



**Appendix E**  
**Public Consultation**



**Appendix E.1**  
**Public Consultation**





# Clair-Maltby Secondary Plan

Master Environmental Servicing  
Plan and Community Plan

[guelph.ca/clair-maltby](http://guelph.ca/clair-maltby)





# Project Progress

August 11, 2015 – Open House

September 17, 2015 – Focus Group

October 23, 2015 – Draft TOR released

December 2015 – Council Approval of TOR

January-March 2016 – Retained Consultant Team



# Study Structure



Task A – CEIS

Task B – Water/Wastewater

Task C – Stormwater Management

Task D – Mobility Study

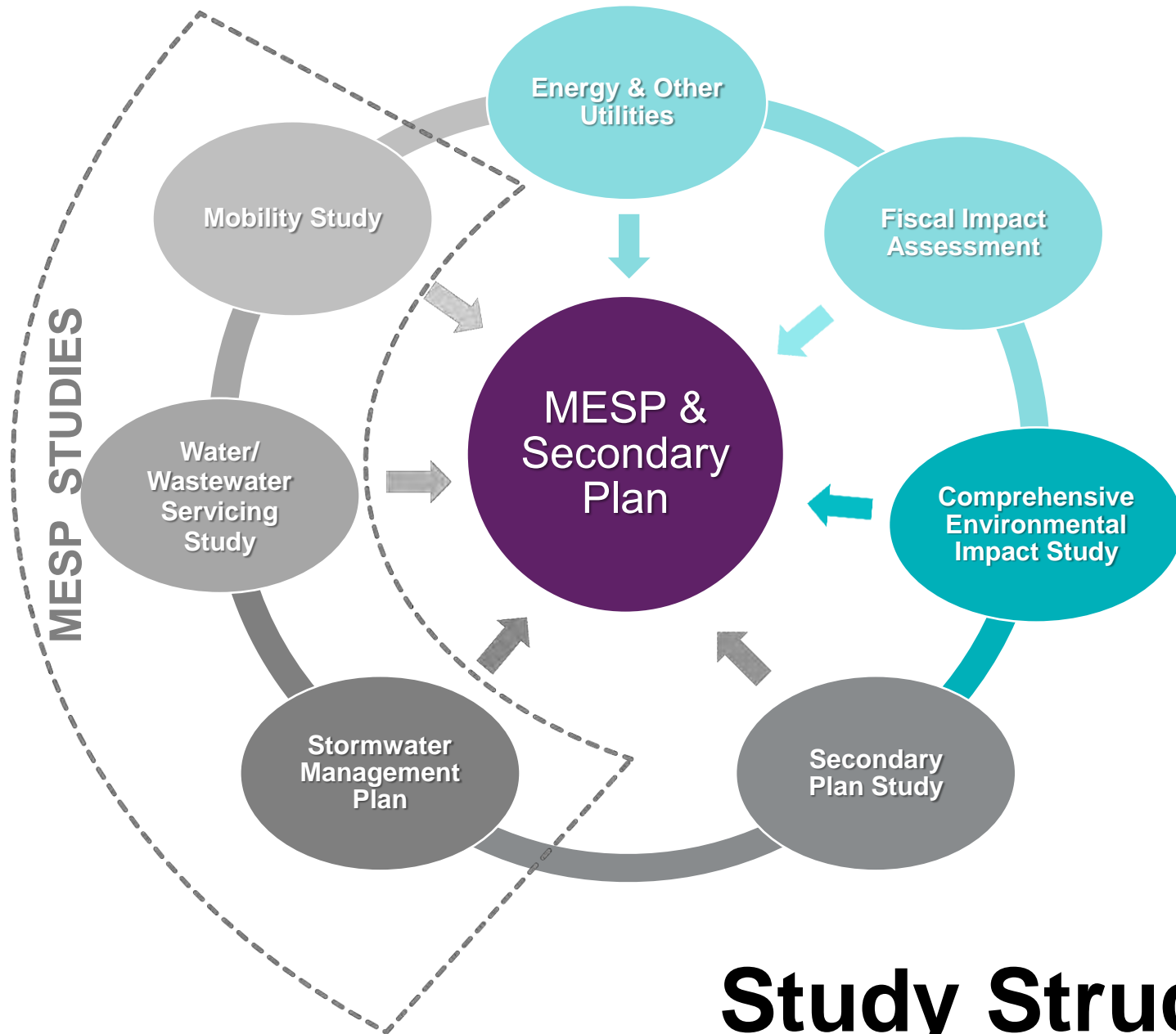
Task E – Energy & Other Utilities

Task F – Secondary Plan

Task G – Fiscal Impact Assessment

Task H – Community Engagement & Communications

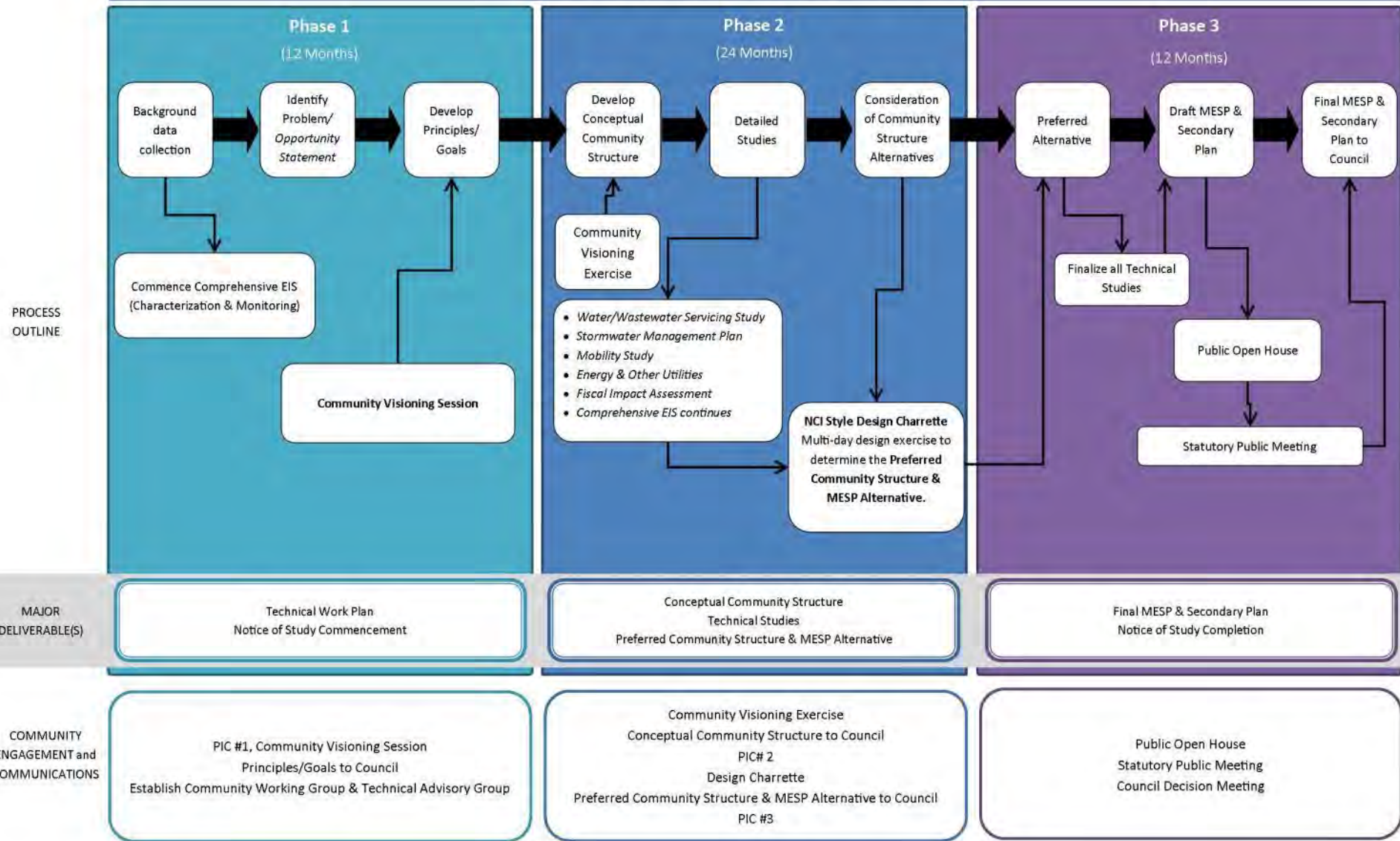




# Study Structure



## Clair-Maltby Secondary Plan - Process Outline



# Clair-Maltby Secondary Plan

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## Consulting Team

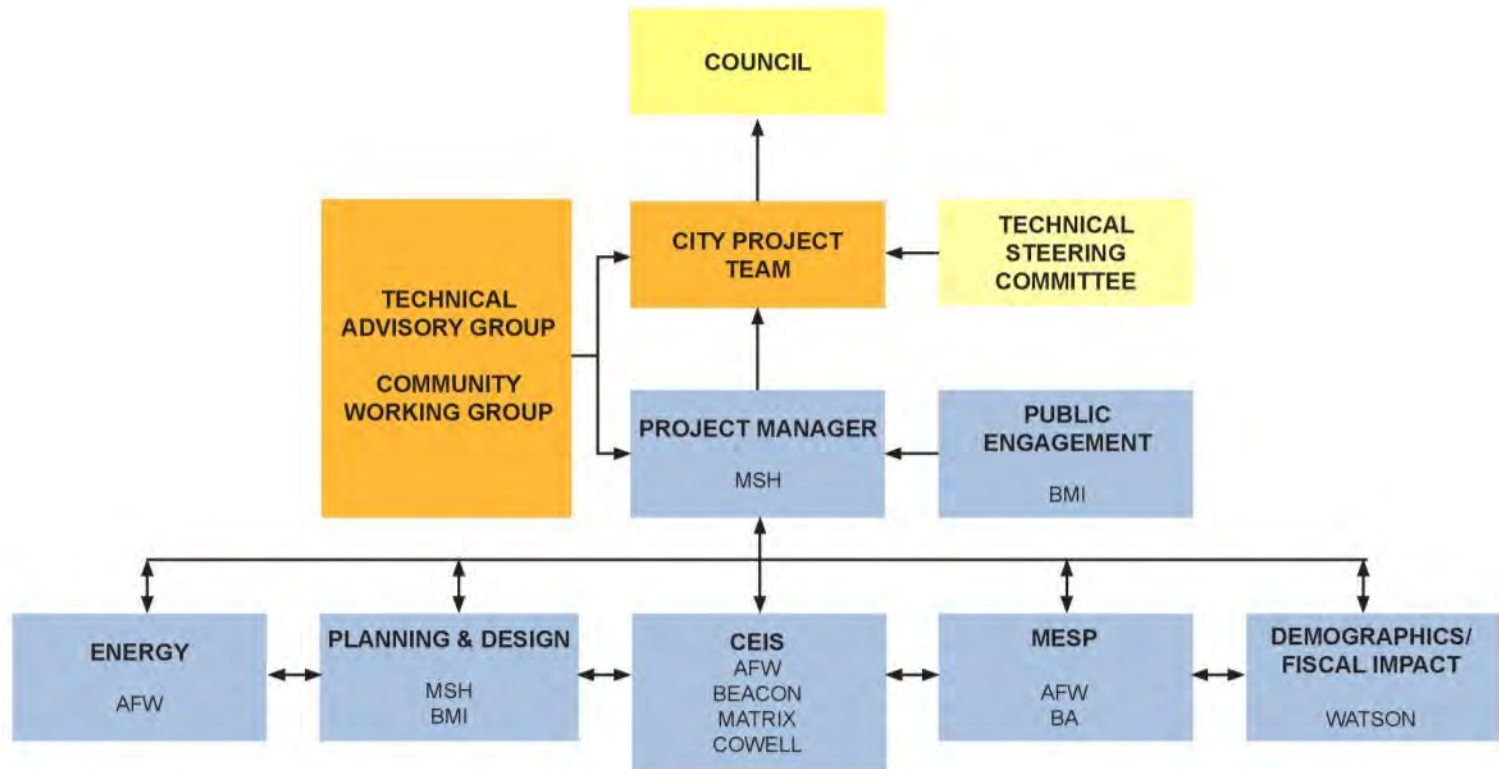
- Macaulay Shiomi Howson Ltd. (MSH) - *Project Management / Planning/Sustainable Development/Facilitation*
- Brook McIlroy Inc. - *Community Outreach / Urban Design*
- Amec Foster Wheeler (AFW) - *Water / Wastewater / Stormwater Management / Energy*
- Beacon Environmental Ltd. – *Natural Heritage*
- Daryl Cowell - *Landform*
- Matrix Solutions Inc. – *Hydrogeology*
- BA Group – *Mobility/Parking*
- Watson & Associates - *Fiscal Impact/Land Economics*
- ASI - *Archaeology, Cultural Heritage & Aboriginal Engagement*



# Clair-Maltby Secondary Plan

## Study Reporting Structure

CITY OF GUELPH  
CLAIR-MALTBY SECONDARY PLAN  
CONSULTANT TEAM ORGANIZATION



# Clair-Maltby Secondary Plan

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## Comprehensive Environmental Impact Study (CEIS)

### What is the study about?

- examination and verification of environmental features and functions
- assessment of the role of water in the study area to support natural systems (groundwater/surface water)
- constraints and opportunities definition
- assessment of impacts associated with possible land use changes
- establishment of integrated management strategies





# Clair-Maltby Secondary Plan

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## Comprehensive Environmental Impact Study (CEIS)

### How will this study be conducted?

- review of background information
- multi-year monitoring and field studies
- modelling of surface and groundwater
- agency and stakeholder consultation
- reporting



# Clair-Maltby Secondary Plan

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## Comprehensive Environmental Impact Study (CEIS)

### Field Monitoring

- Surface Water
- Groundwater
- Ecological



# Clair-Maltby Secondary Plan

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## Field Monitoring

### Surface Water (2016, 2017, 2018)

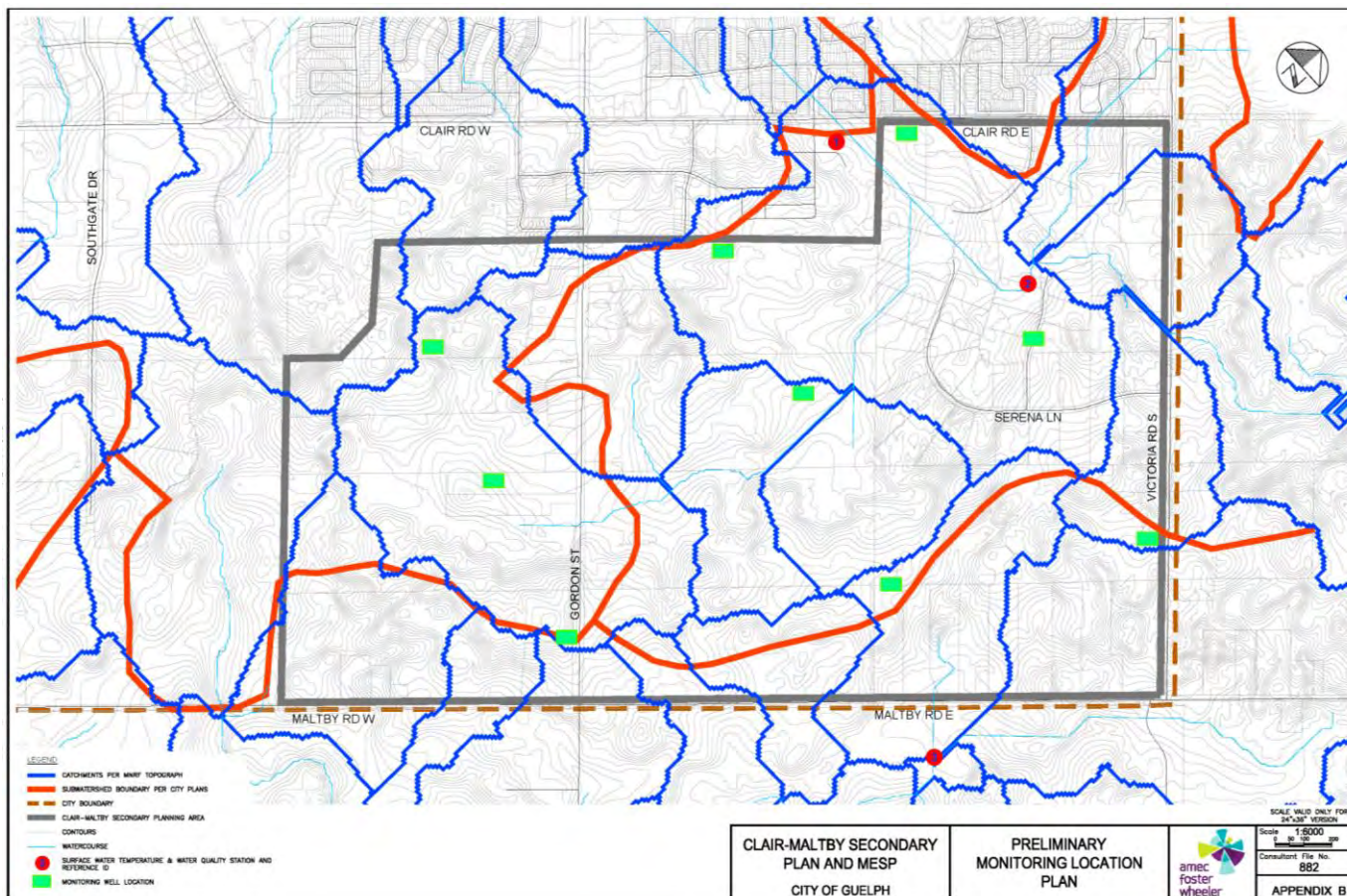
- Rainfall
- Water Levels
- Water Quality
- Temperature
- Velocity metering



# Clair-Maltby Secondary Plan

## Field Monitoring

### Surface Water





# Clair-Maltby Secondary Plan

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## Field Monitoring

### Groundwater (2016, 2017, 2018)

- 18 monitoring wells at 9 locations across 3 transects
  - Dataloggers at 9 locations, monthly manual water level measurements
  - Water quality sampling twice / year for 3 years
  - Hydraulic testing of each well
- Ideally drill wells in 2016

Guelph permeameter testing across primary study area (3 days)





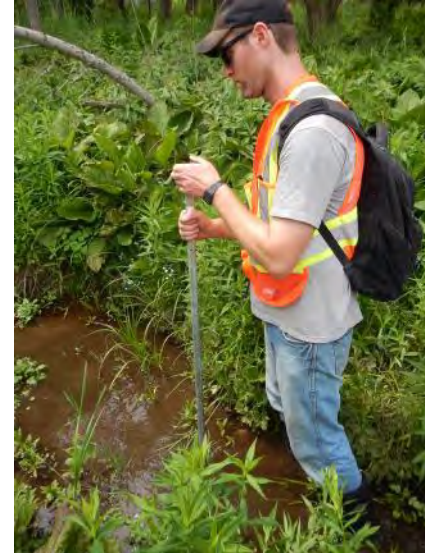


# Clair-Maltby Secondary Plan

## Field Monitoring

### Groundwater (2016, 2017, 2018)

- Drive point piezometer nests at 20 locations around wetlands in primary study area and along tributaries outside of primary study area
  - Monthly water level measurements





# Clair-Maltby Secondary Plan

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## Field Monitoring

### Groundwater (2016, 2017, 2018)

- Spotflow / baseflow measurements at 25 locations outside primary study area (Mill Creek, Hanlon Creek, Torrance Creek)
  - 3x / year for 3 years

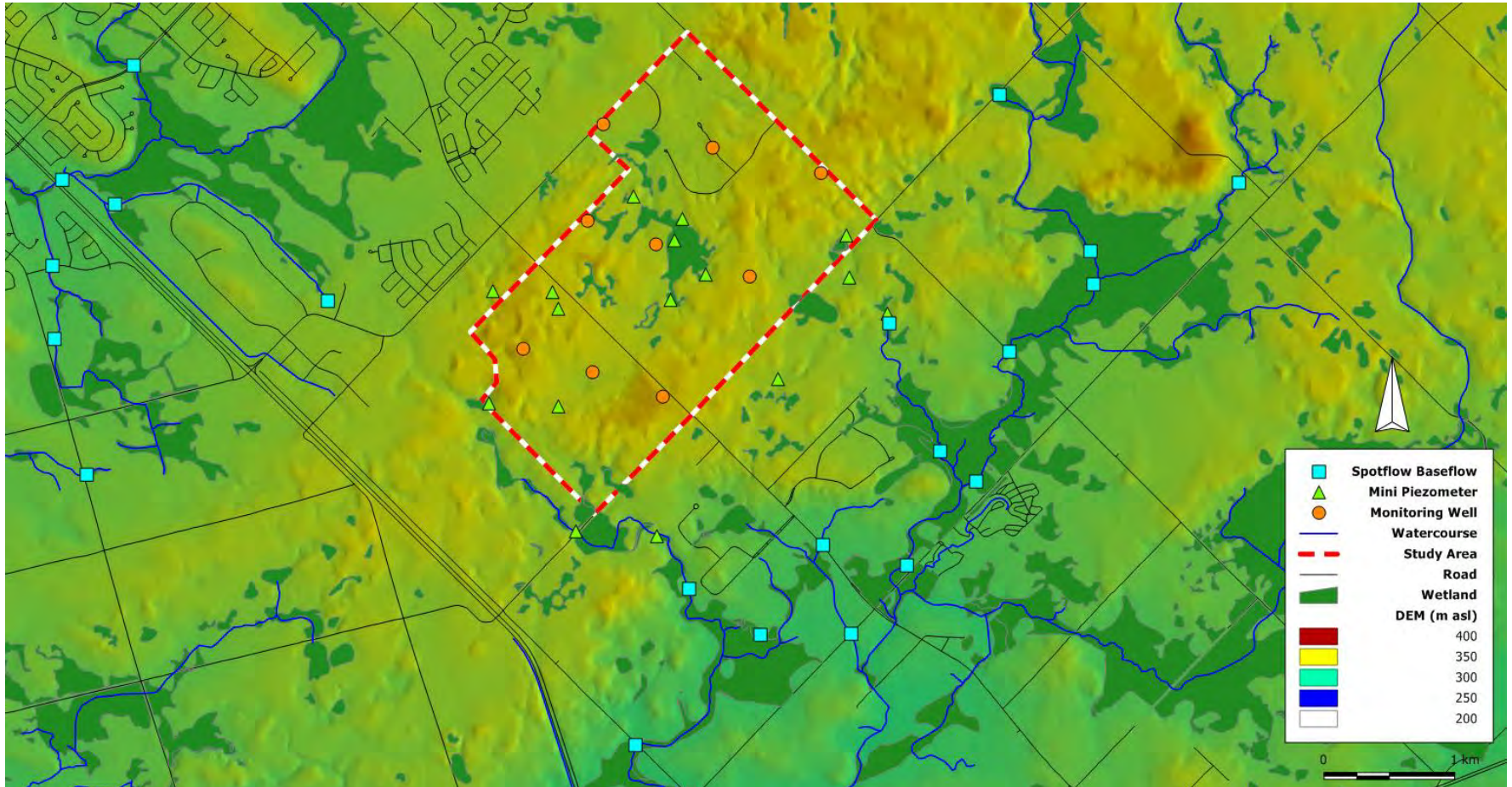






# Clair-Maltby Secondary Plan

## Field Monitoring - Groundwater







# Clair-Maltby Secondary Plan

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## Field Monitoring

### Ecology: General Approach

Build on work done to date and focus on functions best addressed at a landscape / Secondary Plan scale

- |               |   |
|---------------|---|
| 2016          | pull together base of existing information        |
| 2016          | start wetland water level and quality monitoring  |
| 2017          | bulk of field work (surveys for wildlife, plants) |
| 2017 and 2018 | wetland monitoring and wildlife movement          |
| 2018          | wetland water level and quality monitoring        |
| 2018          | targeted follow-up surveys TBD                    |

# Clair-Maltby Secondary Plan

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## Field Monitoring

### Ecology: Preliminary Work Plan within the Primary Study Area

Plan to undertake surveys in representative locations across the primary study area

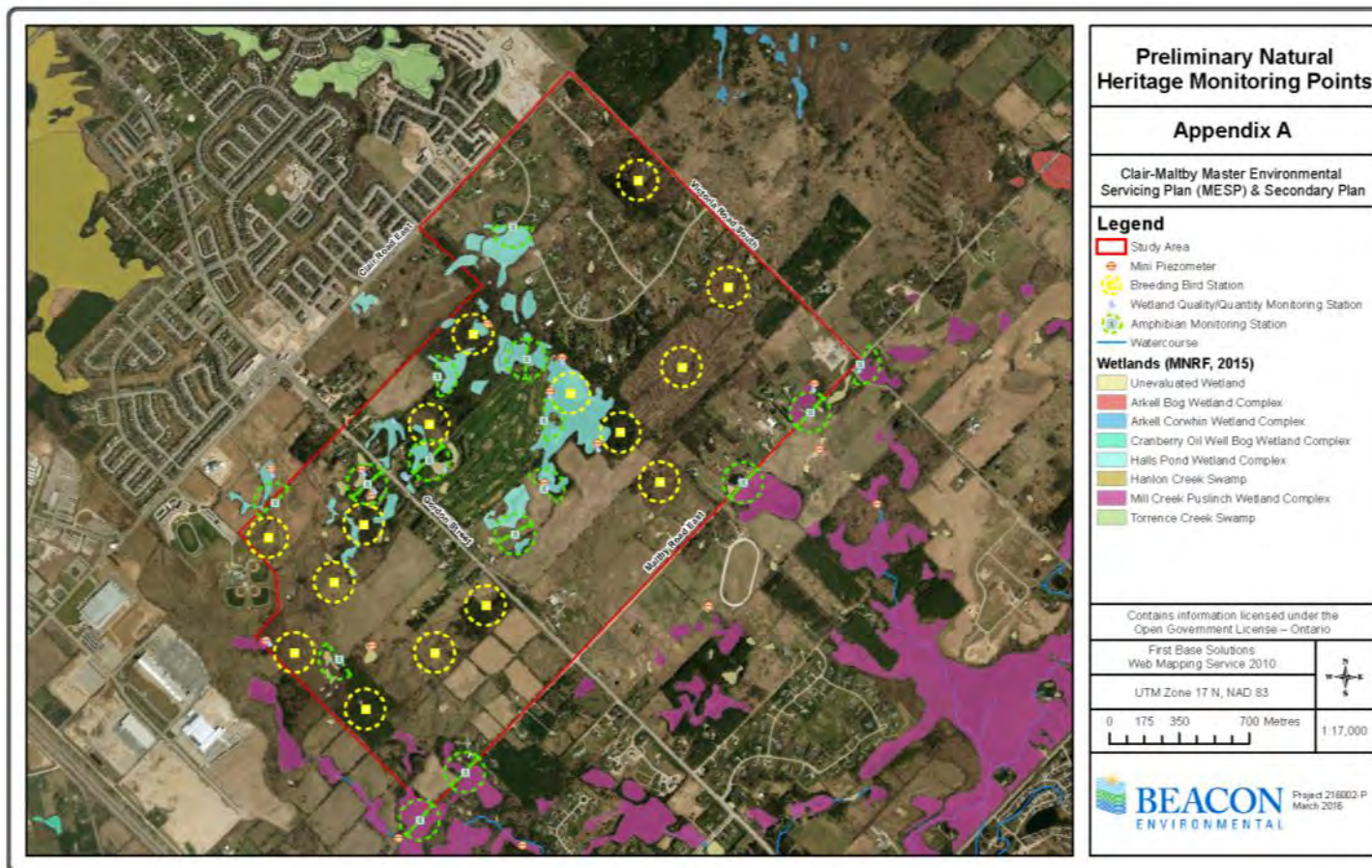
- Vegetation community classification / verification – up to 10 days
- Breeding amphibian surveys (frogs/roads) - about 20 stations
- Amphibian movement surveys (frogs/salamanders) – 3 or 4 locations
- Turtle surveys (basking) – about 5 locations
- Deer movement surveys – transects in selected areas (in winter)
- Bird surveys – about 15 stations



# Clair-Maltby Secondary Plan

## Field Monitoring

### Ecology





# Questions?





# Property Access Surface Water Gauges



Visual flow monitoring and surface water level gauges installed by hand; no drilling required





# Property Access Mini-piezometers



Installed by hand; no drilling required





# Property Access Groundwater Wells



Drilling is required

# Property Access Amphibian Surveys



In person visits three times between  
late March and late June in the evenings



# Property Access Bird Surveys



In person visits two to three times between mid-May and early July early in the morning

# Property Access Plant & Vegetation Community Surveys



In person visits two or three times between mid-May and late September during the day





# 1 WELCOME

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Thank you for attending, and welcome to the Public Information Centre and Visioning Workshop for the Clair-Maltby Secondary Plan.

Your feedback is important to us, and will help inform the development of the vision and guiding principles for the secondary plan study.

## Agenda

- |                                     |                |
|-------------------------------------|----------------|
| <b>1</b> Sign in and Display Boards | 6:30 - 7:00 pm |
| <b>2</b> Presentation               | 7:00 - 7:30pm  |
| <b>3</b> Workshop                   | 7:30 - 8:30 pm |

Three rounds: Guiding Principles - choose up to 3 topics

1. Sustainability & Servicing
2. Mobility
3. Natural Heritage Network and Parks System
4. Land Use, Urban Design, and Cultural Heritage

Final round: Vision

- |                                   |                |
|-----------------------------------|----------------|
| <b>4</b> Report Back & Next Steps | 8:30 - 9:00 pm |
|-----------------------------------|----------------|

## Contact Us

### **Stacey Laughlin, MCIP, RPP**

Senior Policy Planner

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### **Arun Hindupur, M.Sc., P.Eng.**

Infrastructure Planning Engineer

Engineering and Capital Infrastructure Services

[arun.hindupur@guelph.ca](mailto:arun.hindupur@guelph.ca)



# 2 THE STUDY

## Study Purpose

The City of Guelph is undertaking the Clair-Maltby Secondary Plan and Master Environmental Servicing Plan (MESP) Study. Clair-Maltby is the last unplanned greenfield area within the city. This Study will establish a plan for future development in the area.

The Clair-Maltby Secondary Plan and the Master Environmental Servicing Plan (MESP) are being developed simultaneously to provide an integrated planning approach within the Study Area. Comments from our community engagement sessions will be analysed alongside land use, environment, mobility and servicing studies for a comprehensive review of the Clair-Maltby Secondary Plan Area and its needs.

**Your input today will provide critical guidance for the conceptual community structure, which will be developed during the next phase of this study.**

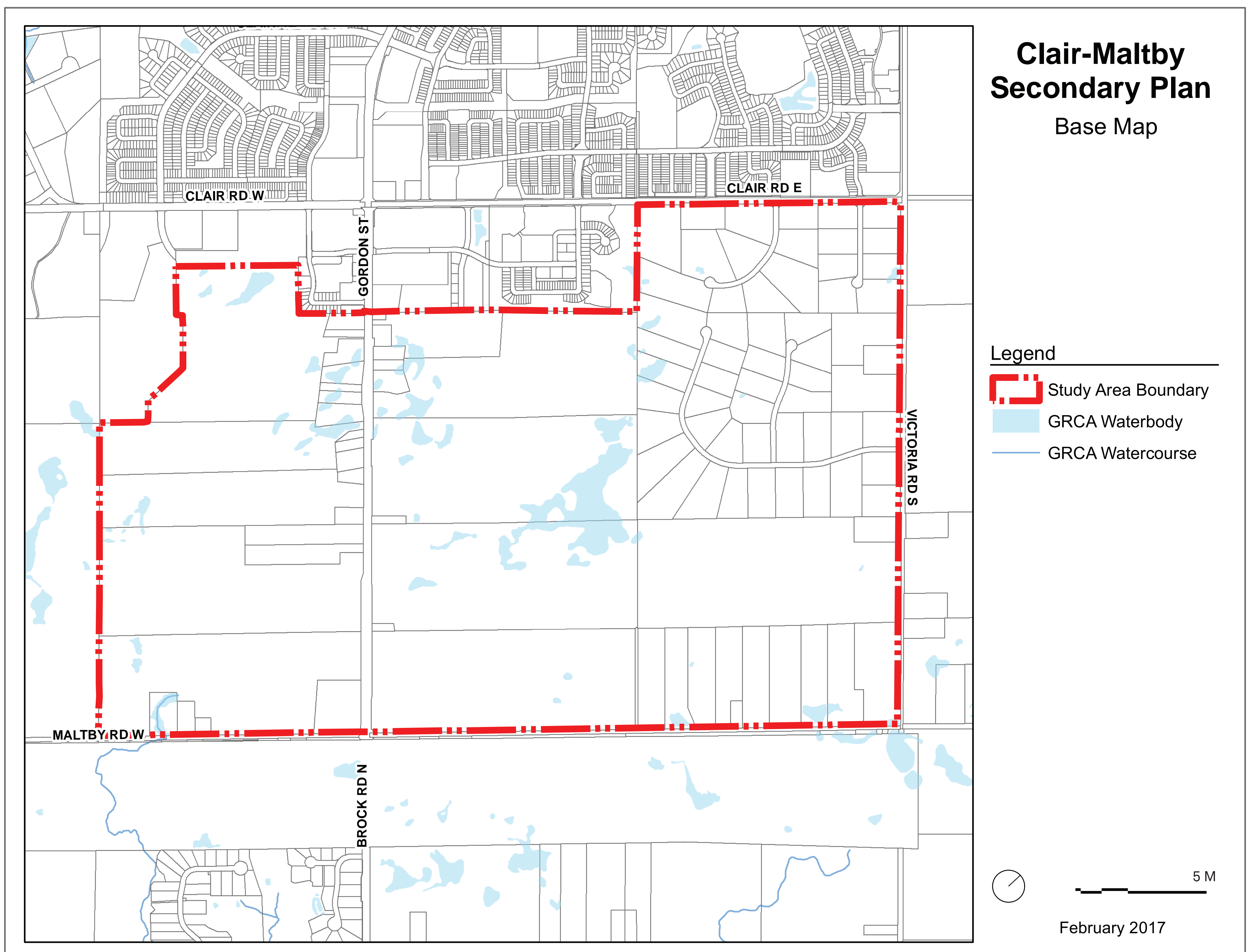
## Study Schedule



# 3 SECONDARY PLAN AREA

## Physical Context

The Secondary Planning Area is located in the south end of the City of Guelph. It is bounded by Clair Road to the north, Victoria Road (City Boundary) to the east, Maltby Road (City Boundary) to the south and the eastern limits of the Southgate Business Park to the west. It has an area of more than 520 hectares which is currently primarily rural and agricultural in nature.





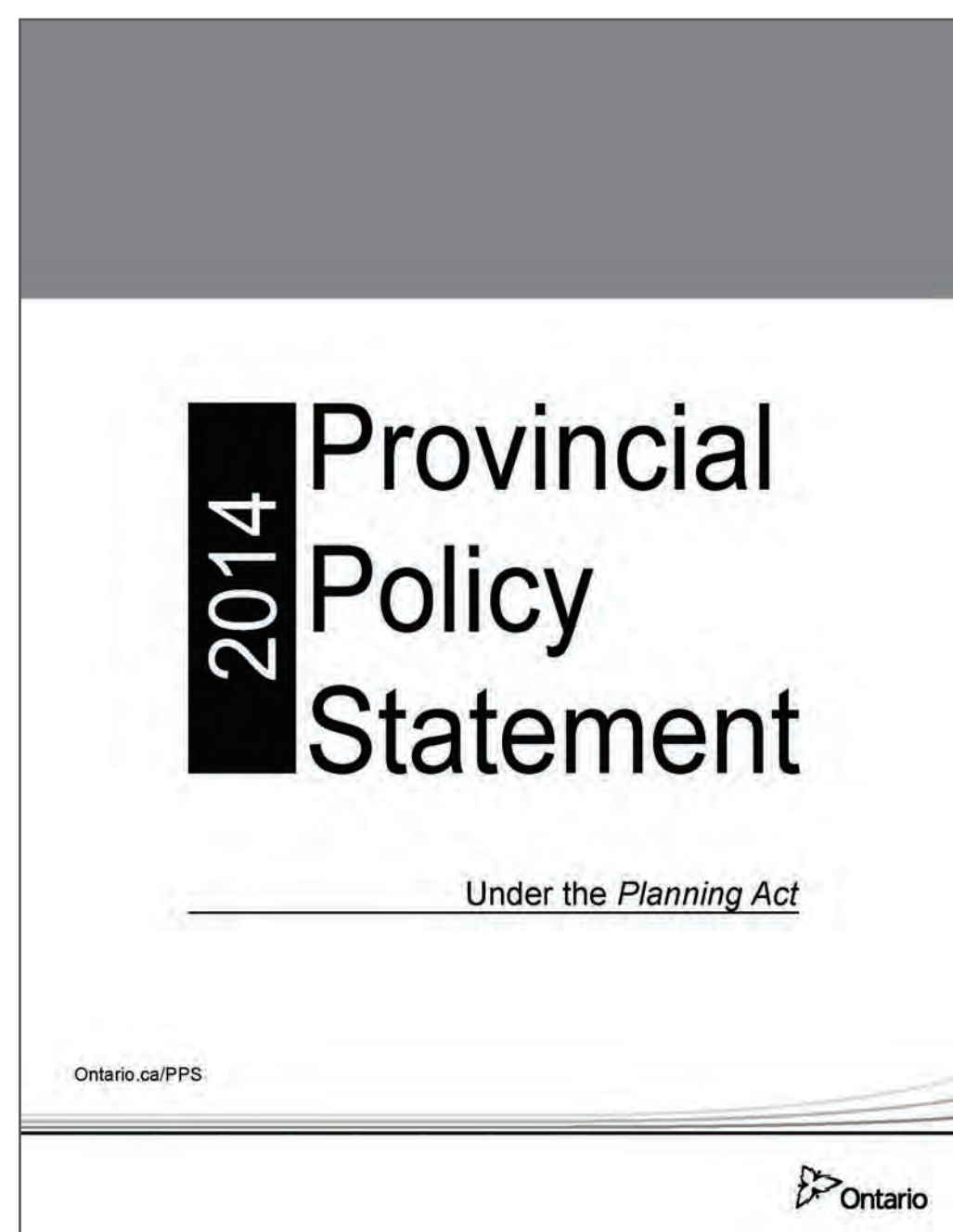
# 4 GUIDING DOCUMENTS

Provincial and Municipal legislation contain policy that will influence the direction for the Secondary Plan Area. These include the:

## Provincial Policy Statement (PPS)

Relevant themes include:

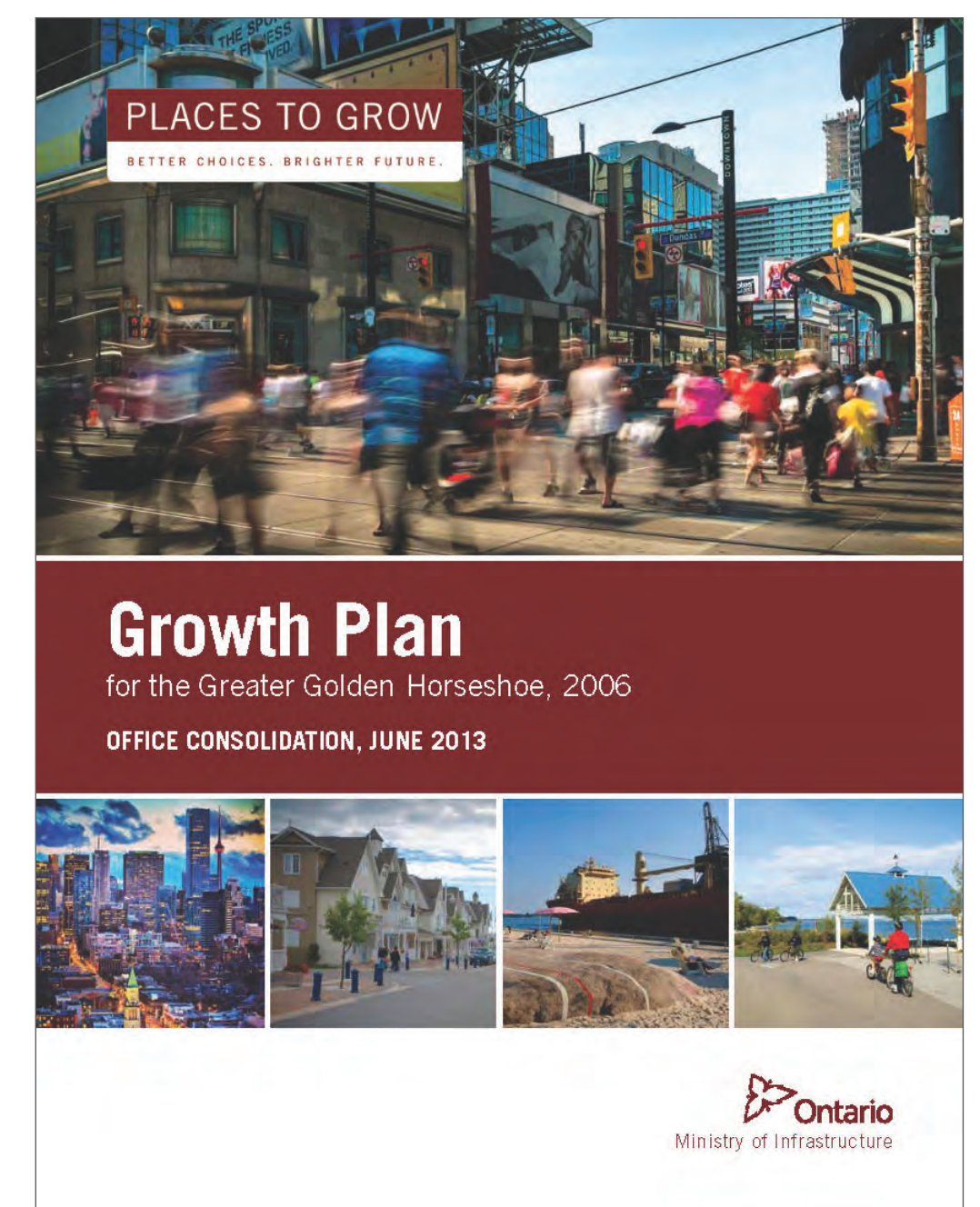
- Creating strong, livable and healthy communities;
- Protecting the environment, public health and safety; and
- Facilitating economic growth.



## Places to Grow: Growth Plan for the Greater Golden Horseshoe

Relevant themes include:

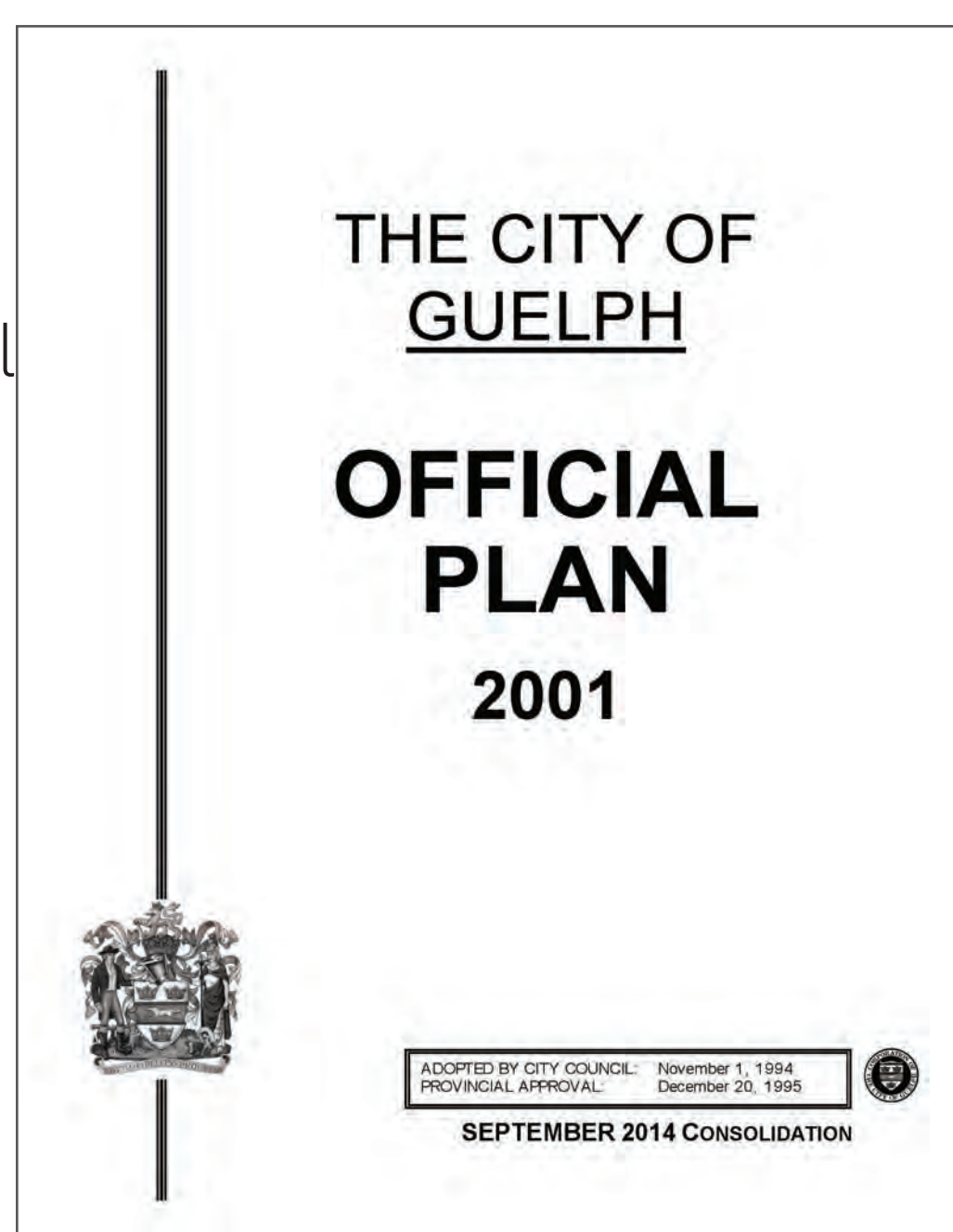
- Growth management directions;
- Greenfield residential targets; and
- People/jobs density targets.



## City of Guelph Official Plan

Relevant themes include:

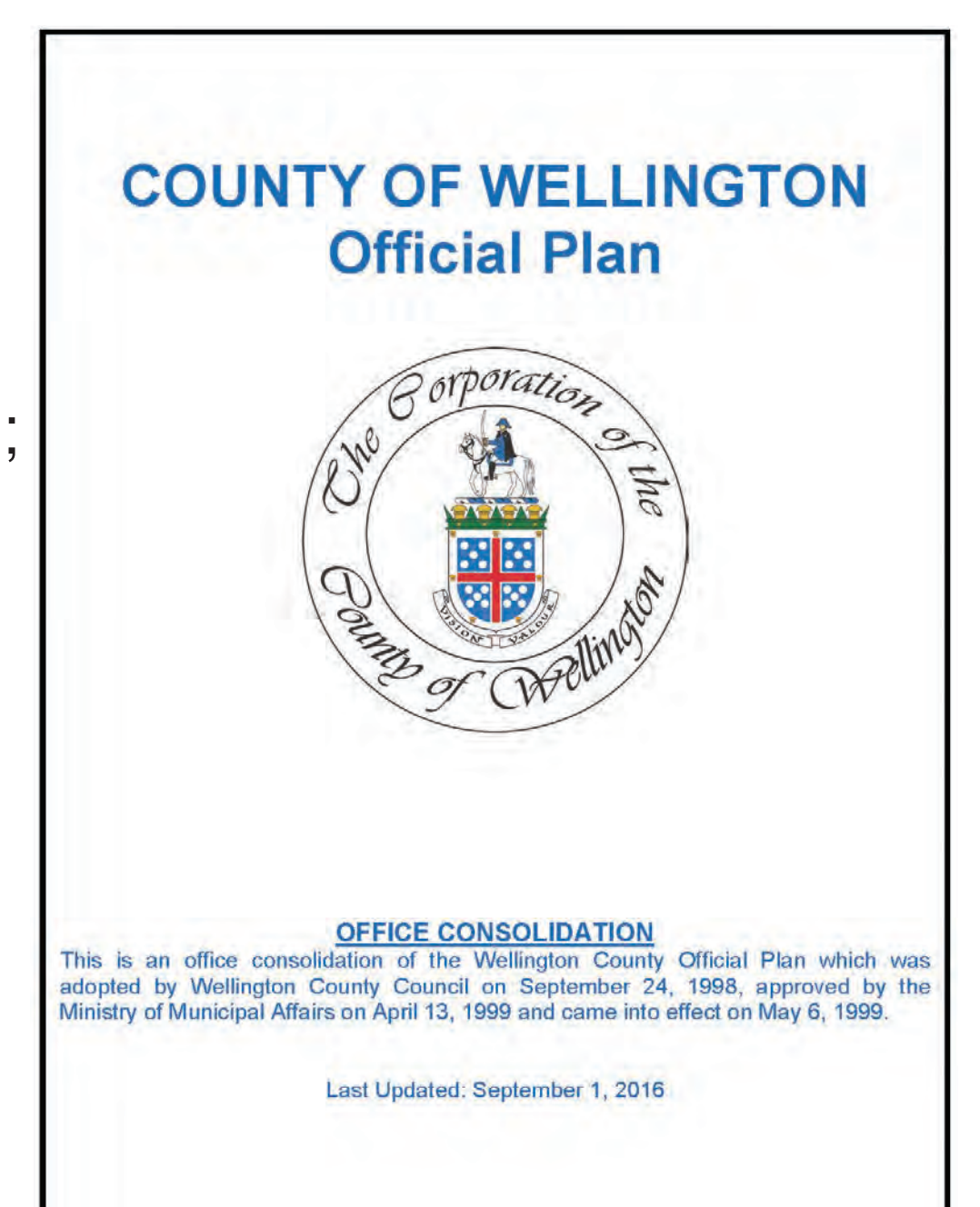
- Complete communities;
- Protection of the Natural Heritage Network;
- Multimodal transportation system;
- Environmental and built form sustainability;
- Varied and affordable housing types; and
- Conservation of built and cultural heritage and archaeological resources.



## Wellington County Official Plan (relevant to adjacent lands)

Relevant themes include:

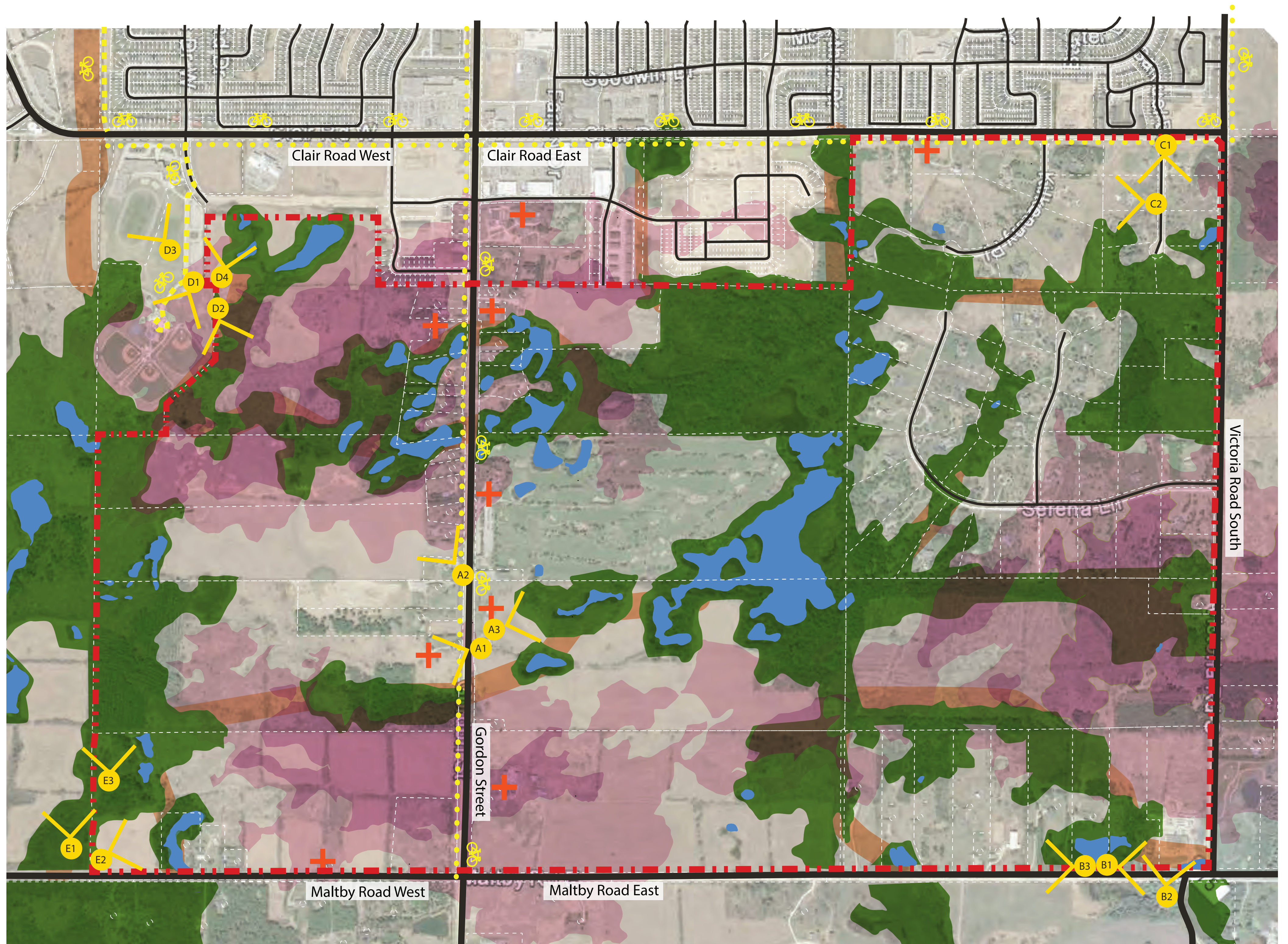
- Land use designations and policies;
- Gordon Street Extension; and
- Significant Drinking Water Threat policies.





# 5 EXISTING CONDITIONS

## Existing Conditions Map



- |                           |   |                          |     |                                      |           |   |             |
|---------------------------|---|--------------------------|-----|--------------------------------------|-----------|---|-------------|
| Natural Heritage System   | + | Built Heritage Resources | —   | Existing Roads                       | Bike Lane | Ⓧ | Drone Views |
| Significant Natural Areas |   |                          | —   | Higher Elevation Areas               | 🚲         | 🚲 |             |
| Ecological Linkages       |   |                          | --- | Clair Maltby Secondary Plan Boundary | 🚲         | 🚲 |             |
| Water Bodies              |   |                          |     |                                      | 🚲         | 🚲 |             |

What are your top priorities for development in the Secondary Plan Area?



# 6 EXISTING CONDITIONS

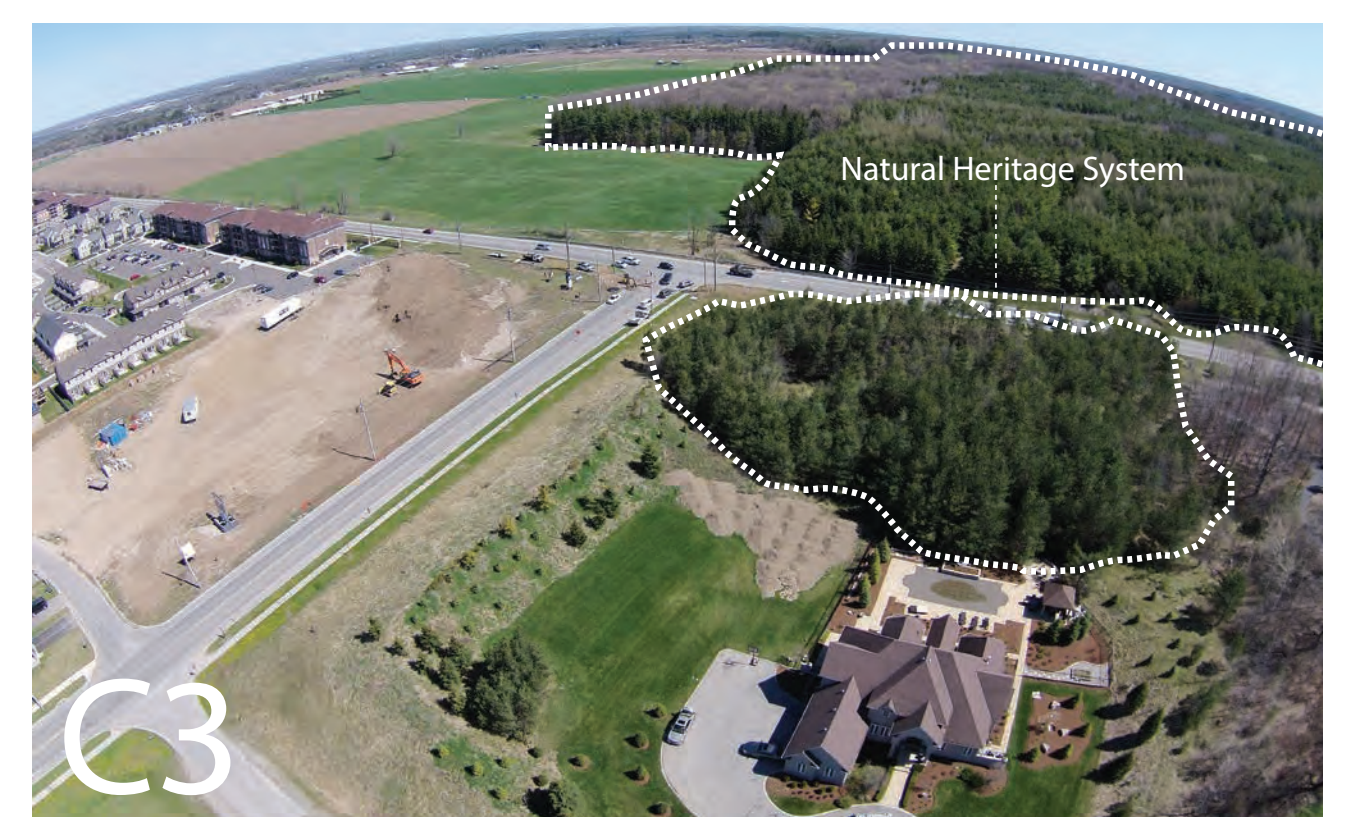
## Central Views



## South East Views



## North East Views



## North West Views



## South West Views

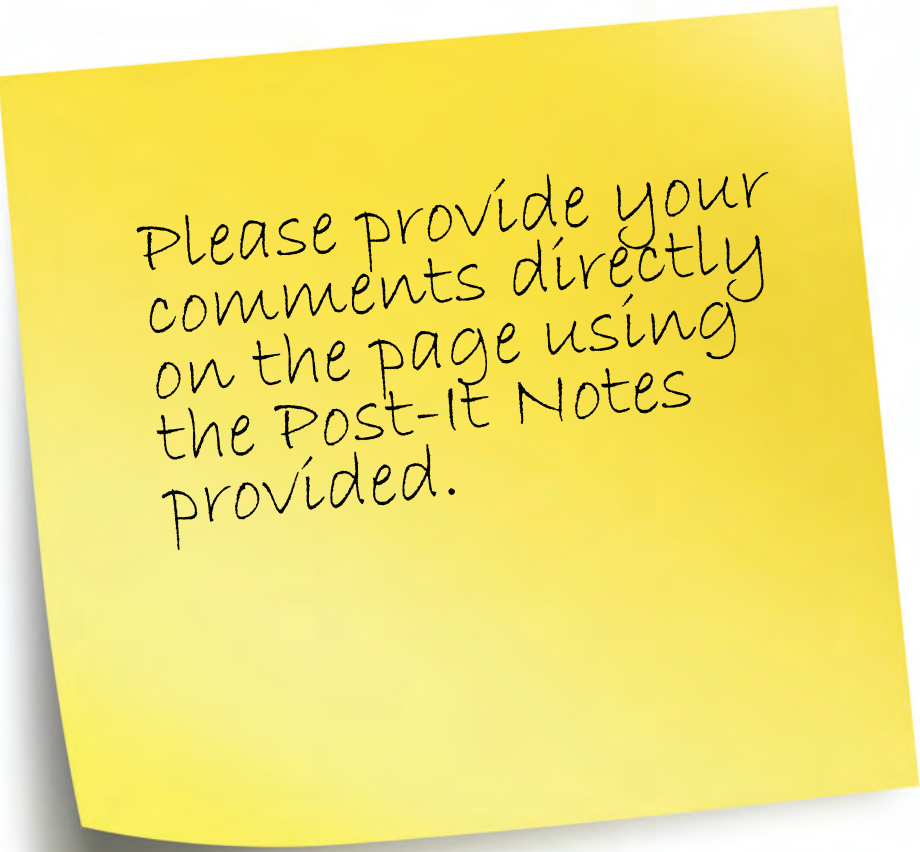




# 7 COMMENTS AND NEXT STEPS

Please provide any additional comments about your vision for the Clair-Maltby area in the space below, using the post-it notes and pencils which have been provided.

*Transform. Connect. Community. When fully developed, the Clair-Maltby area will be known for...*



Please provide your comments directly on the page using the Post-It Notes provided.

## NEXT STEPS

**Vision / Principles to Council for endorsement** - July 2017

**Visioning Exercise: Conceptual Community Structure** - September 2017 (tentative)

**Conceptual Community Structure to Council for endorsement** - Q4 2017 (tentative)

**Design Charrette: Preferred Community Structure Alternative** - March 2018 (tentative)

**Conceptual Community Structure to Council for endorsement** - Q2 2018 (tentative)

April 6, 2017

## **Clair-Maltby Secondary Plan and Master Environmental Servicing Plan**

### **Notice of Study Commencement, Public Information Centre No. 1 and Visioning Workshop**

Join us for a Public Information Centre (PIC) and Visioning Workshop  
about the Clair-Maltby Secondary Plan

**Thursday, April 27, 2017  
6:30-9 p.m.**

Bishop Macdonell Catholic High School, Gymnasium  
200 Clair Road West, Guelph

#### **Visioning Workshop**

The visioning workshop will help to establish a vision, goals and guiding principles for the study. These will inform future decisions regarding the secondary plan.

- |                |  |
|----------------|--|
| 6:30-7 p.m.    | Sign-in and display board viewing  |
| 7-7:30 p.m.    | Presentation   |
| 7:30-8:30 p.m. | Workshop exercise <ul style="list-style-type: none"><li>• Individual top priorities</li><li>• Group visioning</li><li>• Group guiding principles</li><li>• Group precedent ranking</li></ul> |
| 8:30-9:00 p.m. | Report back and next steps   |

#### **How to Participate**

Drop-in anytime from 6:30-9 p.m. to review project information, meet the project team, ask questions or provide comments.

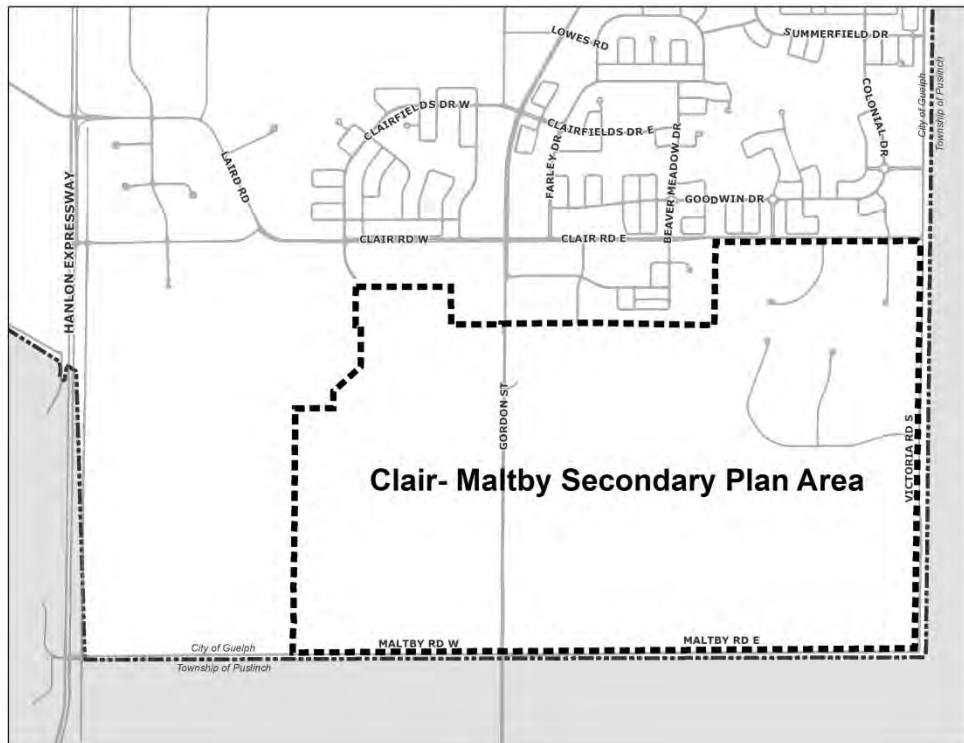
To participate in the workshop exercise, registration by **Tuesday, April 25** is suggested. You can register at [guelph.ca/clair-maltby](http://guelph.ca/clair-maltby). If you require assistance with registration please call Planning Services at 519-837-5615 extension 2459.

## Unable to attend?

Email your comments to [clair-maltby@guelph.ca](mailto:clair-maltby@guelph.ca)

## The Project

The City of Guelph has initiated the Clair-Maltby Secondary Plan and Master Environmental Servicing Plan (MESP) Study to plan the last unplanned greenfield area of the City. The study area is approximately 520 hectares and is generally located between Clair Road and Maltby Road in the southeast corner of Guelph.



Through the secondary plan, a vision for a complete and healthy community will be created including:

- an integrated mix of land uses (residential, employment and commercial);
- appropriate building heights, densities and built form to contribute to a vibrant community of neighbourhoods;
- the preservation of environmental features and functions;
- parks and open space;
- an integrated transportation network to promote transit, walking and cycling; and
- servicing and infrastructure (e.g. watermains, sanitary sewers, stormwater management).

## The Process

The MESP will be carried out in accordance with the Master Plan (Approach #1) requirements of the Municipal Engineers Association Class Environmental Assessment (EA) process (Section A.2.7 of the Class EA document- October 2000, as amended in 2007 and 2011) which is an approved process under the Ontario Environmental Assessment Act.

This process will include Phases 1 and 2 of the Class EA process to identify a series of related projects/studies necessary to support urban development of this area. In addition this study will be integrated with the Planning Act as outlined in Section A.2.9 of the Municipal Class EA process.

The MESP will provide direction on municipal water/wastewater servicing, stormwater management and mobility.

**For more information**

[guelph.ca/clair-maltby](http://guelph.ca/clair-maltby)

Please contact one of our project team members if you have questions, comments, would like to be added to the project mailing list, or if you require this document to be provided in an alternative format as per the *Accessibility for Ontarians with Disabilities Act (2005)*.

**Stacey Laughlin, MCIP, RPP**

Senior Policy Planner  
Planning, Urban Design and Building Services  
519-822-1260 x 2327  
[stacey.laughlin@guelph.ca](mailto:stacey.laughlin@guelph.ca)

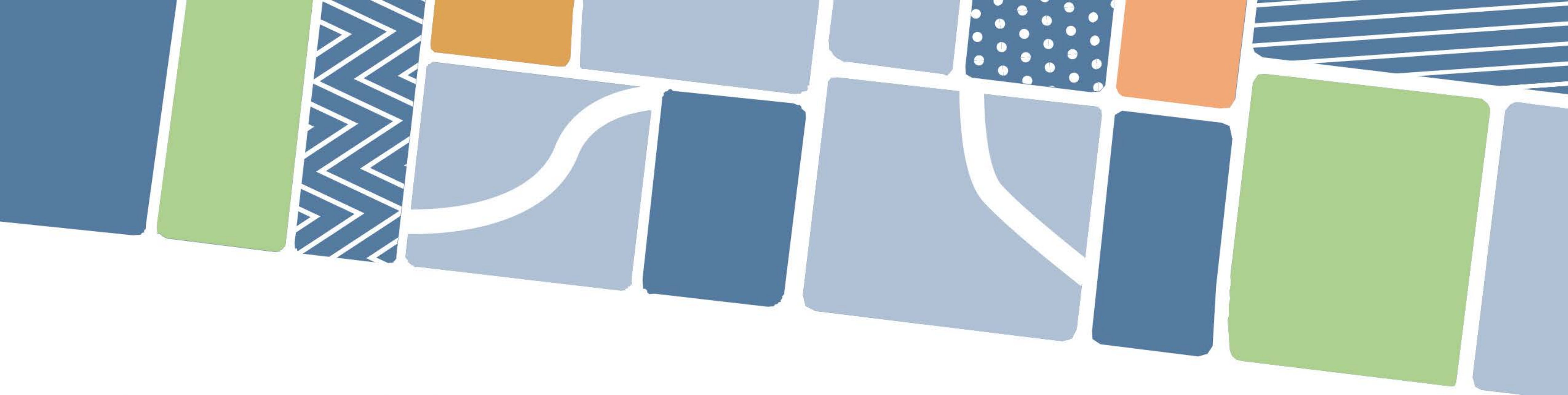
**Arun Hindupur, M.Sc., P.Eng.**

Infrastructure Planning Engineer  
Engineering and Capital Infrastructure Services  
519-822-1260 x2282  
[arun.hindupur@guelph.ca](mailto:arun.hindupur@guelph.ca)

Information will be collected in accordance with the *Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

(This notice first issued April 6, 2017)





# **CLAIR-MALTBY**

## **MASTER ENVIRONMENTAL SERVICING PLAN (MESP)**

**&**

## **COMPREHENSIVE ENVIRONMENTAL IMPACT STUDY (CEIS)**

# 1 PROBLEM/OPPORTUNITY STATEMENT

## Problem

- The City of Guelph is undertaking the Clair-Maltby Secondary Plan and Master Environmental Servicing Plan (MESP) Study to comprehensively plan the last unplanned greenfield area within the city. The current study area does not have full municipal services to support future development.

## Opportunity

- The Clair-Maltby Secondary Plan and the Master Environmental Servicing Plan (MESP) are being developed concurrently to provide an integrated planning approach to establish a plan for future urban development and full municipal services within this area.



# 2 GOVERNING PROVINCIAL LEGISLATION

## **Municipal Class Environmental Assessment Process (October 2000), as amended in 2007 & 2011)**

- The Municipal Class Environmental Assessment (Class EA) process categorizes proposed municipal projects according to their anticipated environmental impact, and calls for increasingly stringent review requirements as the magnitude of the anticipated environmental impact increases.
- The Class EA defines a Master Plan as:  
“A Long Range Plan, integrating infrastructure requirements for present and future land use with environmental planning principles. The Plan examines the whole infrastructure system in order to outline a framework for planning subsequent projects and/or developments (Class EA, October 2000, as amended in 2007 & 2011)”.

## **Planning Act**

- The Planning Act sets out the ground rules for land use planning in Ontario and describes how land uses may be controlled, and who may control them.

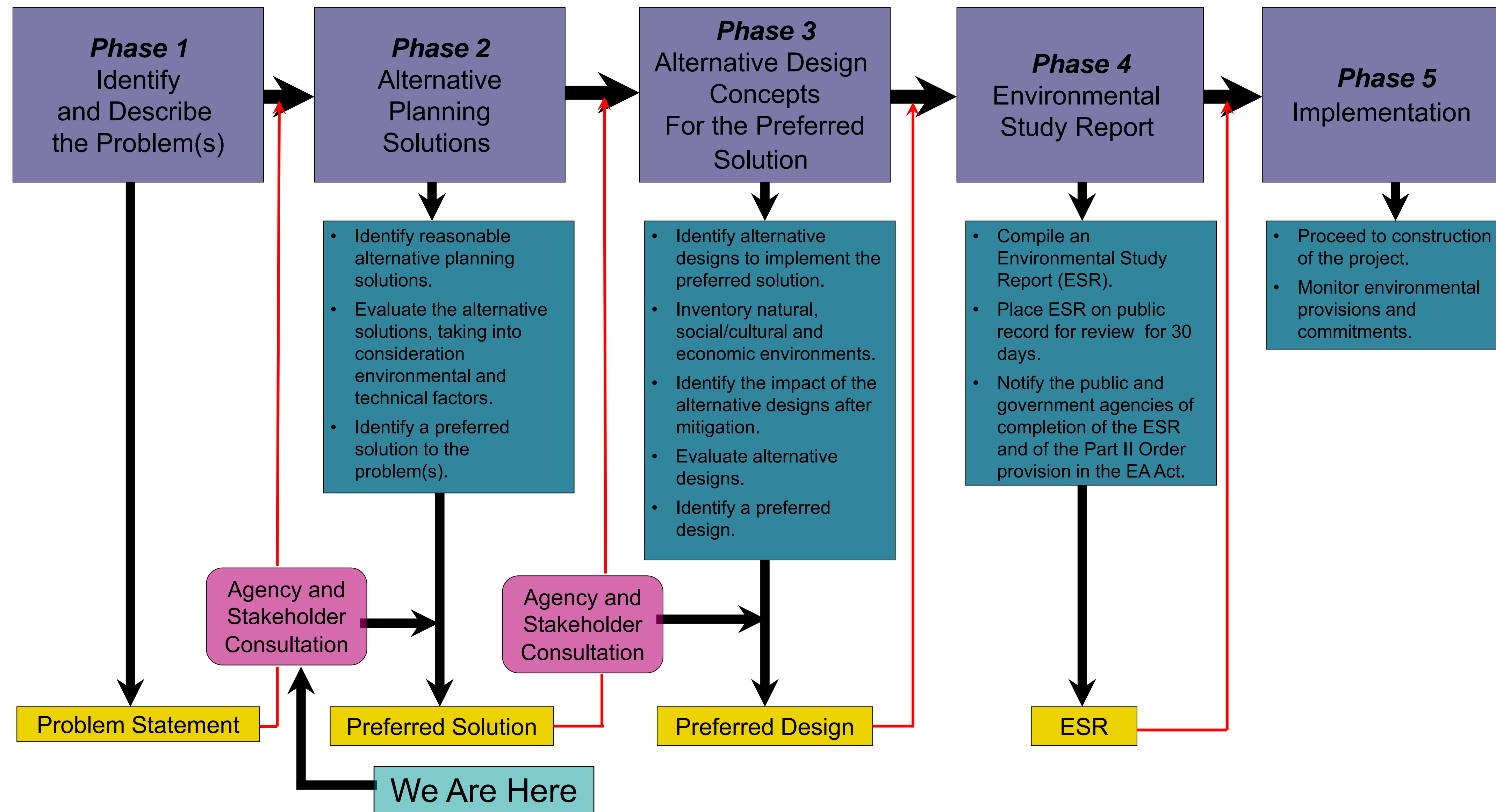
## **Provincial Policy Statement**

- The Provincial Policy Statement contains clear, overall policy directions on matters of provincial interest related to land use planning and development.
- It promotes a policy-led planning system that recognizes there are complex inter-relationships among and between environmental, economic and social factors in land use planning.

The Master Environmental Servicing Plan (MESP) being prepared for the Clair-Maltby Community constitutes a municipal services plan (stormwater, wastewater, water and transportation) along with environmental management to support future urbanization.

# 3

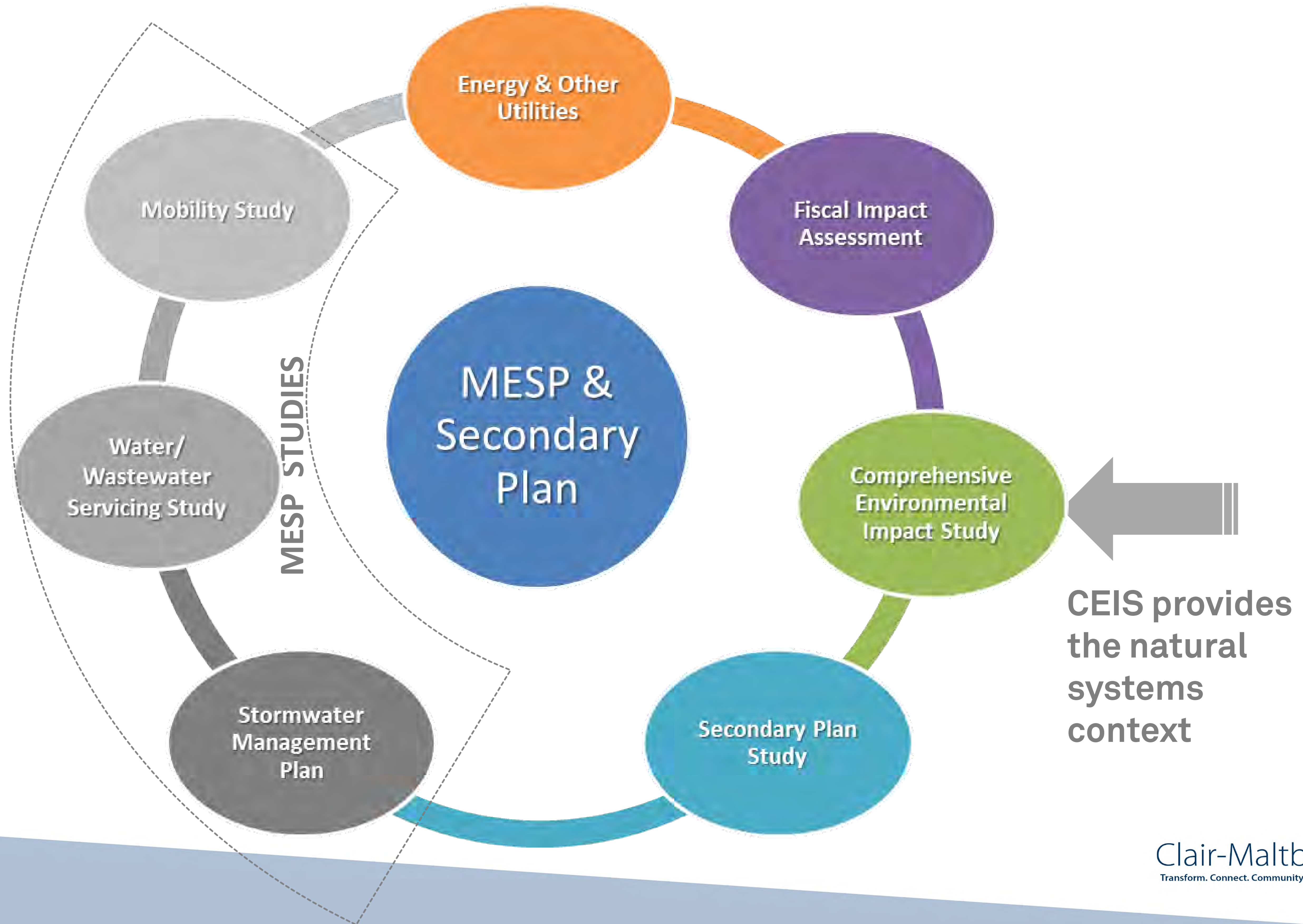
# MUNICIPAL CLASS EA PROCESS





# 4

## CLAIR-MALTBY SECONDARY PLAN PROCESS DIAGRAM



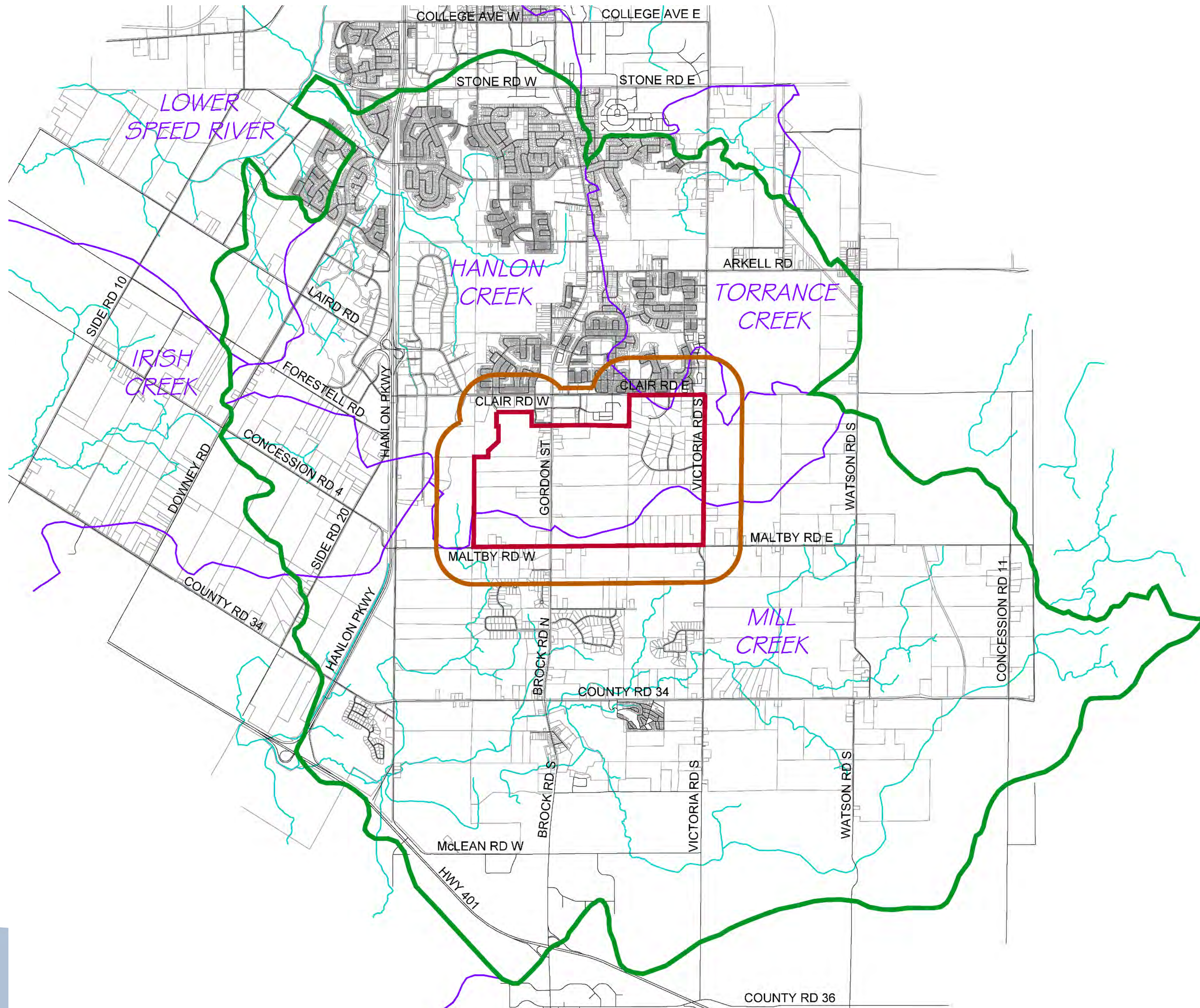
# 5 PURPOSE OF COMPREHENSIVE ENVIRONMENTAL IMPACT STUDY (CEIS)

- Technical basis for informing:
  - Potential land uses
  - Servicing and mobility infrastructure
  - Community Structure options
  - Preferred Community Structure Alternative
- Technical basis for Management Plan(s)
- Technical basis for Implementation and Monitoring Plan(s)
- Policies specific to the Secondary Plan Area



# 6

# STUDY AREAS



Secondary Plan Area (SPA)

Primary Study Area (PSA)

Secondary Study Area (SSA)



# 7 COMPREHENSIVE ENVIRONMENTAL IMPACT STUDY (CEIS)

## Key CEIS Tasks

- Verification / refinement / assessment of environmental features and functions
- Assessment of the role of water in the study areas to support natural systems (groundwater/surface water)
- Constraints and opportunities definition
- Assessment of impacts associated with different community structure options
- Establishment of integrated management strategies

## Approach

- Review of background information
- Multi-year monitoring and field studies
- Modelling of surface and groundwater
- Refinement of Natural Heritage System
- Agency and stakeholder consultation



# 8 SURFACE WATER

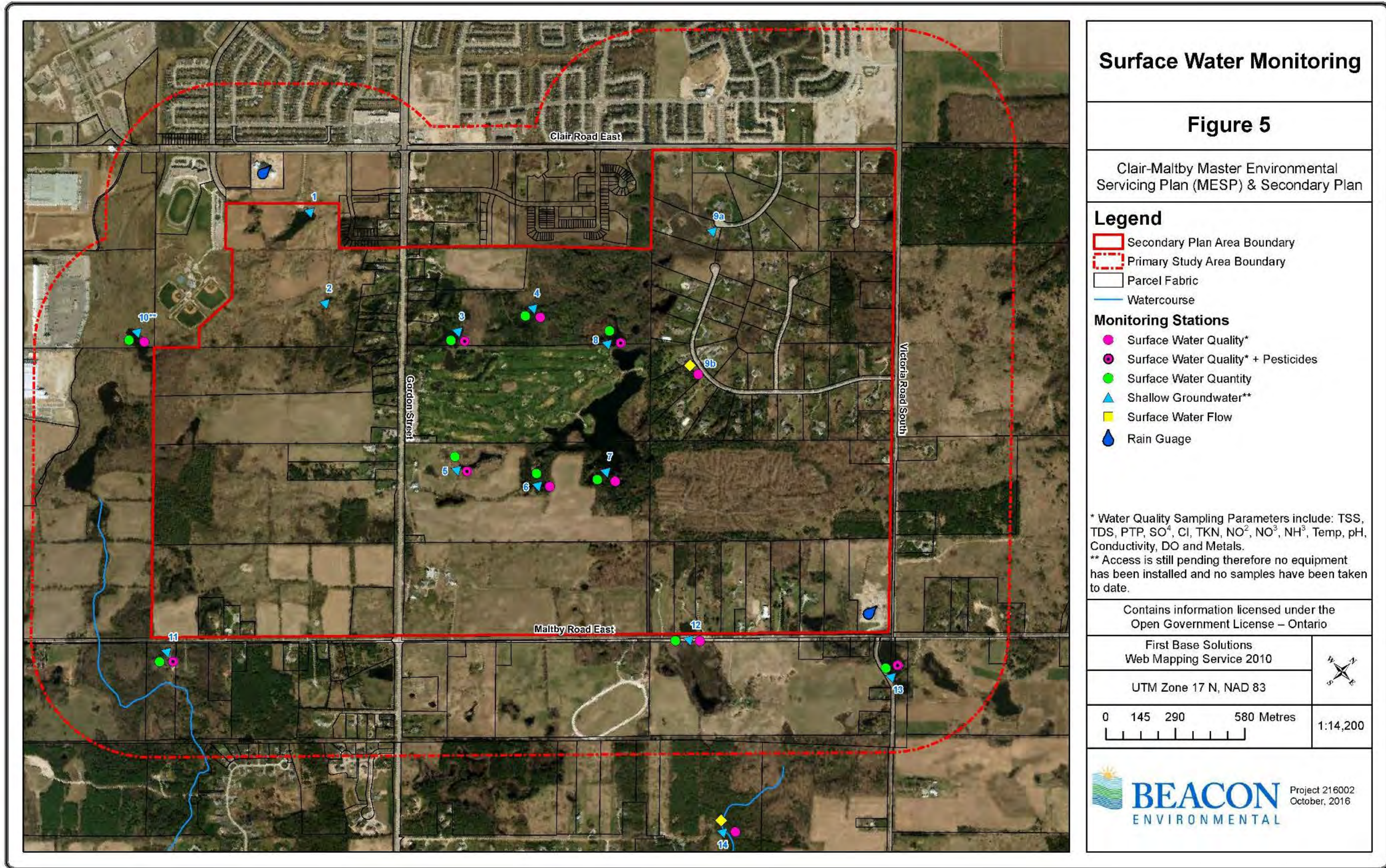


## Objective / Purpose

- Need to define runoff characteristics (peak and volume) in the study area
  - Headwaters of Mill, Hanlon and Torrance Creeks
- Assist in the definition of the role of water in supporting natural systems functionality
- Fundamental component of Stormwater Management Plan development



# 9 SURFACE WATER MONITORING





# 10 GROUNDWATER

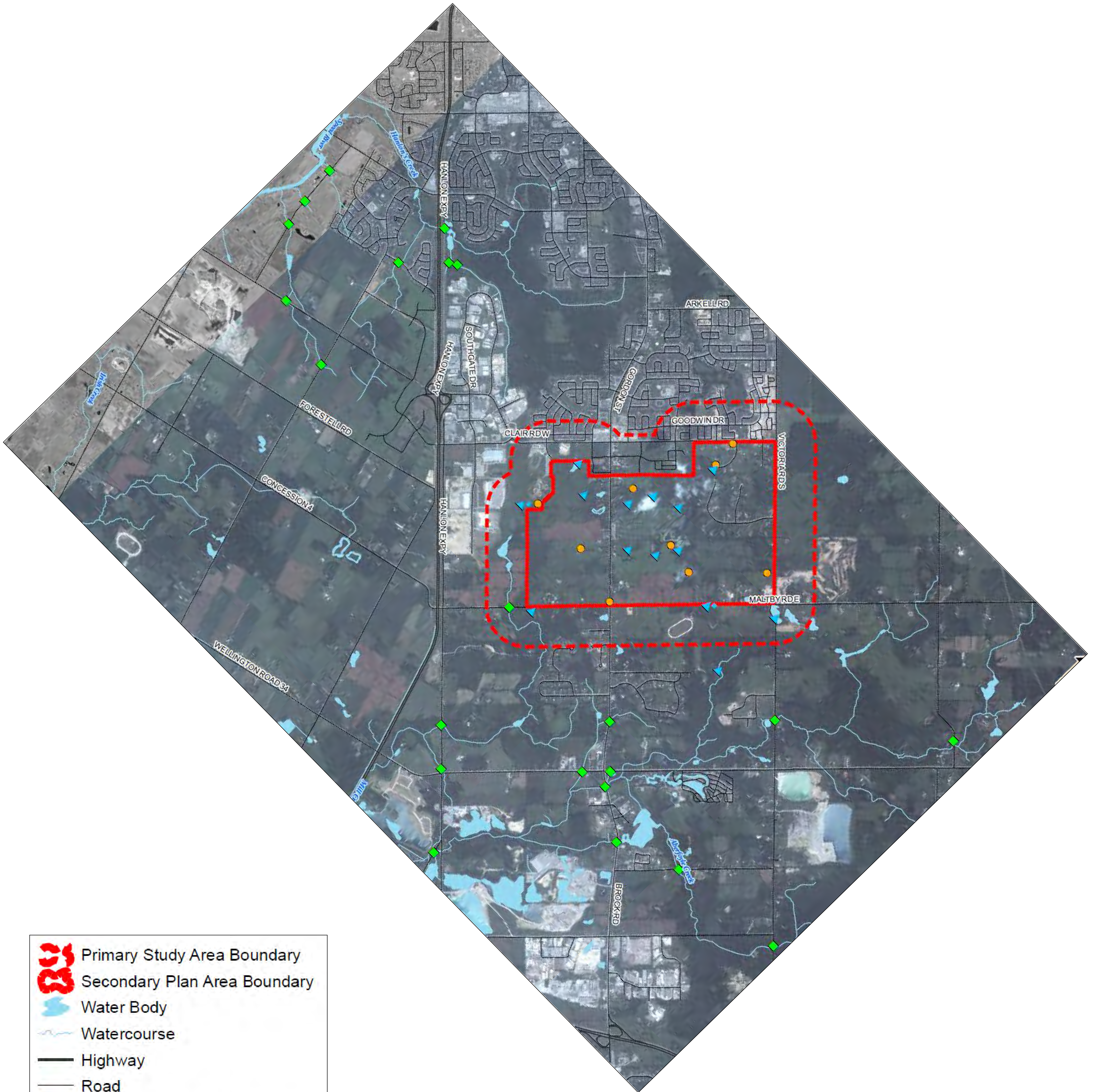
## Objective / Purpose











- Hydrogeological characterization to establish baseline conditions within the SPA and PSA
- Field program will contribute to water balance, help identify constraints and opportunities, and establish ongoing monitoring locations
- Integrated modelling will quantify components of the existing and future conditions water budgets, assess impacts to surface and groundwater, and assess alternative management options



# 11

# GROUNDWATER MONITORING

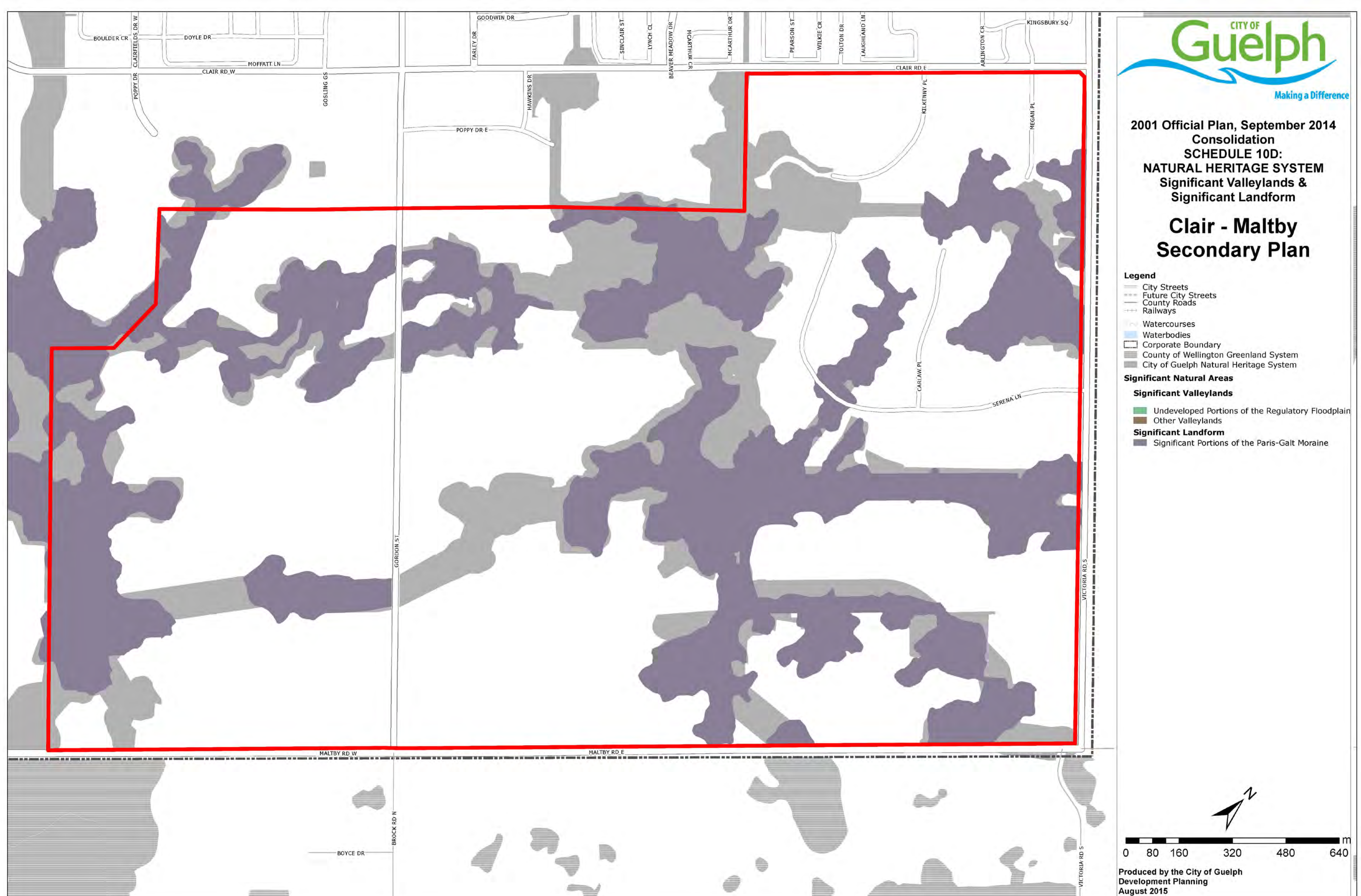


-  Primary Study Area Boundary
-  Secondary Plan Area Boundary
-  Water Body
-  Watercourse
-  Highway
-  Road
-  Mini Piezometer Installed
-  Mini Piezometer Proposed
-  Spotflow Station
-  Monitoring Well Nest



# 12 SIGNIFICANT LANDFORM

- Secondary Plan Area falls within Paris Moraine
- MNRF has identified a portion of this landform in an Earth Science ANSI just east of the Secondary Plan Area
- Significant Landform already defined and identified as part of the City's NHS
- CEIS work to focus on approaches for integration of this landform into the Secondary Plan through design and policy





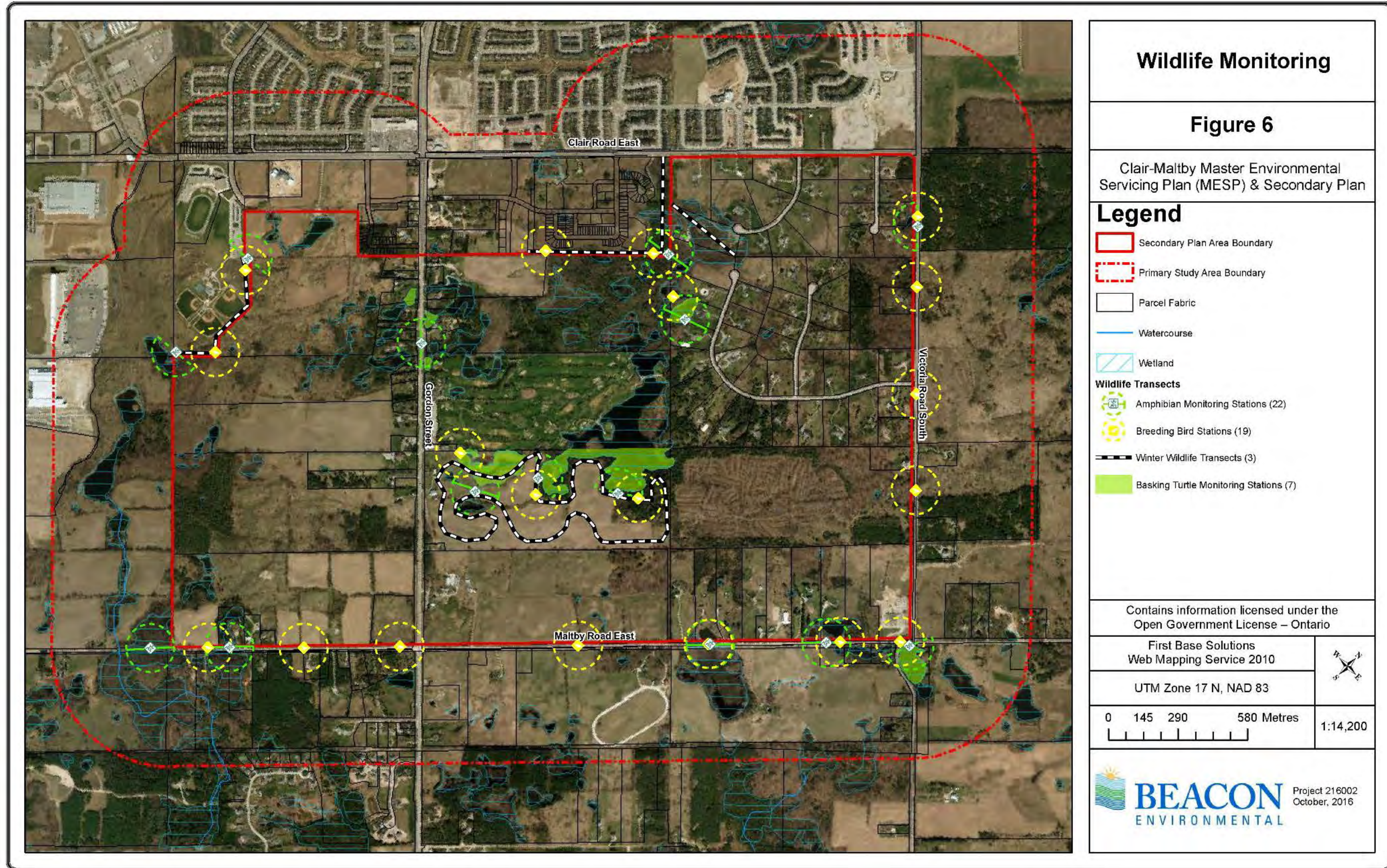
# 13 NATURAL SYSTEMS

## Objective / Purpose

- Confirm and refine the Natural Heritage System (NHS)
- Update wetland mapping in consultation with GRCA and MNRF
- Develop a better understanding of how surface and groundwater support Natural Heritage System functions



# WILDLIFE MONITORING





# 15 STORMWATER MANAGEMENT PLAN

- Fundamental component of the MESP studies
- Inherently linked to the CEIS:
  - Surface water modelling / monitoring
  - Ground water modelling / monitoring
- Hydrologic Model (PCSWMM) and Hydraulic Model (HEC-RAS) will be used to set targets and criteria for stormwater management (flooding and erosion) including water balance from the Groundwater Model (MIKE-SHE)



# 16 STORMWATER MANAGEMENT PLAN

- Three (3) Community Structure Alternatives will be analysed to determine impacts
  - Quantity (flooding and erosion)
  - Quality
  - Water Budget
- Assessment of Preferred Stormwater Management System
  - Traditional (end-of-pipe)
  - Innovative (LID BMPs)
  - Climate Change Influences
- Functional Planning of Stormwater Management System
  - Functional grading
  - Outlets
  - Major / Minor flow paths
  - Stormwater management practices



# 17 WATER INFRASTRUCTURE

## Water Supply

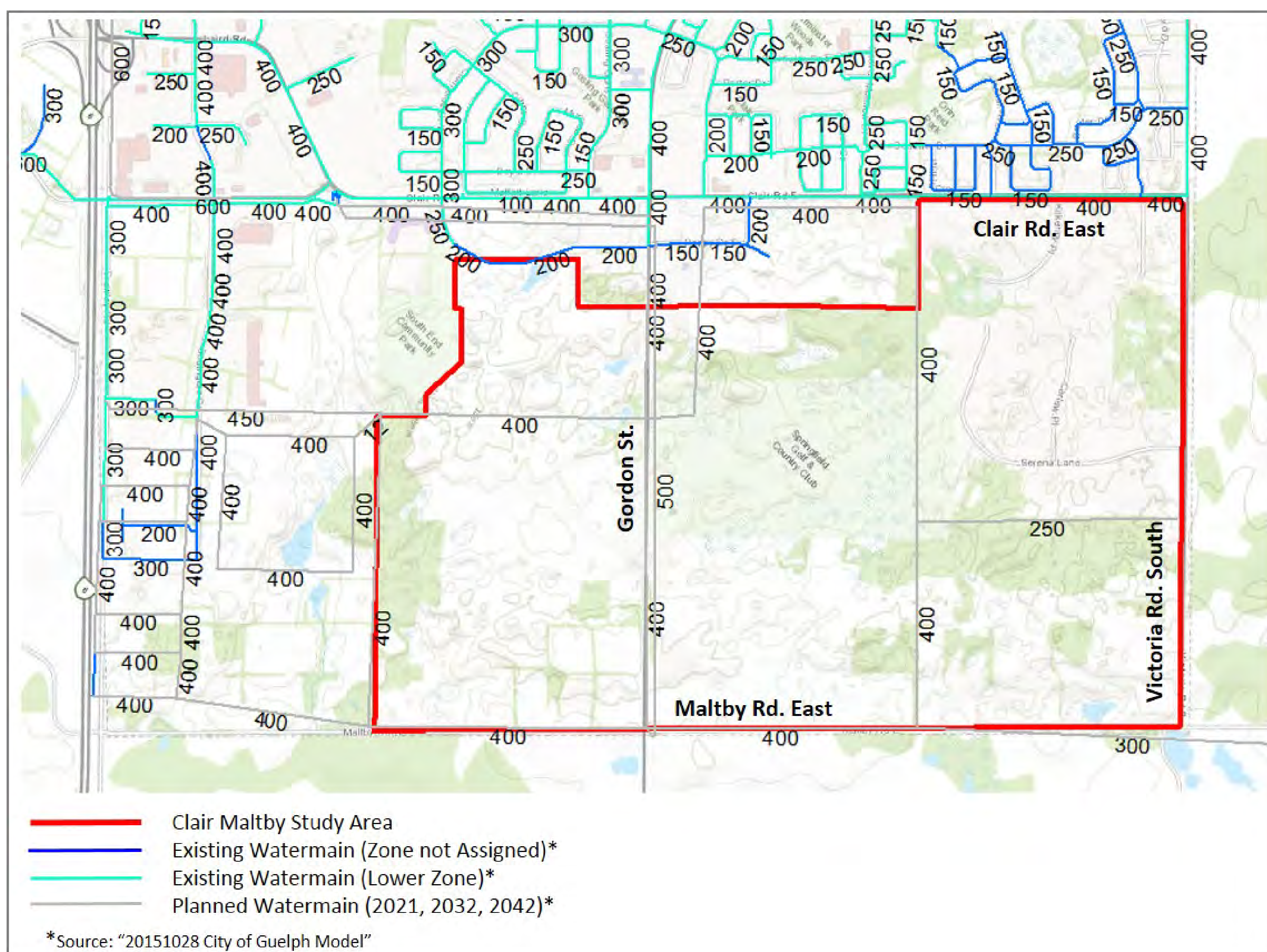
Guelph has completed a Water Supply Master Plan to address the needs related to future growth to the year 2038. Water supply alternatives to accommodate future growth within the City will primarily be achieved through the following measures:

- Conservation & Demand Management
- Groundwater: Existing Municipal Off-line Wells
- Groundwater: Municipal Test Wells
- Groundwater: New Well inside City

## Water Distribution

There is currently no water distribution network in the Clair-Maltby Secondary Plan Area. These lands will be serviced via a recently established pressure zone called Zone 3.

Zone 3 is now functional since the commissioning of the Clair Road Booster Pumping Station (BPS). Additional components such as a storage facility (i.e. elevated tank or underground reservoir) and watermains will be required as the Clair-Maltby lands develop to complete the water distribution network for these lands.



