak period average speed and experiences the highest A.M. peak hour signal and congestion delays of all corridors. The westbound direction results indicated an average speed of 34 km/h. During the P.M. peak hours, the eastbound and westbound directions indicated average speeds of 35-31 km/h, respectively.

LOS during A.M. peak hours: Eastbound and Westbound, LOS C for both directions.

LOS during P.M. peak hours: Eastbound and Westbound, LOS C for both directions.

The study results comparison between 2016 and 2017 indicates the change of Level of Service in the A.M. peak hours; the eastbound and westbound direction decreased from LOS B to LOS C.

5) Mill Street East/Young Street/Queen Street (Highway 7) between Tanners Drive and Main Street (1.9 km)

During the A.M. peak hours, the eastbound direction traffic indicated an average speed of 41 km/h. The westbound direction traffic indicated an average speed of 34 km/h. During the P.M. peak hours, the eastbound and westbound directions indicated average speeds of 38-30 km/h, respectively. This road segment experiences the highest P.M. peak period congestion (41 seconds) of all corridors in either direction.

LOS during A.M. peak hours: Eastbound and Westbound, LOS B and C, respectively for each direction.

LOS during P.M. peak hours: Eastbound and Westbound, LOS B and C, respectively for each direction.

The study results comparison between 2016 and 2017 indicates the change of Level of Service in the A.M. peak hours; the eastbound direction improved from LOS C to LOS B.

6) Mountainview Road North between Guelph Street (Highway 7) and River Drive (1.4 km)

During the A.M. peak hours, the northbound and southbound directions indicated average speeds of 38-36 km/h, respectively. During the P.M. peak hours, the northbound and southbound directions indicated average speeds of 43-36 km/h, respectively.

LOS during A.M. peak hours: Northbound and Southbound, LOS C for both directions.

LOS during P.M. peak hours: Northbound and Southbound, LOS B and LOS C, respectively for each direction.

The study results comparison between 2016 and 2017 indicates the change of Level of Service in the A.M. and P.M. peak hours; the A.M. peak hours LOS decreased in both directions from LOS B to LOS C. The P.M. peak hours LOS decreased in the southbound direction from LOS B to LOS C.

7) **Mountainview Road South between Guelph Street (Highway 7) and 10 Side Road (3.5 km)**

During the A.M. peak hours, the northbound and southbound directions indicated average speeds of 48-63 km/h, respectively. During the P.M. peak hours, the northbound and southbound directions indicated average speeds of 37-45 km/h, respectively.

LOS during A.M. peak hours: Northbound and Southbound, LOS B and LOS A, respectively for each direction.

LOS during P.M. peak hours: Northbound and Southbound, LOS C for both directions.

The study results comparison between 2016 and 2017 indicates the change of Level of Service in the A.M. and P.M. peak hours; the A.M. peak hours LOS improved in the northbound direction from LOS B to LOS A. The P.M. peak hours LOS decreased in both directions from LOS B to LOS C.

Comparison to Previous Years

The following overall results were identified comparing the 2016 and 2017 Travel Time and Delay Studies:

- There was a general decline in Level of Service for the A.M. peak hours compared to the 2016 study.
- Overall, Level of Service has remained consistent over the three study years;
- The lower range for travel speed has declined marginally for the A.M. peak hours, but remained relatively constant for the P.M. peak hours. The upper range for travel speed has remained consistent for both peak hour periods;
- The top five average Signal Delays has been relatively constant over time for both peak hour periods;
- No corridors were reported as having a LOS D in the 2017 study.

Overall, our major corridors continue to operate at good Level of Service, with all corridors at Level of Service C or better. For the next two years, staff will be implementing a new traffic signal management system.

The new system will allow staff to improve the coordination on Mountainview Road from Derlex Boulevard to River Drive. To improve the efficiency of our corridors, Council approved the Guelph Street/Maple Avenue southbound right turn lane project as part of the 2018 Capital Budget. Also, identified in the 2019-2027 capital forecast summary is the Maple Avenue/Main Street northbound right turn lane project. The proposed intersection improvements are expected to improve the overall Level of Service on Maple Avenue.

RELATIONSHIP TO STRATEGIC PLAN:

The application of the Travel Time and Delay Study is an operational matter.

FINANCIAL IMPACT:

The cost to undertake the annual Travel Time and Delay Study is included as part of the Operating Budget. This annual study will continue to be funded through the Operating Budget.

COMMUNICATIONS IMPACT:

Staff will continue to report our annual findings on the Travel Time and Delay Study to Council.

SUSTAINABILITY IMPLICATIONS:

The Town is committed to implementing our Community Sustainability Strategy, Imagine Halton Hills. Doing so will lead to a higher quality of life.

The recommendation outlined in this report advances the Strategy's implementation.

The report supports the Social Well-being pillar of Sustainability and in summary the alignment of this report with Community Sustainability Strategy is good.