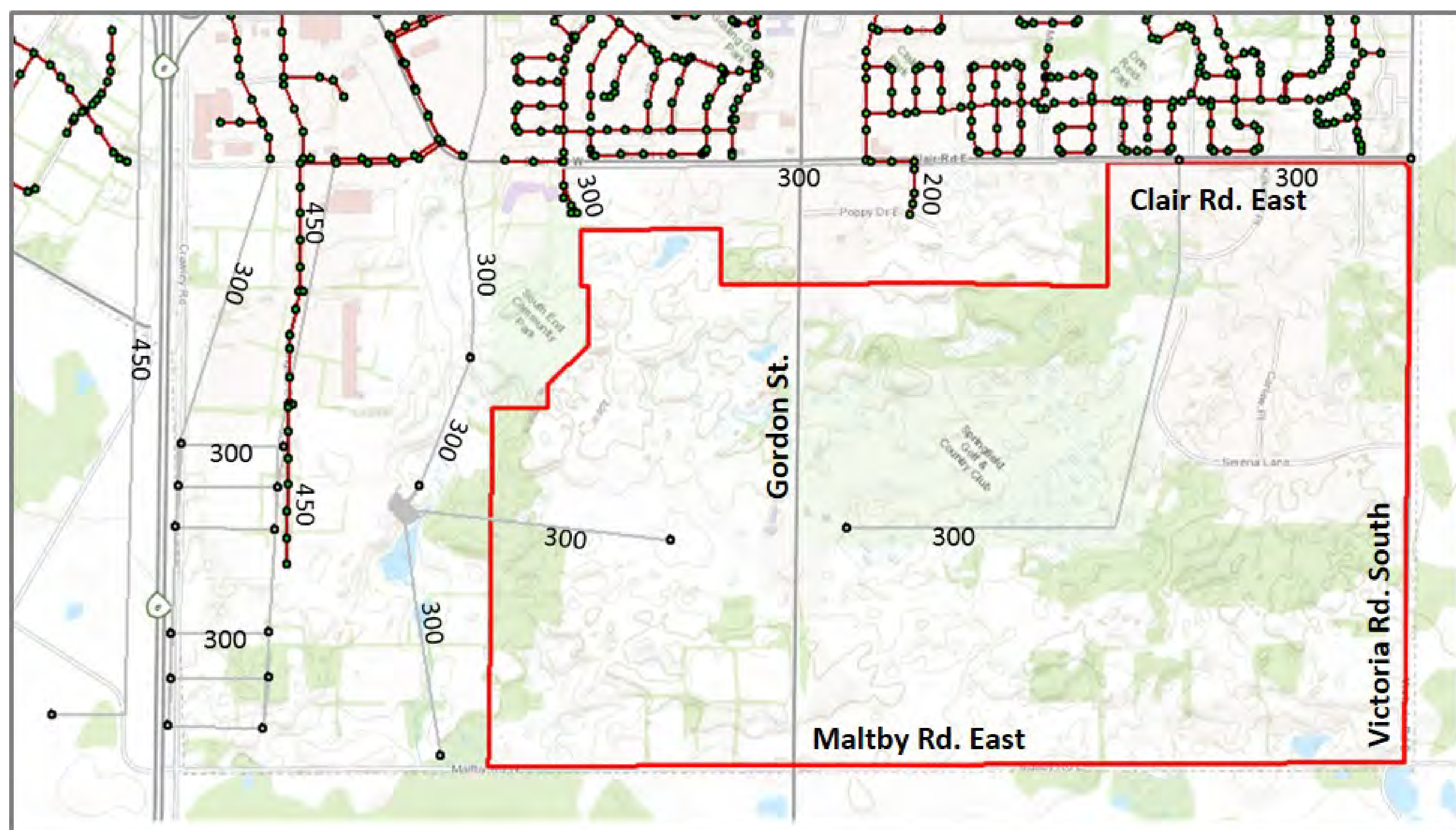


# 18

# WASTEWATER INFRASTRUCTURE

The Clair-Maltby Lands will be serviced by a trunk sewer system that is directed to the Guelph Wastewater Treatment Plant (WWTP). The lands are high such that gravity service to the WWTP is likely feasible through the existing trunk system north of Clair Road.

A review of the capacity of the trunk system to the WWTP is required to verify the available conveyance capacity.



- Clair Maltby Study Area
- Existing Wastewater\*
- Planned Wastewater (2019, 2031..)\*

\*Source: "2013-11-21-Guelph\_Sanitary Model-60298422"



## Purpose

Identify a transportation network and design standards to ensure that the network meets the needs of all modes of transportation including walking, cycling, transit and vehicular traffic

## Context

The Official Plan provides direction for the establishment of an integrated transportation system that:

- Places priority on walking, biking and transit
- Connects to the existing road system and provides linkages between existing and future developments
- Creates a modified grid system



## Opportunities and Constraints

- Existing development pattern and limited opportunities for connections due to the extensive Natural Heritage System (NHS) and topography will make it challenging to fully achieve the City's objectives
- All opportunities to promote connectivity will be carefully assessed to ensure the community is connected, easy to navigate and facilitates walking, biking and transit





# Clair-Maltby Public Information Centre & Visioning Session

April 27, 2017



# Purpose

- Project overview
- Public and stakeholder input into vision and guiding principles



# Presentation Outline

- Introductions
- Background/Study Context
- Next Steps
- Visioning Approach



# Background/Context

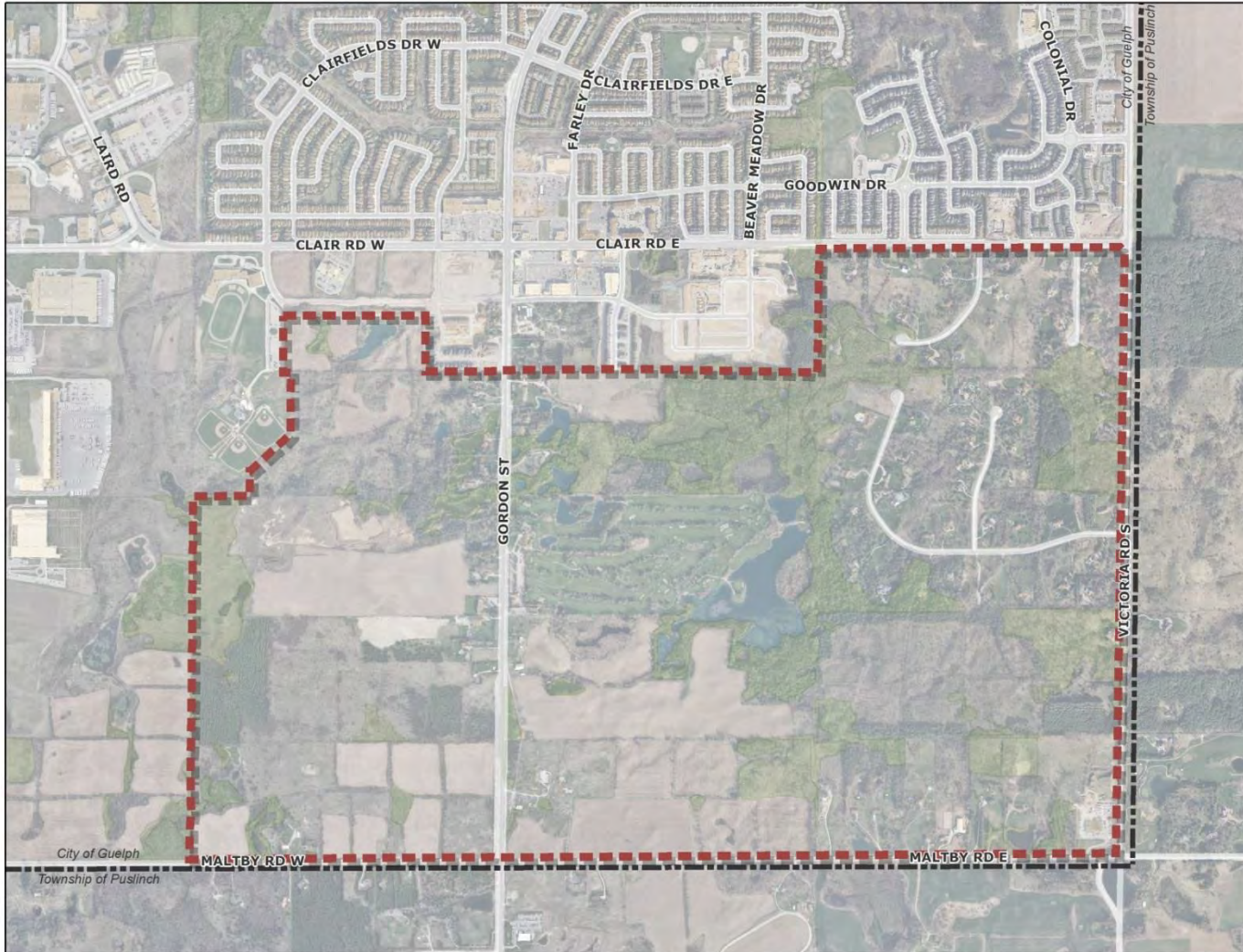


# Background

- The Clair-Maltby Secondary Plan (CMSP) and Master Environmental Servicing Plan (MESP) process provides an integrated approach to advance the development of the CMSP Area.
- The approach integrates land use, environment, transportation and servicing studies/plans to guide the Secondary Plan.

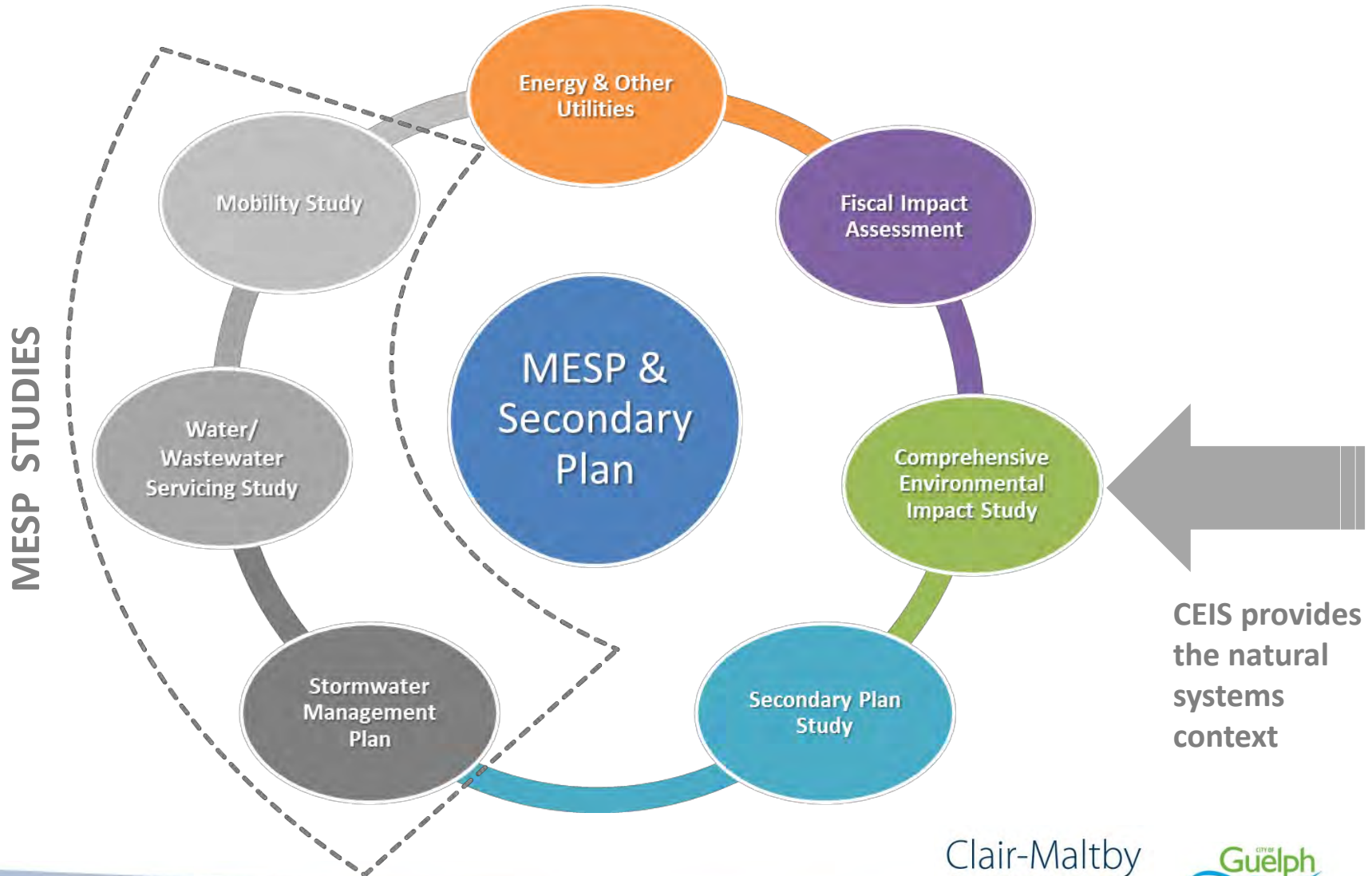


# Study Area



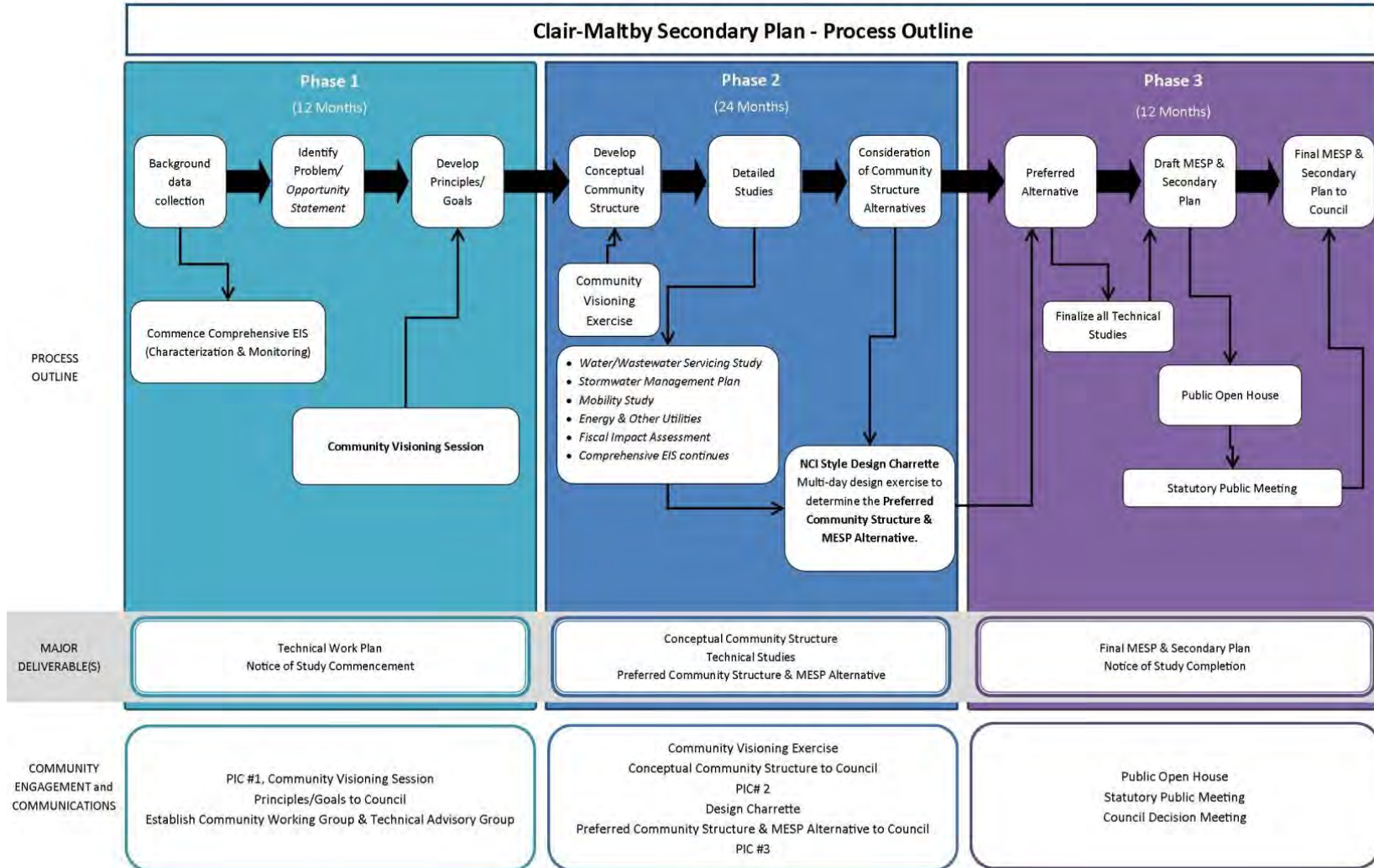


# Study Components





# Overview of Study Process





# Technical Study Work Plan Context

- Preliminary Work Plans were submitted as part of the proposal for mobility, servicing, stormwater management, energy and Comprehensive Environmental Impact Study (CEIS).
- The Consultant Team is updating and refining the Work Plans based on:
  - Review of background information;
  - Field reconnaissance;
  - Consultation with stakeholders.



# Purpose of Comprehensive Environmental Impact Study (CEIS)

- Technical basis for informing:
  - Servicing and transportation, including trails;
  - Conceptual Community Structure Options; and,
  - Preferred Community Structure Alternative.
- Relates to
  - Surface water (Hydrology/Hydraulics);
  - Groundwater (Hydrogeology);
  - Landform (Geology); and,
  - Natural Heritage (Terrestrial/Aquatic).

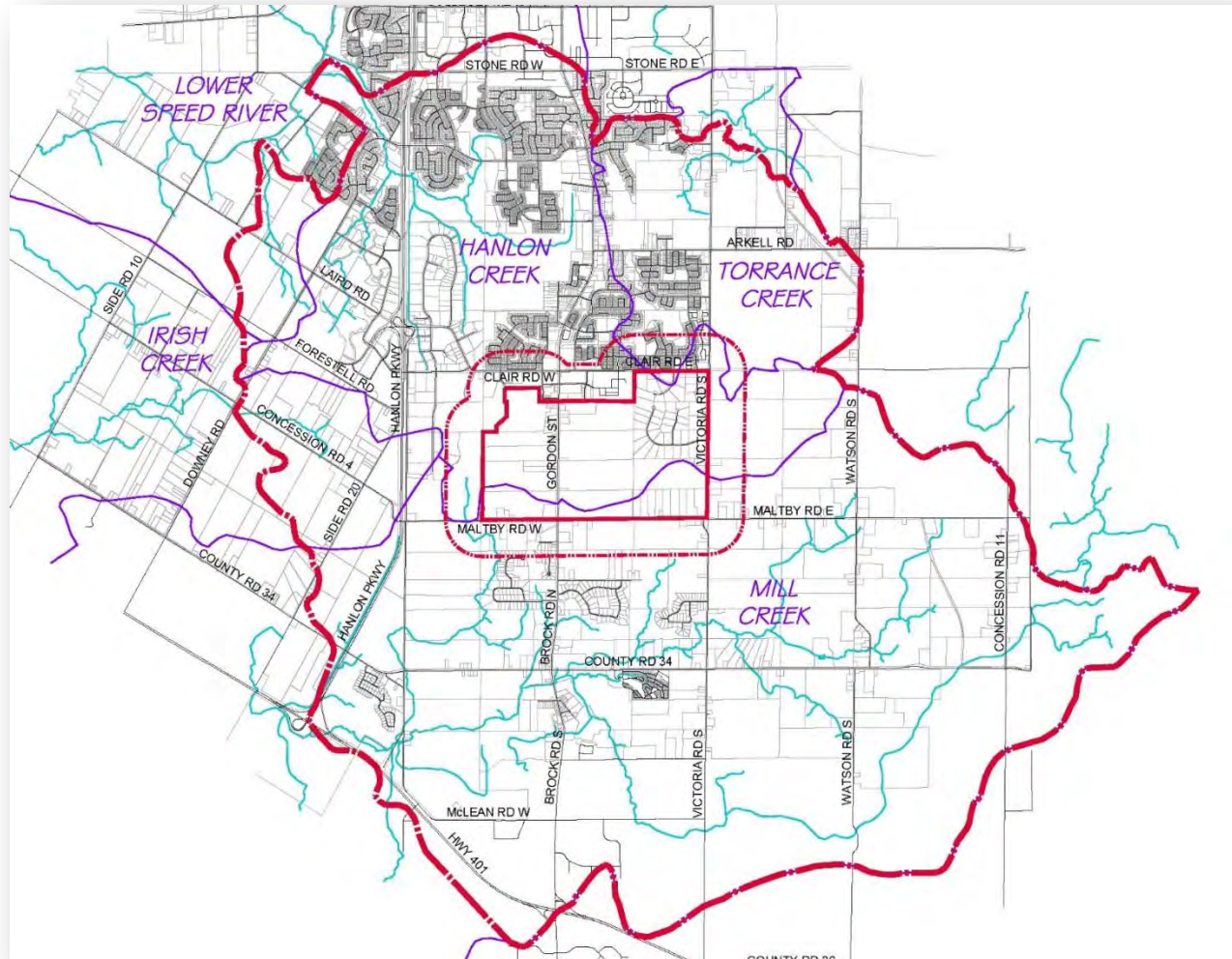


# CEIS Study Areas

Secondary  
Plan Area  
(SPA)

Primary  
Study Area  
(PSA)

Secondary  
Study Area  
(SSA)





# Status/Process Update

- Water Monitoring (Groundwater and Surface Water) associated with CEIS currently underway – 3 years required (2016, 2017, 2018);
- Winter wildlife surveys have been carried out;
- Joint RSAC/EAC meeting (November 16, 2016) to discuss work plan for CEIS;
- MNRF/GRCA meeting (January 11, 2017) to discuss work plan for CEIS;
- Technical Advisory Group established and first meeting held on February 7, 2017 to discuss CEIS technical work plan – other disciplines being discussed throughout the project; and,
- CEIS Work Plan to be finalized based on all comments received (April 2017).



# Secondary Plan Status

Preliminary background analysis of existing conditions will be complete by end of April 2017 including:

- Planning Policy Framework;
- Cultural Heritage Resources;
- Archaeological Resources;
- Energy and Utilities;
- Mobility;
- Stormwater Management;
- Water and Wastewater Servicing; and,
- Demographic and Economic Trends.



# Secondary Plan: Policy Framework

Provincial Policy Statement (PPS) and Growth Plan provide direction on the creation of efficient land use and development patterns with the intent of:

- Creating strong, livable and healthy communities;
- Protecting the environment and public health and safety; and,
- Facilitating economic growth.

The Growth Plan provides specific direction related to growth management (e.g. greenfield residential/jobs target).



# Secondary Plan: Policy Framework

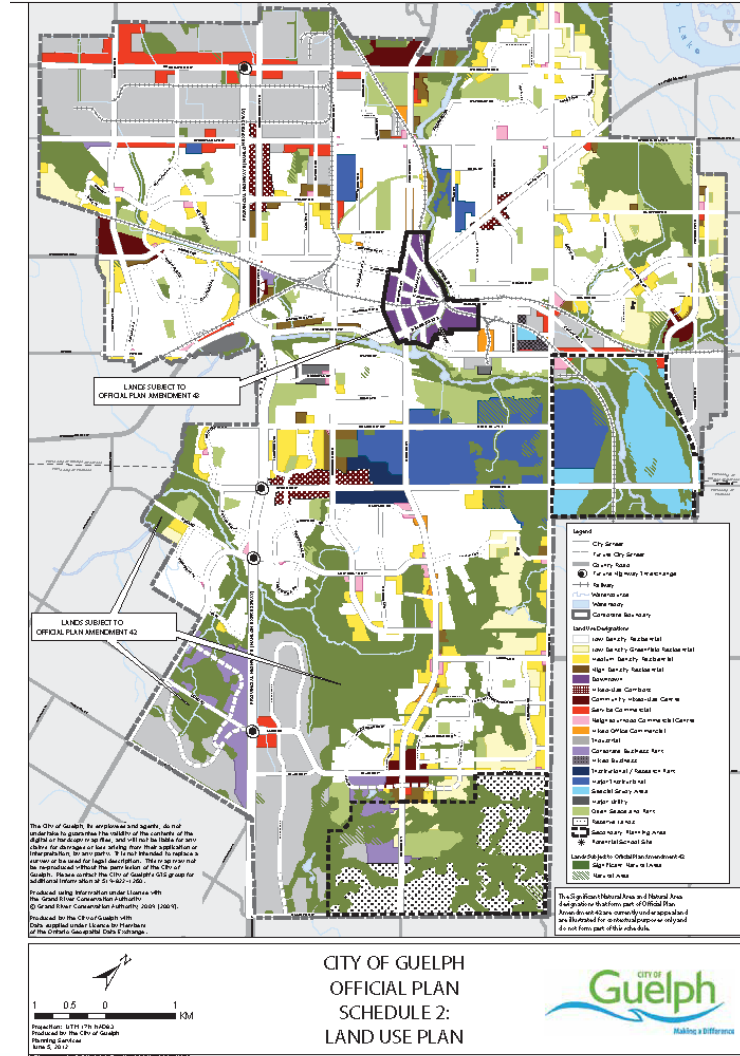
The City's Official Plan builds on Provincial policy. Key themes include:

- Complete communities;
- Natural Heritage System;
- Transportation including transit, cycling and walking;
- Climate change;
- Phasing of development and services;
- Urban design;
- Range of housing types and densities;
- Cultural heritage resources; and,
- Sustainable neighbourhoods.



# Secondary Plan: Policy Framework

## OFFICIAL PLAN LAND USE SCHEDULE



Clair-Maltby  
Transform. Connect. Community.



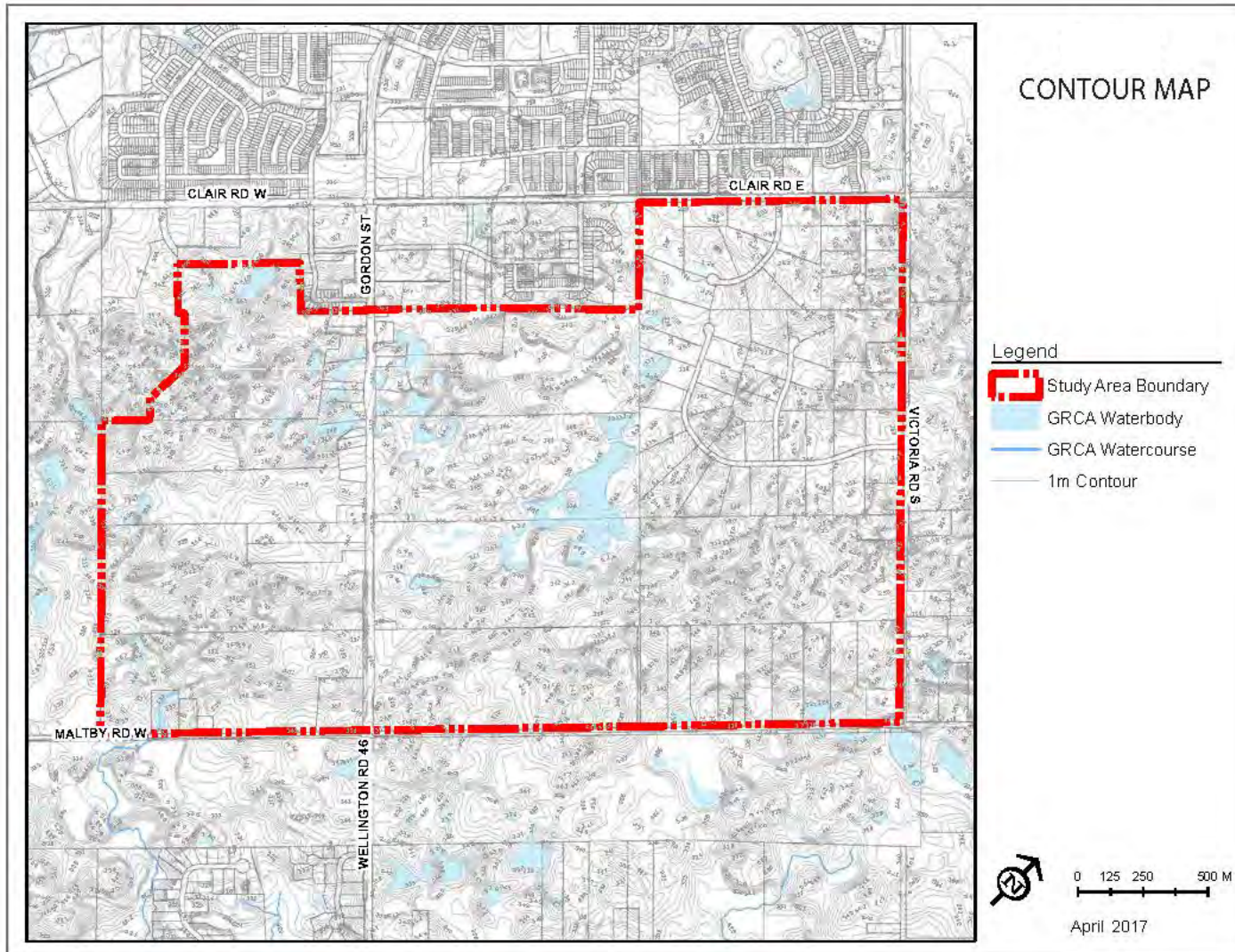


# Secondary Plan: Current Influences

- Hummocky topography and drainage issues;
- Balancing the protection of the natural heritage system with accommodating urban development;
- Existing land uses;
- Cultural heritage resources;
- Potential for presence of archaeological resources;
- Challenges related to the achievement of a connected transportation system which supports all transportation modes; and,
- Need to extend services into the area.

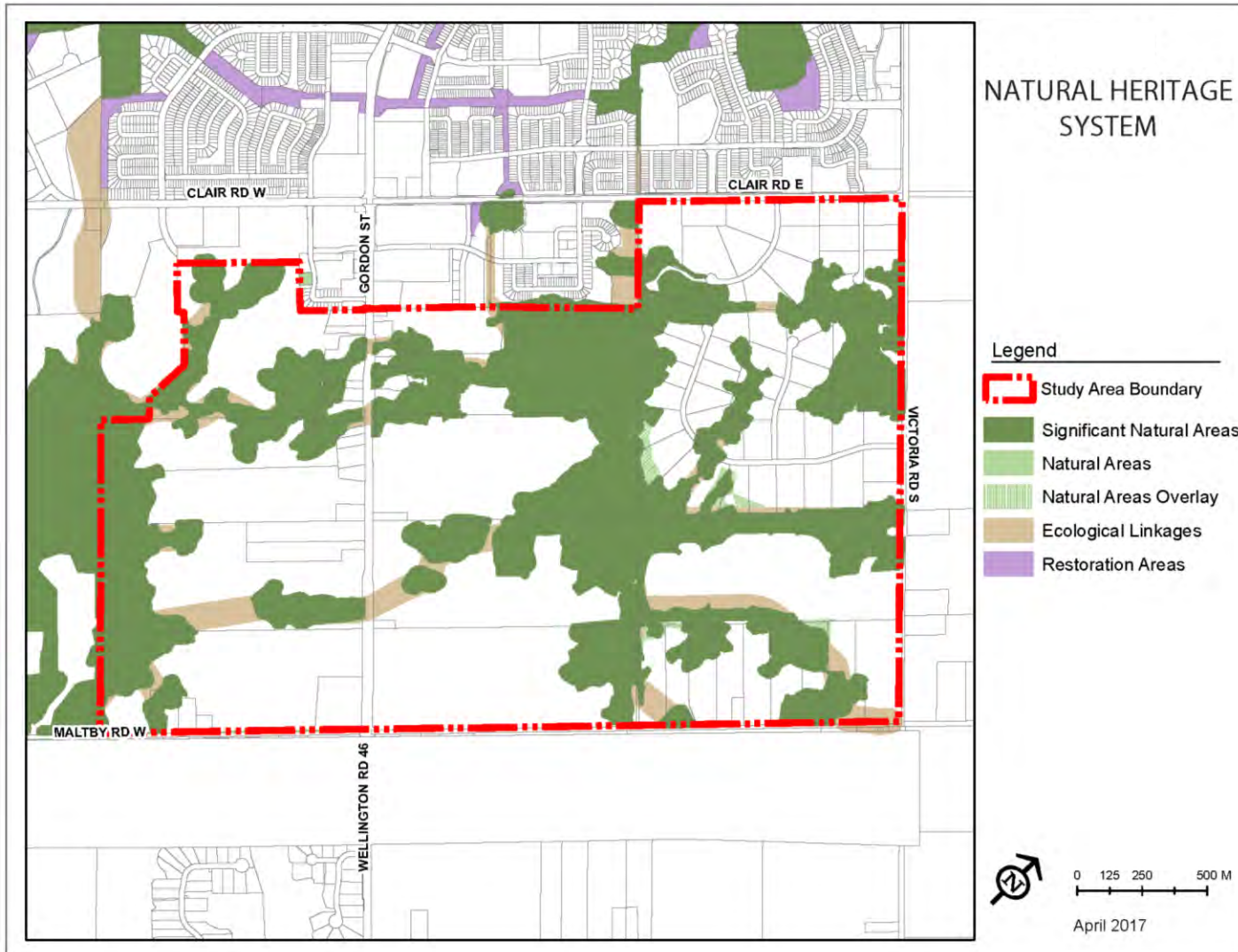


# Secondary Plan: Current Influences



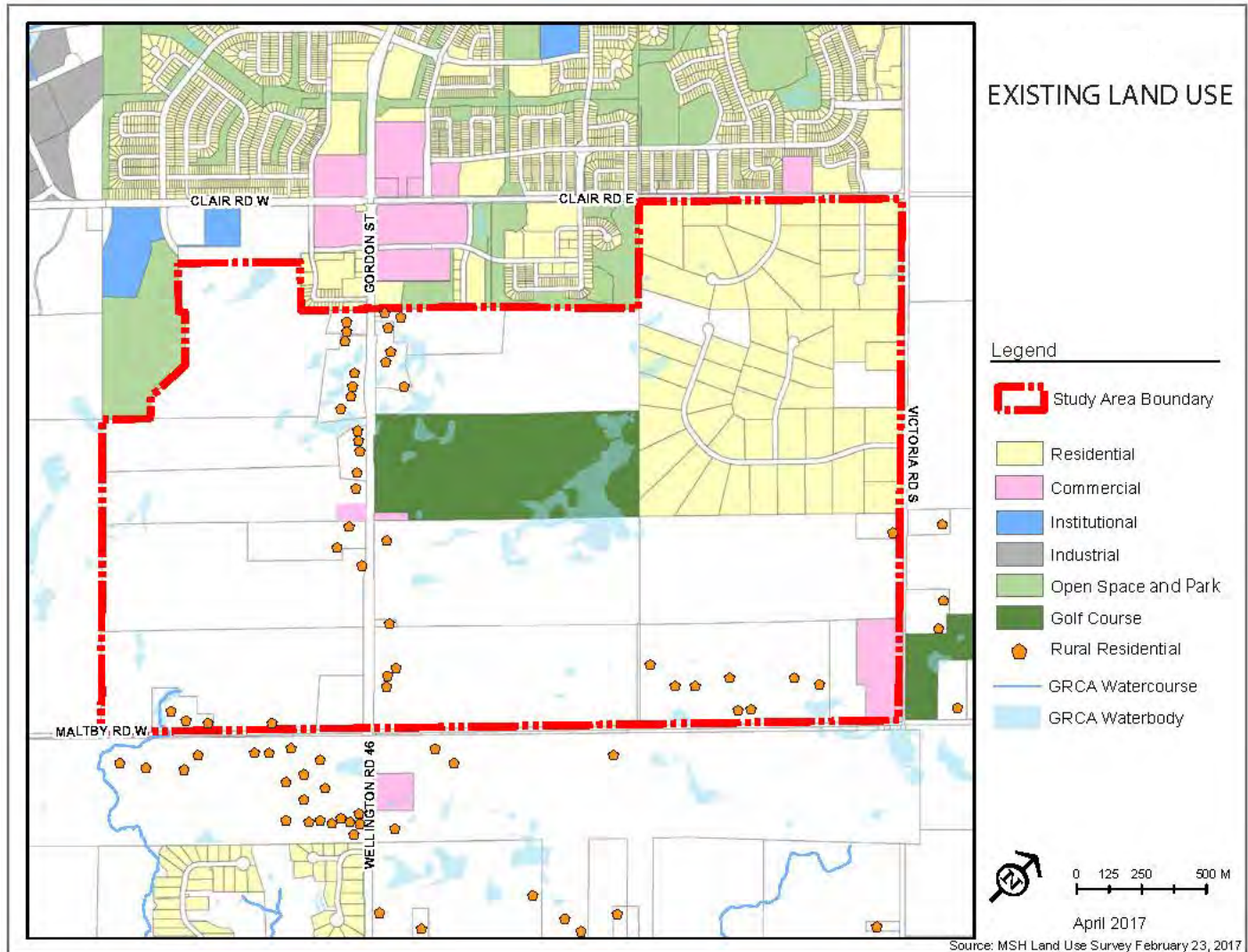


# Secondary Plan: Current Influences



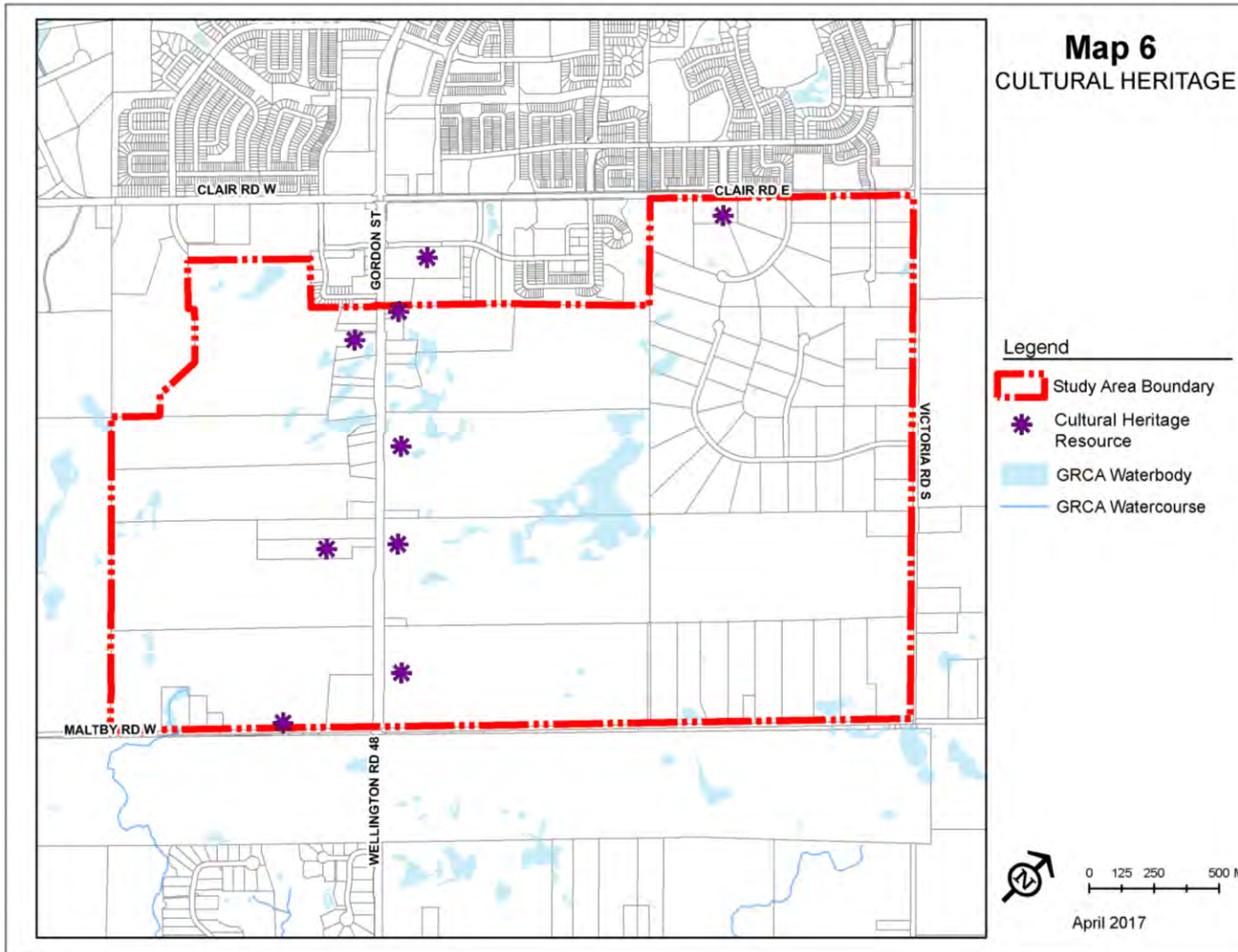


# Secondary Plan: Current Influences





# Secondary Plan: Current Influences





# Secondary Plan: Other Considerations

Planning will take into account:

- Vision and Guiding Principles;
- Demographic, land use and employment trends;
- Conclusions of the various supporting studies including the CEIS as well as the other technical studies and the fiscal impact assessment; and,
- Urban design considerations.



# Next Steps & Anticipated Timing

<b>March/April 2017</b>	Develop and finalize all technical work plans
<b>April 27, 2017</b>	Visioning Workshop/PIC #1 to develop draft vision and guiding principles for the Study
<b>July 2017</b>	Vision/principles to Council for endorsement
<b><u>Tentative Timing</u></b>	
<b>September 2017</b>	Visioning Exercise to develop Conceptual Community Structure
<b>Q4 2017</b>	Conceptual Community Structure to Council for endorsement
<b>March 2018</b>	Design Charrette to determine the Preferred Community Structure Alternative
<b>Q2 2018</b>	Preferred Community Structure Alternative to Council for endorsement



# Visioning Approach



# Guiding Principles - Examples

## Guelph Innovation District Secondary Plan 'Principles'

1. Protect what is Valuable
2. Create Sustainable and Energy Efficient Infrastructure
3. Establish a Multi-modal Pedestrian-focused Mobility System
4. Create an Attractive and Memorable Place
5. Promote a Diversity of Land Uses and Densities
6. Grow Innovative Employment Opportunities

## Downtown Secondary Plan 'Principles'

1. Celebrate What We've Got
2. Set the Scene for Living Well Downtown
3. A Creative Place for Business
4. We Come Together Here
5. Reconnect with the River
6. Make it Easy to Move Around
7. Embody Guelph's Green Ambitions
8. Build Beautifully



# Vision

## Example Vision

### **Downtown Secondary Plan**

Downtown Guelph: a distinct and vital urban centre nestled against the Speed River, comprised of beautiful buildings and public spaces, and surrounded by leafy neighbourhoods, where people live, work, shop, dine, play and celebrate.



# Vision

## Example Vision

### **A Vision for Guelph's Innovation District**

The Guelph Innovation District (GID) is a compact, mixed use community that straddles the Eramosa River in the City's east end. The GID will serve predominately as the home of innovative, sustainable employment uses with an adjacent urban village connecting residential and compatible employment uses. The urban village is meant to be an identifiable, pedestrian oriented space, with street-related built form that supports a mix of medium and high density commercial, residential and employment uses. Important land use connections are also envisioned between the GID, as an innovation centre, the University of Guelph, as a knowledge-based research centre and the Downtown, as the City's civic hub and cultural centre, supporting the emergence of a University-Downtown-GID trinity of innovation spaces.

The GID is at once highly energetic and intimately familiar, because it showcases an entirely new approach to planning, designing, and developing urban places, and at the same time, reflects Guelph's history and celebrates the rich heritage resources of the district, including the stunning river valley, dramatic topography and views, and historic Reformatory Complex.

The GID is attractive, pedestrian-focused and human-scaled. It provides a mix of land uses at transit-supportive densities, offers meaningful places to live, work, shop, play and learn, and supports a wide range of employment and residential land uses. It protects valuable natural and cultural heritage resources while fully integrating them with the new community, features sustainable buildings and infrastructure, and works towards carbon neutrality. It makes needed connections between all modes of transportation, but in a manner that prioritizes pedestrians, cyclists and transit users over drivers, and stitches the GID into the overall fabric of the City. It is exciting and new and feels like it has been part of the City for a long time.



**Transform. Connect. Community.**

**When fully developed the  
Clair-Maltby area  
will be known for...**



# Vision and Guiding Principles

4 Rounds of Conversation – 15 minutes each

- First 3 rounds – Guiding Principles, there are four topics, you can choose up to 3 different ones.
- Last round – Vision, you will remain at the third station to have a conversation about the potential Vision for the Clair-Maltby area



# Guiding Principles Topics

- Sustainability & Servicing
- Mobility
- Natural Heritage Network and Parks System
- Land Use, Urban Design and Cultural Heritage
- Vision Workbooks



# Café Etiquette

- Write down your ideas
- Focus on what matters
- Listen to understand
- Contribute your thinking
- Speak your mind & heart
- Link & connect ideas
- Listen for insights & ask deeper questions
- It's OK to change tables



# World Café Agenda

1. Guiding Principles Round 1 (15 min)
2. Guiding Principles Round 2 (15 min)
3. Guiding Principles Round 3 (15 min – including prioritization of the ideas)
4. Visioning Round (15 min)
5. Report Back (15 min)





**Thank You**





# WELCOME

Thank you for attending tonight's Public Workshop.

Your feedback is important to us and will help in evaluating the Community Structure Alternatives.

- |   |                                       |                |
|---|---------------------------------------|----------------|
| 1 | View Display Boards                   | 6:00 - 7:00 pm |
| 2 | Presentation                          | 7:00 - 7:30pm  |
| 3 | Workshop - Evaluation of Alternatives | 7:30 - 8:30 pm |
| 4 | Report Back & Next Steps              | 8:30 - 9:00 pm |

## Contact Us

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[arun.hindupur@guelph.ca](mailto:arun.hindupur@guelph.ca)

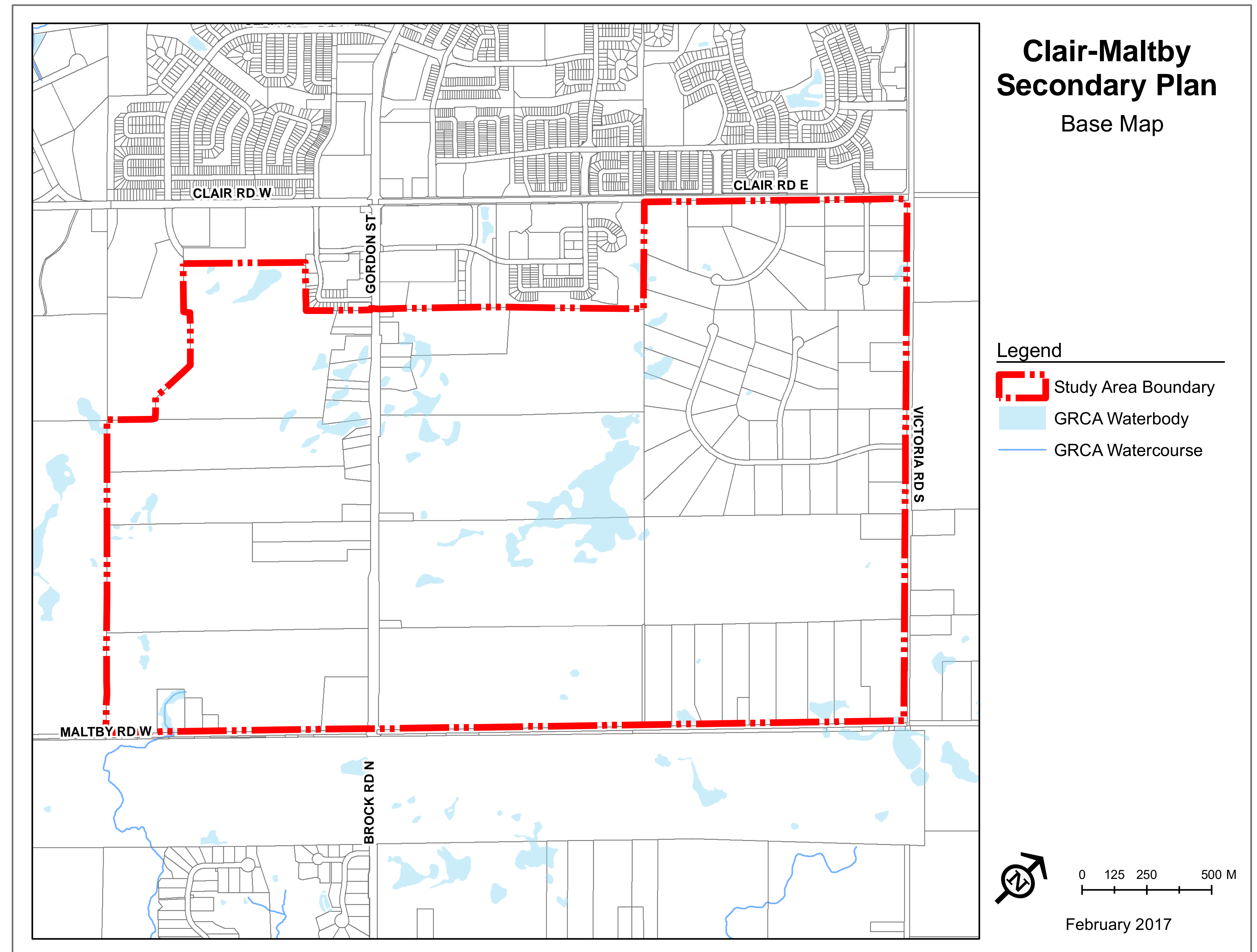


# THE SECONDARY PLAN

The Clair-Maltby Secondary Plan (CMSP) and Master Environmental Servicing Plan (MESP) process provides an integrated approach to advance the development of the CMSP Area.

The approach integrates land use, environment, transportation and servicing studies/plans to guide the Secondary Plan.

The Secondary Plan Area is bounded by Clair Road, Victoria Road South, Maltby Road, and Poppy Drive.





# STUDY PURPOSE AND SCHEDULE

Clair-Maltby is the last unplanned greenfield area within the city. The City of Guelph is undertaking the Clair-Maltby Secondary Plan and Master Environmental Servicing Plan (MESP) Study to establish a plan for future development in the area.

The Clair-Maltby Secondary Plan and the MESP are being developed simultaneously to provide an integrated planning approach within the Study Area. Comments from our community engagement sessions will be analyzed alongside land use, environment, mobility and servicing studies for a comprehensive review of the Clair-Maltby Secondary Plan Area and its needs.

Your input will provide critical guidance for the preferred community structure, which will be developed through the design charrette.





# THE CHARETTE

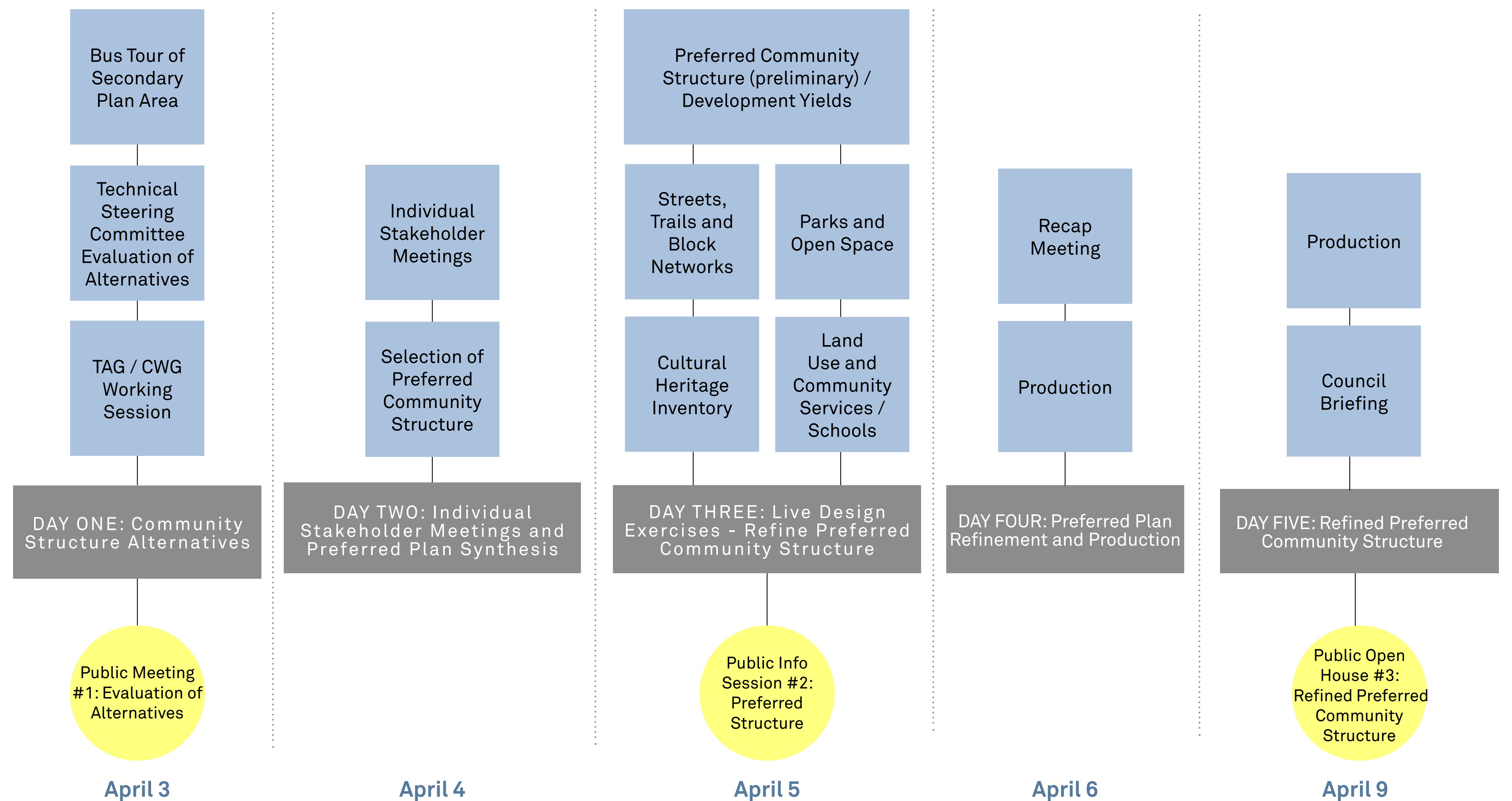
A charrette is an intensive, multi-disciplinary workshop with the aim of developing a design or vision for a project or planning activity. Charrettes are often conducted to design such things as parks and buildings, or to plan communities or transportation systems.

The purpose of the charrette is to create an implementable Preferred Community Structure for the Secondary Plan Area that reflects good planning and the input from the community and stakeholders.

As part of the charrette process potential versions of all elements required for the Preferred Community Structure including environment, mobility, urban design and servicing will be considered.

The charrette will be a collaborative 5-day exercise focused on creating an implementable solution.

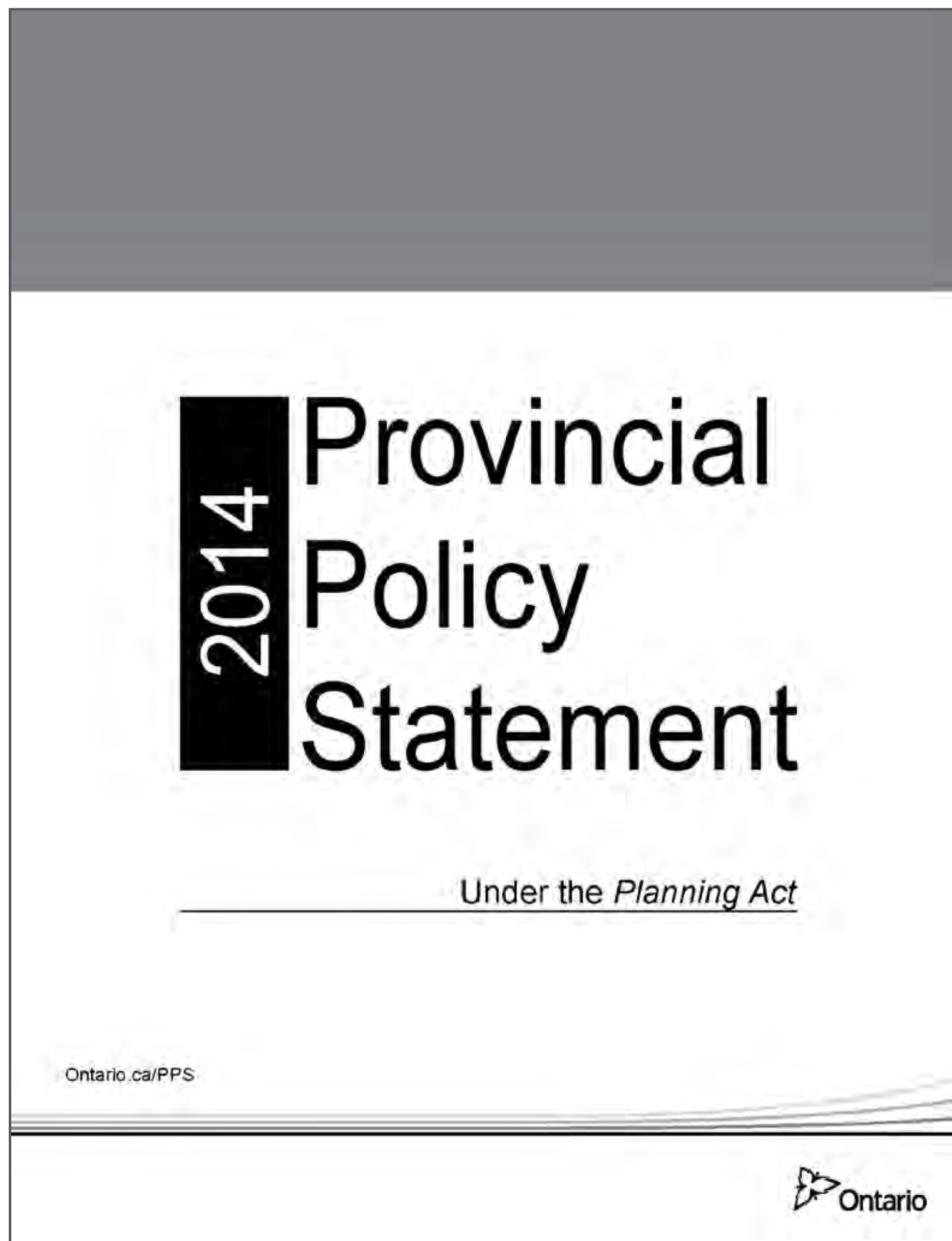
## DESIGN CHARRETTE OVERVIEW





# GUIDING DOCUMENTS

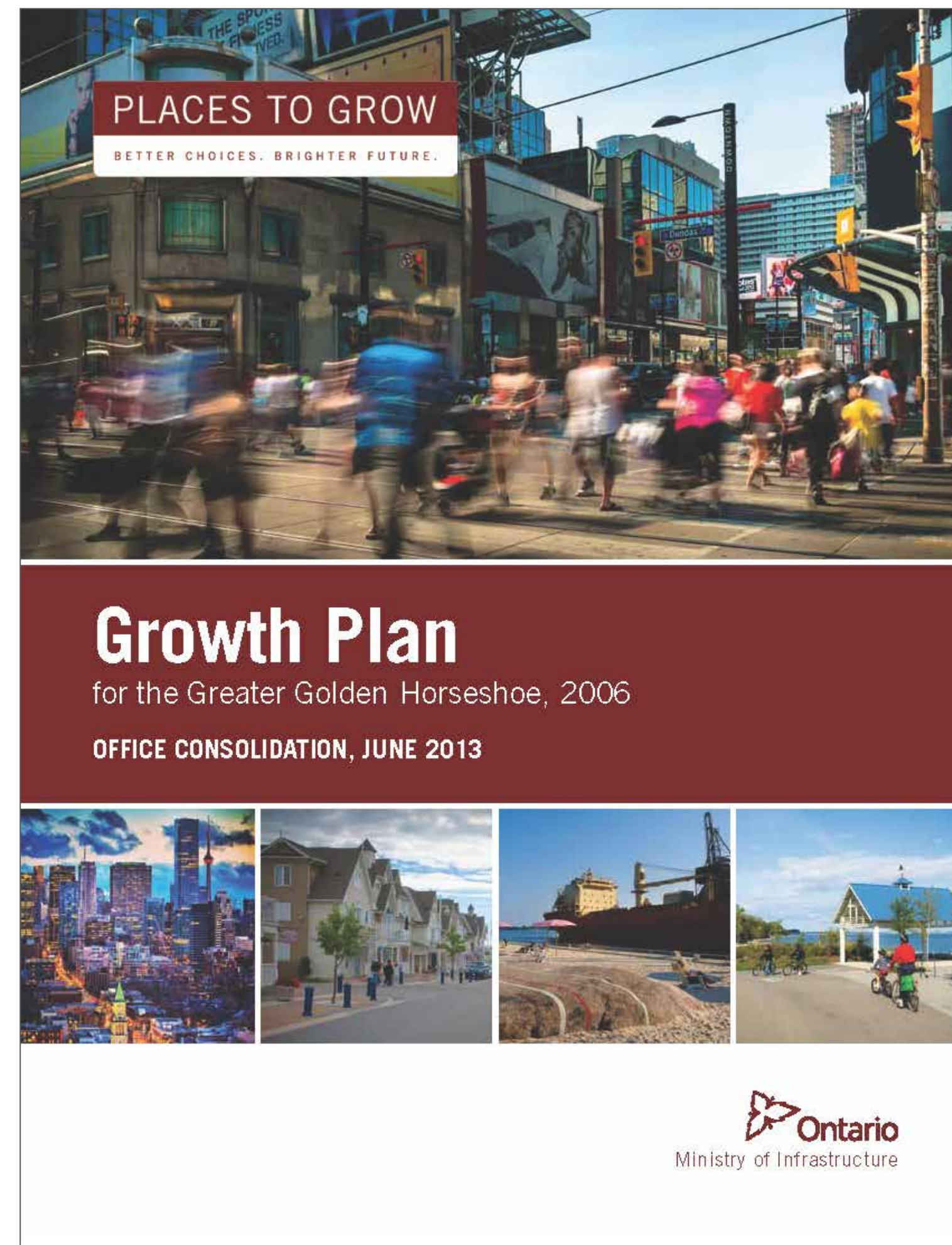
## Provincial Policy Statement (PPS)



Relevant themes include:

- Creating strong, livable and healthy communities;
- Protecting the environment, public health and safety; and
- Facilitating economic growth.

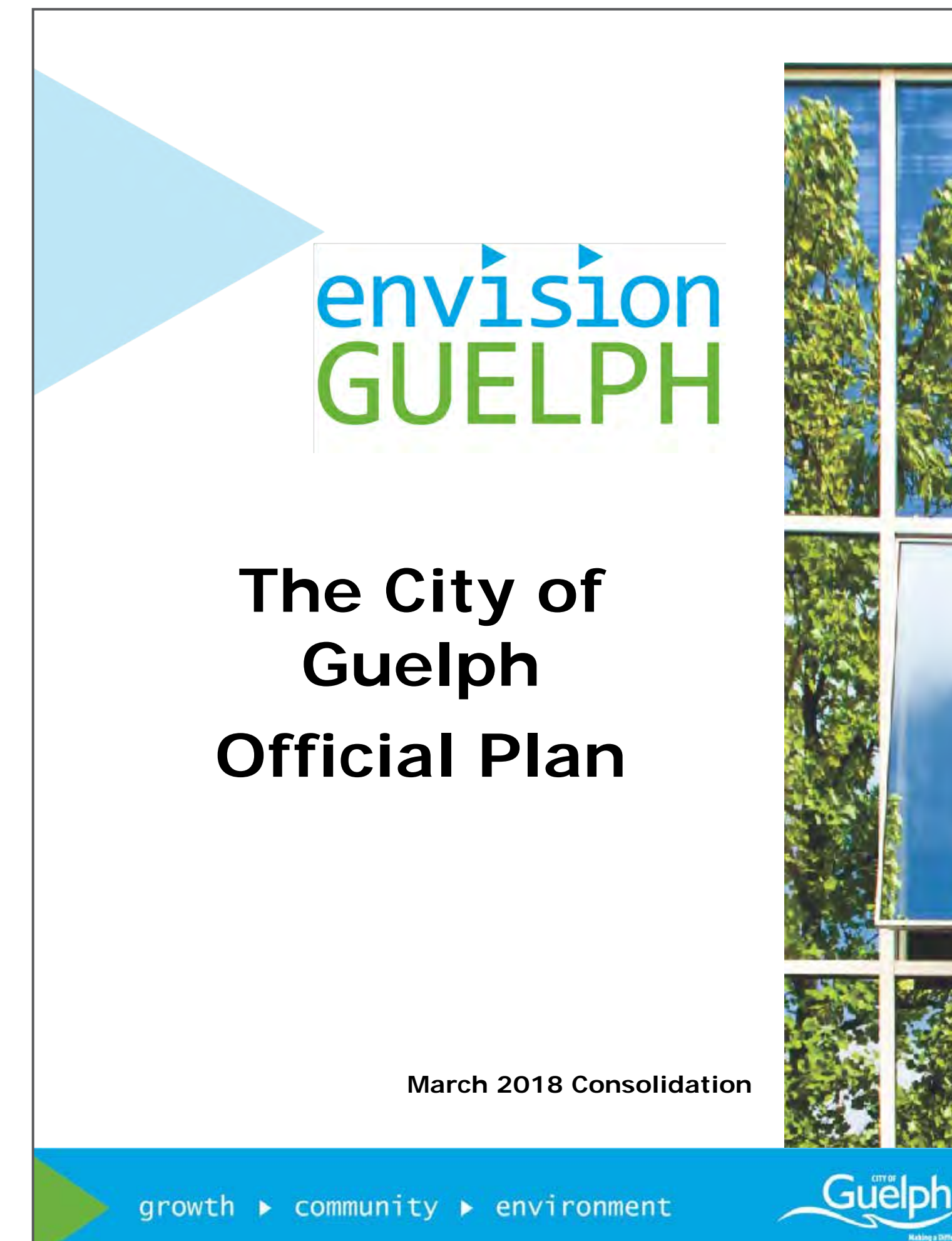
## Places to Grow: Growth Plan for the Greater Golden Horseshoe



Relevant themes include:

- Growth management directions;
- Greenfield residential targets; and
- People/jobs density targets.

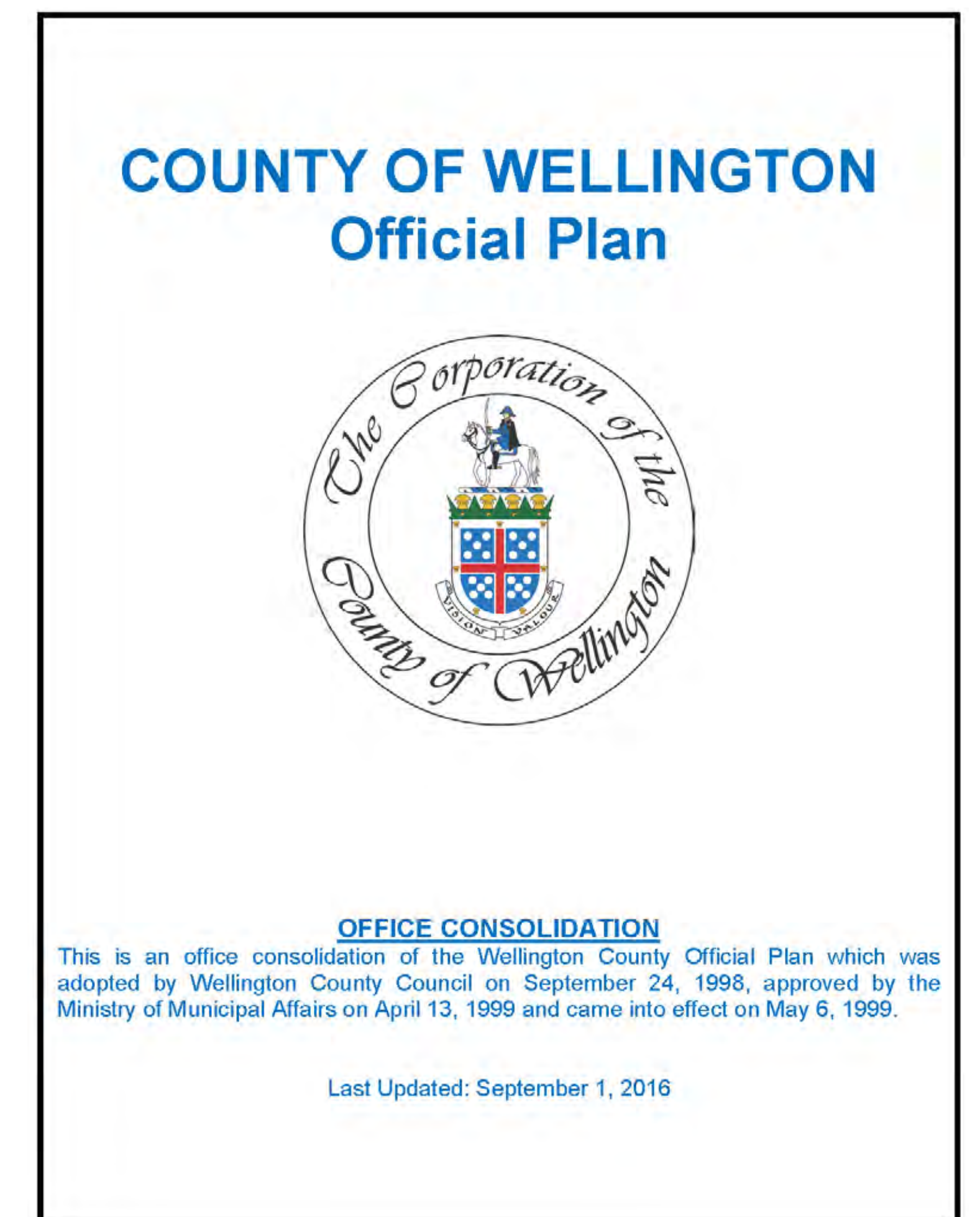
## City of Guelph Official Plan



Relevant themes include:

- Complete communities;
- Protection of the Natural Heritage System;
- Multimodal transportation system;
- Environmental and built form sustainability;
- Varied and affordable housing types; and
- Conservation of built and cultural heritage and archaeological resources.

## Wellington County Official Plan (relevant to adjacent lands)



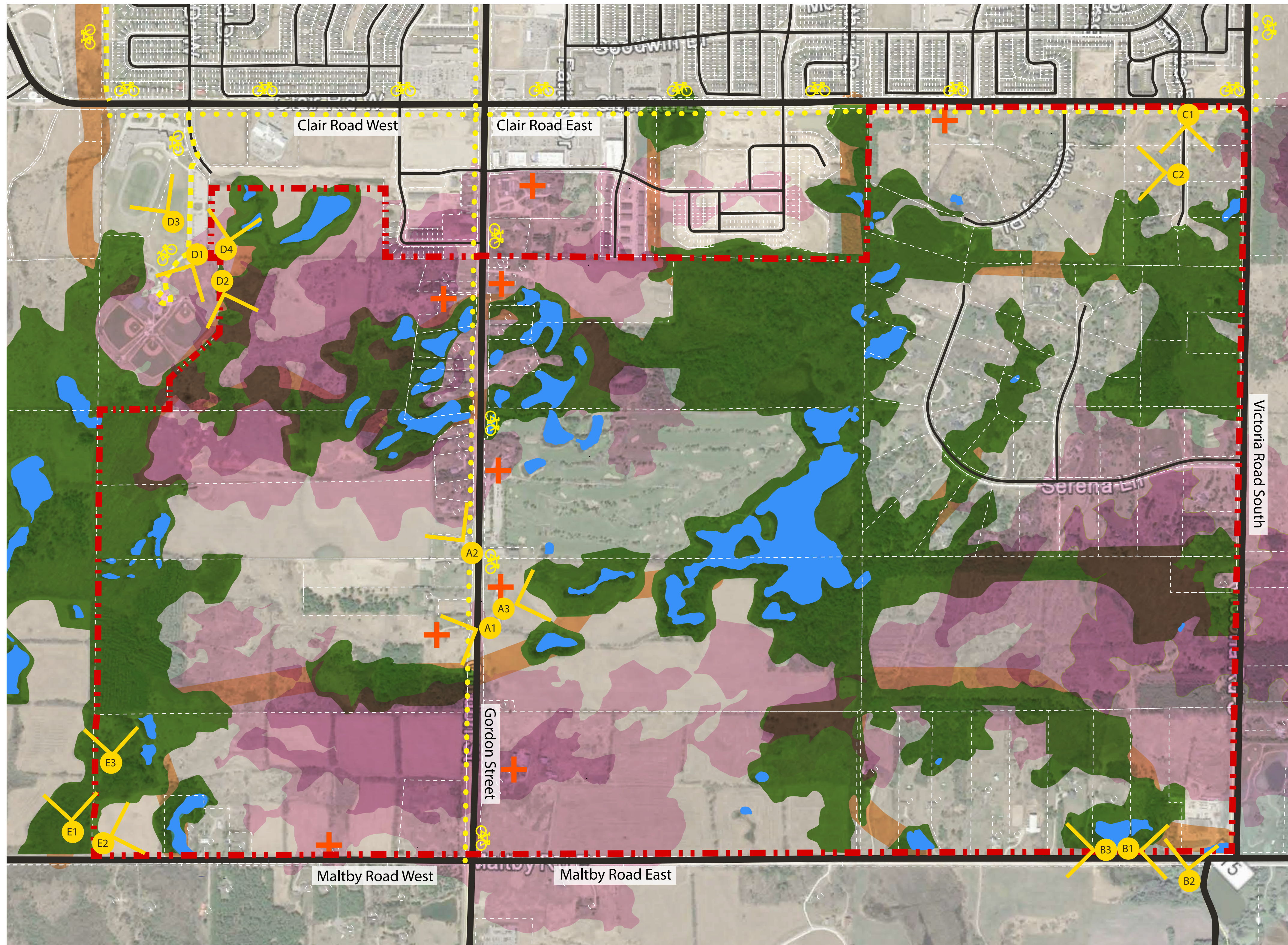
Relevant themes include:

- Land use designations and policies;
- Gordon Street Extension; and
- Significant Drinking Water Threat policies.



# EXISTING CONDITIONS

Existing Conditions Map



## Central Views



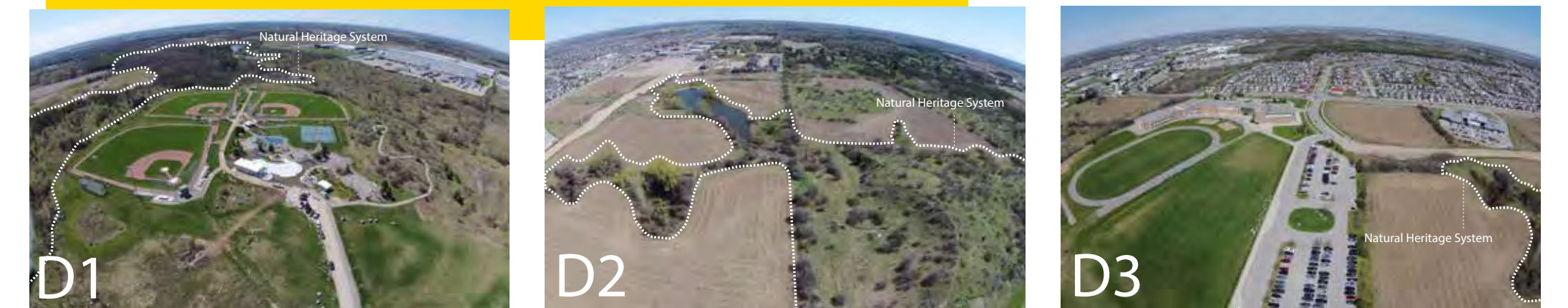
## South East Views



## North East Views



## North West Views



## South West Views



### Legend

- Existing Roads
- Paris Moraine
- Clair Maltby Secondary Plan Boundary
- Natural Heritage System
- Significant Natural Areas and Natural Areas
- Ecological Linkages
- Water Bodies
- Bike Lanes
- Bike Lane or Paved Shoulders
- Off Road Bike Route
- ✚ Built Heritage Resources
- 📷 Drone Views



# VISION AND GUIDING PRINCIPLES

## Vision:

Clair-Maltby will be a vibrant, urban community that is integrated with Guelph's southern neighbourhoods, as well as having strong connections to Downtown, employment areas and the rest of the City.

The Natural Heritage System and the Paris Moraine provide the framework for the balanced development of interconnected and sustainable neighbourhoods.

This area will be primarily residential in character with a full range and mix of housing types and a variety of other uses that meet the needs of all residents.

A system of parks, open spaces and trails will be interwoven throughout to provide opportunities for active and passive recreation.

## Guiding Principles:



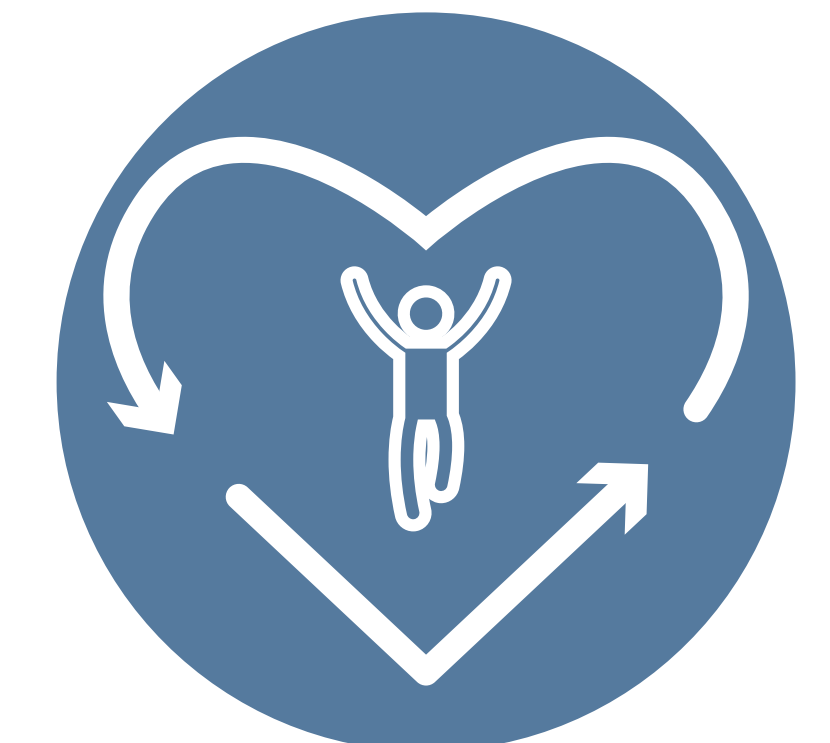
### Vibrant and Urban

Create identifiable urban neighbourhoods that are pedestrian oriented and human-scaled.  
Promote forward-thinking and innovative design that integrates new development into the rolling topography, while conserving significant cultural heritage resources.



### Green and Resilient

Protect, maintain, restore, and where possible, improve water resources and the Natural Heritage System.  
Support resiliency and environmental sustainability through measures such as energy efficiency, water conservation and green infrastructure.



### Healthy and Sustainable

Design the community for healthy, active living.  
Provide a mix of land uses including a diversity of housing choices at appropriate densities with appropriate municipal services to ensure long-term sustainable development which is fiscally responsible.



### Interconnected and Interwoven

Establish a multi-modal mobility network that provides choice and connects neighbourhoods to each other and the rest of the City.  
Create a network of parks, open spaces and trails to provide opportunities for active and passive recreation, as well as active transportation choices.

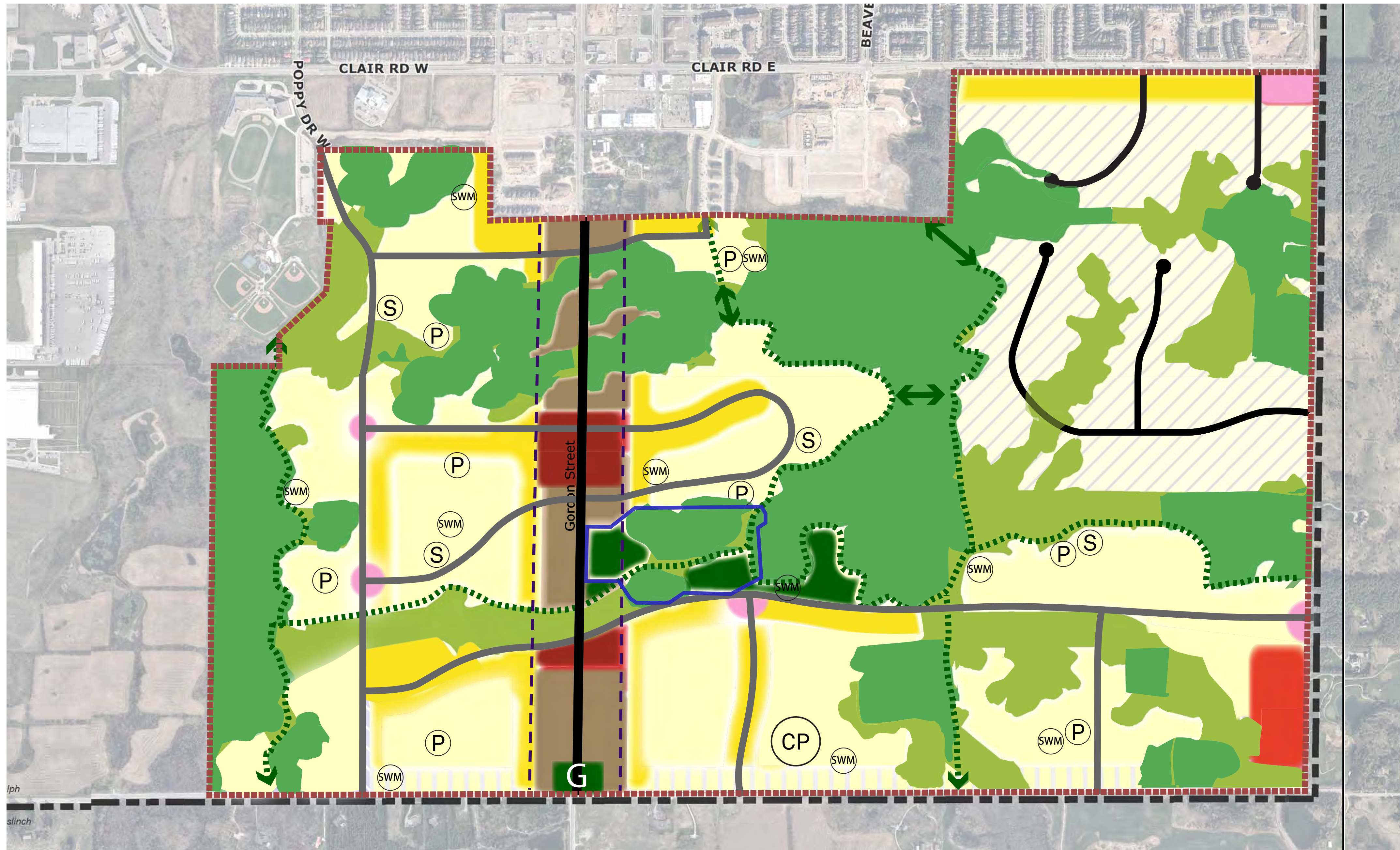


### Balanced and Liveable

A valued and livable community which reflects the right balance between protecting the environment and fostering a healthy, equitable and complete community.

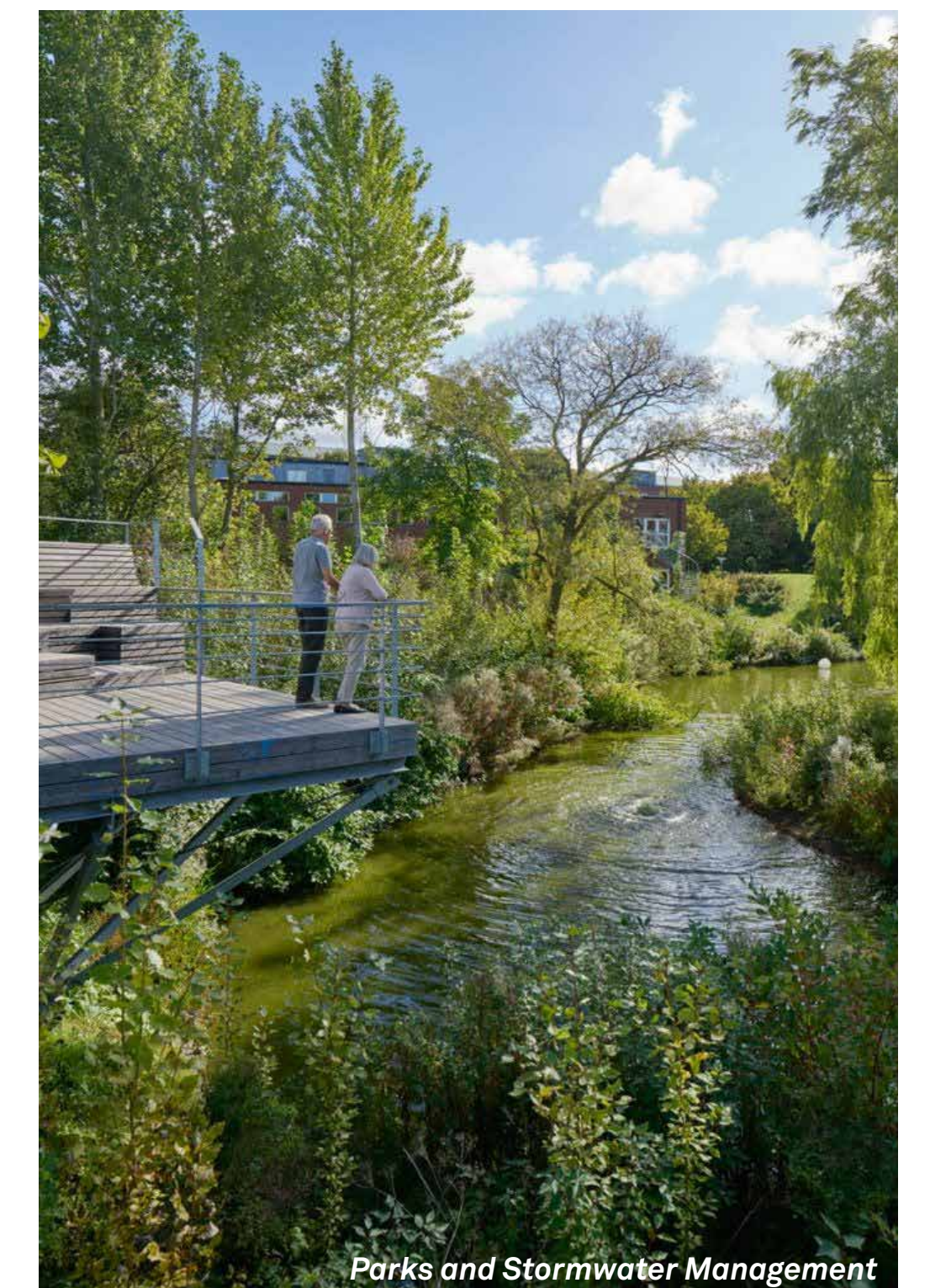


# ALTERNATIVE 1: FEATURING THE GREEN



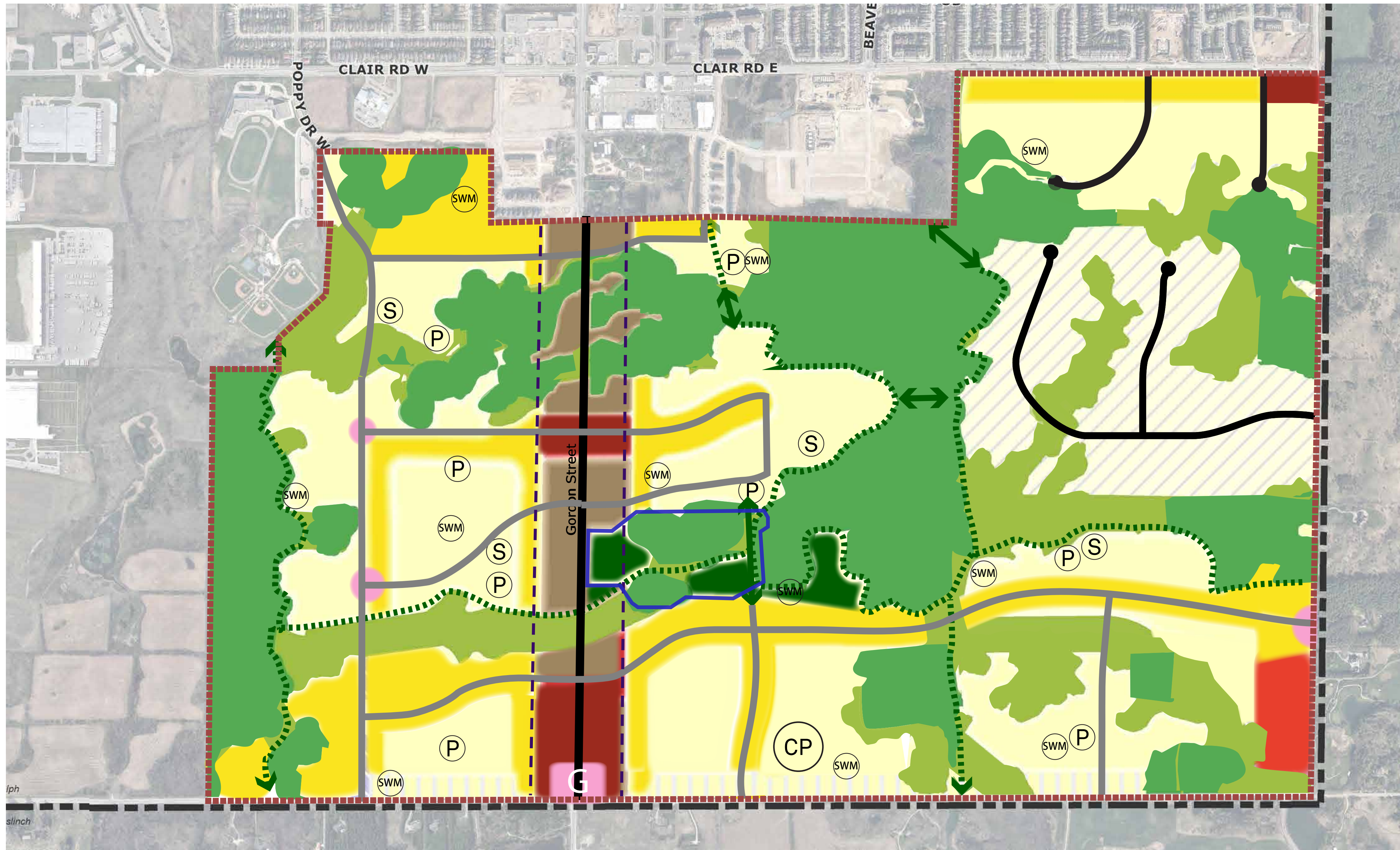
## LEGEND

- |   |  |  |   |  |
|---|--|--|---|--|
| <ul style="list-style-type: none"> <li>--- Clair-Maltby Secondary Plan Boundary</li> <li>— Cultural Heritage Landscape</li> <li>Urban-Rural Transition Zone</li> <li>— Gordon St. Corridor</li> </ul> | <ul style="list-style-type: none"> <li>— Existing Street Network</li> <li>— Proposed Street and Cycling Network</li> <li>— Proposed Trail Network</li> <li>↔ Potential Active Transportation Link</li> </ul> | <ul style="list-style-type: none"> <li>(P) Neighbourhood Park</li> <li>(CP) Community Park</li> <li>(S) Elementary School</li> <li>(SWM) Stormwater Management</li> <li>(G) Gateway</li> </ul> | <p>Natural Heritage System:</p> <ul style="list-style-type: none"> <li>May Permit Essential Transportation Infrastructure</li> <li>Does Not Permit Transportation Infrastructure</li> </ul> | <p>Land Use:</p> <ul style="list-style-type: none"> <li>Low Density (Residential)</li> <li>Medium Density (Residential)</li> <li>High Density (Residential)</li> <li>Mixed Use</li> <li>Neighbourhood Commercial</li> <li>Service Commercial</li> <li>Rolling Hills Residential</li> <li>Open Space</li> </ul> |
|---|--|--|---|--|





# ALTERNATIVE 2: FOCUS ON COMMUNITY SERVICES



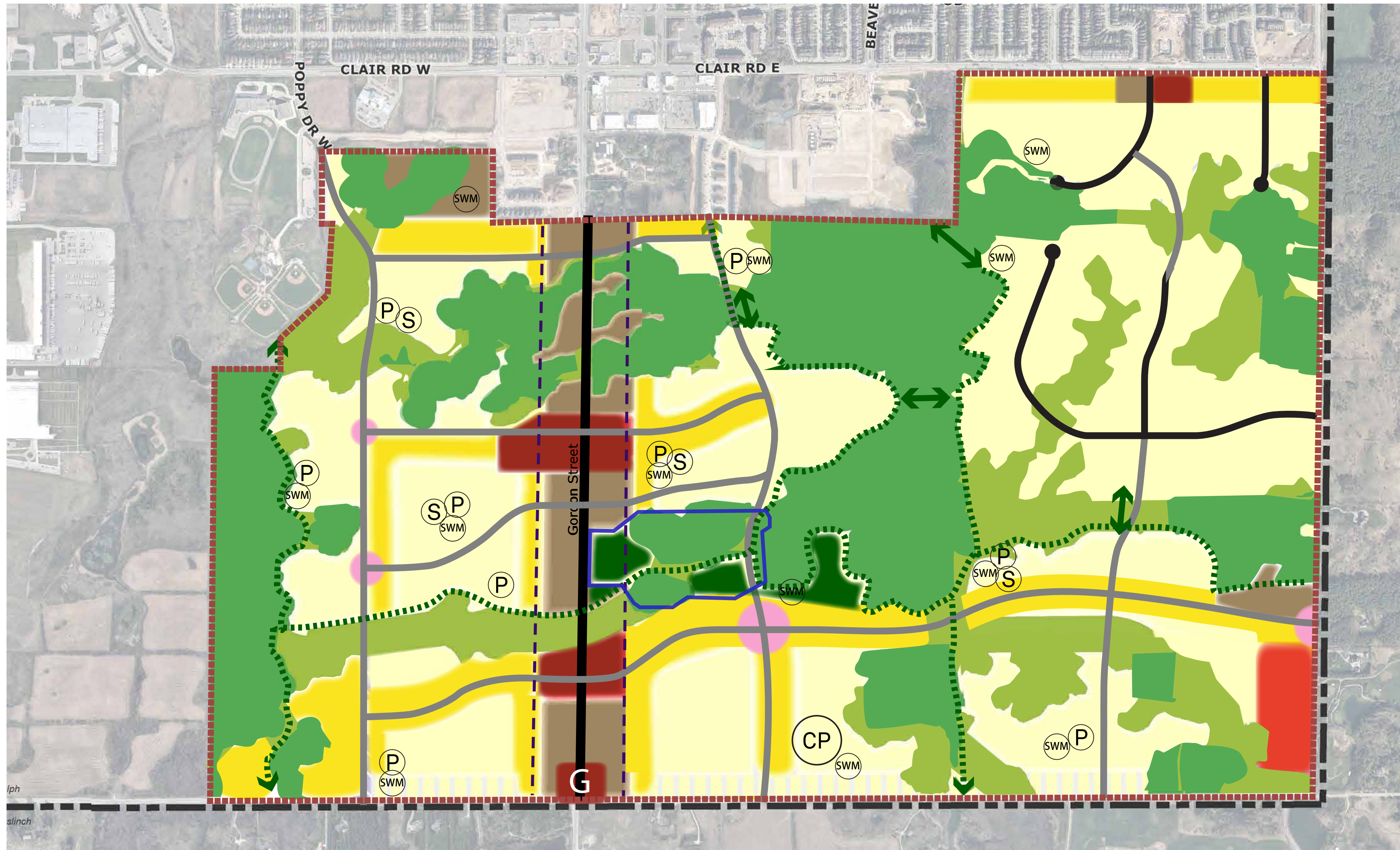
## LEGEND

<ul style="list-style-type: none"> <li>▬ Existing Street Network</li> <li>▬ Proposed Street and Cycling Network</li> <li>▬ Cultural Heritage Landscape</li> <li>Urban-Rural Transition Zone</li> <li>▬ Gordon St. Corridor</li> </ul>	<ul style="list-style-type: none"> <li>(P) Neighbourhood Park</li> <li>(CP) Community Park</li> <li>(S) Elementary School</li> <li>(SWM) Stormwater Management</li> <li>(G) Gateway</li> </ul>	<p>Natural Heritage System:</p> <ul style="list-style-type: none"> <li>▬ May Permit Essential Transportation Infrastructure</li> <li>▬ Does Not Permit Transportation Infrastructure</li> </ul>	<p>Land Use:</p> <ul style="list-style-type: none"> <li>▬ Low Density (Residential)</li> <li>▬ Medium Density (Residential)</li> <li>▬ High Density (Residential)</li> <li>▬ Mixed Use</li> <li>▬ Neighbourhood Commercial</li> <li>▬ Service Commercial</li> <li>▬ Rolling Hills Residential</li> <li>▬ Open Space</li> </ul>
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# ALTERNATIVE 3: URBAN AND CONNECTED



## LEGEND

- ▬▬▬ Clair-Maltby Secondary Plan Boundary
- ▬ Cultural Heritage Landscape
- ▬ Urban-Rural Transition Zone
- ▬ Gordon St. Corridor

- ▬ Existing Street Network
- ▬ Proposed Street and Cycling Network
- ▬ Proposed Trail Network
- ↔ Potential Active Transportation Link

- (P) Neighbourhood Park
- (CP) Community Park
- (S) Elementary School
- (SWM) Stormwater Management
- (G) Gateway

- Natural Heritage System:
- ▬ May Permit Essential Transportation Infrastructure
  - ▬ Does Not Permit Transportation Infrastructure

- Land Use:
- ▬ Low Density (Residential)
  - ▬ Medium Density (Residential)
  - ▬ High Density (Residential)
  - ▬ Mixed Use
  - ▬ Neighbourhood Commercial
  - ▬ Service Commercial
  - ▬ Rolling Hills Residential
  - ▬ Open Space





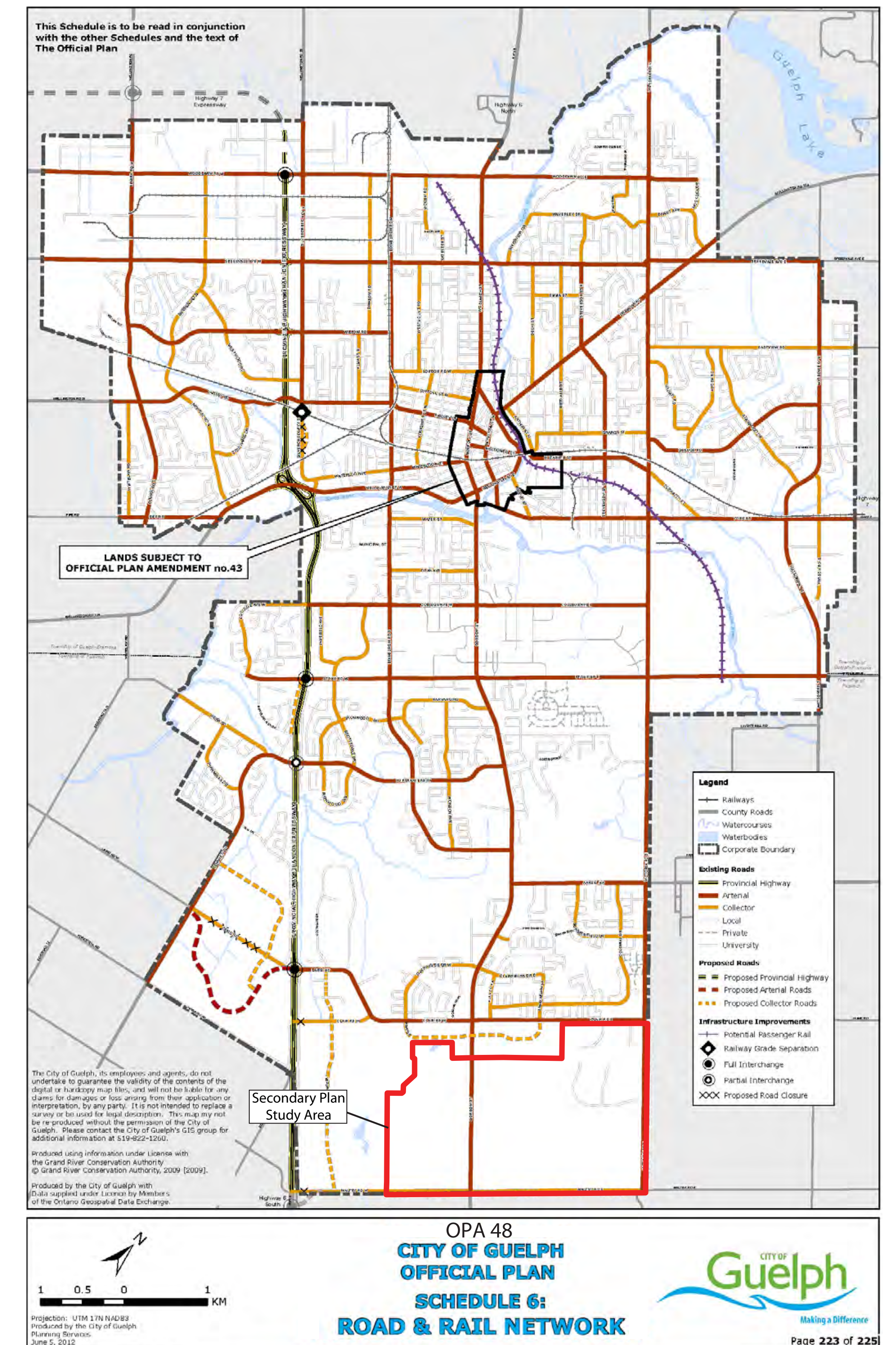
# GUELPH WELLINGTON TRANSPORTATION STUDY

## Key Improvements in Secondary Plan Area:

- Widening of Gordon Street from 2 to 4 lanes (approved 2001 EA) from Kortright Road to Wellington Road 34;
- Widening of Clair Road from 2 to 4 lanes (approved 2003 EA) - COMPLETE
- Southerly extension of Southgate Drive to Maltby Road; and
- Development of an internal collector road system within the Clair-Maltby Secondary Plan area connecting to Gordon Street and Maltby Road

## Other Key Studies Informing the Transportation Network:

- Guelph Active Transportation Network Study
- Bicycle Friendly Guelph: Cycling Master Plan
- Guelph Transit, Transit Growth Strategy and Plan
- Guelph Trails Master Plan
- Wellington County Active Transportation Plan
- Various Environmental Assessments (i.e. Gordon Street, Victoria Road)





# TRANSPORTATION NETWORK CONSIDERATIONS

## Existing Travel Behaviour

TABLE 3 SOUTH GUELPH AREA:  
PEAK PERIOD TRIP DISTRIBUTION BY TRAVEL MODE

Destination Area	Proportion of All Trips	Mode Split	Legend
Local Area <sup>1</sup>	50%		<b>Travel Mode</b> Auto Driver (Red) Auto Passenger (Orange) Transit (Green) Walk (Blue) Cycle (Yellow) Other (Purple)
Rest of Guelph (7% Downtown)	26%		
Halton / Peel Regions	7%		
Waterloo Region	7%		
City of Toronto	3%		

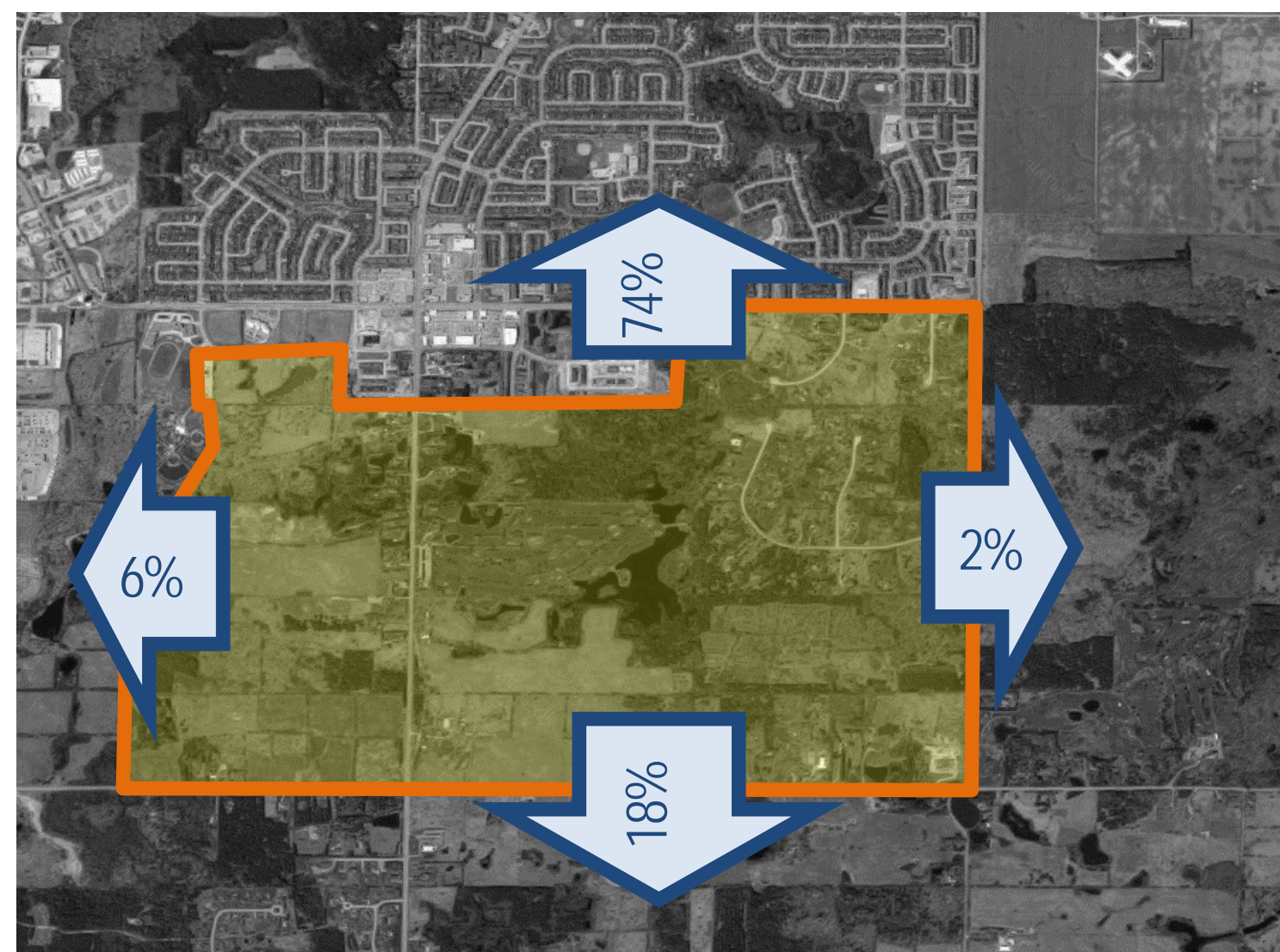
Note:  
1. "Local area" consists of areas within the City of Guelph south of the Eramosa River.  
2. Another 7% of trips are oriented to "other" areas in the region, including Wellington County, City of Hamilton, etc.