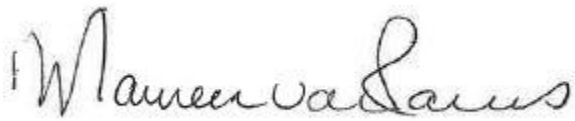
CONSULTATION:

This report was discussed with Transportation and Public Works staff.

CONCLUSION:

The Travel Time and Delay Study is an annual monitoring study of our major corridors to evaluate existing operation and traffic flow conditions. The study, together with other traffic operational reviews, identifies future road network improvements to maintain a good Level of Service and social well-being of our community.

Reviewed and Approved by,



Maureen Van Ravens, Acting Commissioner of Transportation and Public Works

Brent Marshall, CAO

Appendix A

LOS Criteria by Urban Street Class

Urban Street Class Free Flow Speed	I	II	III	IV
	90 to 70 km/h	70 to 55 km/h	55 to 50 km/h	50 to 40 km/h
LOS	**Average travel speed (km/h)**			
A	>72	>59	>50	>41
B	> 56 - 72	> 46 - 59	> 39 - 50	> 32 - 41
C	> 40 - 56	> 33 - 46	> 28 - 39	> 23 - 32
D	> 32 - 40	> 26 - 33	> 22 - 28	> 18 - 23
E	> 26 - 32	> 21 - 26	> 17 - 22	> 14 – 18
F	≤ 26	≤ 21	≤ 17	≤ 14

Corridor		Dir.	Beginning At	Ending At
1	Mill Street/Yo	EB	Main Street	Tanners Drive
		WB	Tanners Drive	Main Street
2	Guelph Street	EB	Main Street South	Delrex Boulevard
		WB	Delrex Boulevard	Main Street South
3	Guelph Street	EB	Hall Road	Caseley Drive
		WB	Caseley Drive	Hall Road
4	Mountain view Road	NB	Guelph Street	River Drive
		SB	River Drive	Guelph Street
5	Mountain view Road	NB	10th Side Road	Guelph Street
		SB	Guelph Street	10th Side Road
6	Maple Avenue	EB	Trafalgar Road	Mountainview Road N
		WB	Mountainview Road N	Trafalgar Road
7	Main Street	NB	Kingham Road	Guelph Street West
		SB	Guelph Street West	Kingham Road
1	Mill Street/Yo	EB	Main Street	Tanners Drive
		WB	Tanners Drive	Main Street
2	Guelph Street	EB	Main Street South	Delrex Boulevard
		WB	Delrex Boulevard	Main Street South
3	Guelph Street	EB	Hall Road	Caseley Drive
		WB	Caseley Drive	Hall Road
4	Mountain view Road	NB	Guelph Street	River Drive
		SB	River Drive	Guelph Street
5	Mountain view Road	NB	10th Side Road	Guelph Street
		SB	Guelph Street	10th Side Road
6	Maple Avenue	EB	Trafalgar Road	Mountainview Road N
		WB	Mountainview Road N	Trafalgar Road
7	Main Street	NB	Kingham Road	Guelph Street West
		SB	Guelph Street West	Kingham Road

Length (km)	Signals	Posted Speed*	HCM Urban Street Class	Performance Measures (Average for C				
				Travel Time (mm:ss)	Travel Speed (km/h)	LOS	Signal Delay (mm:ss)	Congestion Delay (mm:ss)
AM PEAK PERIOD								
1.9	3	50	III	2:49	41.2	B	0:10	0:20
1.9	3	50	III	3:25	33.8	C	0:44	0:23
3.9	11	50	III	5:33	42.0	B	1:03	0:18
3.9	11	50	III	5:35	41.7	B	1:15	0:15
2.1	2	55	III	2:28	51.7	A	0:23	0:00
2.1	2	55	III	2:18	55.7	A	0:15	0:02
1.3	4	50	III	2:04	38.3	C	0:31	0:03
1.3	4	50	III	2:13	35.6	C	0:48	0:01
3.5	9	55	II	4:24	47.8	B	0:46	0:10
3.5	9	55	II	3:22	62.6	A	0:05	0:03
2.8	4	47	IV	6:31	25.5	C	2:28	0:46
2.8	4	47	IV	4:51	34.3	B	1:00	0:35
1.3	2	50	III	2:09	35.4	C	0:22	0:16
1.3	2	50	III	2:00	38.1	C	0:16	0:13
PM PEAK PERIOD								
1.9	3	50	III	3:02	38.2	C	0:11	0:32
1.9	3	50	III	3:50	30.2	C	0:50	0:41
3.9	11	50	III	5:08	45.3	B	0:57	0:12
3.9	11	50	III	5:22	43.3	B	0:56	0:10
2.1	2	55	III	2:29	51.4	A	0:21	0:00
2.1	2	55	III	2:16	56.4	A	0:04	0:05
1.3	4	50	III	1:52	42.5	B	0:21	0:03
1.3	4	50	III	2:13	35.7	C	0:45	0:03
3.5	9	55	II	5:46	36.5	C	1:52	0:21
3.5	9	55	II	4:40	45.1	C	0:50	0:20
2.8	4	47	IV	4:48	34.6	B	1:34	0:15
2.8	4	47	IV	5:24	30.8	C	2:13	0:09
1.3	2	50	III	2:41	28.4	C	0:46	0:24
1.3	2	50	III	1:58	38.8	C	0:09	0:18

Appendix B

Corridor/Direction)		
Total Delay (mm:ss)	Travel Time Index	Buffer Time Index
0:30	1.21	9%
1:07	1.48	32%
1:21	1.19	7%
1:30	1.20	5%
0:23	1.05	27%
0:17	0.98	9%
0:34	1.31	6%
0:49	1.40	26%
0:56	1.14	7%
0:08	0.87	13%
3:15	1.96	6%
1:35	1.46	18%
0:39	1.42	7%
0:29	1.32	15%
0:43	1.31	13%
1:31	1.66	10%
1:09	1.11	4%
1:07	1.16	6%
0:21	1.06	16%
0:09	0.96	13%
0:24	1.18	8%
0:48	1.40	18%
2:13	1.49	10%
1:10	1.21	7%
1:49	1.45	16%
2:22	1.63	9%
1:10	1.77	18%
0:26	1.29	15%

TOWN OF HALTON HILLS
Working Together Working for You!

REPORT

REPORT TO: Chair and Members of the Planning, Public Works and Transportation Committee

REPORT FROM: Jeff Jelsma, Manager of Development Engineering

DATE: April 16, 2018

REPORT NO.: TPW-2018-0012

RE: Amendment and Repeal of By-law No. 2015-0016 Widening or Altering of Driveways

RECOMMENDATION:

THAT Report No. TPW-2018-0012, dated April 16, 2018, regarding the Amendment and Repeal of By-law No. 2015-0016 Widening or Altering of Driveways, be received;

AND FURTHER THAT By-law 2015-0016 to regulate the construction, installation, widening or altering of driveways, be repealed and replaced with the by-law attached as an Appendix of this report.

BACKGROUND:

By-law 2015-0016 was enacted to regulate the construction, installation, widening or altering of driveways and curb cuts located on Town-owned road allowances or other property under the jurisdiction of the Town. The Development Engineering Division of the Transportation & Public Works Department administers this by-law and is responsible for evaluating and issuing the associated permit.

A permit under this by-law is required for new driveways which are not part of a draft plan of subdivision, providing multiple new driveways, widening an existing driveway or relocating an existing driveway on the same property. The majority of permits considered under this by-law are from homeowners requesting to widen their existing driveway for better access or increase the number of parking spaces (subject to the Compressive Zoning By-law).

Similarly to the review for Site Plan and Draft Plan of Subdivisions applications, staff utilizes the Transportation Association of Canada Guidelines (TAC-ACT) to evaluate the technical merit of the proposed driveway or driveway modifications.

COMMENTS:

Staff received a minor variance application for a second residential driveway with a proposed separation of less than 15m. No technical concerns were noted and staff was prepared to support the request, however, By-law 2015-0016, contained criteria which prevented the issuance of the required permit.

Section 12(g) of the By-law indicated that:

> "The minimum distance at the curb line between driveways on the same property frontage shall be:
>
> i) a minimum of 15 metres for urban residential lots.
> ii) a minimum of 30 metres for rural residential and farm lots.
> iii) at the discretion of the Commissioner of Planning & Infrastructure Services for commercial/industrial/institutional lots."

As noted above, By-law 2015-0016 provides the Commissioner of Transportation & Public Works discretion for considering the separation between driveways for commercial/industrial/institutional properties only. All other uses need to follow the specific criteria as indicated in the By-law. Furthermore, By-law 2015-0016 does not allow for the refusal of a permit for situations where minimum separation as stated above may not operate or function safely.

The minor variance application made staff aware that the current By-law had no mechanism to vary the requirements as described. It would be appropriate to provide the Commissioner of Transportation & Public Works the discretion to allow for a reduced or increased separation where the technical evaluation supports either a decrease or increase in separation.

Staff recommends amending section 12(g) as follows:

> The minimum distance at the Curb Line between Driveways on the same property frontage shall be:
>
> i) a minimum of 15 metres for urban residential lots.
> ii) a minimum of 30 metres for rural residential and farm lots.
> iii) a minimum requirement in accordance with the Transportation Association of Canada (TAC-ATC) for commercial/industrial/institutional lots
> iv) any deviation or discrepancy with the standards set out in Sections i), ii) and iii) herein, shall be at the sole discretion of the Commissioner of Transportation & Public Works and the decision shall be final.

Staff also recommends amending Section 3 of the By-law to include the following under a new section 3(d):

> At the sole discretion of the Commissioner of Transportation and Public Works, the applicant may be required to submit a design drawing of the proposed Driveway and related works prepared by a qualified professional. The design drawing shall, at a minimum, include sight line evaluation based on Transportation Associated of Canada Guidelines (TAC-ATC), proposed and existing grading details and culvert capacity analysis all to the satisfaction of the Commissioner of Transportation & Public Works.