## Travel Orientation and Primary Travel Mode

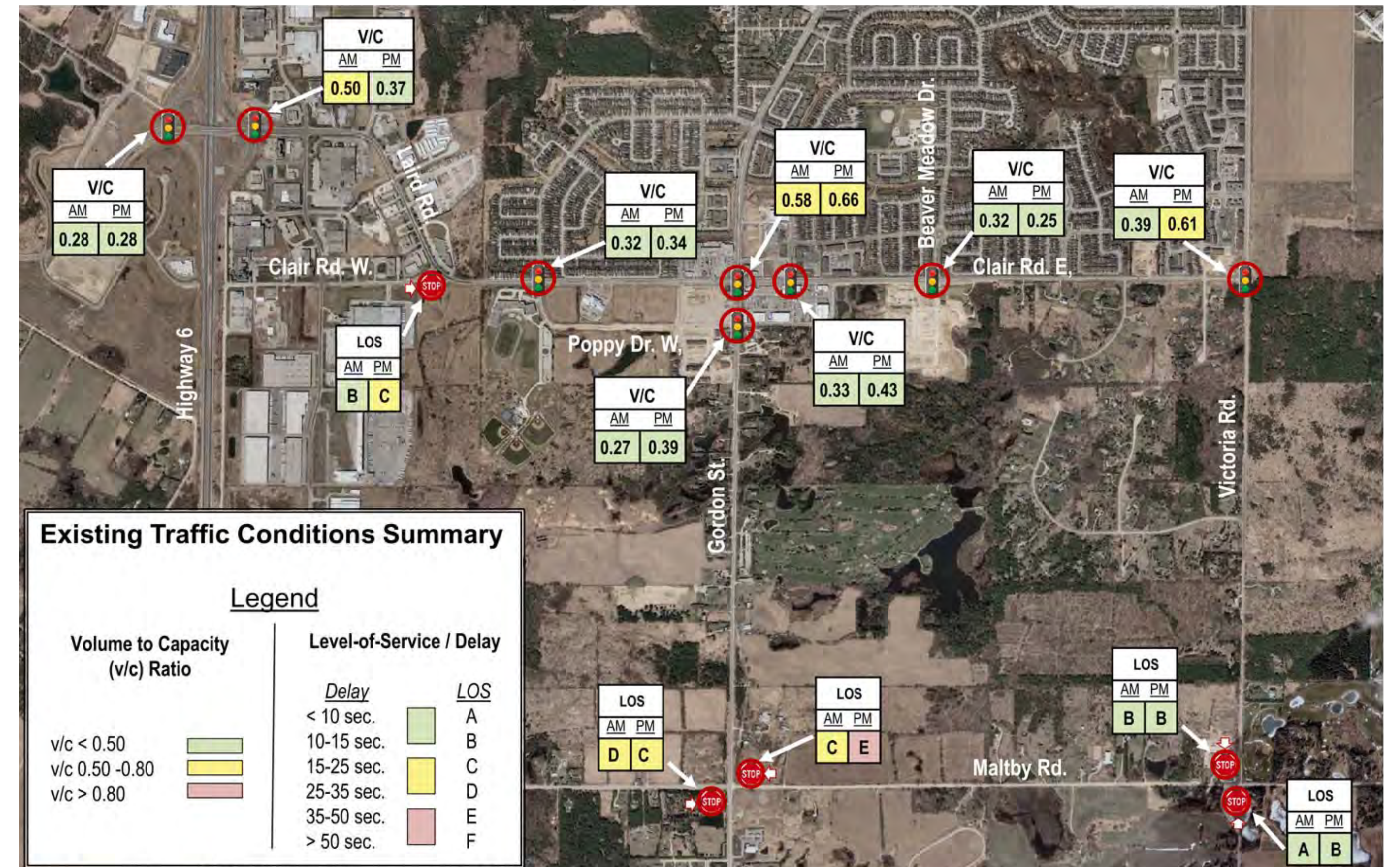
- Approx. 75% of trips stay within the City of Guelph.
- Most trips are undertaken in a private vehicle (86% of trips in Guelph; 88% overall).

## General Traffic Distribution

- Approx. 75% of local area traffic volumes are anticipated to be oriented north of the study area.



## Existing Traffic Conditions



## Existing Weekday Peak Hour Area Traffic Operations

- Acceptable traffic operations at area signalized intersections under existing conditions.
- Gordon Street / Clair Road intersection can be busy during peak travel periods under existing conditions.
- Eastbound and westbound movements at Gordon Street / Maltby Road can experience longer delays.
- Other unsignalized intersections operate acceptably under existing conditions.



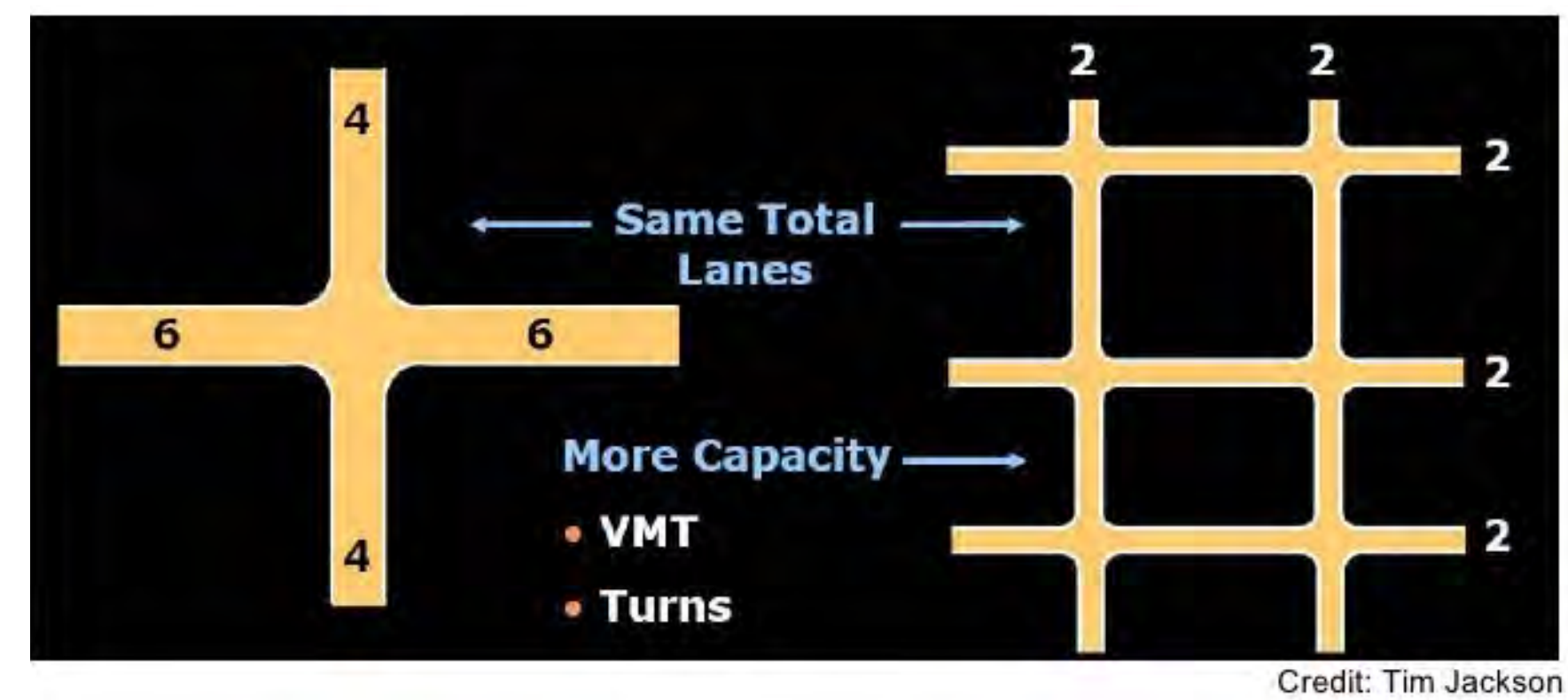
# TRANSPORTATION NETWORK CONSIDERATIONS

## Principles of Transportation Network:

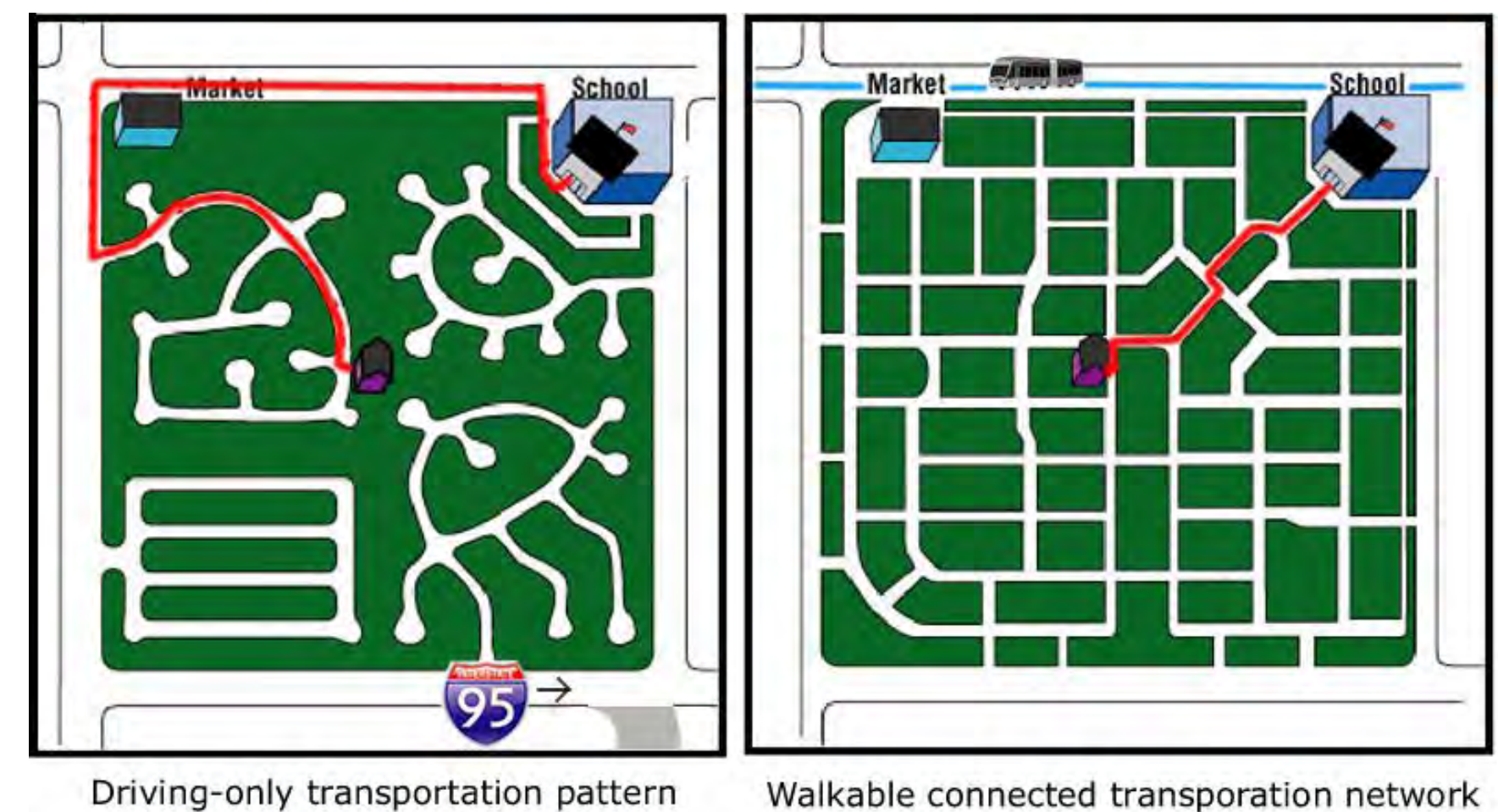
1. Provide flexibility, redundancy, and continuity;
2. Support transit service operations;
3. Support multi-modal transportation;
4. Enhance connectivity for all travel modes;
5. Provide robust and frequent connectivity internal to the neighbourhood, and to adjacent neighbourhoods; and
6. Respect natural heritage features.

## Some Benefits of a Well-Planned Street Network:

### 1. Street capacity



### 2. Walkability

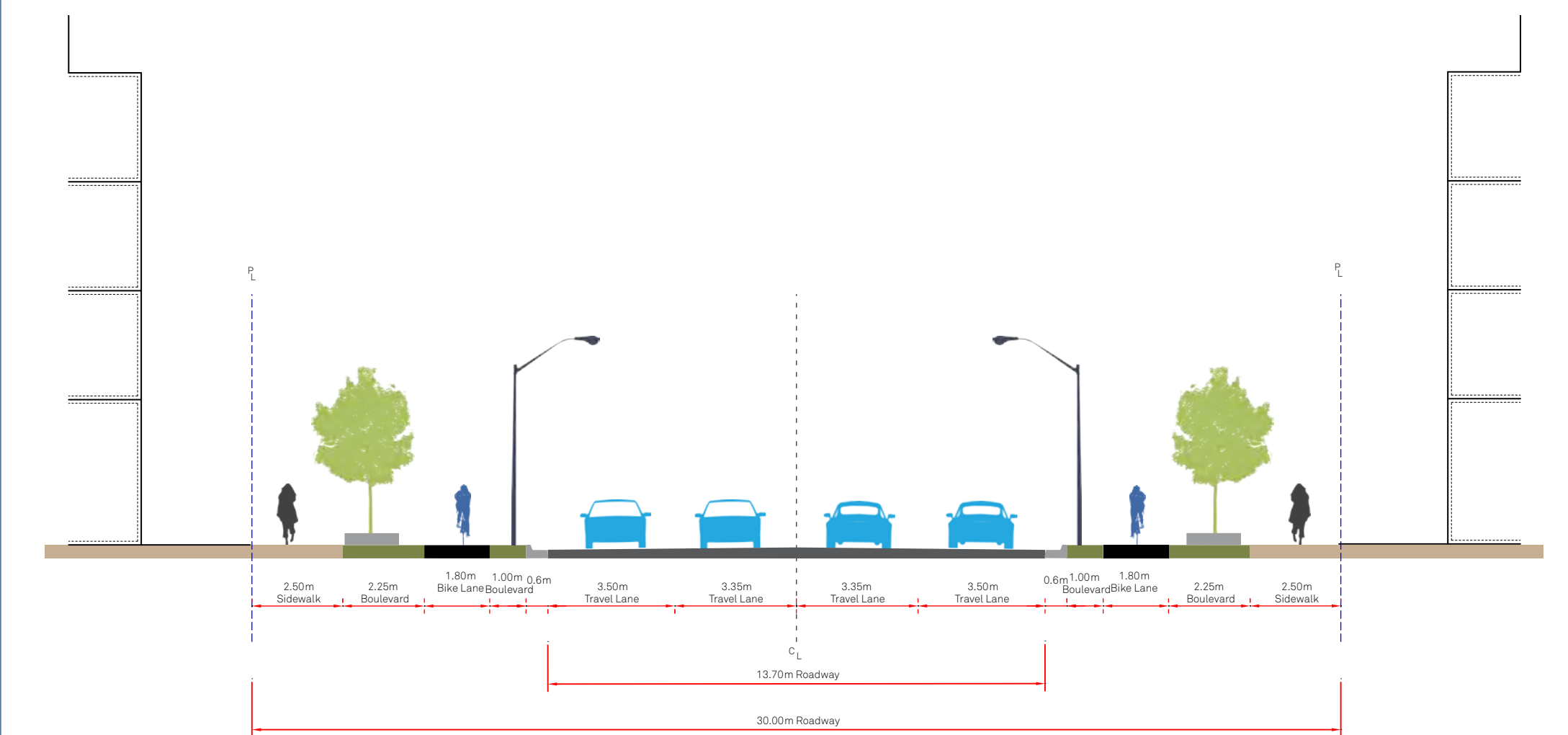


### 3. Safety

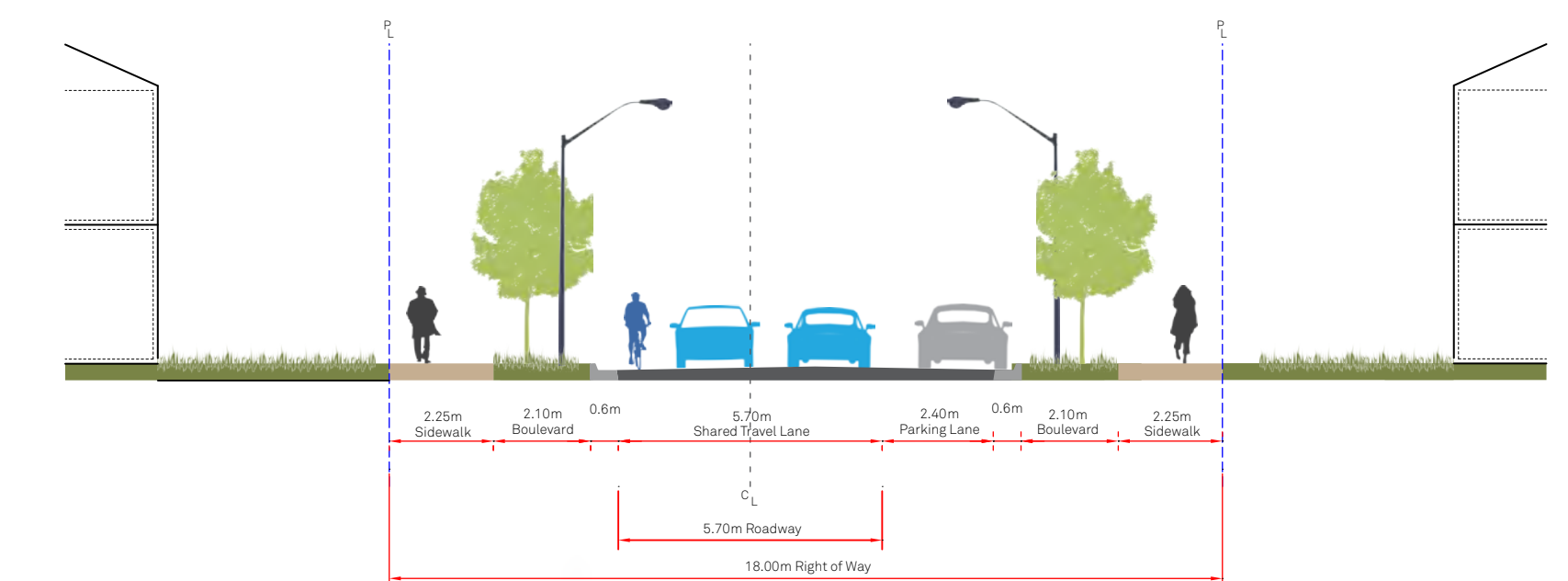
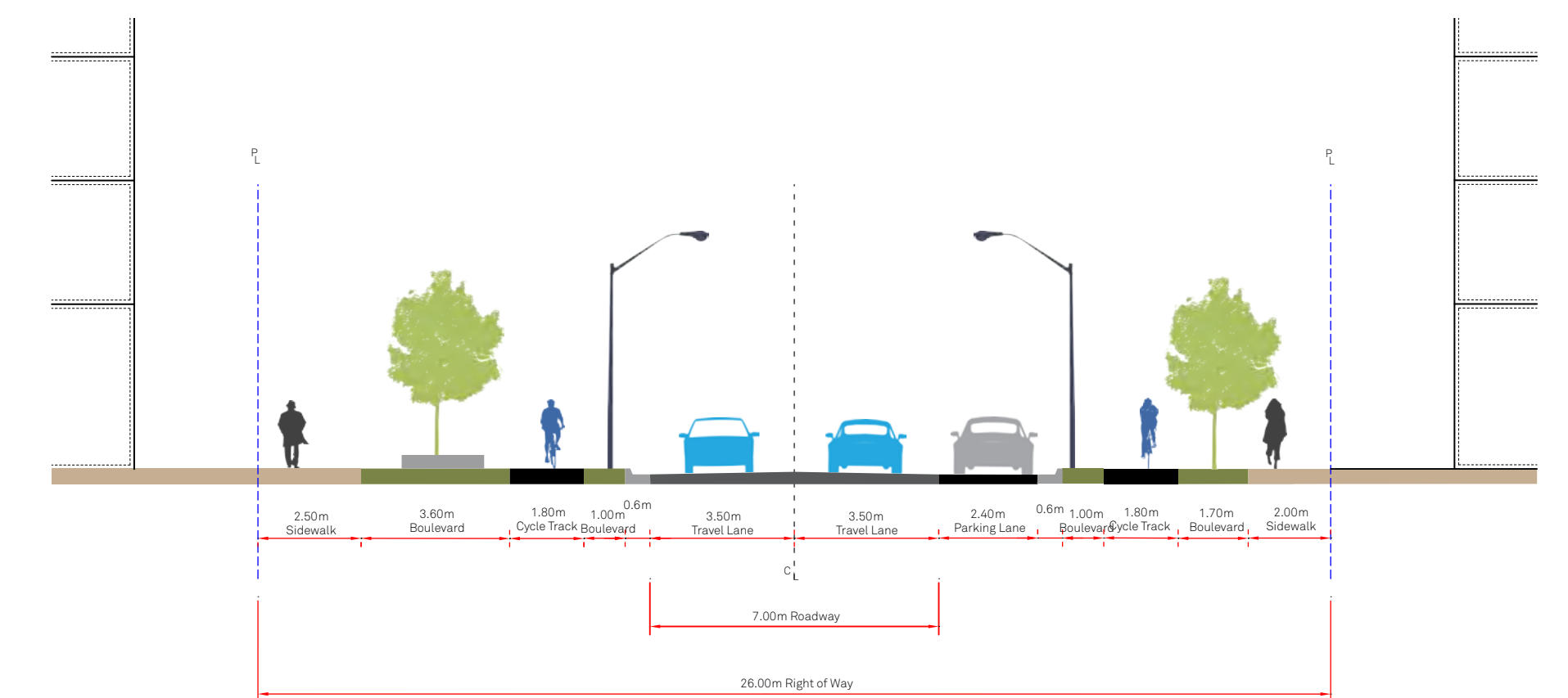
- Accommodate all street users
- Reduce street crossing distances
- Reduce vehicle speeds

## Examples of New Potential Street Cross Sections

### 1. Arterial Street



### 2. Collector Street

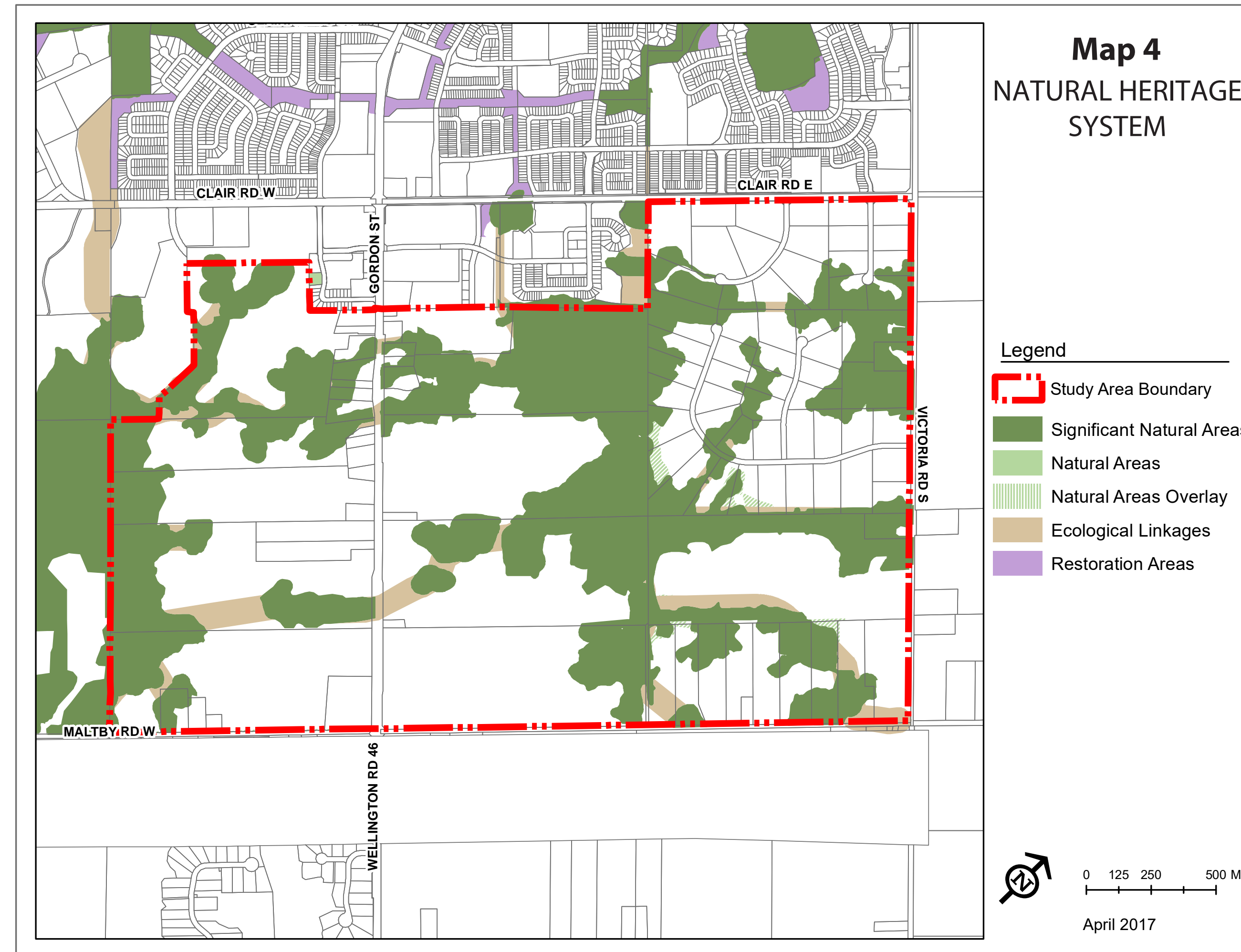




# NATURAL HERITAGE SYSTEM

A Natural Heritage System (NHS) already exists for the Secondary Plan Area. This NHS is mapped and described in the City's current Official Plan. It is based on the technical work and consultations undertaken as part of the City's Natural Heritage Strategy (2004 – 2009). This NHS was approved by Council (Official Plan Amendment 42) in 2010, and was refined and finalized by the Ontario Municipal Board's approval of the City's Official Plan Amendment 42 in 2014. This is the NHS shown in the various maps presented as part of this charrette.

The purpose of the natural heritage work undertaken through the Clair-Maltby Secondary Plan process has been to verify and update the NHS, as needed, based on relevant changes to existing conditions and application of current legislation, policies and guidelines. A work plan for these updates was developed in consultation with the City and key stakeholders.



467 species of plants can be found in the Clair-Maltby Secondary Plan Area



112 species of birds can be found in the Clair-Maltby Secondary Plan Area



7 species of frog and 1 species of toad can be found in the Clair-Maltby Secondary Plan Area



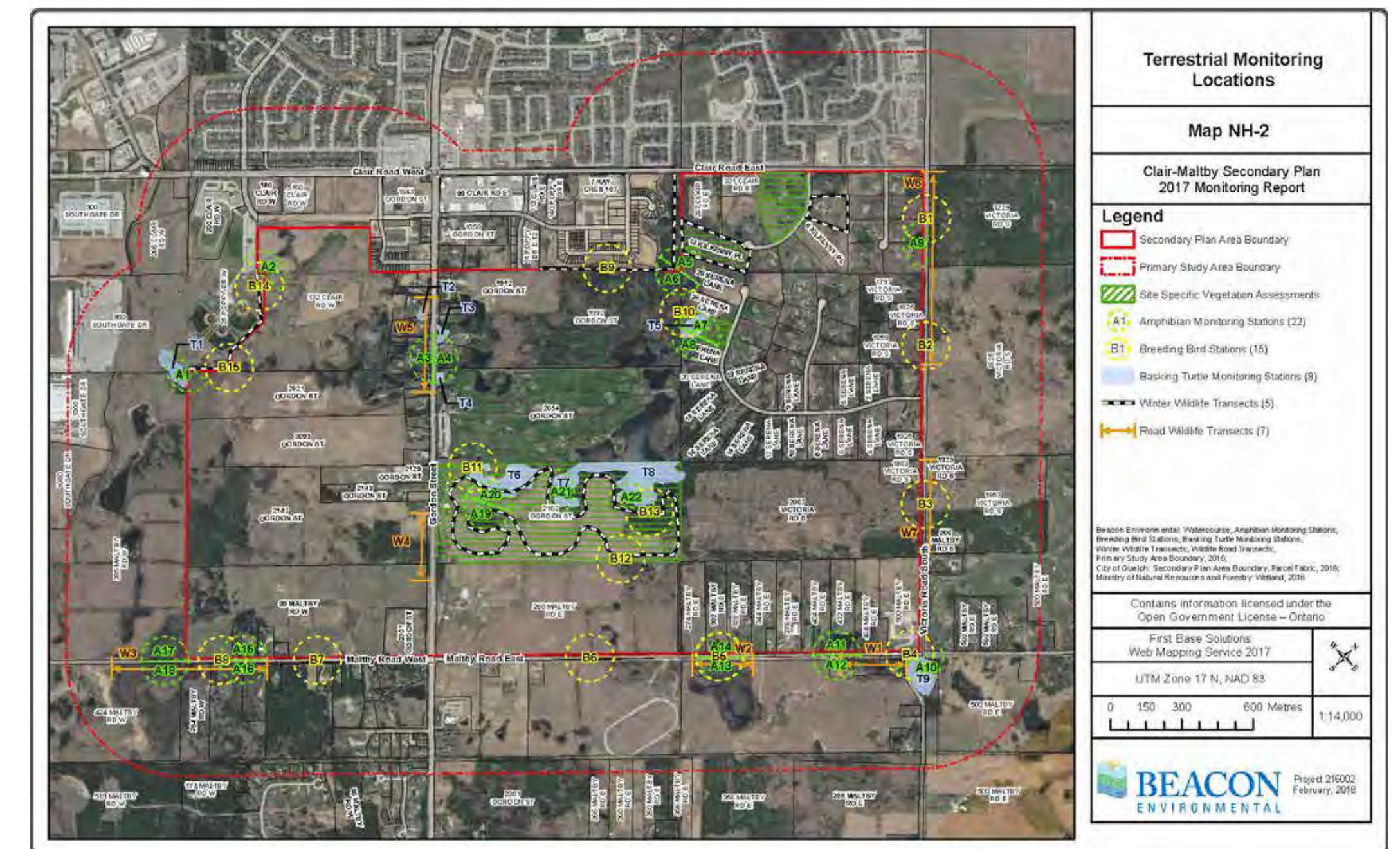
# NATURAL HERITAGE SYSTEM

Natural heritage field studies undertaken as part of the Clair-Maltby Secondary Plan process over 2016 and 2017 have included:

- Preliminary screening for headwater drainage features;
- Assessment of the water levels and quality of selected wetlands;
- Air photo interpretation to verify and update vegetation community mapping supplemented with scoped vegetation assessments and botanical surveys;
- Amphibian and reptile surveys, including movement surveys over roads;
- Breeding bird and winter wildlife surveys (including for deer and raptors); and
- Incidental observations of seeps, springs and other wildlife.

Field studies have been limited to properties where access was provided, public lands and road rights-of-way. Surface water sampling stations were coordinated with shallow groundwater sampling stations to gain a better understanding of how the different wetlands function. Field work has been supplemented by a review of all available background studies and data in the study area from the last decade or so.

Over 2018, refinements and updates to the NHS will be confirmed based on the technical work undertaken. These updates will be reviewed with the City and key stakeholders including: local agencies and advisory committees, as well as the landowners and advisory groups established for this project. Updates to the NHS will be integrated into the various models and planning studies to inform the different technical components (e.g., transportation, servicing, storm water management) and the Secondary Plan itself, including the related policies.



Wetland Monitoring Station 8 at various points from April-November 2017



# PROBLEM AND OPPORTUNITY STATEMENT

## Problem

The City of Guelph is undertaking the Clair-Maltby Secondary Plan and Master Environmental Servicing Plan (MESP) Study to comprehensively plan the last unplanned greenfield area within the city. The current study area does not have full municipal services to support future development.

## Opportunity

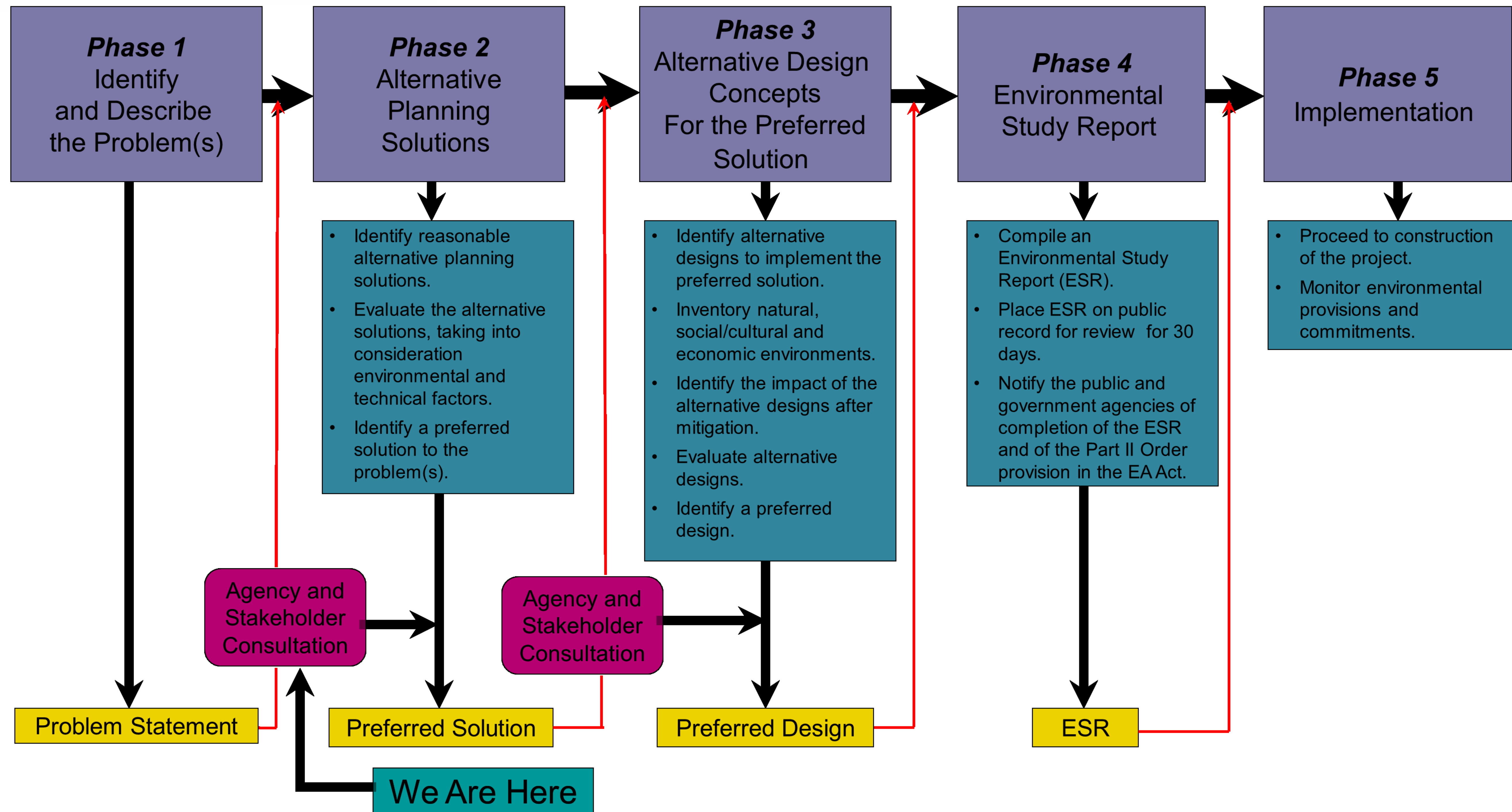
The Clair-Maltby Secondary Plan and the Master Environmental Servicing Plan (MESP) are being developed concurrently to provide an integrated planning approach to establish a plan for future urban development and full municipal services within this area.

Newly urbanizing lands require municipal services in the form of roads, water, wastewater and stormwater infrastructure, in order to meet municipal and provincial requirements. The process involving the conversion of undeveloped land to a fully serviced, urbanized form is governed through an integrated approach addressing the needs of the Planning Act and the Environmental Assessment Act, including the Municipal Engineers Association Class Environmental Assessment Process for public infrastructure planning and design.





# MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT



The MESA for Clair-Maltby is intended to fulfill Phases 1 and 2



# STORMWATER MANAGEMENT PLANNING

## Background

Urbanizing existing natural and rural lands has the potential to alter surface runoff and groundwater functions, possibly negatively affecting the area's wetlands, drainage features and associated wildlife and fish. Stormwater Management techniques can both pro-actively and reactively manage and mitigate the impacts of urbanization to address regulatory and functional objectives.

## Objectives

Stormwater Management is intended to address the following objectives:

- i. Control drainage (quantity and quality) and associated risks
- ii. Manage impacts to drainage features and related habitat (Clair-Maltby open water drainage features are limited due to the hummocky terrain)
- iii. Maintain/improve water quality in accordance with Provincial requirements
- iv. Work towards water balance preserving surface water infiltration and groundwater quantity and quality





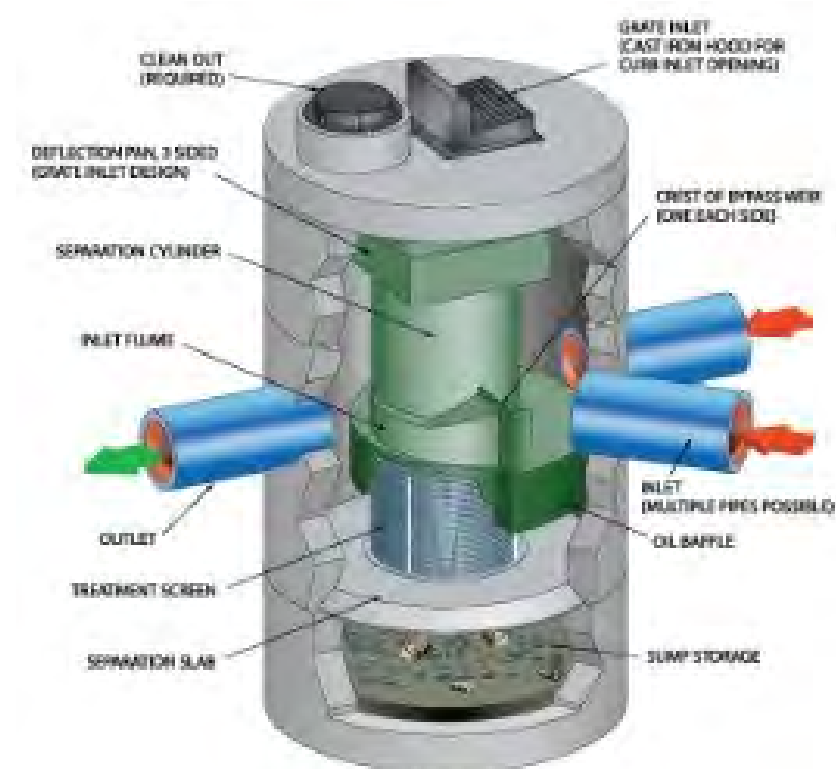
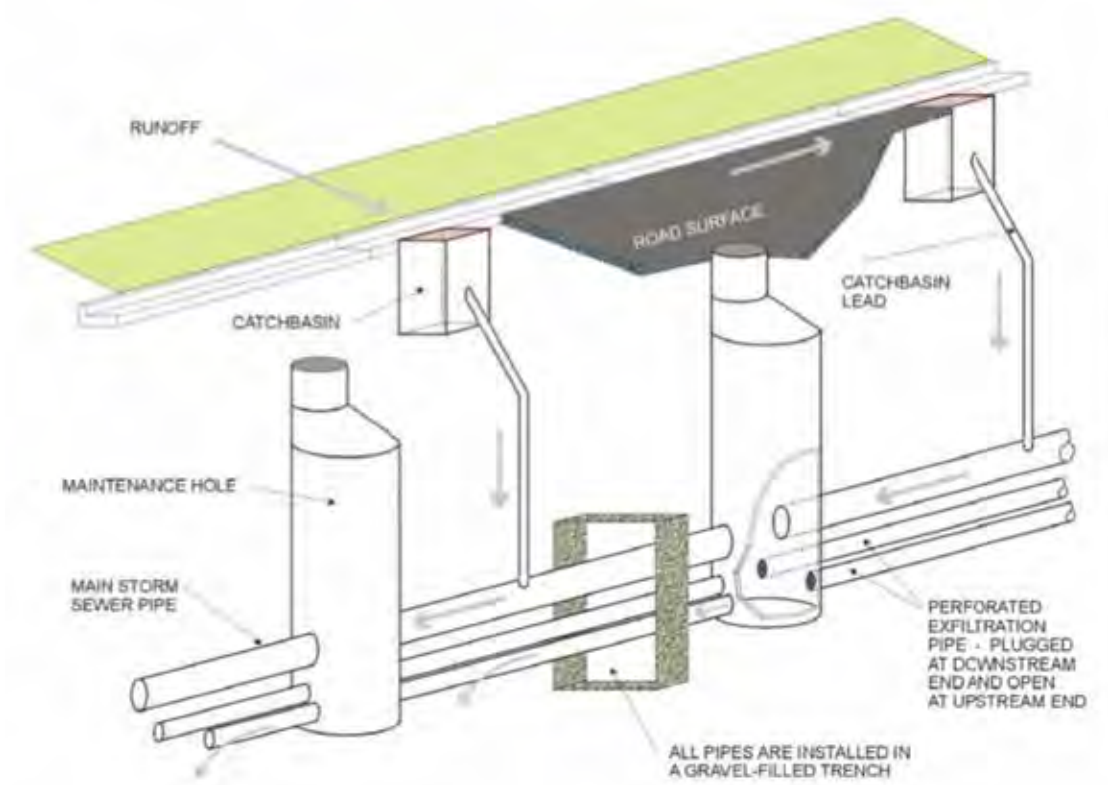
# STORMWATER MANAGEMENT ALTERNATIVES

There are a number of Stormwater Management techniques available to address the objectives which fall into various categories as follows:

- Dry ponds
- Wet ponds
- Wetlands
- Hybrids
- Greenways
- Infiltration Systems
- Oil and grit separators

- Perforated pipes
- Swales
- Enhanced swales

- Bioretention (rain gardens)
- Soak away Pits
- Permeable pavements
- Rain water harvesting
- Rain gardens
- Biofilters



The Do Nothing alternative is required to be considered in the Municipal Class Environmental Assessment process. It would however not address the stormwater management objectives for the future development area.



# PRELIMINARY STORMWATER MANAGEMENT FACILITY CONSIDERATIONS

- **Location** – preliminary locations established based on existing topography and drainage routes, and functional connections to features
- **Size** – to be determined to meet stormwater management objectives
- **Geometry** – there are options (rectangular, greenway, circular etc.) – which will have to consider compatibility with the planning for adjacent land uses
- **Form** – functional considerations (i.e. dry or wet) as well as opportunities to make some spaces multi-functional – particularly where parks, schools and natural areas are adjacent to stormwater management facilities
- **Other complementary considerations:**
  - Extent and size of Low Impact Development Best Management Practices – this may affect community design and street widths
  - Stormwater Management Facility's Overflows – most of the area has inwardly draining systems which will need to have relief overflows
  - Drainage system layout (sewer and overland) – will be influenced by future land use and road patterns
  - Enhanced water quality protection need to include pre-treatment of runoff before being infiltrated, source water protection considerations and salt management imperative



# WATER AND WASTEWATER SERVICING

## Background

The Clair Maltby Lands Water and Wastewater Servicing will be integrated with the City of Guelph's existing water distribution and wastewater collection systems. As all of the roads in the development will have commercial or residential users, each building will be provided with a water service connection and a sanitary service connection. Site topography is a key consideration governing the integration of the water and wastewater services within the existing City of Guelph System.

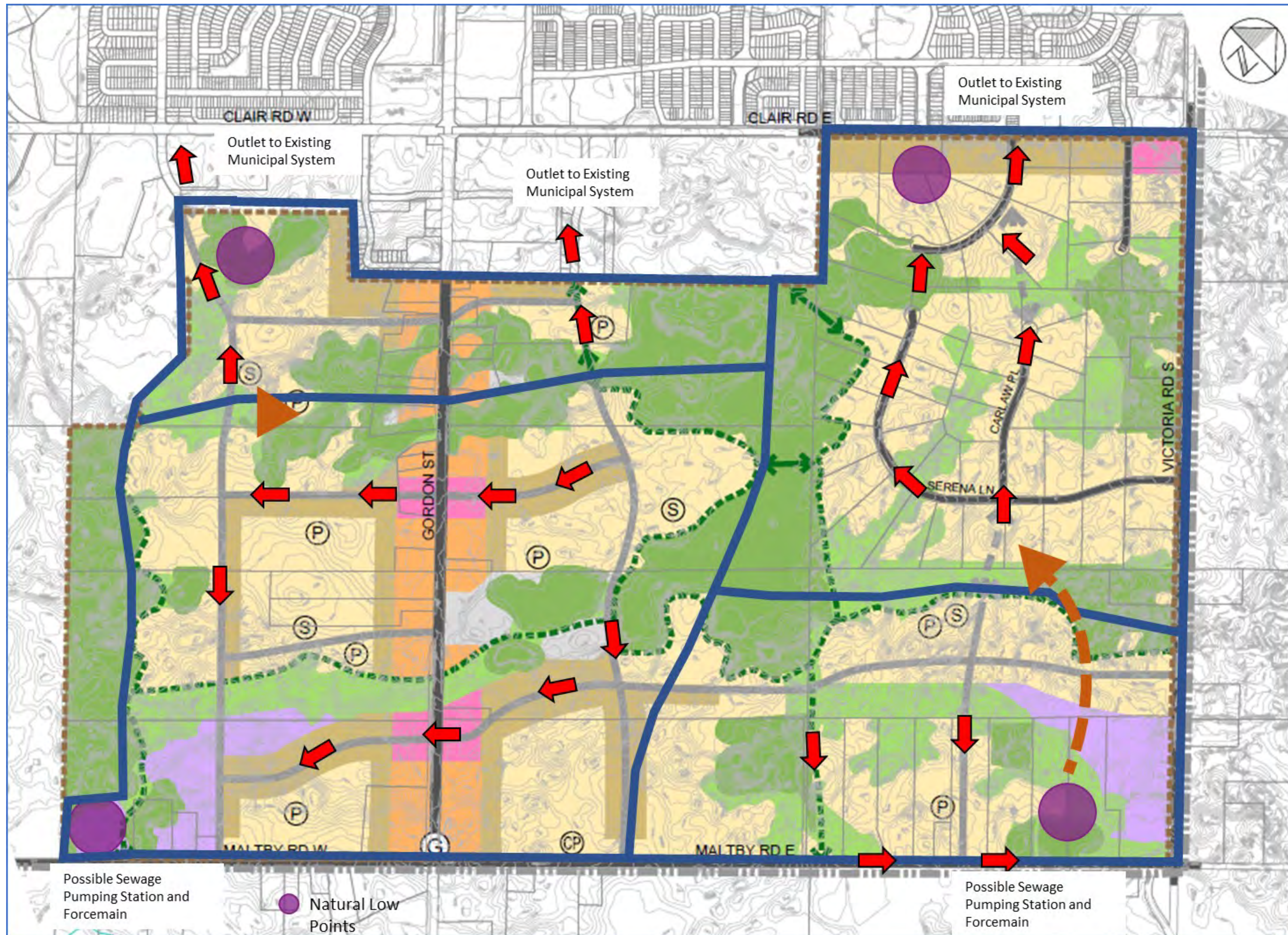
## Objectives

1. The Clair Maltby Lands will be serviced in accordance with the City of Guelph's Master Planned Infrastructure
2. The City's water distribution network will be expanded with a 300 mm water main on every new road in a fully looped configuration (i.e. with no dead end watermains).
3. The City's wastewater collection system will be expanded such that there is a gravity sewer on every road that collects the wastewater and conveys it to the Guelph wastewater treatment plant.





# WASTEWATER COLLECTION



The City's wastewater collection system is accessible in three sub-trunk sewer systems to the North.

The undulating topography of the Clair Maltby lands, presents a challenge in regards to gravity servicing.

Most of the Clair Malby lands naturally drains to low points in the South East and in the South West. It is not possible for all of the proposed lands to be connected to the Guelph system without pumping stations.



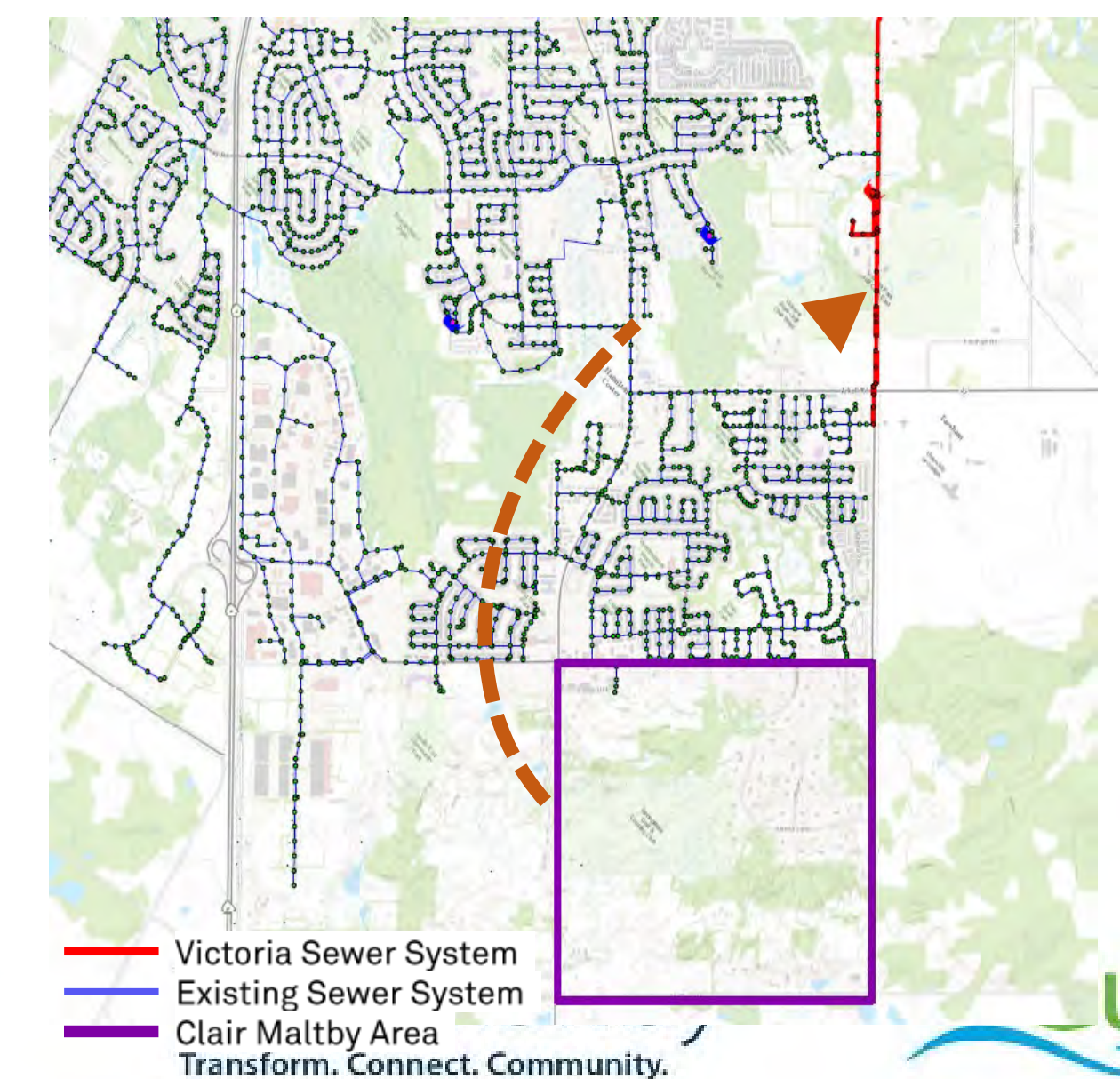
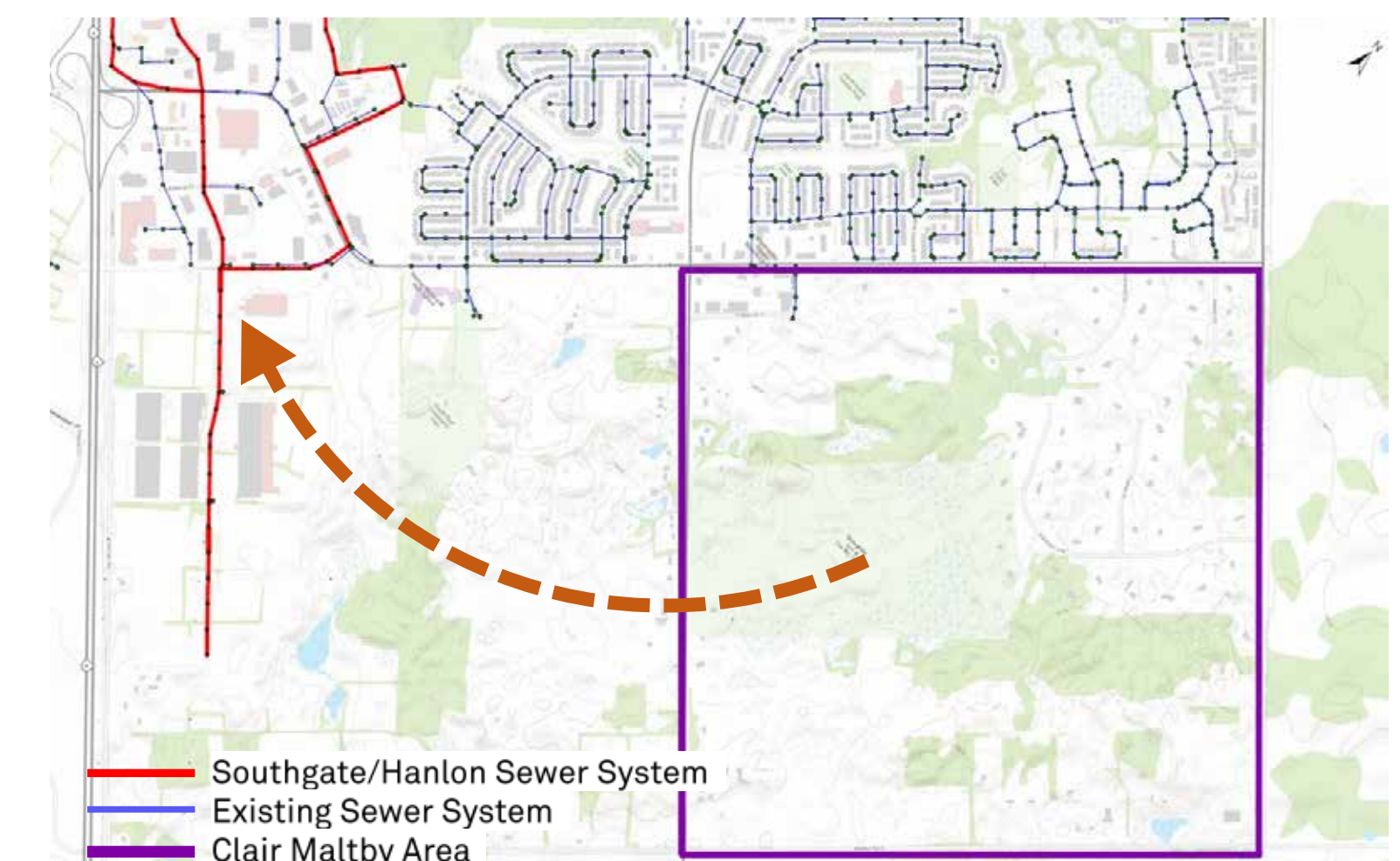
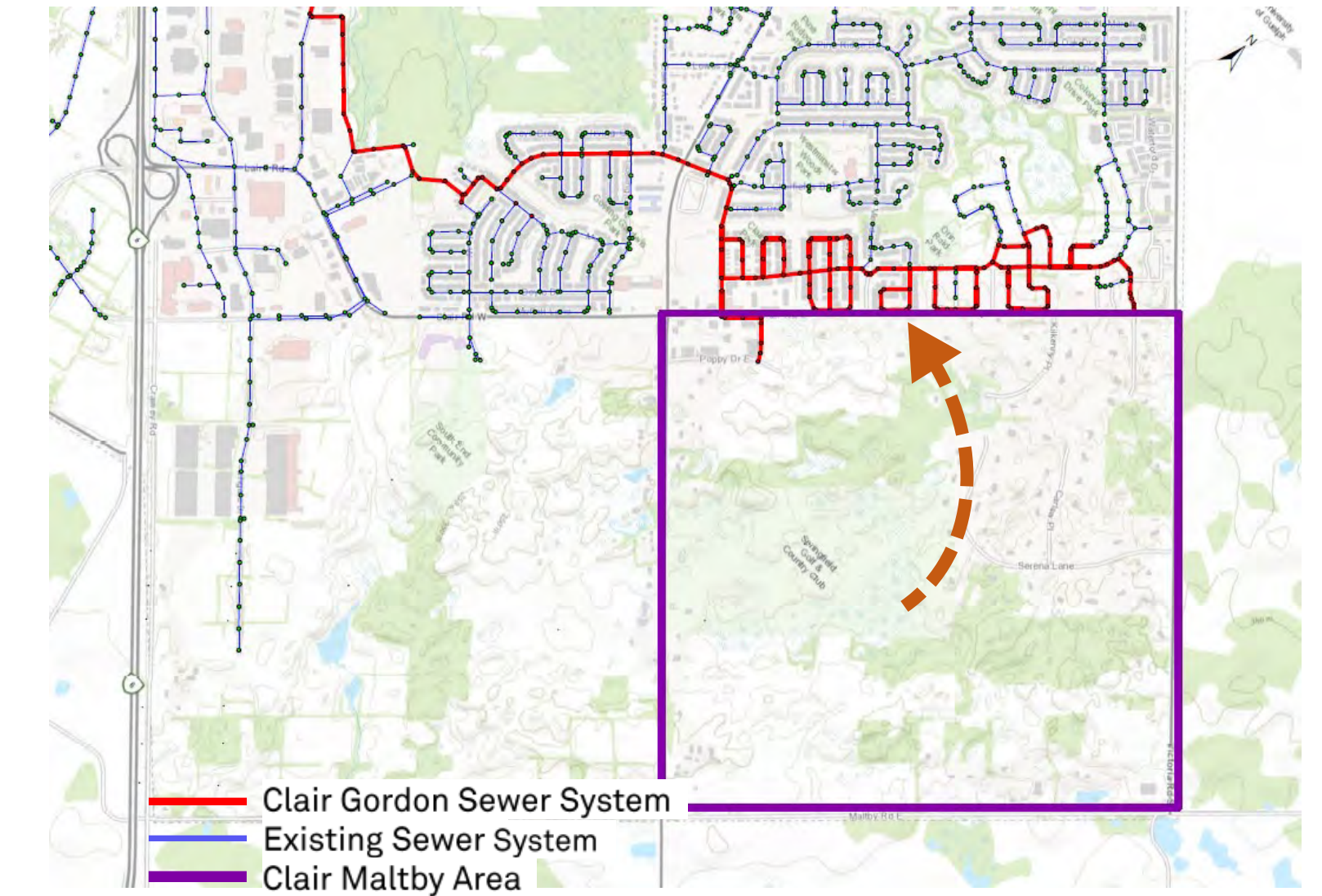
# WASTEWATER CONVEYANCE ALTERNATIVES

## Alternative Approaches

- 1. Do Nothing** *A moratorium on new wastewater collection infrastructure*
- 2. Limit Growth** *Growth is limited to reduce demand and costs of operating and maintaining wastewater infrastructure*
- 3. New Infrastructure – Gravity collection system** – *Areas serviced by gravity only – limited by topography*
- 4. New Infrastructure – Pump Station(s) and forcemain(s)** – *Pumping Stations and forcemains to lift wastewater from areas that are too low to drain by gravity*
- 5. New Infrastructure – Gravity collection system, pump station(s), forcemain(s)**

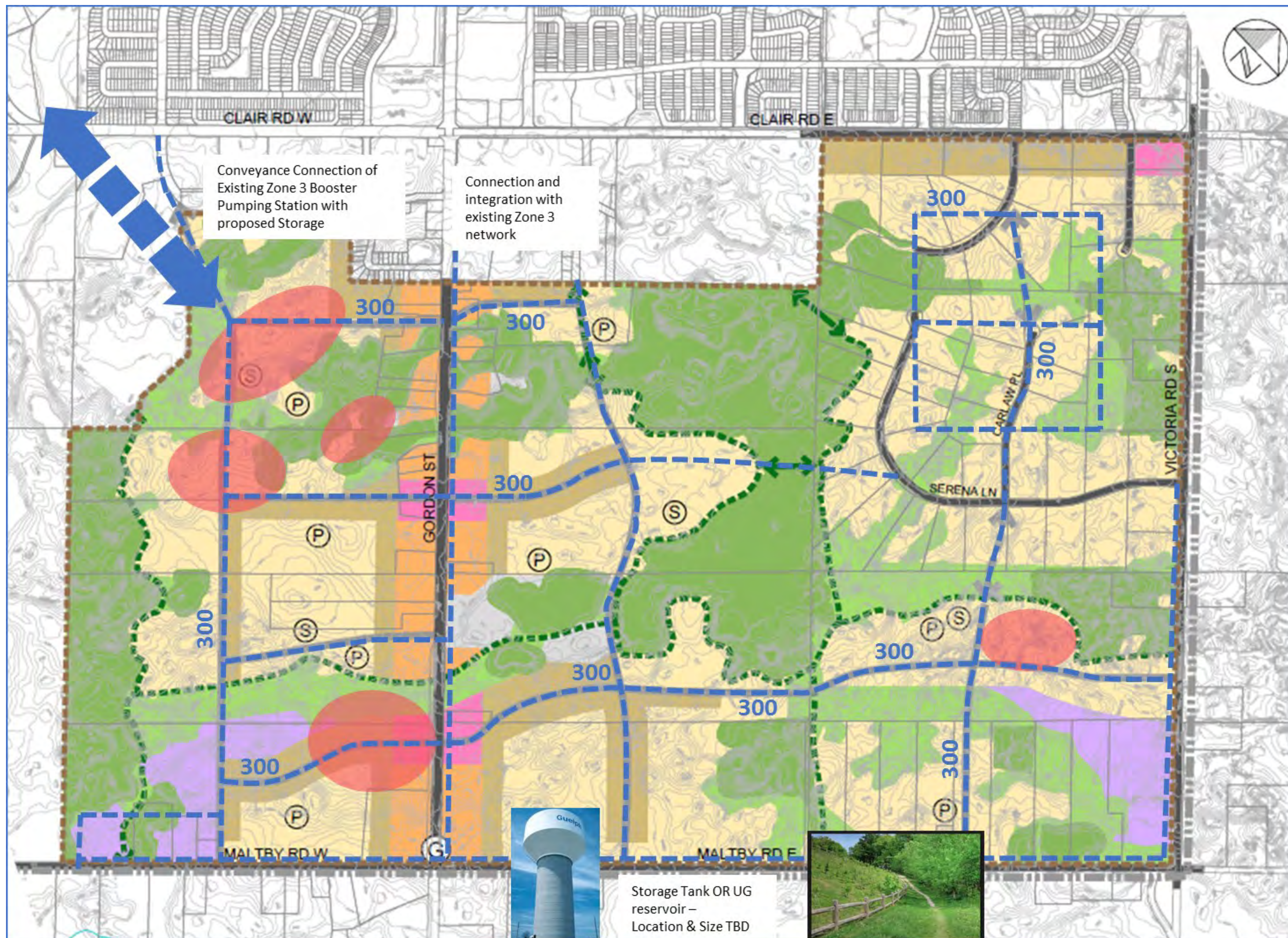
## Alternative System Configurations

- 1. Clair Gordon Trunk System**
  - a. use existing sewers no upgrades
  - b. use existing sewer routes with capacity upgrades
- 2. Southgate / Hanlon Trunk System**
  - a. use existing sewers no upgrades
  - b. use existing sewer routes with capacity upgrades
- 3. Victoria Trunk System**
  - a. use existing sewers no upgrades
  - b. use existing sewer routes with capacity upgrades





# WATER DISTRIBUTION



Water distribution is organized in pressure zones that are suitable for lands within a given geodetic elevation range.

The Clair Maltby Lands are higher in elevation than much of the rest of the City. The City's water distribution system is currently being expanded in the South Side of Guelph through a new pressure zone (Zone 3) that will operate at levels that are suitable for the Clair Maltby Lands.

Zone 3 is now live with pumping into the zone, however as demand increases in its service area, it will require storage to meet mandated operating requirements.

The high points within the Clair Maltby Lands are suitable locations for the implementation of elevated storage for the new pressure zone.



# WATER DISTRIBUTION ALTERNATIVES

## Alternative Approaches

- 1. Do Nothing** *A moratorium on new wastewater collection infrastructure*
- 2. Limit Growth** *Growth is limited to reduce demand and costs of operating and maintaining water infrastructure*
- 3. Service through Development of Zone 3 – New Storage & Transmission System expansion as per Current City – Wide Master Planning Context**

## Alternative System Configurations

### 1. New Storage & Transmission

a. Underground storage – in combination with pumps



b. Elevated Tank Storage – Floating





# COMMENTS AND NEXT STEPS

Please provide any additional comments about your vision for the Clair-Maltby area in the space below, using the post-it notes and pencils which have been provided.



Please provide your comments directly on the page using the Post-It Notes provided.

## **Next Steps:**

### **Charrette Public Meeting 2 - April 5**

An overview of the Preferred Community Structure and an opportunity to further refine the vision for Clair-Maltby

### **Charrette Public Meeting 3 - April 9**

A presentation of the final Preferred Community Structure and more detailed information regarding built form, streets, blocks, and the open space system.

Following the charrette, the Preferred Community Structure will go to City Council for approval in June 2018.





# WELCOME

Thank you for attending tonight's Public Workshop.

Your feedback is important to us and will help in evaluating the Community Structure Alternatives.

- |   |                |
|---|----------------|
| 1 View Display Boards                   | 6:00 - 7:00 pm |
| 2 Presentation                          | 7:00 - 7:30pm  |
| 3 Workshop - Evaluation of Alternatives | 7:30 - 8:30 pm |
| 4 Report Back & Next Steps              | 8:30 - 9:00 pm |

## Contact Us

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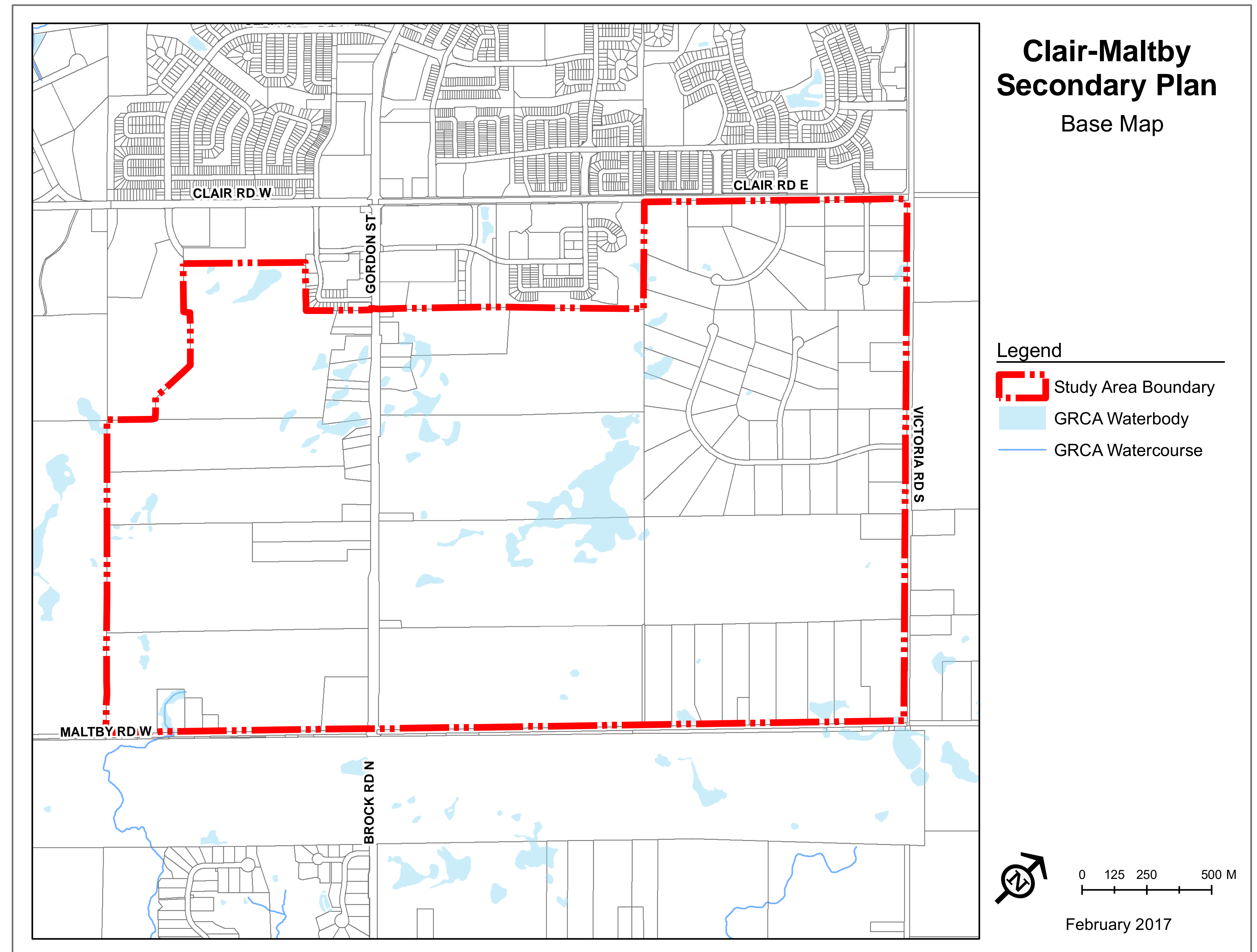


# THE SECONDARY PLAN

The Clair-Maltby Secondary Plan (CMSP) and Master Environmental Servicing Plan (MESP) process provides an integrated approach to advance the development of the CMSP Area.

The approach integrates land use, environment, transportation and servicing studies/plans to guide the Secondary Plan.

The Secondary Plan Area is bounded by Clair Road, Victoria Road South, Maltby Road, and Poppy Drive.





# STUDY PURPOSE AND SCHEDULE

Clair-Maltby is the last unplanned greenfield area within the city. The City of Guelph is undertaking the Clair-Maltby Secondary Plan and Master Environmental Servicing Plan (MESP) Study to establish a plan for future development in the area.

The Clair-Maltby Secondary Plan and the MESP are being developed simultaneously to provide an integrated planning approach within the Study Area. Comments from our community engagement sessions will be analyzed alongside land use, environment, mobility and servicing studies for a comprehensive review of the Clair-Maltby Secondary Plan Area and its needs.

Your input will provide critical guidance for the preferred community structure, which will be developed through the design charrette.





# THE CHARETTE

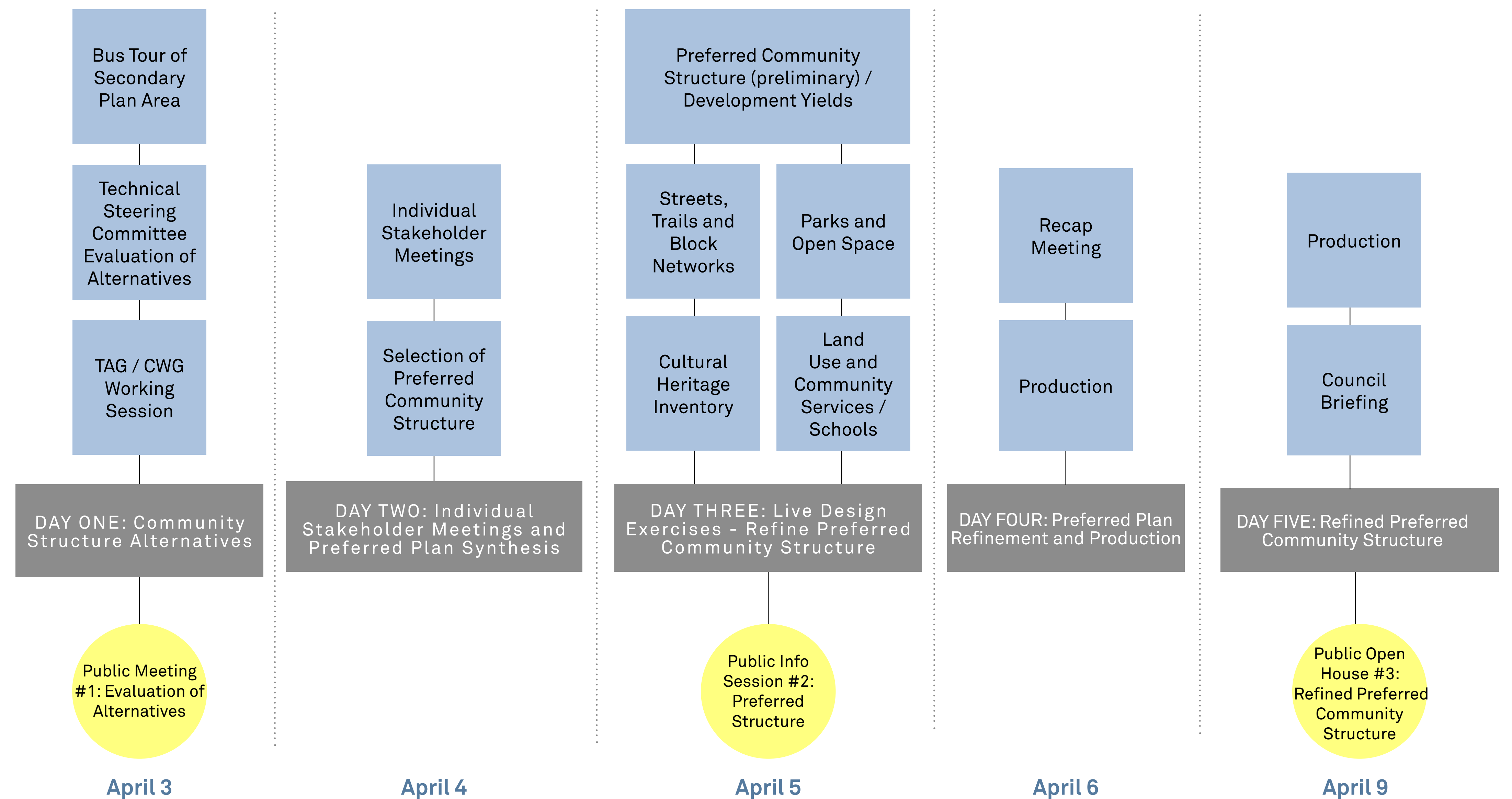
A charrette is an intensive, multi-disciplinary workshop with the aim of developing a design or vision for a project or planning activity. Charrettes are often conducted to design such things as parks and buildings, or to plan communities or transportation systems.

The purpose of the charrette is to create an implementable Preferred Community Structure for the Secondary Plan Area that reflects good planning and the input from the community and stakeholders.

As part of the charrette process potential versions of all elements required for the Preferred Community Structure including environment, mobility, urban design and servicing will be considered.

The charrette will be a collaborative 5-day exercise focused on creating an implementable solution.

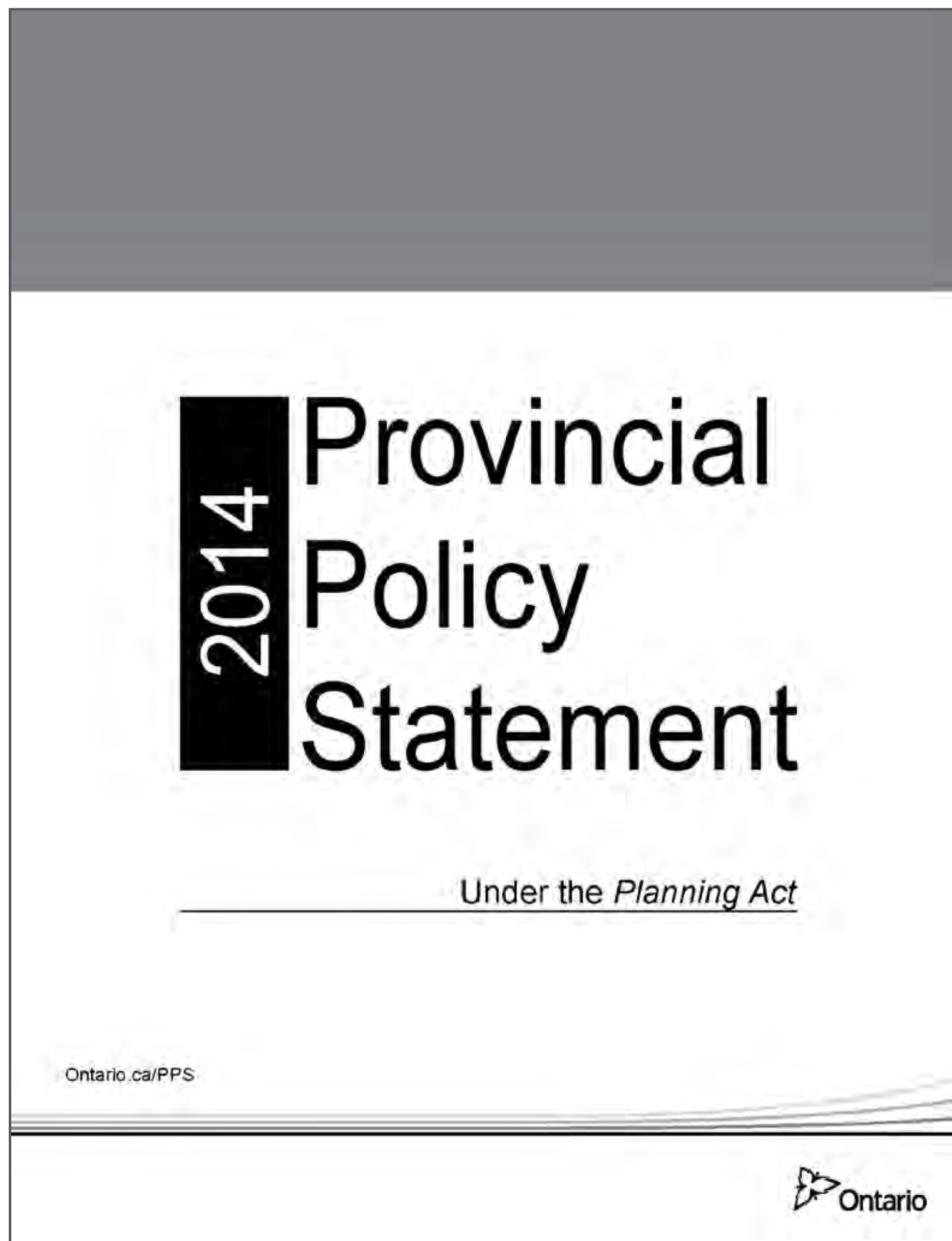
## DESIGN CHARRETTE OVERVIEW





# GUIDING DOCUMENTS

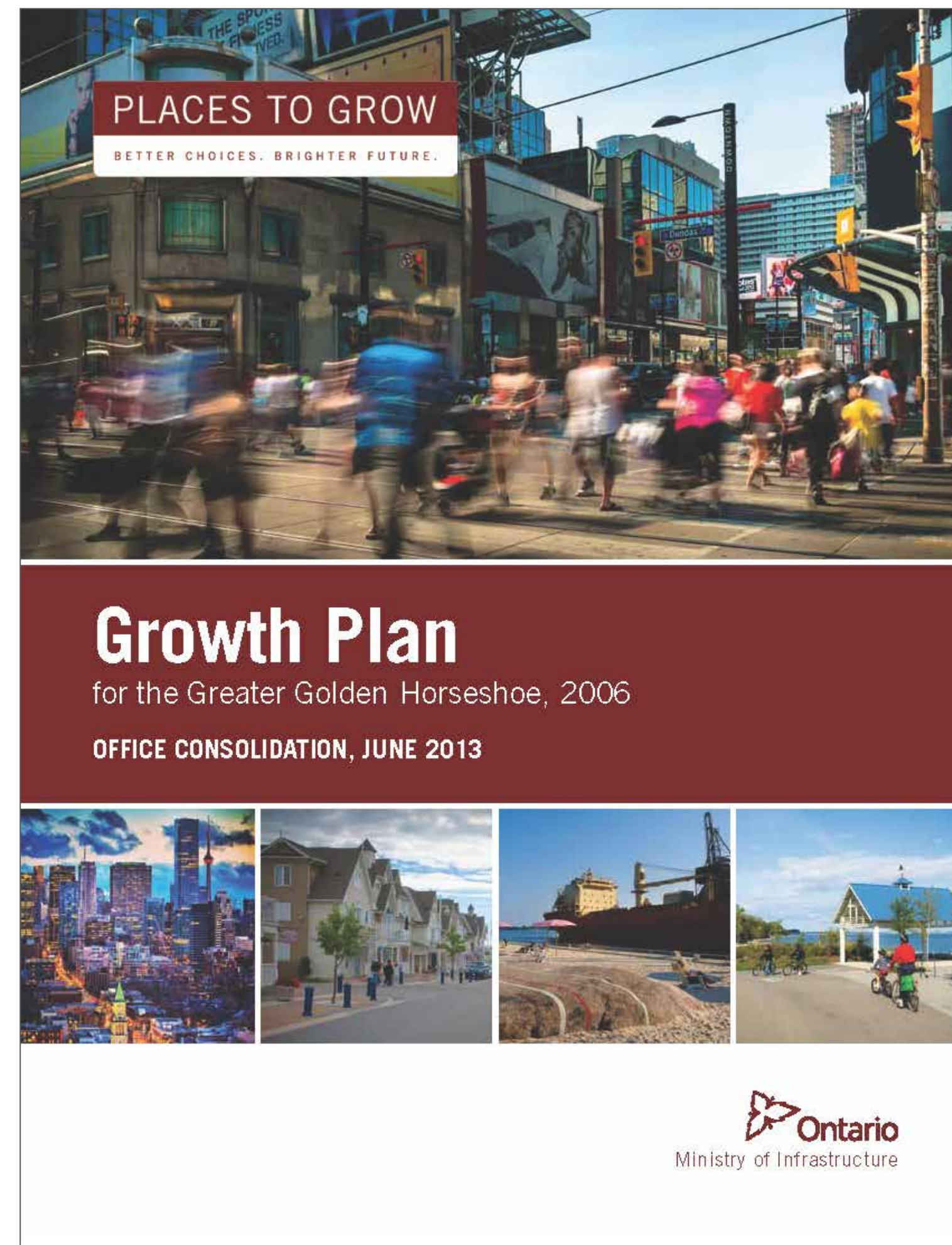
## Provincial Policy Statement (PPS)



Relevant themes include:

- Creating strong, livable and healthy communities;
- Protecting the environment, public health and safety; and
- Facilitating economic growth.

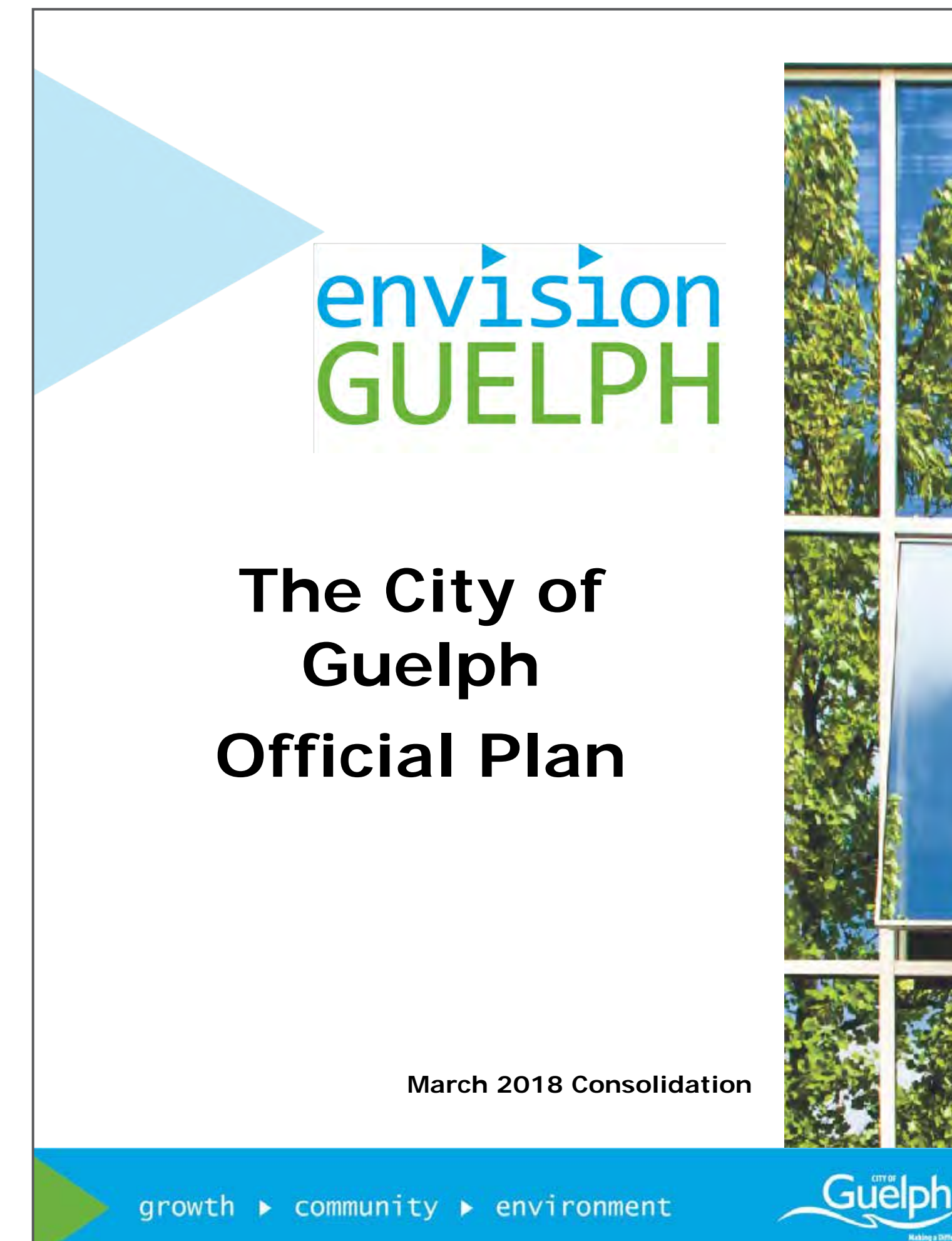
## Places to Grow: Growth Plan for the Greater Golden Horseshoe



Relevant themes include:

- Growth management directions;
- Greenfield residential targets; and
- People/jobs density targets.

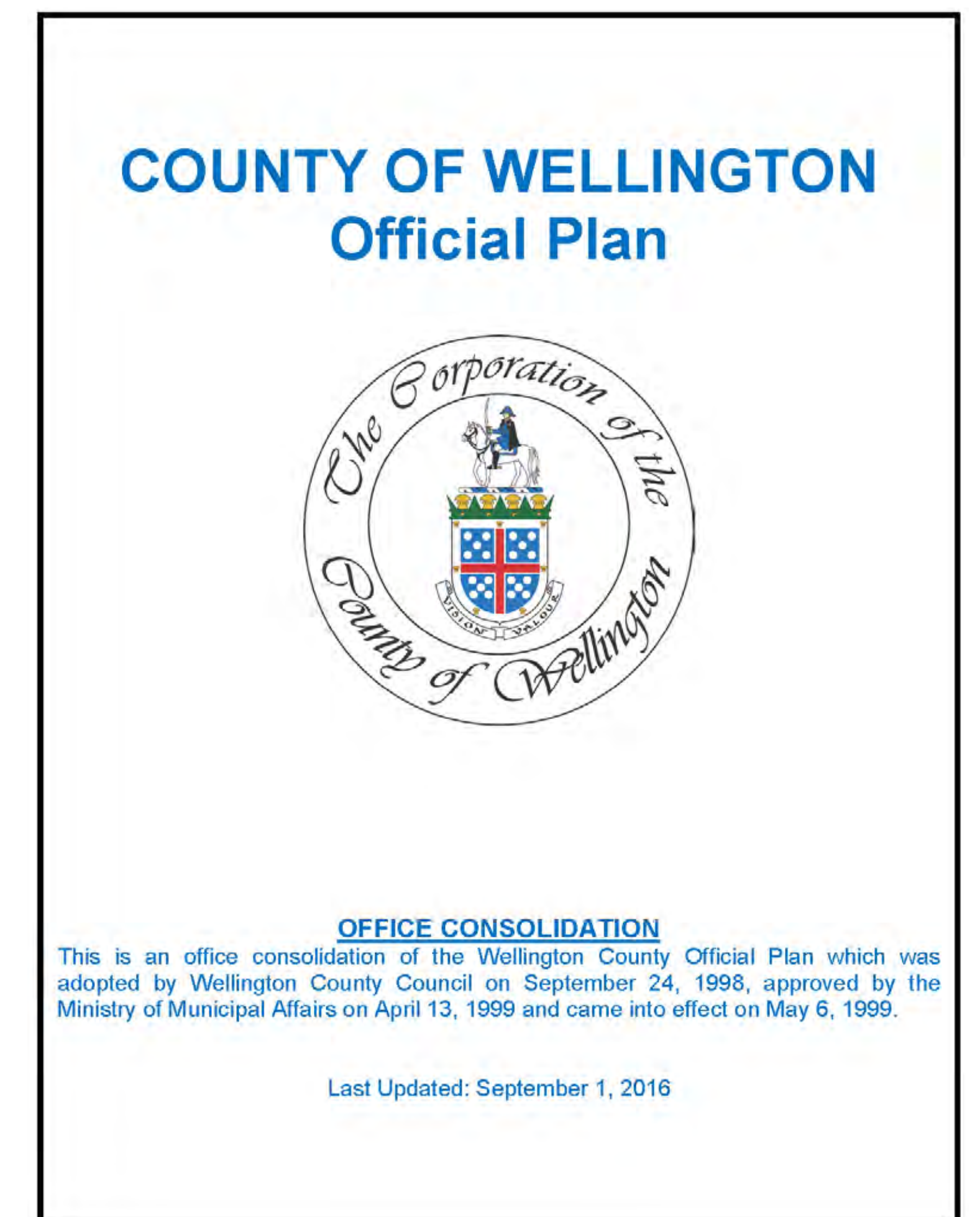
## City of Guelph Official Plan



Relevant themes include:

- Complete communities;
- Protection of the Natural Heritage System;
- Multimodal transportation system;
- Environmental and built form sustainability;
- Varied and affordable housing types; and
- Conservation of built and cultural heritage and archaeological resources.

## Wellington County Official Plan (relevant to adjacent lands)



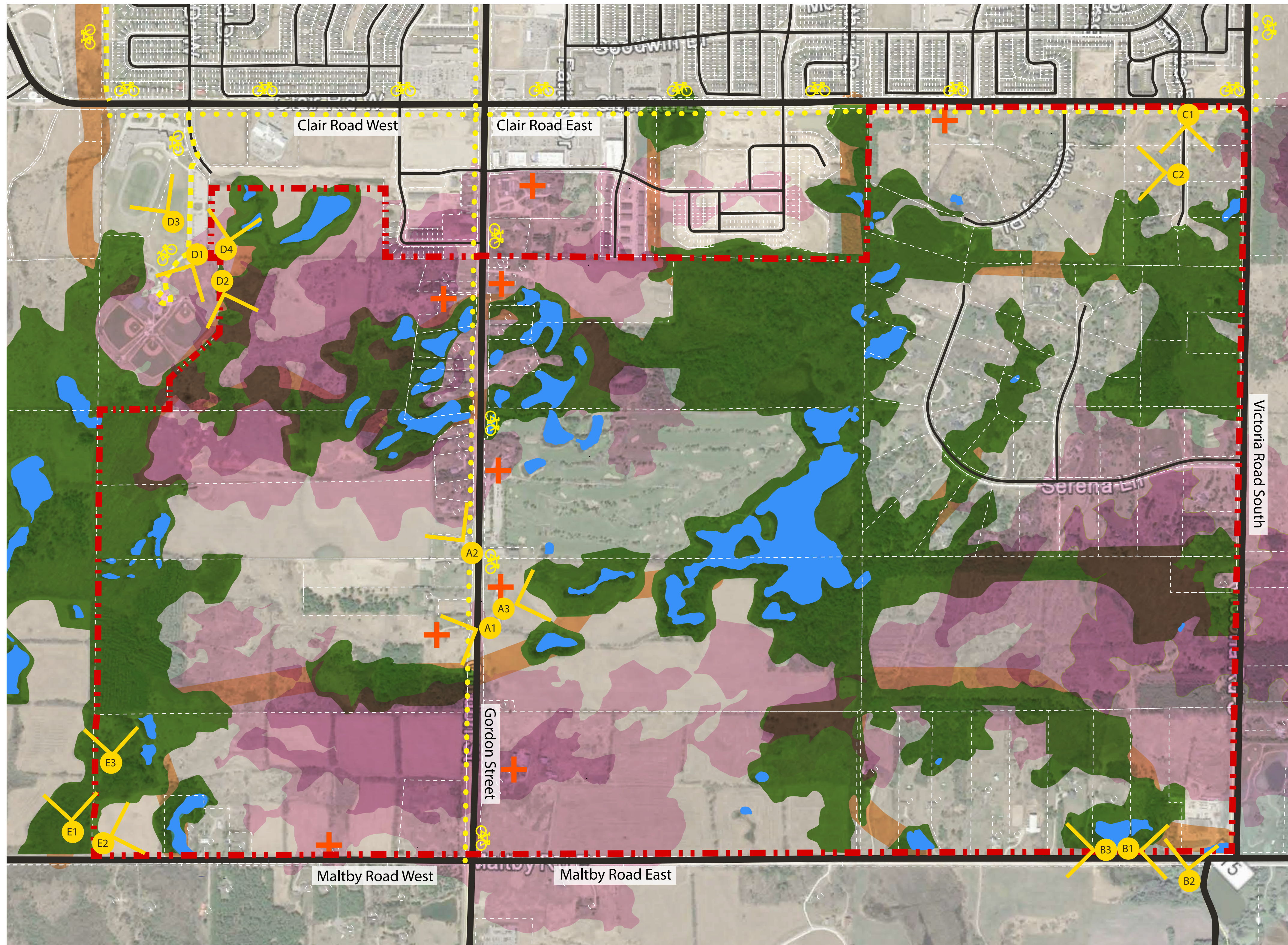
Relevant themes include:

- Land use designations and policies;
- Gordon Street Extension; and
- Significant Drinking Water Threat policies.



# EXISTING CONDITIONS

Existing Conditions Map



## Central Views



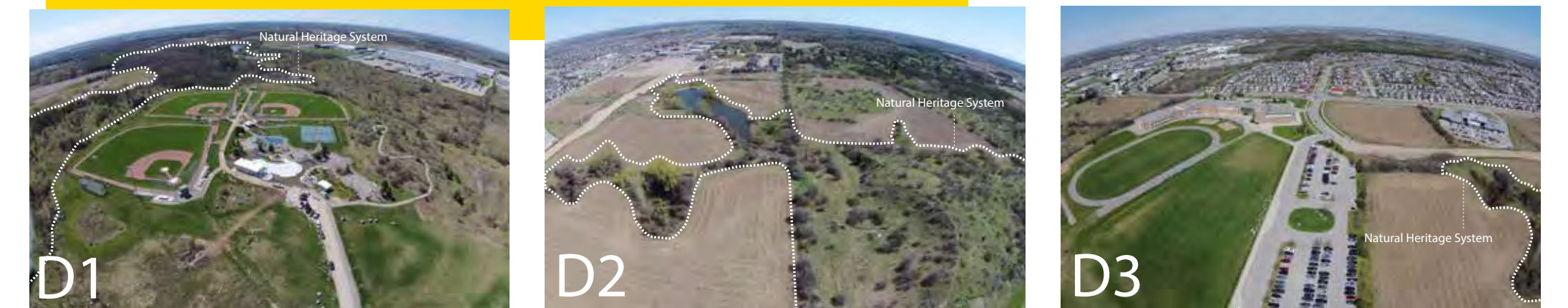
## South East Views



## North East Views



## North West Views



## South West Views



### Legend

- Existing Roads
- Paris Moraine
- Clair Maltby Secondary Plan Boundary
- Natural Heritage System
- Significant Natural Areas and Natural Areas
- Ecological Linkages
- Water Bodies
- Bike Lanes
- Bike Lane or Paved Shoulders
- Off Road Bike Route
- ✚ Built Heritage Resources
- 📷 Drone Views

1 Km



# VISION AND GUIDING PRINCIPLES

## Vision:

Clair-Maltby will be a vibrant, urban community that is integrated with Guelph's southern neighbourhoods, as well as having strong connections to Downtown, employment areas and the rest of the City.

The Natural Heritage System and the Paris Moraine provide the framework for the balanced development of interconnected and sustainable neighbourhoods.

This area will be primarily residential in character with a full range and mix of housing types and a variety of other uses that meet the needs of all residents.

A system of parks, open spaces and trails will be interwoven throughout to provide opportunities for active and passive recreation.

## Guiding Principles:



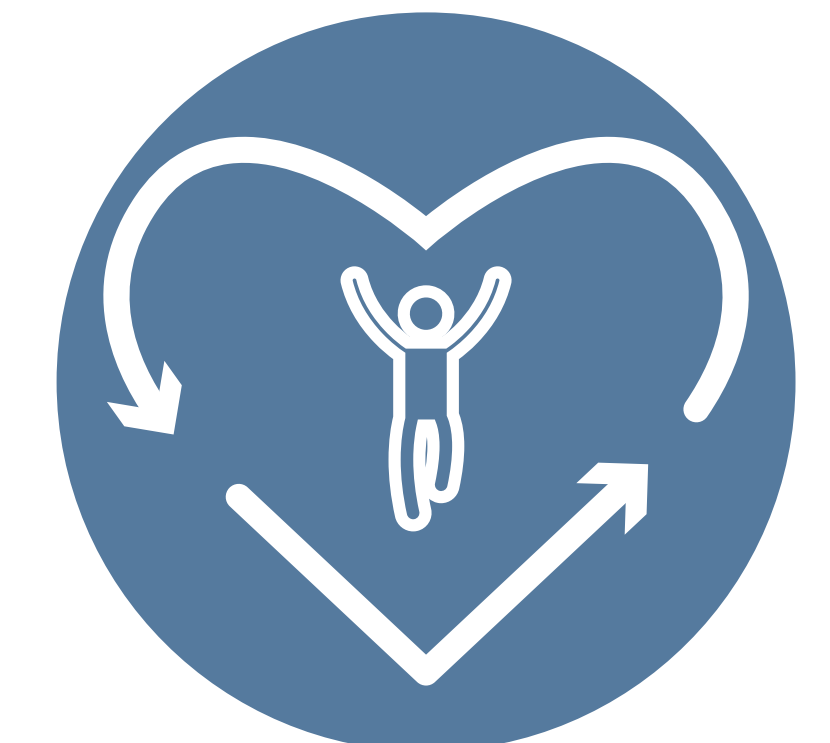
### Vibrant and Urban

Create identifiable urban neighbourhoods that are pedestrian oriented and human-scaled.  
Promote forward-thinking and innovative design that integrates new development into the rolling topography, while conserving significant cultural heritage resources.



### Green and Resilient

Protect, maintain, restore, and where possible, improve water resources and the Natural Heritage System.  
Support resiliency and environmental sustainability through measures such as energy efficiency, water conservation and green infrastructure.



### Healthy and Sustainable

Design the community for healthy, active living.  
Provide a mix of land uses including a diversity of housing choices at appropriate densities with appropriate municipal services to ensure long-term sustainable development which is fiscally responsible.



### Interconnected and Interwoven

Establish a multi-modal mobility network that provides choice and connects neighbourhoods to each other and the rest of the City.  
Create a network of parks, open spaces and trails to provide opportunities for active and passive recreation, as well as active transportation choices.

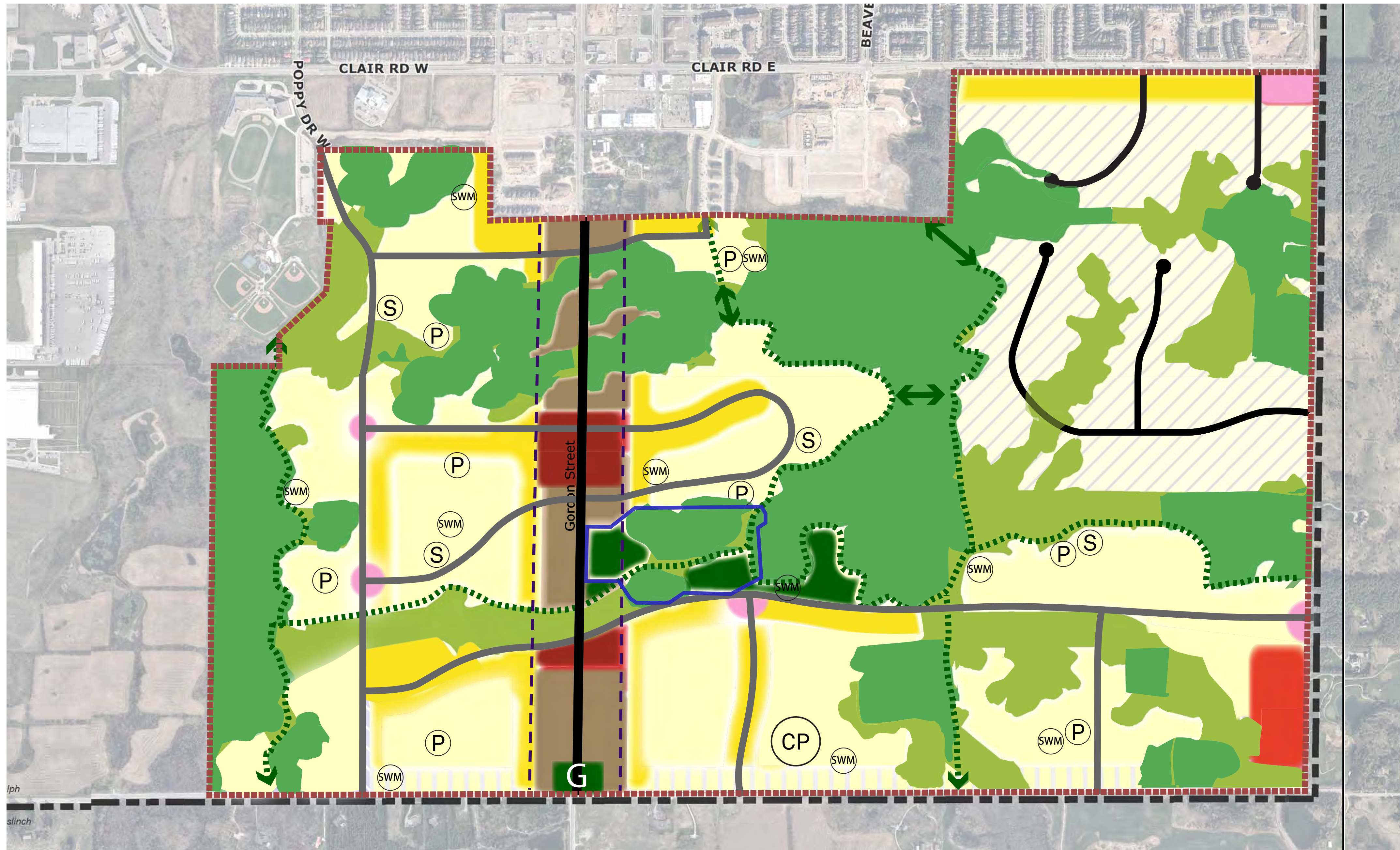


### Balanced and Liveable

A valued and livable community which reflects the right balance between protecting the environment and fostering a healthy, equitable and complete community.