In addition, general housekeeping of the By-law has also been incorporated

RELATIONSHIP TO STRATEGIC PLAN:

This report supports the Town's Strategic Goal:
H. Provide Sustainable Infrastructure & Services.

Through the Strategic Objective:
H1. To provide infrastructure and services that meets the needs of our community in an efficient, effective and environmentally sustainable manner.

FINANCIAL IMPACT:

There is no financial impact associated with this report.

CONSULTATION:

The updated By-law has been reviewed by the Town's Legal Coordinator.

PUBLIC ENGAGEMENT:

There was no public engagement for this report as it is considered operational matter.

SUSTAINABILITY IMPLICATIONS:

The Town is committed to implementing our Community Sustainability Strategy, Imagine Halton Hills. Doing so will lead to a higher quality of life.

The recommendation outlined in this report is not applicable to the Strategy's implementation.

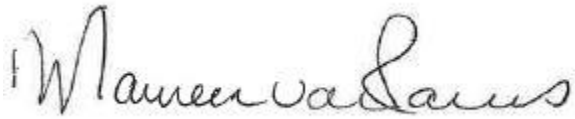
COMMUNICATIONS:

There is no communication impact associated with this report.

CONCLUSION:

Staff is recommending that By-law 2015-0016, which regulates the construction, installation, widening or altering of driveways, be repealed and replaced with the By-law attached as an Appendix to this report. The amended by-law will provide staff the ability to review and consider multiple entrance applications based on technical merit rather than solely on a prescribed set of criteria.

Reviewed and Approved by,



Maureen Van Ravens, Acting Commissioner of Transportation and Public Works

Brent Marshall, CAO

TOWN OF HALTON HILLS
Working Together Working for You!

BY-LAW NO. 2018-XXXX

A By-law to regulate the construction, installation, widening or altering of driveways and curb cuts located on Town-owned road allowances or other property under the jurisdiction of the Town.

WHEREAS the Municipal Act, 2001, S.O. c. 25, as amended authorizes a municipality to enact by-laws respecting the public assets under the jurisdiction of the municipality;

WHEREAS Council for the Corporation of the Town of Halton Hills considers it advisable to enact a by-law requiring the consent of the Town for a person to construct, install, widen or alter any driveway or curb;

AND WHEREAS on May 7, 2018, Council for the Town of Halton Hills approved Report No. TPW-2018-0012, dated April 16, 2018, in which certain recommendations were made relating to By-law 2015-0016 Widening or Altering of Driveways.

NOW, THEREFORE, BE IT RESOLVED THAT THE COUNCIL OF THE CORPORATION OF THE TOWN OF HALTON HILLS ENACTS AS FOLLOWS:

1. For the purposes of this By-law:

(a) "Adjacent Property" means the property adjacent to the highway or the Municipal property to which the entrance is intended to provide access;

(b) "Applicant" means any person or Corporation to whom a Permit has been issued under this By-law;

(c) "Commissioner of Transportation & Public Works" means the Commissioner of Transportation & Public Works of the Corporation of the Town of Halton Hills, or any person designated by him/her to act on his/her behalf with respect to matters contained within this By-law.

(d) "Curb Cut" means any point at which the curb along a travelled roadway is interrupted or depressed to provide access to use on the property;

(e) "Curb Line" means the edge of the travelled portion of the road allowance (the line of curb, or the edge of asphalt where no curb exists);

(f) "Directional Approach" means a driveway which is designed and signed to be used in one direction only;

(g) "Driveway" means any lane, ramp or drive intended to provide vehicular access from the travelled portion of a municipal road allowance to a use on the adjacent property or intended to provide parking for vehicles;

(h) "Entrance" shall mean driveway;

(i) "Entrance Permit" means permission, in writing, on a form signed by the Commissioner of Transportation & Public Works to allow the work for which the permission was requested;

(j) "Frontage" means the horizontal distance between the side lot lines;

(k) "Highway" means a highway as defined in Section 1 of the Highway Traffic Act, R.S.O. 1990, Chapter H.9 and includes a street and a bridge forming part of a highway or on, over or across which a highway passes and includes the whole of the road allowance;

(l) "Intersection" means the area at which two or more Highways intersect;

(m) "Town" means The Corporation of the Town of Halton Hills;

(n) "Town Property" means Town-owned road allowances or other property in the jurisdiction of the Town.

2. (a) No person shall construct, install, widen or alter any Driveway or Curb Cut located on Town Property without an Entrance Permit.

(b) Notwithstanding Subsection (a), no Entrance Permit shall be required for the construction of new driveways within unassumed plans of subdivision.

(c) No person shall construct, install, widen or alter any Driveway or Curb Cut located on a Road Allowance or other Town property except in accordance with the plans, specifications, documents and any other information used as the basis for the issuance of an Entrance Permit.