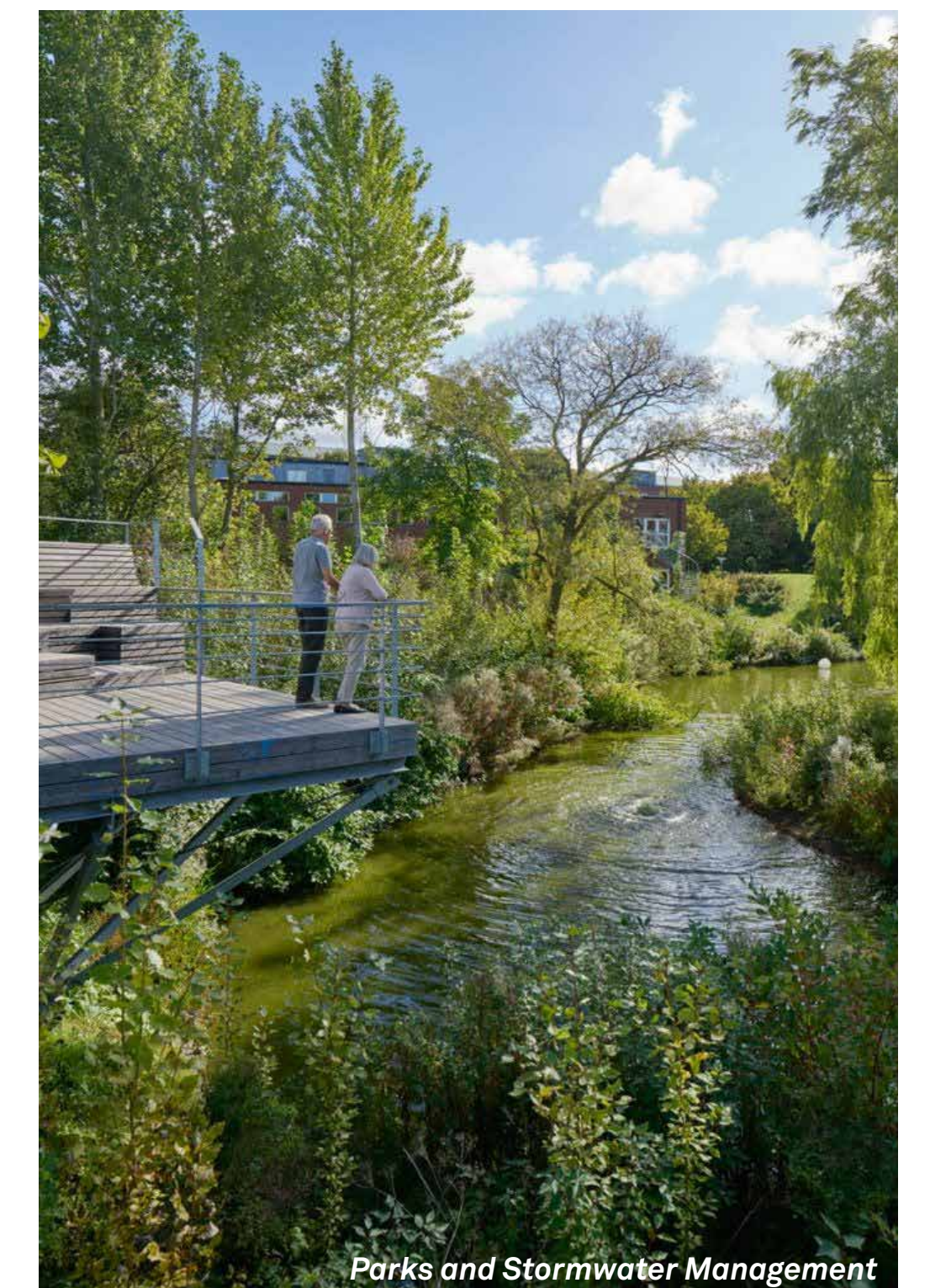


# ALTERNATIVE 1: FEATURING THE GREEN



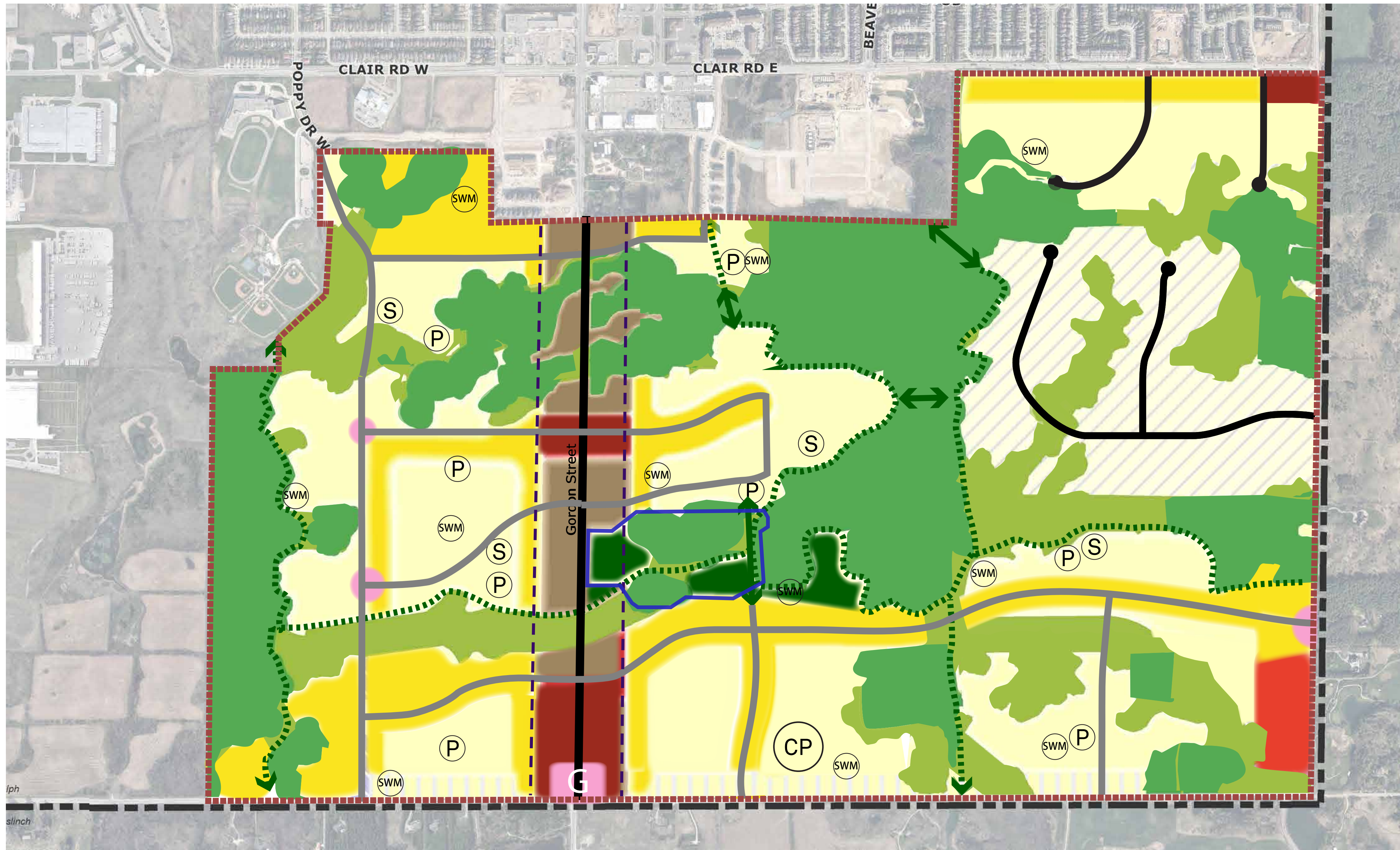
## LEGEND

- |   |  |  |   |  |
|---|--|--|---|--|
| <ul style="list-style-type: none"> <li>▬ Clair-Maltby Secondary Plan Boundary</li> <li>▬ Cultural Heritage Landscape</li> <li>▬ Urban-Rural Transition Zone</li> <li>▬ Gordon St. Corridor</li> </ul> | <ul style="list-style-type: none"> <li>▬ Existing Street Network</li> <li>▬ Proposed Street and Cycling Network</li> <li>▬ Proposed Trail Network</li> <li>↔ Potential Active Transportation Link</li> </ul> | <ul style="list-style-type: none"> <li>(P) Neighbourhood Park</li> <li>(CP) Community Park</li> <li>(S) Elementary School</li> <li>(SWM) Stormwater Management</li> <li>(G) Gateway</li> </ul> | <p>Natural Heritage System:</p> <ul style="list-style-type: none"> <li>▬ May Permit Essential Transportation Infrastructure</li> <li>▬ Does Not Permit Transportation Infrastructure</li> </ul> | <p>Land Use:</p> <ul style="list-style-type: none"> <li>▬ Low Density (Residential)</li> <li>▬ Medium Density (Residential)</li> <li>▬ High Density (Residential)</li> <li>▬ Mixed Use</li> <li>▬ Neighbourhood Commercial</li> <li>▬ Service Commercial</li> <li>▬ Rolling Hills Residential</li> <li>▬ Open Space</li> </ul> |
|---|--|--|---|--|





# ALTERNATIVE 2: FOCUS ON COMMUNITY SERVICES



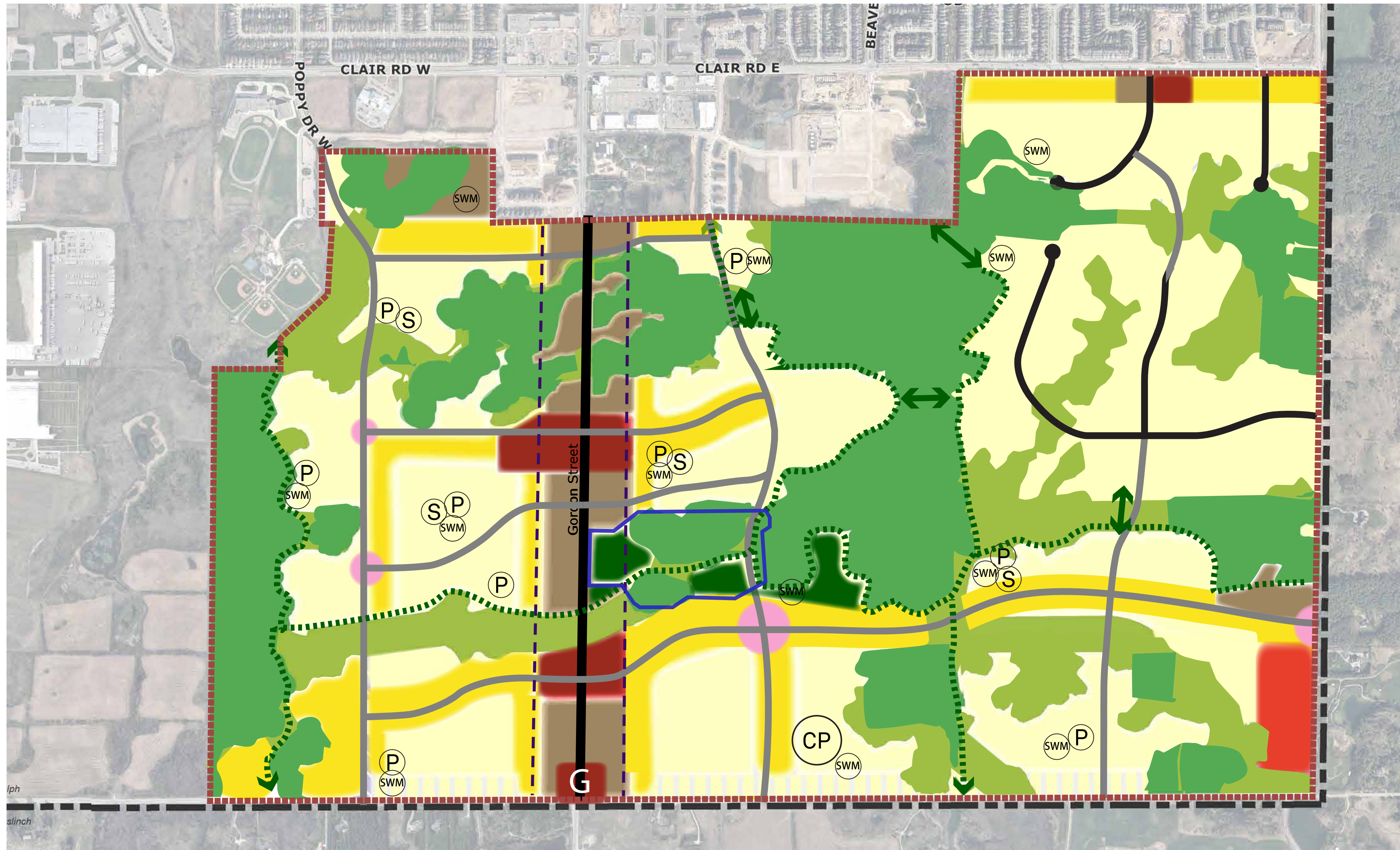
## LEGEND

<ul style="list-style-type: none"> <li>▬ Existing Street Network</li> <li>▬ Proposed Street and Cycling Network</li> <li>▬ Cultural Heritage Landscape</li> <li>Urban-Rural Transition Zone</li> <li>▬ Gordon St. Corridor</li> </ul>	<ul style="list-style-type: none"> <li>(P) Neighbourhood Park</li> <li>(CP) Community Park</li> <li>(S) Elementary School</li> <li>(SWM) Stormwater Management</li> <li>(G) Gateway</li> </ul>	<p>Natural Heritage System:</p> <ul style="list-style-type: none"> <li>▬ May Permit Essential Transportation Infrastructure</li> <li>▬ Does Not Permit Transportation Infrastructure</li> </ul>	<p>Land Use:</p> <ul style="list-style-type: none"> <li>▬ Low Density (Residential)</li> <li>▬ Medium Density (Residential)</li> <li>▬ High Density (Residential)</li> <li>▬ Mixed Use</li> <li>▬ Neighbourhood Commercial</li> <li>▬ Service Commercial</li> <li>▬ Rolling Hills Residential</li> <li>▬ Open Space</li> </ul>
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# ALTERNATIVE 3: URBAN AND CONNECTED



## LEGEND

- ▬▬▬ Clair-Maltby Secondary Plan Boundary
- ▬ Cultural Heritage Landscape
- ▬ Urban-Rural Transition Zone
- ▬ Gordon St. Corridor

- ▬ Existing Street Network
- ▬ Proposed Street and Cycling Network
- ▬ Proposed Trail Network
- ↔ Potential Active Transportation Link

- (P) Neighbourhood Park
- (CP) Community Park
- (S) Elementary School
- (SWM) Stormwater Management
- (G) Gateway

- Natural Heritage System:
- ▬ May Permit Essential Transportation Infrastructure
  - ▬ Does Not Permit Transportation Infrastructure

- Land Use:
- ▬ Low Density (Residential)
  - ▬ Medium Density (Residential)
  - ▬ High Density (Residential)
  - ▬ Mixed Use
  - ▬ Neighbourhood Commercial
  - ▬ Service Commercial
  - ▬ Rolling Hills Residential
  - ▬ Open Space





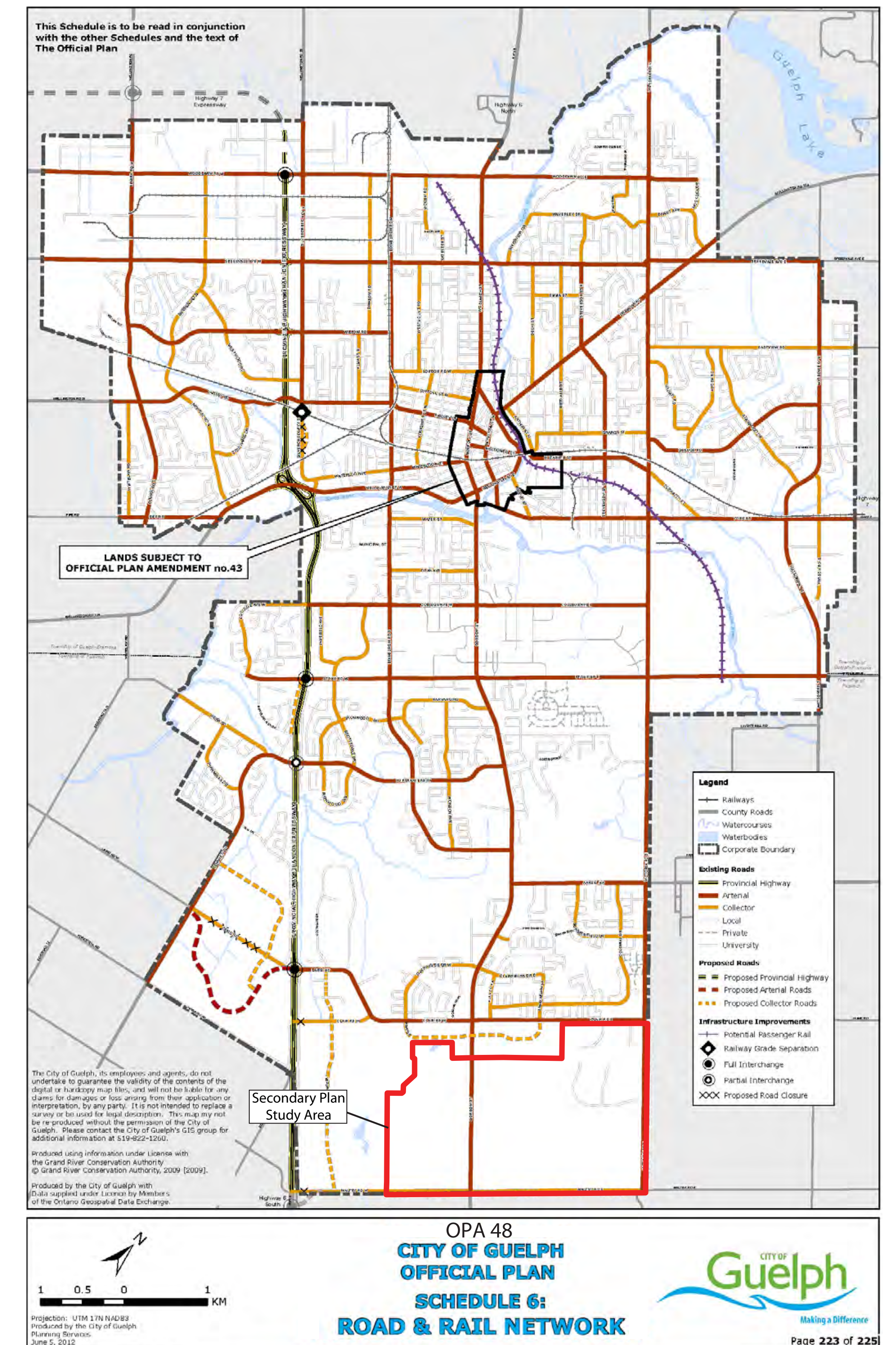
# GUELPH WELLINGTON TRANSPORTATION STUDY

## Key Improvements in Secondary Plan Area:

- Widening of Gordon Street from 2 to 4 lanes (approved 2001 EA) from Kortright Road to Wellington Road 34;
- Widening of Clair Road from 2 to 4 lanes (approved 2003 EA) - COMPLETE
- Southerly extension of Southgate Drive to Maltby Road; and
- Development of an internal collector road system within the Clair-Maltby Secondary Plan area connecting to Gordon Street and Maltby Road

## Other Key Studies Informing the Transportation Network:

- Guelph Active Transportation Network Study
- Bicycle Friendly Guelph: Cycling Master Plan
- Guelph Transit, Transit Growth Strategy and Plan
- Guelph Trails Master Plan
- Wellington County Active Transportation Plan
- Various Environmental Assessments (i.e. Gordon Street, Victoria Road)





# TRANSPORTATION NETWORK CONSIDERATIONS

## Existing Travel Behaviour

TABLE 3 SOUTH GUELPH AREA:  
PEAK PERIOD TRIP DISTRIBUTION BY TRAVEL MODE

Destination Area	Proportion of All Trips	Mode Split	Legend
Local Area <sup>1</sup>	50%		<b>Travel Mode</b> 
Rest of Guelph (7% Downtown)	26%		
Halton / Peel Regions	7%		
Waterloo Region	7%		
City of Toronto	3%		

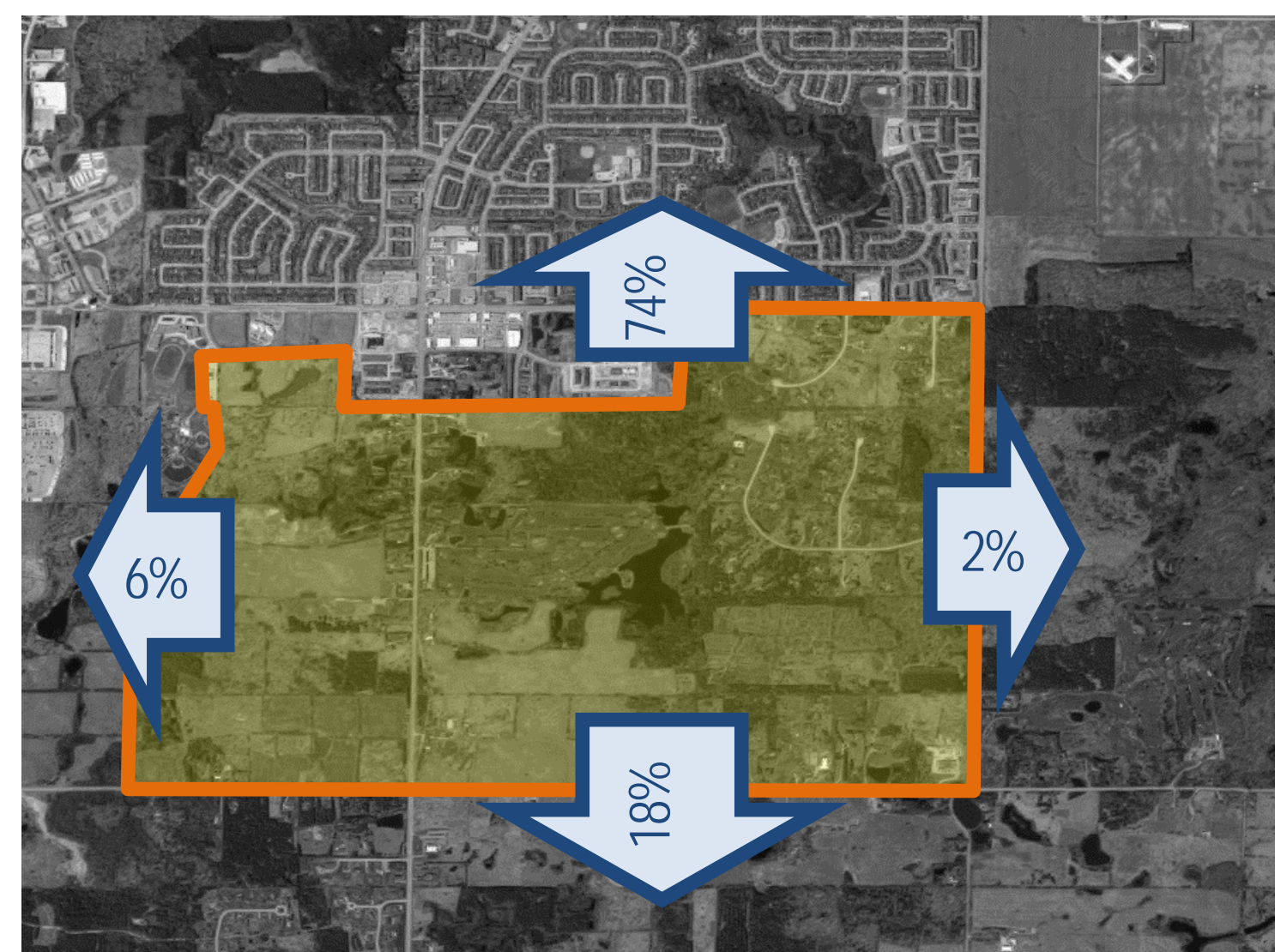
Note:  
1. "Local area" consists of areas within the City of Guelph south of the Eramosa River.  
2. Another 7% of trips are oriented to "other" areas in the region, including Wellington County, City of Hamilton, etc.

## Travel Orientation and Primary Travel Mode

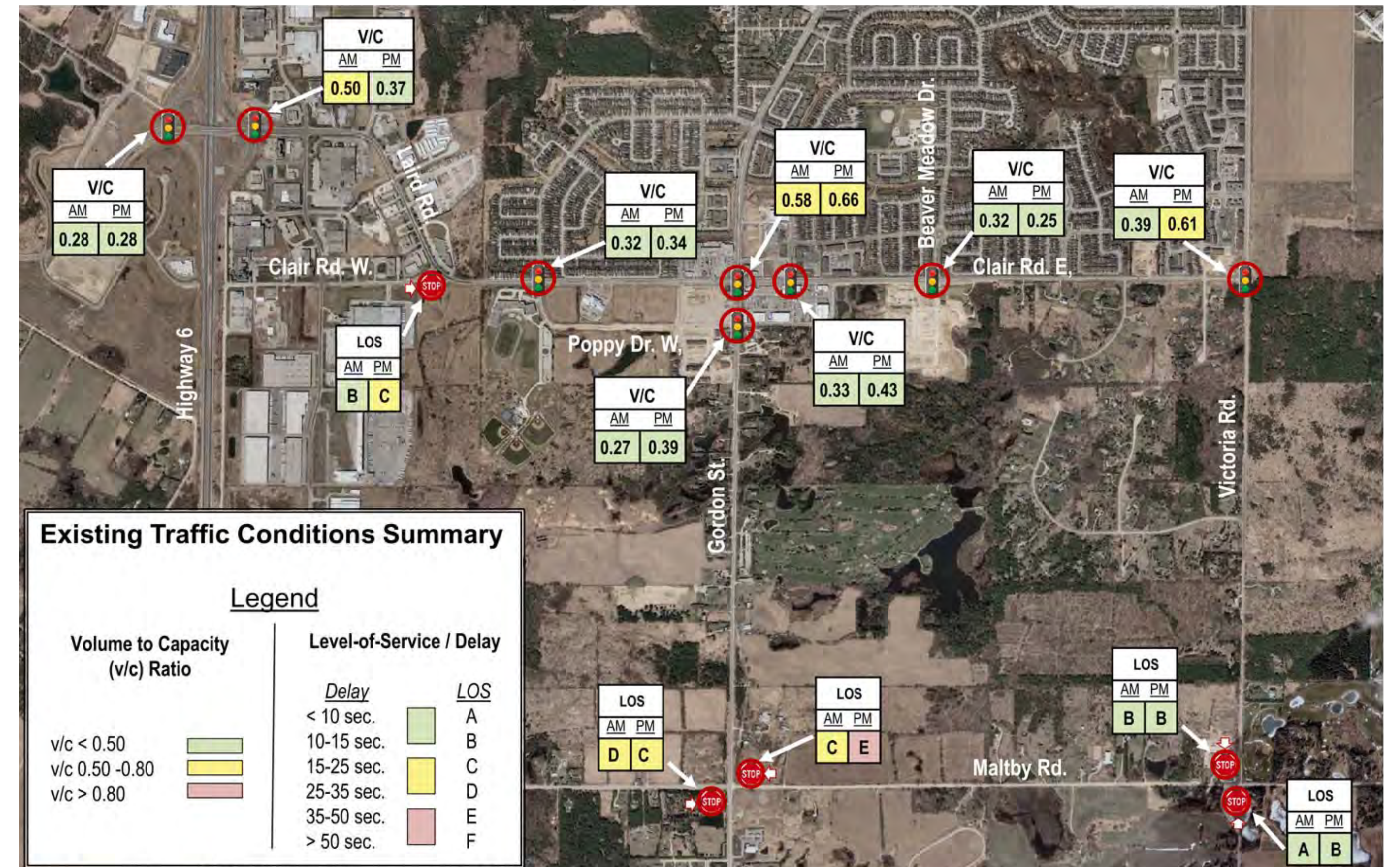
- Approx. 75% of trips stay within the City of Guelph.
- Most trips are undertaken in a private vehicle (86% of trips in Guelph; 88% overall).

## General Traffic Distribution

- Approx. 75% of local area traffic volumes are anticipated to be oriented north of the study area.



## Existing Traffic Conditions



## Existing Weekday Peak Hour Area Traffic Operations

- Acceptable traffic operations at area signalized intersections under existing conditions.
- Gordon Street / Clair Road intersection can be busy during peak travel periods under existing conditions.
- Eastbound and westbound movements at Gordon Street / Maltby Road can experience longer delays.
- Other unsignalized intersections operate acceptably under existing conditions.



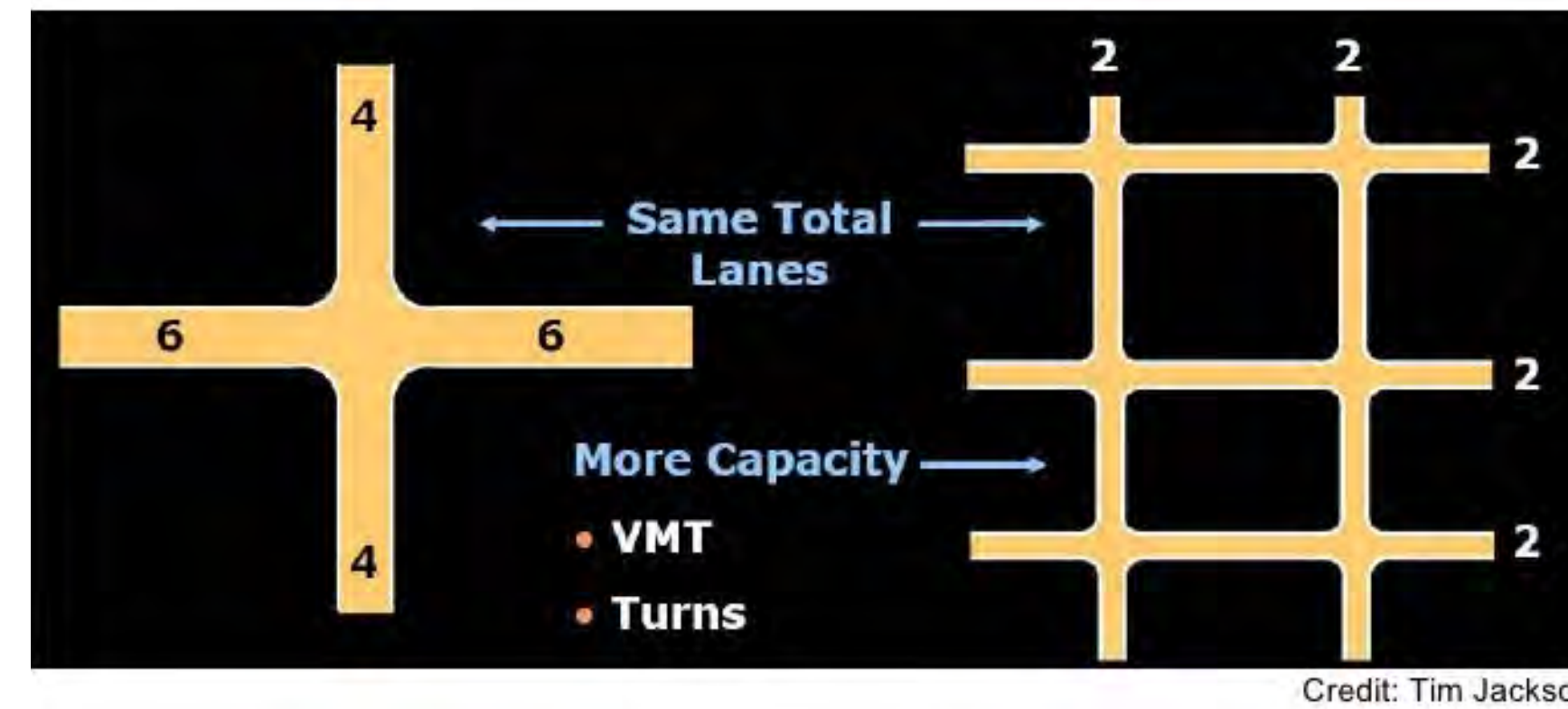
# TRANSPORTATION NETWORK CONSIDERATIONS

## Principles of Transportation Network:

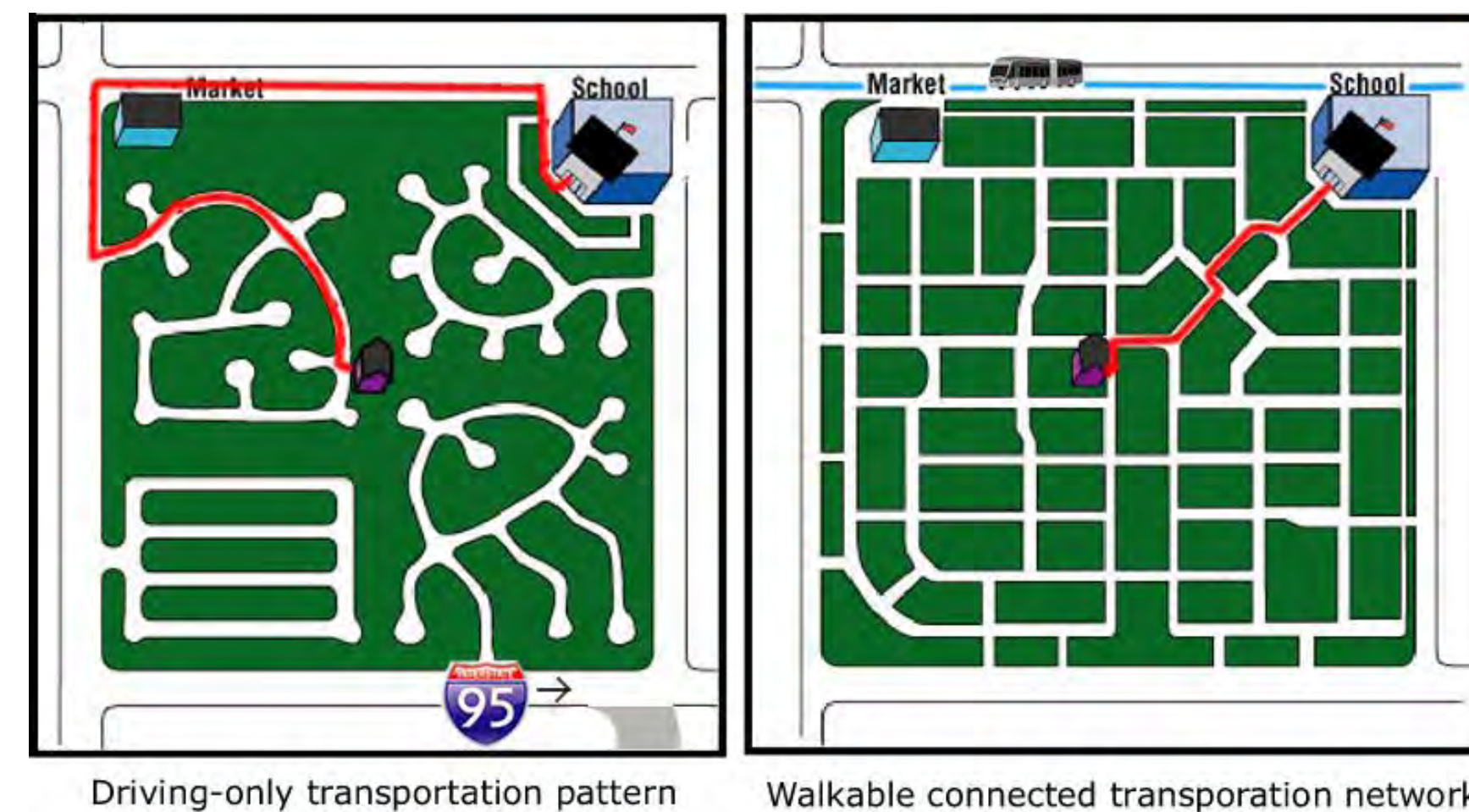
1. Provide flexibility, redundancy, and continuity;
2. Support transit service operations;
3. Support multi-modal transportation;
4. Enhance connectivity for all travel modes;
5. Provide robust and frequent connectivity internal to the neighbourhood, and to adjacent neighbourhoods; and
6. Respect natural heritage features.

## Some Benefits of a Well-Planned Street Network:

### 1. Street capacity



### 2. Walkability

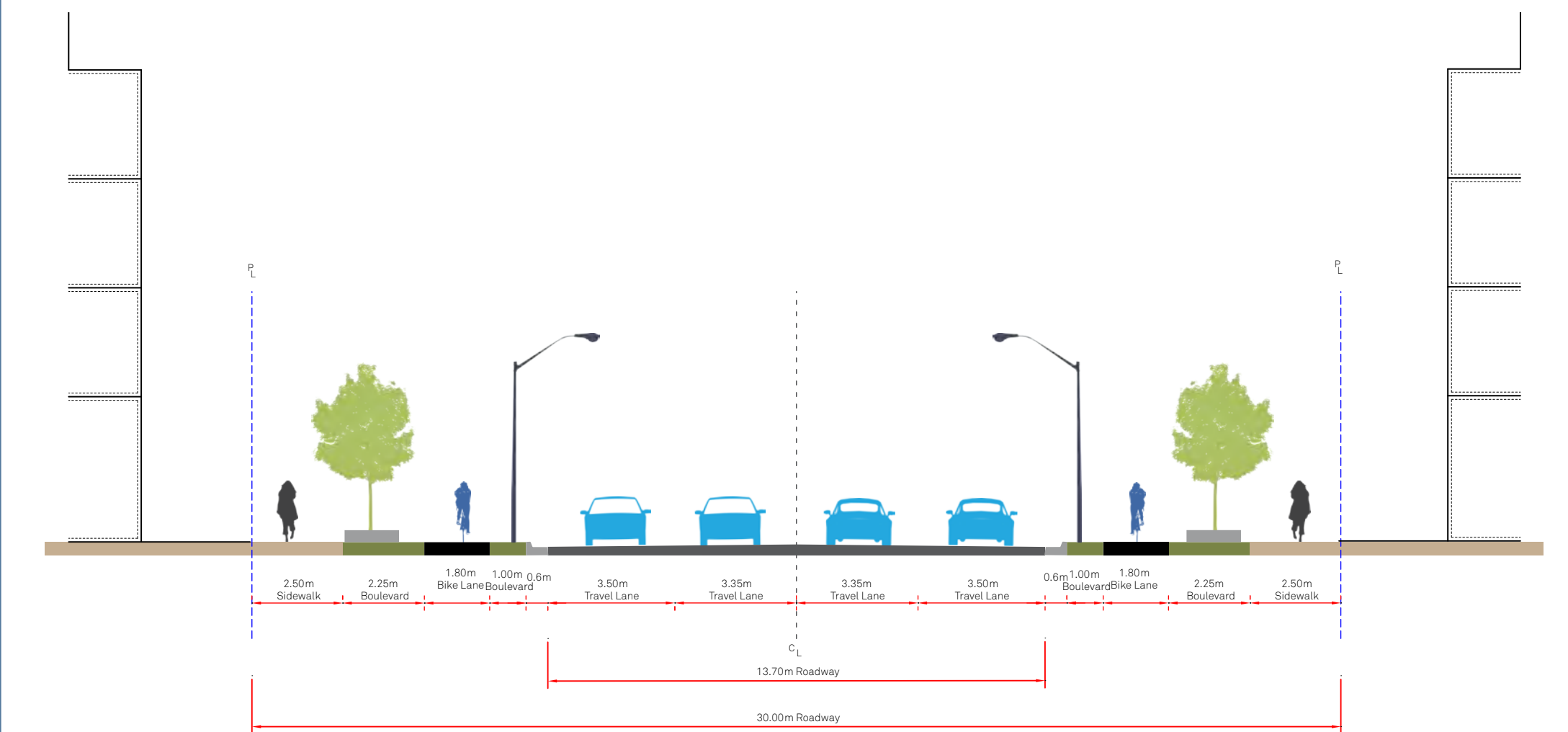


### 3. Safety

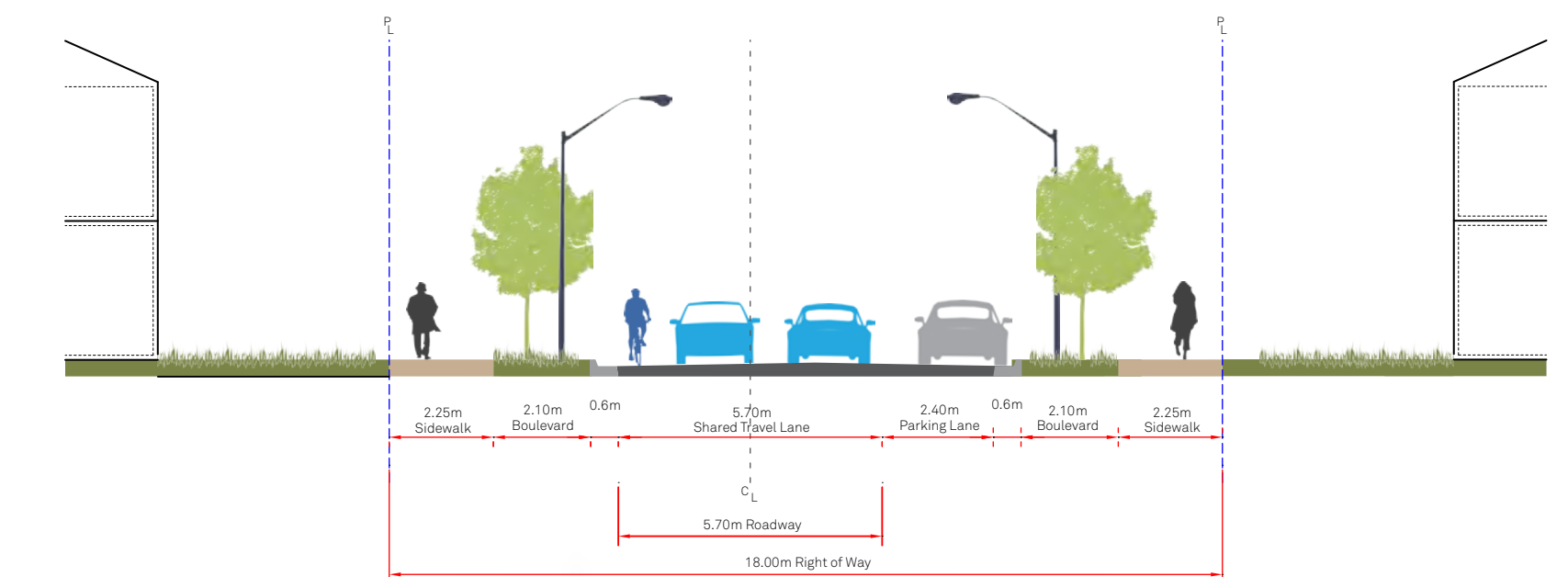
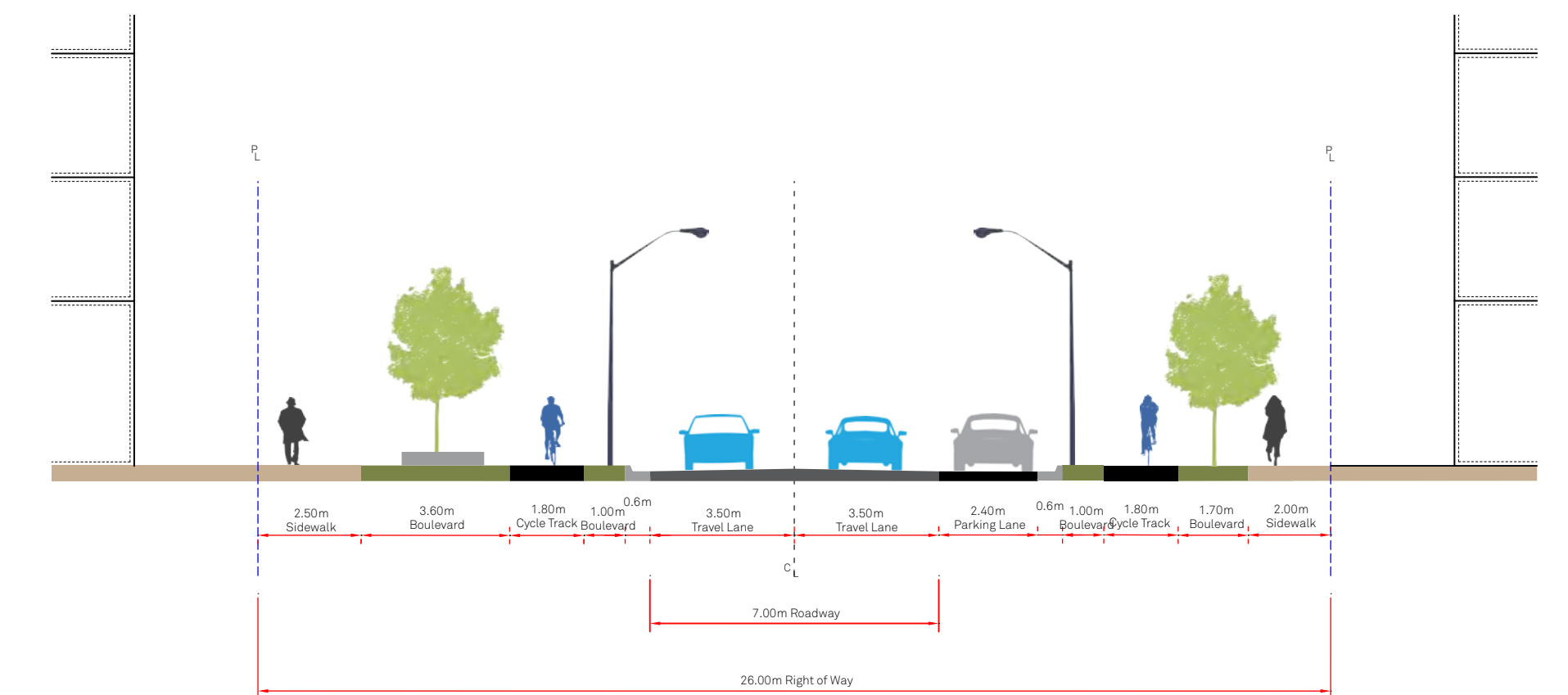
- Accommodate all street users
- Reduce street crossing distances
- Reduce vehicle speeds

## Examples of New Potential Street Cross Sections

### 1. Arterial Street



### 2. Collector Street

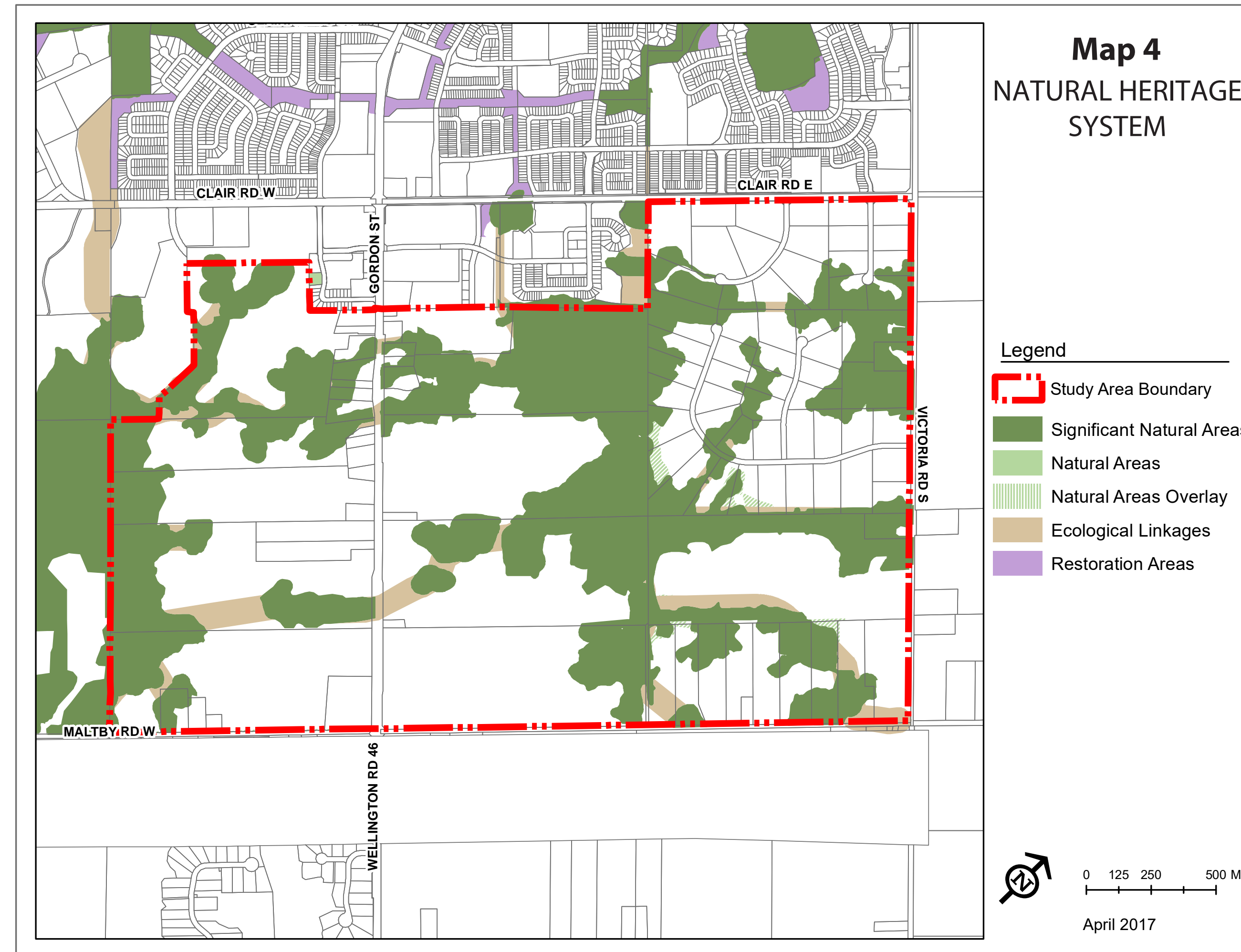




# NATURAL HERITAGE SYSTEM

A Natural Heritage System (NHS) already exists for the Secondary Plan Area. This NHS is mapped and described in the City's current Official Plan. It is based on the technical work and consultations undertaken as part of the City's Natural Heritage Strategy (2004 – 2009). This NHS was approved by Council (Official Plan Amendment 42) in 2010, and was refined and finalized by the Ontario Municipal Board's approval of the City's Official Plan Amendment 42 in 2014. This is the NHS shown in the various maps presented as part of this charrette.

The purpose of the natural heritage work undertaken through the Clair-Maltby Secondary Plan process has been to verify and update the NHS, as needed, based on relevant changes to existing conditions and application of current legislation, policies and guidelines. A work plan for these updates was developed in consultation with the City and key stakeholders.



467 species of plants can be found in the Clair-Maltby Secondary Plan Area



7 species of frog and 1 species of toad can be found in the Clair-Maltby Secondary Plan Area



112 species of birds can be found in the Clair-Maltby Secondary Plan Area



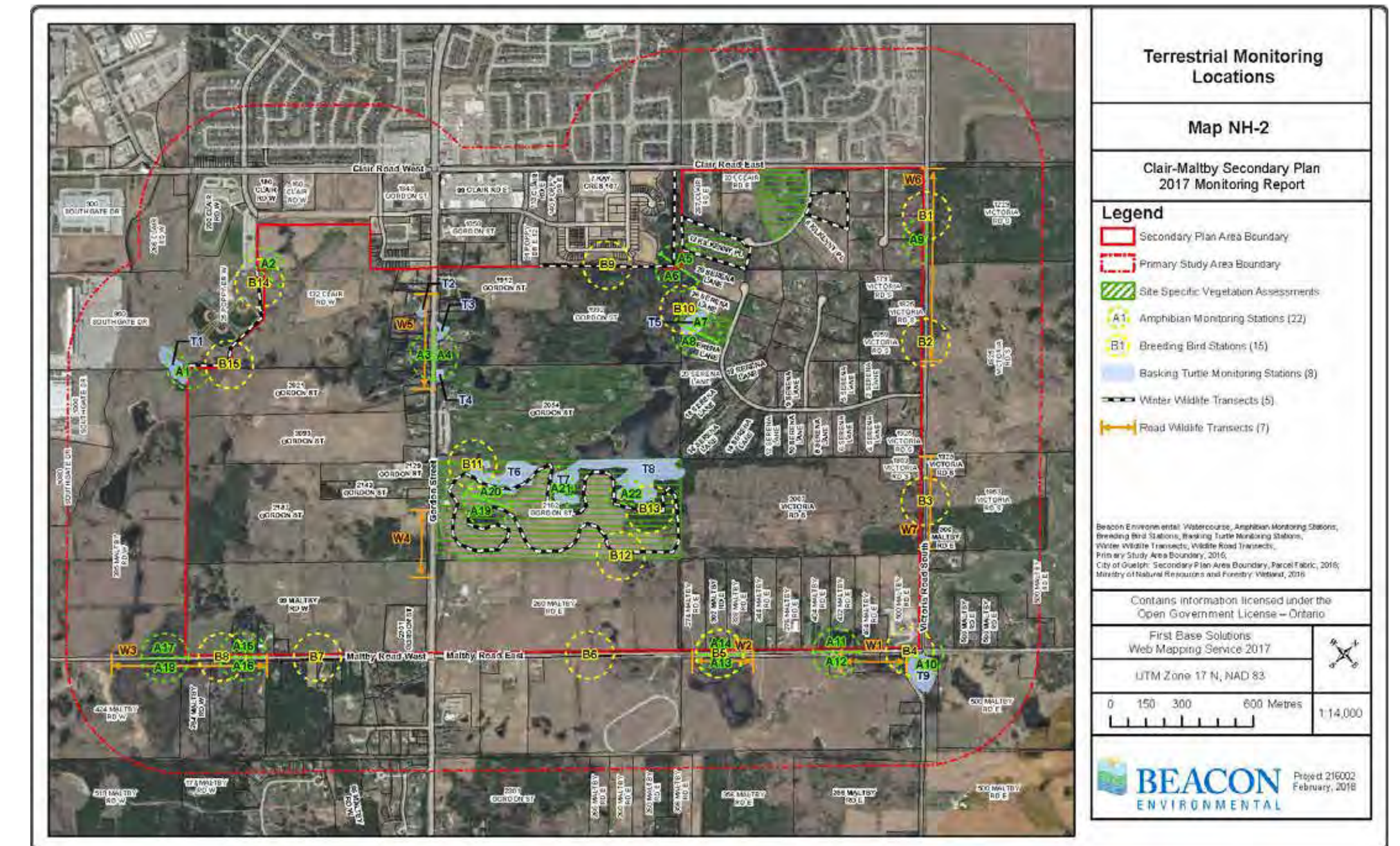
# NATURAL HERITAGE SYSTEM

Natural heritage field studies undertaken as part of the Clair-Maltby Secondary Plan process over 2016 and 2017 have included:

- Preliminary screening for headwater drainage features;
- Assessment of the water levels and quality of selected wetlands;
- Air photo interpretation to verify and update vegetation community mapping supplemented with scoped vegetation assessments and botanical surveys;
- Amphibian and reptile surveys, including movement surveys over roads;
- Breeding bird and winter wildlife surveys (including for deer and raptors); and
- Incidental observations of seeps, springs and other wildlife.

Field studies have been limited to properties where access was provided, public lands and road rights-of-way. Surface water sampling stations were coordinated with shallow groundwater sampling stations to gain a better understanding of how the different wetlands function. Field work has been supplemented by a review of all available background studies and data in the study area from the last decade or so.

Over 2018, refinements and updates to the NHS will be confirmed based on the technical work undertaken. These updates will be reviewed with the City and key stakeholders including: local agencies and advisory committees, as well as the landowners and advisory groups established for this project. Updates to the NHS will be integrated into the various models and planning studies to inform the different technical components (e.g., transportation, servicing, storm water management) and the Secondary Plan itself, including the related policies.



Wetland Monitoring Station 8 at various points from April-November 2017



# PROBLEM AND OPPORTUNITY STATEMENT

## Problem

The City of Guelph is undertaking the Clair-Maltby Secondary Plan and Master Environmental Servicing Plan (MESP) Study to comprehensively plan the last unplanned greenfield area within the city. The current study area does not have full municipal services to support future development.

## Opportunity

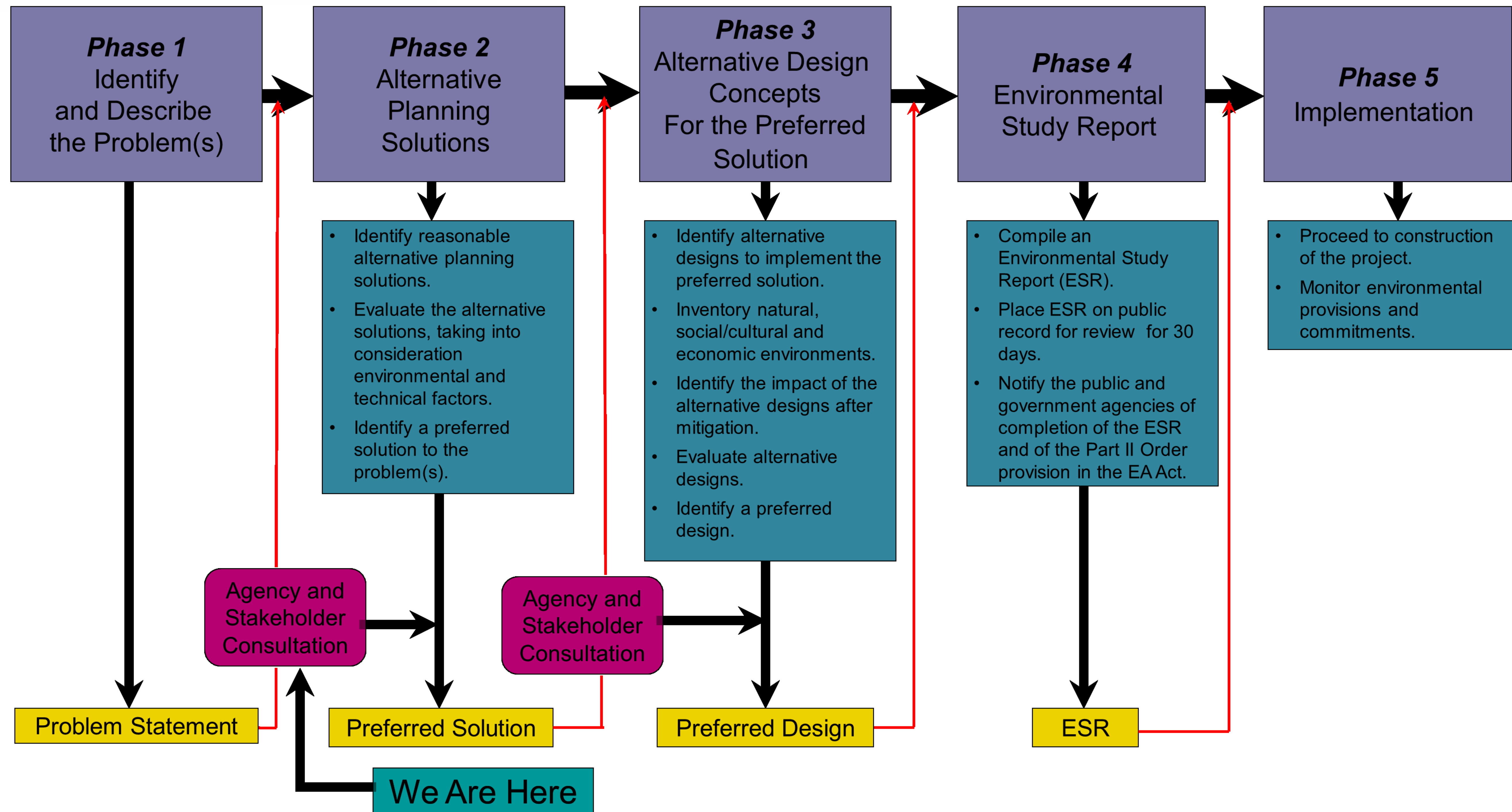
The Clair-Maltby Secondary Plan and the Master Environmental Servicing Plan (MESP) are being developed concurrently to provide an integrated planning approach to establish a plan for future urban development and full municipal services within this area.

Newly urbanizing lands require municipal services in the form of roads, water, wastewater and stormwater infrastructure, in order to meet municipal and provincial requirements. The process involving the conversion of undeveloped land to a fully serviced, urbanized form is governed through an integrated approach addressing the needs of the Planning Act and the Environmental Assessment Act, including the Municipal Engineers Association Class Environmental Assessment Process for public infrastructure planning and design.





# MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT



The MESA for Clair-Maltby is intended to fulfill Phases 1 and 2



# STORMWATER MANAGEMENT PLANNING

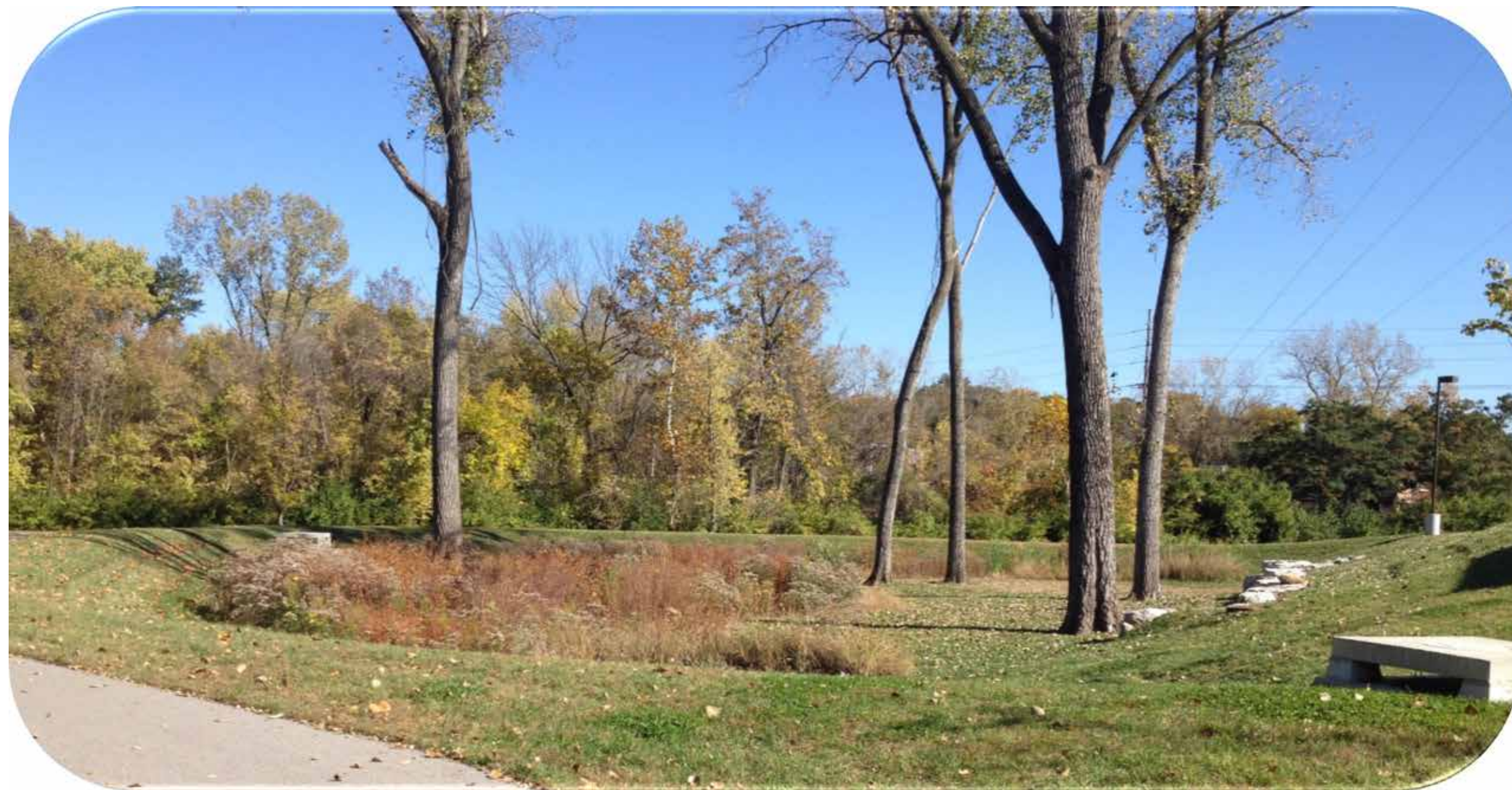
## Background

Urbanizing existing natural and rural lands has the potential to alter surface runoff and groundwater functions, possibly negatively affecting the area's wetlands, drainage features and associated wildlife and fish. Stormwater Management techniques can both pro-actively and reactively manage and mitigate the impacts of urbanization to address regulatory and functional objectives.

## Objectives

Stormwater Management is intended to address the following objectives:

- i. Control drainage (quantity and quality) and associated risks
- ii. Manage impacts to drainage features and related habitat (Clair-Maltby open water drainage features are limited due to the hummocky terrain)
- iii. Maintain/improve water quality in accordance with Provincial requirements
- iv. Work towards water balance preserving surface water infiltration and groundwater quantity and quality





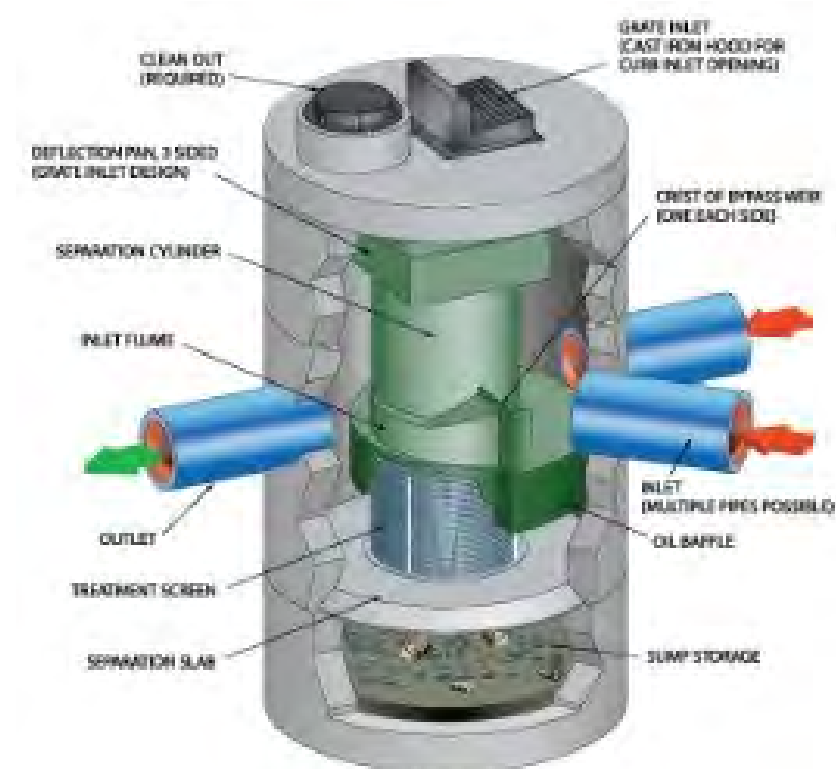
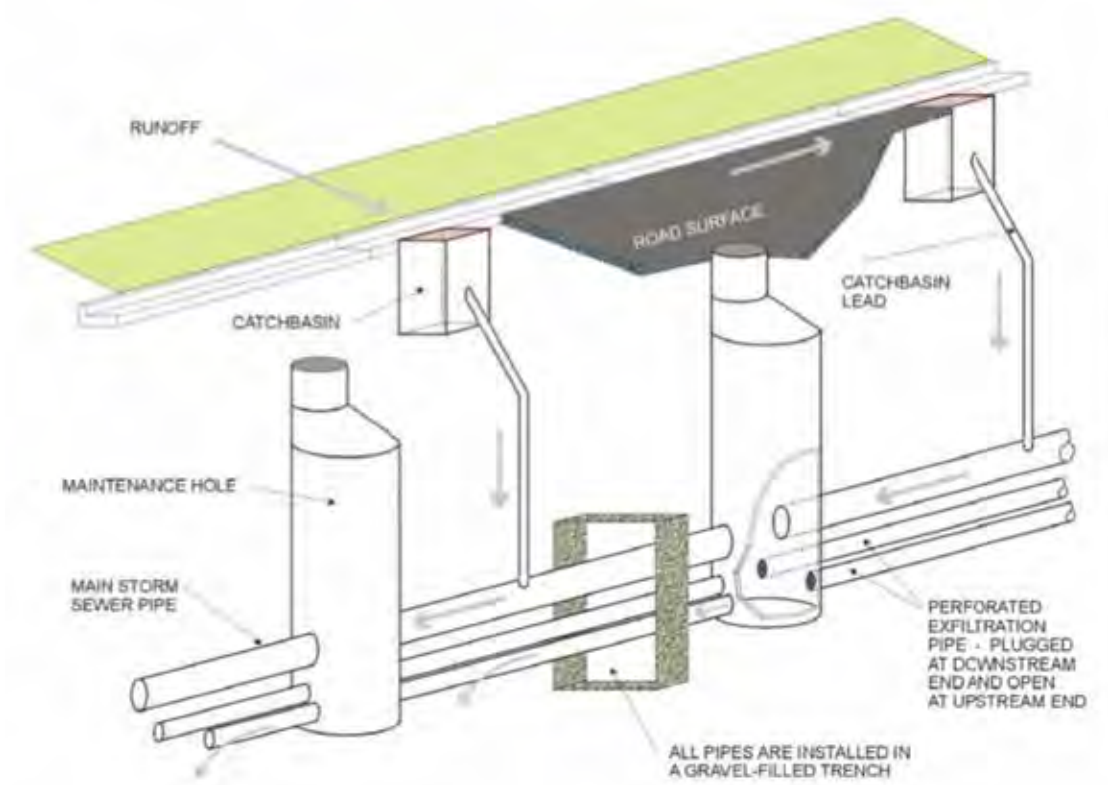
# STORMWATER MANAGEMENT ALTERNATIVES

There are a number of Stormwater Management techniques available to address the objectives which fall into various categories as follows:

- Dry ponds
- Wet ponds
- Wetlands
- Hybrids
- Greenways
- Infiltration Systems
- Oil and grit separators

- Perforated pipes
- Swales
- Enhanced swales

- Bioretention (rain gardens)
- Soak away Pits
- Permeable pavements
- Rain water harvesting
- Rain gardens
- Biofilters



The Do Nothing alternative is required to be considered in the Municipal Class Environmental Assessment process. It would however not address the stormwater management objectives for the future development area.



# PRELIMINARY STORMWATER MANAGEMENT FACILITY CONSIDERATIONS

- **Location** – preliminary locations established based on existing topography and drainage routes, and functional connections to features
- **Size** – to be determined to meet stormwater management objectives
- **Geometry** – there are options (rectangular, greenway, circular etc.) – which will have to consider compatibility with the planning for adjacent land uses
- **Form** – functional considerations (i.e. dry or wet) as well as opportunities to make some spaces multi-functional – particularly where parks, schools and natural areas are adjacent to stormwater management facilities
- **Other complementary considerations:**
  - Extent and size of Low Impact Development Best Management Practices – this may affect community design and street widths
  - Stormwater Management Facility's Overflows – most of the area has inwardly draining systems which will need to have relief overflows
  - Drainage system layout (sewer and overland) – will be influenced by future land use and road patterns
  - Enhanced water quality protection need to include pre-treatment of runoff before being infiltrated, source water protection considerations and salt management imperative



# WATER AND WASTEWATER SERVICING

## Background

The Clair Maltby Lands Water and Wastewater Servicing will be integrated with the City of Guelph's existing water distribution and wastewater collection systems. As all of the roads in the development will have commercial or residential users, each building will be provided with a water service connection and a sanitary service connection. Site topography is a key consideration governing the integration of the water and wastewater services within the existing City of Guelph System.

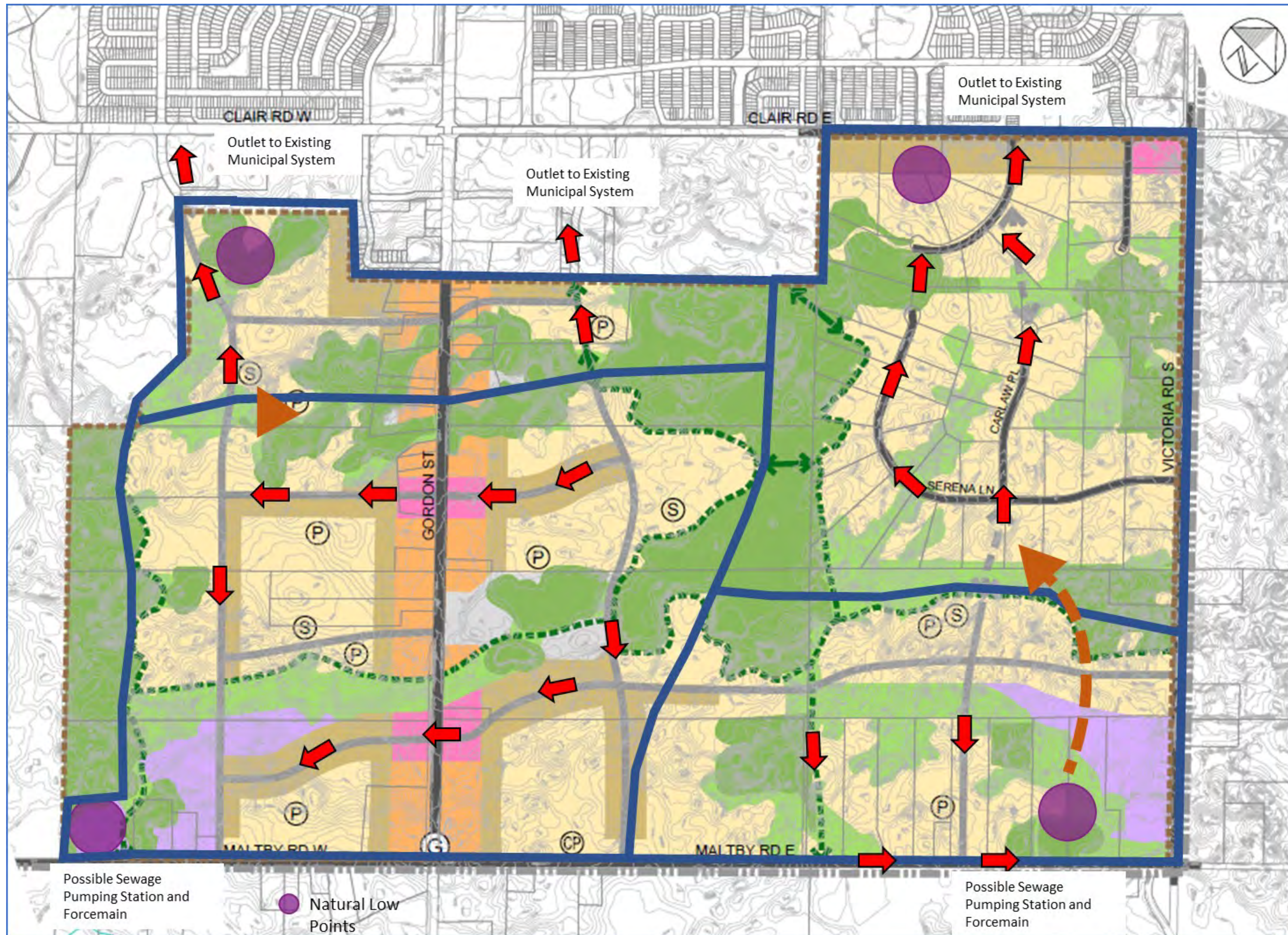
## Objectives

1. The Clair Maltby Lands will be serviced in accordance with the City of Guelph's Master Planned Infrastructure
2. The City's water distribution network will be expanded with a 300 mm water main on every new road in a fully looped configuration (i.e. with no dead end watermains).
3. The City's wastewater collection system will be expanded such that there is a gravity sewer on every road that collects the wastewater and conveys it to the Guelph wastewater treatment plant.





# WASTEWATER COLLECTION



The City's wastewater collection system is accessible in three sub-trunk sewer systems to the North.

The undulating topography of the Clair Maltby lands, presents a challenge in regards to gravity servicing.

Most of the Clair Malby lands naturally drains to low points in the South East and in the South West. It is not possible for all of the proposed lands to be connected to the Guelph system without pumping stations.



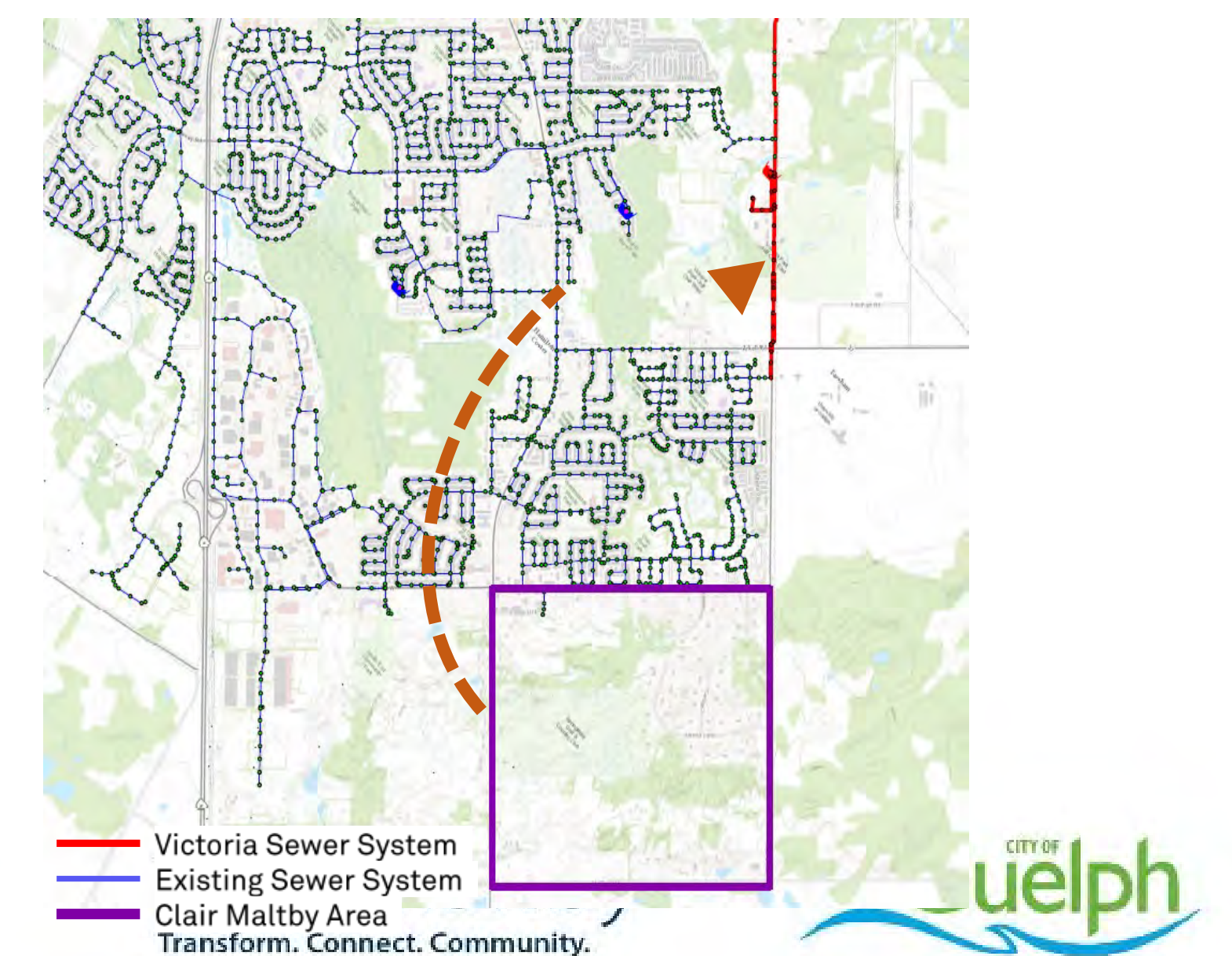
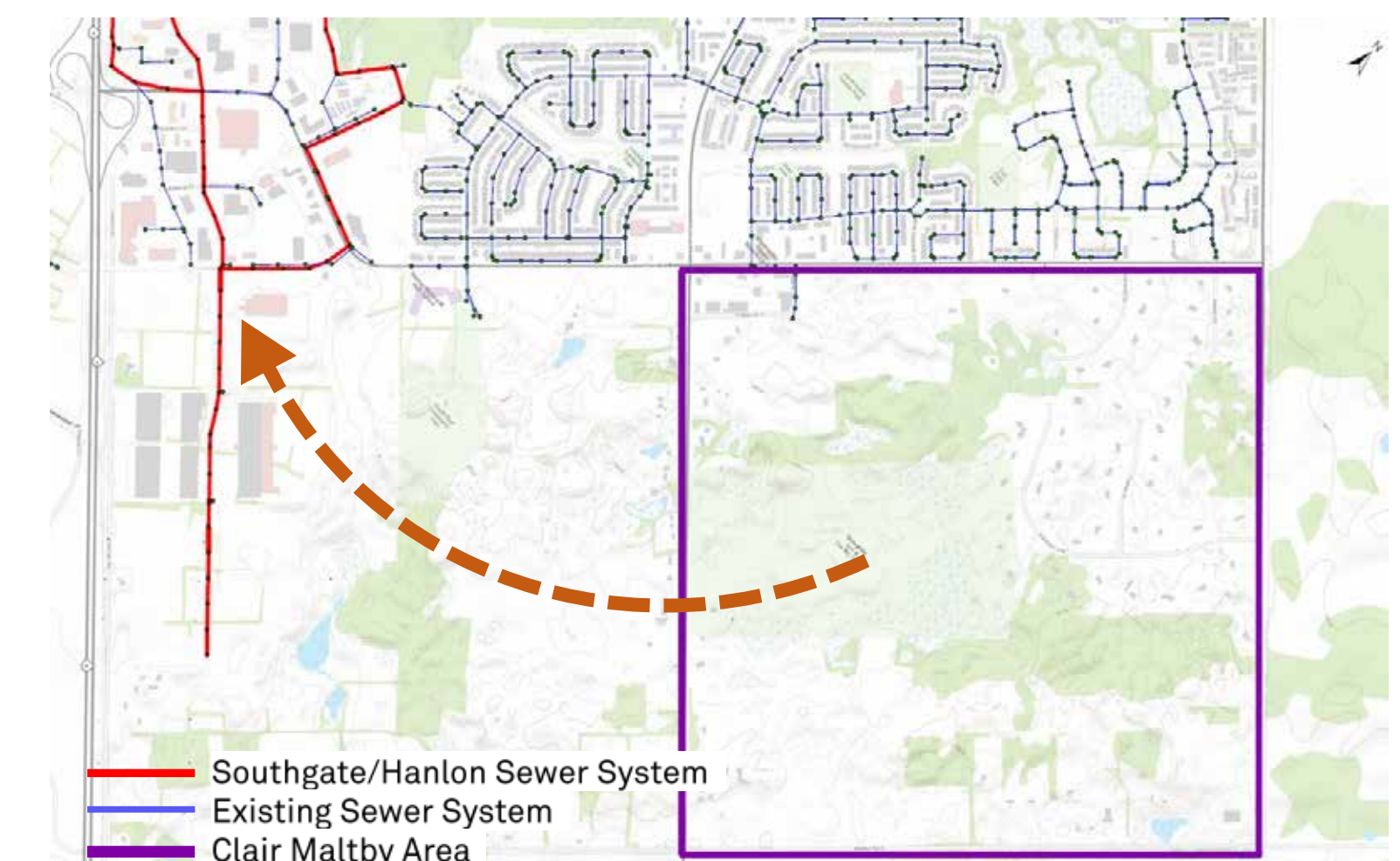
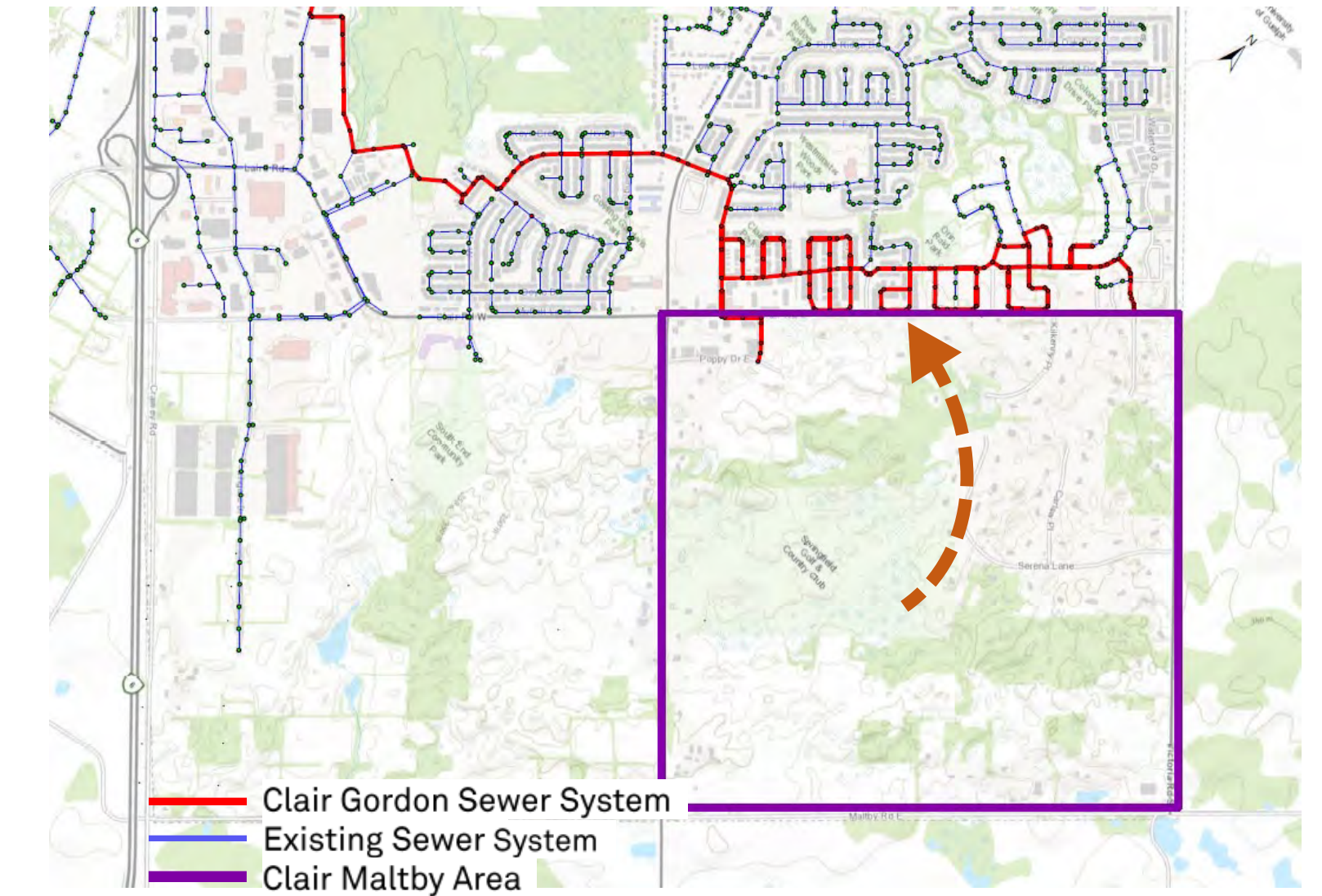
# WASTEWATER CONVEYANCE ALTERNATIVES

## Alternative Approaches

- 1. Do Nothing** *A moratorium on new wastewater collection infrastructure*
- 2. Limit Growth** *Growth is limited to reduce demand and costs of operating and maintaining wastewater infrastructure*
- 3. New Infrastructure – Gravity collection system** – *Areas serviced by gravity only – limited by topography*
- 4. New Infrastructure – Pump Station(s) and forcemain(s)** – *Pumping Stations and forcemains to lift wastewater from areas that are too low to drain by gravity*
- 5. New Infrastructure – Gravity collection system, pump station(s), forcemain(s)**

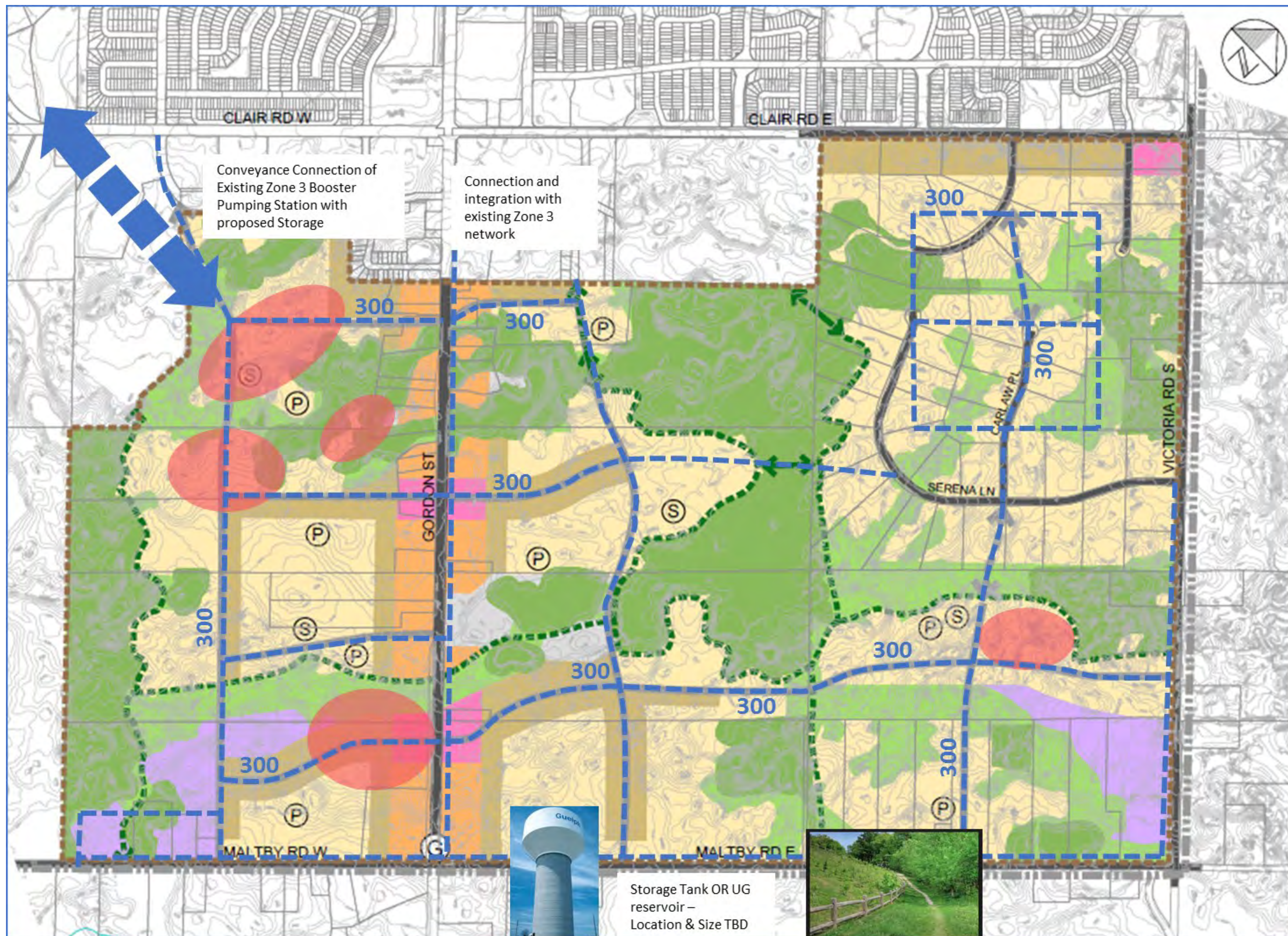
## Alternative System Configurations

- 1. Clair Gordon Trunk System**
  - a. use existing sewers no upgrades
  - b. use existing sewer routes with capacity upgrades
- 2. Southgate / Hanlon Trunk System**
  - a. use existing sewers no upgrades
  - b. use existing sewer routes with capacity upgrades
- 3. Victoria Trunk System**
  - a. use existing sewers no upgrades
  - b. use existing sewer routes with capacity upgrades





# WATER DISTRIBUTION



Water distribution is organized in pressure zones that are suitable for lands within a given geodetic elevation range.

The Clair Maltby Lands are higher in elevation than much of the rest of the City. The City's water distribution system is currently being expanded in the South Side of Guelph through a new pressure zone (Zone 3) that will operate at levels that are suitable for the Clair Maltby Lands.

Zone 3 is now live with pumping into the zone, however as demand increases in its service area, it will require storage to meet mandated operating requirements.

The high points within the Clair Maltby Lands are suitable locations for the implementation of elevated storage for the new pressure zone.



# WATER DISTRIBUTION ALTERNATIVES

## Alternative Approaches

- 1. Do Nothing** *A moratorium on new wastewater collection infrastructure*
- 2. Limit Growth** *Growth is limited to reduce demand and costs of operating and maintaining water infrastructure*
- 3. Service through Development of Zone 3 – New Storage & Transmission System** *expansion as per Current City – Wide Master Planning Context*

## Alternative System Configurations

### 1. New Storage & Transmission

- a. Underground storage – in combination with pumps



- b. Elevated Tank Storage – Floating





# COMMENTS AND NEXT STEPS

Please provide any additional comments about your vision for the Clair-Maltby area in the space below, using the post-it notes and pencils which have been provided.



Please provide your comments directly on the page using the Post-It Notes provided.

## **Next Steps:**

### **Charrette Public Meeting 2 - April 5**

An overview of the Preferred Community Structure and an opportunity to further refine the vision for Clair-Maltby

### **Charrette Public Meeting 3 - April 9**

A presentation of the final Preferred Community Structure and more detailed information regarding built form, streets, blocks, and the open space system.

Following the charrette, the Preferred Community Structure will go to City Council for approval in June 2018.





# Clair-Maltby Secondary Plan

Transform. Connect. Community.

**Public Meeting**  
April 3, 2018



# Clair-Maltby

Transform. Connect. Community.

Public Meeting  
April 3, 2018





# Agenda

1. Presentation 7:00 – 7:30 PM
  - What is a Charrette
  - Structuring Elements and Vision and Guiding Principles
  - Community Structure Alternatives
  - Green Infrastructure and Building Typologies
  - Workshop Introduction
  
2. Workshop – Evaluation of Alternatives 7:30 – 8:45 PM
  
3. Report Back and Next Steps 8:45 – 9:00 PM



# The Secondary Plan Process





# What is a Charrette?

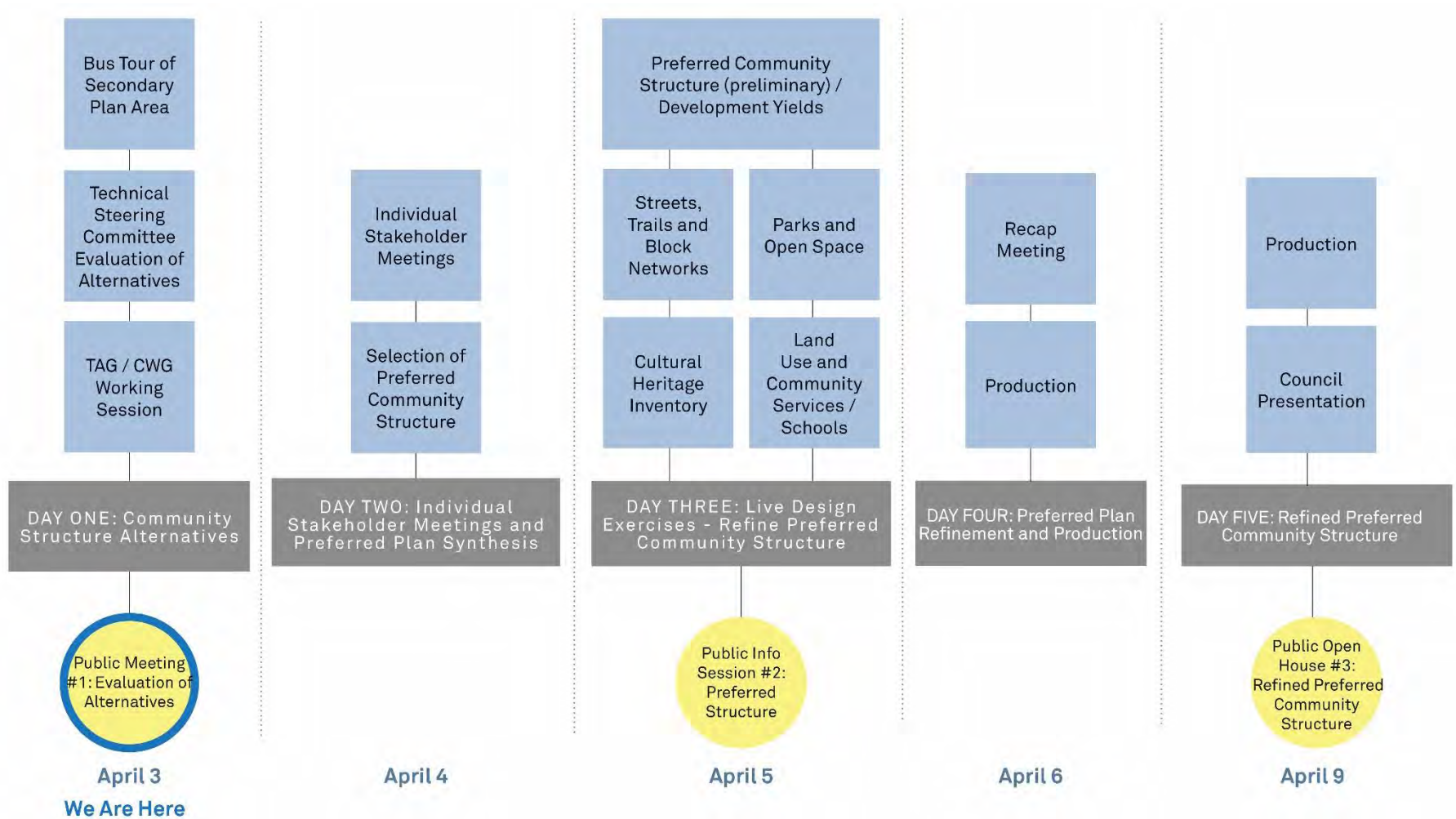
A multi-disciplinary, intensive and collaborative design and planning workshop inclusive of all affected stakeholders with the aim of developing a design or vision for a project or planning activity.



Literally, charrette is from the French term for “cart” or “chariot.”



# Design Charrette Overview



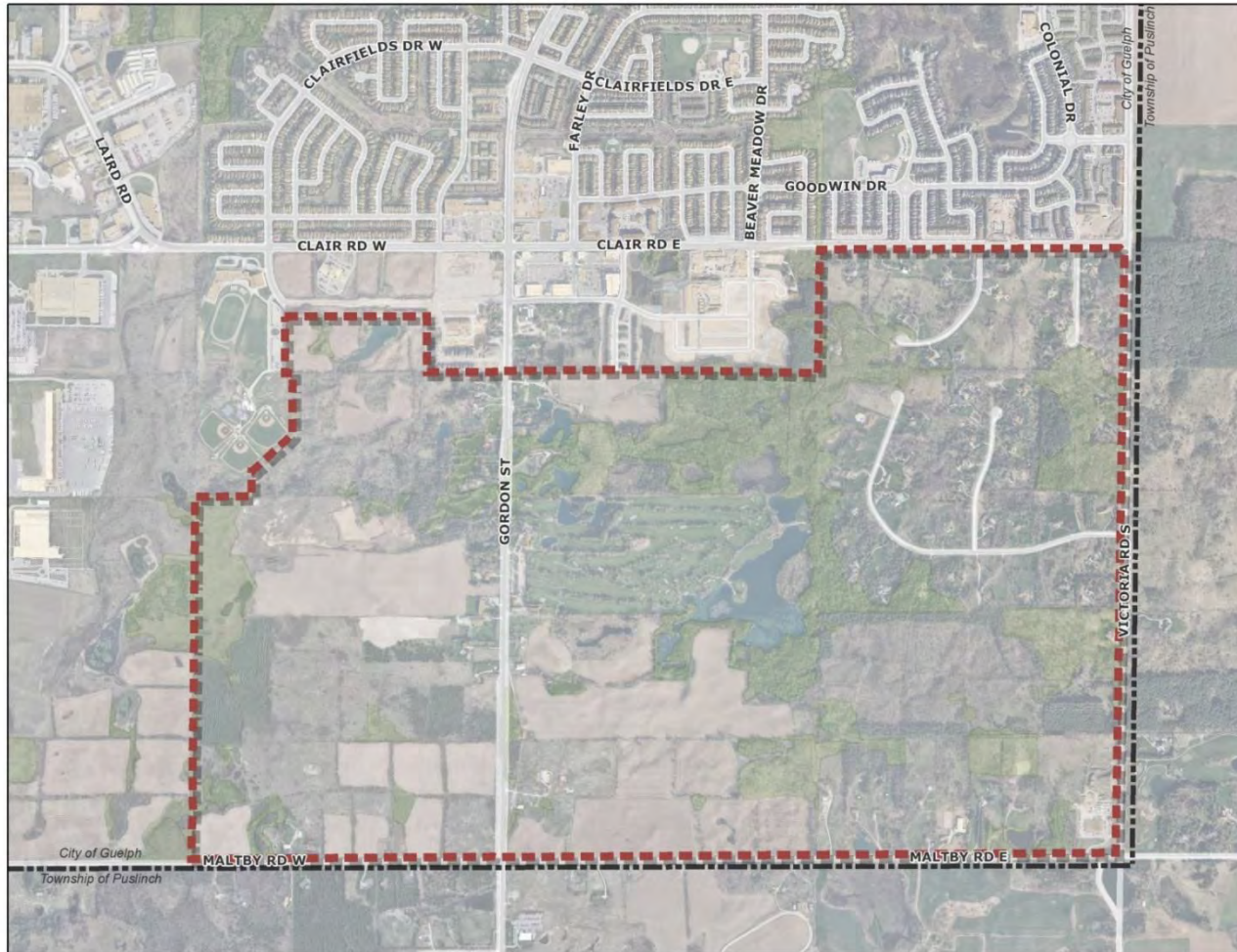


# Structuring Elements



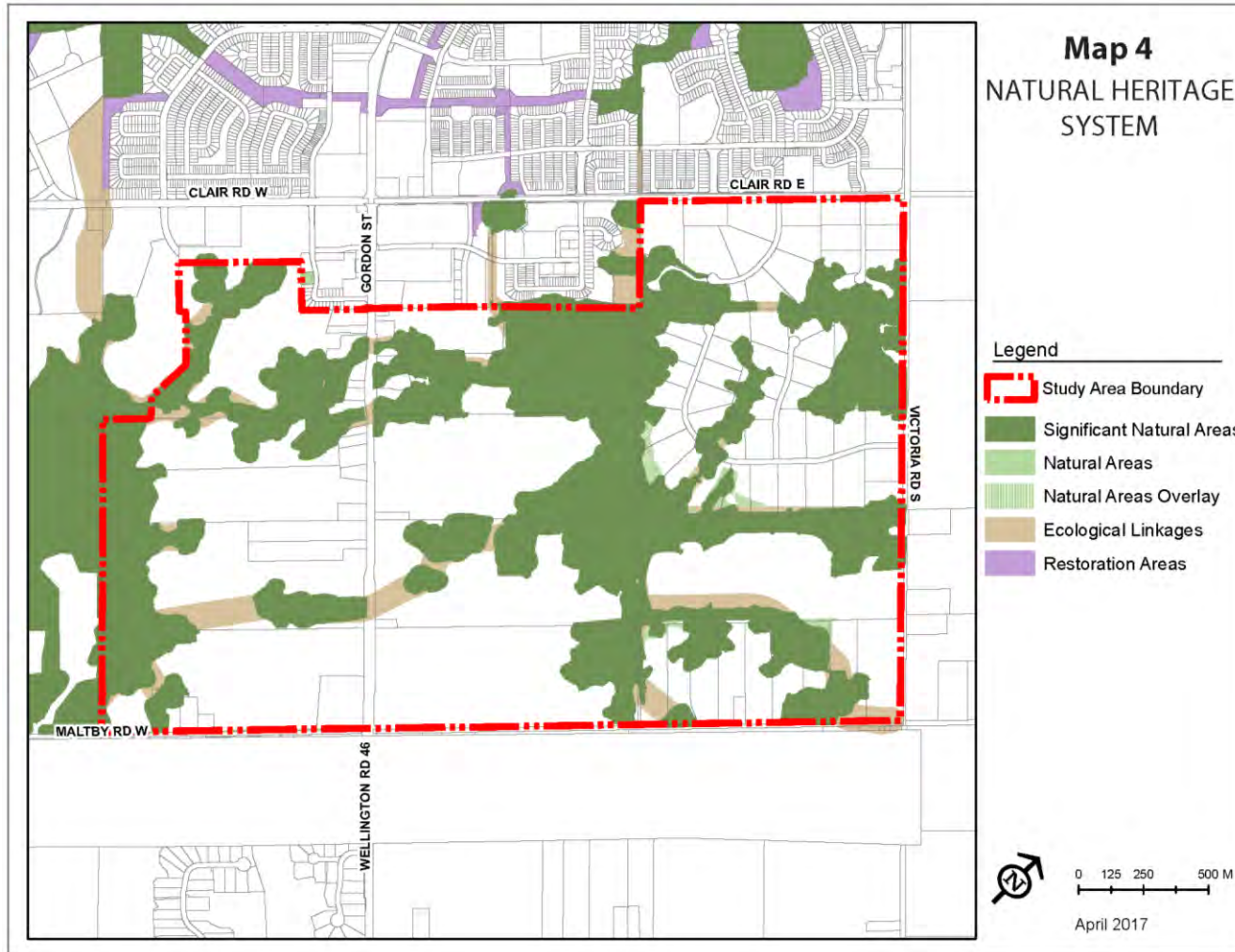


# Study Area



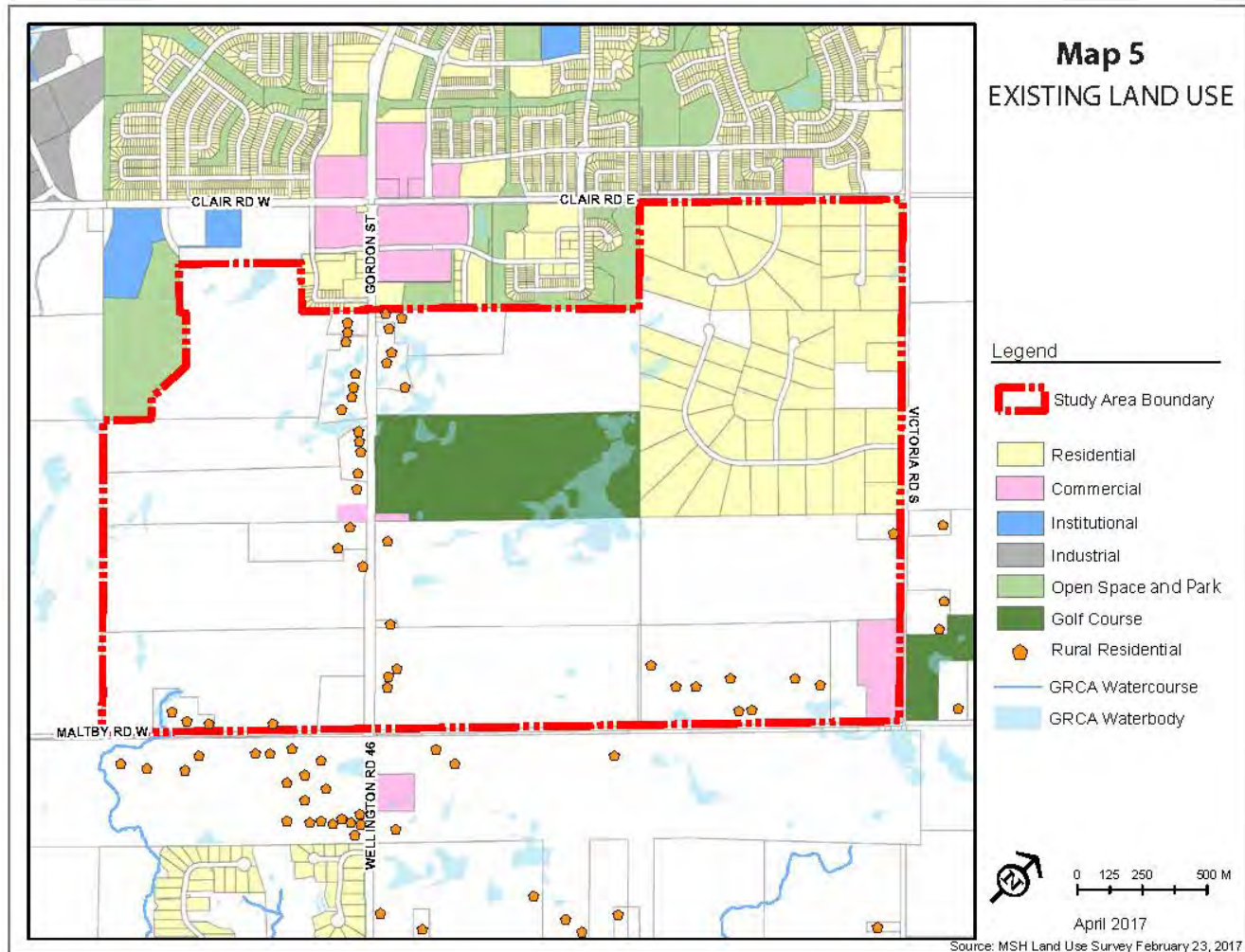


# Natural Features



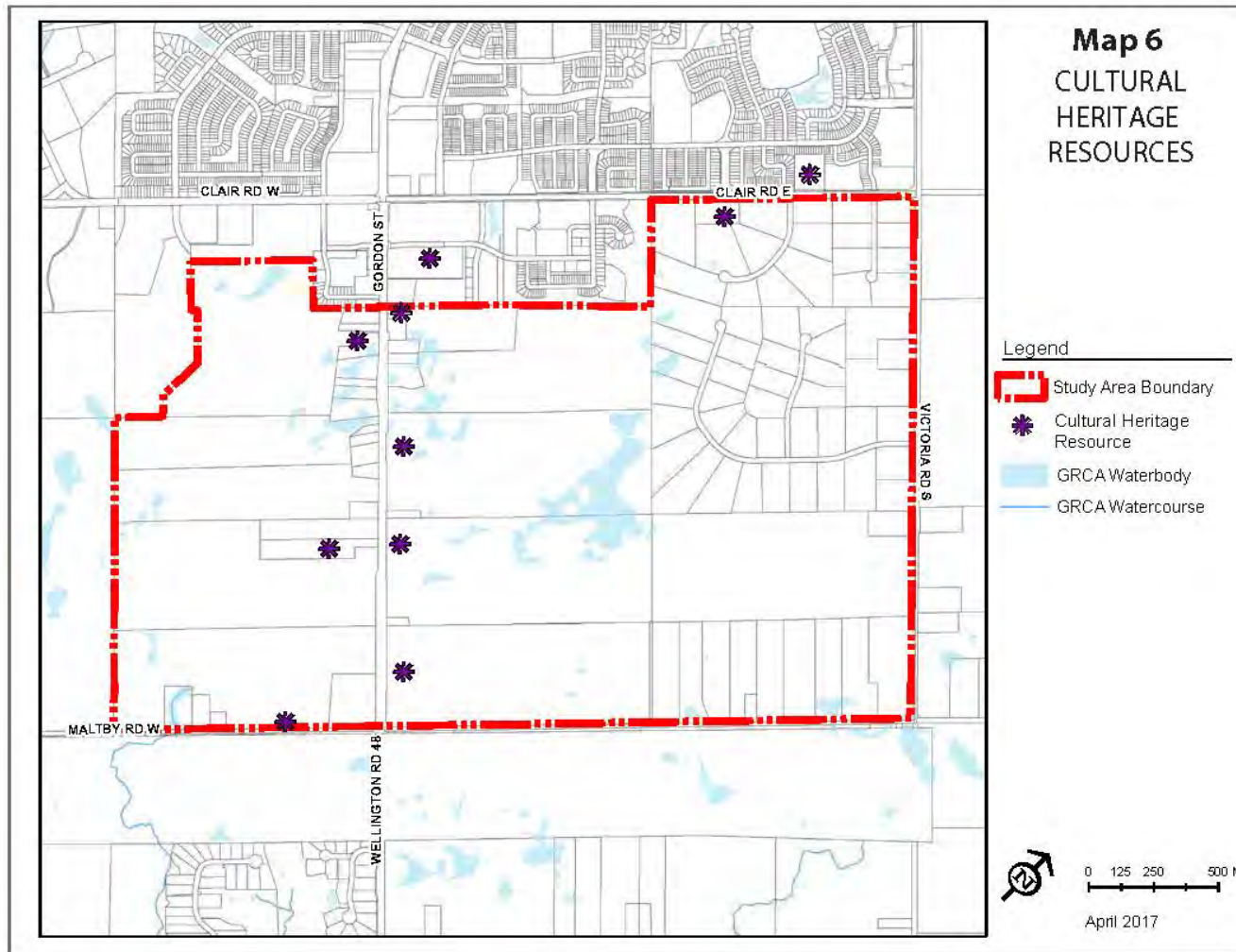


# Existing Land Use





# Cultural Heritage Resources





# Vision

Clair Maltby will be a vibrant, urban community that is integrated with Guelph's southern neighbourhoods, as well as having strong connections to Downtown, employment areas and the rest of the City.

The Natural Heritage System and the Paris Moraine provided the framework for the balanced development of interconnected and sustainable neighbourhoods.

The area will be primarily residential in character with a full range and mix of housing types and a variety of other uses that meet the needs of all residents.

A system of parks, open spaces and trails will be interwoven throughout to provide opportunities for active and passive recreation.





# Guiding Principles



Vibrant and Urban



Green and Resilient



Healthy and Sustainable

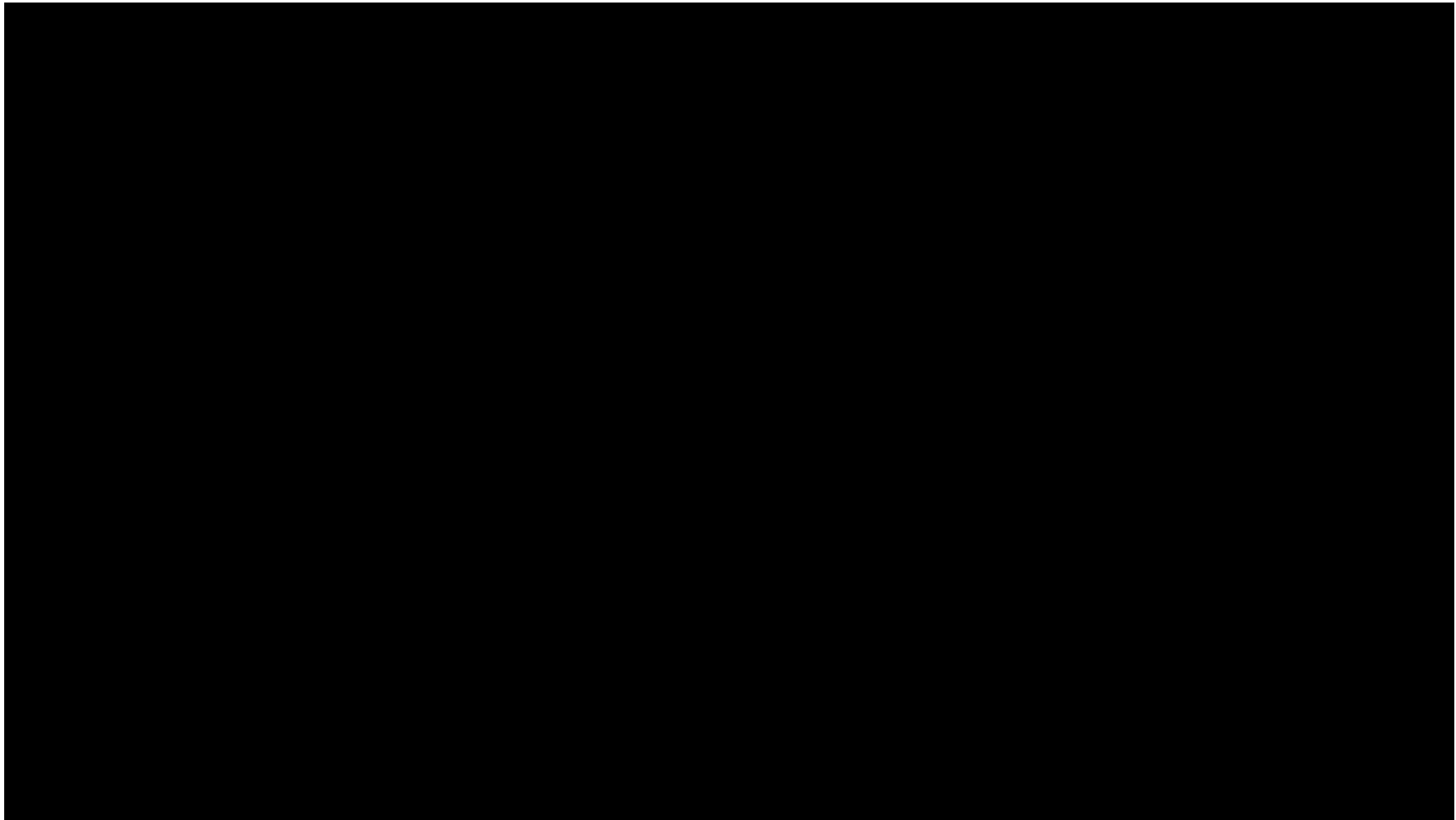


Interconnected and Interwoven



Balanced and Liveable



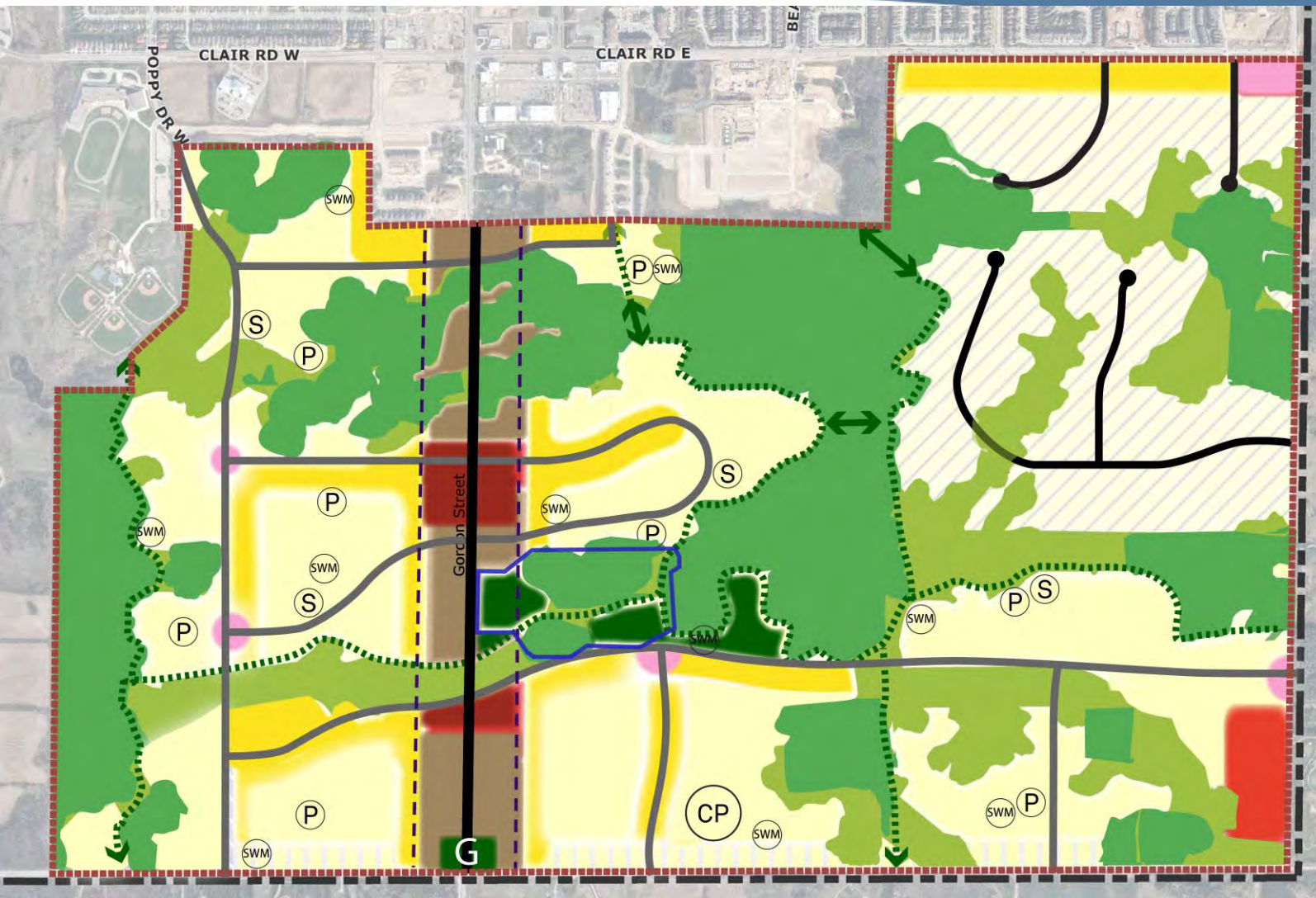




# Community Structure Alternatives







**Legend**

- Clair-Maltby Secondary Plan Boundary
- Cultural Heritage Landscape
- Urban-Rural Transition Zone
- Gordon St. Corridor
- Existing Street Network
- Proposed Street and Cycling Network
- Potential Street Connection
- Proposed Trail Network
- Potential Active Transportation Link
- Neighbourhood Park (P)
- Community Park (CP)
- Elementary School (S)
- Stormwater Management (SWM)
- Gateway (G)

**Natural Heritage System**

- May Permit Essential Transportation Infrastructure
- Does Not Permit Transportation Infrastructure

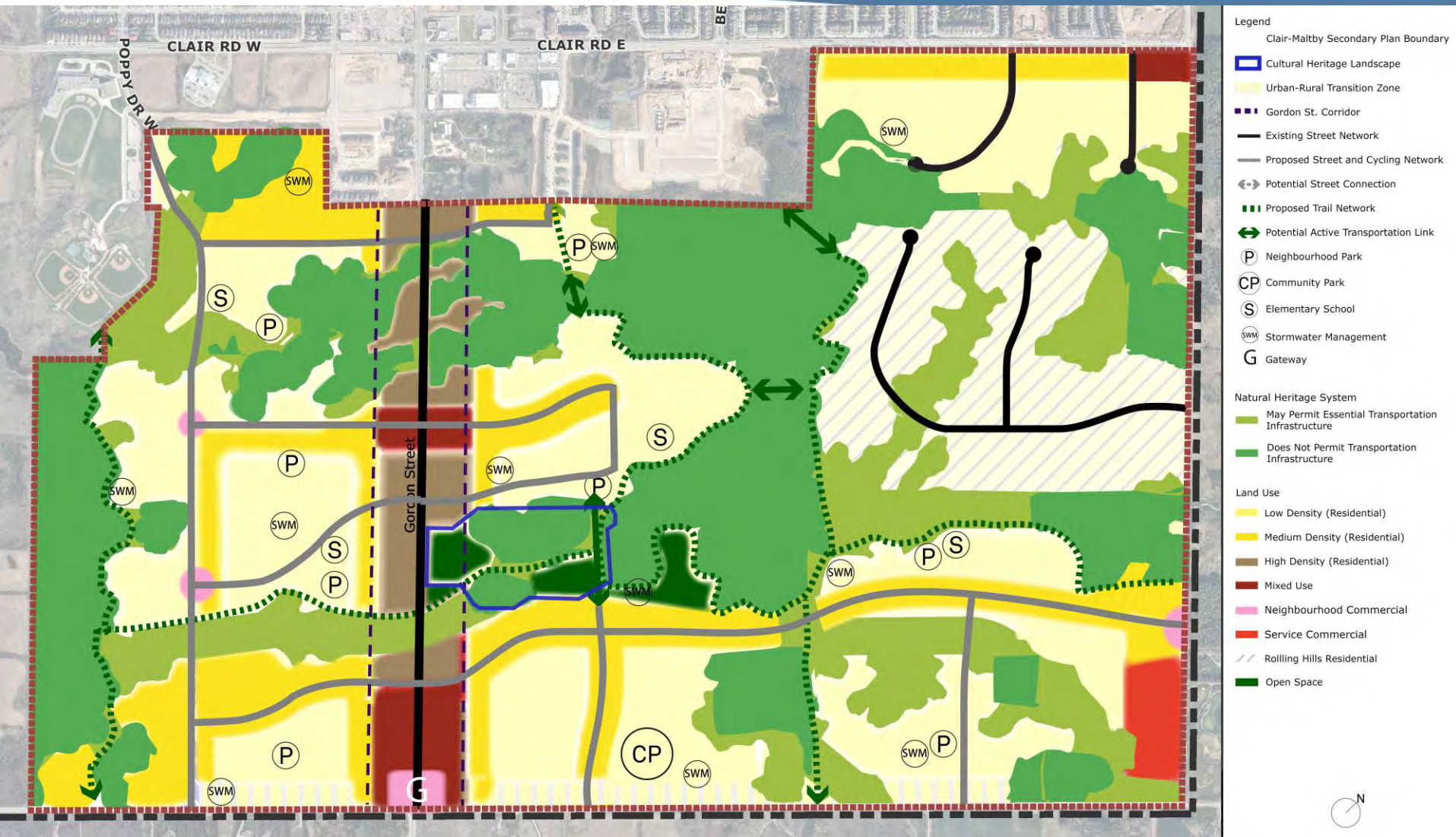
**Land Use**

- Low Density (Residential)
- Medium Density (Residential)
- High Density (Residential)
- Mixed Use
- Neighbourhood Commercial
- Service Commercial
- Rolling Hills Residential
- Open Space

N

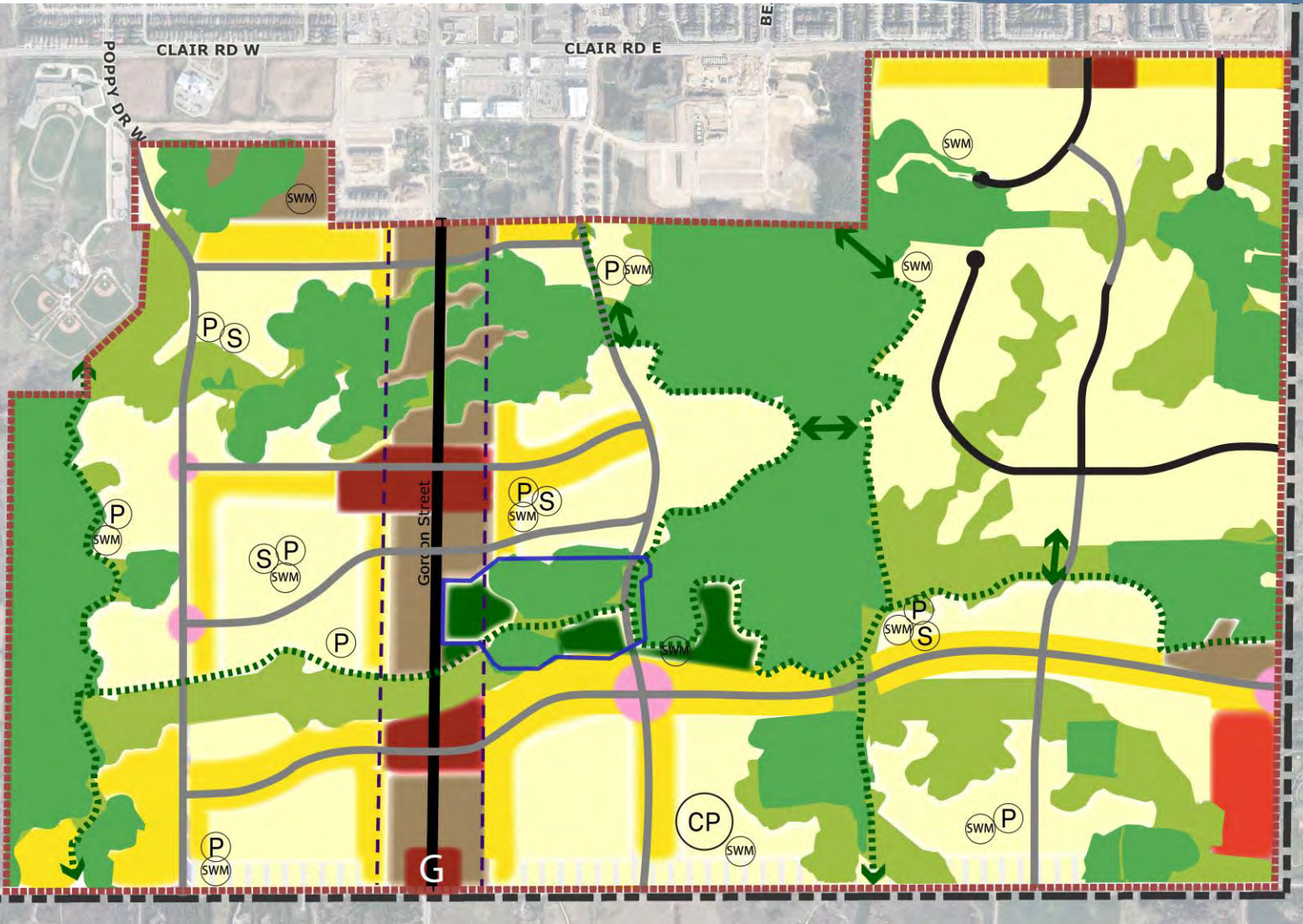
# Alternative 1: Featuring the Green





# Alternative 2: Focus on Community and Services





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# Alternative 3: Connected and Urban



# Land Use Typologies



# Low Density Residential





# Medium Density Residential



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# High Density Residential





# Mixed Use



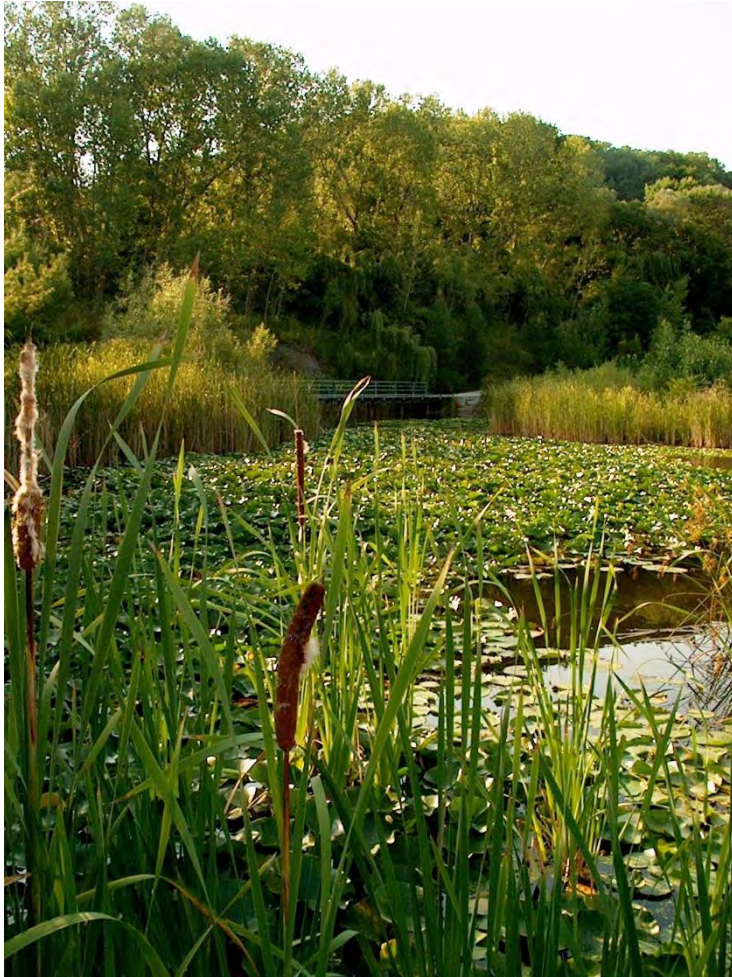


# Neighbourhood Commercial



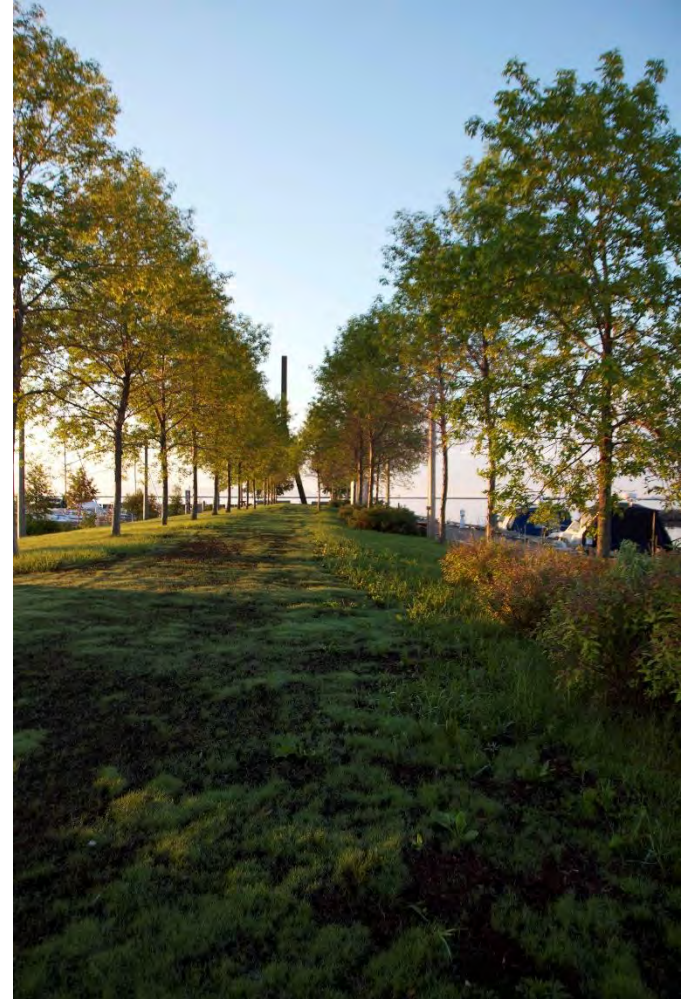


# Natural Heritage System





# Community Parks



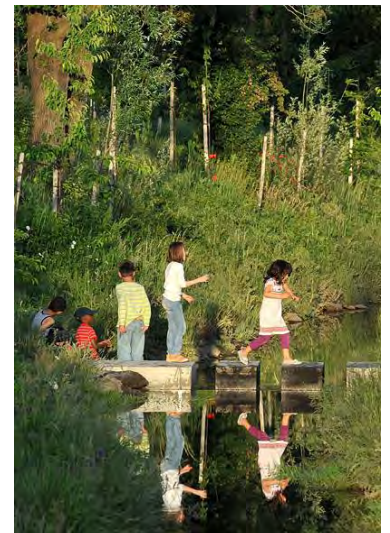
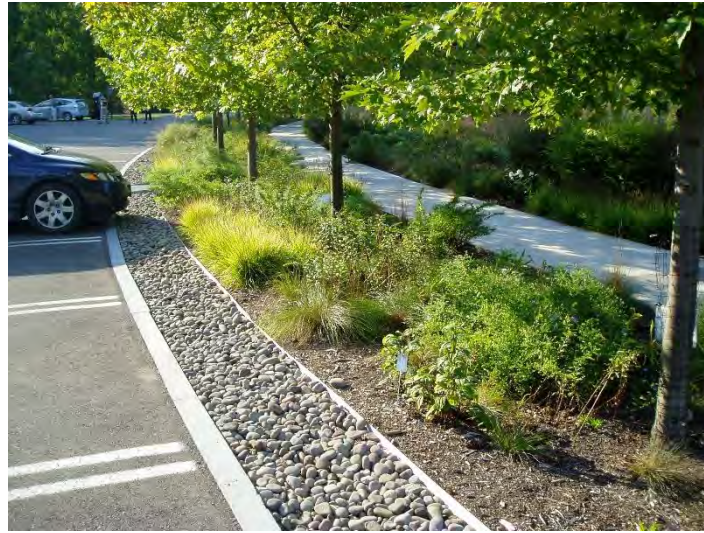


# Neighbourhood Parks





# Stormwater Management





# Gateways





# Streets and Blocks





# Cycling Trails and Multi-Use Paths





# Workshop Exercise (Evaluating the Alternatives)

At your tables:

- Exercise #1 – 15 min: Vibrant and Urban
  - Land uses are...
- Exercise #2 – 15 min: Green and Resilient / Healthy and Sustainable
  - Parks and open spaces are...
- Exercise #3 – 15 min: Interconnected and Interwoven
  - The street network connects...
- Exercise #4 – 15 min: Balanced and Liveable
  - Provides appropriate...



# Thank You





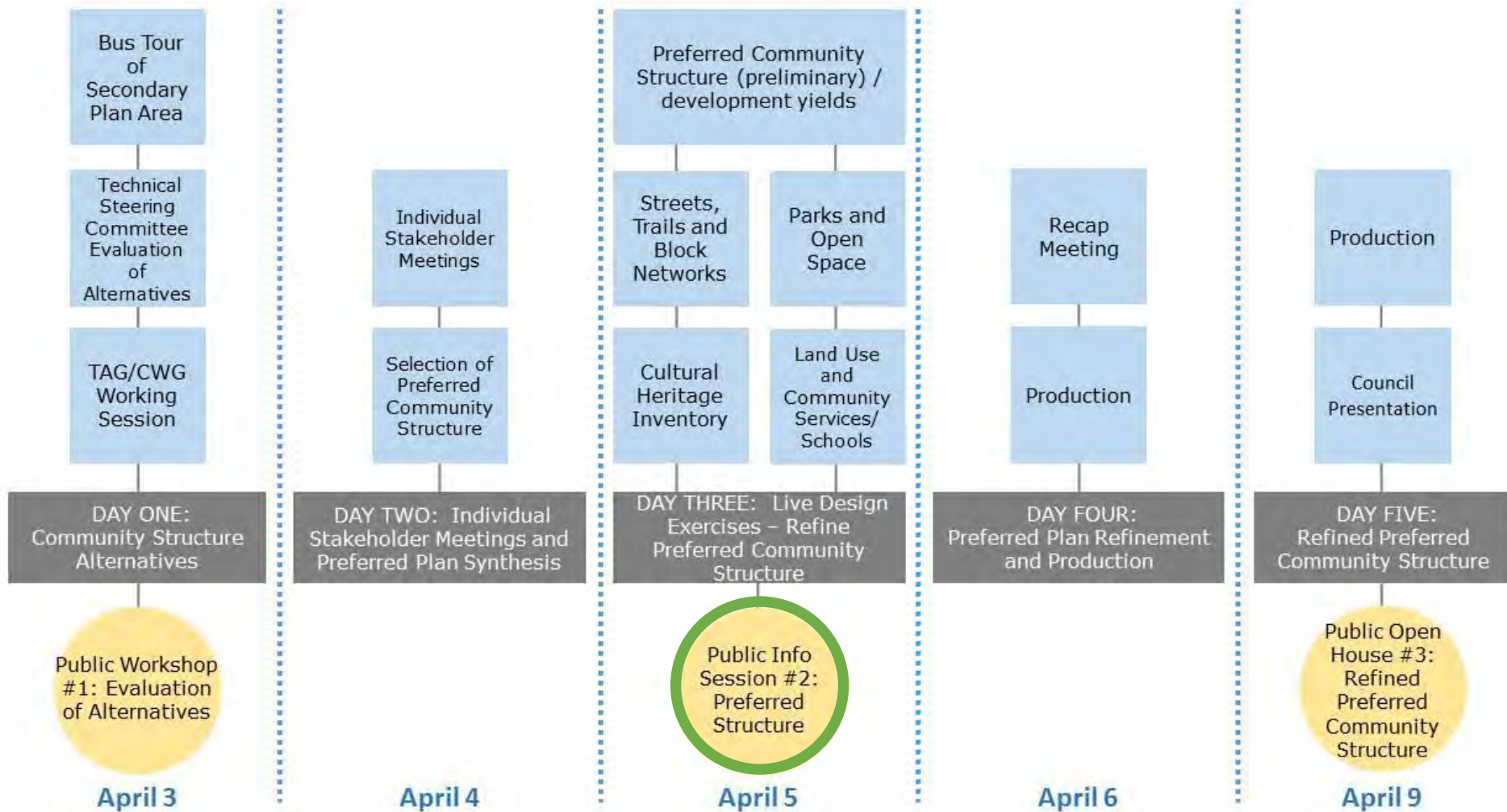
# Clair-Maltby Secondary Plan

Transform. Connect. Community.

**Public Meeting**  
April 5, 2018



# Design Charrette Overview





# The Secondary Plan Process





# Vision

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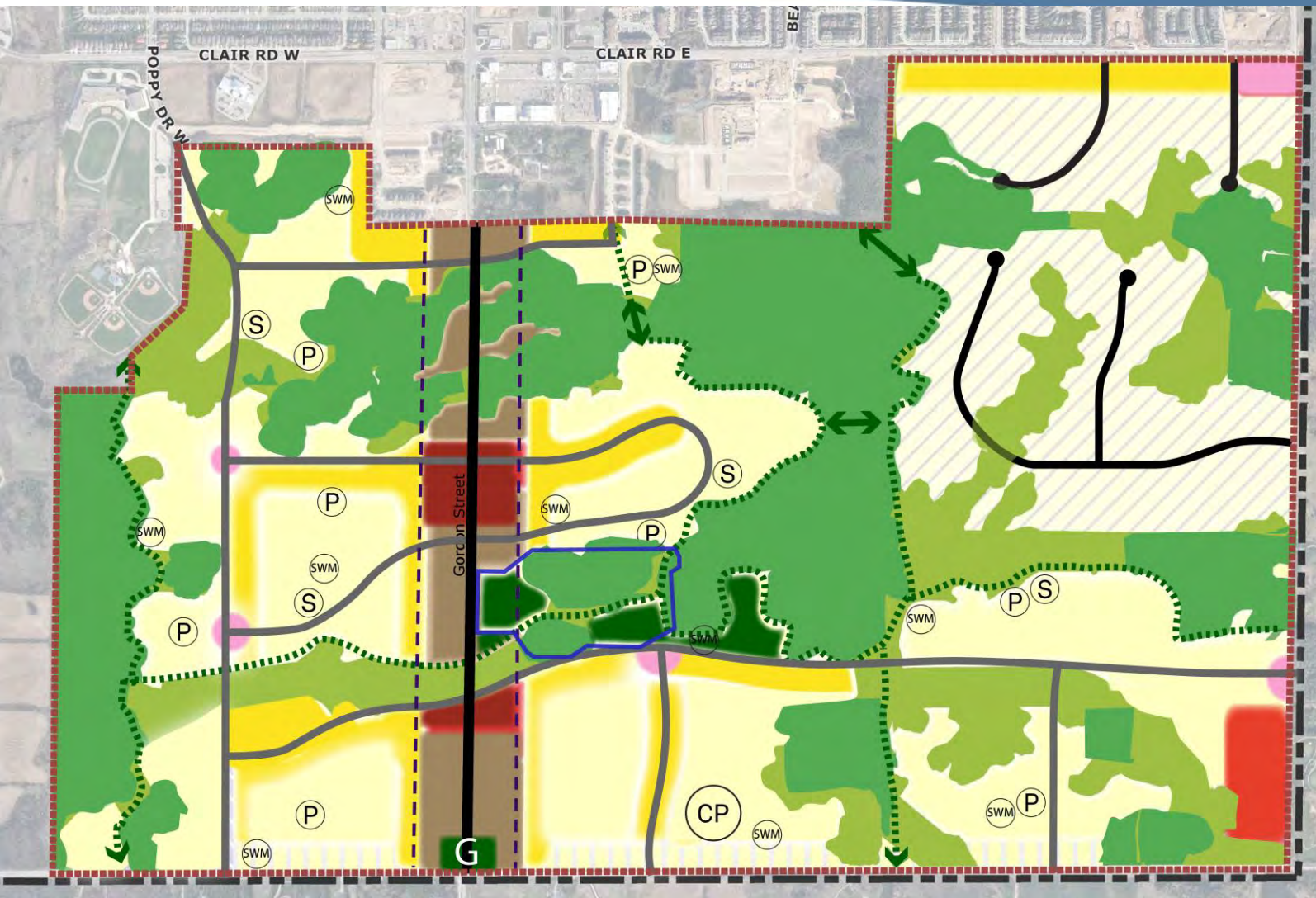
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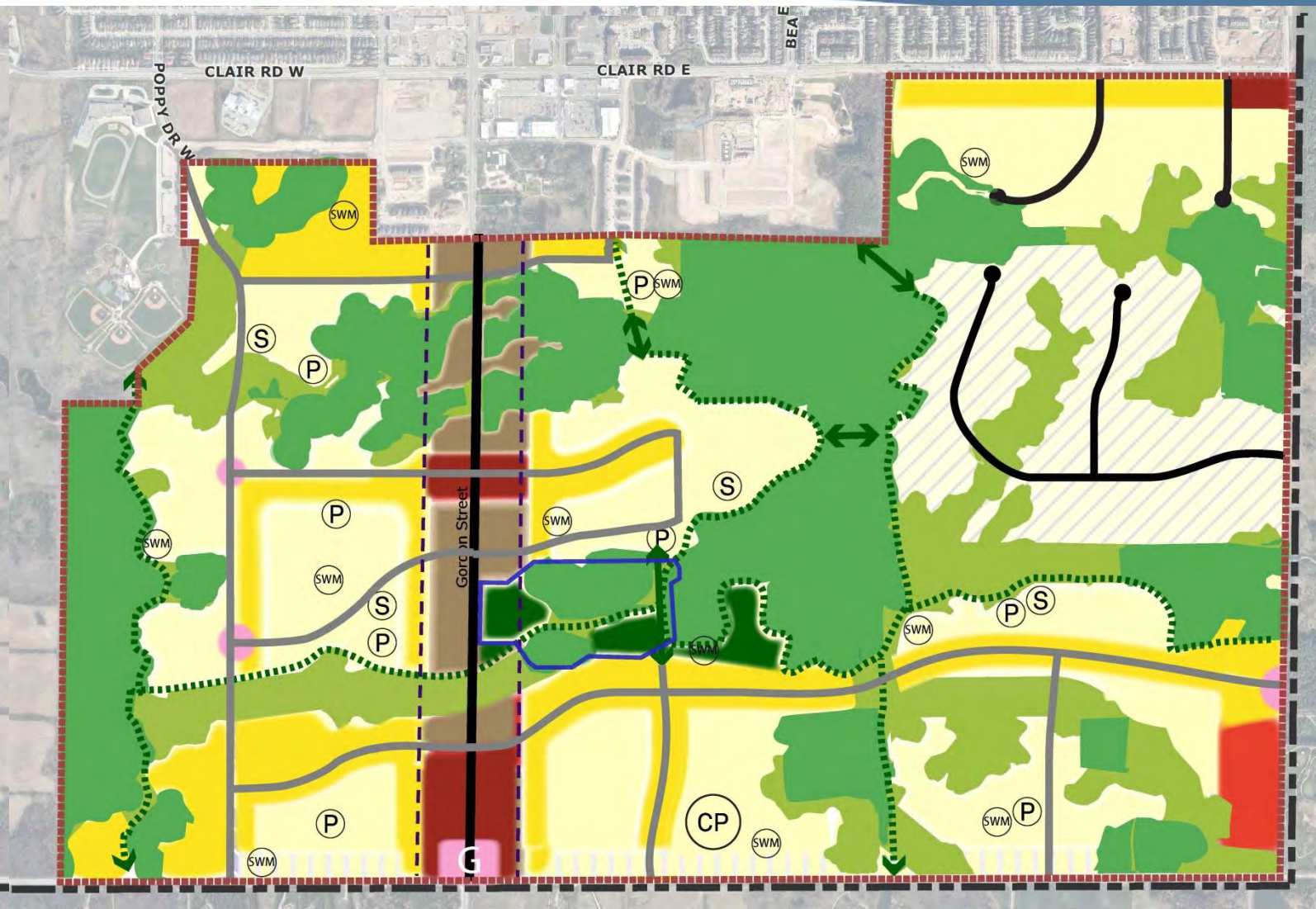
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# Alternative 1: Featuring the Green



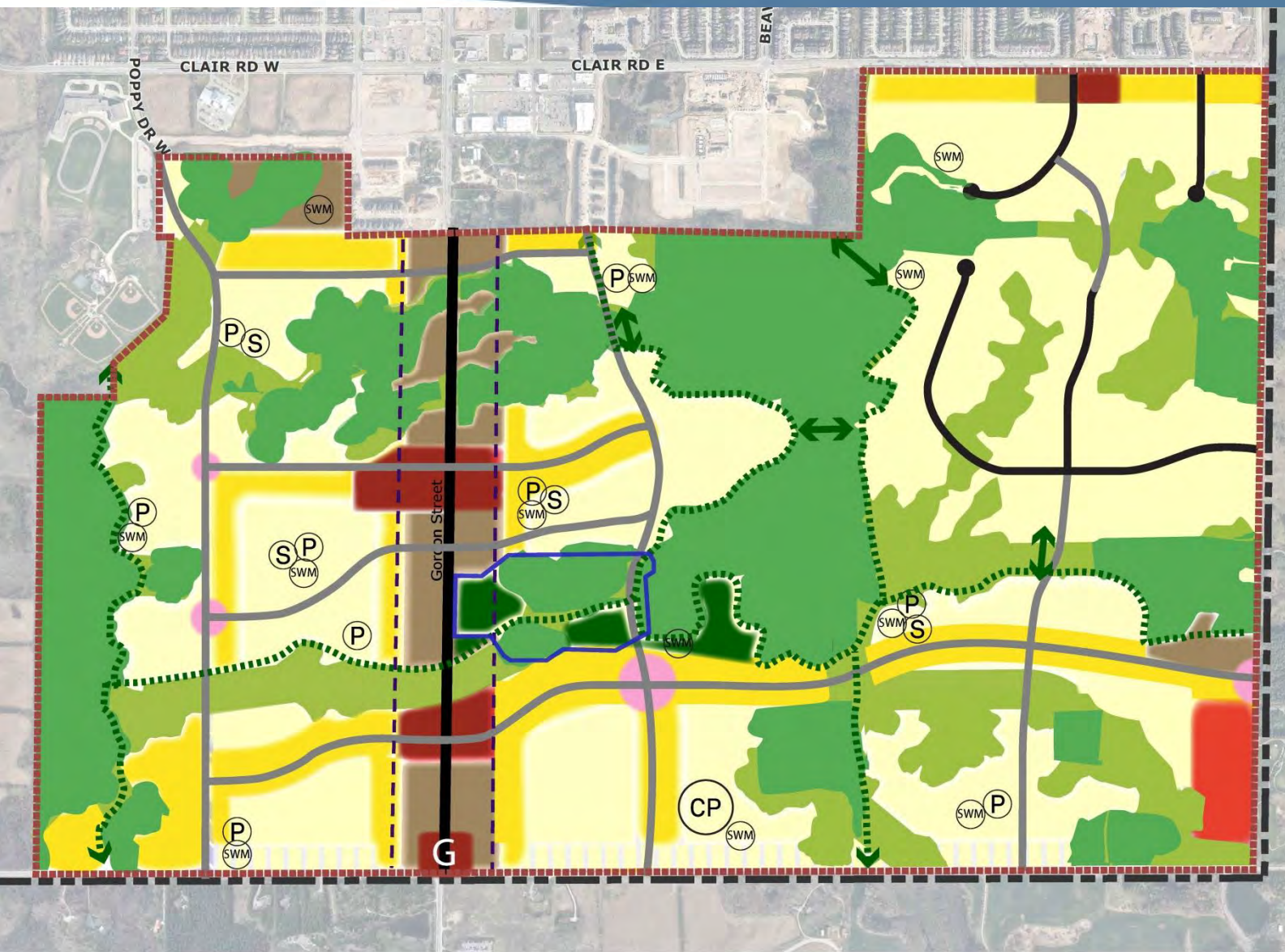


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# Alternative 2: Focus on Community and Services





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# Alternative 3: Connected and Urban

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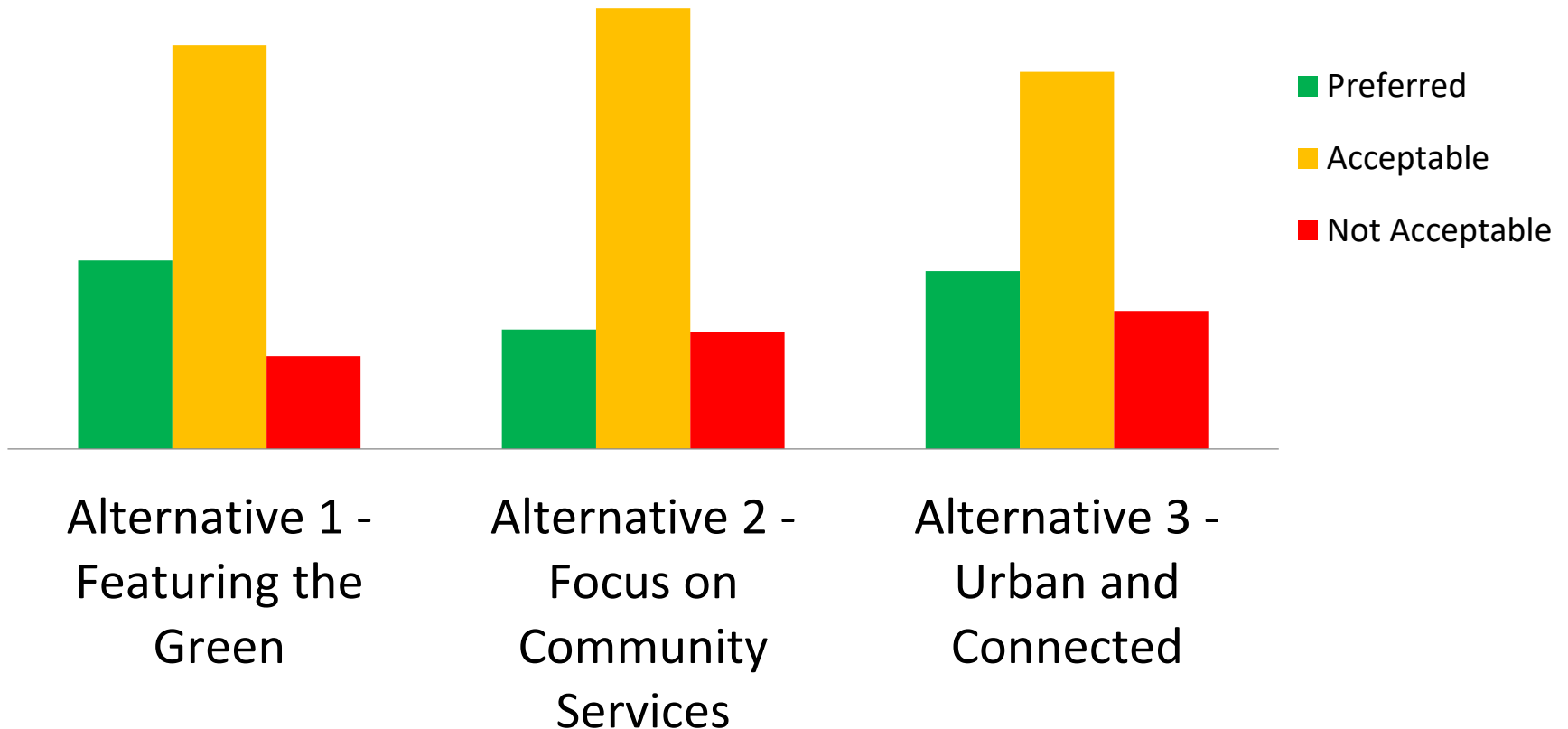


# What We Heard



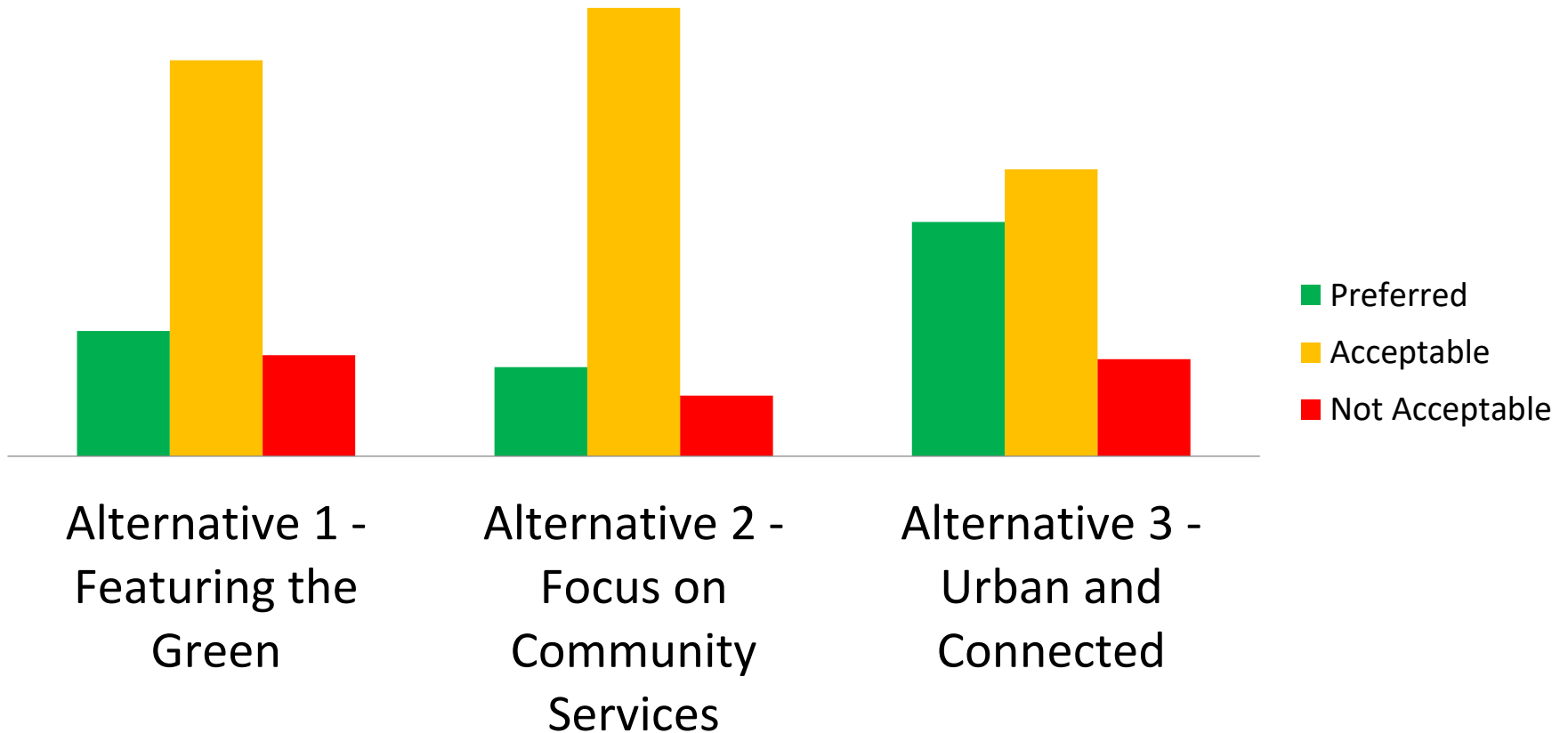


# Vibrant and Urban



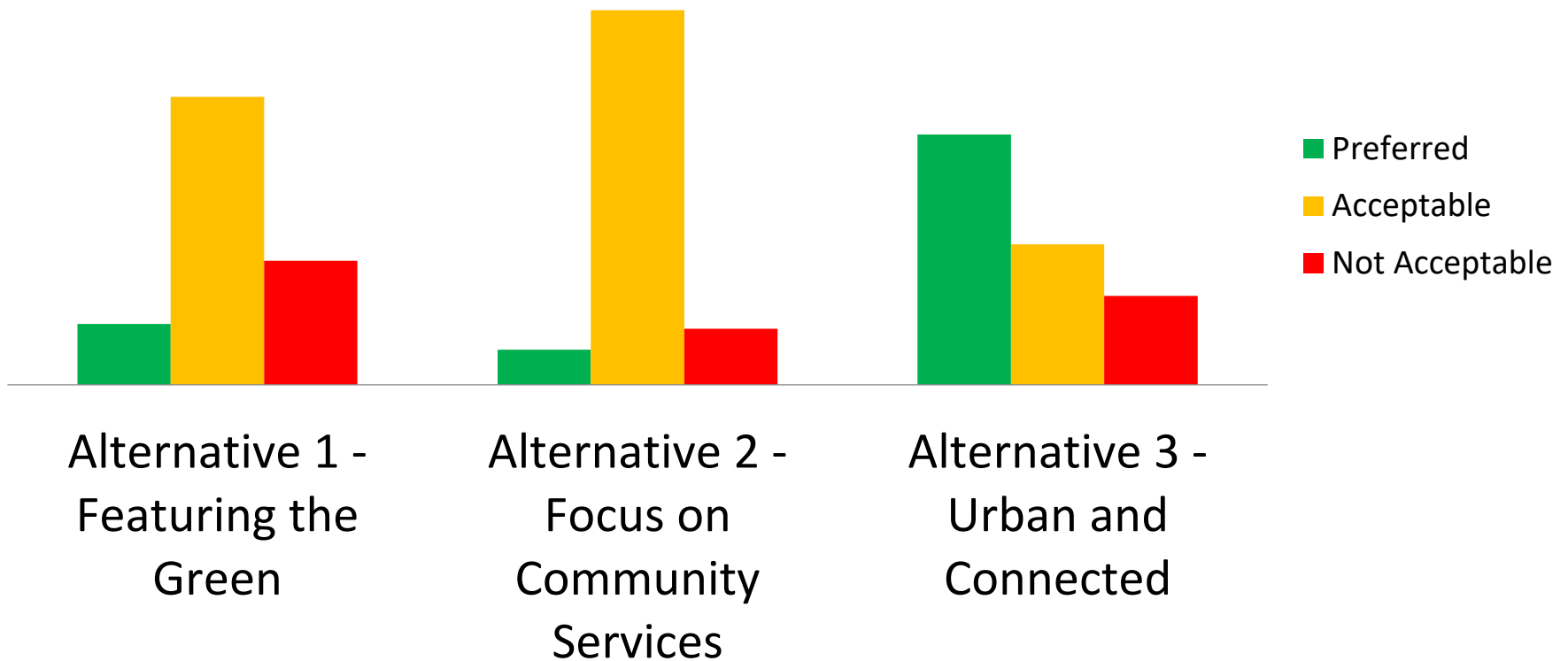


# Green and Resilient



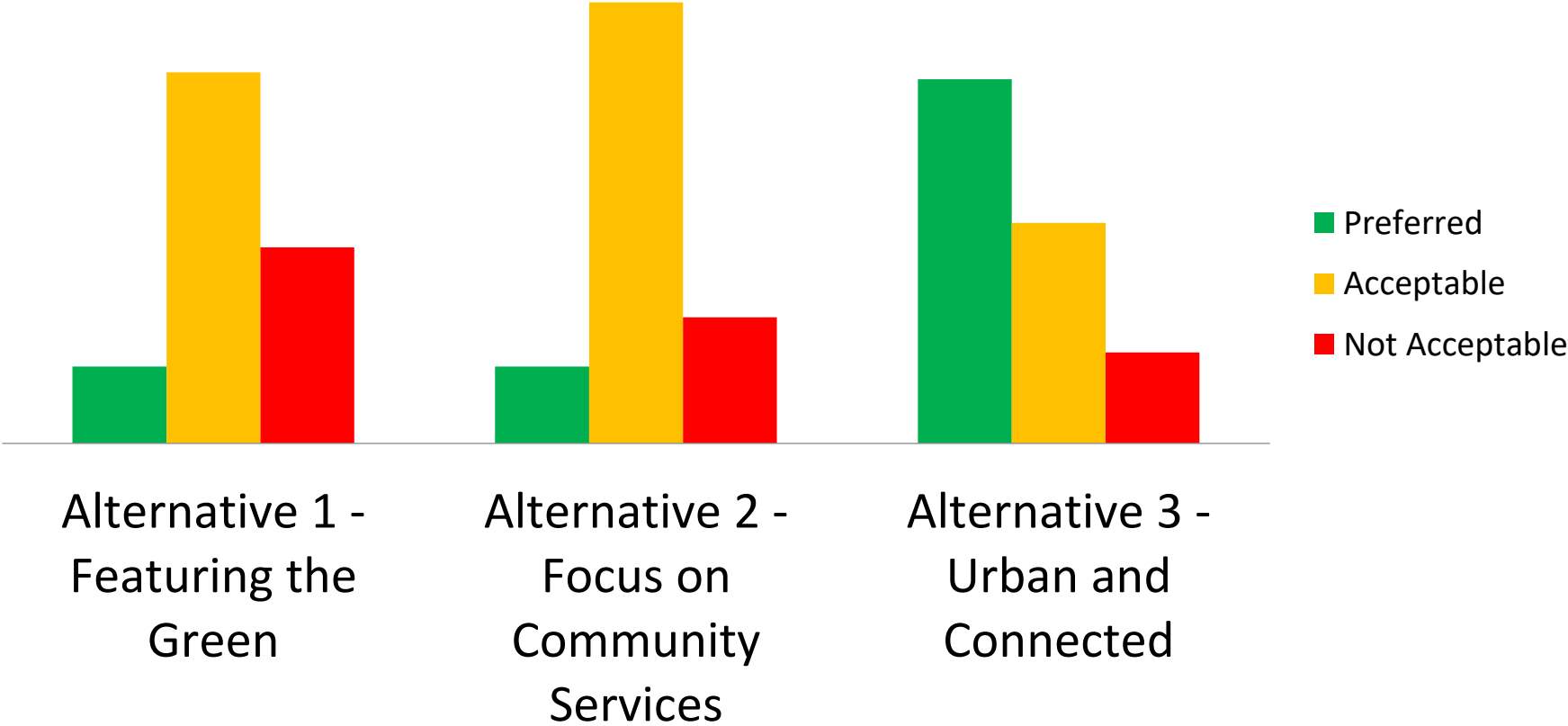


# Interconnected and Interwoven





# Balanced and Liveable





# What we heard

- Road locations and alignments
  - Grid network
  - Natural Heritage System crossings
  - Concerns related to single loaded roads
- Additional trails, including to employment lands
- Road through Cultural Heritage Landscape and Natural Heritage System



# What we heard

- Location and number of mixed-use and neighbourhood commercial
- Location of community park
- General support for collocating dry stormwater management, parks and schools
- Rural-urban transition, especially along Victoria Road
- Importance of Natural Heritage System including landform
- General support for green gateway
- Integrate safe options active transportation



# What we heard

- Rolling Hills
  - Concern about showing any redevelopment
  - Support for some development along Clair Road
  - If developed there are no schools and parks shown. Should more density be added along roads?
  - Concern about economic impacts



# Preliminary Preferred Concept

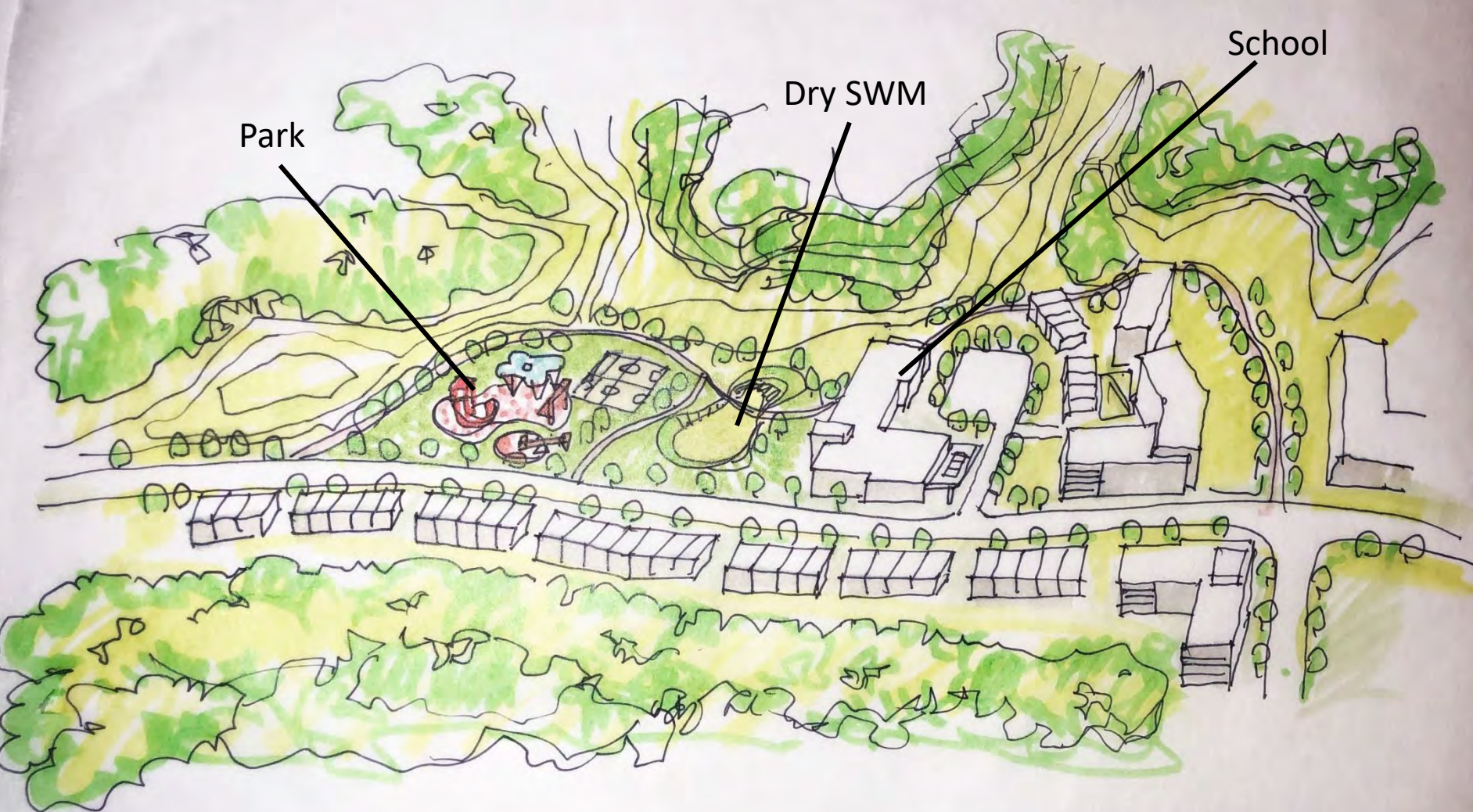


# Key Area Demonstration sketches





# Key Area Demonstration sketches





# Next Steps

Galleria & Room 112 – ask questions, provide your written comments or mark-up a copy of the preferred concept plan

April 9, 2018

- Open House 4:30-6:30
- Council Presentation 6:30
- deadline to register as a delegation is Friday at 10am

June 2018 – Preferred Concept to Council for consideration

July 2018 – Q1/Q2 2019 – Phase 3 of the project



# Thank You



Clair-Maltby  
Transform. Connect. Community.





# Land Use Typologies



# Low Density Residential





# Medium Density Residential





# High Density Residential





# Mixed Use



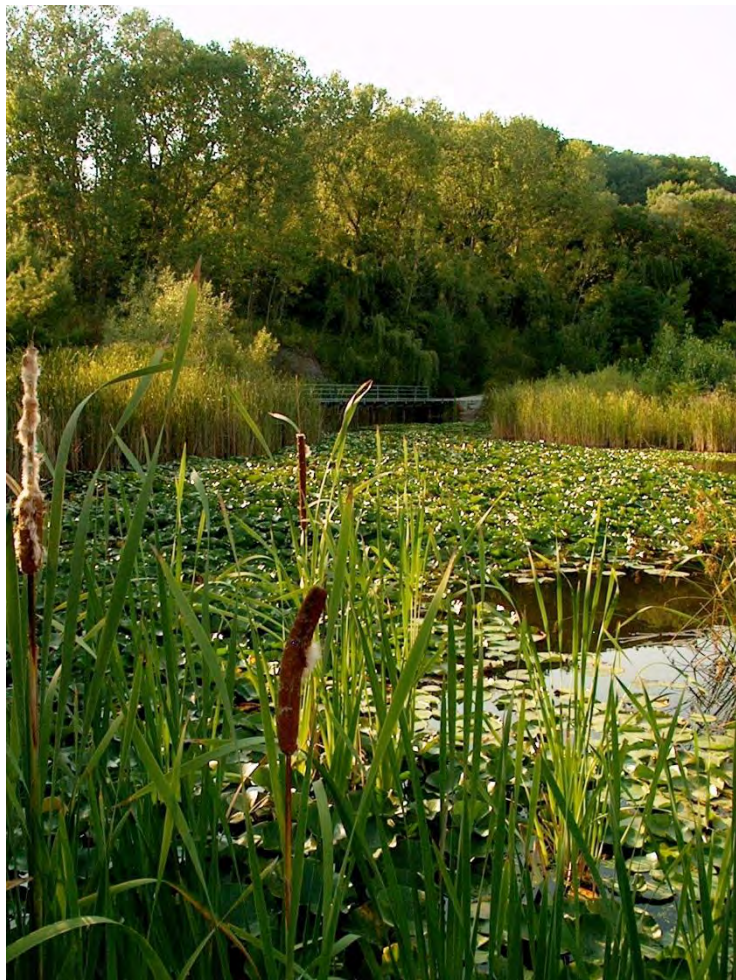


# Neighbourhood Commercial



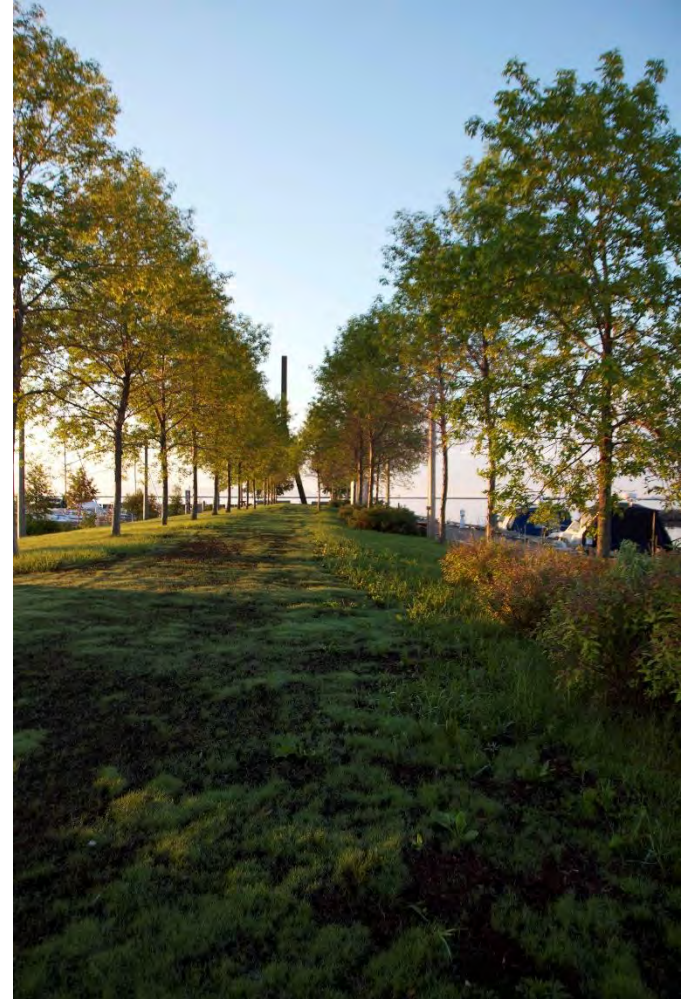


# Natural Heritage System





# Community Parks



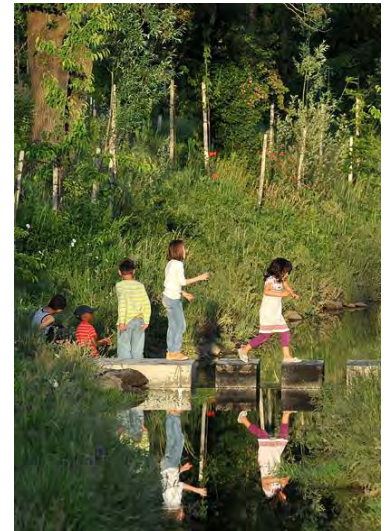


# Neighbourhood Parks





# Stormwater Management





# Gateways





# Streets and Blocks





# Cycling Trails and Multi-Use Paths





# Structuring Elements







# Clair-Maltby Secondary Plan

Transform. Connect. Community.

**Council Meeting**  
April 9, 2018



# The Secondary Plan Process





# CMSP & MESP Project

## Community Engagement Opportunities

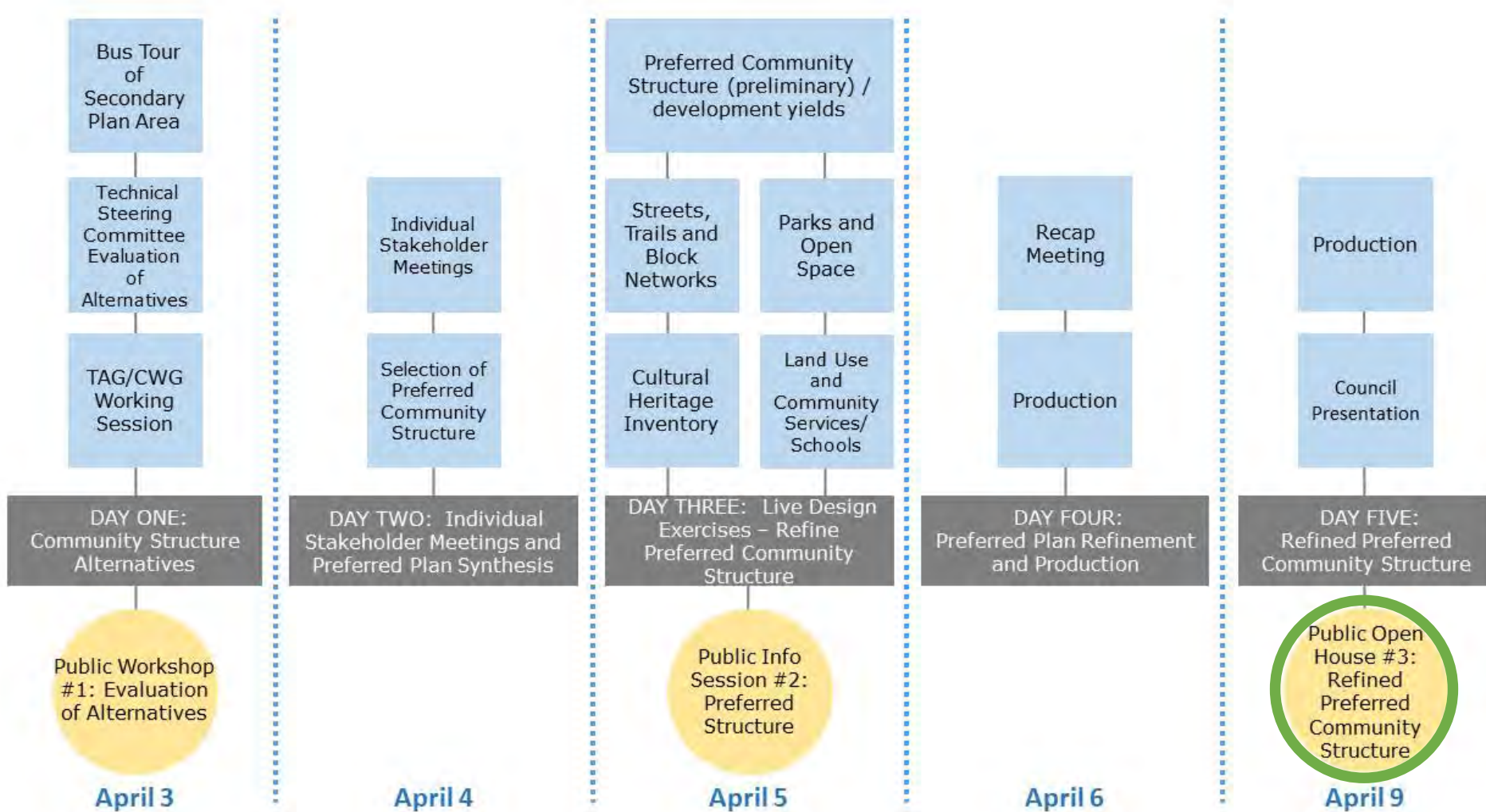
2015	June – Project Kick-off Report to Council August – TOR Open House September – TOR Focus Group Session October – consultation on draft TOR
2016	May – Property Owners Meeting
2017	February/March – Establishment of the Community Working Group April – Visioning Workshop July – COW/Council approval of vision and guiding principles September – Visioning Workshop December – COW/Council approval of Conceptual Community Structure
2018	March – EAC/RSAC, Council Workshop April – Planning and Design Charrette







# Design Charrette Overview





# Charrette Day 1





# Charrette Days 2&3





# Vision

Clair-Maltby will be a vibrant, urban community that is integrated with Guelph's southern neighbourhoods, as well as having strong connections to Downtown, employment areas and the rest of the City.

The Natural Heritage System and the Paris Moraine provided the framework for the balanced development of interconnected and sustainable neighbourhoods.

The area will be primarily residential in character with a full range and mix of housing types and a variety of other uses that meet the needs of all residents.

A system of parks, open spaces and trails will be interwoven throughout to provide opportunities for active and passive recreation.



# Guiding Principles



Vibrant and Urban



Green and Resilient



Healthy and Sustainable



Interconnected and Interwoven



Balanced and Liveable

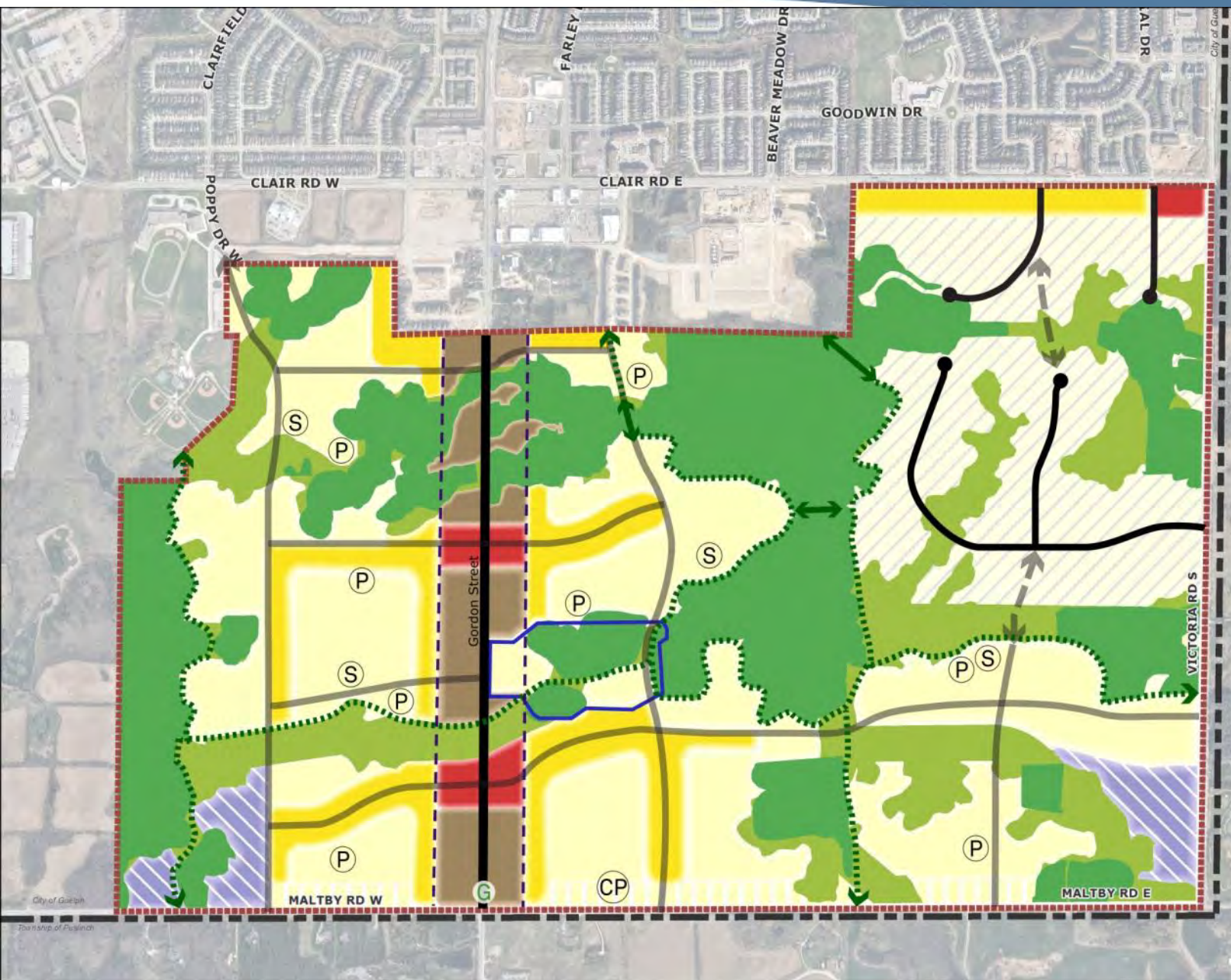


# Conceptual Community Structure



# Clair-Maltby Conceptual Community Structure

- Legend**
- Clair-Maltby Secondary Plan Boundary
  - Cultural Heritage Landscape
  - Urban-Rural Transition Zone
  - Gordon St. Corridor
  - Existing Street Network
  - Proposed Street and Cycling Network
  - Potential Street Connection
  - Proposed Trail Network
  - Potential Active Transportation Link
  - Neighbourhood Park
  - Community Park
  - Elementary School
  - Gateway
- Natural Heritage System**
- May Permit Essential Transportation Infrastructure
  - Does Not Permit Transportation Infrastructure
- Land Use**
- Low Density (Residential)
  - Medium Density (Residential)
  - High Density (Residential)
  - Mixed Use
  - Employment
  - Rolling Hills Residential



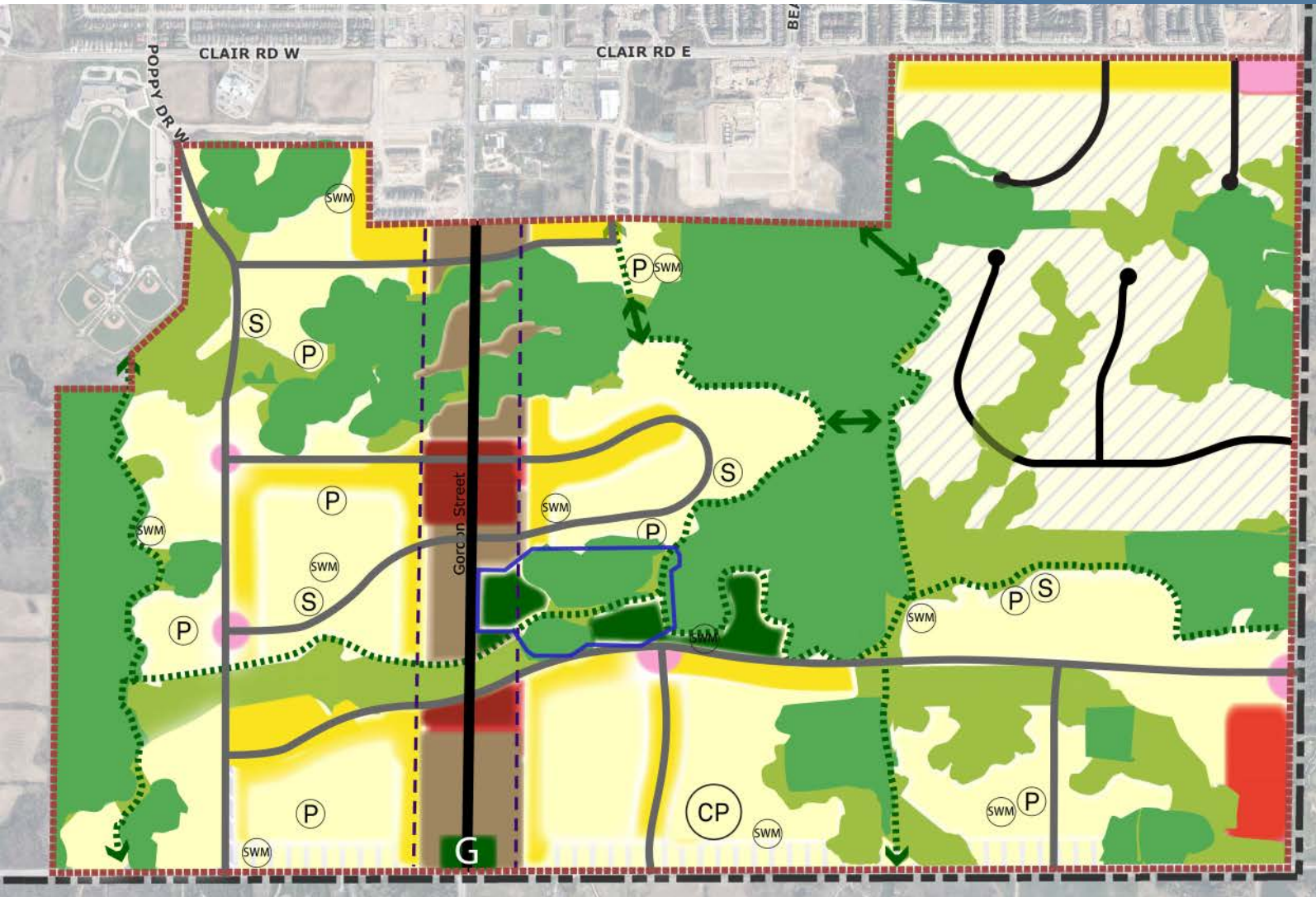
City of Guelph  
Township of Pasquabunga





# Community Structure Alternatives





**Legend**

- Clair-Maltby Secondary Plan Boundary
- Cultural Heritage Landscape
- Urban-Rural Transition Zone
- Gordon St. Corridor
- Existing Street Network
- Proposed Street and Cycling Network
- Potential Street and Cycling Connection
- Potential Trail Network
- Potential Active Transportation Link
- Neighbourhood Park (P)
- Community Park (CP)
- Elementary School (S)
- Stormwater Management (SWM)
- Gateway (G)

**Natural Heritage System**

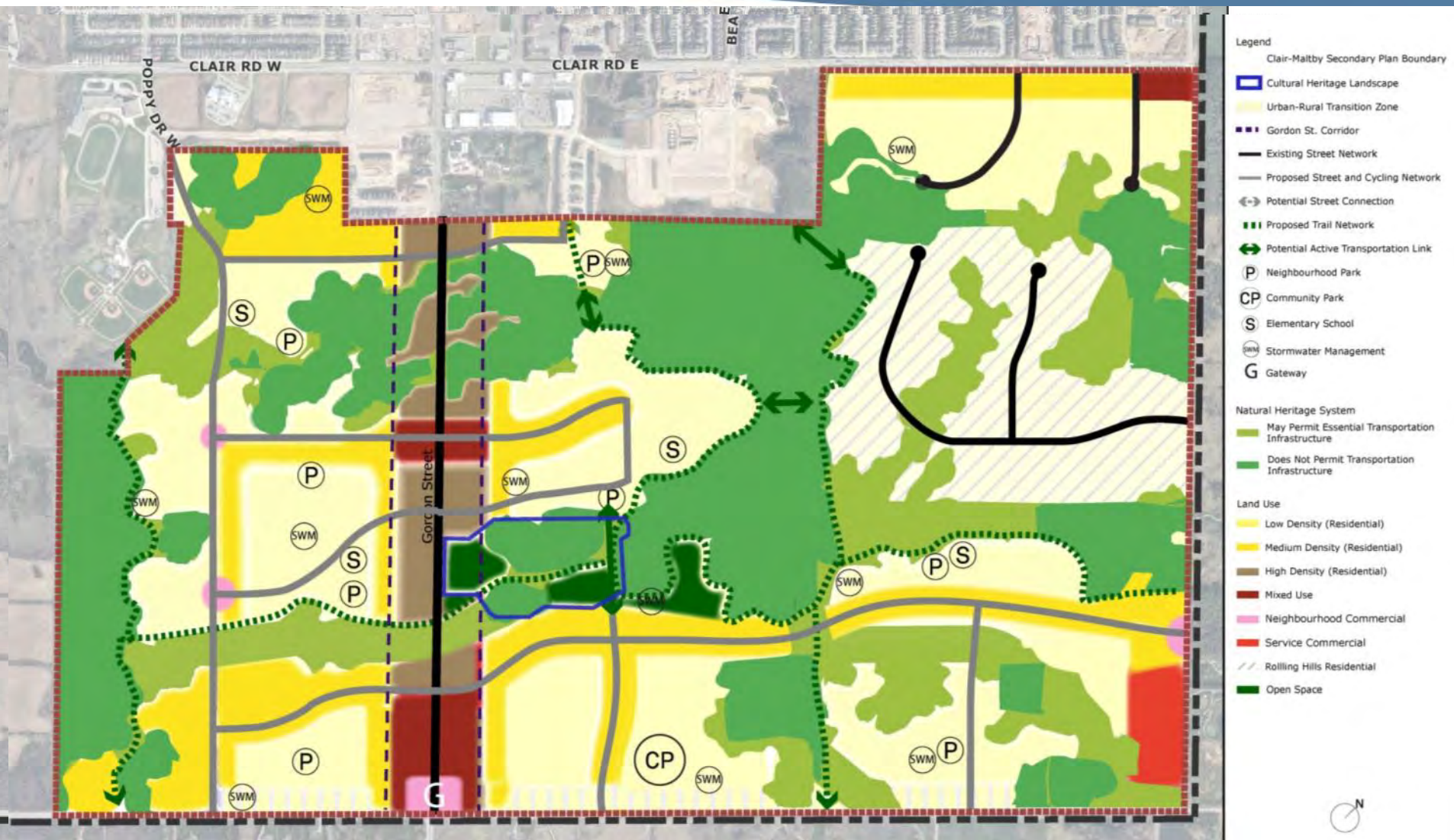
- May Permit Essential Transportation Infrastructure
- Does Not Permit Transportation Infrastructure

**Land Use**

- Low Density (Residential)
- Medium Density (Residential)
- High Density (Residential)
- Mixed Use
- Neighbourhood Commercial
- Service Commercial
- Rolling Hills Residential
- Open Space

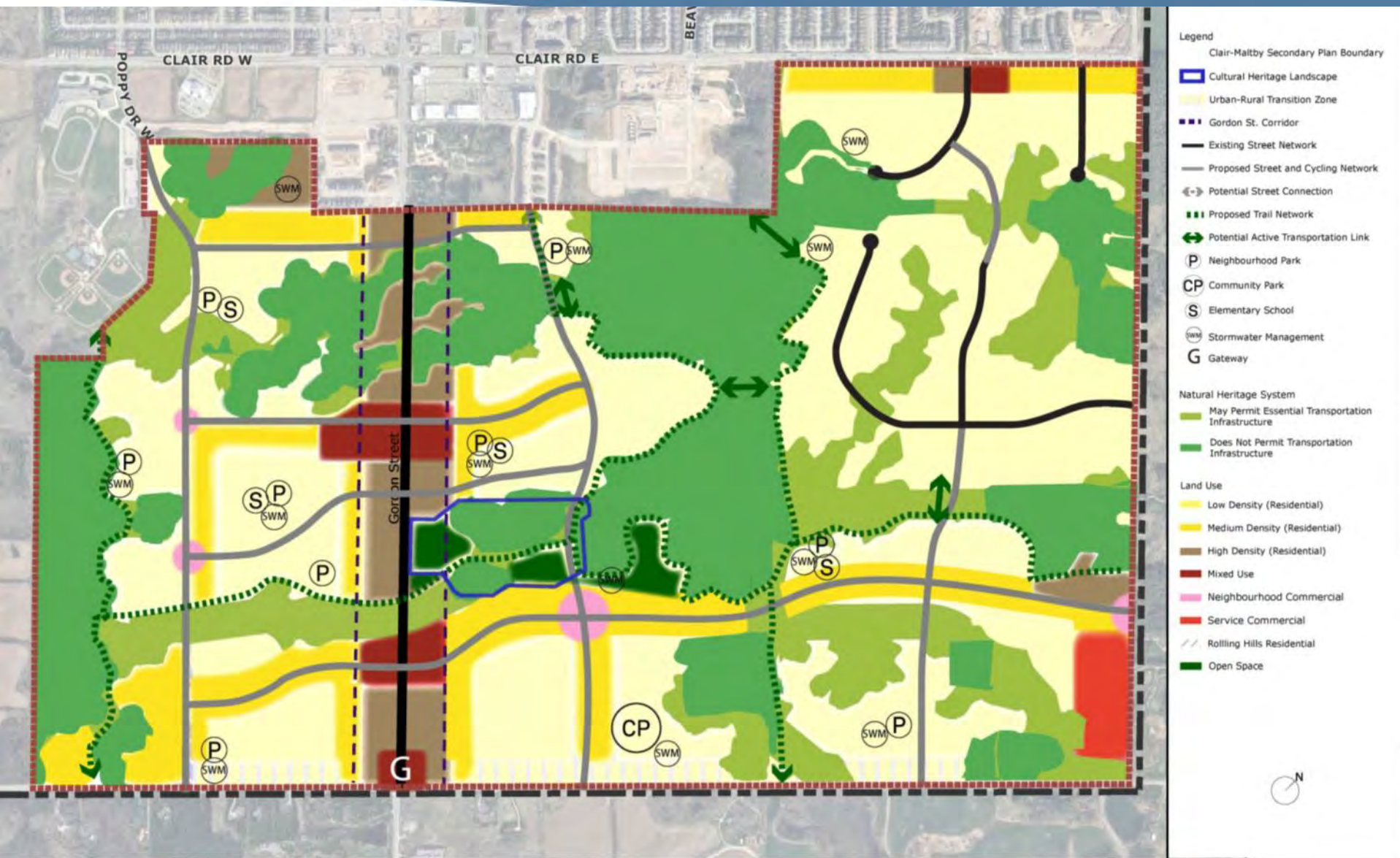
# Alternative 1: Featuring the Green





# Alternative 2: Focus on Community and Services





# Alternative 3: Connected and Urban

Clair-Maltby  
Transform. Connect. Community.



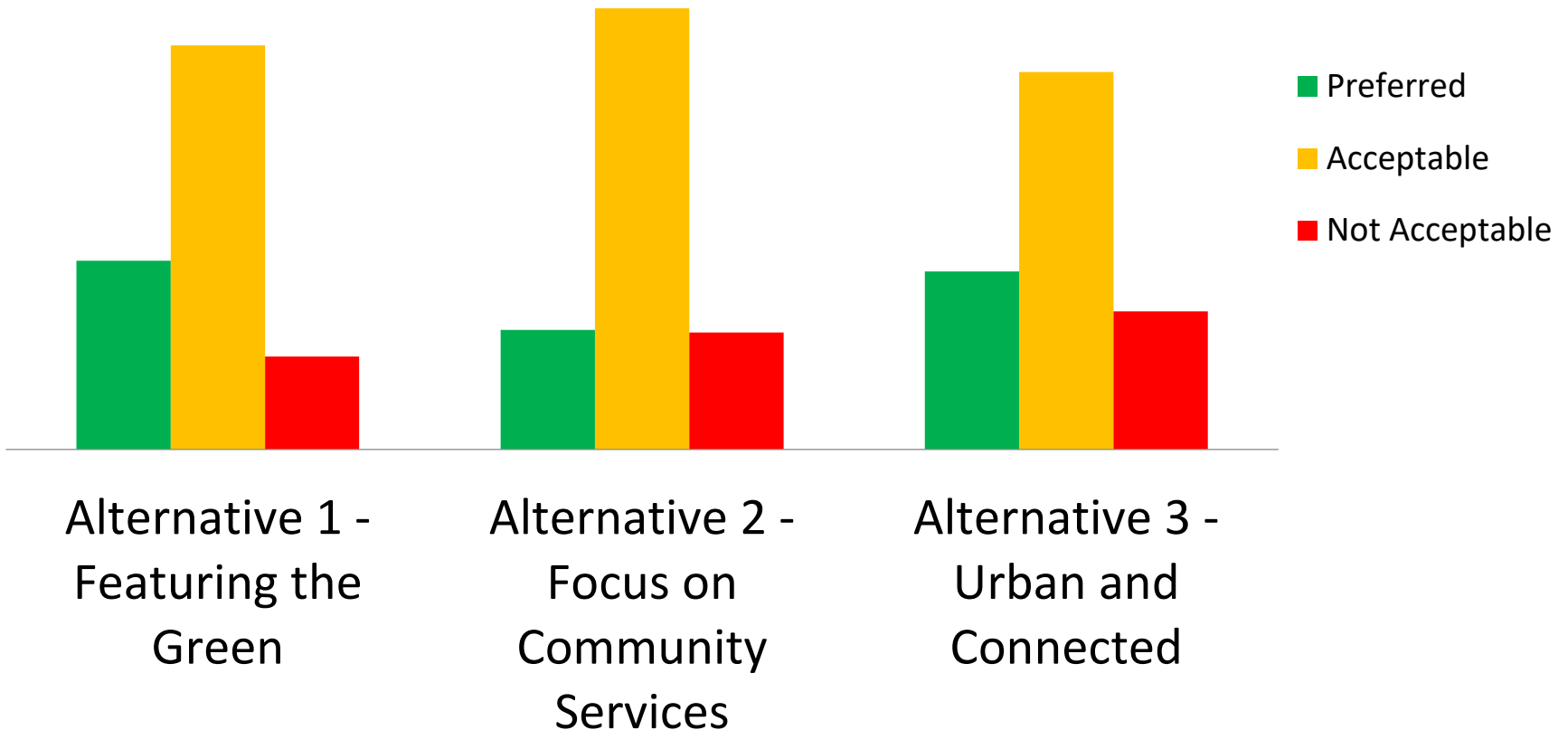


# What We Heard



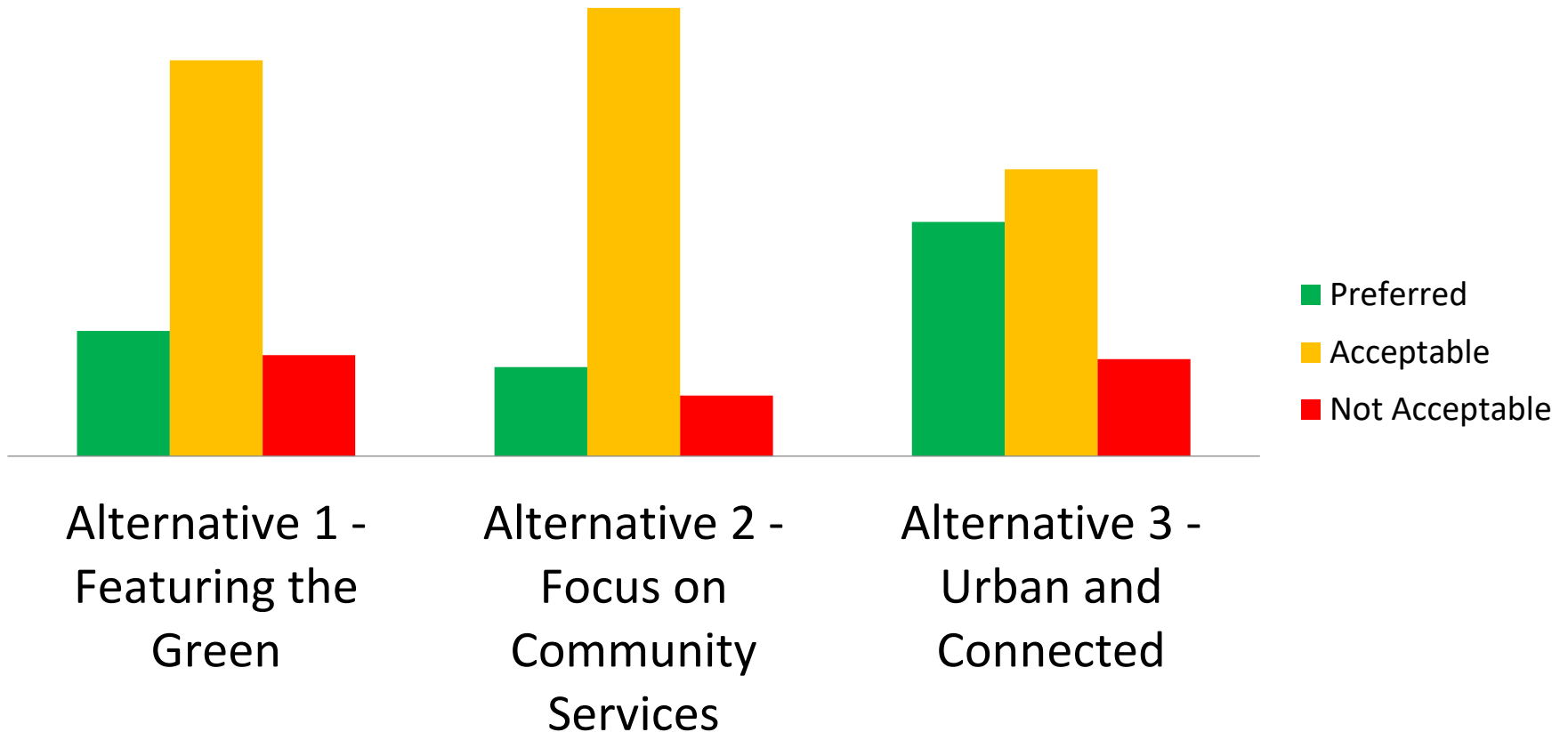


# Vibrant and Urban



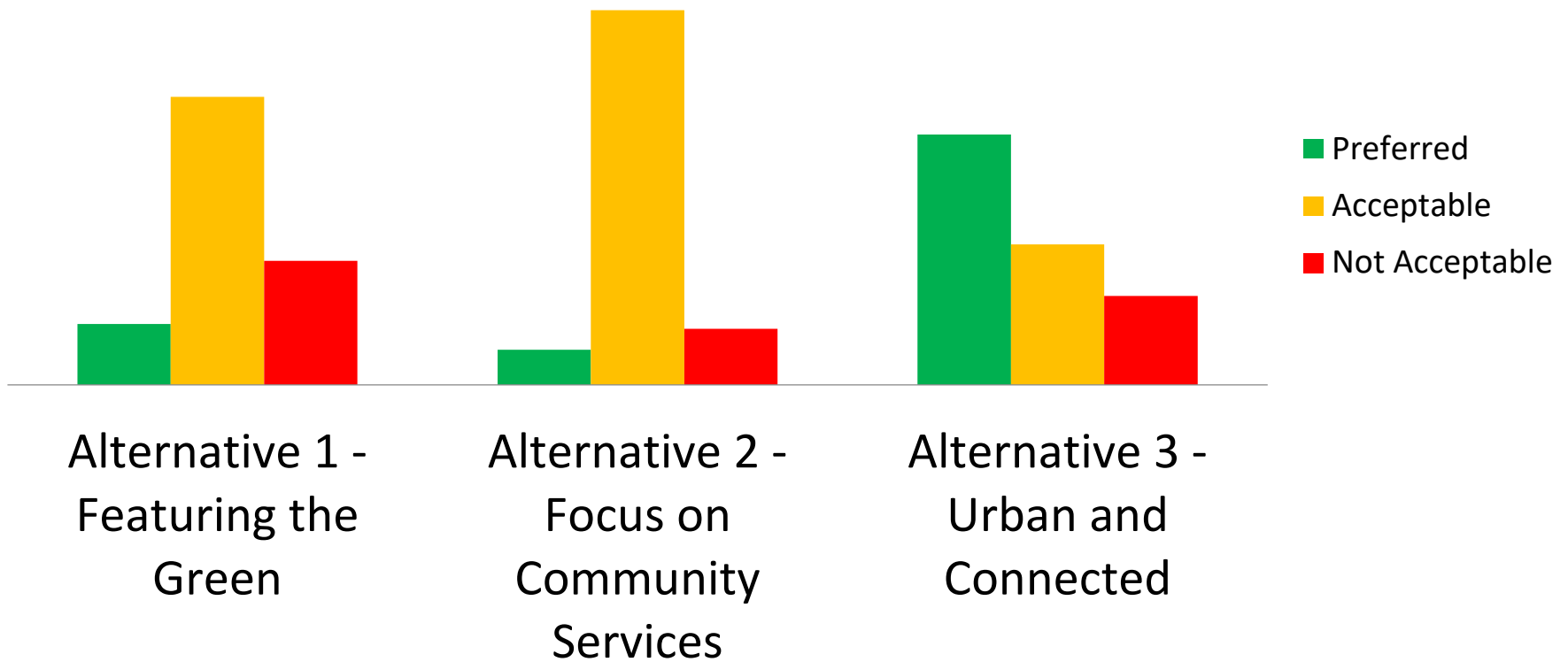


# Green and Resilient



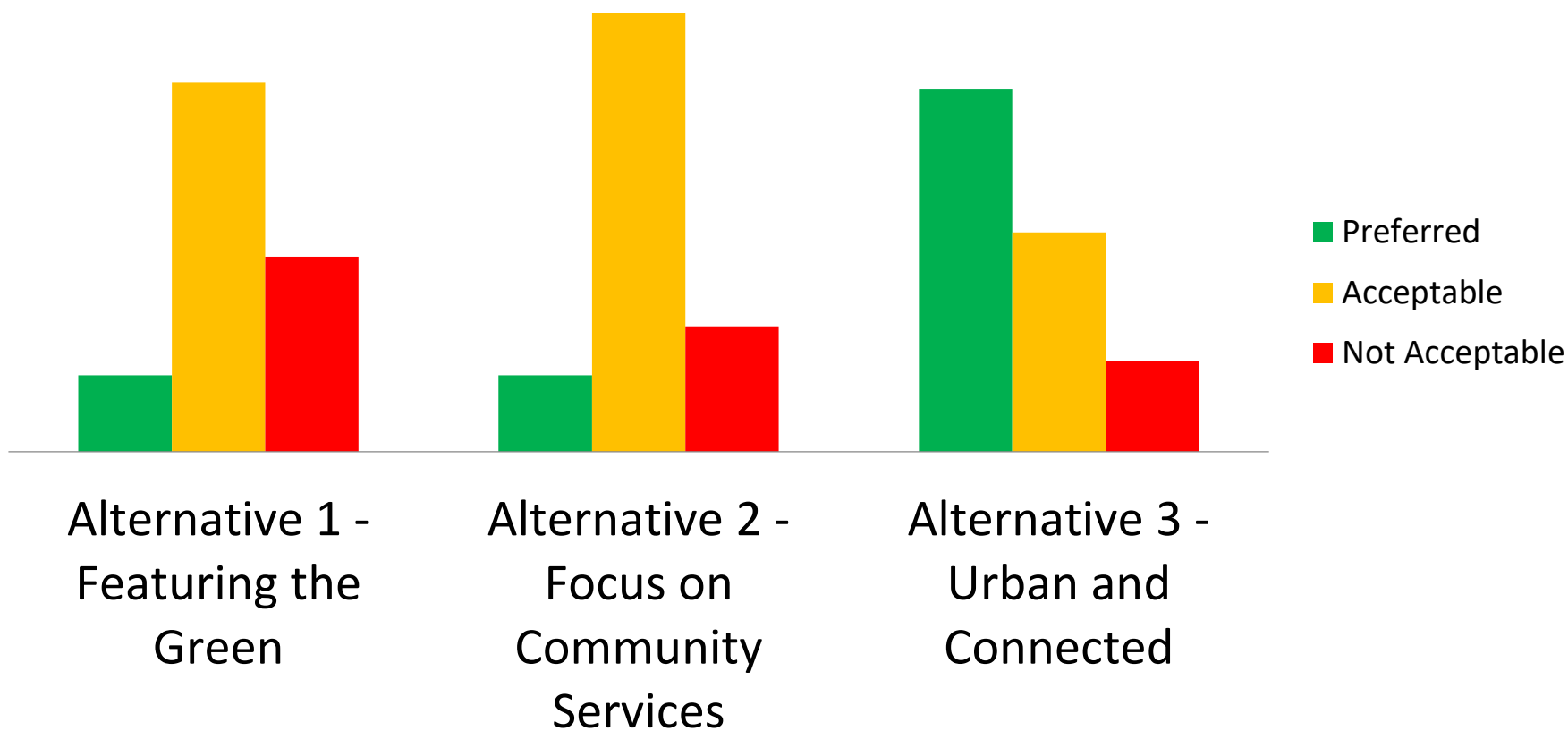


# Interconnected and Interwoven





# Balanced and Liveable





# What we heard

- Road locations and alignments
  - Grid network
  - Natural Heritage System crossings
  - Concerns related to single loaded roads
- Additional trails, including to employment lands
- Road through Cultural Heritage Landscape and Natural Heritage System



# What we heard

- Location and number of mixed-use and neighbourhood commercial
- Location of community park
- General support for collocating dry stormwater management, parks and schools
- Rural-urban transition, especially along Victoria Road
- Importance of Natural Heritage System including landform
- General support for green gateway
- Integrate safe options active transportation



# What we heard

- Rolling Hills
  - Concern about showing any redevelopment
  - Support for some development along Clair Road
  - If developed there are no schools and parks shown. Should more density be added along roads?
  - Concern about economic impacts



# PRELIMINARY

## Preferred Community Structure

### Day 3 – April 5, 2018

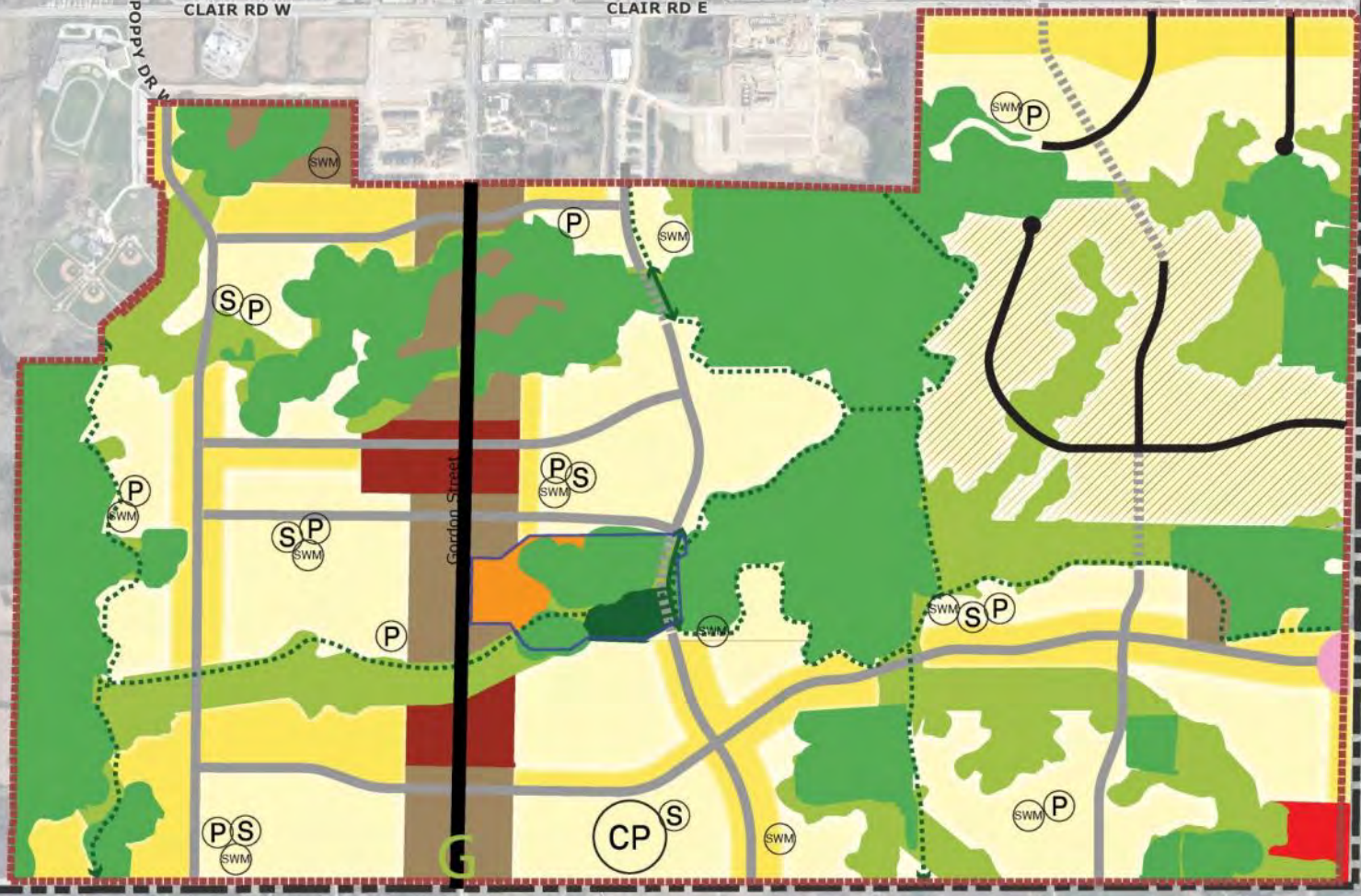


# PRELIMINARY – April 5, 2018

## Clair-Maltby Preliminary Preferred Concept

April 5 2018

- Legend**
- Clair-Maltby Secondary Plan Boundary
  - Cultural Heritage Landscape
  - Urban-Rural Transition Zone
  - Gordon St. Corridor
  - Existing Street Network
  - Proposed Street and Cycling Network
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  - Neighbourhood Park
  - Community Park
  - Elementary School
  - Stormwater Management
  - Gateway
- Natural Heritage System**
- May Permit Essential Transportation Infrastructure
  - Does Not Permit Transportation Infrastructure
- Land Use**
- Low Density (Residential)
  - Medium Density (Residential)
  - High Density (Residential)
  - Mixed Use
  - Neighbourhood Commercial
  - Service Commercial
  - Reserve Lands
  - Open Space





# What we heard on April 5th

- Continues to be differing public opinions on:
  - Rolling Hills
  - The north-south collector road on the east side of Gordon Street
  - Community Park
- Minor modifications to locations of land uses
- Changes to Neighbourhood/Convenience Commercial
- Consistent approach to Victoria Road
- Number of potential school locations



# Preferred Community Structure

## April 9, 2018

Clair-Maltby  
Preliminary Preferred Concept

April 9 2018

### Legend

-  Clair-Maltby Secondary Plan Boundary
-  Cultural Heritage Landscape
-  Urban-Rural Transition Zone
-  Gordon St. Corridor



### Streets and Trails

-  Existing Street Network
-  Proposed Street and Cycling Network
-  Future Street Connection
-  Road Link Assessment Area
-  Proposed Trail Network
-  Potential Active Transportation Link

### Parks, Schools, and Features

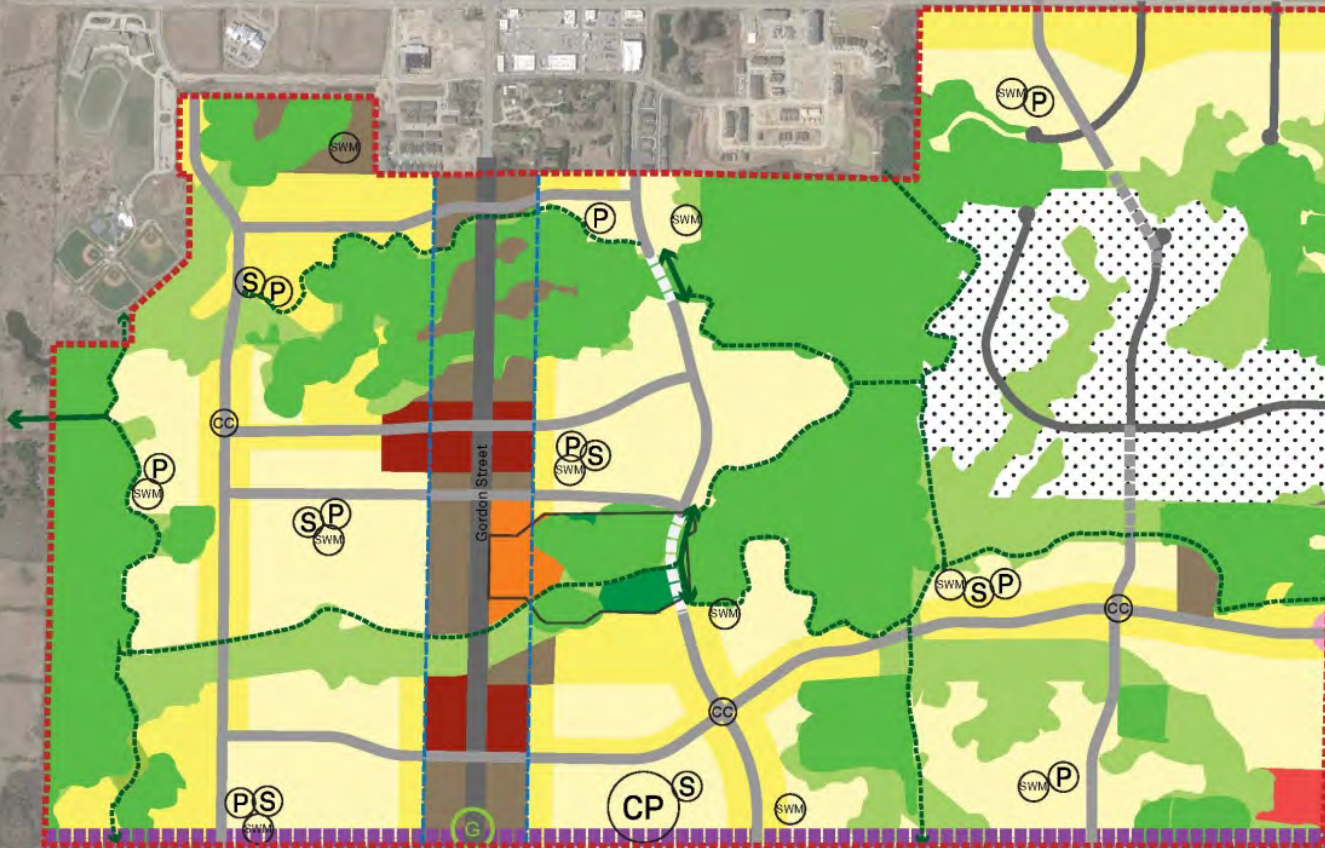
-  Neighbourhood Park
-  Community Park
-  Elementary School
-  Stormwater Infiltration Areas
-  Convenience Commercial Area
-  Gateway

### Natural Heritage System

-  May Permit Essential Transportation Infrastructure
-  Does Not Permit Transportation Infrastructure

### Land Use

-  Low Density (Residential)
-  Medium Density (Residential)
-  High Density (Residential)
-  Mixed Use
-  Neighbourhood Commercial
-  Service Commercial
-  Mixed Office / Commercial
-  Reserve Lands
-  Open Space





# Next Steps

June 5, 2018	Preferred Community Structure to COW for decision
June 25, 2018	Preferred Community Structure to Council for decision
Q3 2018 – Q2 2019	Phase 3 of the project <ul style="list-style-type: none"><li>• Planning Act process including additional Community Engagement</li><li>• Detailed environmental/servicing work</li></ul>





# WELCOME

Thank you for attending tonight's Open House

The materials presented today are the products of a week-long design charette.