3. (a) An Applicant under this By-law shall provide to the Commissioner of Transportation & Public Works the information required in the Application Form attached hereto as Schedule "A" to this By-law and shall supply any supportive material as may be required. The Applicant shall comply with every regulation and procedure as set out in this By-law.

(b) A non-refundable administration fee in accordance with current Town Rates and Fees By-law, as amended, shall be required as part of the application. An administration fee shall not be required for applications from members of the Public Utilities Coordinating Committee or applications which are deemed to fall within the limits of construction on a Town capital reconstruction project.

(c) The Entrance Permit shall expire 90 days from the date of issuance provided that no work has commenced within that time, after which a new permit must be obtained.

(d) At the sole discretion of the Commissioner of Transportation & Public Works, the applicant may be required to submit a design drawing of the proposed Entrance and related works prepared by a qualified professional. The design drawing shall, at a minimum, include sight line evaluations based on Transportation Association of Canada (TAC-ATC) guidelines, proposed and existing grading details, and culvert capacity analysis all to the satisfaction of the Commissioner of Transportation & Public Works.

4. Where an Applicant fails to comply with any of the provisions of this By-law, the Town may perform the works necessary to effect compliance with the By-law and all costs and expenses incurred shall be borne by the Applicant or the same may be recovered in like manner as municipal taxes.

5. A driveway is permitted on Town property only to provide access to an Adjacent Property and shall not be constructed, installed, widened or altered to perform any other function, including the parking of vehicles, as defined under the current Town Uniform Traffic Control By-law, as amended.

6. The Commissioner of Transportation & Public Works may remove or alter any Driveway or Curb Cut on Town property for which an Entrance Permit has not been issued, or for one which has not been constructed or altered in accordance with the permit issued, or in accordance with Section 12 of this By-law.

7. The Adjacent Property owner, upon replacement, alteration or removal of any Driveway or Curb cut pursuant to Section 6 of this By-law shall be solely responsible for the costs of reinstating the Town Property, or any other work required, as determined by the Commissioner of Transportation & Public Works, to make the Driveway conform to the provisions of Section 12 or to return the Town property to a condition in accordance with Town specifications.

8. (a) Every driveway located on Town Property shall be maintained in good condition by the Adjacent Property owner at their own expense.

(b) Once installation of a Curb Cut has been completed to the satisfaction of the Commissioner of Transportation & Public Works, the Curb Cut becomes the responsibility of the Town.

9. The Adjacent Property owner shall assume the cost of constructing, installing, widening or altering a Driveway or Curb Cut on Town property in all instances, including those that are done at the Town's discretion unless such work is undertaken as part of the Town's Capital Works Reconstruction Program.

10. The Applicant agrees to indemnify and save harmless the Town from all actions, causes of actions, suits, claims, demands and costs whatsoever arising by reason of the Applicant, his agents or employees doing, failing to do, or doing incorrectly or negligently anything the Applicant is required to do under this By-law or the terms of the Entrance Permit and will be responsible for damages, injuries or accidents resulting from any of his operations, or caused by reason of the existence of the driveway, or of any materials, plants, or equipment used in connection with the works performed as a result of issuance of the Entrance Permit.

11. The Town reserves the right to alter, construct or remove any Driveway or Curb Cut located on Town Property without notice to, or permission from the Adjacent Property owner. This right also extends to allow work by utility services. The Town or other utility services shall reinstate the Driveway, Curb Cut or other works at no cost to the Adjacent Property owner.

12. No Driveway or Curb Cut shall be installed, constructed, altered or removed except in accordance with the following regulations:

(a) All Driveways, culverts and Curb Cuts shall be in accordance with current municipal standards and specifications.

(b) All Driveways shall extend sufficiently onto the Adjacent Property to allow parking on the Adjacent Property and not on Town Property.

(c) Where a Driveway widening on Town Property is permitted pursuant to Section 2 of this By-law, it is to be constructed from a similar material and be of similar appearance to the original Driveway, except in commercial/industrial/institutional areas and in certain urban residential areas, where asphalt or other permanent hard surface may be required.

(d) No Driveway shall meet the travelled portion of the highway at an angle of less than 70 degrees.

(e) Where an existing Driveway is being replaced, relocated or abandoned, it shall be removed from the Town Property at the time of creating the new Driveway, and the Town Property shall be reinstated by the Adjacent Property owner, at their own expense, to the satisfaction of the Commissioner of Transportation & Public Works.

(f) All Driveways shall conform with the Town's Zoning By-law, as amended.

(g) The minimum distance at the Curb Line between Driveways on the same property frontage shall be:

i) a minimum of 15 metres for urban residential lots.
ii) a minimum of 30 metres for rural residential and farm lots.
iii) a minimum requirement in accordance with the Transportation Association of Canada (TAC-ATC) Guidelines for commercial/industrial/institutional lots.
iv) Any deviation or discrepancy with the standards set out in Sections i), ii) and iii) herein, shall be at the sole discretion of the Commissioner of Transportation & Public Works and the decision shall be final.