**1** Open House

4:30 - 6:30 pm

**2** Council Presentation

6:30 pm

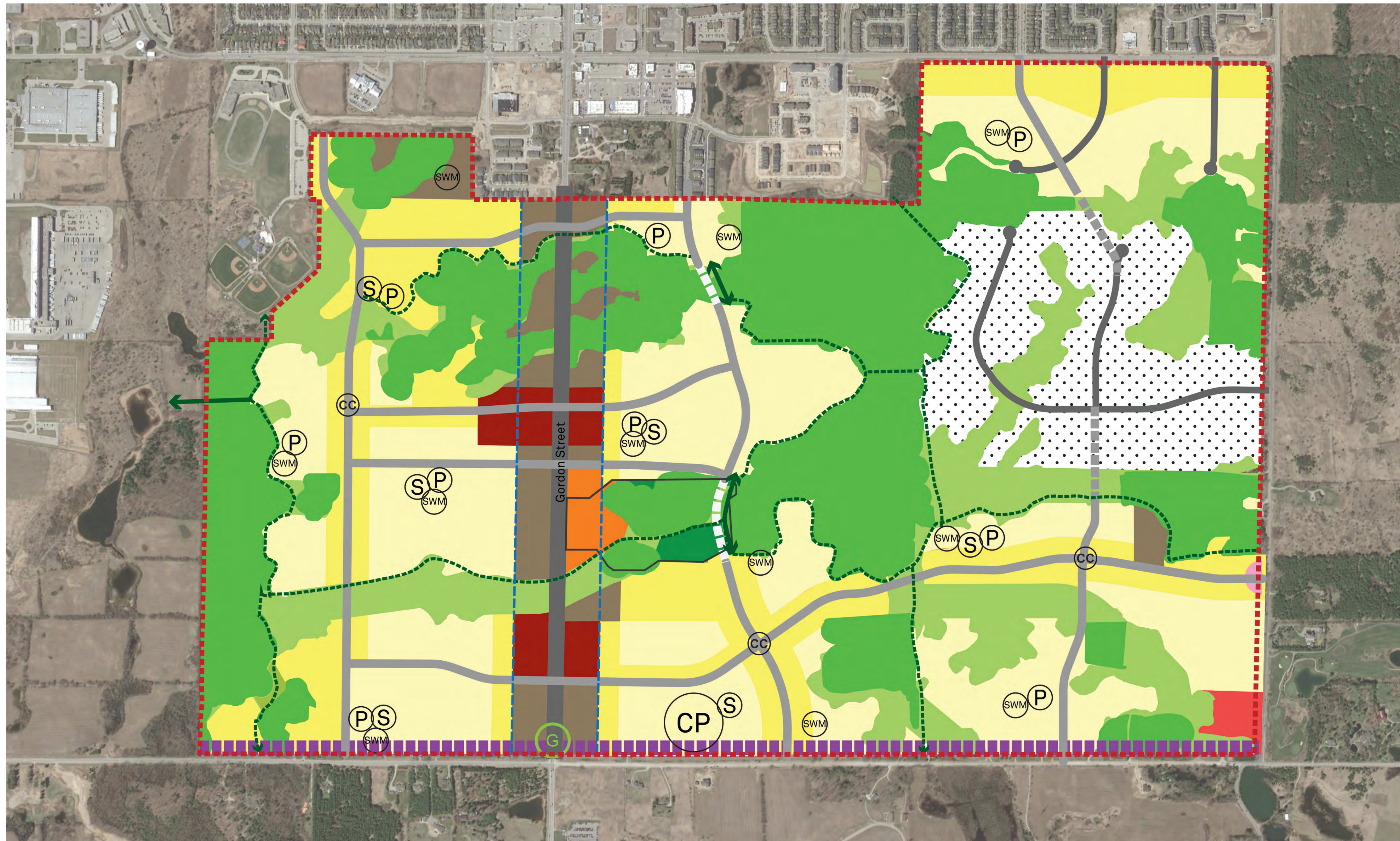
## Contact Us

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Senior Policy Planner  
Planning, Urban Design and Building Services  
[stacey.laughlin@guelph.ca](mailto:stacey.laughlin@guelph.ca)

**Arun Hindupur, M.Sc., P.Eng.**  
Supervisor, Infrastructure Engineering  
Engineering and Capital Infrastructure Services  
[arun.hindupur@guelph.ca](mailto:arun.hindupur@guelph.ca)



# PRELIMINARY PREFERRED COMMUNITY STRUCTURE

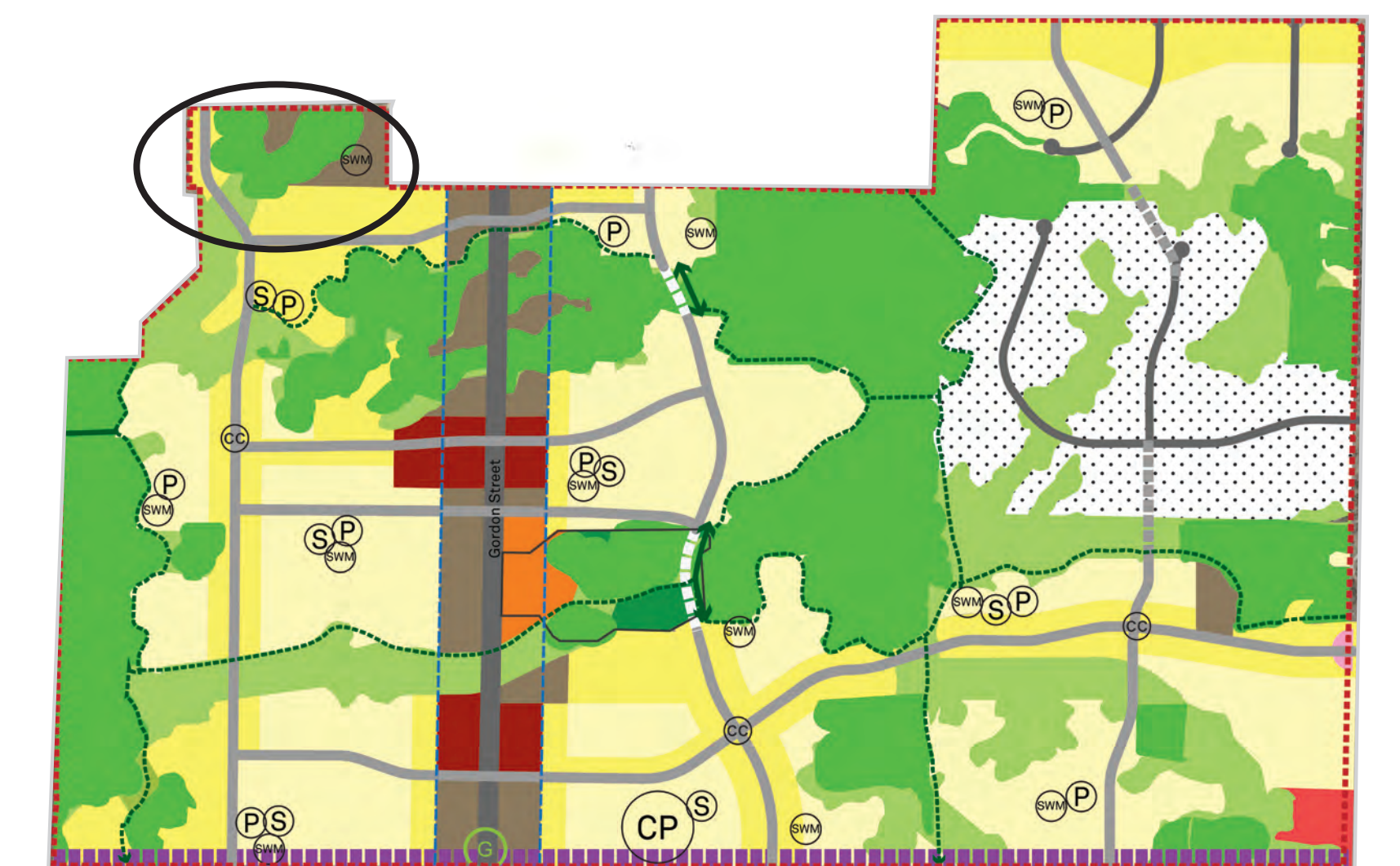


## LEGEND

- Clair-Maltby Secondary Plan Boundary
- Cultural Heritage Landscape
- Urban-Rural Transition Zone
- Gordon St. Corridor
- Streets and Trails**
- Existing Street Network
- Proposed Street and Cycling Network
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- Road Link Assessment Area
- Proposed Trail Network
- Potential Active Transportation Link
- Parks, Schools, and Features**
- P Neighbourhood Park
- CP Community Park
- S Elementary School
- SWM Stormwater Infiltration Areas
- CC Convenience Commercial Area
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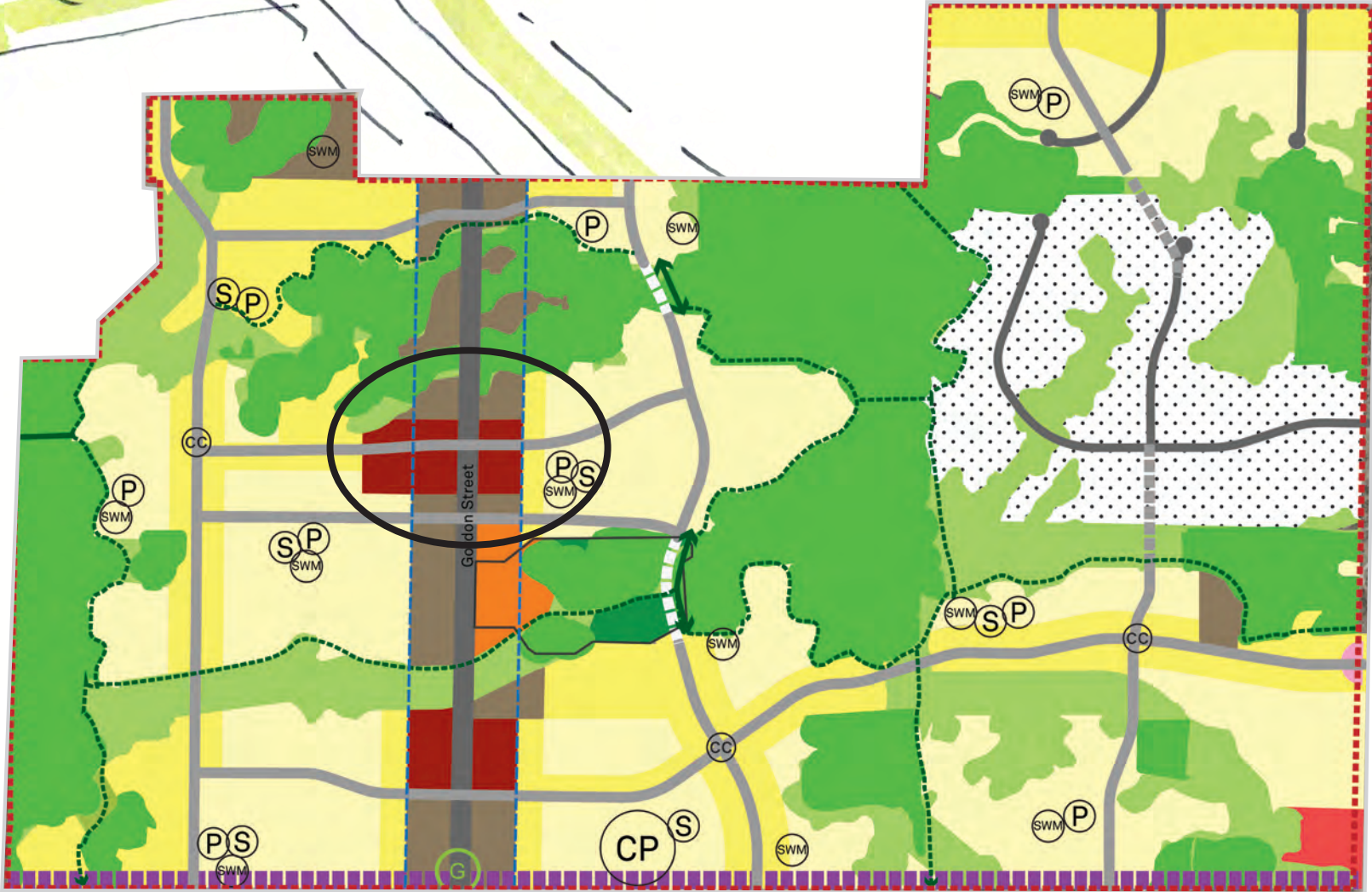
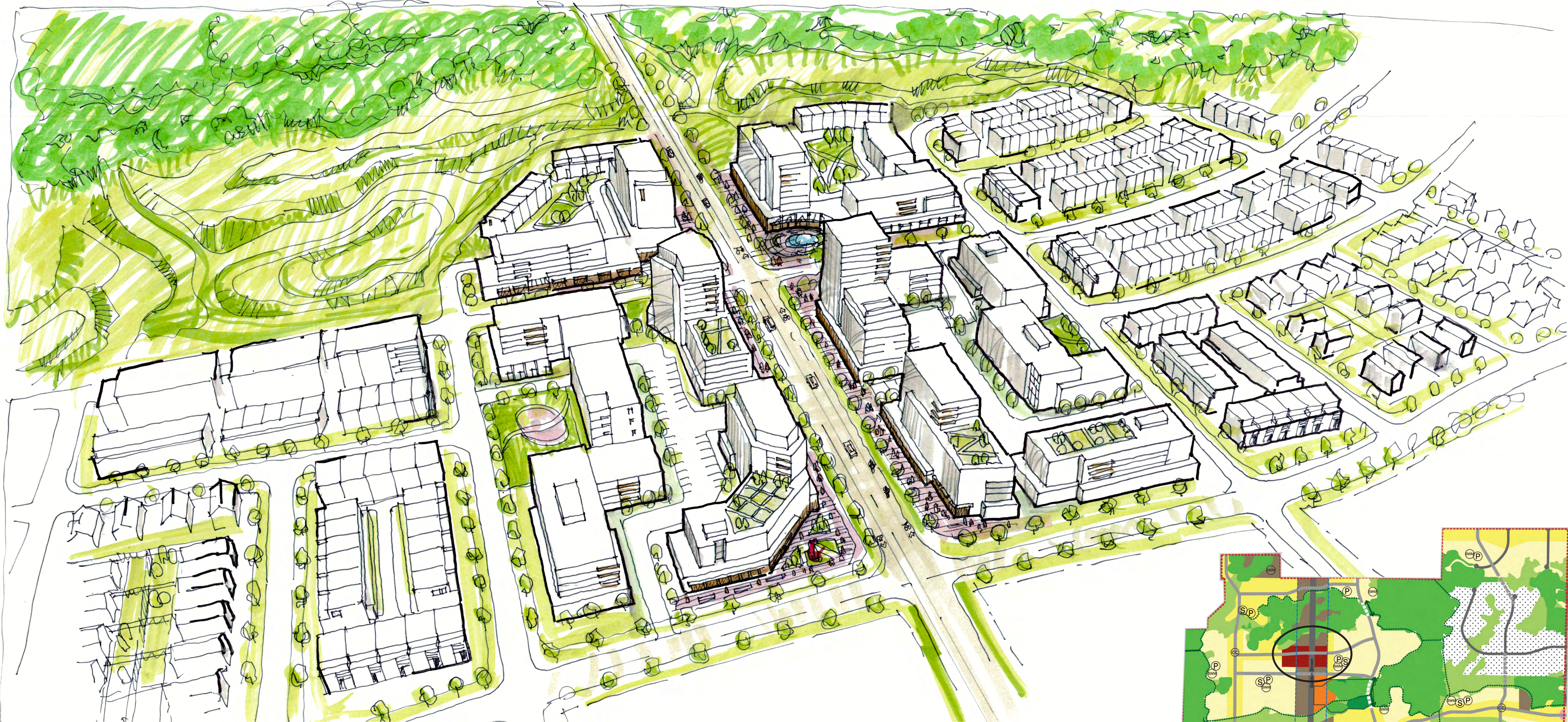


# CONNECTIONS TO THE COMMUNITY



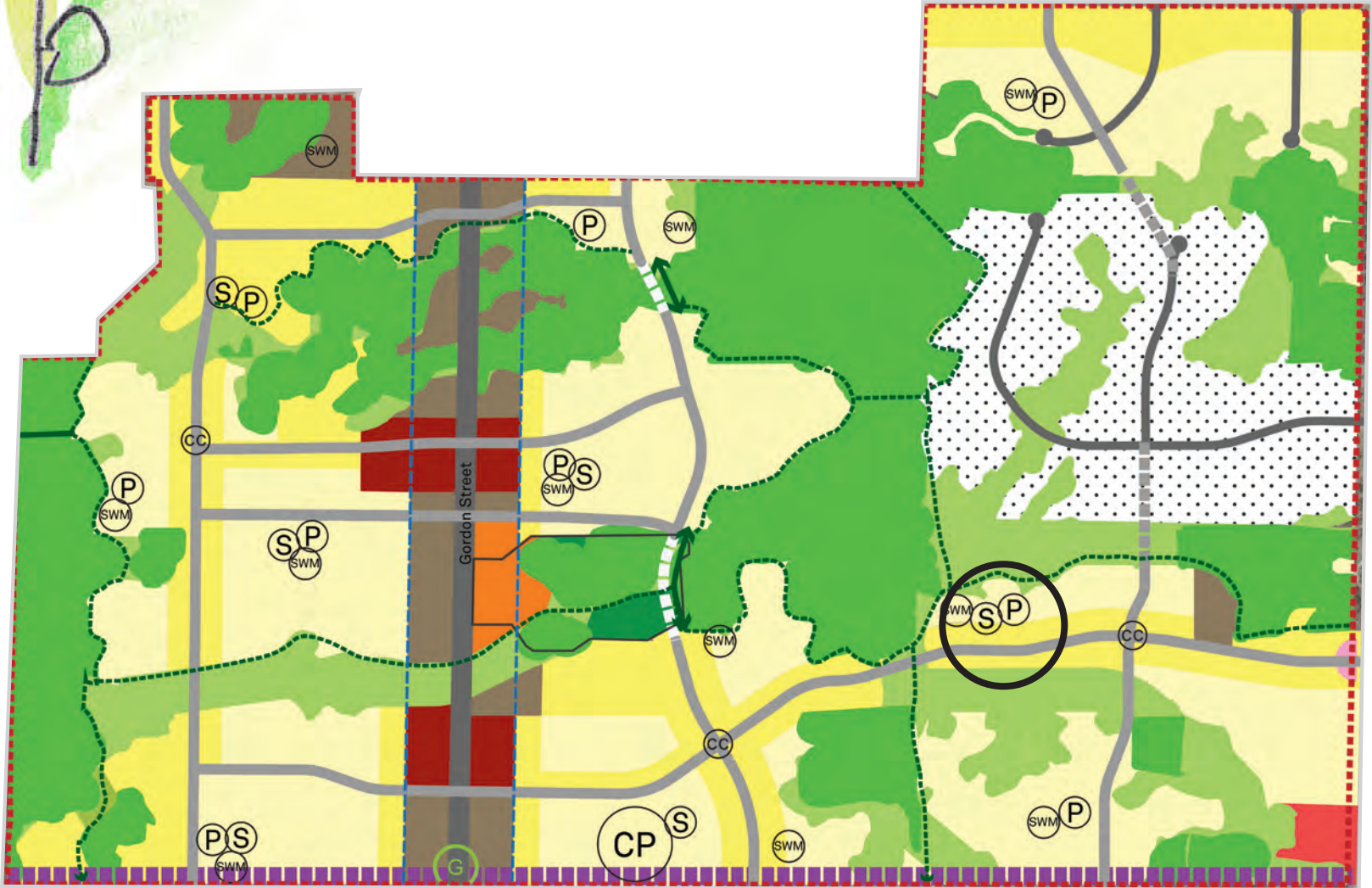


# GORDON STREET



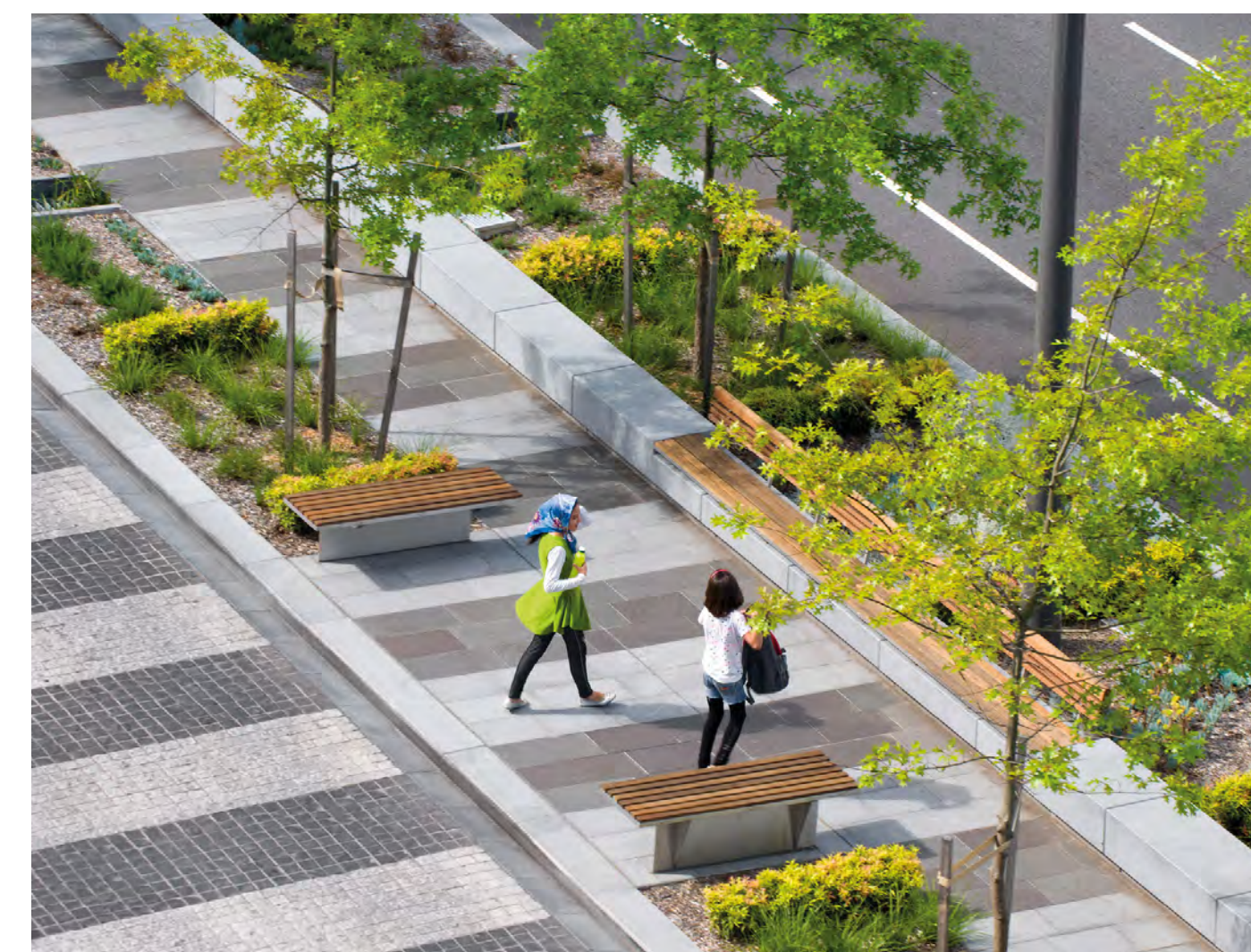
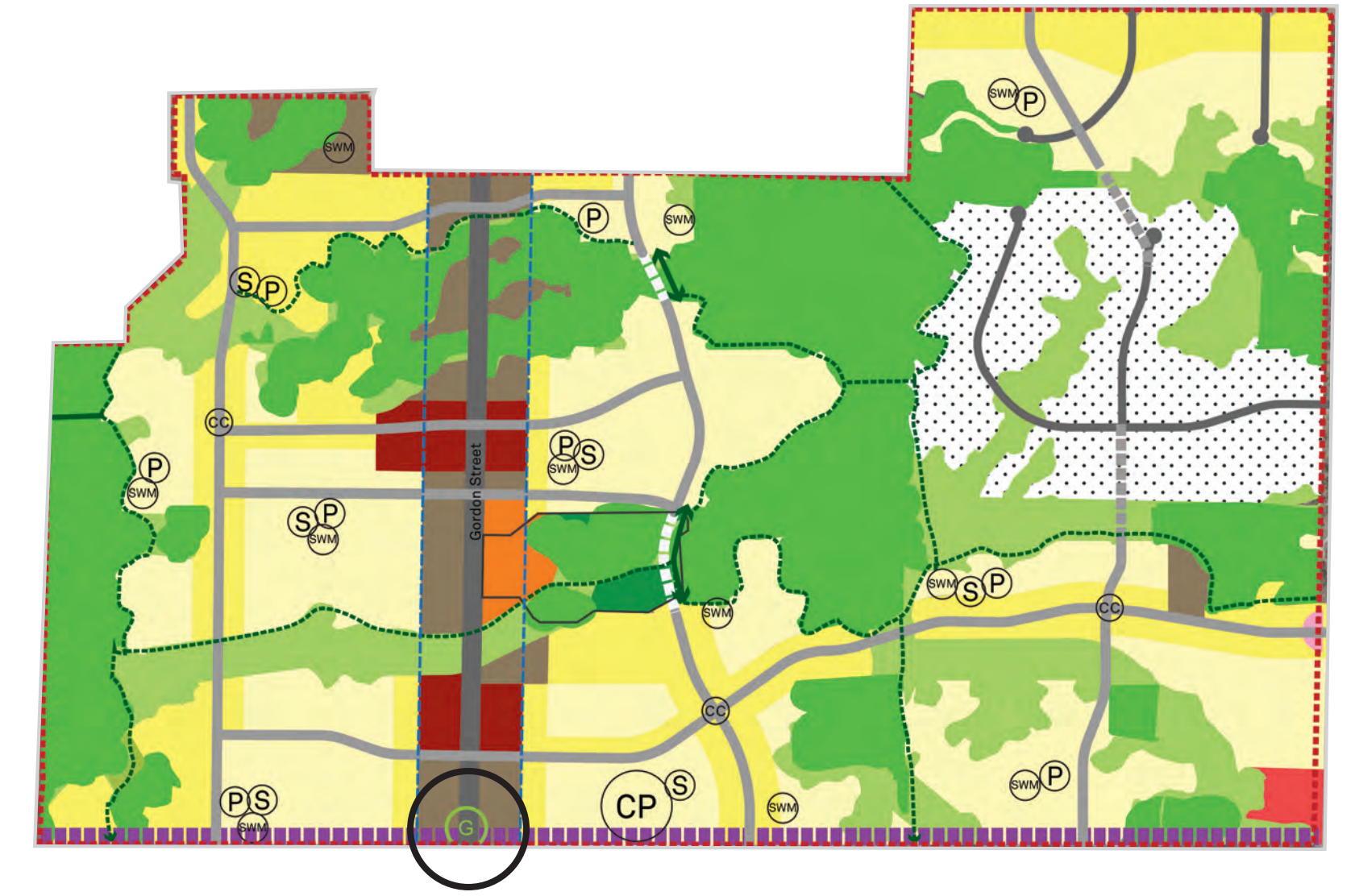
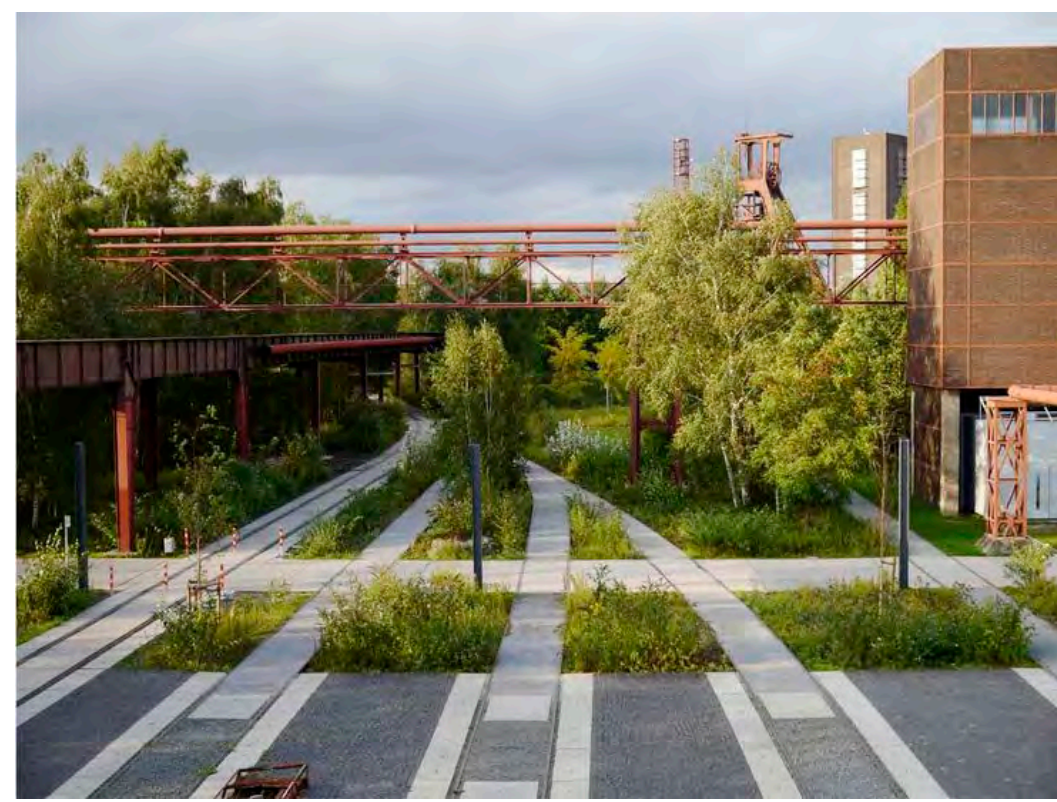


# RESPECTING NATURAL HERITAGE





# GREEN GATEWAY

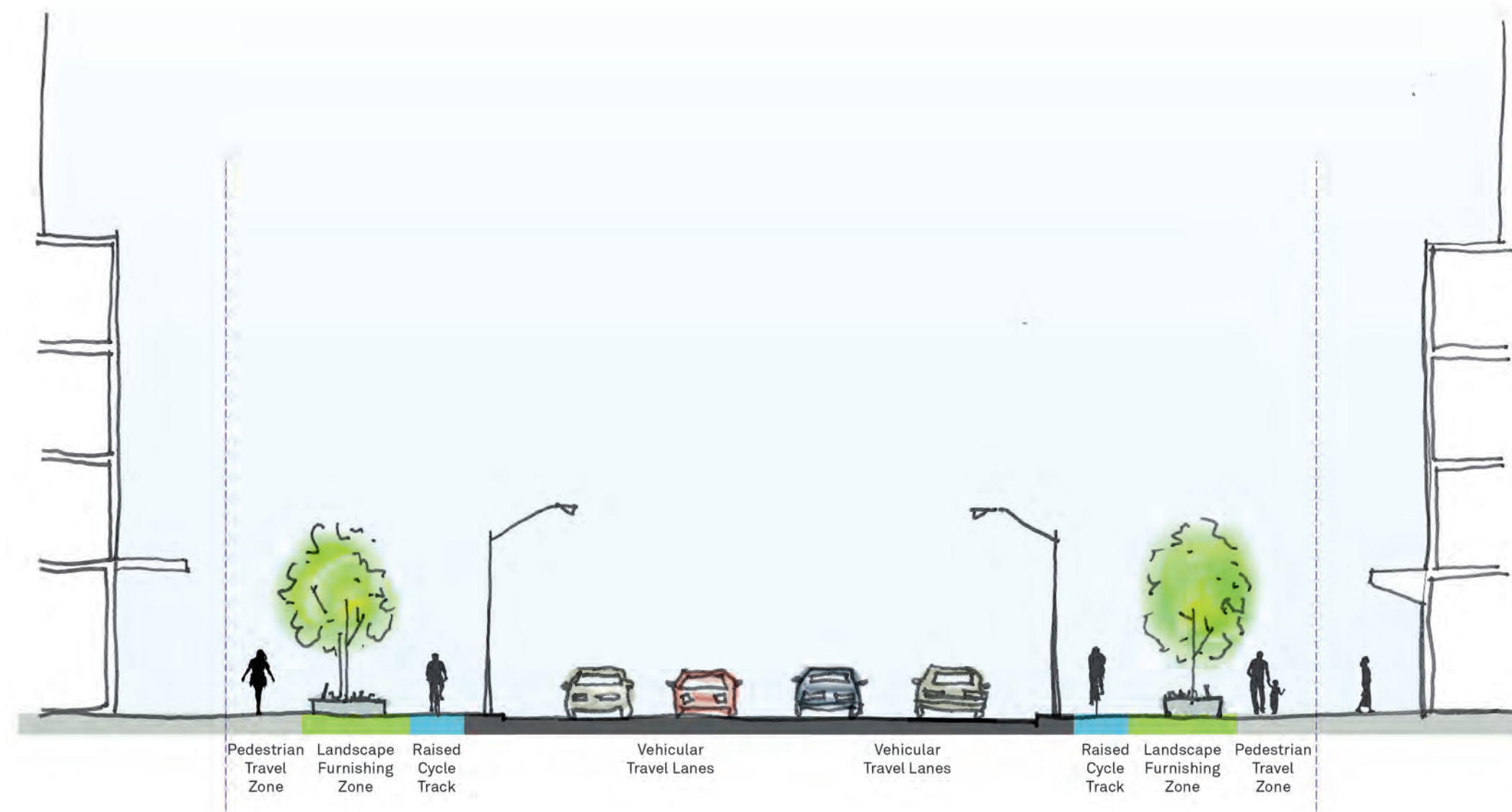




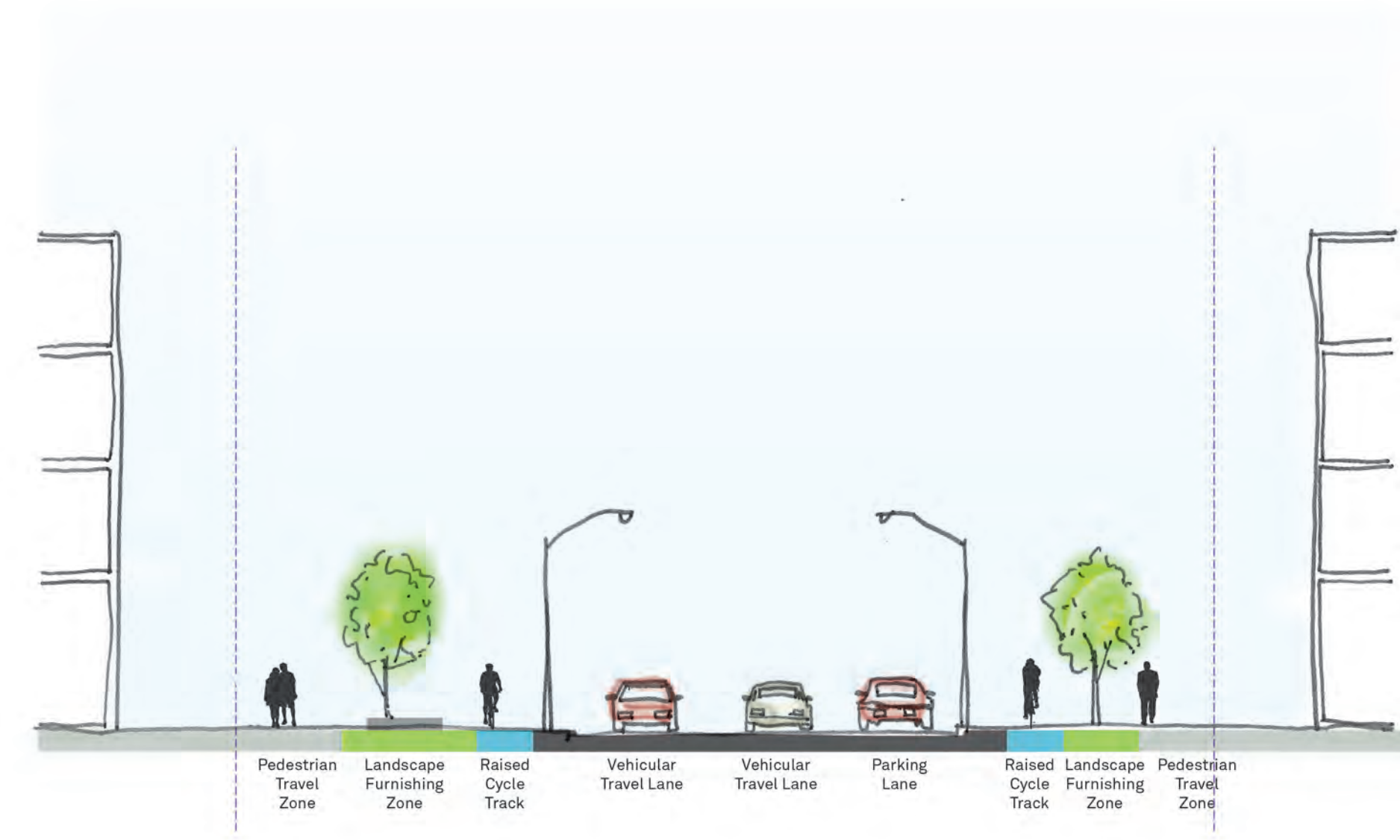
# STREETS AND BLOCKS

What do you envision for Clair Maltby? Place the stickers provided on images that you like, or use the Post-It Notes for suggestions not shown in the precedent images below.

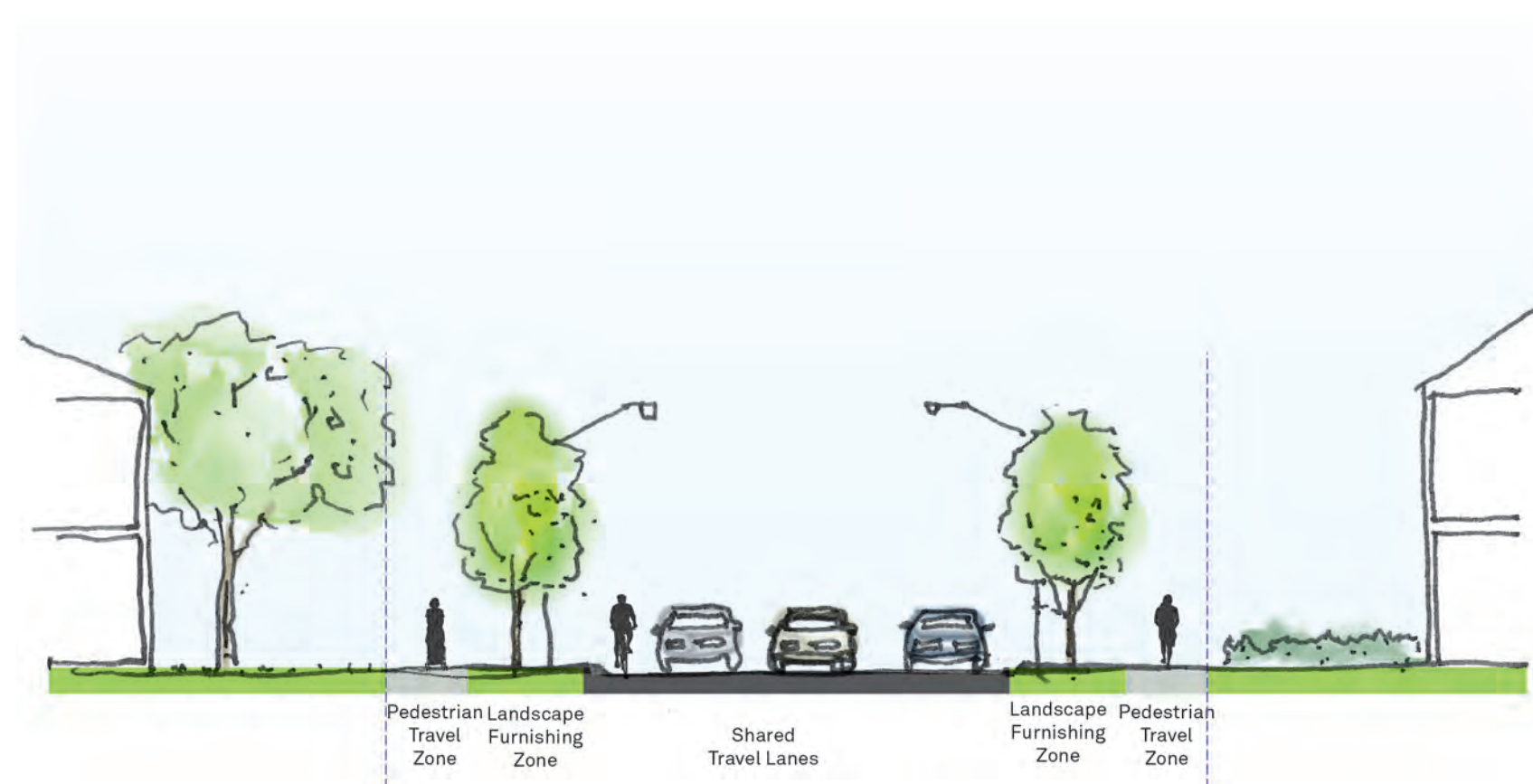
Gordon Street



Collector Street Option



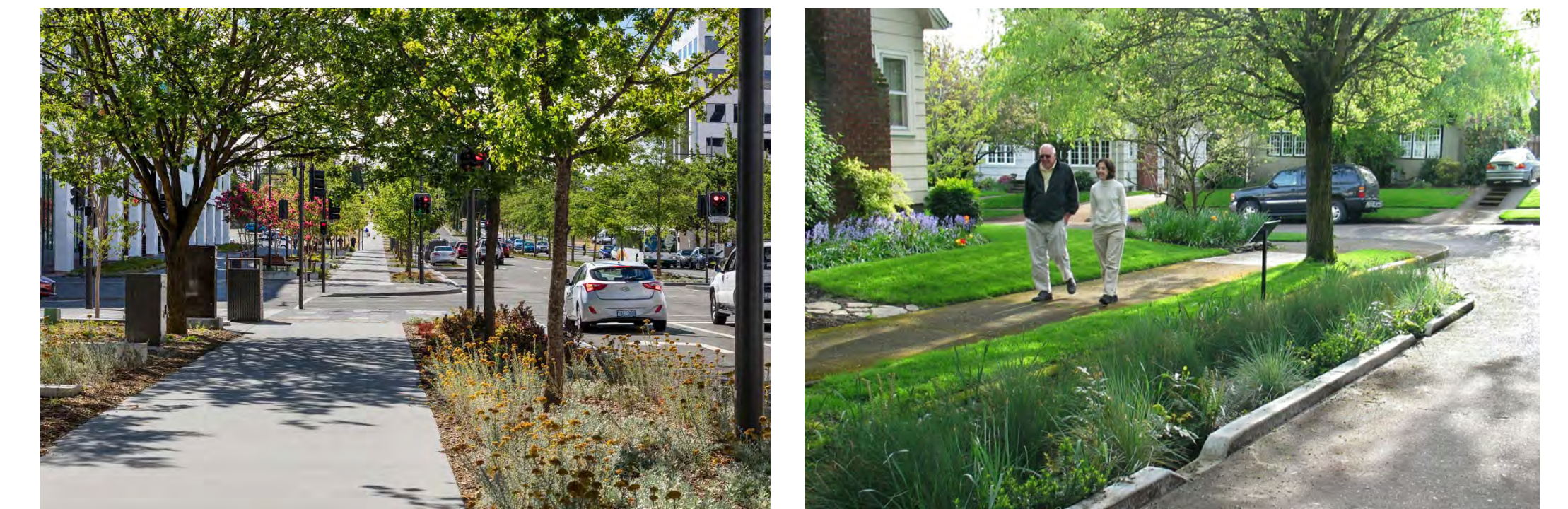
Typical Local Street



Typical Trail



Preliminary Street Sections





# OPEN SPACE

What do you envision for Clair Maltby? Place the stickers provided on images that you like, or use the Post-It Notes for suggestions not shown in the precedent images below.



Natural Heritage Areas



Parkettes



Neighbourhood Parks



Community Parks



# BUILT FORM

What do you envision for Clair Maltby? Place the stickers provided on images that you like, or use the Post-It Notes for suggestions not shown in the precedent images below.



Residential



Mixed Use



Neighbourhood Commercial



# GREEN ELEMENTS

What do you envision for Clair Maltby? Place the stickers provided on images that you like, or use the Post-It Notes for suggestions not shown in the precedent images below.



Green Infrastructure



Green Links



Cycling Trails and Multi Use Paths



Date of Notice: September 7, 2018

## **Information Session: Comprehensive Environmental Impact Study – Phase 1 and 2 Characterization Report**

### **Clair-Maltby Secondary Plan and Master Environmental Servicing Plan**

**September 26, 2018**

**6:30-8:30 p.m.**

Council Chambers, City Hall  
1 Carden Street, Guelph

Members of the community, interested stakeholders and members of Environmental Advisory Committee, River Systems Advisory Committee, Clair-Maltby Community Working Group and Clair-Maltby Technical Advisory Group, are invited to attend this information session to learn more about the Phase 1 and 2 Characterization Report for the Comprehensive Environmental Impact Study (CEIS).

Attendees will have the opportunity to ask questions of clarification following a presentation by the City's project team.

The Phase 1 and 2 Characterization Report is a technical document that summarizes the project team's current understanding of the Natural Heritage System, as well as surface and ground water interaction in the Clair-Maltby area. This report is part of the Comprehensive Environmental Impact Study for this project.

The report will be available for review on **September 10, 2018** on <https://guelph.ca/plans-and-strategies/clair-maltby-secondary-plan/cm-documents/>. It can also be found on the project webpage, [guelph.ca/clair-maltby](http://guelph.ca/clair-maltby), under 'documents'.

### **For more information**

Visit [guelph.ca/clair-maltby](http://guelph.ca/clair-maltby) for additional project details.

**Arun Hindupur, M.Sc., P.Eng.**, Supervisor, Infrastructure Engineering  
Engineering and Capital Infrastructure Services  
519-822-1260 extension 2282  
[clair-maltby@guelph.ca](mailto:clair-maltby@guelph.ca)





# Clair-Maltby

Transform. Connect. Community.

**Information Session:**

**Comprehensive Environmental Impact Study (CEIS)  
Phase 1 and 2 Characterization Report**

September 26, 2018





September 26, 2018

## CEIS Phase 1 and 2 Characterization Report

1. Introductions
2. Secondary Plan Process Update
3. CEIS Overview / MESP Integration
4. CEIS Phase 1 and 2 Characterization Report
  - Hydrogeology;
  - Surface Water;
  - Natural Heritage; and
  - Significant Landform
5. MESP Overview
6. Next Steps / Timing – Schedule
  - CEIS Impact Assessment
  - MESP
  - Secondary Plan





# Clair-Maltby

Transform. Connect. Community.

## 1. Introductions





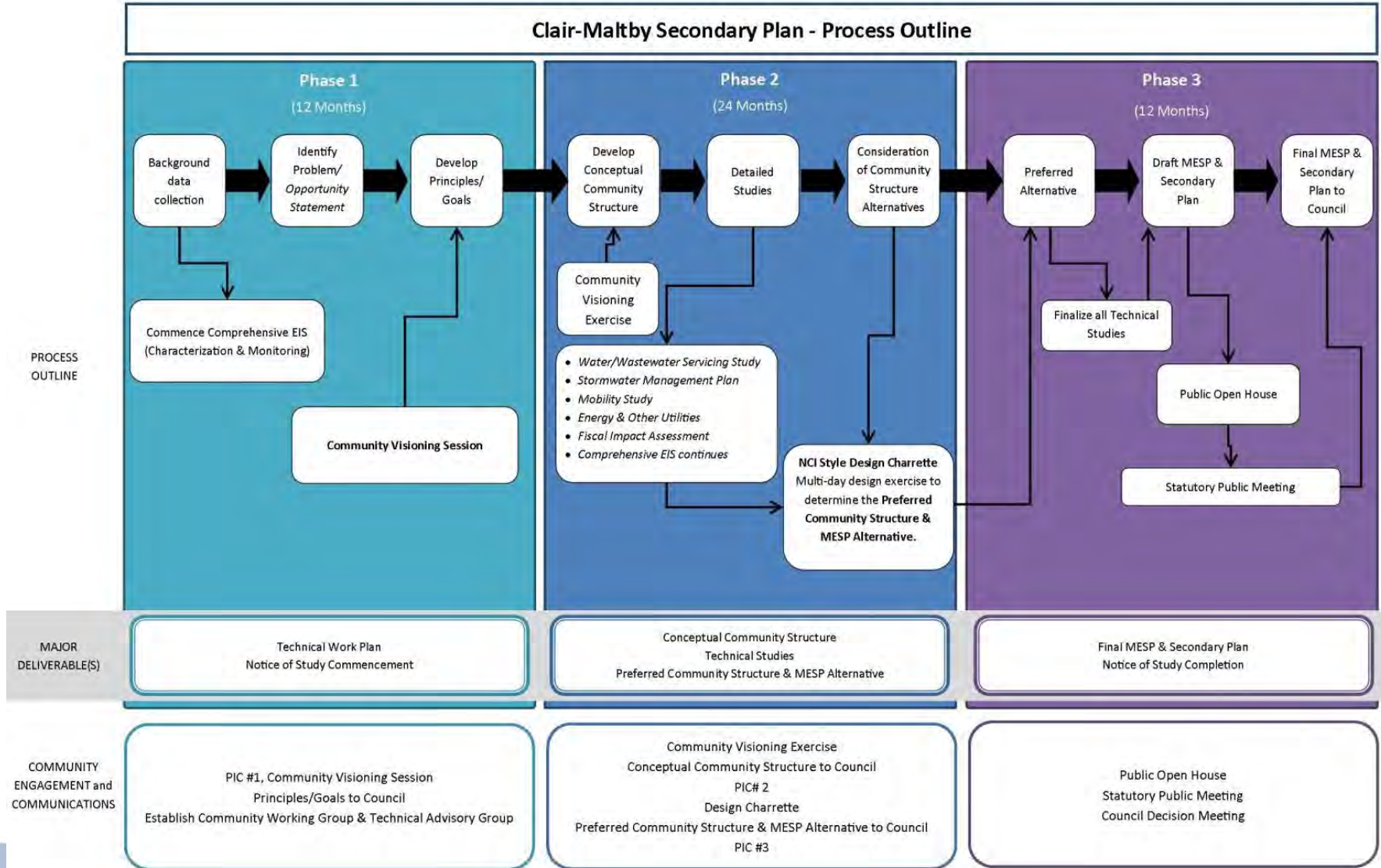
# Clair-Maltby

Transform. Connect. Community.

## 2. Secondary Plan Process Update



# 2. Secondary Plan Process Update: Study Components





# 2. Secondary Plan Process Update

<b>April 3-6 &amp; 9, 2018</b>	Planning & Design Charrette
<b>June 2018</b>	Council approval of the Preferred Community Structure (as the basis for Ph3)
<b>September 2018</b>	Ph 1 and 2 Characterization Report Information Session
<b>Q4 2018 – Q3 2018</b>	Phase 3 Project Work







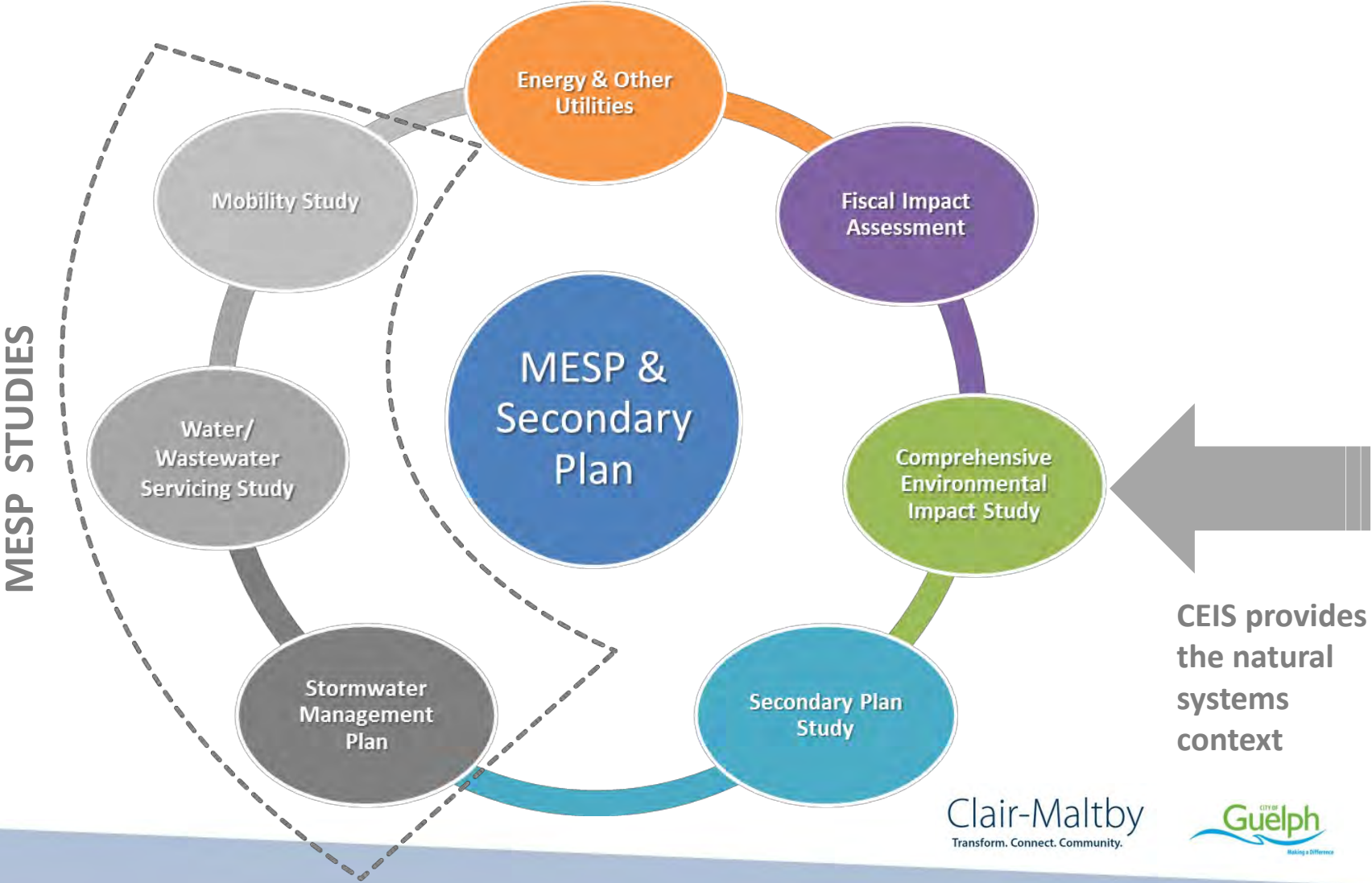
# Clair-Maltby

Transform. Connect. Community.

## 3. CEIS Overview / MESP Integration



# 3. CEIS Overview / MESP Integration: Study Components





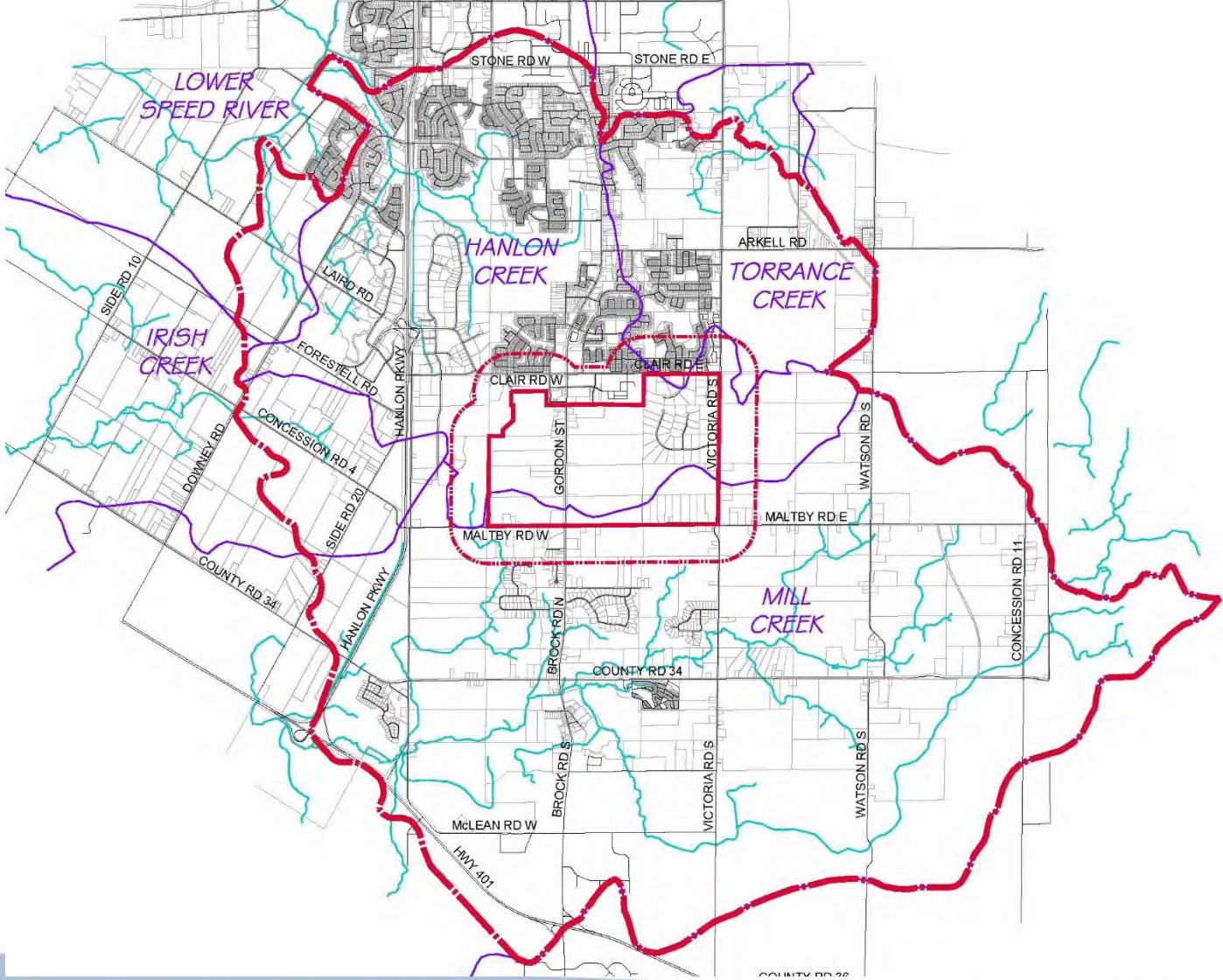
# 3. CEIS Overview / MESP Integration:

## CEIS Study Area

Secondary Plan Area (SPA)

Primary Study Area (PSA)

Secondary Study Area (SSA)





# 3. CEIS Overview / MESP Integration:

## Key CEIS Tasks

- Phases 1 and 2:
  - Verification / refinement / assessment of environmental features and functions
  - Assessment of the role of water in the study areas to support natural systems (groundwater/surface water)
  - Constraints and opportunities definition
- Phase 3:
  - Assessment of impacts associated with different community structure options
  - Establishment of integrated management strategies



### 3. CEIS Overview / MESP Integration: CEIS Approach

- Review of background information
- Multi-year monitoring and field studies
  - 2016, 2017, 2018 (ongoing)
- Modelling of surface and groundwater
- Refinement / Update of Natural Heritage System
  - Building on existing NHS approved in 2014
- Agency and stakeholder consultation



### 3. CEIS Overview / MESP Integration: Existing Natural Heritage System (NHS)



**2001 Official Plan, September 2014 Consolidation**



### 3. CEIS Overview / MESP Integration: CEIS Disciplines Involved

- Groundwater (Hydrogeology)
- Surface water (Hydrology / Hydraulics)
- Natural Heritage
  - Landform (Geology)
  - Terrestrial
  - Aquatic





# Clair-Maltby

Transform. Connect. Community.

## 4. CEIS Phase 1/2 Characterization Report



## 4. CEIS Phase 1/2 Characterization Report: Discipline by Discipline Summary of:

- Objective / Purpose
- 2016 / 2017 Field Work
- Ongoing 2018 Field Work
- Summary of Findings
- Input to Community Structure alternatives
- Integration considerations



## 4. CEIS Phase 1/2 Characterization Report:

### Hydrogeology: Objective / Purpose

Hydrogeological characterization to establish baseline conditions within the SPA and PSA

Field program contributes to water balance, helps identify constraints and opportunities, and establishes ongoing monitoring locations

Integrated modelling to quantify components of the existing and future conditions water budgets, assess impacts to surface and groundwater, and assess alternative management options



# 4. CEIS Phase 1/2 Characterization Report: Hydrogeology: Project Specific Field Work

17 boreholes/wells  
(9 locations)

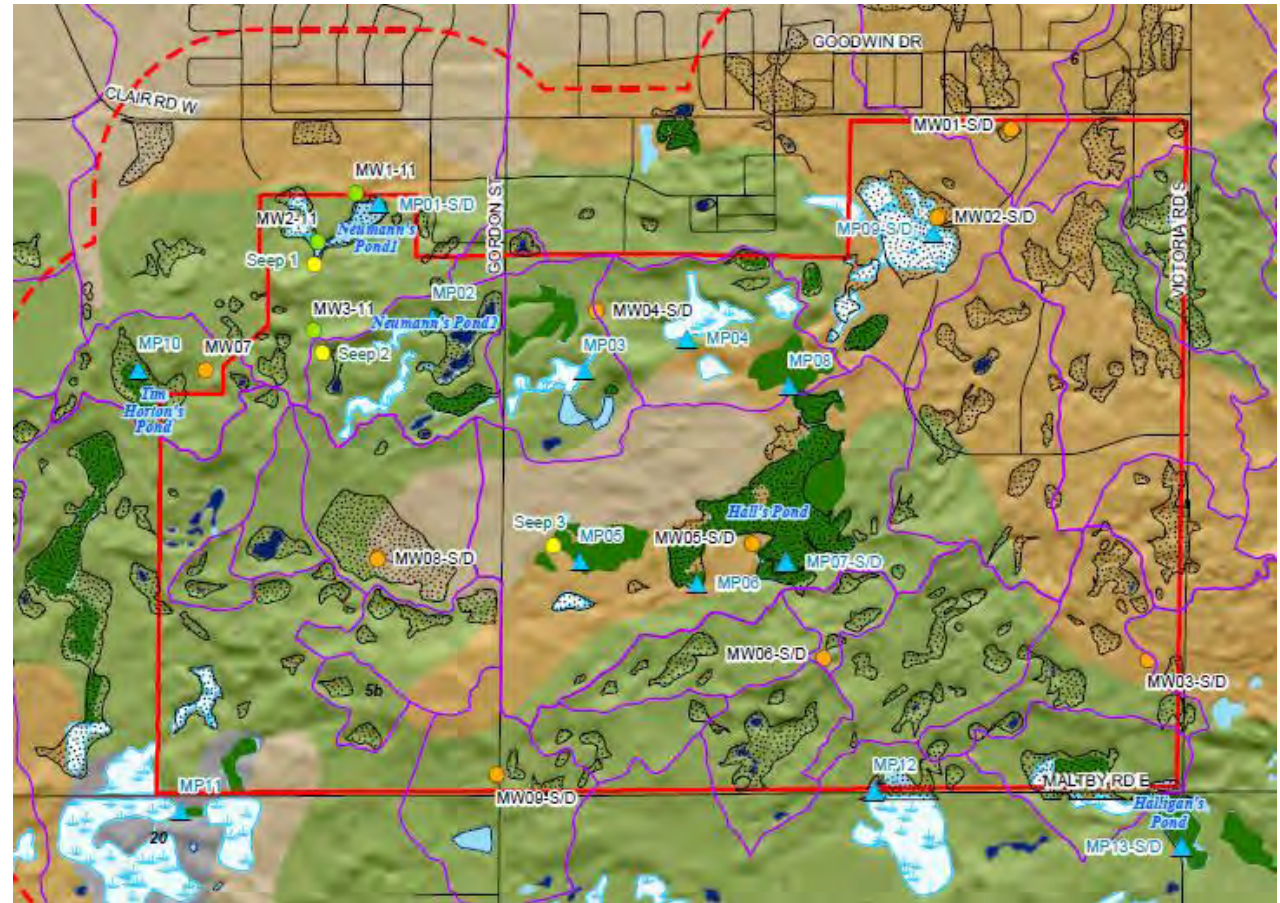
18 drivepoint wells  
(14 locations)

Groundwater levels  
(continuous/manual)

Water quality  
(3 events)

Baseflow  
(27 locations)

Seeps and springs

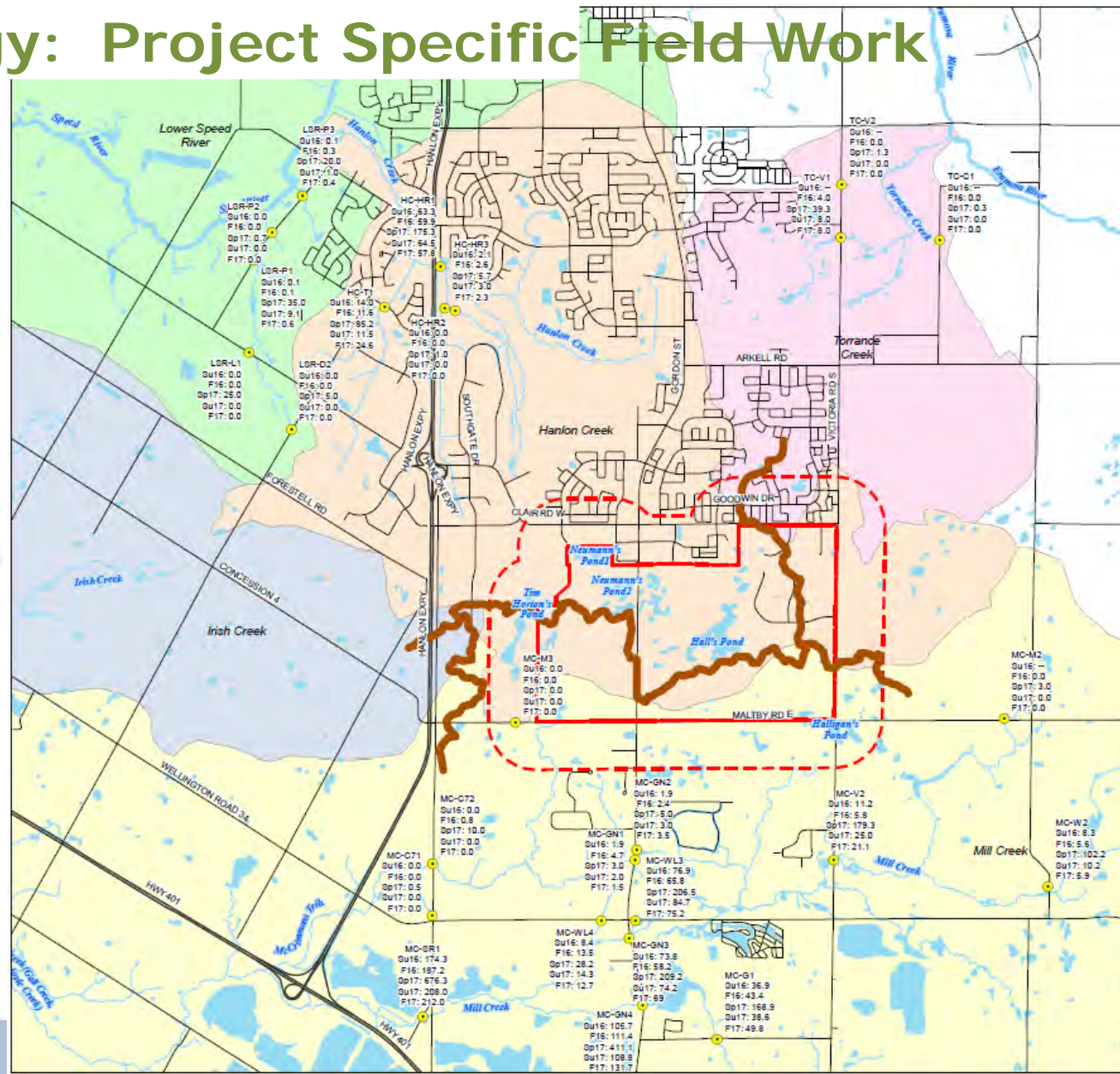




# 4. CEIS Phase 1/2 Characterization Report: Hydrogeology: Project Specific Field Work

- Primary Study Area Boundary
- Secondary Plan Area Boundary
- Water Body
- Watercourse
- Updated Subwatershed Boundary (Wood PLC, 2018)
- Highway
- Road
- Spot Flow Location
- Subwatershed**
  - Hanlon Creek
  - Irish Creek
  - Lower Speed River
  - Mill Creek
  - Torrance Creek

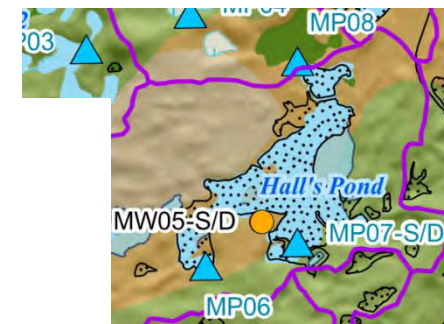
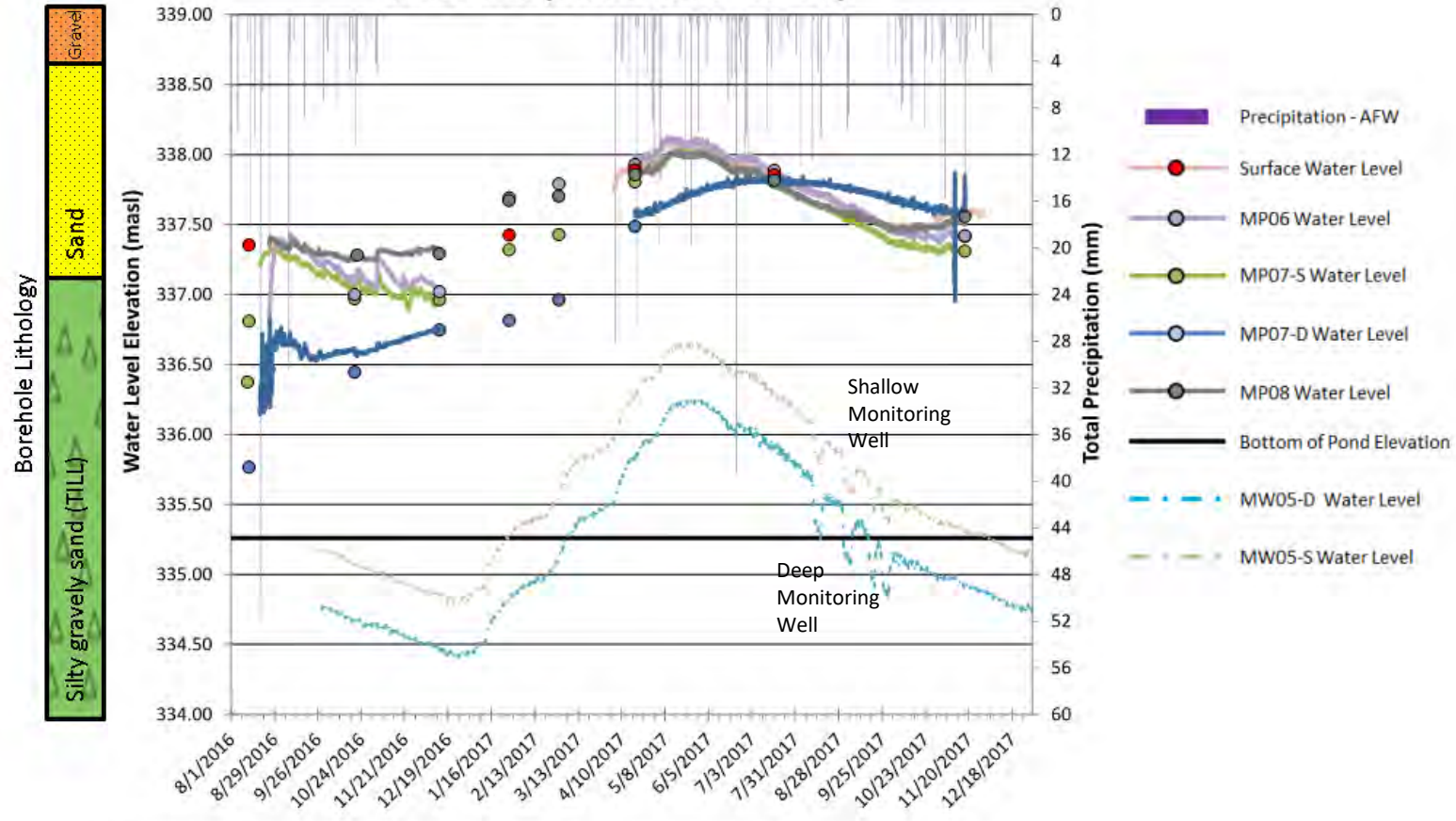
HC-D2	Spot Flow Location
Su16:0	Summer 2016 (Aug.30/31, Sept. 1) Flow Rate (L/s)
F16:0	Fall (Nov.9/10) Flow Rate (L/s)
Sp17:0	Spring 2017 (May 10/11) Flow Rate (L/s)
Su17:0	Summer 2017 (Aug.16) Flow Rate (L/s)
F17:0	Fall (Nov. 29) Flow Rate (L/s)





# 4. CEIS Phase 1/2 Characterization Report: Hydrogeology: Summary of Findings

Clair-Maltby Secondary Plan  
 Long Term Water Level Monitoring  
 Hall's Pond (Stations Combined)

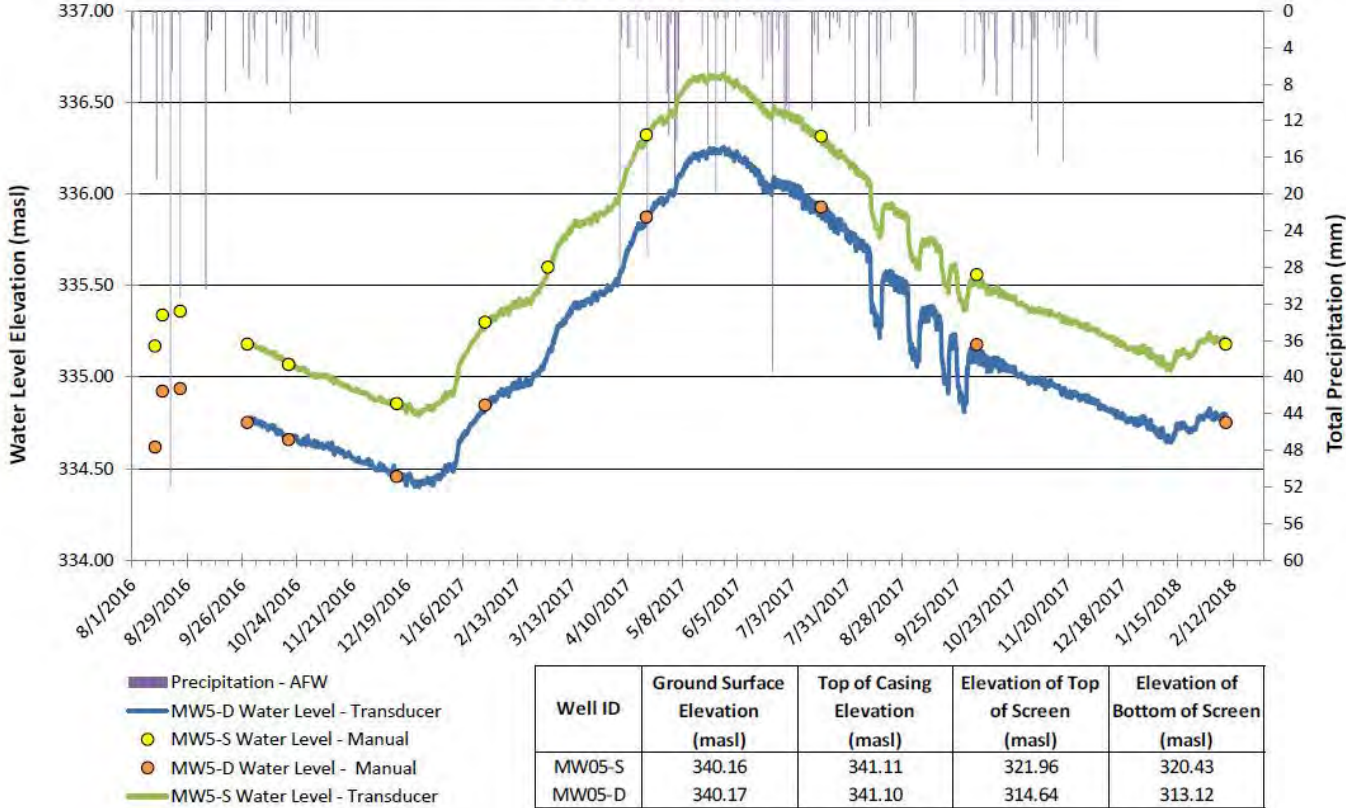


Precipitation - AFW: Data set from rain gauge installed by AMEC Foster-Wheeler at 500 Maltby Rd. E.



# 4. CEIS Phase 1/2 Characterization Report: Hydrogeology: Summary of Findings

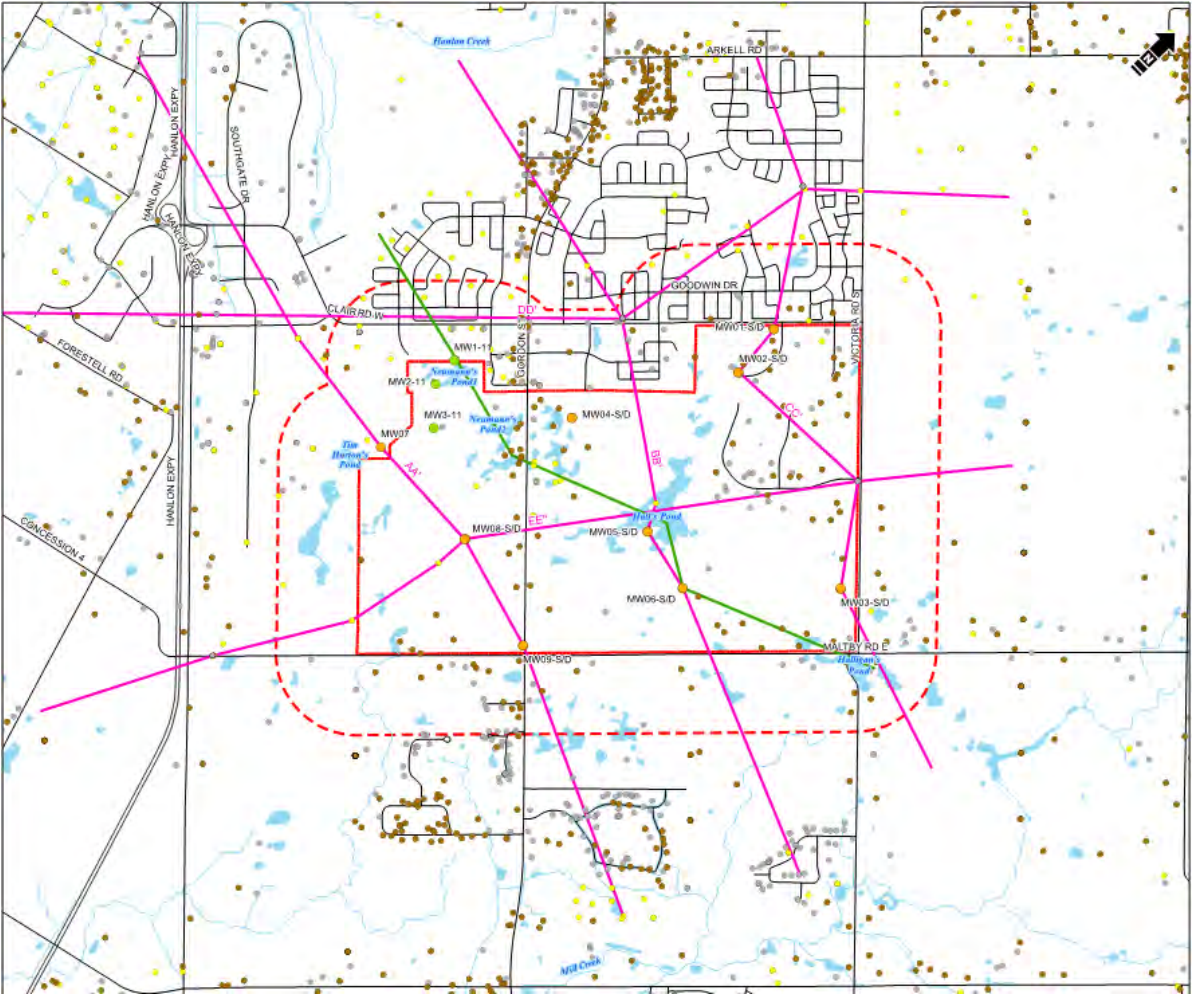
Clair-Maltby Secondary Plan  
Long Term Groundwater Level Monitoring  
MW5-D & MW5-S



Precipitation - AFW: Data set from rain gauge installed by AMEC Foster-Wheeler at 500 Maltby Rd. E.



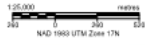
# 4. CEIS Phase 1/2 Characterization Report: Hydrogeology: Summary of Findings



All Available Borehole Information

- Primary Study Area Boundary
- Secondary Plan Area Boundary
- Water Body
- Watercourse
- Highway
- Road
- Geological Cross Section Location
- Conceptual Groundwater Flow System Cross Section
- Monitoring Well (Matrix)
- Monitoring Well (132 Clair Rd)
- Municipal Well
- Consultant Well
- GPW Well
- WWIS Well

Source: This map is based on the City of Guelph, City Council and Province of Ontario (2011) and Ontario (2011) Spatial Planning of Southern Ontario, Ontario Municipal Water Services, 2011.



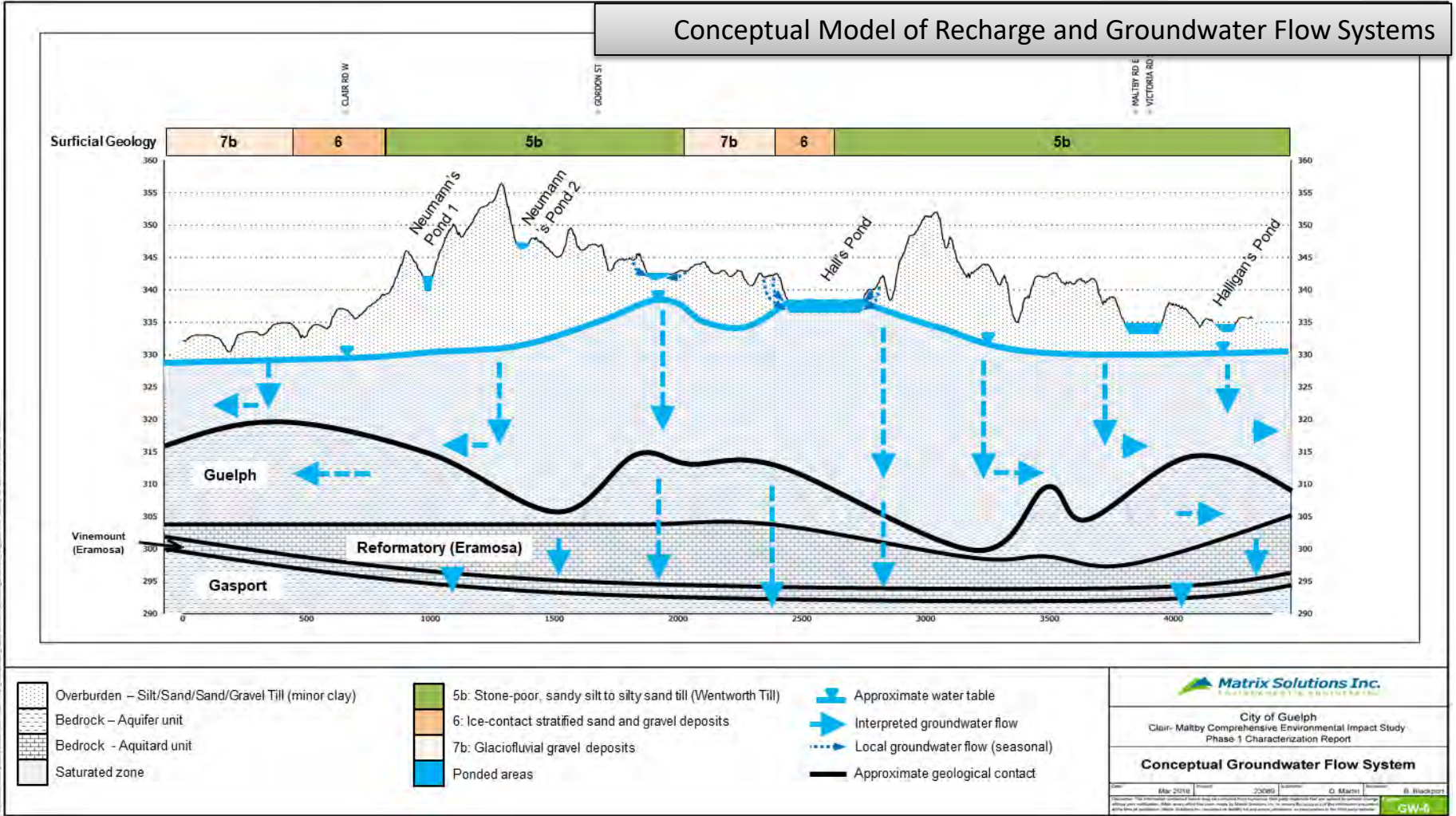






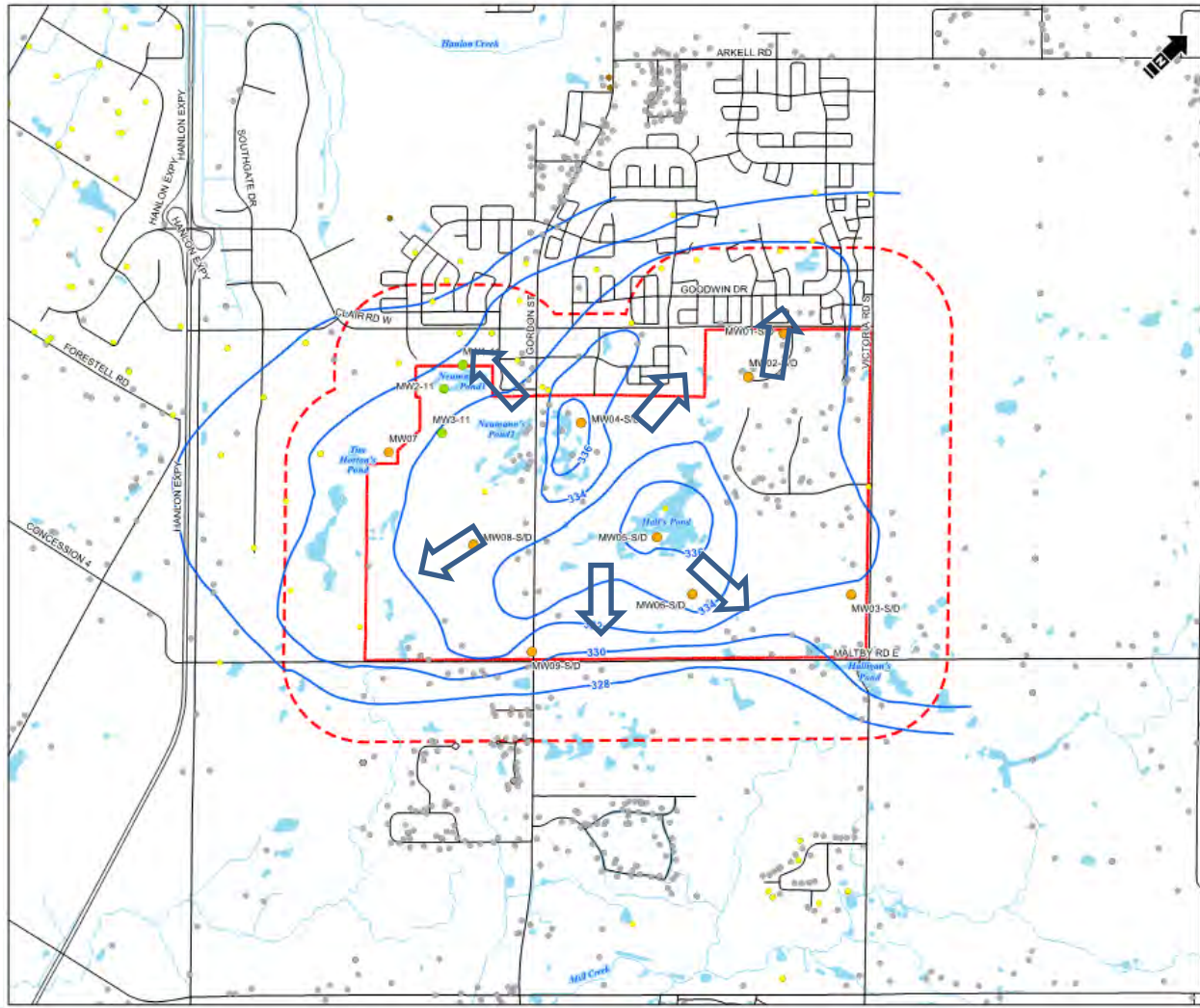
# 4. CEIS Phase 1/2 Characterization Report: Hydrogeology: Summary of Findings

Conceptual Model of Recharge and Groundwater Flow Systems





# 4. CEIS Phase 1/2 Characterization Report: Hydrogeology: Summary of Findings

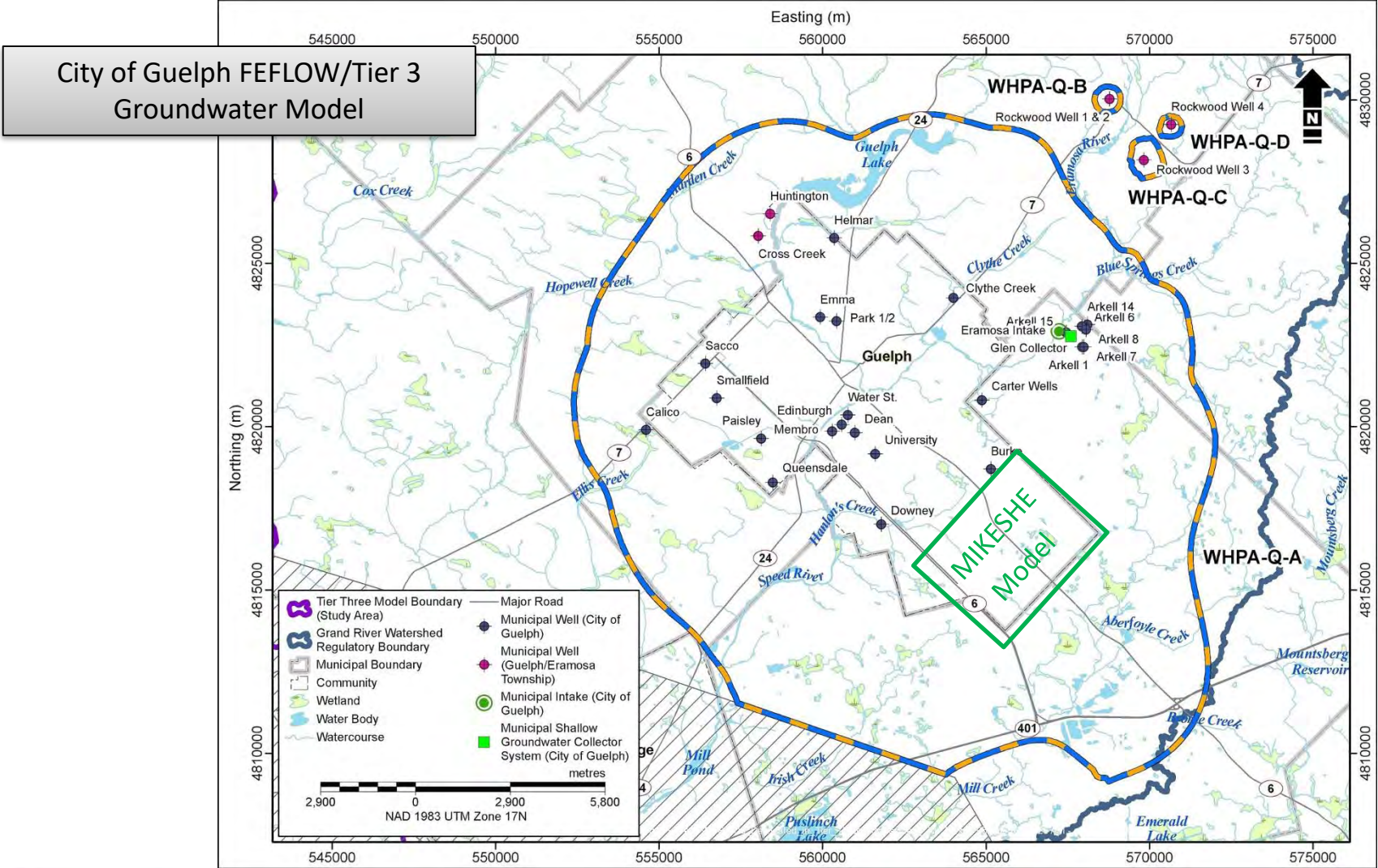


Interpreted Water Table and Generalized Groundwater Flow Directions

- Primary Study Area Boundary
  - Secondary Plan Area Boundary
  - Water Body
  - Watercourse
  - Water Table Elevation Contour (2m)
  - Highway
  - Road
  - Monitoring Well (Matrix)
  - Monitoring Well (132 Clair Rd.)
  - Consultant Well
  - GPW Well
  - WWIS Well
- General groundwater flow direction

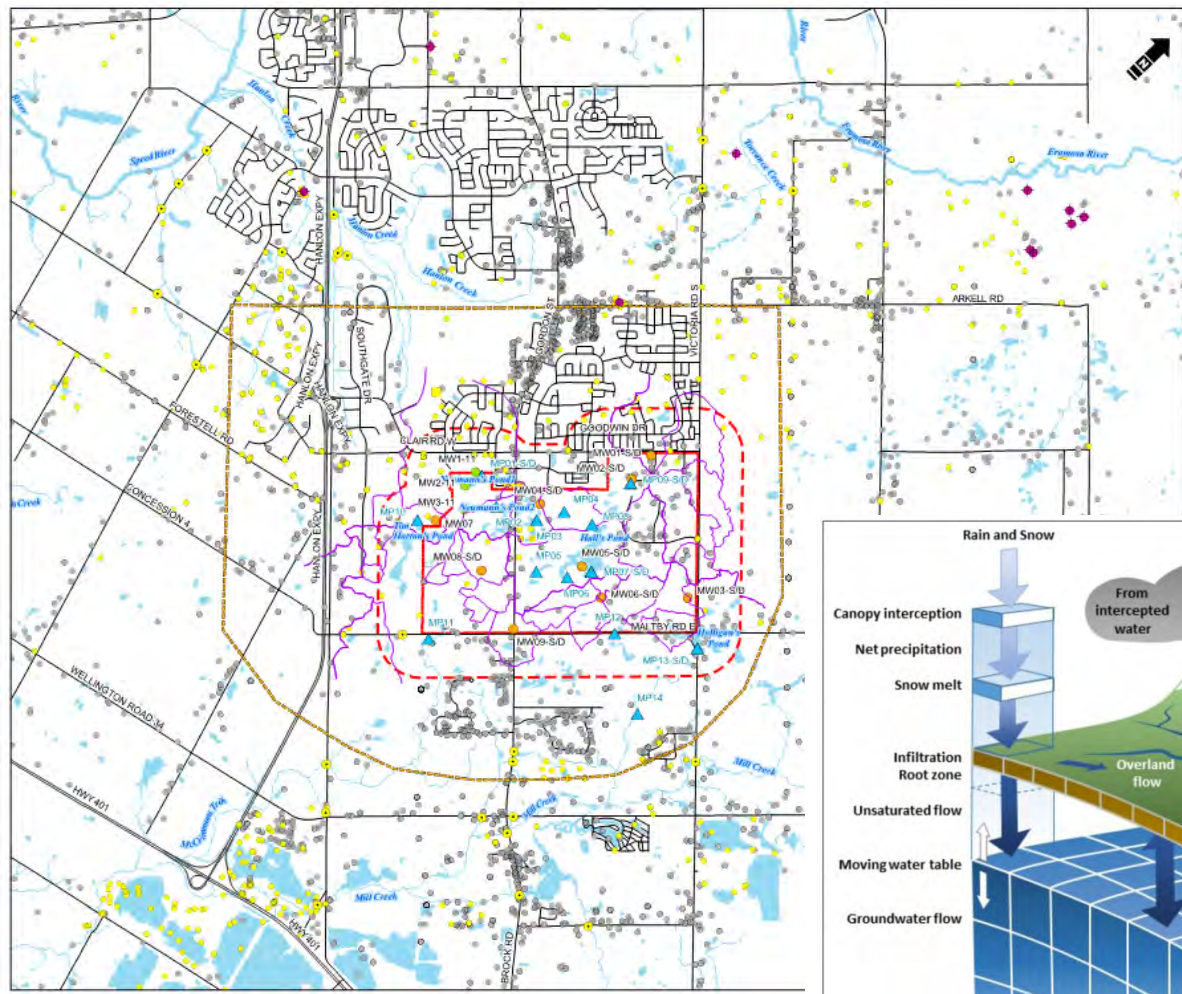


# 4. CEIS Phase 1/2 Characterization Report: Hydrogeology: Summary of Findings Tier 3 Model





# 4. CEIS Phase 1/2 Characterization Report: Hydrogeology: Summary of Findings



Integrated Surface Water-Groundwater Model Domain

- Secondary Plan Area Boundary
- Primary Study Area Boundary
- MIKE SHE Model Domain
- Subcatchment
- Water Body
- Watercourse
- Highway
- Road
- Mini Piezometer
- Spot Flow Location
- Monitoring Well (Matrix)
- Monitoring Well (132 Clair Ryl)
- Surface Water Flow (Beacon)
- Municipal Well
- Consultant Well
- WWIS Well

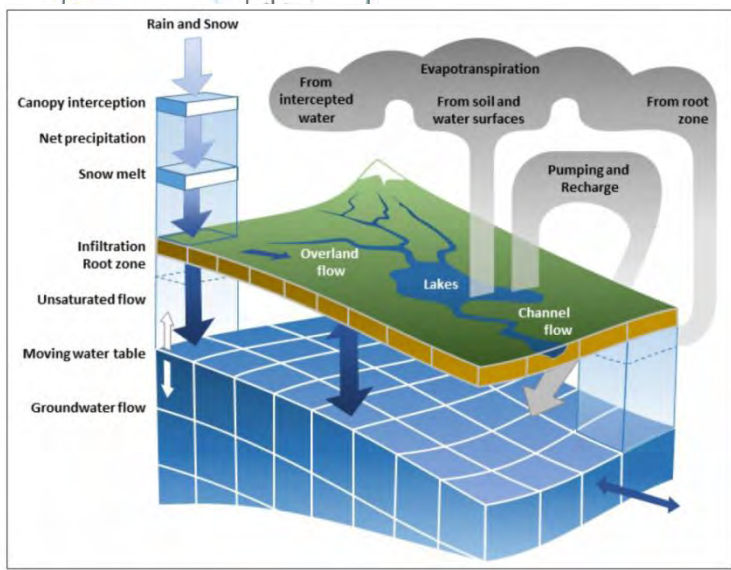
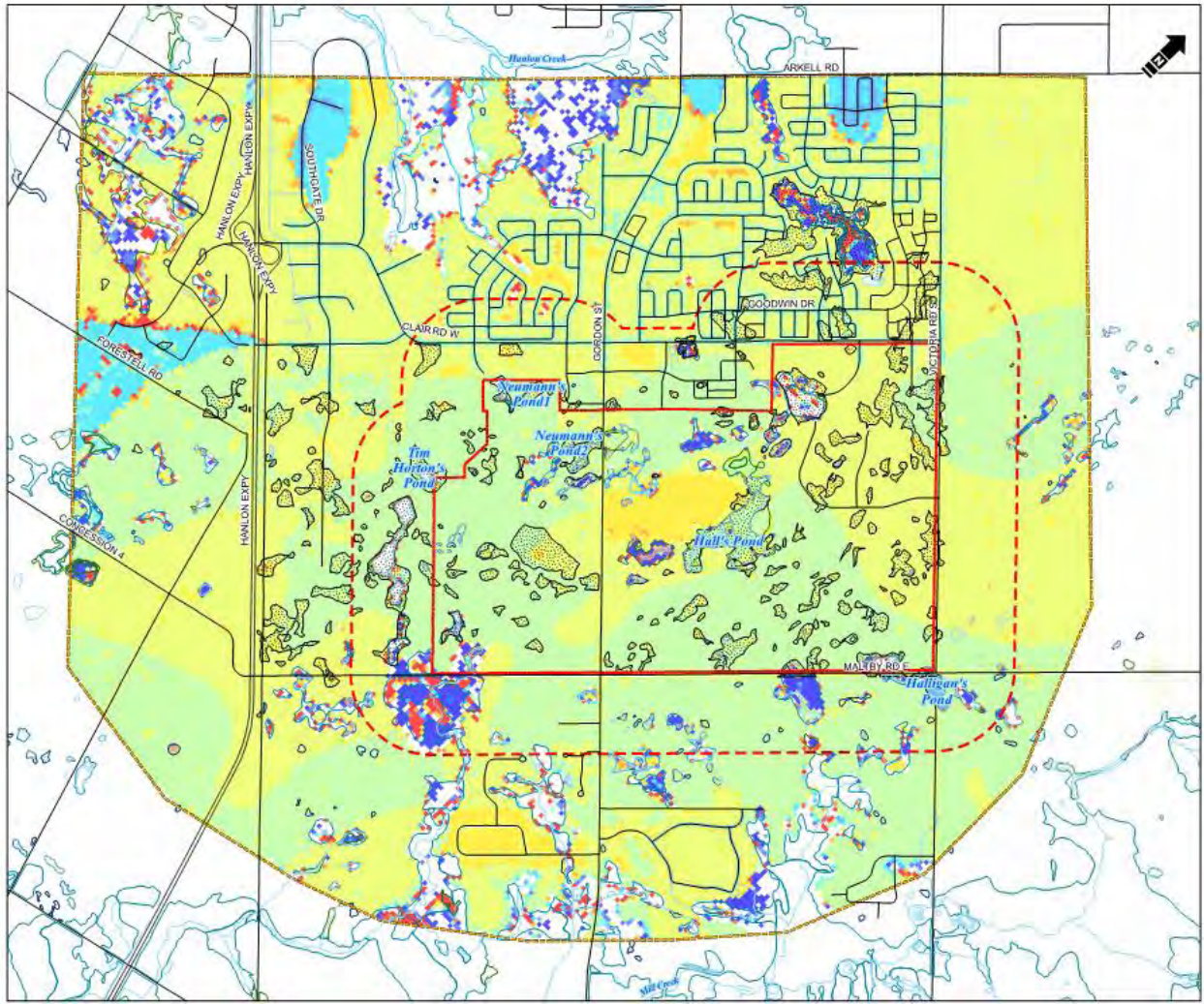


Figure B1 MIKE SHE Hydrologic Process Diagram



# 4. CEIS Phase 1/2 Characterization Report: Hydrogeology: Summary of Findings

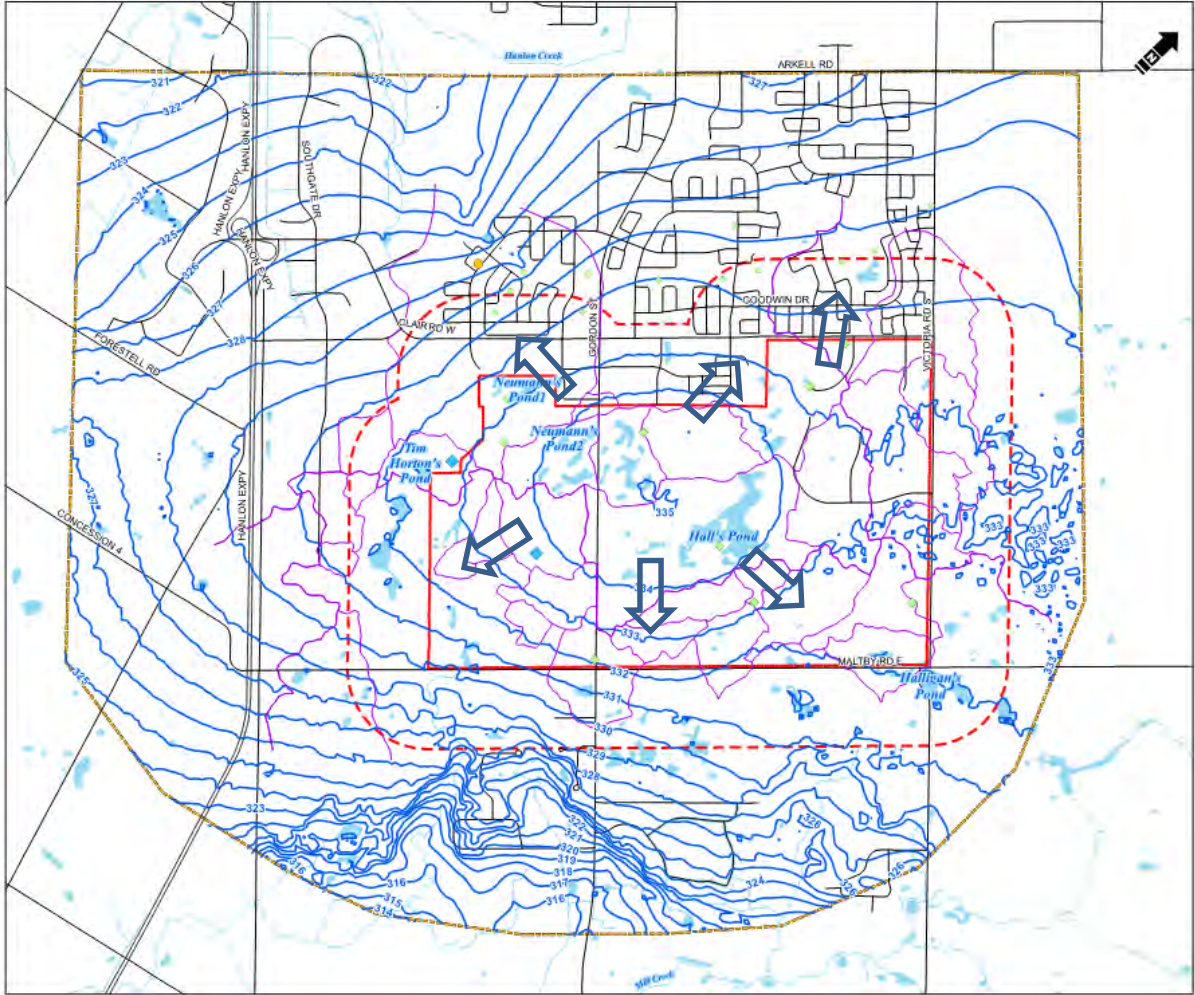


Simulated Average Annual Recharge


- Primary Study Area Boundary
  - Secondary Plan Area Boundary
  - MIKE SHE Model Domain
  - Closed Depression
  - Fen
  - Bog
  - Swamp
  - Marsh
  - Open Water
  - Unknown Wetland
  - Water Body
  - Watercourse
  - Highway
  - Road
- Groundwater Recharge (mm/year)**
- 0 - 50
  - 50 - 100
  - 100 - 150
  - 150 - 200
  - 200 - 250
  - 250 - 300
  - 300 - 350
  - 350 - 400
  - 400 - 450
  - 450 - 500
  - > 500



# 4. CEIS Phase 1/2 Characterization Report: Hydrogeology: Summary of Findings

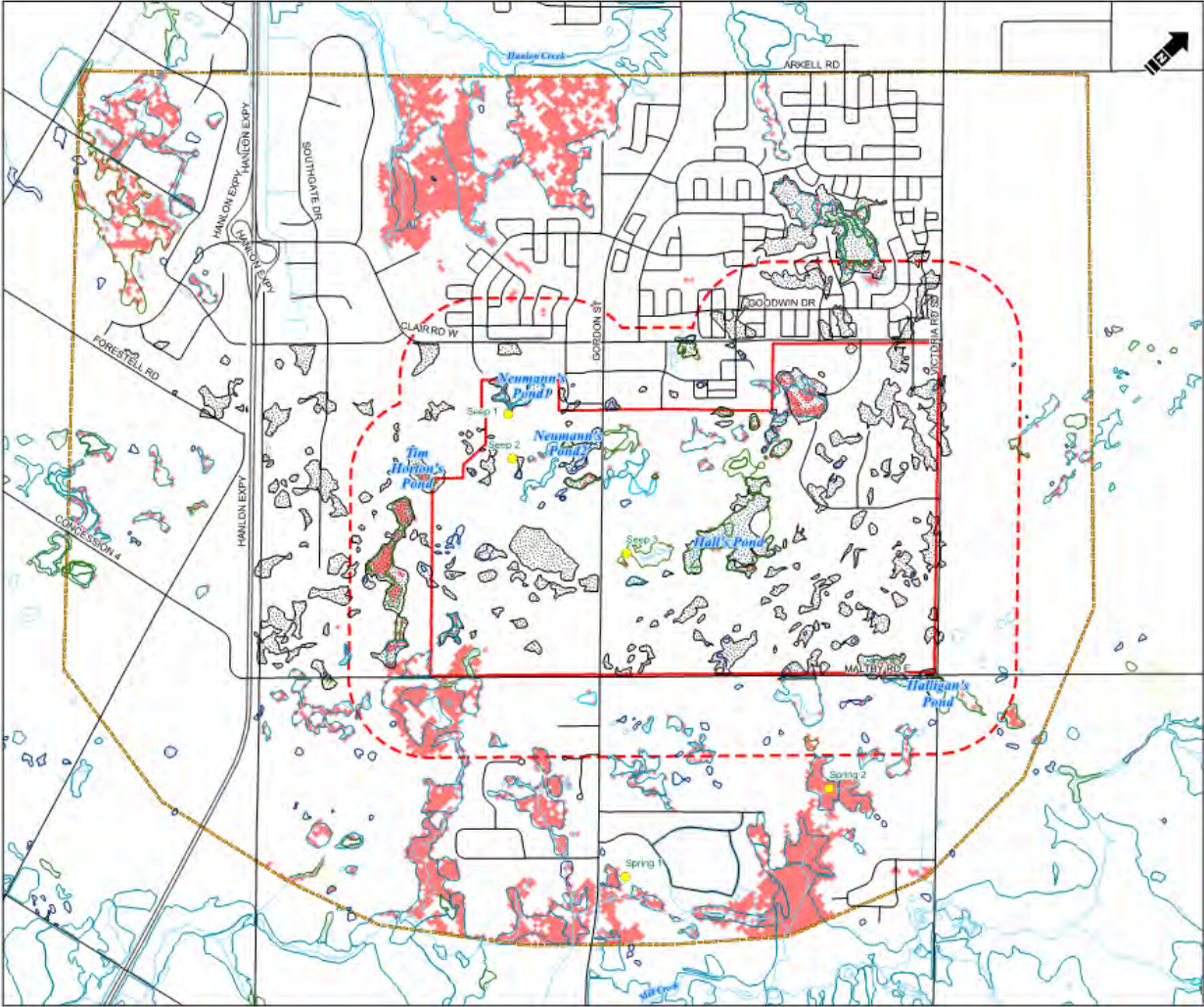


Simulated Water Table & General Flow Directions

 General simulated groundwater flow direction



# 4. CEIS Phase 1/2 Characterization Report: Hydrogeology: Summary of Findings



Simulated Average Annual Discharge to Surface Water

- Primary Study Area Boundary
- Secondary Plan Area Boundary
- MIKE SHE Model Domain
- Closed Depression
- Groundwater Discharge
- Fen
- Bog
- Swamp
- Marsh
- Open Water
- Unknown Wetland
- Water Body
- Watercourse
- Highway
- Road
- Observed Seep and Spring







# 4. CEIS Phase 1/2 Characterization Report:

## Hydrogeology: Summary of Findings

Simulated Water Budget 2003-2017

**Table 4.2.4 Average Annual Water Budget (2003-2017, mm-year)**

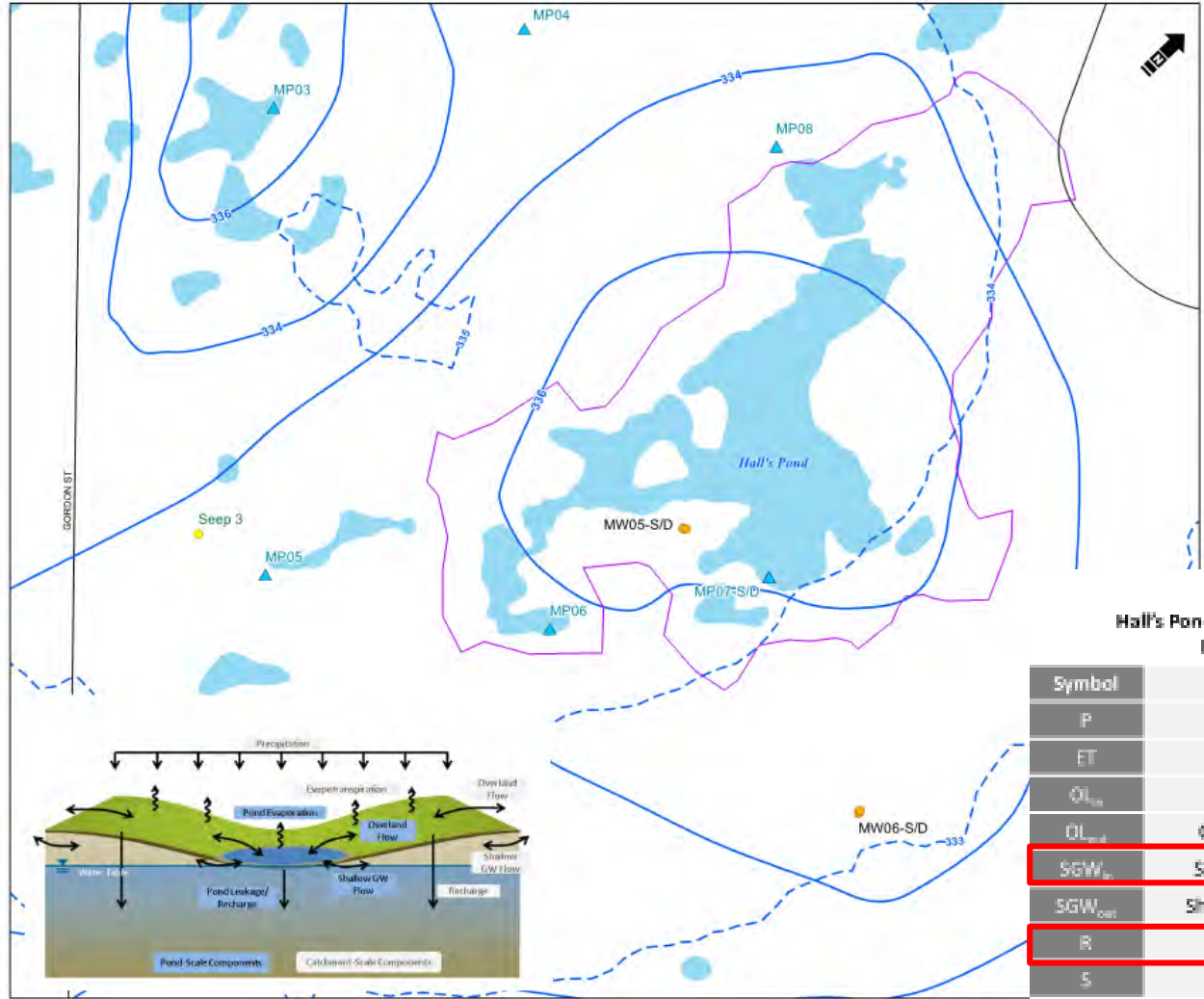
Area/Catchment	Precipitation	Evapotranspiration	Overland Flow In	Overland Flow Out	Lateral Groundwater Flow				Vertical Groundwater Flow		Pumping	Change in Storage
					Overburden		Bedrock Above Vinemount		Regional Bedrock Aquifer			
					Inflow	Outflow	Inflow	Outflow	Inflow	Outflow		
SSA Model Domain	-801	480	0	108	-35	126	-17	44	0	99	2	-7
Mill Creek	-801	498	-1	188	-41	36	-140	194	-1	66	7	-6
Hanlon Creek	-801	472	0	86	-19	60	-42	186	0	64	0	-7
Torrance Creek	-801	450	0	60	-48	95	-233	421	0	58	0	-4

**Table 4.2.5 Average Annual Groundwater Recharge (2003-2017)**

Area/Catchment	Groundwater Recharge (mm/year)
SSA Model Domain	325
Mill Creek	338
Hanlon Creek	326
Torrance Creek	302



# 4. CEIS Phase 1/2 Characterization Report: Hydrogeology: Summary of Findings

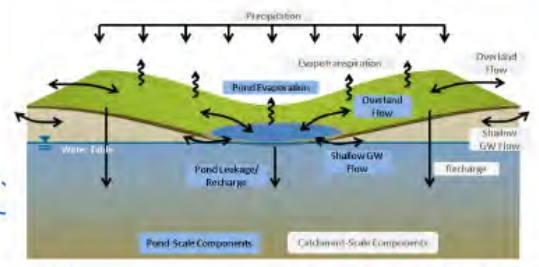


Hall's Pond Water Balance

- Hall's Pond Subcatchment
- Water Body
- Water Table Elevation Contour (2m)
- Simulated Head Contour (1m)
- Road
- Mini Plazometer
- Monitoring Well (Matrix)
- Monitoring Well (132 Clair Rd.)
- Observed Seep and Spring

Hall's Pond Average Annual Simulated Water Balance (2003-2017)  
 $P - ET + (OL_{in} - OL_{out}) + (SGW_{in} - SGW_{out}) - R = S$

Symbol	Subcatchment-Scale		Pond-Scale	
P	Precipitation	801	Precipitation	801
ET	Evapotranspiration	509	Evaporation	543
OL <sub>in</sub>	Overland Flow (In)	3	Overland Flow (In)	71
OL <sub>out</sub>	Overland Flow (Out)	1	Overland Flow (Out)	52
SGW <sub>in</sub>	Shallow GW Flow (In)	3	Shallow GW Flow (In)	4
SGW <sub>out</sub>	Shallow GW Flow (Out)	3	Shallow GW Flow (Out)	1
R	Recharge	299	Recharge	286
S	Storage Change	-5	Storage Change	-6



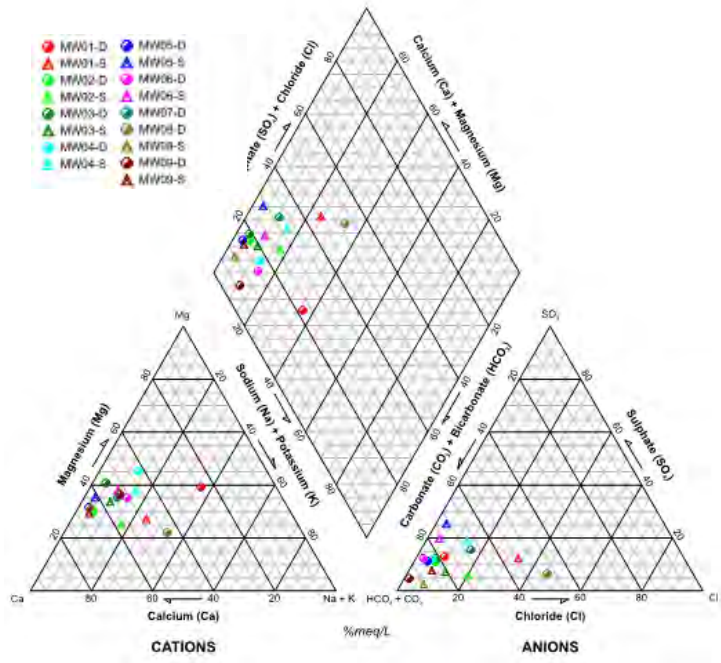
\*All values reported in mm.



# 4. CEIS Phase 1/2 Characterization Report: Hydrogeology: Summary of Findings

## Existing Groundwater Quality

- Consistent Ca-Mg Carbonate Groundwater Similar Age
- Groundwater Isotopes gw age less than 50 years old
- Elevated chloride and nitrate, typical of road salt and agricultural practices



**TABLE C2**  
Groundwater Quality Results - Routine Parameters

City of Guelph  
Clair - Maltby Master Environmental Servicing Plan (MESP) and Secondary Plan (SP)

Monitoring Well	Sample Date	MSI Sample Number	Lab pH	Lab EC µS/cm	Temp at lab °C	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	Fe mg/L	Mn mg/L	Cl mg/L	SO <sub>4</sub> mg/L	NO <sub>3</sub> -N mg/L	NO <sub>2</sub> -N mg/L	TKN mg/L	Alkalinity-T mg/L	HCO <sub>3</sub> mg/L	Hardness-T mg/L	TDS mg/L
MW06-S	19-Oct-16	23089161019005	7.53	602	8.7	69.2	29.7	13	2.2	0.012	0.0453	9.21	55.6	<0.010	<0.020	0.28	282	282	295	351
MW06-S	19-Apr-17	23089170419011	8.08	616	2.4	99.5	39.5	5.2	1.78	<b>0.79</b>	<b>0.121</b>	8.23	70.5	<0.010	<0.15	316	316	411	404	400
MW06-S	04-Oct-17	23089171004009	8.01	625	3.3	73.3	31	10.6	1.45	<b>0.589</b>	0.0452	11.4	76.4	<0.010	<0.020	<0.15	271	311	311	400
MW07-D	19-Oct-16	23089161019001	7.44	696	8.7	79.3	30.7	17.1	1.55	0.024	<b>0.0787</b>	39.6	47.4	0.028	0.318	<0.15	276	276	325	386
MW07-D	19-Apr-17	23089170419015	7.99	682	2.4	77.7	27.9	13.2	1.4	0.021	<b>0.0654</b>	32.4	42.1	0.012	0.125	<0.15	281	281	309	413
MW07-D	10-Oct-17	23089171010001	8.12	701	4.7	76.4	29	18	1.65	0.028	<b>0.0696</b>	40.4	41.2	<0.010	0.578	0.19	285	285	310	416
MW08-D	19-Oct-16	23089161019002	7.23	1180	8.7	105	30.5	88.3	3.18	<0.010	0.0434	189	32	<0.050	1.49	0.51	336	336	388	639
MW08-D	19-Apr-17	23089170419014	7.88	1180	2.4	100	28.8	85.2	3.37	<0.010	0.0191	167	29.5	0.015	1.51	<1.5	354	354	369	718
MW08-D	05-Oct-17	23089171005004	8.09	1180	3.3	101	29.3	88.6	3.42	<0.010	0.021	170	29.9	0.014	1.31	<0.15	321	321	374	663
MW08-S	19-Oct-16	23089161019003	7.25	569	8.7	77.7	22.8	1.7	1.29	<0.010	0.00707	14.4	4.79	<0.010	1.04	0.76	288	288	288	295
MW08-S	19-Apr-17	23089170419013	7.78	664	2.4	92	24.2	3.74	0.87	<0.010	0.0013	13.5	5.89	<0.010	1.81	<1.5	354	354	329	385
MW08-S	05-Oct-17	23089171005005	7.93	656	3.3	95.1	24.6	3.25	0.744	<0.010	0.00133	15.9	4.95	<0.010	1.19	0.15	321	321	339	352
MW09-D	21-Oct-16	23089161021001	7.56	445	12	54.4	22.3	12.1	1.08	0.024	0.0367	2.79	7.88	<0.010	<0.020	0.48	237	237	228	272
MW09-D	19-Apr-17	23089170419017	8.12	469	2.4	53.9	20.8	10.1	0.997	0.06	<b>0.0581</b>	3.06	4.98	<0.010	<0.020	0.84	294	294	220	312
MW09-D	04-Oct-17	23089171004008	7.98	466	3.3	59.8	21.8	7.31	0.99	0.084	0.0581	2.56	4.55	<0.010	<0.020	0.29	264	264	239	278
MW09-S	21-Oct-16	23089161021002	7.28	583	12	89.3	23.4	4.69	3.34	<0.010	0.00469	14.1	16.9	<0.010	7	1.91	260	260	319	346
MW09-S	19-Apr-17	23089170419016	7.96	659	2.4	89.1	23.5	5.71	3.63	<0.010	0.00068	19.9	15	<0.010	7.17	1.16	338	338	319	430
MW09-S	04-Oct-17	23089171004007	7.88	620	3.3	87.2	23.9	5.41	4.35	0.109	0.00058	14.7	17	<0.010	7.09	<1.5	283	283	316	376

**TABLE C3**  
Groundwater Quality Results - Dissolved Metals

City of Guelph  
Clair - Maltby Master Environmental Servicing Plan (MESP) and Secondary Plan (SP)

Monitoring Well	Sample Date	MSI Sample Number	Al mg/L	Sb mg/L	As mg/L	Ba mg/L	Be mg/L	Bi mg/L	B mg/L	Cd mg/L	Cs mg/L	Cr mg/L	Co mg/L	Cu mg/L	Pb mg/L	Li mg/L	Mo mg/L	Ni mg/L	P mg/L
MW01-D	20-Oct-16	23089161020003	0.007	0.00024	0.00763	0.0345	<0.0010	<0.00050	0.078	<0.00010	<0.00010	<0.00050	0.00022	0.00059	<0.00050	0.002	0.00453	0.00152	<0.050
MW01-D	19-Apr-17	23089170419003	<0.0050	0.00015	0.0127	0.049	<0.0010	<0.00050	0.072	<0.00010	<0.00010	<0.00050	0.00042	0.00069	<0.00050	0.002	0.00312	0.00245	<0.050
MW01-D	04-Oct-17	23089171004003	<0.0050	0.00017	0.00876	0.044	<0.0010	<0.00050	0.065	<0.00011	<0.00010	<0.00050	0.00072	0.00104	<0.00050	0.005	0.00293	0.00291	<0.050
MW01-S	20-Oct-16	23089161020004	<0.0050	<0.00010	0.00012	0.0573	<0.0010	<0.00050	0.021	0.000195	<0.00010	<0.00050	<0.00010	0.00129	0.00018	0.002	0.000284	0.00082	<0.050
MW01-S	19-Apr-17	23089170419004	<0.0050	<0.00010	0.00011	0.056	<0.0010	<0.00050	0.019	0.000183	<0.00010	<0.00050	<0.00010	0.00143	0.00026	0.002	0.000425	0.00069	<0.050
MW01-S	04-Oct-17	23089171004004	<0.0050	<0.00010	0.00014	0.0609	<0.0010	<0.00050	0.021	0.000192	<0.00010	<0.00050	<0.00010	0.00051	0.000214	0.002	0.000578	0.00157	<0.050
MW02-D	20-Oct-16	23089161020002	<0.0050	0.00046	0.0194	0.0901	<0.0010	<0.00050	0.015	<0.00010	<0.00010	<0.00050	0.00137	0.00056	0.000163	0.002	0.00136	0.00619	<0.050
MW02-D	19-Apr-17	23089170419002	<0.0050	<0.00010	0.0049	0.0885	<0.0010	<0.00050	<0.010	<0.00010	<0.00010	<0.00050	0.00059	<0.00020	0.000281	0.002	0.000484	0.003	<0.050
MW02-D	04-Oct-17	23089171004001	<0.0050	<0.00010	0.00358	0.0906	<0.0010	<0.00050	<0.010	<0.00010	<0.00010	<0.00050	0.00028	0.0004	0.000126	0.002	0.000396	0.00154	<0.050
MW02-S	20-Oct-16	23089161020001	0.0064	0.00049	0.023	0.0647	<0.0010	<0.00050	0.028	<0.00010	<0.00010	<0.00050	0.003	0.00056	0.000266	0.001	0.00192	0.0126	<0.050
MW02-S	19-Apr-17	23089170419001	0.0052	0.00013	<b>0.0315</b>	0.0482	<0.0010	<0.00050	0.019	<0.00010	<0.00010	<0.00050	0.00182	0.00023	0.000066	0.002	0.000928	0.00841	<0.050
MW02-S	04-Oct-17	23089171004002	0.0093	0.00011	0.0197	0.0471	<0.0010	<0.00050	0.02	<0.00010	<0.00010	<0.00050	0.00101	0.00063	0.000066	0.002	0.000921	0.00491	<0.050
MW03-D	20-Oct-16	23089161020005	<0.0050	<0.00010	0.00238	0.0806	<0.0010	<0.00050	<0.010	<0.00010	<0.00010	<0.00050	0.00013	0.00032	<0.00050	0.002	0.000905	<0.0050	<0.050
MW03-D	19-Apr-17	23089170419006	<0.0050	<0.00010	0.00244	0.0778	<0.0010	<0.00050	<0.010	<0.00010	<0.00010	<0.00050	<0.00010	0.00082	<0.00050	0.002	0.000864	<0.0050	<0.050
MW03-D	10-Oct-17	23089171010003	<0.0050	<0.00010	0.00233	0.0787	<0.0010	<0.00050	<0.010	<0.00010	<0.00010	<0.00050	<0.00010	0.00042	<0.00050	0.003	0.000909	<0.0050	<0.050



## 4. CEIS Phase 1/2 Characterization Report:

### Hydrogeology: Input to Community Structure Alternatives

- Wetlands and Ponds supported primarily by runoff from areas within existing NHS adjacent to the features
- Wetlands and Ponds provide recharge to the groundwater flow system. Many are perched but Halls Pond is an example of a feature which is in contact with water table but recharges groundwater system
- Groundwater discharge to wetlands is small to negligible
- Groundwater recharge primarily through vertical infiltration in SPA
- Most Closed depression areas have higher than average infiltration and recharge
- Most areas in SPA have moderate to high permeability and large depth to water table provides good opportunity for infiltration of stormwater
- Closed depressions represent existing opportunity for stormwater infiltration



# 4. CEIS Phase 1/2 Characterization Report:

## Hydrogeology: Integration Considerations

- Conceptual Model provides functional context and linkages between surface water, groundwater and NHS
  - Key Characteristics
    - Thick unsaturated zone away from wetlands
    - Moderate to High Permeability
    - Moderate to High Infiltration Capacity
  - Key Functions
    - Groundwater discharge to creeks (regionally)
    - Wetland recharge to groundwater system
    - Recharge to bedrock production aquifer



# 4. CEIS Phase 1/2 Characterization Report:

## Hydrogeology: Integration Considerations

- Infiltration: should be maintained to provide existing recharge and the opportunity to enhance infiltration without unacceptable increases to groundwater levels that would impact wetland areas or surface water consideration
- Groundwater flow: maintain flow divide in SPA to maintain contributions to discharge areas and bedrock production aquifer
- Closed Depressions: maintain above average infiltration of these areas and opportunity for stormwater management based on existing function
- Wetlands/Ponds: maintain overall hydrologic function (runoff from adjacent areas) within local subcatchments to preserve range and timing of water levels associated with these features.



## 4. CEIS Phase 1/2 Characterization Report: Hydrogeology: Integration Considerations

- Infrastructure trenches: should be designed to minimize water table lowering and redirection of shallow flows in areas of shallow water table depth
- Recharge Water Quality: best management practices for infiltration water should be implemented to maintain existing groundwater quality



# 4. CEIS Phase 1/2 Characterization Report:

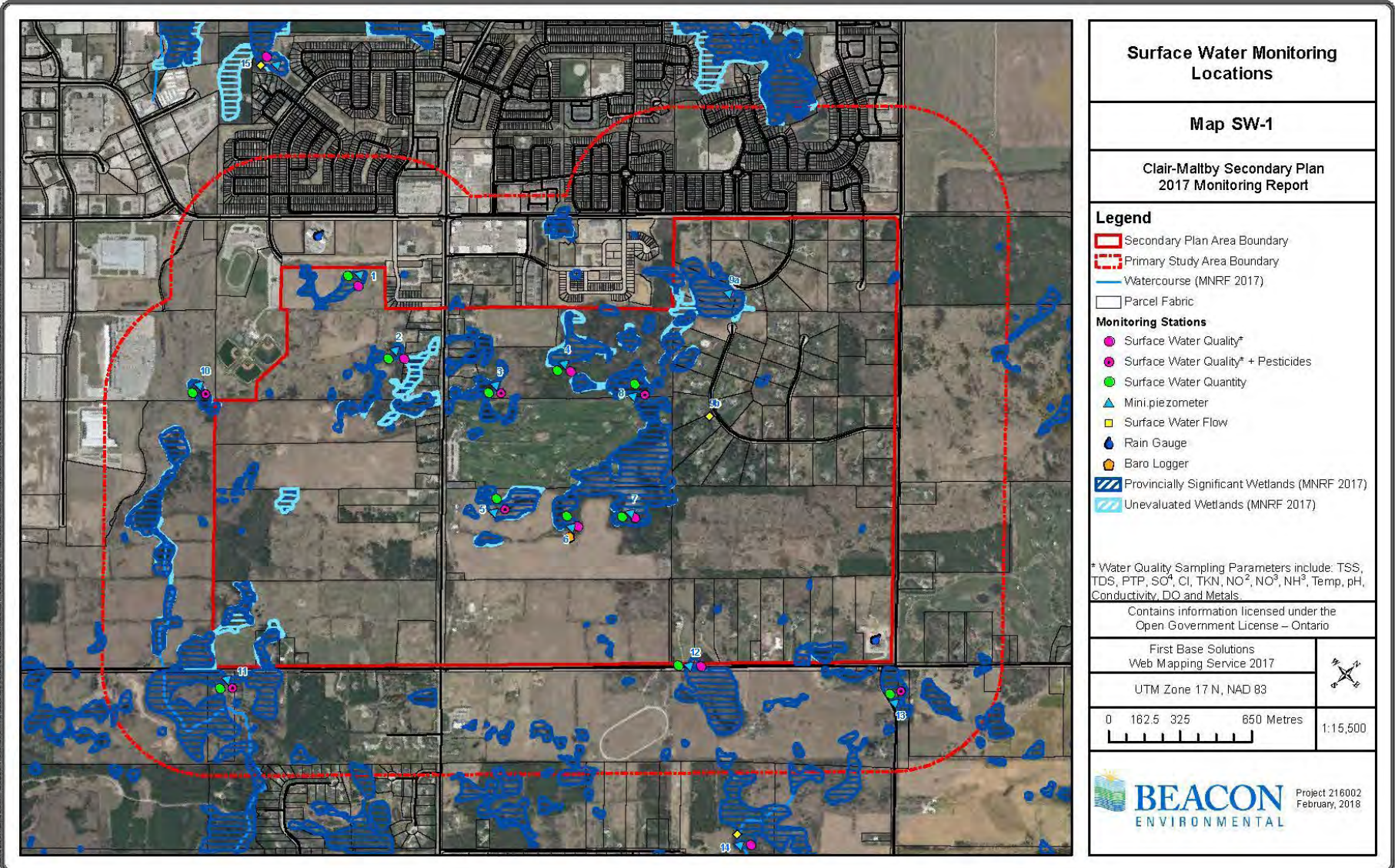
## Surface Water: Objective / Purpose

- Need to define runoff characteristics (peak, volume) in the study area
  - Headwaters of Mill, Hanlon and Torrance Creeks
- Assist in the definition of the role of water in supporting natural systems functionality
- Fundamental component of Stormwater Management Plan development





# 4. CEIS Phase 1/2 Characterization Report: Surface Water: Field Work





# 4. CEIS Phase 1/2 Characterization Report: Surface Water: Summary of Findings (Rainfall)

Monthly Precipitation Totals for 2016 and 2017 and Climate Normals (mm)

Month	2016 & 2017 Total <sup>2</sup>	1981-2010 Climate Normal <sup>1</sup>	Percent Difference <sup>2</sup>
<b>2016</b>			
April	57.8 (NA)	74.5	-22.42% (NA)
May	57.3 (NA)	82.3	-30.38% (NA)
June	53.0 (NA)	82.4	-35.68% (NA)
July	102.4 (NA)	98.6	+3.85% (NA)
August	152.6 (134.4)	83.9	+81.88% (+60.19%)
September	77.1 (58.2)	87.8	-12.19% (-33.71%)
October	85.8 (43.8)	67.4	+27.30% (-35.01%)
November	55.6 (40)	87.1	-36.17% (-54.08%)
December	90.1 (NA)	71.2	+26.54% (NA)
<b>TOTAL</b>	<b>731.7 (NA)</b>	<b>735.2</b>	<b>-0.48% (NA)</b>
April	57.8 (NA)	74.5	-22.42% (NA)
<b>2017</b>			
April	92.0 (NA)	74.5	+23% (NA)
May	120.5 (107.2)	82.3	+46% (+30%)
June	117.8 (94.6)	82.4	+43% (+15%)
July	35.5 (37.4)	98.6	-64% (-62%)
August	68.1 (51.6)	83.9	-19% (-38%)
September	55.5 (23.8)	87.8	-37% (-73%)
October	85.8 (56.2)	67.4	+27% (-17%)
November	96.1 (69.8)	87.1	+10% (-20%)
December	55.6 (NA)	71.2	-22% (NA)
<b>TOTAL</b>	<b>726.9 (NA)</b>	<b>735.2</b>	<b>-1% (NA)</b>

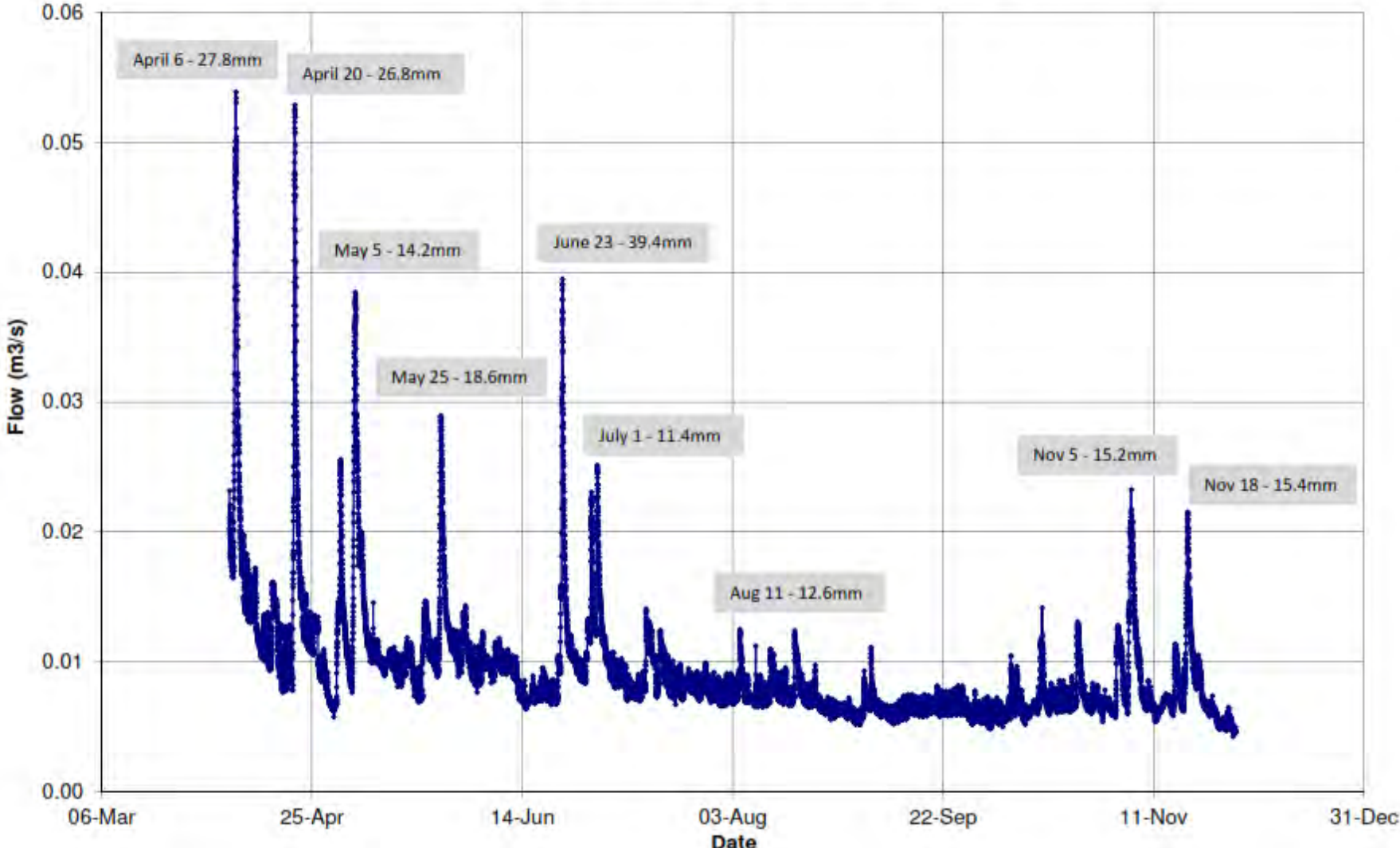
1. From Environment Canada Waterloo Wellington Airport

2. First value is based on Environment Canada's Elora RCS gauge, value in brackets is based on Clair Maltby Project gauge



# 4. CEIS Phase 1/2 Characterization Report: Surface Water: Summary of Findings – Surface Flow

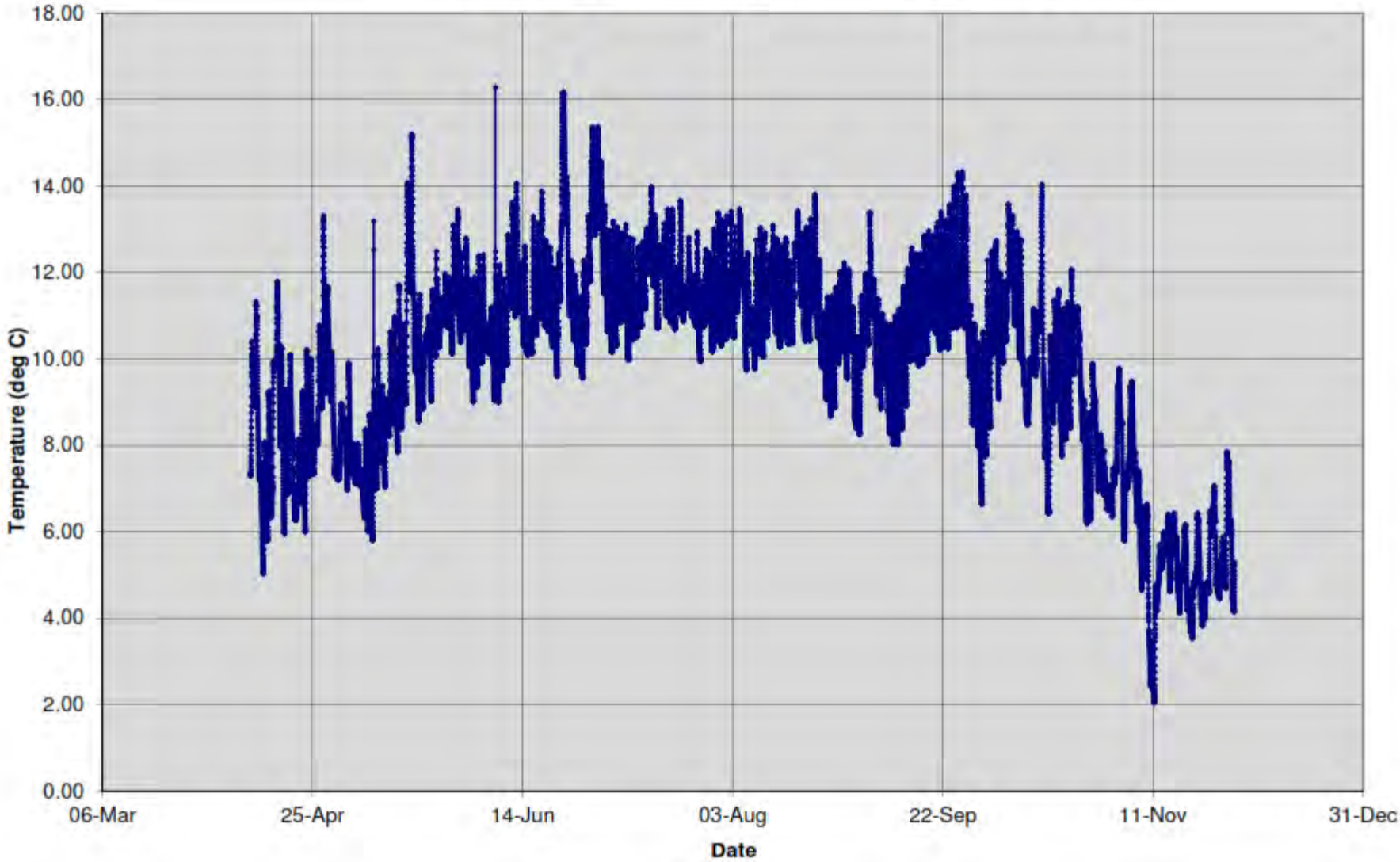
Station 14 (Hammersley) Estimated Flows for 2017





# 4. CEIS Phase 1/2 Characterization Report: Surface Water: Summary of Findings – Temperature

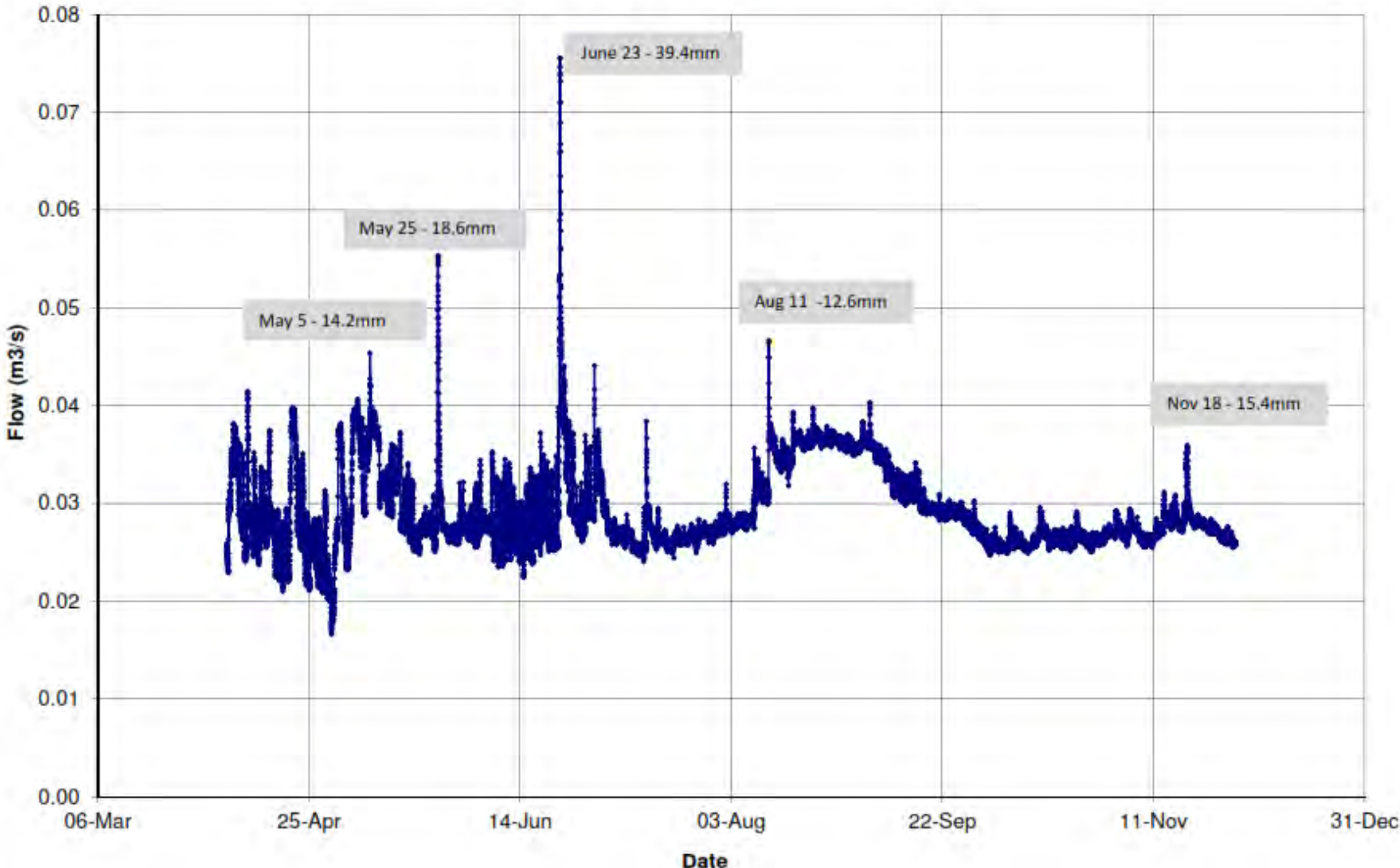
Station 14 (Hammersley) Recorded Temperature for 2017





# 4. CEIS Phase 1/2 Characterization Report: Surface Water: Summary of Findings – Surface Flow

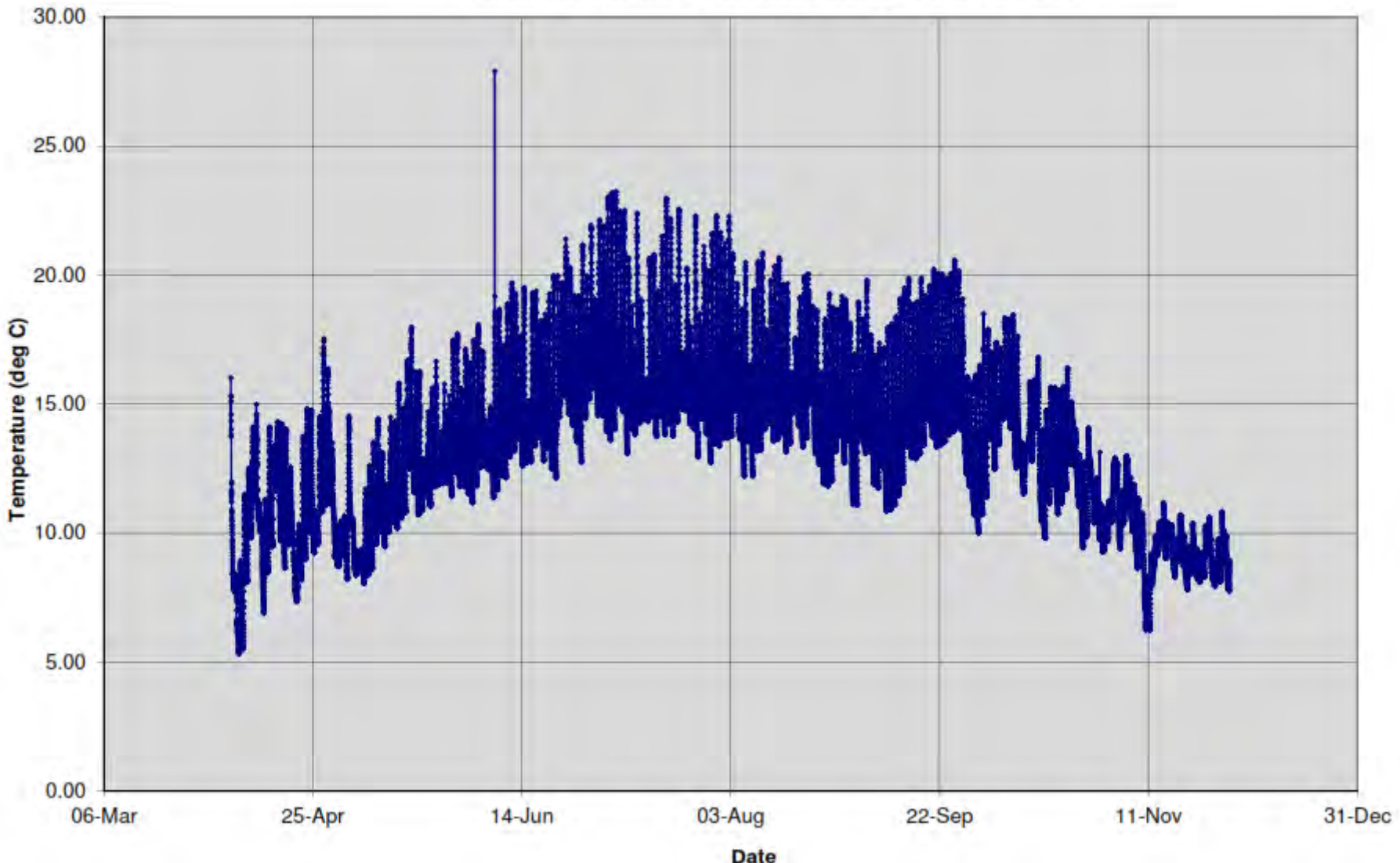
Station 15 (Hanlon) Estimated Flows for 2017





# 4. CEIS Phase 1/2 Characterization Report: Surface Water: Summary of Findings – Temperature

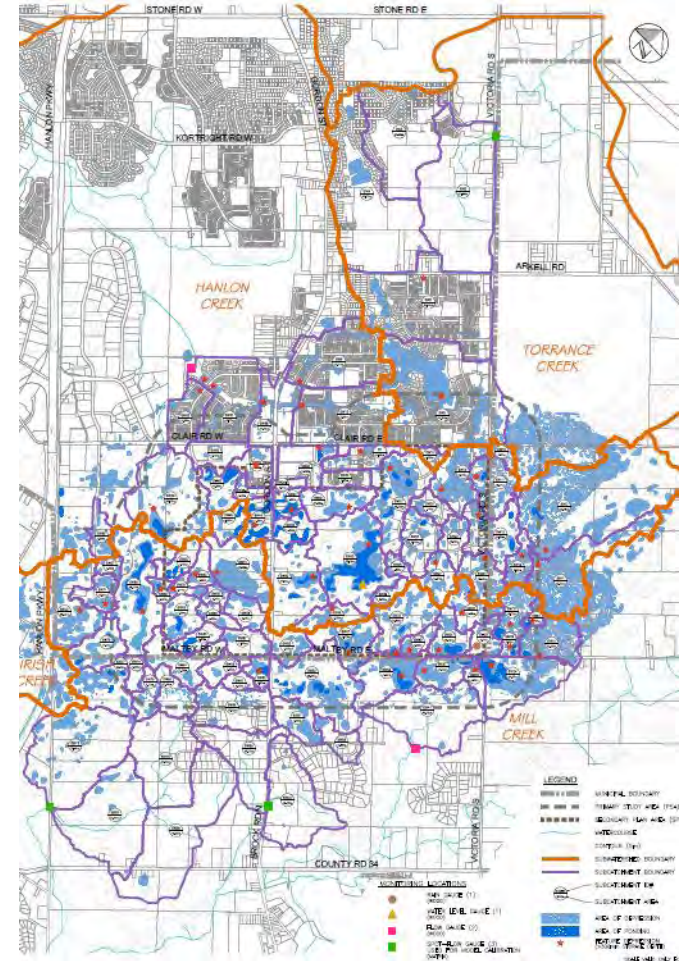
Station 15 (Hanlon) Recorded Temperature for 2017





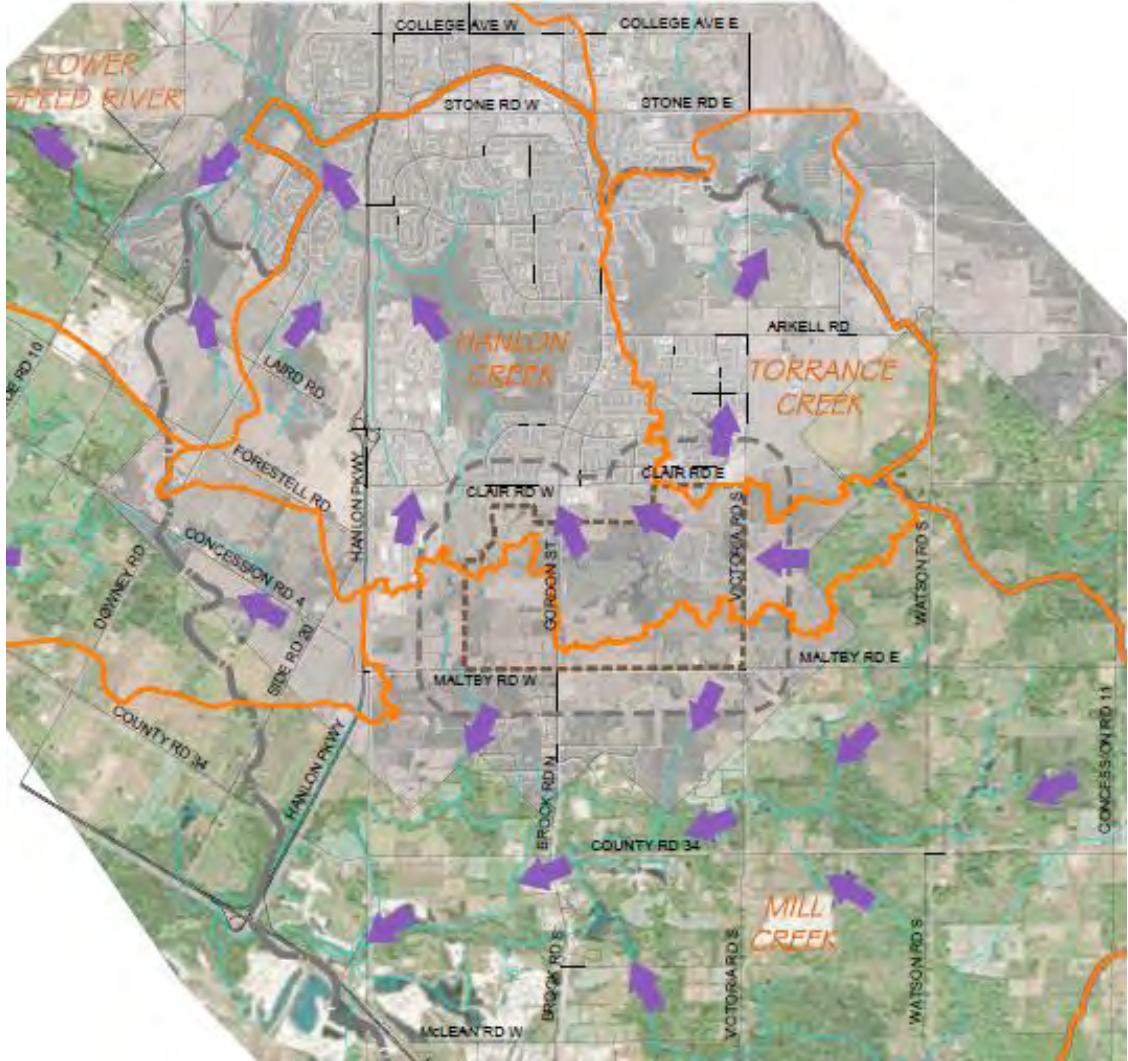
# 4. CEIS Phase 1/2 Characterization Report: Surface Water: Summary of Findings - Hydrology

- PCSWMM hydrologic model built on 2012 digital elevation model
- Subcatchments developed to Hanlon Creek, Mill Creek and Torrance Creek to the monitoring locations
- Depressional features (<300mm capture) incorporated into subcatchment depression storage; (>300 mm capture) used storage elements with overflow.
- Model validation to the 2016 to 2017 monitoring period results, requiring changes to baseflow, impervious coverages and increased infiltration in greenways



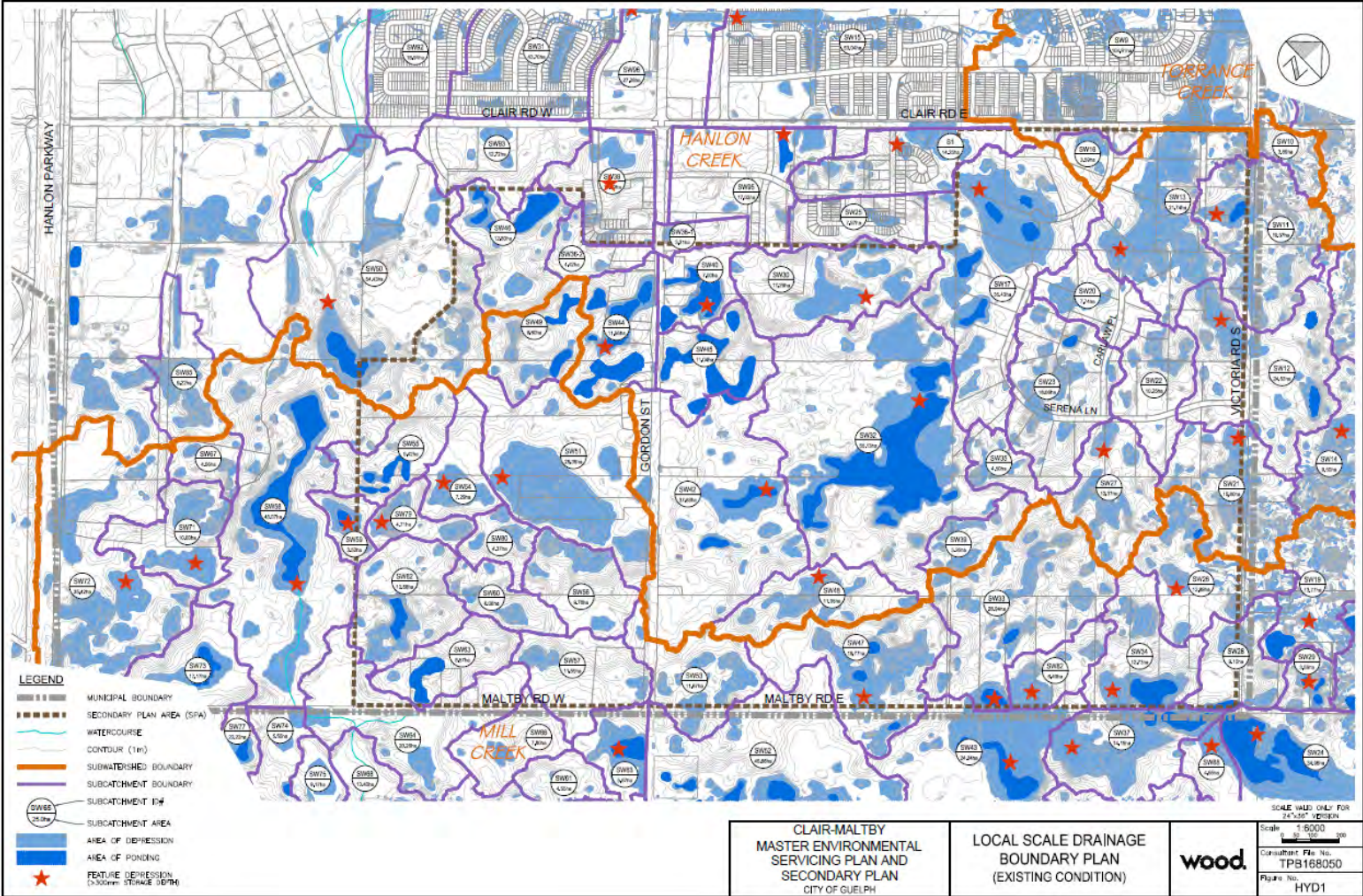


# 4. CEIS Phase 1/2 Characterization Report: Surface Water: Summary of Findings - Hydrology



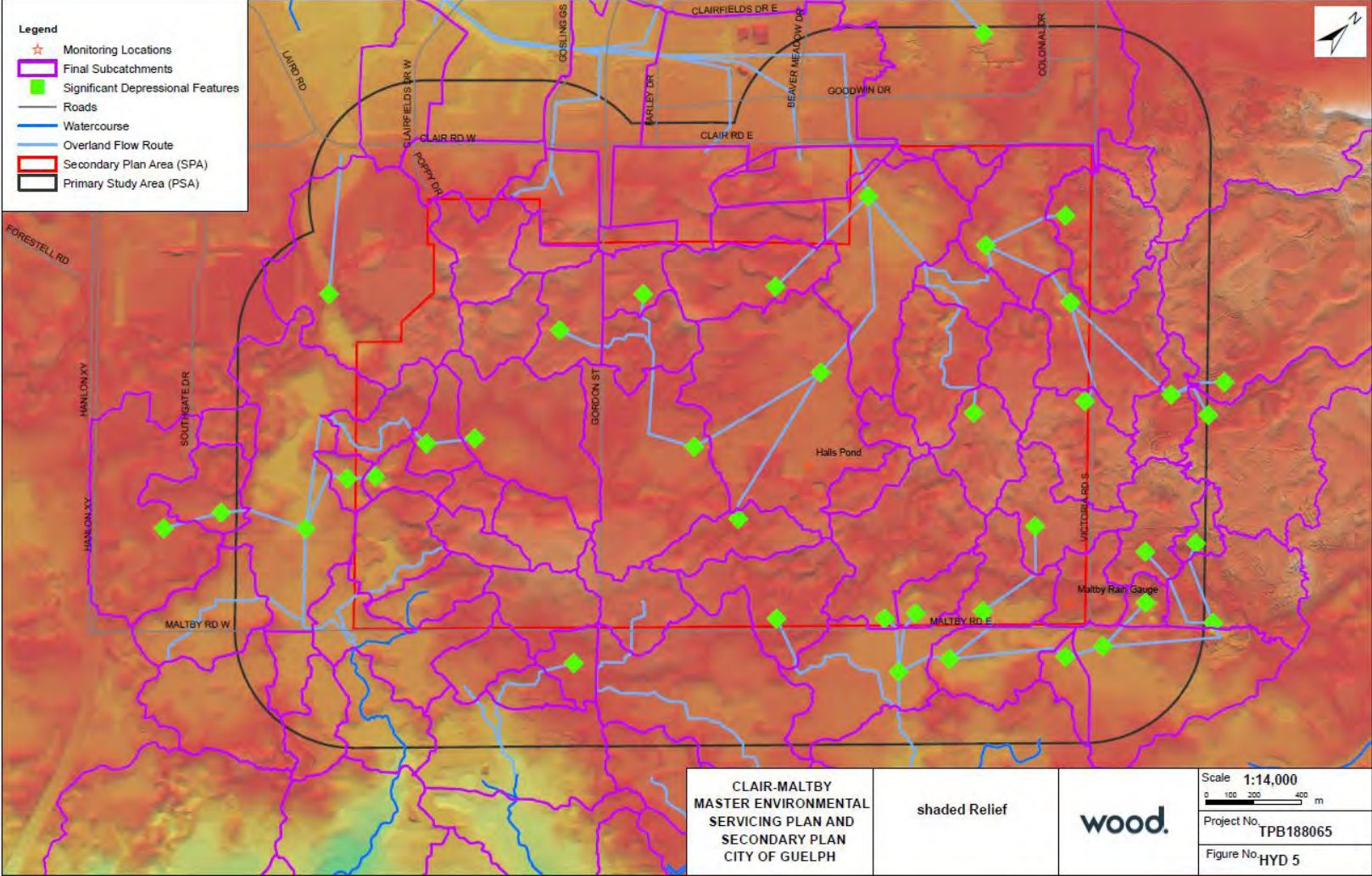


# 4. CEIS Phase 1/2 Characterization Report: Surface Water: Summary of Findings - Hydrology



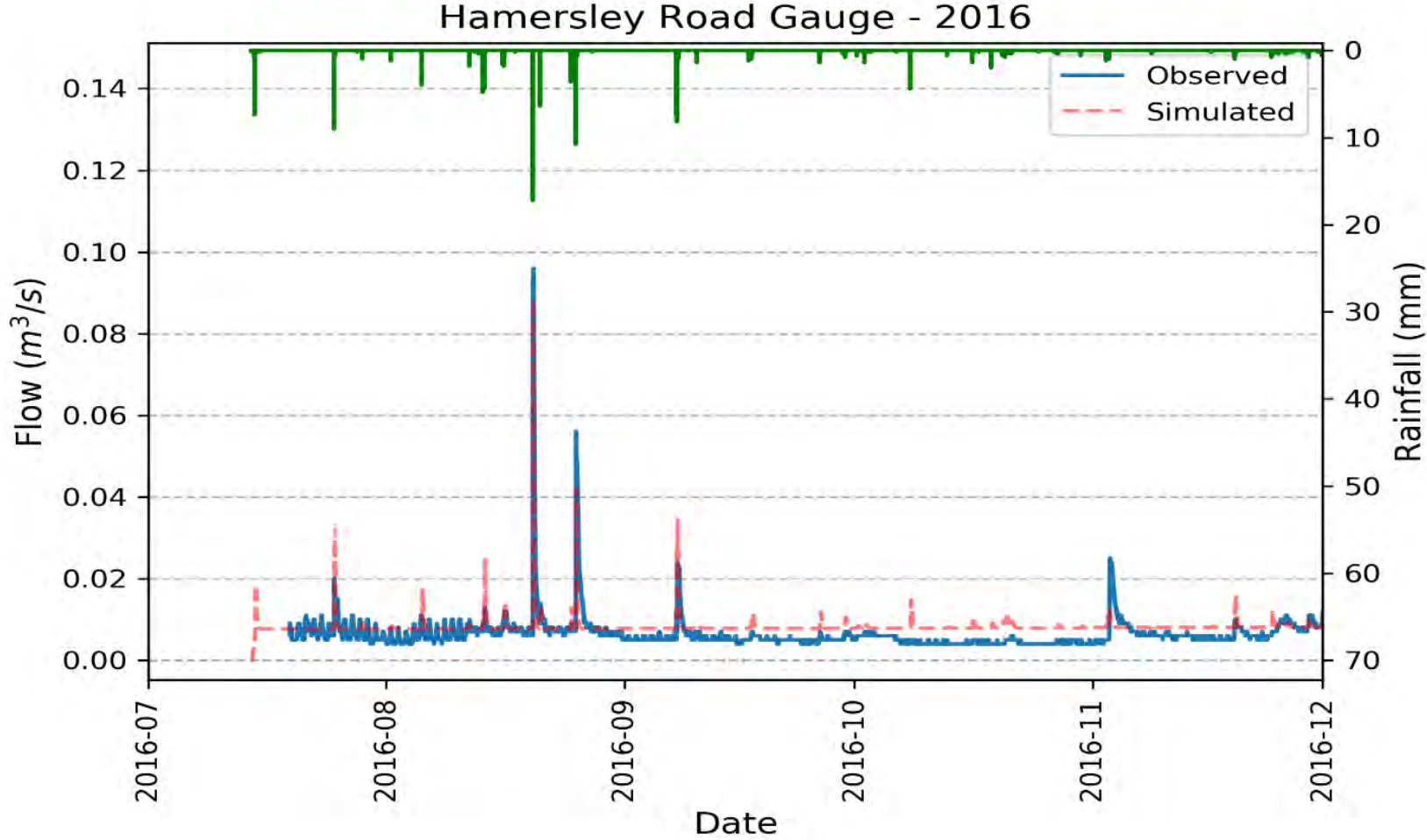


# 4. CEIS Phase 1/2 Characterization Report: Surface Water: Summary of Findings - Hydrology





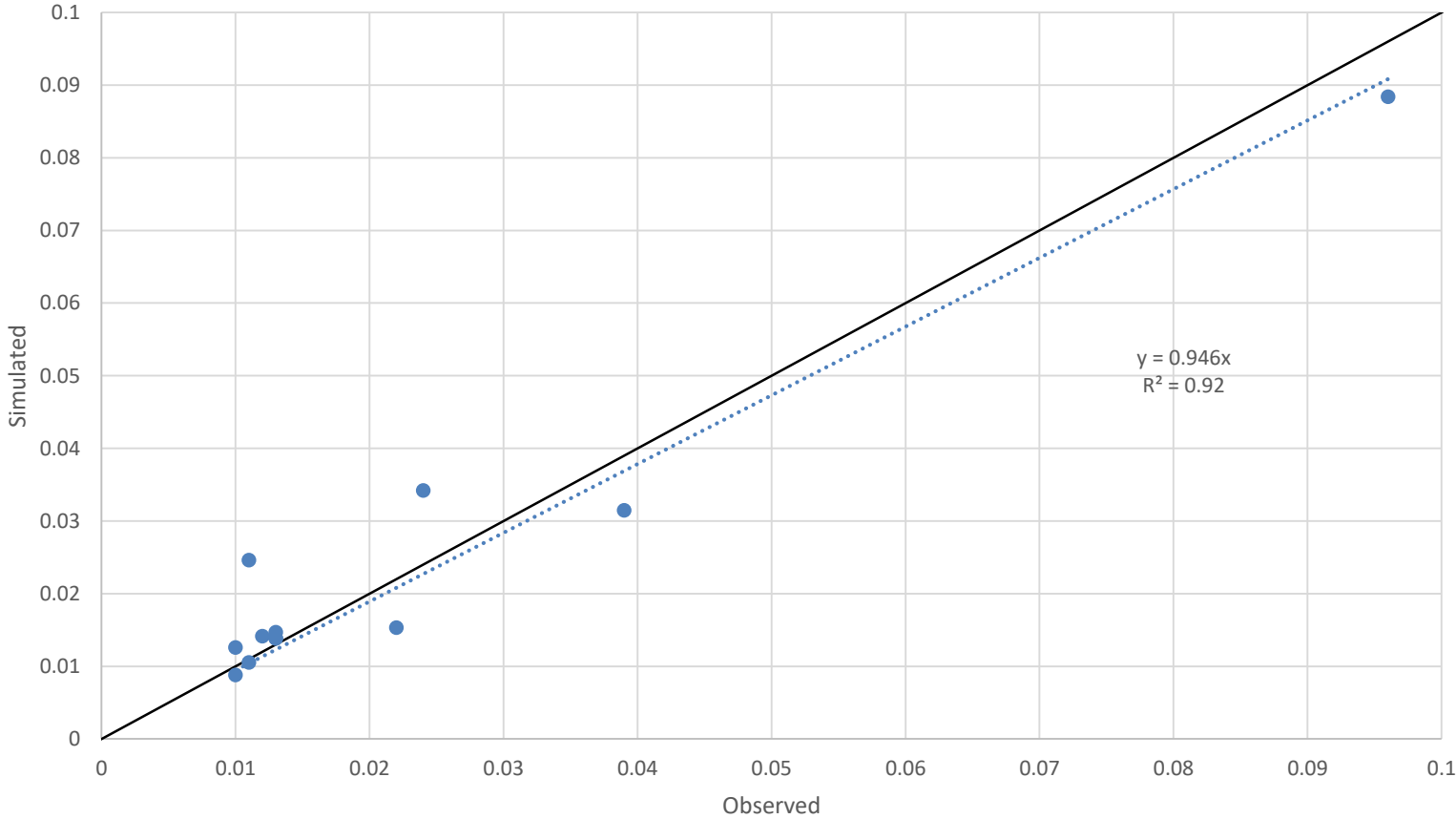
# 4. CEIS Phase 1/2 Characterization Report: Surface Water: Summary of Findings - Hydrology





# 4. CEIS Phase 1/2 Characterization Report: Surface Water: Summary of Findings - Hydrology

Hamersley Road Gauge - Maximum Flow (m<sup>3</sup>/s)





## 4. CEIS Phase 1/2 Characterization Report: Surface Water: Summary of Findings - Hydrology

- Validated PCSWMM hydrologic model used to determine:
  - Design and frequency peak flows and water balance (surface based)
  - 100 Year frequency flows 1.55 m<sup>3</sup>/s and 0.48 m<sup>3</sup>/s for Hanlon Creek and Mill Creek monitoring sites (flows are extremely low)
  - Flows within Hanlon and Mill Creek are low, but have baseflow from contributing groundwater discharge
  - 93% to 97% precipitation either infiltrates or evaporates
  - 95%+/- infiltration within depressional features
  - Only 7 out of 47 significant depressional features (>300 mm capture) exhibited a discharge over 67 years of simulation period



## 4. CEIS Phase 1/2 Characterization Report: Surface Water: Input to Community Structure Alternatives

- There are 47 significant depressional features with over 300 mm of storage
- Depressional features (dry, ponds, wooded areas and wetlands) infiltrate most precipitation
- Surface water contributions to wetlands are significant, with groundwater contributions being minor (see Hydrogeology Section)
- Significant depressional features discharge for only infrequent and significant storm events
- Mill Creek and Hanlon Creek have low frequency flows
- Baseflow relies on groundwater discharge
- Most of the area has moderate to high infiltrative soils
- The depressional areas provide an opportunity for infiltration of stormwater runoff



# 4. CEIS Phase 1/2 Characterization Report:

## Surface Water: Integration Considerations

- Stormwater quantity controls to be integrated with sustainable planning approach for the NHS terrestrial units, based on the existing unit water balance
- Replicate existing overland drainage to wetlands and woodlots
- Stormwater management and drainage systems to manage the increased rate and volume of runoff from future development resulting in no increase in peak flows and runoff volumes to watercourses
- As part of the stormwater management system, source, conveyance and end-of-pipe measures that promote infiltration, should be implemented



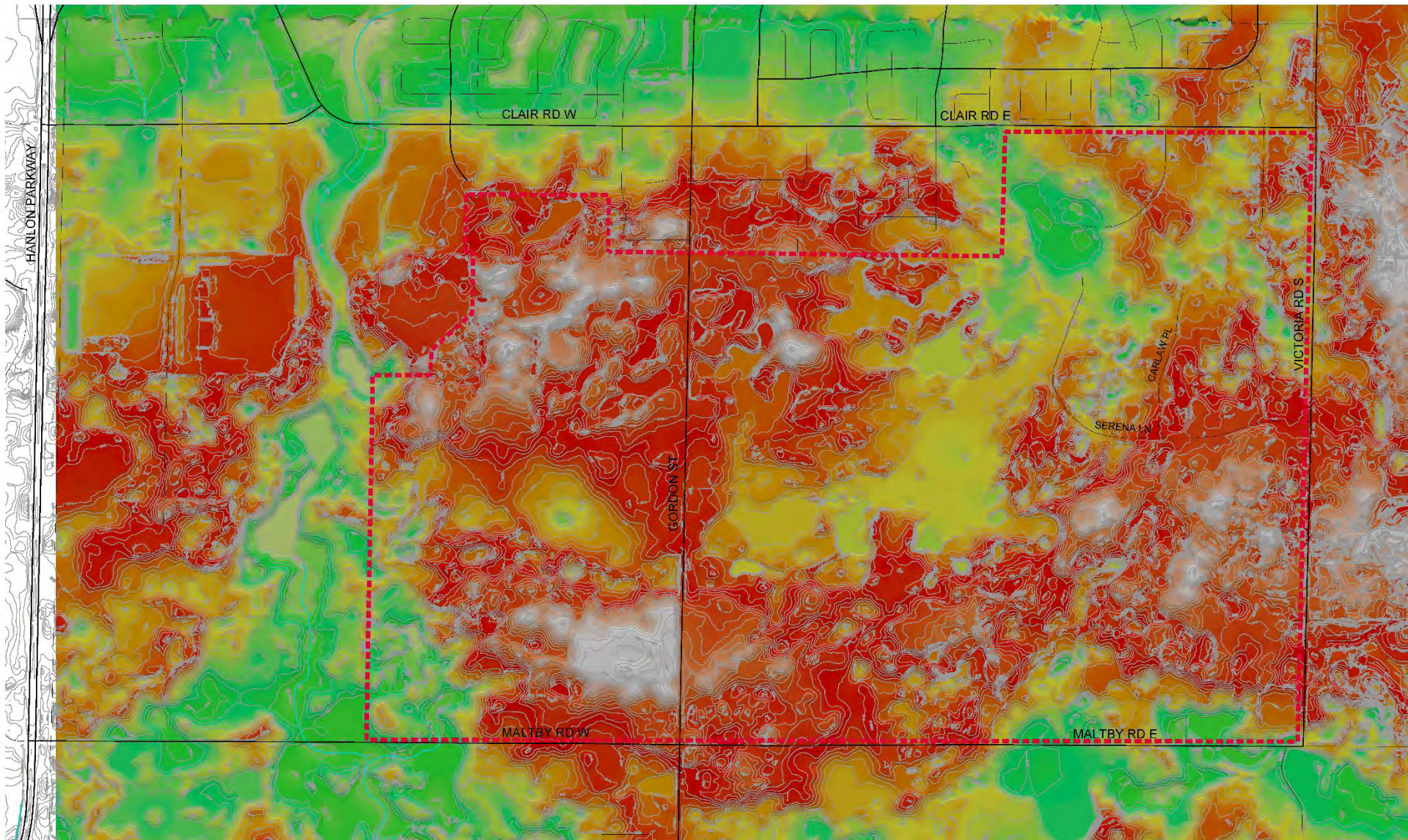
# 4. CEIS Phase 1/2 Characterization Report:

## Surface Water: Integration Considerations

- The significant infiltration function of depressional features should either be preserved or replicated within stormwater management measures
- The stormwater management system should appropriately maintain and if possible augment baseflows, and mitigate thermal impacts from future development

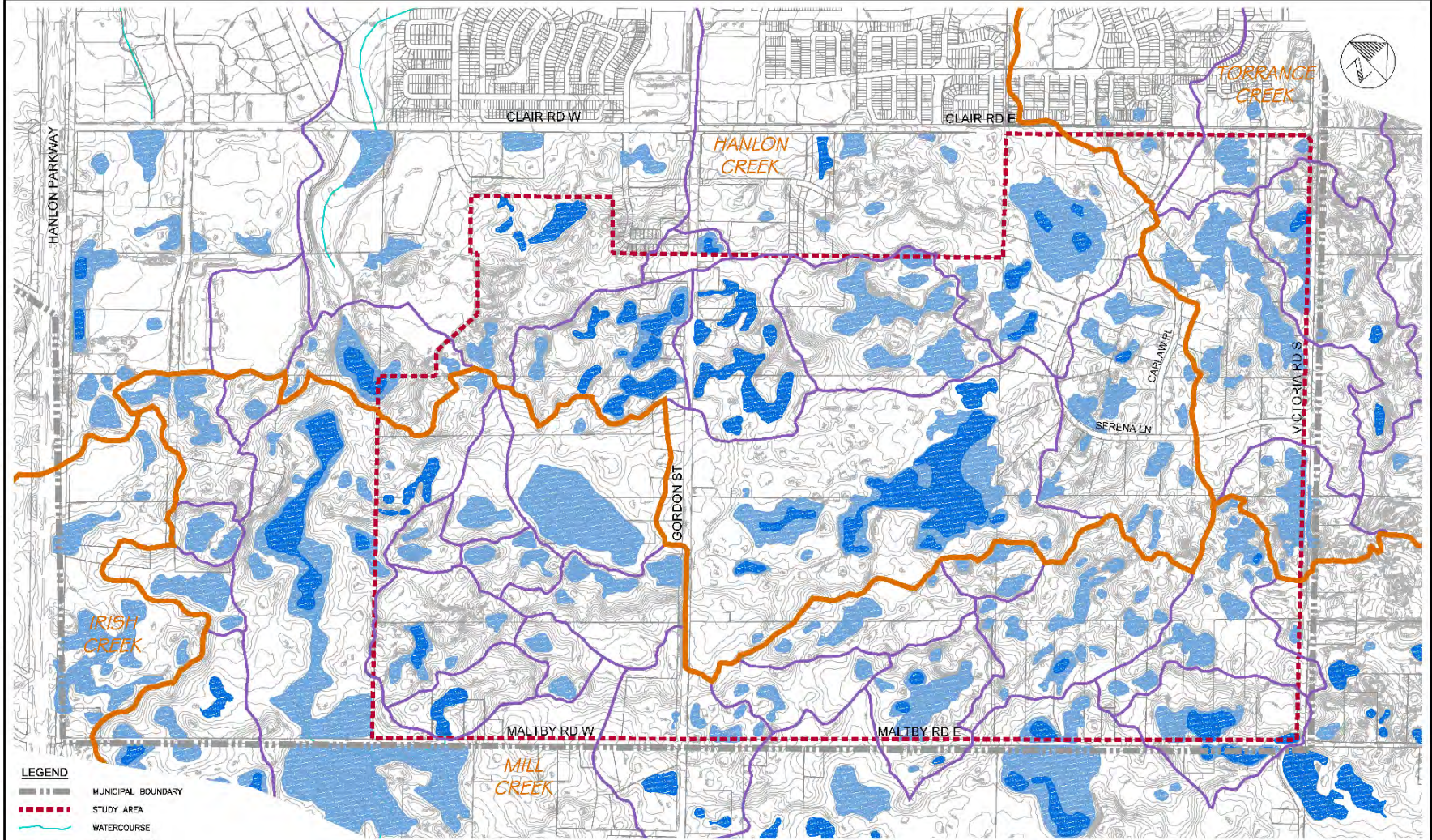


# 4. CEIS Phase 1/2 Characterization Report: Preliminary Stormwater Management Considerations





# 4. CEIS Phase 1/2 Characterization Report: Preliminary Stormwater Management Considerations



- LEGEND**
- MUNICIPAL BOUNDARY
  - STUDY AREA
  - WATERCOURSE
  - CONTOUR (1m)
  - WATERSHED BOUNDARY
  - SUBCATCHMENT BOUNDARY
  - AREA OF DEPRESSION
  - AREA OF PONDING

CLAIR-MALTBY  
MASTER ENVIRONMENTAL  
SERVICING PLAN AND  
SECONDARY PLAN  
CITY OF GUELPH

LOCAL SCALE  
DRAINAGE BOUNDARY  
PLAN



SCALE VALID ONLY FOR  
24"x36" VERSION

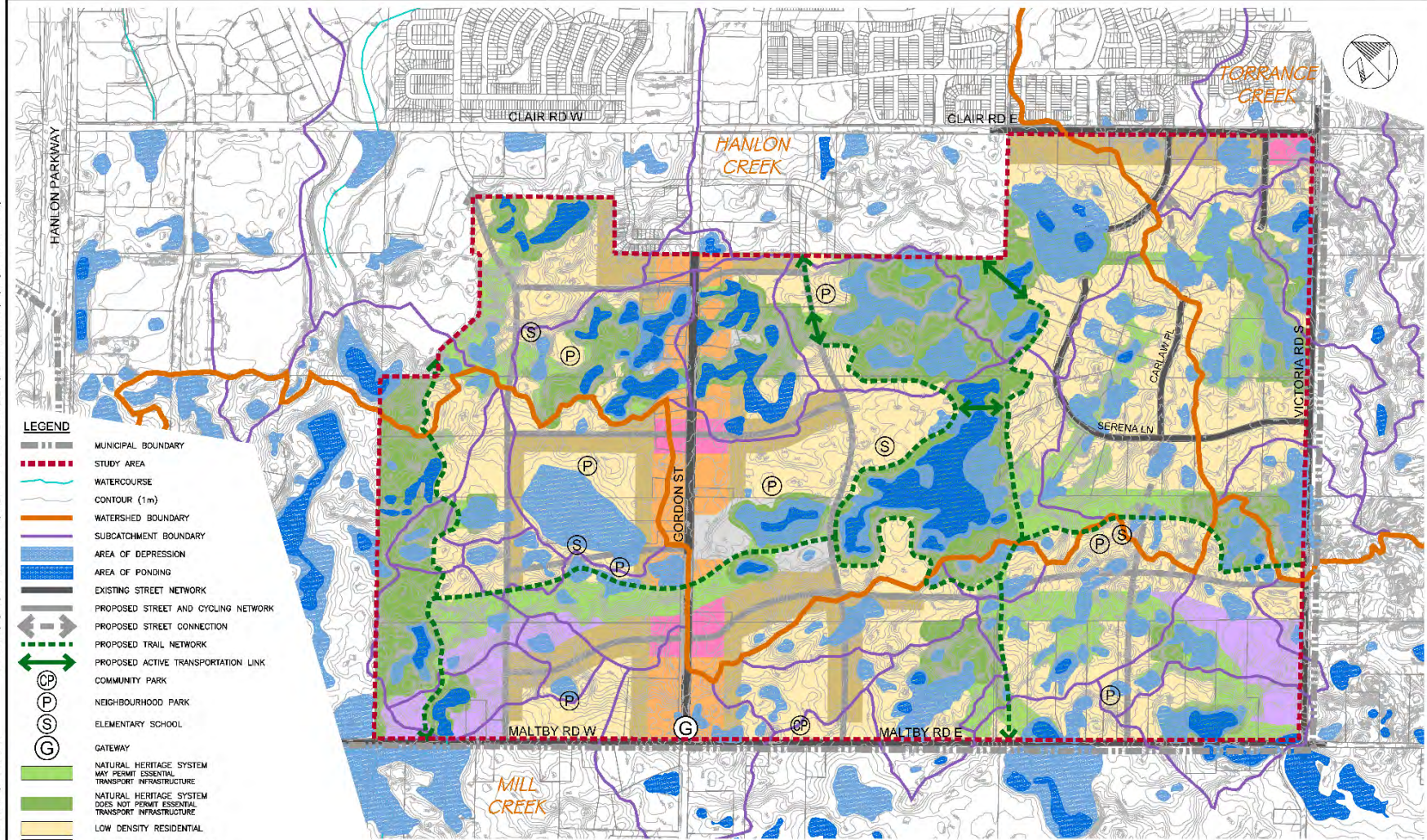
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Consultant File No.  
TPB168050

Figure No.  
W1



# 4. CEIS Phase 1/2 Characterization Report: Preliminary Stormwater Management Considerations



- LEGEND**
- MUNICIPAL BOUNDARY
  - STUDY AREA
  - WATERCOURSE
  - CONTOUR (1m)
  - WATERSHED BOUNDARY
  - SUBCATCHMENT BOUNDARY
  - AREA OF DEPRESSION
  - AREA OF PONDING
  - EXISTING STREET NETWORK
  - PROPOSED STREET AND CYCLING NETWORK
  - PROPOSED STREET CONNECTION
  - PROPOSED TRAIL NETWORK
  - PROPOSED ACTIVE TRANSPORTATION LINK
  - COMMUNITY PARK
  - NEIGHBOURHOOD PARK
  - ELEMENTARY SCHOOL
  - GATEWAY
  - NATURAL HERITAGE SYSTEM MAY PERMIT ESSENTIAL TRANSPORT INFRASTRUCTURE
  - NATURAL HERITAGE SYSTEM DOES NOT PERMIT ESSENTIAL TRANSPORT INFRASTRUCTURE
  - LOW DENSITY RESIDENTIAL
  - MEDIUM DENSITY RESIDENTIAL
  - HIGH DENSITY RESIDENTIAL
  - MIXED USE
  - EMPLOYMENT
  - NO DEVELOPMENT

CLAIR-MALTBY  
MASTER ENVIRONMENTAL  
SERVICING PLAN AND  
SECONDARY PLAN  
CITY OF GUELPH

EXISTING DRAINAGE  
FEATURES AND CONCEPTUAL  
LAND USE PLAN

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Consultant File No. TPB168050  
Figure No. LU2

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# 4. CEIS Phase 1/2 Characterization Report: Significant Landform: Objectives / Purpose



- Significant Landform already defined and identified as part of the City's NHS



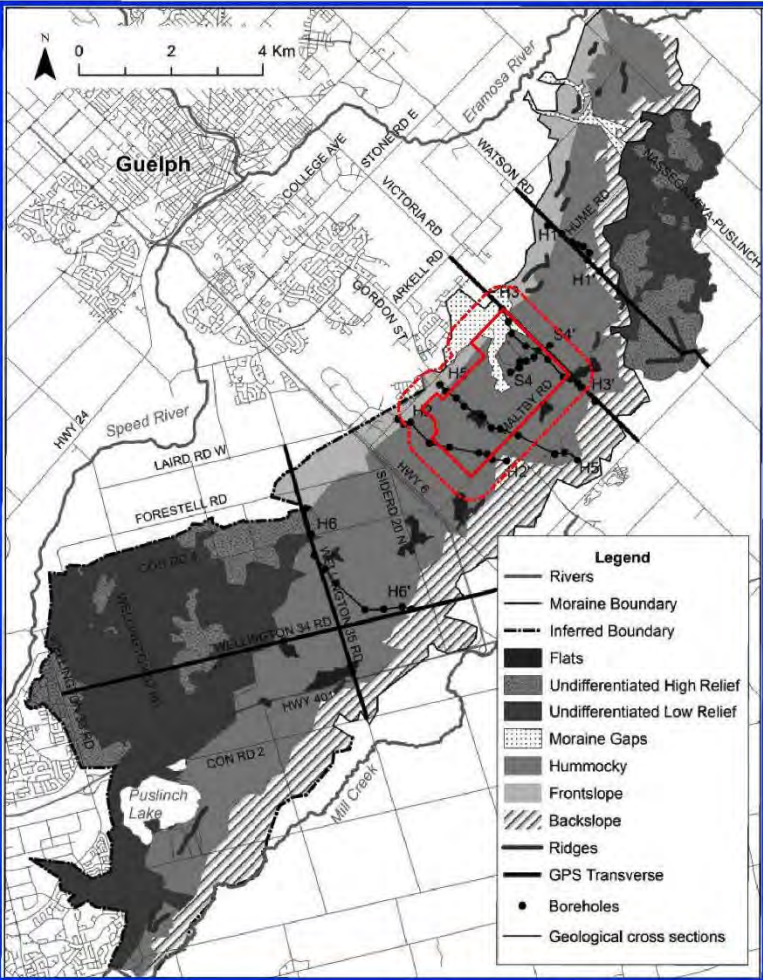
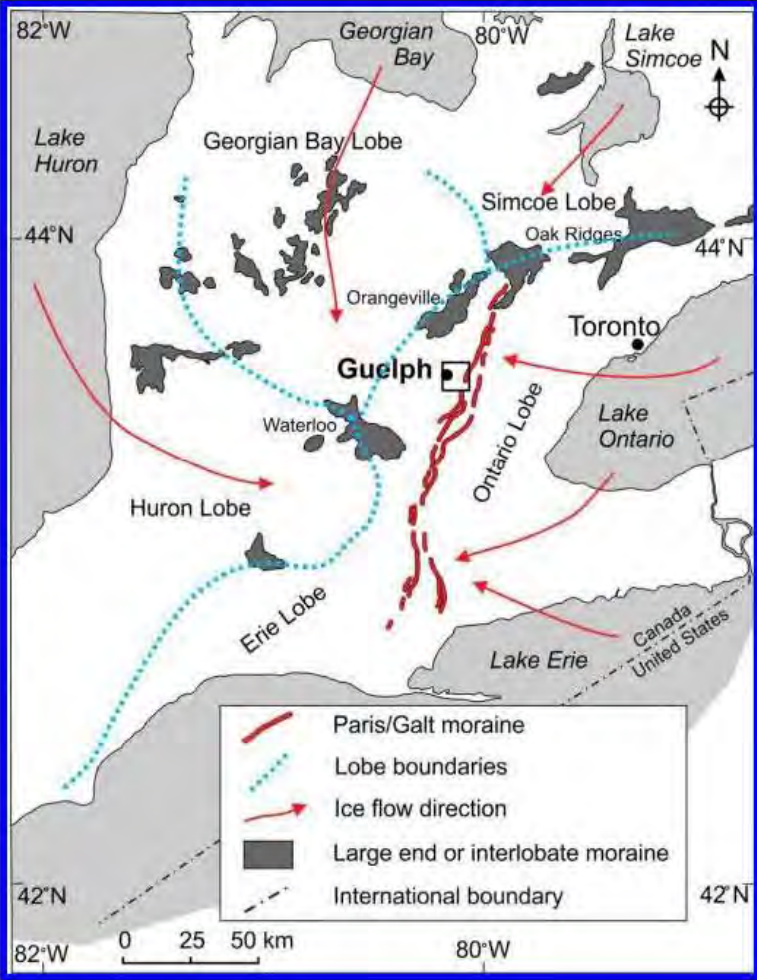
- No technical update being done to Significant Landform mapping as part of CEIS



- CEIS work to focus on approaches for integration of these features into the Secondary Plan through design and policy



# 4. CEIS Phase 1/2 Characterization Report: Significant Landform: Context





# 4. CEIS Phase 1/2 Characterization Report:

## Significant Landform: Policy

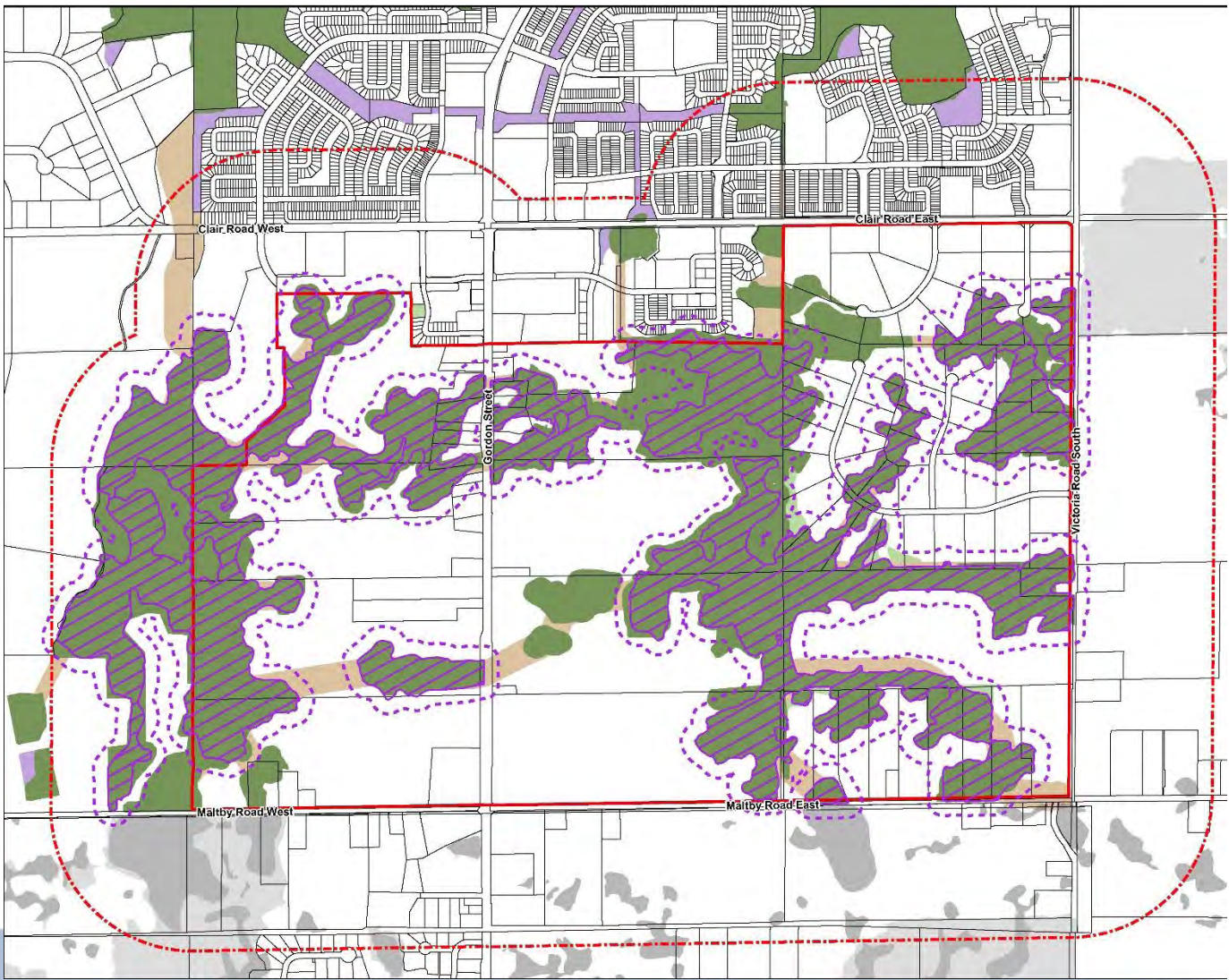
Criterion for Significant Landform Designation (City of Guelph Official Plan):

*Hummocky Topography of the Paris Galt Moraine that exhibits slope concentrations where:*

- the slope is 20% or greater,*
- and located in association with closed depressions identified by the GRCA, and*
- in close proximity to other Significant Natural Areas of the Natural Heritage System.*



# 4. CEIS Phase 1/2 Characterization Report: Significant Landform: Mapping





## 4. CEIS Phase 1/2 Characterization Report:

### Significant Landform: Input to Community Structure Alternatives

- **ROADS AND TRAILS:** Refinements to new primary road and trail alignments with consideration for Significant Landform and the topography of the area as a whole
- **WATER BALANCE:** Recognition that closed depressions outside of the NHS present opportunities for infiltration of clean / treated water
- **CONNECTIVITY:** Recognition that the linear nature of the Significant Landform can help support both natural heritage and active transportation connections



## 4. CEIS Phase 1/2 Characterization Report: Significant Landform: Integration Considerations

- NHS: Significant Landform is integrally tied to the NHS and therefore any refinements to other NHS components must also consider Significant Landform
- WATER MANAGEMENT: The topography, soils and surficial geology in the SPA currently determine how the area drains as well as its role in contributing baseflows to systems outside the SPA
- CONNECTIVITY: Roads, trails and other infrastructure requirements need to be sited with consideration for maintaining the character and connectivity of the NHS



# 4. CEIS Phase 1/2 Characterization Report:

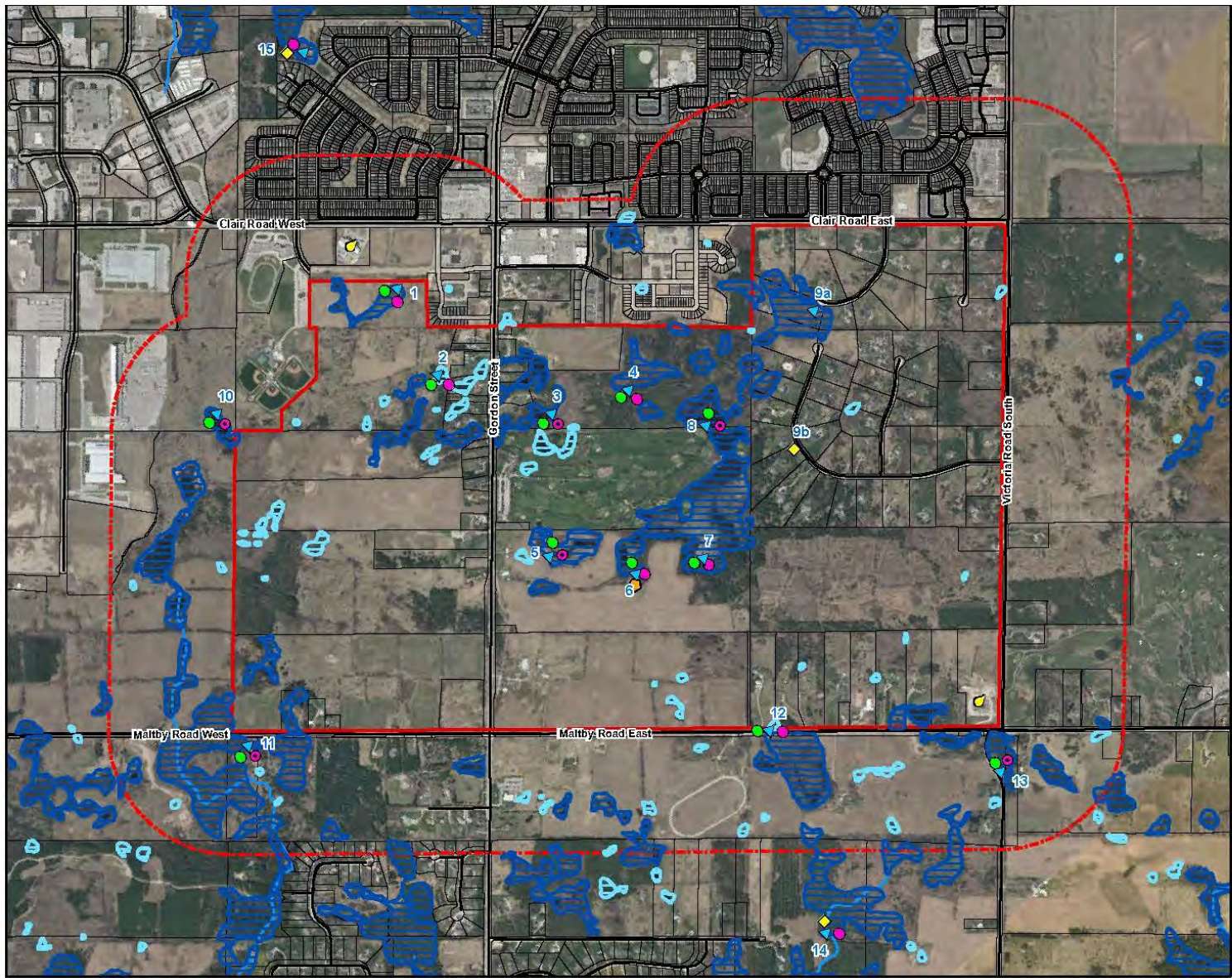
## Natural Systems: Objective / Purpose

- Confirm and refine components of the Natural Heritage System (NHS), with an emphasis on Ecological Linkages and Significant Wildlife Habitat
- Develop and implement an approach for reviewing the status of wetlands in consultation with the City, GRCA and MNR
- Work with the intergrated team to develop a better understanding of how surface and groundwater support Natural Heritage System functions