(h) The minimum distance at the Curb Line between any Driveway and any Intersection shall be 10 metres or as otherwise determined by the Commissioner of Transportation & Public Works.

(i) Any Driveway to a commercial or industrial property shall conform to the Commercial Site Access Policy and Standards of the Ministry of Transportation.

(j) Asphalt or concrete ramping is not permitted in lieu of a Curb Cut.

(k) If the Applicant proposes a reversed (negative sloped) driveway on private property, the Applicant must prove, to the satisfaction of the Commissioner of Transportation & Public Works, that the driveway will not be flooded by the overland flow during a 100-year storm event or by the surplus flow in the storm sewer system.

(l) All Driveways shall have unobstructed visual sightlines for entry onto any part of the Town Property, including sidewalks.

(m) Removal of trees and shrubs from Town Property pursuant to the provisions of this By-law shall be subject to Town's Tree By-law and the approval of the Commissioner of Transportation & Public Works.

(n) Driveway location and design are subject to the specifications within the Ontario Provincial Standards (OPS) and the TAC-ATC guidelines.

(o) The Stopping Sight Distance criteria, as outlined in the TAC-ATC guidelines shall restrict the location of any Driveway based on the road allowance geometrics, and may result in refusal of the Entrance Permit.

(p) All drains, ditches, culverts and watercourses shall be installed and maintained in accordance with Town Standards and Specifications, and the guidelines of the following agencies, as required: Halton Region Conservation Authority, Credit Valley Conservation Authority, Grand River Conservation Authority, Niagara Escarpment Commission, Ministry of Transportation Ontario, Ministry of Natural Resources and Forestry, and Ministry of the Environment and Climate Change. Permits required from these agencies must be obtained by the Applicant prior to the issuance of the Entrance Permit.

13. The Applicant shall be responsible for all damages to all existing services within the Town Property when such damages arise out of the work undertaken by the Applicant.

14. Every person who contravenes any provision of this By-law is guilty of an offence, and, upon conviction, is liable to a fine subject to the provisions under the Provincial Offenses Act R.S.O. 1990, Chapter P.33, as amended, exclusive of costs and every such penalty shall be recoverable under the same Provincial Offenses Act R.S.O. 1990 Chapter P.33, as amended.

15. If any section, clause or provision of this By-law, including anything contained in the schedule attached hereto, is for any reason declared by a court of competent jurisdiction to be invalid, the same shall not affect the validity of the By-law as whole or any part thereof other than the section, clause or provision so declared to be invalid and is thereby declared to the intention that all the remaining sections, clauses or provisions of this By-law shall remain in full force and effect until repealed, notwithstanding that one or more provisions thereof shall have been declared to be invalid.

16. By-law No. 2015-0016 respecting Widening or Altering of Driveways be repealed.

BY-LAW read and passed by the Council for the Town of Halton Hills, this _____day of _____, 2018.

_____

MAYOR – Rick Bonnette

_____

TOWN CLERK – Suzanne Jones

Schedule A

Town of Halton Hills
1 Halton Hills Drive
Halton Hills ON L7G 5G2
www.haltonhills.ca

Construction/Excavation or Entrance on Public Highway Permit

Date of Application: _____

☐ Construction ☐ Excavation ☐ Entrance Permit File Number: _____

Type of Entrance: ☐ Commercial ☐ Residential ☐ Industrial ☐ Farm ☐ Temporary

Location of Work: _____

Type of Work: _____

Owner's Name: _____

Address: _____ Postal Code: _____

Business Telephone: _____ Home Telephone: _____ Cell: _____

Contractor/Applicant's Name: _____

Address: _____

Telephone: _____ Fax: _____

Contact Person: _____ Title: _____

Contractor's Liability Insurance: _____ (For the Town's minimum insurance requirements and conditions please see Section 1.b) of this application.)

Company Name: _____ Policy Number: _____

Temporary Restoration

A. _____ Cold Mix Asphalt Restoration of roadway, curb and sidewalk.

Permanent Restoration

B. _____ Complete permanent restoration by contractor/self.

C. _____ Request Town staff to perform permanent restoration works.

Other Conditions of Permit: _____

Construction, Excavation or Entrance Fees

a. Administrative Fee (non-refundable) $ _____ Paid by: _____

b. Refundable Security $ _____ Paid by: _____

c. Total Amount Payable $ _____

d. Administrative Fee Waived _____ (See By-law 2015-0016)

For Construction and Excavation permits, please submit a Certificate of Insurance with this application.

The applicant agrees to all conditions as shown herein and on the reverse side of this permit and as set out in the Town of Halton Hills By-law Number 92-199 for Construction/Excavation on Public Highways and By-law Number 2015-0016 for Entrances on Public Highways.

_____ _____

Name and Title of Applicant Signature of Applicant

_____ _____

Engineering Staff Approval Date of Approval

ENG-2017-11

Page 1 of 5

Engineering Services
Tel: 905-873-2601 Ext. 2200 Fax: 905-873-3036

Town of Halton Hills
1 Halton Hills Drive
Halton Hills ON L7G 5G2
www.haltonhills.ca

Construction/Excavation or Entrance on Public Highway Permit

For office use only:
Entrances: _____ Posted Speed: _____ km/h
Stopping Sight Distance: ☐ Left ☐ Right

Culvert Specification: Length 7.3 metres minimum
Diameter 450 mm minimum

Curb Cut Length:
- ☐ Less than 9.14m (30ft) – No driveway widening permitted.
- ☐ Equal to 9.14m (30ft) or less than 10.97m (36ft) - Min. 3.5m, Max 4.0 m.
- ☐ Equal to 10.97m (36ft) or less than 12.19m (40ft) - Min. 4.0m, Max. 5.5m.
- ☐ Equal to 12.19m (40ft) or less than 15.24m (50ft) - Min. 4.0m, Max. 6.0m.
- ☐ Equal to 15.24m (50ft) or less than 18.28m (60ft) - Min. 4.0m, Max. 6.5m.
- ☐ Equal to or greater than 18.28m (60ft) - Min. 4.0m, Max 7.0m.

Expiry Date: _____ Inspection Date: _____ Approved By: _____

List of Attachments or Conditions:
Traffic Protection Plan By: _____ Date: _____
Insurance Certificate By: _____ Date: _____
Draw and/or Sketch By: _____ Date: _____
Other: _____

The personal information on this form is collected under the authority of Section 11 of the Municipal Act, as amended, and in accordance with the Municipal Freedom of Information and Protection of Privacy Act. The information is used for the purpose of processing this document. Questions regarding the collection of this information should be directed to Transportation & Public Works at 905-873- 2601 ext. 2200.

Public Utility Coordinating Committee (P.U.C.C.) members will be responsible for obtaining the consent of the Town of Halton Hills for the location of the proposed plant, whether or not they engage a private contractor to do the work. They are also required to file with the Town a letter of intent stating that they will have, at all time, adequate insurance coverage. All P.U.C.C. members are required to complete this Permit for all road cuts, but securities and fees are not required if they complete final restoration works.

Note: This administration fee shall not be required for applications which are deemed to fall within the limits of construction on a Town of Halton Hills Capital reconstruction project.

Engineering Services
Tel: 905-873-2601 Ext. 2200 Fax: 905-873-3036

Town of Halton Hills
1 Halton Hills Drive
Halton Hills ON L7G 5G2
www.haltonhills.ca

Construction/Excavation or Entrance on Public Highway Permit

This Permit for Construction/Excavation on Public Highway is issued pursuant to Town By-law No. 92-199, as amended, and the Applicant agrees to the following conditions:

1. Prior to the issuance of a Permit, the Applicant shall provide the following to the satisfaction of the Commissioner of Transportation & Public Works:
   a) A non-refundable administration fee (calculated annually) be used for administration purposes.
   b) Insurance: The Applicant or their Contractor shall take out and maintain Commercial General Liability insurance for a limit of no less than $2,000,000/$5,000,000 per occurrence and coverage shall include but not be limited to bodily injury, personal injury, property damage, contractual liability, employer's liability, non-owned automobile, and shall contain a cross liability clause. The Town of Halton Hills shall be named as an additional insured. If applicable, based solely upon the nature of the works in the sole and absolute discretion of the Town, the Town shall have the right to request, in addition to the Commercial General Liability policy, any or all of the following coverages:
      a. Sudden and Accidental Pollution as an extension of the Commercial General Liability policy for a limit of no less than $5,000,000 per accident **or**
      b. Stand-alone Contractor's Pollution Liability policy for a limit of no less than $5,000,000 per claim. The Town shall be named as an additional insured and/or
      c. Professional Liability Policy (Errors & Omissions) for a limit of no less than $5,000,000 per claim.

      The insurance shall remain in force until such time as the Town has inspected and approved the completed works. The Applicant or their Contractor shall provide a completed certificate of insurance to the Town no less than 5 business days prior to the commencement of the work. If the Town does not receive the certificate of insurance then the Town is under no obligation to issue the Permit until such time as the Town receives the required certificate of insurance from the Applicant or their Contractor; nor shall the Town be financially responsible for any hardship, financial or otherwise, suffered by the Applicant or the Contractor or any other party associated with the works as a result of the non-issuance of the Permit.
      The Town shall require confirmation of insurance on a form issued by the Town prior to issuance of permit which can be found on our website at http://www.haltonhills.ca/forms/index.php;
   c) Any other supportive material as requested by the Commissioner of Transportation & Public Works;
   d) A cash deposit in the amount of one and one half times the value of the final restoration costs as set out on the face of the Permit or a cash deposit in an amount as requested by Town of Halton Hills staff to cover final restoration costs.
2. Indemnification and Save Harmless. The Applicant and their Contractor each:
   a) agrees to indemnify and save harmless the Town of Halton Hills from all actions, causes of actions, suits, claims, demands and costs whatsoever arising by reason of the Applicant, his agents or employees doing, failing to do, or doing incorrectly or negligently anything the Applicant is required to do under the terms of this Permit; and
   b) will be responsible for any and all damages suffered and injuries sustained as a result of any operations on, or caused by reason of the existence or location or condition of, the construction site, or of any materials, plants or equipment used in connection with the works performed as a result of this Permit. It is solely the responsibility of the Applicant that all parties

performing the work have read and agree to No. 2, Indemnification and Save Harmless section of the Application.

3. All requirements of this Permit, or any aspects pertaining to this Permit, shall be to the satisfaction of the Commissioner of Transportation & Public Works otherwise the work will be stopped until all requirements have been met.
4. Permits will be processed after all the necessary information has been submitted to the Building and Engineering Services counter.
5. This Permit does not relieve the Applicant from the responsibility of obtaining all other necessary permits, approvals and plant locations.
6. The Applicant agrees to notify the Transportation & Public Works department at least 2 business days prior to commencing works.
7. A copy of this Permit must be available on the job at all times, during actual construction or installation.
8. If works have not commenced within 3 months from the date of issuance of this permit, this permit will automatically expire. The administration fee shall be retained by the Town and any cash deposits shall be returned to the Applicant. If and when the works are to proceed, a new application will be required.
9. Upon completion of the work, the Applicant shall complete the following to the satisfaction of the Commissioner of Transportation & Public Works:
   a) Restore all subsurface works including the compaction of backfill material;
   b) Restore all areas affected by the work to current Town or Ontario Provincial Standards to the satisfaction of the Commissioner of Transportation & Public Works;
   c) Restore the roadway and sidewalk areas affected by the work by the means set out on the face of the Permit.
10. The Applicant shall guarantee the workmanship and materials of all the work performed under Section 10 within the limits of the highway for a period of twelve (12) months from the date of receiving the Town's approval of the completed work.
11. Unless otherwise specified on the face of this permit, all trenches are to be backfilled with approved Granular 'A' material, placed in 150 mm thick layers and compacted to 100 percent standard proctor density. Under certain circumstances, as determined by the Commissioner of Transportation & Public Works, the Town may specify an unshrinkable fill material to be used as backfill trench material.
12. All trench cuts crossing roads and sidewalks are to be backfilled as per section 12, to 50 mm below final grade. The Applicant shall then complete the temporary restoration consisting of asphalt as indicated on the face of this Application on the same day before allowing traffic to flow over the trench cut.
13. Using the final road works restoration security taken, under Section 1(d) of this Permit, and as indicated on the face of this Permit, the Commissioner of Transportation & Public Works will arrange for the permanent restoration of the asphalt and concrete curbs and sidewalks.

14. Upon the completion of the permanent restoration works, the Town shall reimburse the Applicant any excess monies deposited not used by the Town to restore the works, and the Applicant shall reimburse the Town for any costs of restoration above the monies deposited with the Town within thirty (30) days of receiving any invoice for payment from the Town.
15. The Applicant must complete the final restoration work indicated on the face of this Application to the satisfaction of the Commissioner of Transportation & Public Works.
16. Prior approval must be obtained from the Town of Halton Hills for closing or restricting any road at any time except in the case of emergency. The Town requires the following:
    a) If the work to be undertaken does not necessitate a temporary road closure, an Application to the Commissioner of Transportation & Public Works for a Permit, shall be made at least 2 days prior to the commencement of work;
    b) If the work to be undertaken necessitates a temporary road closure, the Applicant is responsible for undertaking the provisions outlined in Town of Halton Hills By-law No. 2003-0032 which delegates the power to close a highway temporarily for the work to be performed.
17. At all times, the Applicant shall adhere to the provisions as set out by the Town of Halton Hills for the detour of traffic. The Applicant shall supply all traffic control persons, signs, flashers, barricades and other traffic control devices required to close and detour traffic around the working area in accordance with Ontario Traffic Manual, Book 7 (Field Edition). All traffic control devices are to be erected and maintained at the expense of the Applicant.
18. The Applicant must maintain a reasonable pre-approved safe alternate route for vehicular and pedestrian traffic.
19. The Applicant must provide and maintain reasonable local access routes for all property owners or occupants whose access will be affected by the proposed works.
20. In case of emergency work required for public health, safety or welfare reasons, notice shall be given and an Application for Permit made to the Town as soon as possible after commencement of the work, namely on the same day, or if too late in the day, then within 4 hours of the opening of the Town's offices on the following day, which is not a Saturday, Sunday or holiday.
21. In the case of storm sewer works, the Town requires an inspection of the excavation and installed works before the excavation is backfilled. Should the excavation be backfilled prior to the inspection, the Applicant will be required to reopen the excavation for inspection at the Applicant's expense.
22. The Applicant shall be responsible for all damages to all existing services when such damages arise out of the work undertaken by the Applicant.
23. The Applicant is responsible for notifying Town of Halton Hills staff concerning existing damage to Town owned infrastructure (boulevards, curbs, sidewalks, etc.) prior to the issue of the Permit.