# 4. CEIS Phase 1/2 Characterization Report: NHS: Field Work – Wetland Water Levels & Quality



Surface Water Monitoring Locations

Map SW-1

Clair-Maltby Secondary Plan  
Phase 1 and 2 Characterization Report

**Legend**

- Secondary Plan Area
- Primary Study Area
- Watercourse (MNRF 2017)
- Parcel Fabric

**Monitoring Stations**

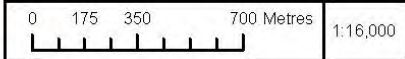
- Surface Water Quality\*
- Surface Water Quality\* + Pesticides
- Surface Water Quality
- ▲ Mini-piezometer
- ◆ Surface Water Flow
- ◆ Rain Gauge
- Baro Logger
- Provincially Significant Wetlands (MNRF 2017)
- Unevaluated Wetlands (MNRF 2017)

\* Water Quality Sampling Parameters include: TSS, TDS, PTP, SO<sup>4</sup>, Cl, TKN, NO<sup>2</sup>, NO<sup>3</sup>, NH<sup>3</sup>, Temp, pH, Conductivity, DO and Metals

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# 4. CEIS Phase 1/2 Characterization Report: NHS: Findings – Wetland Water Levels & Quality

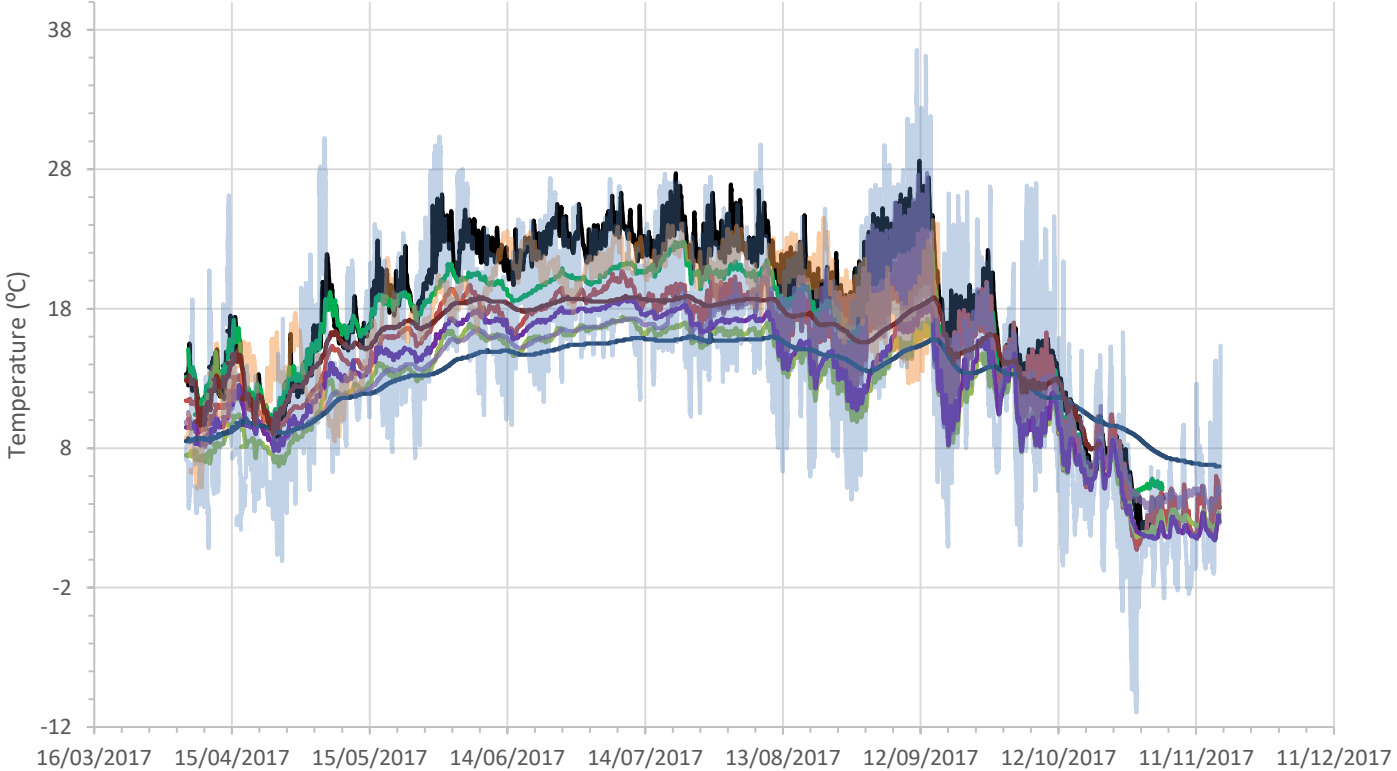


- Standing water in all wetlands sampled from April to November 2017
- Levels generally showed expected seasonal pattern: peak in spring and gradual decline over the summer with a small rebound in fall
- Lab samples screened against PWQO, CDWQ and CEQG guidelines
  - Recurring exceedances included: Ammonia, Total Phosphorus and Aluminum
  - Zinc exc. in two Mill Creek SWS Stations
  - Some Chloride exc. at stations near roads



# 4. CEIS Phase 1/2 Characterization Report: NHS: Findings – Wetland Temperature 2017 Hanlon Creek Watershed Stations (9)

Wetland Station Surface Water Temperatures - Hanlon Creek SWS

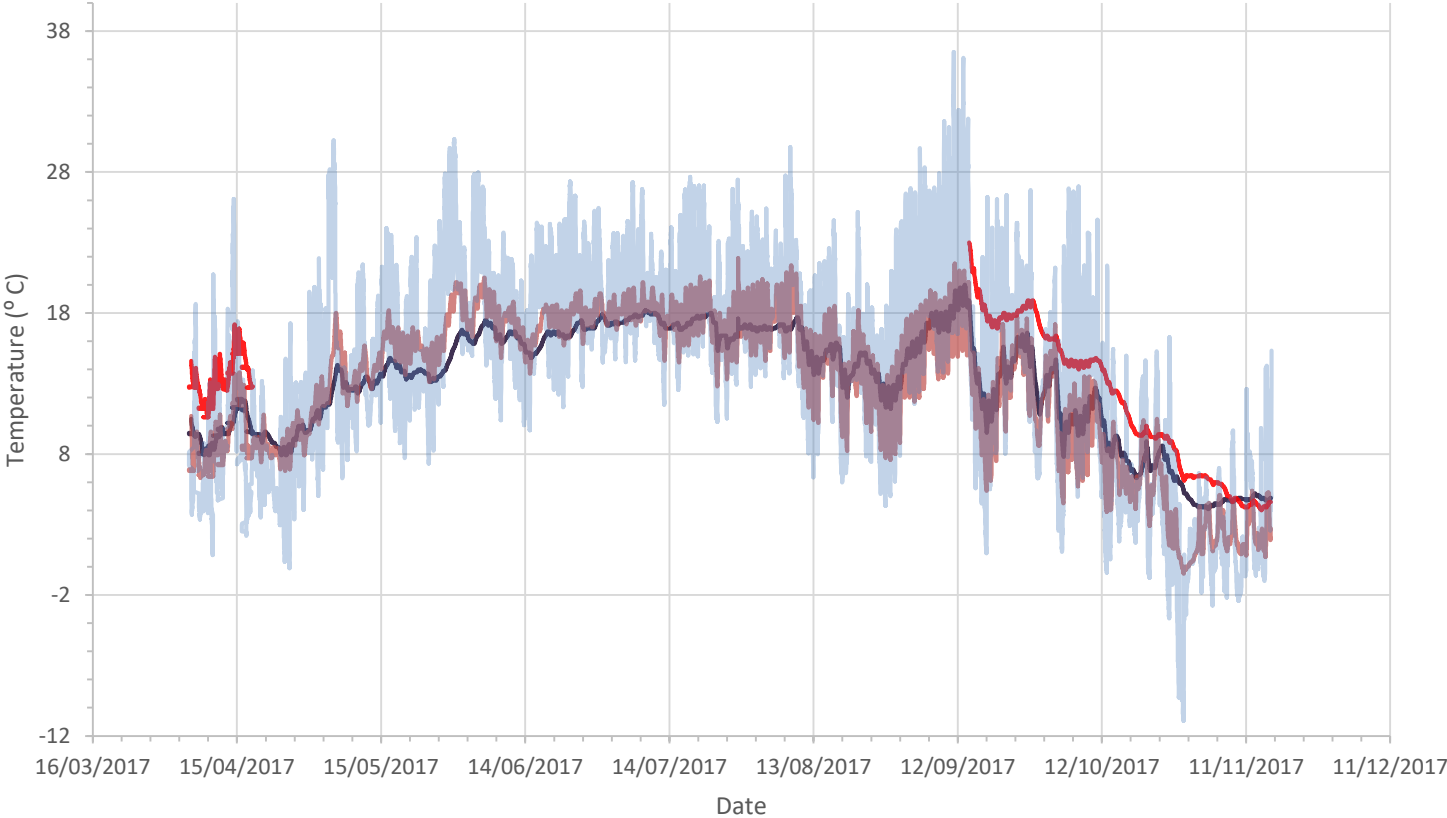


— STN 1\*      — STN 2\*      — STN 3      — STN 4      — STN 5  
— STN 6      — STN 7      — STN 8      — STN 10      — Air Temperature



# 4. CEIS Phase 1/2 Characterization Report: NHS: Findings – Wetland Temperature 2017 Mill Creek Watershed Stations (3)

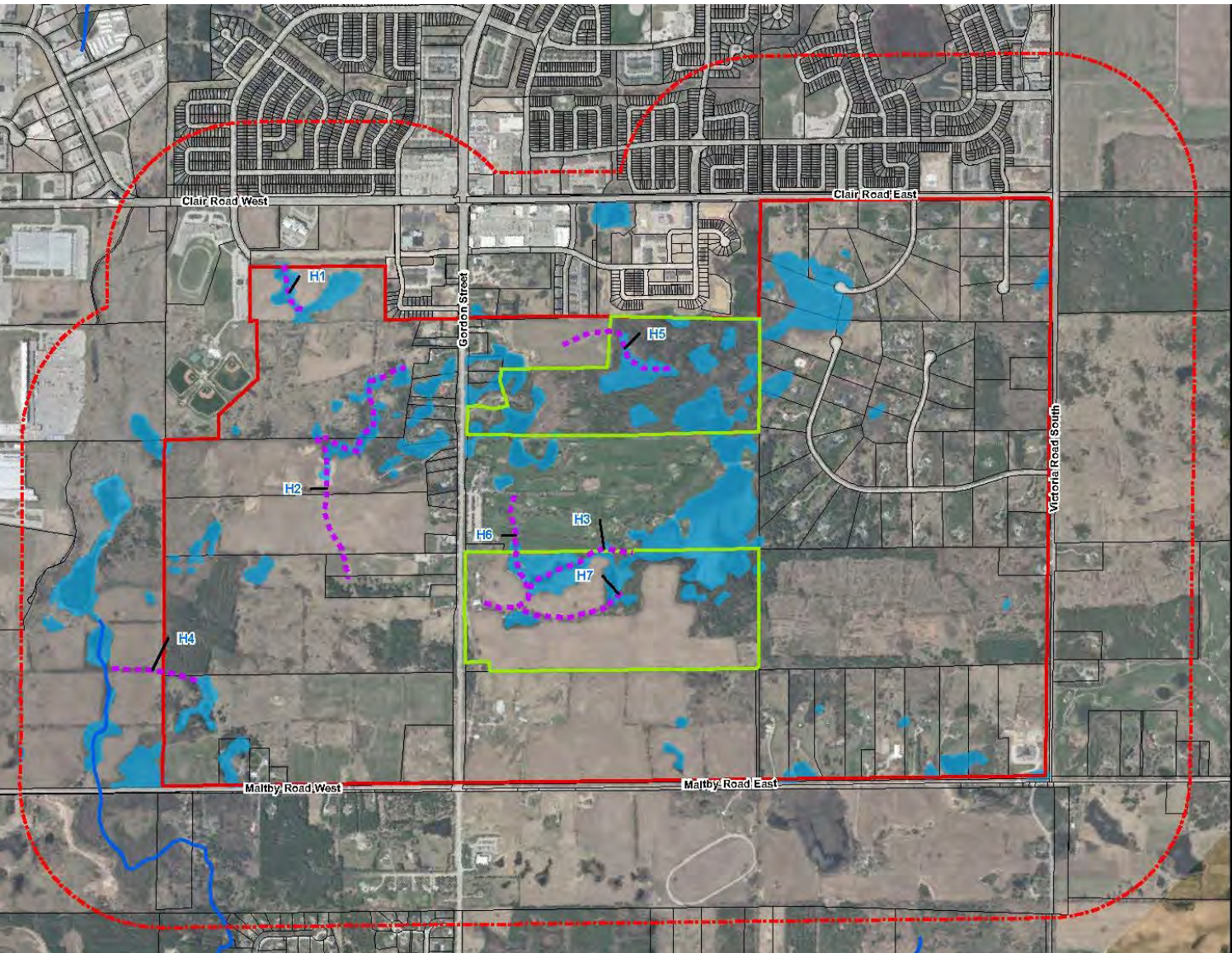
Wetland Station Surface Water Temperatures - Mill Creek SWS



— STN 11 — STN 12 — STN 13 — Air Temperature



# 4. CEIS Phase 1/2 Characterization Report: NHS: Field Work – Headwater Features Assessment



**Scoped Headwater Drainage  
Feature Assessment  
(Potential HDFs)**

**Map NH-4A**

Clair-Maltby Secondary Plan  
Phase 1 and 2 Characterization Report

**Legend**

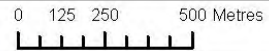
- Secondary Plan Area Boundary
- Primary Study Area Boundary
- Parcel Fabric
- Access Provided for HDF Assessment
- ELC Wetland Communities and Ponds (Beacon 2017)
- Potential Headwater Drainage Feature (HDF) (Beacon 2018)
- Watercourse (MNRF 2017)

City of Guelph: Secondary Plan Area Boundary, 2016

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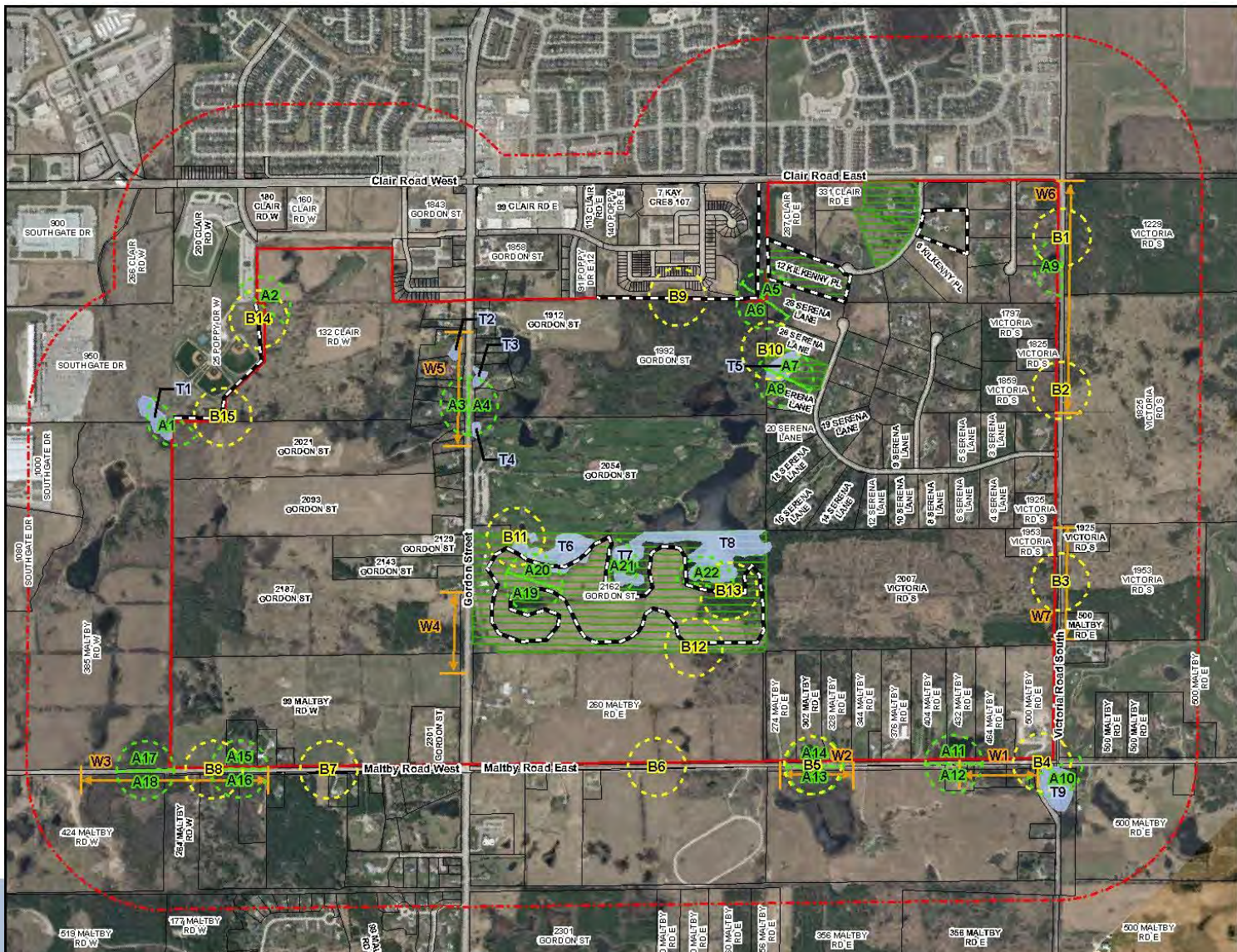
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Project 216002  
August, 2018



# 4. CEIS Phase 1/2 Characterization Report: NHS: Field Work – Terrestrial Ecology



**Terrestrial Monitoring Locations**

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**Map NH-2**

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**Clair-Maltby Secondary Plan  
2017 Monitoring Report**

**Legend**

- Secondary Plan Area Boundary
- Primary Study Area Boundary
- Site Specific Vegetation Assessments
- A1 Amphibian Monitoring Stations (22)
- B1 Breeding Bird Stations (15)
- Basking Turtle Monitoring Stations (8)
- Winter Wildlife Transects (5)
- Road Wildlife Transects (7)

Beacon Environmental: Watercourse, Amphibian Monitoring Stations, Breeding Bird Stations, Basking Turtle Monitoring Stations, Winter Wildlife Transects, Wildlife Road Transects, Primary Study Area Boundary, 2016;  
City of Guelph: Secondary Plan Area Boundary, Parcel Fabric, 2016; Ministry of Natural Resources and Forestry: Wetland, 2016

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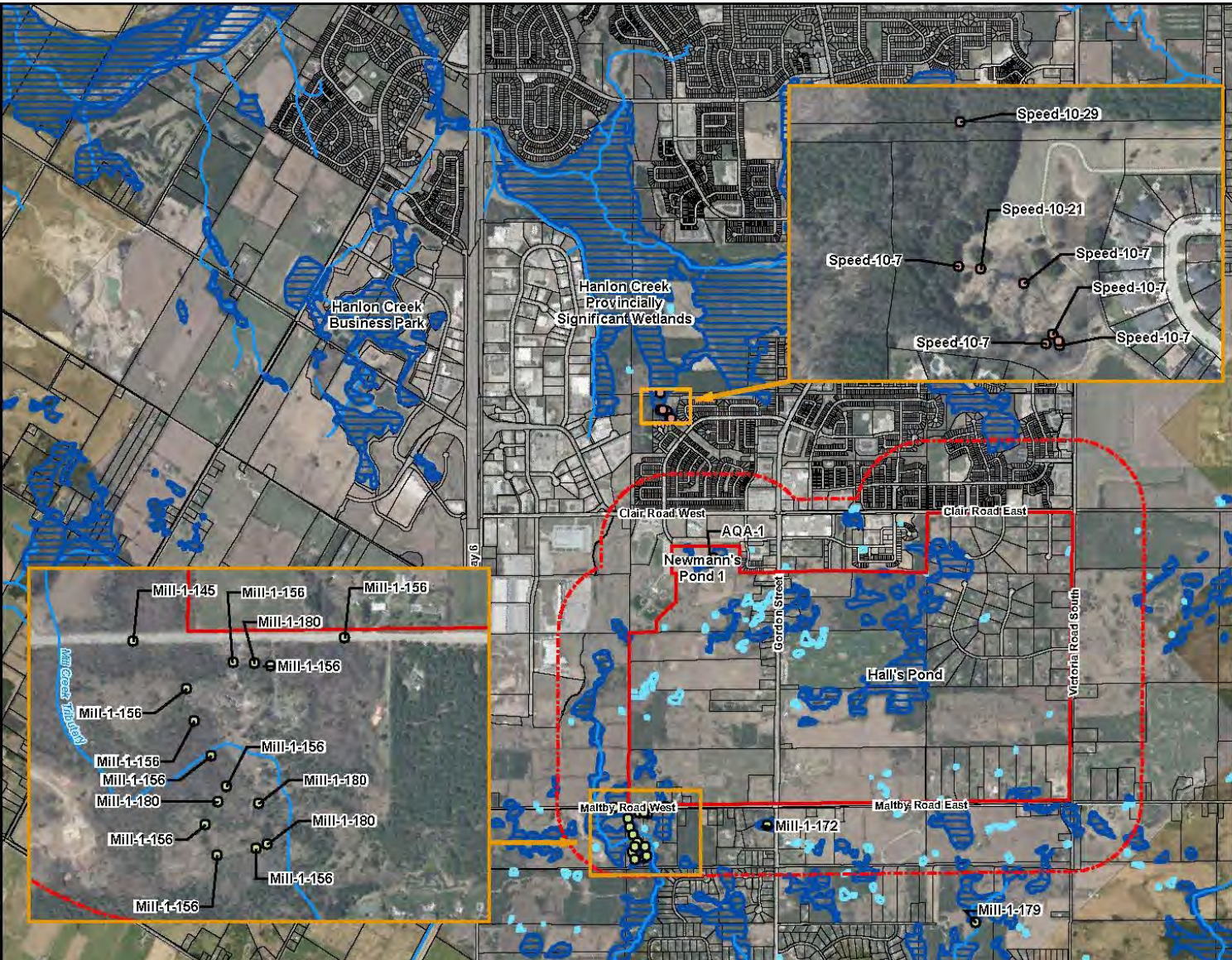
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February, 2018



# 4. CEIS Phase 1/2 Characterization Report: NHS: Findings – Fisheries



**Scoped Fisheries Assessment**

**Map NH-3**

**Clair-Maltby Secondary Plan  
Phase 1 and 2 Characterization Report**

**Legend**

- ▬ Primary Study Area
- ▭ Secondary Plan Area
- Watercourse (MNR 2017)
- Hanlon Creek (MNR 1999)
- Mill Creek (MNR 2010-2012)
- Aquafor Beech Limited Data (2012)
- Wetlands**
- ▨ Provincially Significant Wetlands (MNR 2017)
- ▨ Unevaluated Wetlands (MNR 2017)

Beacon Environmental: Watercourse, Primary Study Area Boundary, 2016;  
City of Guelph: Secondary Plan Area Boundary, Parcel Fabric, 2016;  
Ministry of Natural Resources and Forestry: Hanlon Creek, Mill Creek;  
Aquafor Beech Limited: Sample Data, 2011

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# 4. CEIS Phase 1/2 Characterization Report:

## NHS: Findings – Fisheries

### Hanlon Creek Watershed

- Watercourses immediately north of the SPA historically supported, and appear to continue to support, a coolwater thermal regime

### Mill Creek Watershed

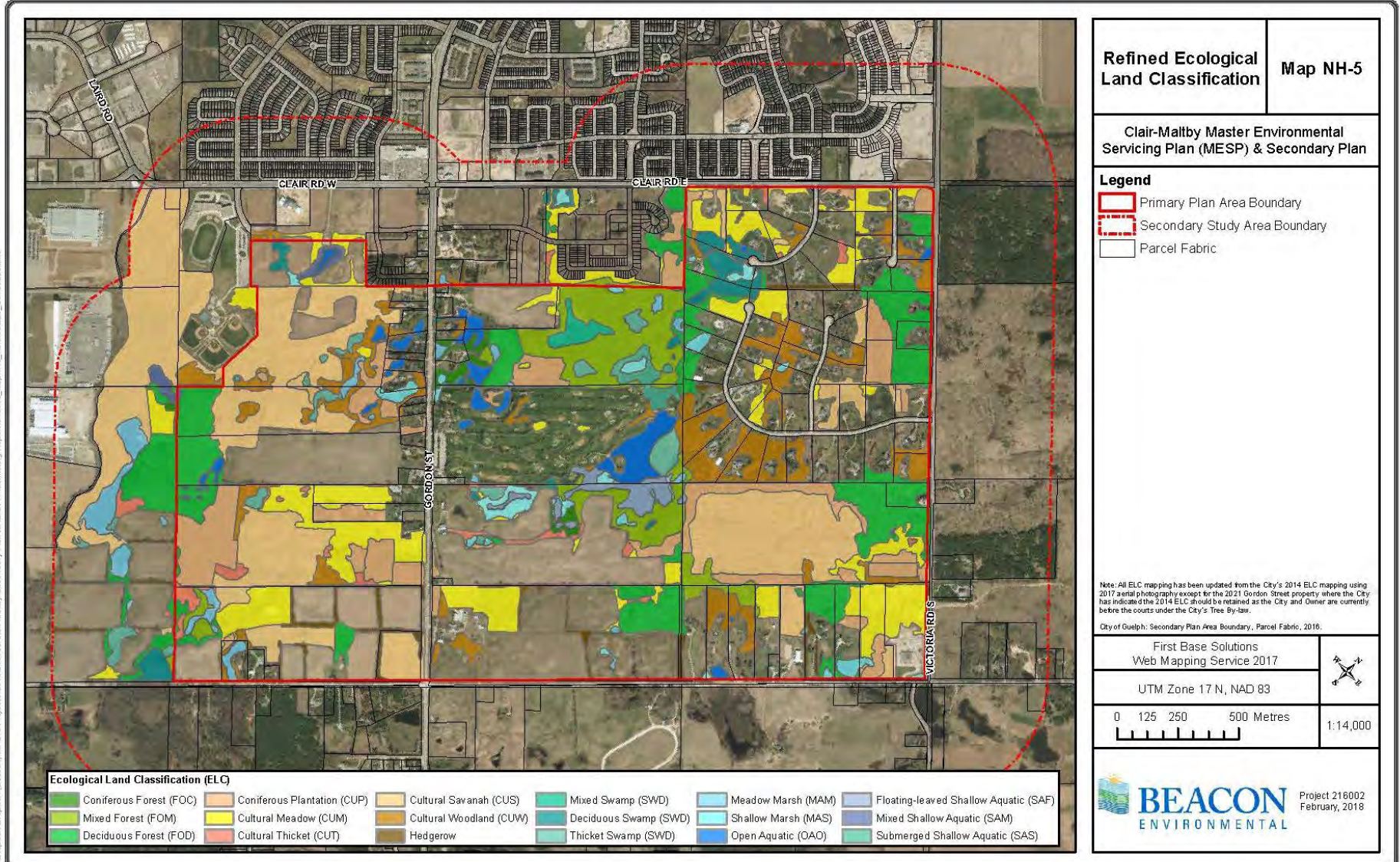
- Watercourses immediately south of the SPA historically supported, and appear to continue to support, a coldwater thermal regime

### Secondary Plan Area (SPA)

The Regional groundwater flow that emerges from the SPA is thought to provide for groundwater discharge to both the Hanlon and Mill Creek systems that is key to supporting baseflows and maintaining the coolwater and coldwater regimes in these systems.



# 4. CEIS Phase 1/2 Characterization Report: NHS: Findings – Vegetation Community Mapping



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## 4. CEIS Phase 1/2 Characterization Report: NHS: Analysis – Refinements to Wetland Mapping

1. Consulted with MNRF and GRCA
2. Reviewed MNRF wetland mapping, GRCA wetland mapping and City wetland mapping
3. Updates based on current vegetation mapping
4. Wetlands recommended to be added as Provincially Significant where they (a) are in the 2014 NHS and/or (b) have a surface hydrologic connection to an existing PSW
5. Other ponds / wetlands identified for future review
6. Mapping from previous OPA 42 settlements respected
7. Refinement work still in progress where access has been provided in 2018



# 4. CEIS Phase 1/2 Characterization Report: NHS: Analysis – Refinements to Wetlands Mapping



**Refinements to City  
Significant Wetland Mapping**

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**Map NH-6**

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Clair-Maltby Secondary Plan  
Phase 1 and 2 Characterization Report

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**Legend**

- Primary Plan Area Boundary
- Secondary Study Area Boundary
- Parcel Fabric

**MNR Provincial Wetlands**

- Proposed MNR Provincial Wetlands to Remain (Beacon, 2018)
- Proposed Additions to MNR Provincial Wetlands (Beacon, 2018)
- Proposed Other Wetlands >0.5 ha to MNR Provincial Wetlands (Beacon, 2018)
- Proposed Removals from MNR Provincial Wetlands (Beacon, 2018)

**Other Wetlands ≤ 0.5 ha**

- Proposed Additions from Other Wetlands ≤ 0.5 ha (Beacon, 2018)
- Proposed Removals from Other Wetlands ≤ 0.5 ha (Beacon, 2018)
- Proposed Removals from LIO Unevaluated Wetlands ≤ 0.5 ha (Beacon, 2018)

**Wetland Buffers**

- MNR Provincial Wetland 30 m Buffer
- Locally Significant / Other Wetlands 15 m Buffer

**City of Guelph Natural Heritage System (2014)**

- Significant Natural Areas
- Natural Areas
- Ecological Linkages
- Restoration Areas

City of Guelph, Secondary Plan Area Boundary, Parcel Fabric, Existing Natural Heritage System, 2016.

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## 4. CEIS Phase 1/2 Characterization Report: NHS: Analysis – Refinements to Woodland Mapping

1. Consulted with City
2. Reviewed current City mapping and policies for Significant Woodlands and Cultural Woodlands
3. Updates based on current vegetation mapping except where previous OPA 42 settlements needed to be respected
4. Refinement work still in progress where access has been provided in 2018



# 4. CEIS Phase 1/2 Characterization Report: NHS: Analysis – Refinements to Woodlands Mapping



**Refinements to  
City Woodlands Mapping  
and Current City NHS**

**Map NH-8**

Clair-Maltby Secondary Plan  
Phase 1 and 2 Characterization Report

**Legend**

- Primary Plan Area Boundary
- Secondary Study Area Boundary
- Parcel Fabric

**Proposed Additions**

- Proposed Additions to Significant Woodlands (Beacon 2018)
- Proposed Additions to Cultural Woodlands (Beacon 2018)

**Proposed Transition**

- Proposed Transition from Cultural Woodlands to Significant Woodlands (Beacon 2018)
- Proposed Transition from Significant Woodlands to Cultural Woodlands (Beacon 2018)

**Woodlands (City of Guelph 2014)**

- Significant Woodlands
- Cultural Woodlands
- 10m Buffer from Existing and Proposed Woodlands

**City of Guelph Natural Heritage System (2014)**

- Significant Natural Areas
- Natural Areas
- Ecological Linkages
- Restoration Areas

City of Guelph: Primary Plan Area, Parcel Fabric, Natural Heritage System, 2018

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May, 2018

**Draft #1**



# 4. CEIS Phase 1/2 Characterization Report: NHS: Findings – Vegetation Communities & Plants



- SPA currently 72% natural and successional vegetation communities
  - 10% wetland (including swamp)
  - 16% upland forest
  - 46% cultural / successional
- 467 species of plants
  - One Species at Risk – Butternut
  - 20 locally significant plant species (County) mainly associated with the wetlands



# 4. CEIS Phase 1/2 Characterization Report:

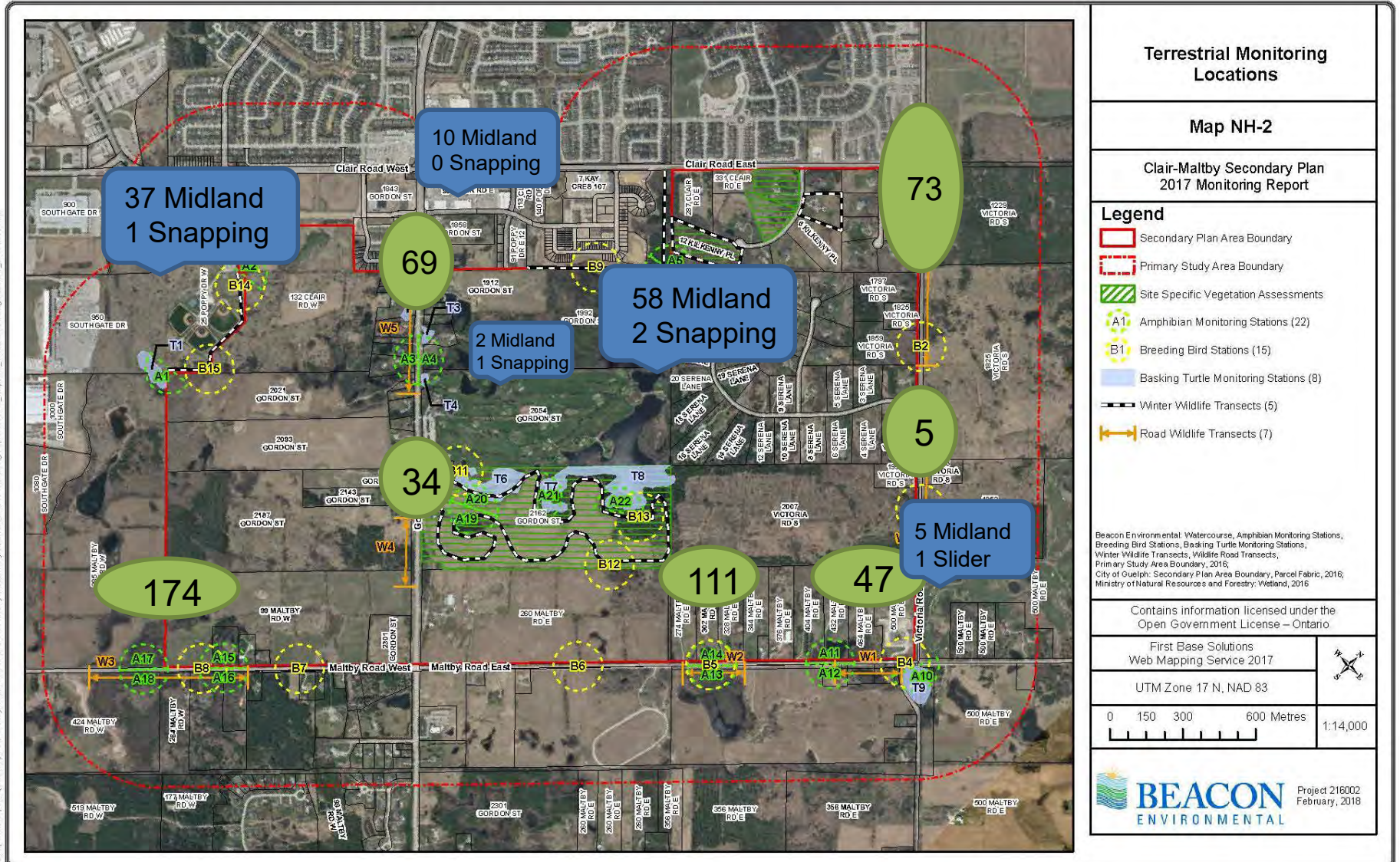
## NHS: Findings – Wildlife



- Species reflective of mix of woodland and wetland pockets with some meadows and farmed lands
- BIRDS: 112 species
  - 6 Species at Risk and 42 species significant and/or rare in the County
- AMPHIBIANS: 10 species
  - 7 species of frog, 1 species of toad, 1 species of salamander (Blue-spotted - 2 obs), 1 newt
  - 3 species of turtle, 4 species of snake
- MAMMALS: range of common mammals including deer and coyote



# 4. CEIS Phase 1/2 Characterization Report: NHS: Findings – Turtle Basking & Frog Movement



Terrestrial Monitoring Locations

Map NH-2

Clair-Maltby Secondary Plan  
2017 Monitoring Report

**Legend**

- Secondary Plan Area Boundary
- Primary Study Area Boundary
- Site Specific Vegetation Assessments
- A1 Amphibian Monitoring Stations (22)
- B1 Breeding Bird Stations (15)
- Basking Turtle Monitoring Stations (8)
- Winter Wildlife Transects (5)
- Road Wildlife Transects (7)

Beacon Environmental: Watercourse, Amphibian Monitoring Stations, Breeding Bird Stations, Basking Turtle Monitoring Stations, Winter Wildlife Transects, Wildlife Road Transects, Primary Study Area Boundary, 2016;  
City of Ouellet: Secondary Plan Area Boundary, Parcel Fabric, 2016;  
Ministry of Natural Resources and Forestry: Wetland, 2016

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Web Mapping Service 2017



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## 4. CEIS Phase 1/2 Characterization Report: NHS: Analysis – Significant Wildlife Habitat (SWH)

1. Updates based on current vegetation mapping combined with species data collected
2. Used current Provincial guidance – SWH Criteria for Ecoregion 6E – to identify Candidate and Confirmed SWH; still requires site-specific verification
3. SWH mapping is based on new information collected as part of this study so OPA 42 mapping does not apply to this NHS component
4. Refinement work still in progress where access has been provided in 2018



# 4. CEIS Phase 1/2 Characterization Report:

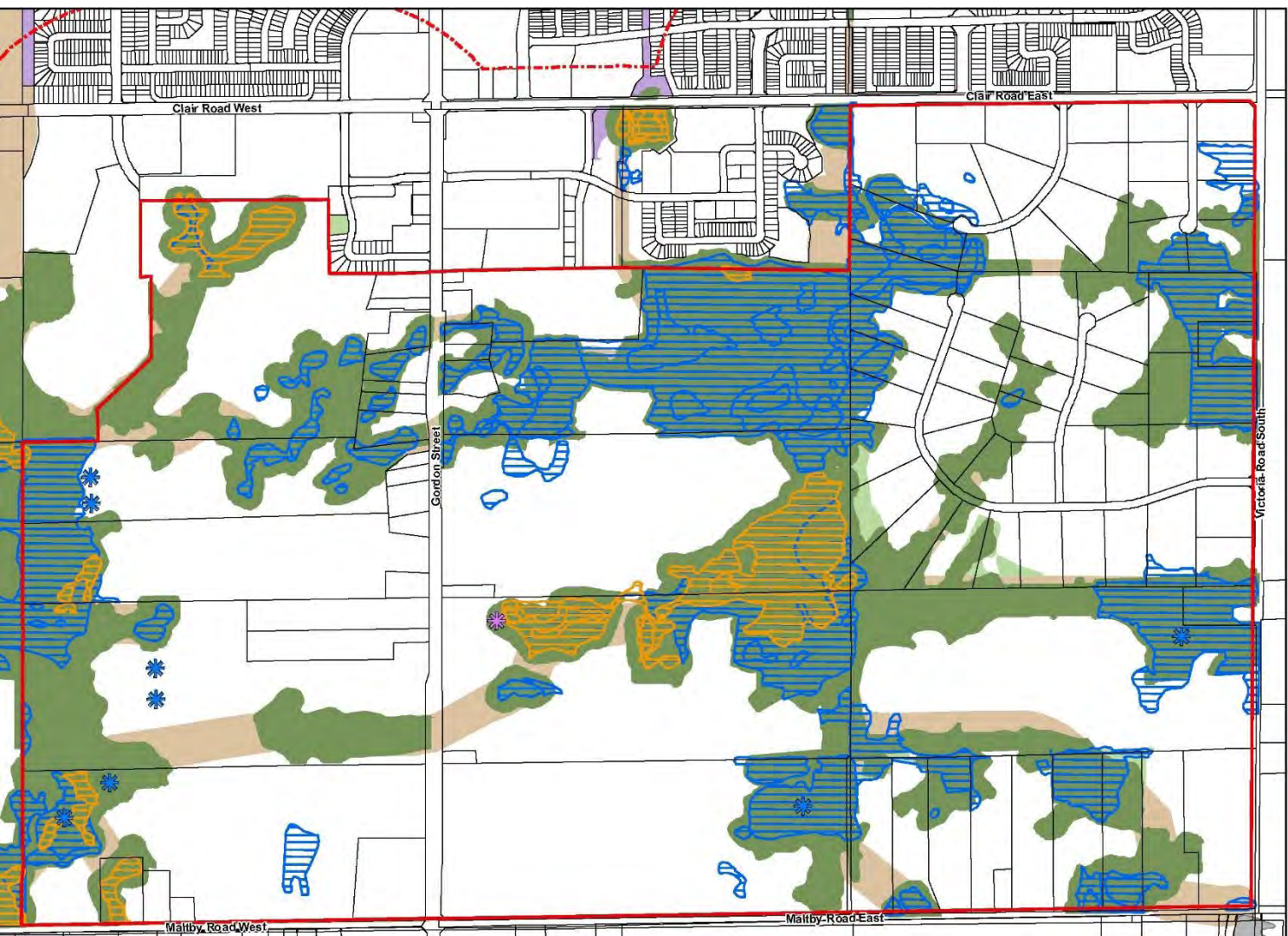
## NHS: Summary of Significant Wildlife Habitat (SWH)

<p><b>A. Seasonal Concentration Areas (15 types)</b></p>	<ul style="list-style-type: none"> <li>• Aquatic Waterfowl Stopover &amp; Staging Areas</li> <li>• Raptor Wintering Areas</li> <li>• Bat Maternity Colonies</li> <li>• Turtle Wintering Areas (Candidate and Confirmed)</li> <li>• <i>Reptile Hibernaculum</i></li> <li>• <i>Colonially-Nesting Bird Habitat – Trees &amp; Shrubs</i></li> <li>• <i>Deer Winter Congregation Areas</i></li> </ul>
<p><b>B. Rare Vegetation Communities &amp; Specialized Habitat for Species (15 types)</b></p>	<ul style="list-style-type: none"> <li>• Other Rare Vegetation Communities (1 SWT3-4 unit)</li> <li>• <i>Waterfowl Nesting Area</i></li> <li>• <i>Bald Eagle and Osprey Habitat</i></li> <li>• <i>Turtle Nesting Areas</i></li> <li>• Seeps and Springs (one Confirmed)</li> <li>• Amphibian Breeding Habitat - Woodland &amp; Wetland (Candidate and Confirmed)</li> </ul>
<p><b>C. Habitats of Species of Conservation Concern (5 types)</b></p>	<ul style="list-style-type: none"> <li>• <i>Marsh Bird Breeding Habitat</i></li> <li>• <i>Shrub/Early Successional Bird Breeding Habitat</i></li> <li>• <i>Terrestrial Crayfish</i></li> <li>• <i>Special Concern and Rare Species</i></li> </ul>
<p><b>D. Animal Movement Corridors (2 types)</b></p>	<ul style="list-style-type: none"> <li>• <i>Amphibian Movement Corridors</i></li> </ul>



# 4. CEIS Phase 1/2 Characterization Report:

## NHS: Analysis – SWH Mapping



**Preliminary Significant Wildlife Habitat (SWH) and Current City NHS**

**Map NH-10**

Clair-Maltby Secondary Plan Phase 1 and 2 Characterization Report

**Legend**

- Secondary Plan Area Boundary (SPA)
- Primary Study Area Boundary (PSA)
- Candidate Amphibian Breeding Habitat (Wetland)

**Significant Wildlife Habitat**

- Candidate SWH – Presence and Extent To Be Verified \*
- Confirmed SWH
- Candidate SWH – Presence To Be Verified
- Confirmed SWH (based on ELC polygon(s))
- Halligan's Pond\*\*

**City of Guelph Natural Heritage System (2014)**

- Significant Natural Areas
- Natural Areas
- Ecological Linkages
- Restoration Areas

\* Several Candidate SWH areas are shown approximately with asterisks; site-specific study will be needed to capture the best and most representative area(s) in the SPA.

\*\* Halligan's pond could be considered Candidate SWH for amphibian breeding, waterfowl stopover and turtle wintering but has not been mapped as such as it is outside the City of Guelph.

City of Guelph, Secondary Plan Area Boundary, Parcel Entry, 2016

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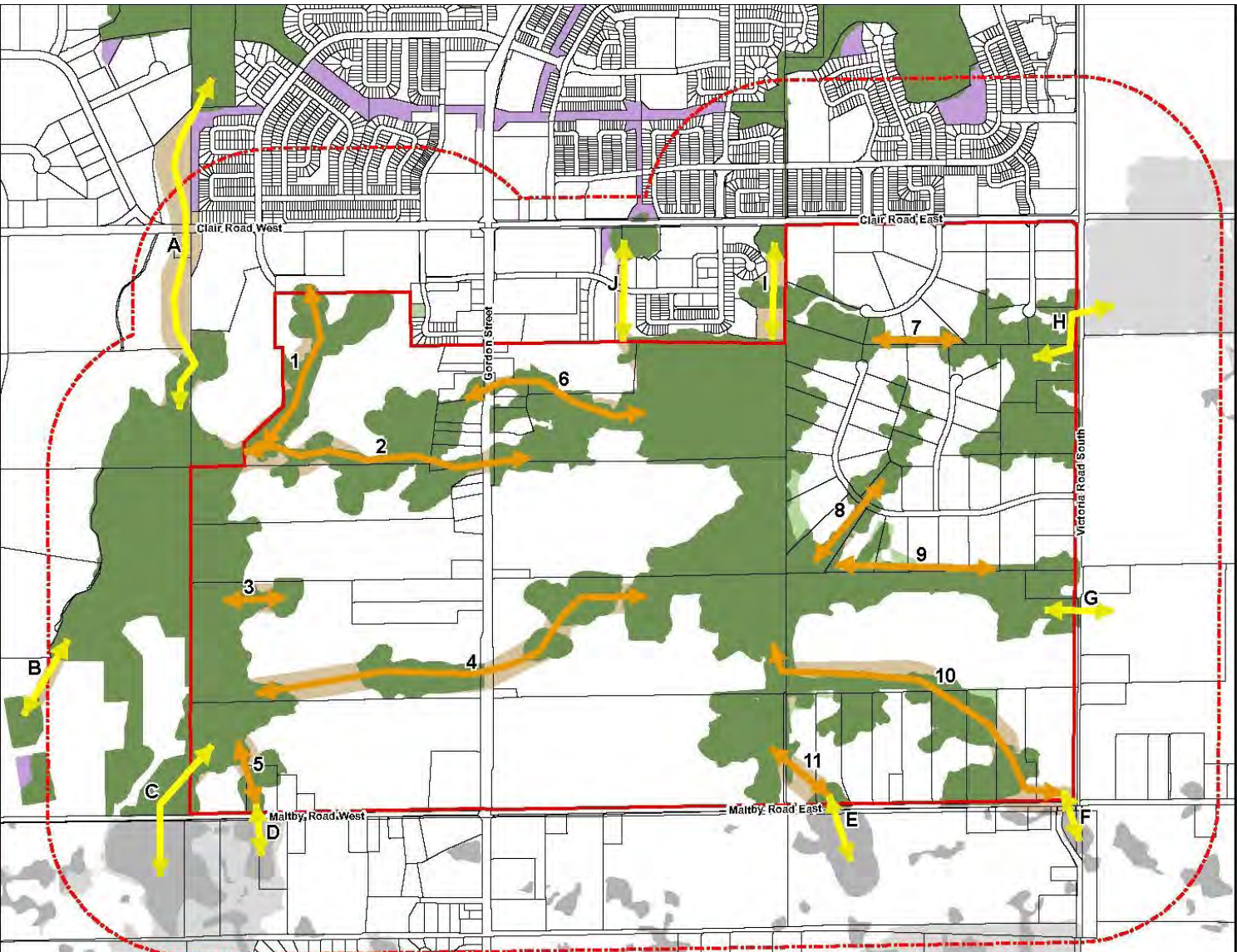
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# 4. CEIS Phase 1/2 Characterization Report:

## NHS: Analysis – Ecological Linkages



<b>Ecological Linkages</b>	
<b>Map NH-11</b>	
<b>Clair-Maltby Secondary Plan Phase 1 and 2 Characterization Report</b>	
<b>Legend</b>	
	Secondary Plan Area Boundary
	Primary Study Area Boundary
	Ecological Linkages within the PSA
	Ecological Linkages within the SPA
<b>City of Guelph Natural Heritage System (2014)</b>	
	Ecological Linkages
	Significant Natural Areas
	Natural Areas
	Restoration Areas
<b>Wildlife Crossings</b>	
	Amphibian Crossings
	Deer Crossings
	Other Wildlife Crossing Opportunities
<small>* Several Candidate SWH areas are shown approximately with asterisks. Site-specific study will be needed to capture the best and most representative area(s) in the SPA.</small>	
<small>** Halligan's pond could be considered Candidate SWH for amphibian breeding, waterfowl stopover and turtle wintering but has not been mapped as such as it is outside the City of Guelph.</small>	
<small>City of Guelph: Secondary Plan Area Boundary, Parcel Fabric, 2016.</small>	
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Project 216002 August, 2018	



## 4. CEIS Phase 1/2 Characterization Report: NHS: Input to Community Structure Alternatives

- NHS: As the NHS as it was approved in 2014 it already has informed the siting of roads, trails and adjacent land uses, and will continue to do so
- NHS FEATURE UPDATES AND REFINEMENTS:
  - The Ph 1/2 CEIS presented Draft 1 of the NHS feature updates and refinements.
  - Draft 2 will be further refined based on additional information from the agencies, City, landowners and stakeholders.
  - The Draft 2 NHS will form the basis for further Community Structure Alternatives



## 4. CEIS Phase 1/2 Characterization Report: NHS: Integration Considerations

- WETLANDS: Results from the shallow groundwater monitoring need to be considered in conjunction with results from the wetland surface water monitoring to better understand functional relationships
- CONNECTIVITY: Roads, trails and other infrastructure requirements need to be sited with consideration for maintaining the character and connectivity of the NHS
  - Where amphibian and reptile movement “hotspots” have been identified across existing roads, opportunities for mitigation measures should be flagged as part of road improvements





# Clair-Maltby

Transform. Connect. Community.

## 5. MESP Overview



## 5. MESP Overview:

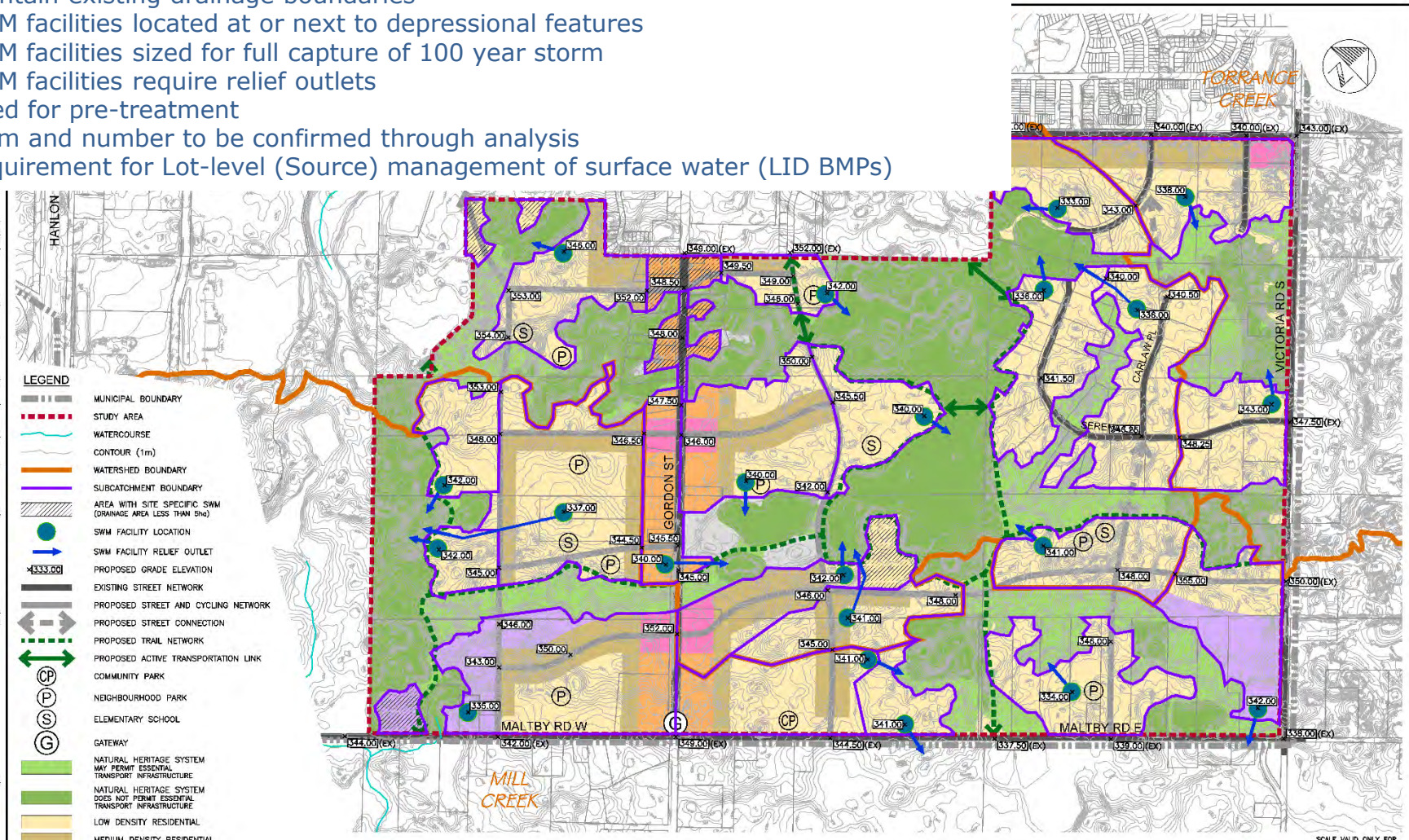
1. Stormwater
2. Water / Wastewater
3. Transportation / Mobility



# 5. MESP Overview

## Stormwater Management Plan

- Maintain existing drainage boundaries
- SWM facilities located at or next to depressional features
- SWM facilities sized for full capture of 100 year storm
- SWM facilities require relief outlets
- Need for pre-treatment
- Form and number to be confirmed through analysis
- Requirement for Lot-level (Source) management of surface water (LID BMPs)





# 5. MESP Overview:

## Water

### Water Servicing Concept

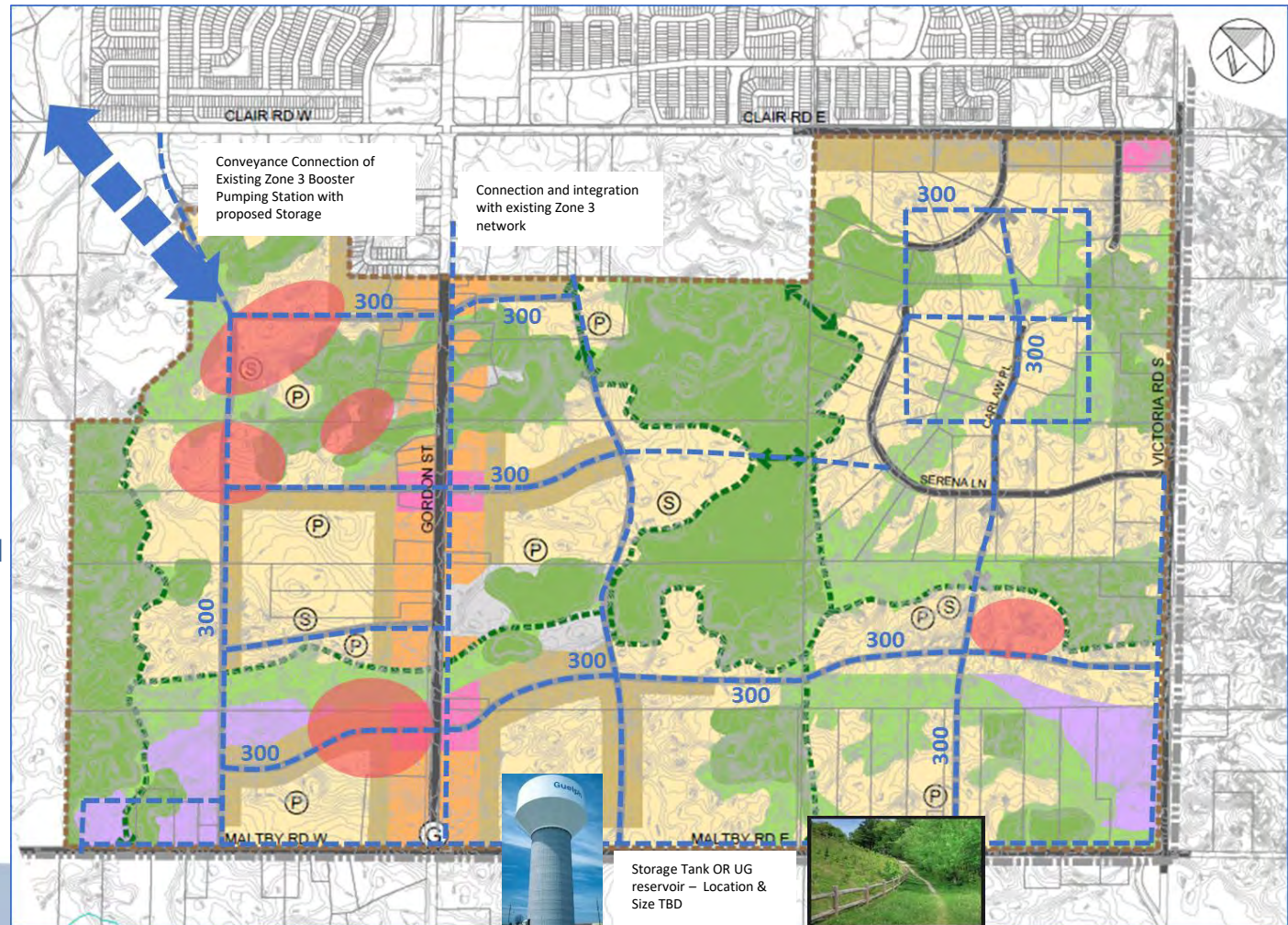
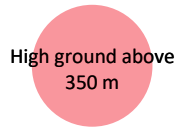
Extension of Zone 3 distribution with 300 mm watermains on all roads.

Configuration to be looped to avoid introduction of dead ends

Zone 3 Storage (Elevated or In-ground Alternatives to be Considered), preferred location in the higher ground

High ground above 350 m in parts of the development will be serviced at minimum allowable pressure (280 Kpa) rather than minimum preferred serviced pressure (350 Kpa) with current configuration of Zone 3 - HGL = 388 m

Conveyance Connection required from Existing Booster Pumping Station - 400 mm - 600 mm.





# 5. MESP Overview: Wastewater

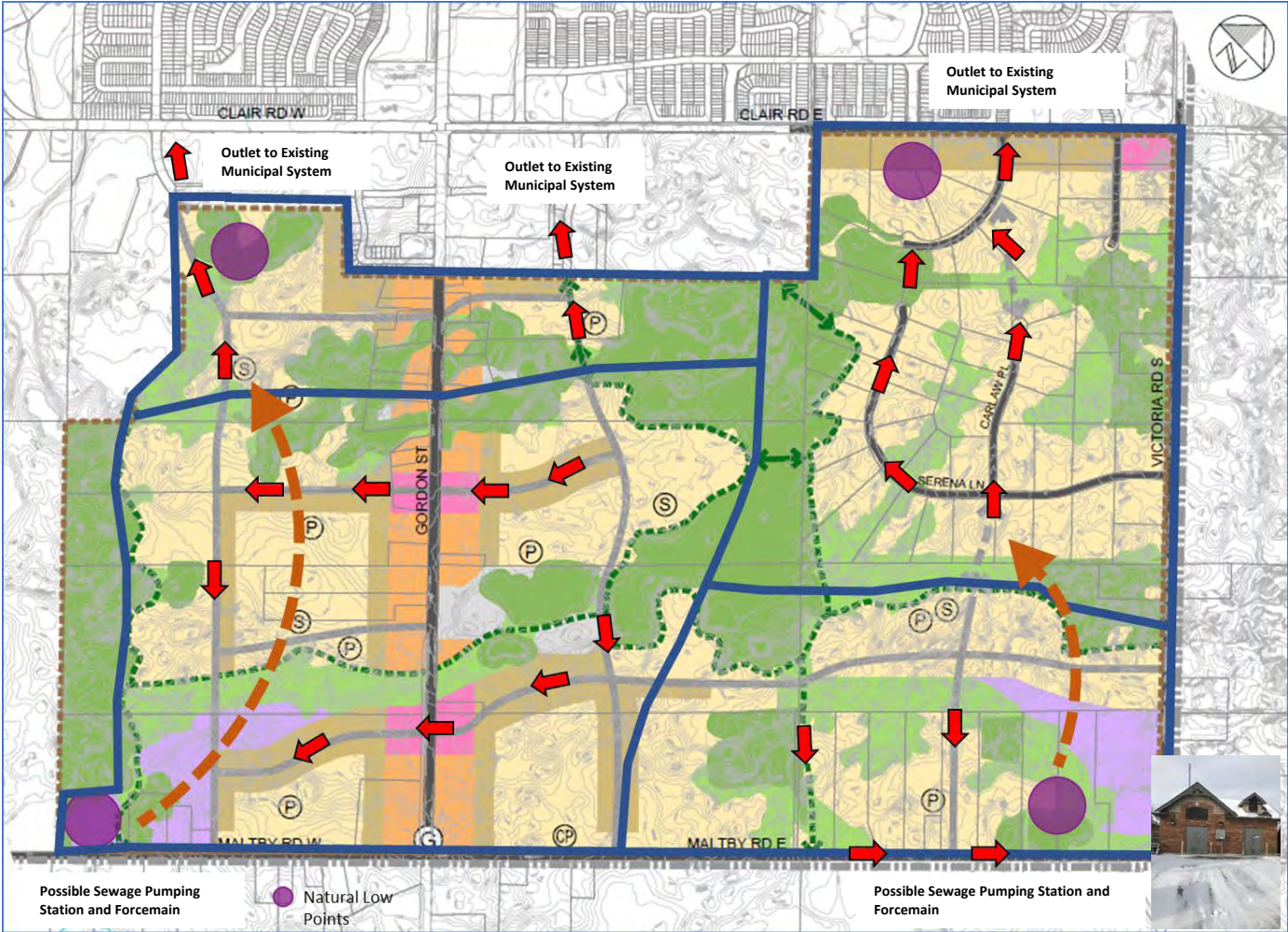
## Internal Sanitary Servicing Concept

Conceptual Sewersheds shown to service proposed lands with existing topographic constraints

Sewershed Configuration may be refined with phasing and ultimate land use

One or more Sewage Pumping Stations (SPSs) will be required with the proposed land use

External Servicing Upgrades will be required to provide Capacity from CMSP lands to Guelph WWTP





# 5. MESP Overview:

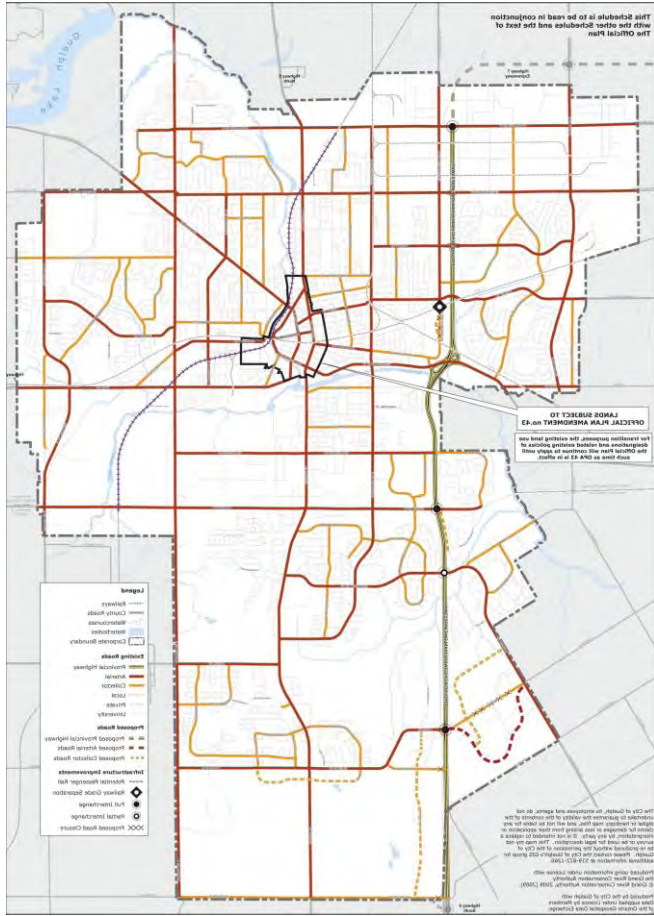
## Mobility

### Transportation: Planned Road Improvements

### Guelph-Wellington Transportation Study (TMP)

#### Key Improvements in Secondary Plan Area:

- Widening of Gordon Street from 2 to 4 lanes (approved 2001 EA) from Kortright Road to Wellington Road 34;
- Widening of Clair Road from 2 to 4 lanes (approved 2003 EA) - COMPLETE
- Southerly extension of Southgate Drive to Maltby Road; and
- Development of an internal collector road system within the Clair-Maltby Secondary Plan area connecting to Gordon Street and Maltby Road.





# 5. MESP Overview:

## Mobility

### Street Network Considerations

- Collector Street network should:
  - provide flexibility, permeability, and continuity;
  - support transit service operations;
  - support multi-modal transportation;
  - enhance connectivity for all travel modes.
- LEED ND Neighbourhood Development Street Layout Goals
  - Provide robust and frequent connectivity internal to the neighbourhood, and to adjacent neighbourhoods.



## 6. Next Steps / Timing - Schedule:

### CEIS

- Evaluate impact of proposed Community Structure Plan on
  - Surface Water
  - Groundwater
  - Natural Heritage System
  - Landforms
- Impact to land uses, servicing and management strategies
- Q3/Q4 2018



## 6. Next Steps / Timing - Schedule: MESP

- Develop preliminary servicing concepts
- Assess alternatives
- Fulfil Environmental Assessment Act requirements
  - Consultation
  - Reasonable range of alternatives
- Q4 2018 / Q1 2019



## 6. Next Steps / Timing - Schedule: Secondary Plan

<b>Q4 2018</b>	Public Workshops to inform policy development
<b>Q1 2019</b>	Prepare Draft Secondary Plan
<b>Q2 2019</b>	Completion of Technical Studies Public Open House & PIC #3 Statutory Public Meeting
<b>Q3 2019</b>	Recommended Secondary Plan & Final MESP to Council



**Thank You**



November 14, 2018

## **Clair-Maltby Secondary Plan and Master Environmental Servicing Plan**

### **Public Workshop: Secondary Plan Policy Directions**

Join us for a Public Workshop about the Clair-Maltby Secondary Plan

**Tuesday, December 4, 2018**

**1:30-4 p.m. or 6:30-9 p.m.**

Salvation Army Guelph Citadel

1320 Gordon Street, Guelph

#### **Policy Development Workshop**

At this workshop, participate in focused conversations and discussion to help establish and refine the policy directions that will inform the creation of the secondary plan for the Clair-Maltby area. The final secondary plan will become part of the City's Official Plan.

A Draft Policy Directions report will be available no later than Monday, November 26 on [guelph.ca/clair-maltby](http://guelph.ca/clair-maltby). This draft report will summarize key draft directions for future policies based on what we've heard through the project so far. Your input, ideas and comments at the public workshop will inform the final Policy Directions report.

#### **Agenda**

- Welcome and introduction
- Presentation of the draft policy directions
- Visual preference survey with instant polling
- Workshop exercise to addressing the following topics:
  - Land Use and Parks
  - Built Form, Urban Design and Cultural Heritage Resources
  - Mobility and Trails
  - Natural Heritage
  - Stormwater, Water and Wastewater Servicing
  - Energy
- Next steps



## How to participate

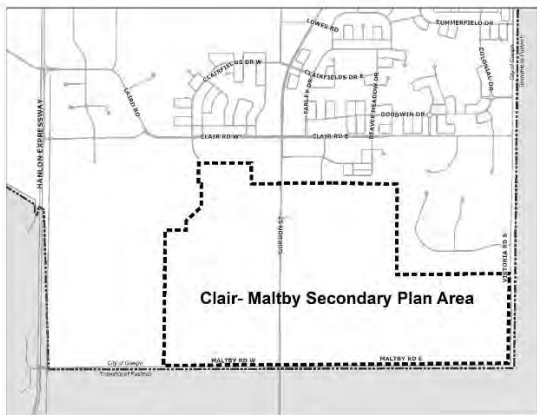
Register to attend either the 1:30 to 4 p.m. or 6:30 to 9 p.m. session by **Thursday, November 29** on [eventbrite.com](https://www.eventbrite.com). Registration is free. If you require assistance with registration, contact Planning Services at 519-837-5616 extension 2459.

## Unable to attend?

- Email your comments to [clair-maltby@guelph.ca](mailto:clair-maltby@guelph.ca)
- Participate in the online conversation at [haveyoursay.guelph.ca/](https://haveyoursay.guelph.ca/) from **December 5 through January 2**.

## The Project

The City has initiated the Clair-Maltby Secondary Plan and Master Environmental Servicing Plan (MESP) Study to plan the last unplanned Greenfield area of the City. The study area is approximately 414 hectares and is generally located between Clair Road and Maltby Road in the southeast corner of Guelph.



## For more information

[guelph.ca/clair-maltby](https://www.guelph.ca/clair-maltby)

For questions or comments, to be added to the project mailing list or if you require this document to be provided in an alternative format as per the *Accessibility for Ontarians with Disabilities Act* (2005), please contact:

**Stacey Laughlin, MCIP, RPP**  
Senior Policy Planner  
Planning, Urban Design and Building  
Services  
519-822-1260 extension 2327  
[stacey.laughlin@guelph.ca](mailto:stacey.laughlin@guelph.ca)

**Arun Hindupur, M.Sc., P.Eng.**  
Infrastructure Planning Engineer  
Engineering and Capital Infrastructure  
Services  
519-822-1260 extension 2282  
[arun.hindupur@guelph.ca](mailto:arun.hindupur@guelph.ca)

Information will be collected in accordance with the *Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.





# Clair-Maltby Secondary Plan Draft Directions

December 4 Public Workshop

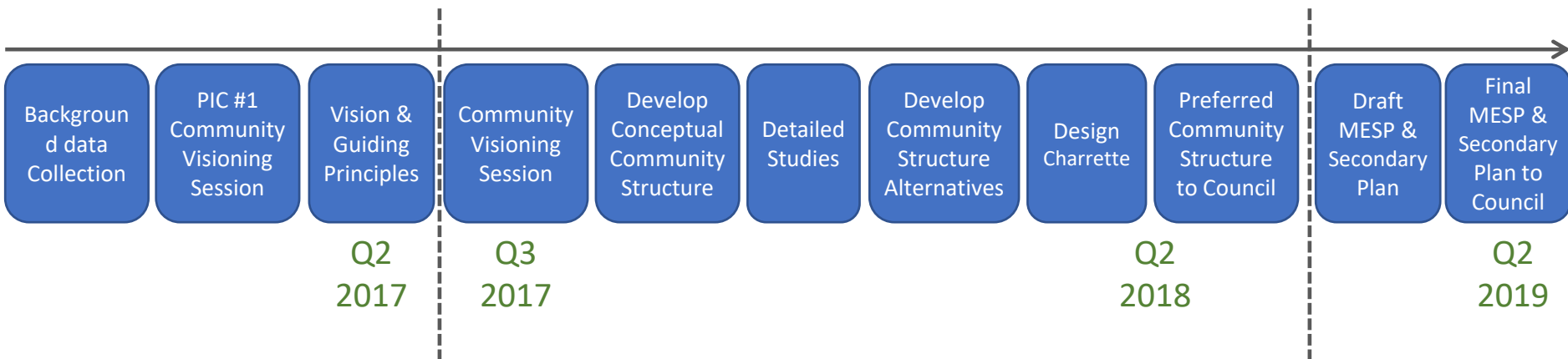


# Agenda

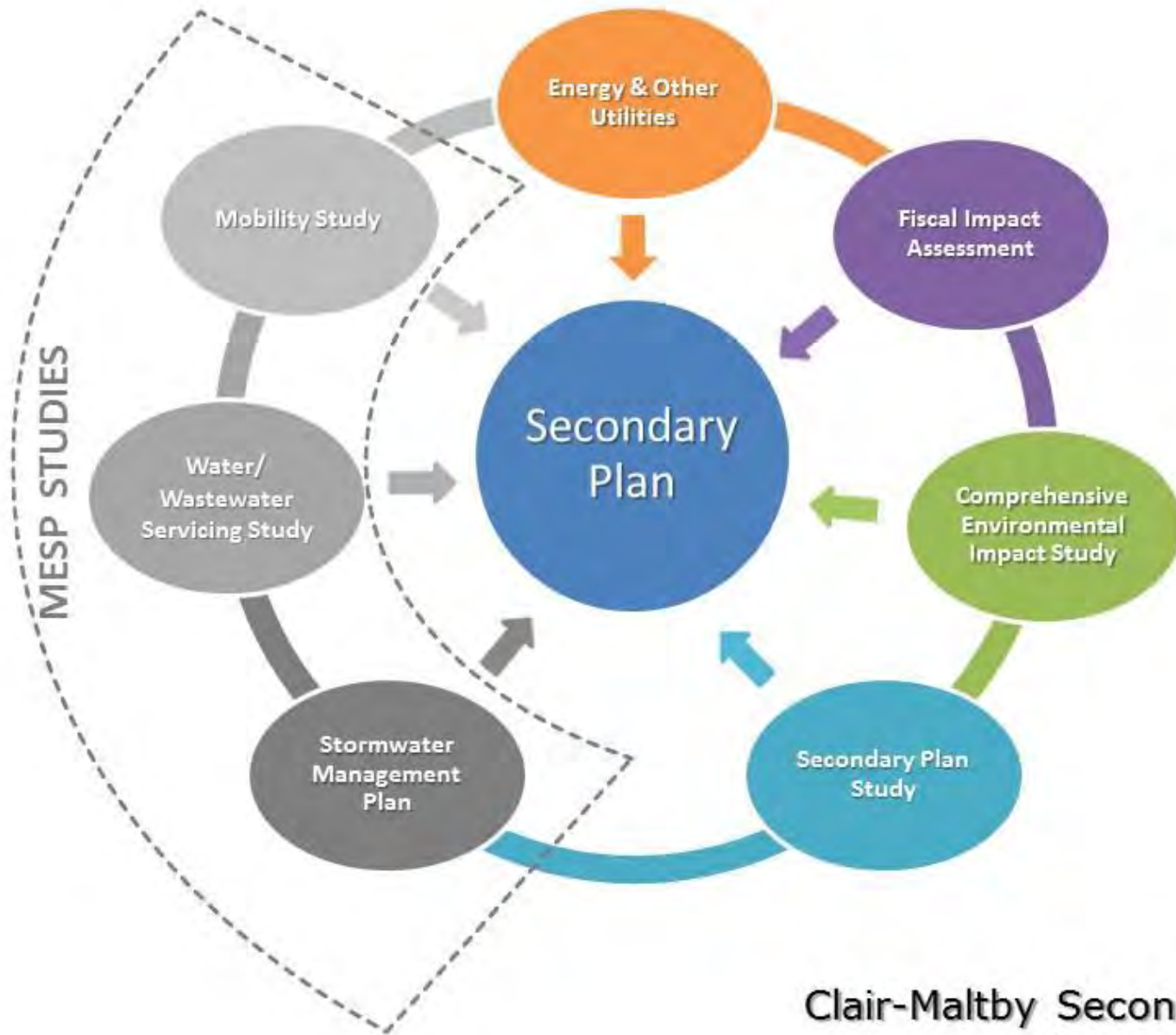
1. Welcome & Introductions
2. Project & Draft Directions Overview
3. Visual Preference Survey
4. World Café discussions
5. Closing and Next Steps



# The Secondary Plan Process







Clair-Maltby Secondary Plan  
Process Diagram



# Clair-Maltby Vision





# Vision

Clair-Maltby will be a **vibrant, urban** community that is integrated with Guelph's southern neighbourhoods, as well as having strong connections to Downtown, employment areas and the rest of the City.

The Natural Heritage System and the Paris Moraine provide the framework for the balanced development of **interconnected and sustainable neighbourhoods**.

The area will be primarily **residential in character** with a **full range and mix of housing types** and a variety of other uses that **meet the needs of all residents**.

A **system of parks, open spaces and trails** will be interwoven throughout to provide opportunities for active and passive recreation.



# Guiding Principles



Vibrant and Urban



Green and Resilient



Healthy and Sustainable



Interconnected and Interwoven



Balanced and Liveable





Vibrant and Urban

## Vibrant and Urban

Create identifiable urban neighbourhoods that are pedestrian oriented and human-scaled.

Promote forward-thinking and innovative design that integrates new development into the rolling topography, while conserving significant cultural heritage resources.





Green and Resilient

## Green and Resilient

Protect, maintain, restore, and where possible, improve water resources and the Natural Heritage System.

Support resiliency and environmental sustainability through measures such as energy efficiency, water conservation and green infrastructure.





Healthy and Sustainable

# Healthy and Sustainable

Design the community for healthy, active living.

Provide a mix of land uses including a diversity of housing choices at appropriate densities with appropriate municipal services to ensure long-term sustainable development which is fiscally responsible.





# Interconnected and Interwoven

Establish a multi-modal mobility network that provides choice and connects neighbourhoods to each other and the rest of the City.

Create a network of parks, open spaces and trails to provide opportunities for active and passive recreation, as well as active transportation choices.

Interconnected and Interwoven





Balanced and Liveable

## Balanced and Liveable

A valued and livable community which reflects the right balance between protecting the environment and fostering a healthy, equitable and complete community.



# Community Structure

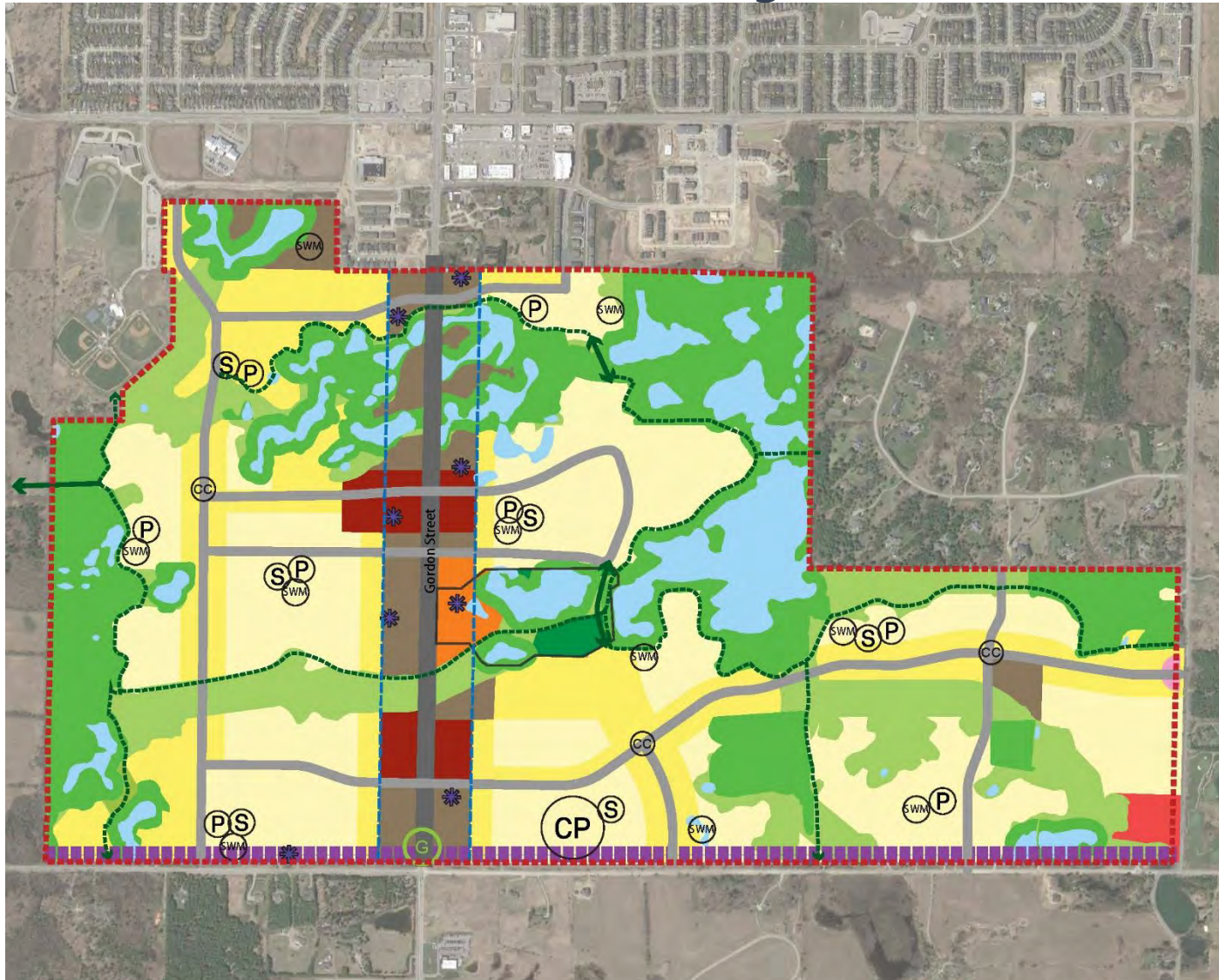
Clair- Maltby will be an **urban village** comprised of:

- Gordon Street Corridor, including an Urban Village Core;
- surrounding residential neighbourhoods;
- Natural Heritage System and the Paris Moraine; and,
- a system of parks and open spaces.





# Preferred Community Structure



## Legend

- Clair-Maltby Secondary Plan Boundary
- Cultural Heritage Landscape
- Urban-Rural Transition Zone
- Gordon St. Corridor

## Streets and Trails

- Existing Street Network
- Proposed Street and Cycling Network
- Proposed Trail Network
- Potential Active Transportation Link

## Parks, Schools, and Features

- Potential Neighbourhood Park
- Potential Community Park
- Potential Elementary School
- Potential Stormwater Infiltration Areas
- Convenience Commercial Area
- Gateway
- Cultural Heritage Resource

## Natural Heritage System

- May Permit Essential Transportation Infrastructure
- Does Not Permit Transportation Infrastructure
- Wetlands (MNRF 2017)

## Land Use

- Low Density (Residential)
- Medium Density (Residential)
- High Density (Residential)
- Mixed Use
- Neighbourhood Commercial
- Service Commercial
- Mixed Office / Commercial
- Open Space







# Proposed Neighbourhood Structure

November 2018

## Legend

 Clair-Maltby Secondary Plan Boundary




### Streets and Trails

 Existing Street Network  
 Proposed Collector Road and Cycling Network  
 Proposed Trail Network  
 Potential Active Transportation Link

### Parks, Schools, and Features

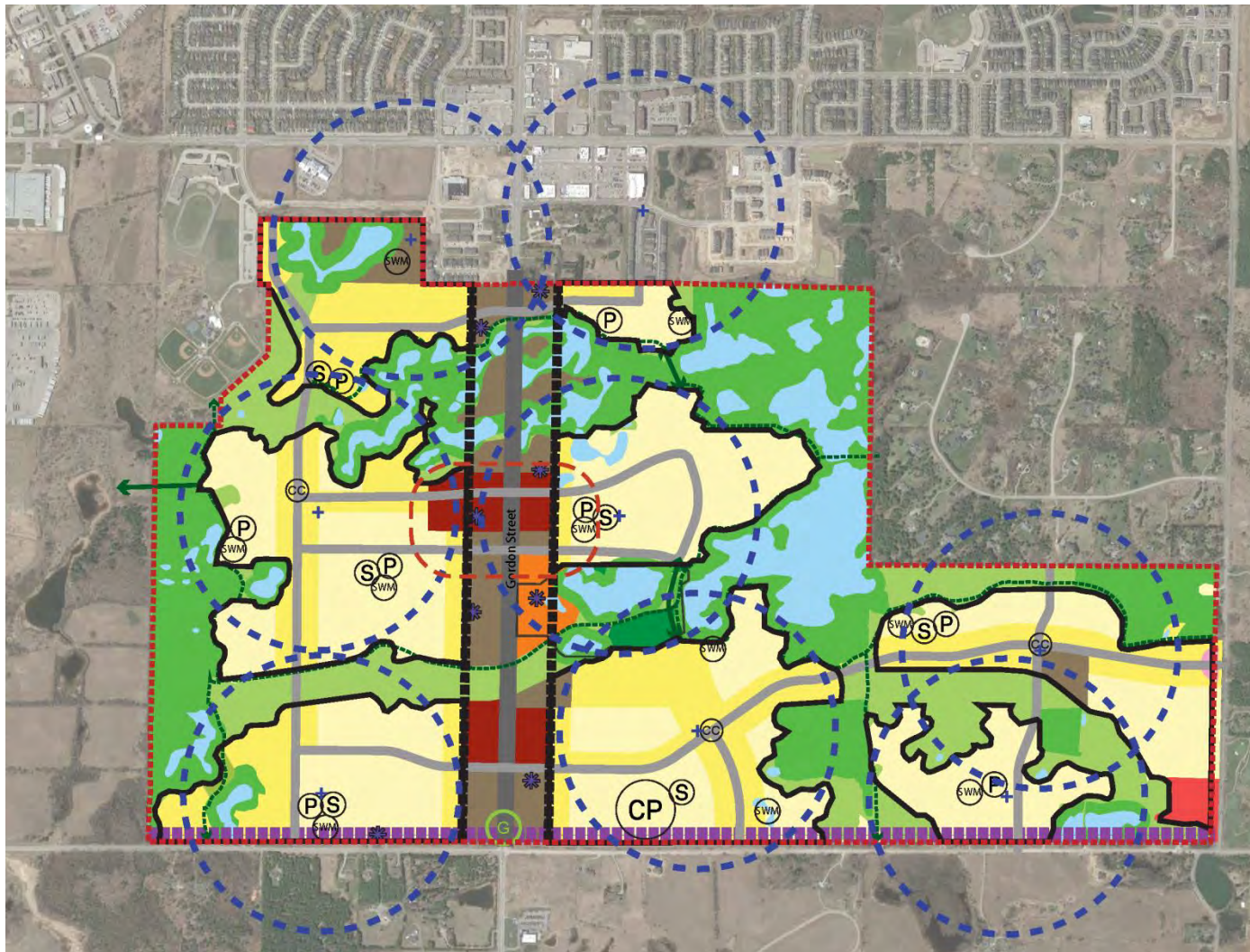
 Potential Neighbourhood Park  
 Potential Community Park  
 Potential Elementary School  
 Potential Stormwater Infiltration Areas  
 Convenience Commercial Area  
 Gateway  
 Cultural Heritage Resource  
 Cultural Heritage Landscape  
 Urban-Rural Transition Zone

### Natural Heritage System

 May Permit Essential Transportation Infrastructure  
 Does Not Permit Transportation Infrastructure  
 Wetlands (MNRF 2017)

### Land Use

 Residential Neighbourhood  
 Gordon St. Corridor Neighbourhood Boundary  
 400m Residential Neighbourhood Walking Circles  
 Urban Village Core





# Structuring Elements





# Key Directions: Protecting the Natural Heritage System (NHS)

The existing NHS Official Plan policies will apply including:

- Environment first approach;
- Protection of the NHS including adjacent lands, buffers, study requirements, wildlife crossing locations urban forest, and natural heritage stewardship and monitoring; and,
- Environmental study requirements.





# Key Directions: Protecting the Natural Heritage System (NHS)

Additional Clair-Maltby specific policy may need to be developed related to:

- Protection of the Paris Moraine;
- Achievement of an appropriate water balance and infiltration target;
- Balance of views and access to NHS; and,
- Incorporation of wildlife crossings in the development of future roads.



# Key Directions: Protecting our Cultural Heritage Resources

- Identify, conserve and celebrate cultural heritage resources
- Development in and around cultural heritage resources will protect the cultural heritage value and integrity





# Key Directions: Water and Wastewater Servicing and Stormwater Management

- Integrate innovative stormwater management, water conservation and reuse, and other green infrastructure practices
- Balance innovative stormwater management with source water protection considerations
- Ensure development and infrastructure design is fiscally responsible in long and short term.
- Phasing of development will ensure compact, orderly development and minimize
- Implement as per the recommendations of the Master Environmental Servicing Plan





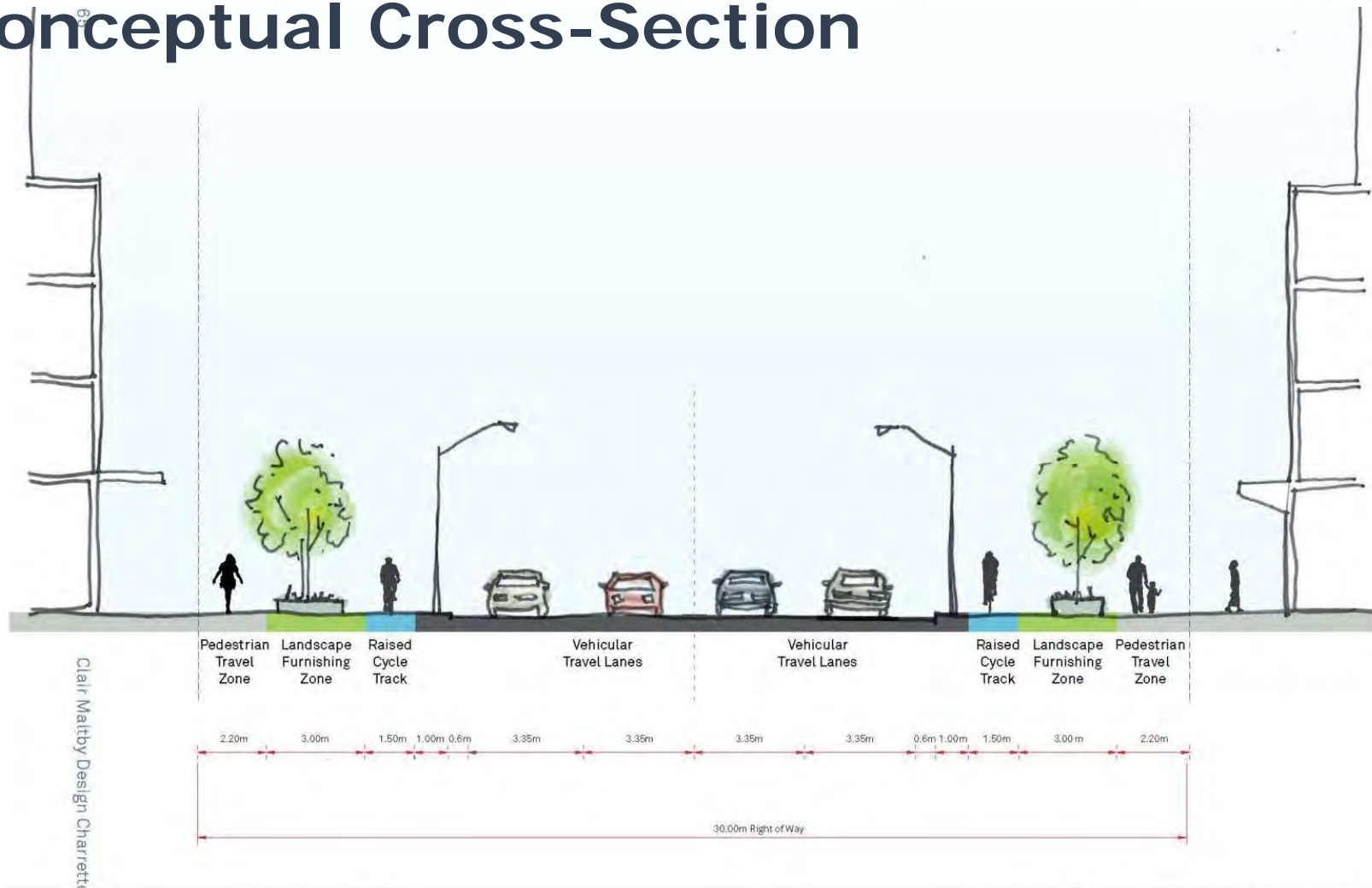
# Key Directions: Mobility and Trails

- Walking, cycling and transit will be attractive and efficient modes of transportation
- Meet or exceed the city-wide modal share
- Modified grid system with fine-grained block structure
- Accept a constrained level of vehicular service to create a more pedestrian oriented environment
- Extend transit system throughout Clair-Maltby and plan for a transit hub and future higher order transit on Gordon Street





# Conceptual Cross-Section



**Gordon Street Arterial Road**  
30 m ROW - Raised Cycle Track

**Clair-Maltby Secondary Plan**  
Scale 1:150  
**BrookMcIlroy/**



# Conceptual Cross-Section

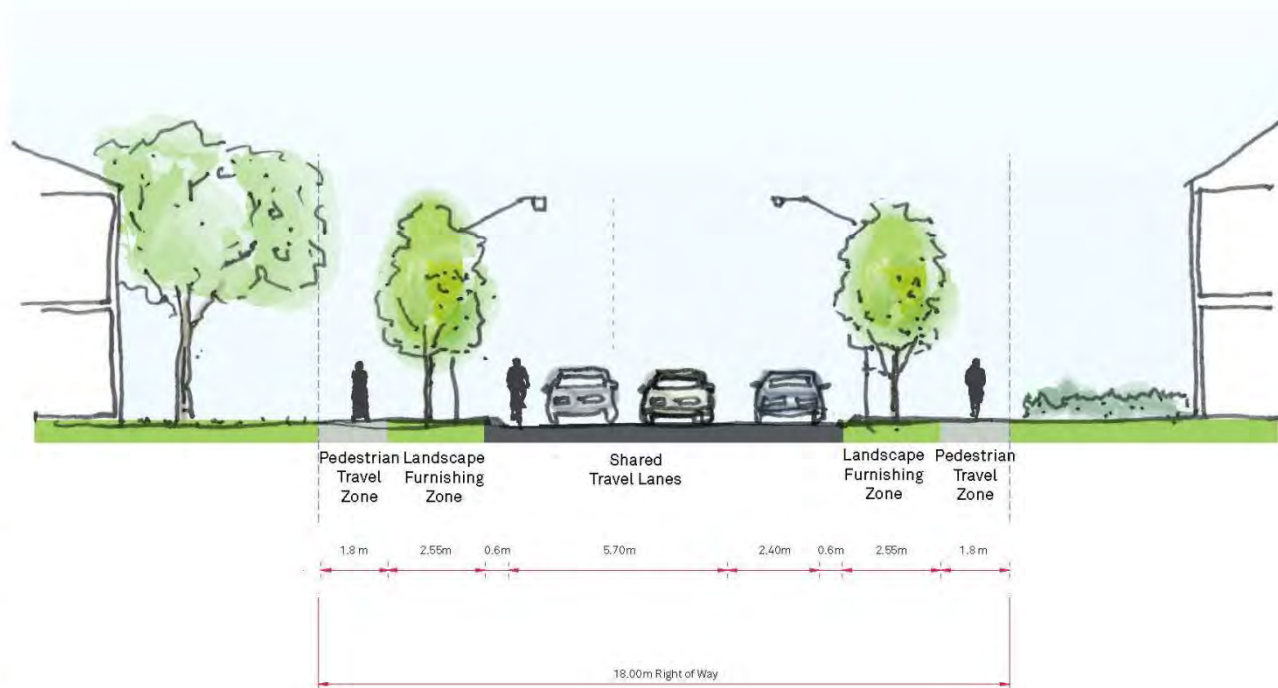


**Collector Road**  
26 m ROW - Parking Lane and Raised Cycle Track

Clair-Maltby Secondary Plan  
Scale 1:150  
BrookMcIlroy/



# Conceptual Cross-Section



Clair Maltby Design Charrette

**Local Road**  
18 m ROW - Shared Travel Lanes and On Street  
Parking

Clair-Maltby Secondary Plan  
Scale 1:150  
BrookMcIlroy/

Clair-Maltby  
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CITY OF  
**Guelph**  
Making a Difference



# Key Directions: Land Use

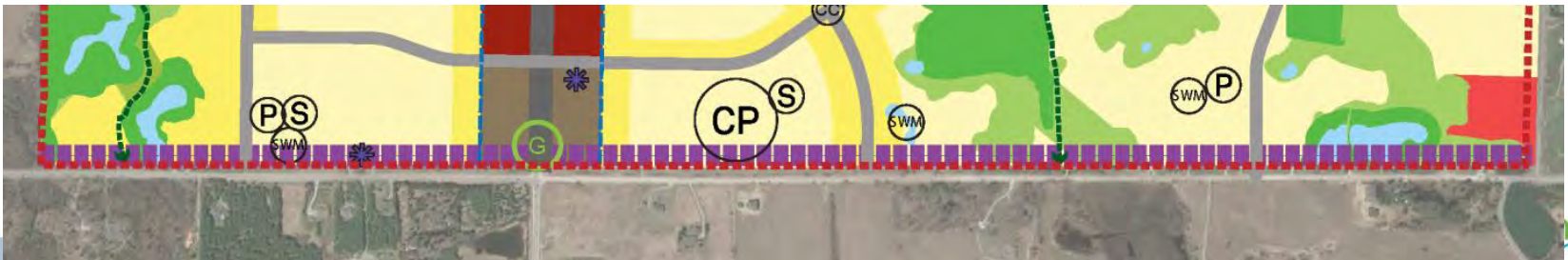
- Create an Urban Village Core that provides a central focus for the area and contains a Main Street area.
- Create an integrated compact and mixed use corridor with high density development along Gordon Street. Provide opportunities for commercial amenities and community services within walking distance for residents.
- Achieve a minimum population of 15,000 to meet the requirements of the Provincial Growth Plan.





# Key Directions: Land Use

- Achieve transit supportive densities with human-scaled built form
- Meet the City-wide target for affordable housing of 30%
- Design a green gateway into the City that contributes to our community image and may include elements such as a linear green space, public art, a multi-use path and connections to the Community Park
- Encourage uses that generate pedestrian traffic on the ground floor in commercial, mixed use and high density residential areas
- The urban-rural transition will have a minimum depth of 60 metres, with buildings having a maximum height of 3 storeys





# Key Directions: Land Use

- **Residential Areas** provide for a full range and mix of housing
- Low density residential areas development will have:
  - Density of 20-60 units per hectare;
  - Maximum height of 4-6 storeys with the tallest buildings on collector roads or at intersections





# Key Directions: Land Use

- Medium density residential areas:
  - Density of 40-100 units per hectare;
  - Minimum height of 2 storeys; and,
  - Maximum height of 6 storeys.
- High density residential areas:
  - Density of 100-200 units per hectare;
  - Minimum Floor Space Index of 1.5;
  - Minimum height of 4 storeys on Gordon St. and 3 storeys elsewhere; and,
  - Maximum height of 14-18 storeys with taller buildings considered in strategic locations.





# Key Directions: Parks

- Establish a network of parks, open spaces and trails with a variety of recreation spaces
- A neighbourhood park within within a 5-10 minute walk for all future residents
- Neighbourhood Parks = 1 hectare minimum
- Community Park = 10 hectares minimum
- Minimum total parkland for Clair-Maltby = 18 hectares.
- Opportunities to increase the parkland should be explored.





# Key Directions: Built Form and Urban Design

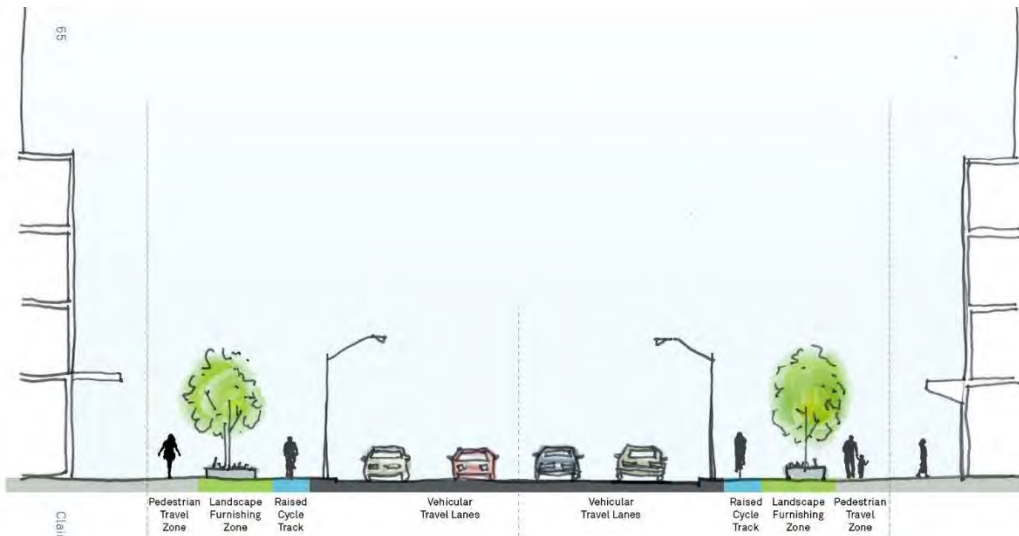
- Promote the development of inspiring, meaningful and memorable places that reinforce Guelph as a historic, beautiful and innovative City with new public spaces for gathering and recreation and:
  - Compact walkable neighbourhoods;
  - Healthy neighbourhood design principles;
  - Building and site design which responds sensitively to variable topography while achieving highly walkable built form;





# Key Directions: Built Form and Urban Design

- **Gordon Street Corridor** will be a transit supportive and multi-modal corridor that incorporates high-quality design and also highlights and celebrates the significant pockets of open space, NHS and cultural heritage resources along it





# Key Directions: Built Form and Urban Design

- The **Urban Village Core** will be highly pedestrian oriented and contain predominately mixed use buildings. Other features include:
  - Upgraded streetscape elements;
  - On-street parking;
  - Taller buildings;
  - Building design which promotes sunlight, views and privacy;
  - A Main Street as an anchor for the area with buildings which contribute to a pedestrian oriented environment and a centrally located square as a focal point.



# Key Directions: Built Form and Urban Design

- **Residential Neighbourhoods** will be designed to:
  - Be centred around a neighbourhood focal point such as neighbourhood-scale mixed use, parks and/or community facilities;
  - Carefully consider the interface with the NHS and the open space system;





# Key Directions: Energy and Climate Change

- Contribute to the City's goal of being a Net Zero Carbon community by 2050
- City facilities will strive towards having 100% of their energy supplied by renewable source by 2050
- To mitigate risks to property, infrastructure, human health and the environment arising from climate change there will be increased reliance on green infrastructure
- Maintenance, restoration and improvement of the NHS will abate climate impacts
- Reduce the amount of energy used for transportation through community design





# Key Directions: Phasing and Finance

- The Fiscal Impact Assessment will be approved by Council.
- Phasing of development will be considered as part of the secondary plan.
- The City will consider options to ensure the provision and/or funding of growth related or shared services in accordance with the Fiscal Impact Assessment and related City policies.
- Landowners may be encouraged to enter into private cost sharing agreement(s) and/or trustee arrangements that address the provision and/or funding of certain local services and infrastructure facilities.



# World Café

- 3 rounds of conversation
- You will have 20 min during the FIRST ROUND ONLY to provide feedback on the draft actions
- You will have 15 min during ROUNDS 2 and 3
- At the end of each round you can move onto another table – or stay and continue to work at the same table
- After 3 rounds, you will have 10 minutes to circulate, view results and add any final thoughts to responses



# Conversation Tables

- Land use
- Parks and cultural heritage resources
- Built form/urban design policies
- Mobility & Trails
- Natural Heritage System
- Stormwater and Water/Wastewater Servicing
- Energy



# Questions

## 1) Review the directions

## 2) Work through the questions

- Which ideas and potential directions do you like most?
- What issues need further consideration? What would you change or clarify?
- Are there any important issues that you feel are not addressed by the Draft Directions document? Is there something new you would add?



# Café Etiquette

- ✓ Write down your ideas
- ✓ Focus on what matters
- ✓ Listen to understand
- ✓ Contribute your thinking
- ✓ Speak you mind & heart
- ✓ Link & connect ideas
- ✓ Listen for insights & ask deeper questions
- ✓ It's OK to change tables
- ✓ Play, doodle and draw!



# World Café Agenda

1. Café Conversations Round 1 (20 min)
2. Café Conversations Round 2 (15 min)
3. Café Conversations Round 3 (15 min)
4. Review (10 min)



# Next Steps

## Phase 3 (Q3 2018 – Q2 2019)

- Detailed technical work including modelling and analysis
- Policy development
- Community Engagement

### **CEIS**

- continue monitoring
- assess impacts based on preferred community structure
- develop mitigation and restoration recommendations
- finalize CEIS as a whole

### **Water, Wastewater, SWM**

- Develop and evaluate alternative solutions
- Create or update models for study area
- Recommend preferred options and prepare MESP project file

### **Fiscal Impact Assessment**

- Prepare fiscal impact model based on the preferred community structure



# Next Steps

## Phase 3 (Q3 2018 – Q2 2019)

### **Mobility**

- Complete technical studies based on preferred community structure
- Finalize mobility network planning study
- Finalize traffic impact study

### **Energy & Other Utilities**

- Evaluate the MESP alternatives which are based on the preferred community structure
- Prepare final report

### **Secondary Plan**

- Prepare draft secondary plan including policies and land use plan based on the preferred community structure as refined by the results of the technical input
- Undertake further community engagement
- Prepare a final secondary plan



# Thank you



March 8, 2019

## **Clair-Maltby Secondary Plan**

**Information session: Planning for growth while protecting the moraine, water resources and natural heritage resources**

**March 28, 2019**

**7-9 p.m.**

Council Chambers, City Hall  
1 Carden Street, Guelph

You are invited to join members of the community, interested stakeholders and members of the Environmental Advisory Committee, River Systems Advisory Committee, Clair-Maltby Community Working Group and Clair-Maltby Technical Advisory Group at this information session to learn more about technical work that has been undertaken to date as part of the Clair-Maltby Secondary Plan.

### **Agenda**

- Dave Belanger, the City's Water Supply Program Manager, will describe how the [Grand River Source Water Protection Plan](#) and the [City's Water Supply Master Plan](#) inform the Secondary Plan process
- Guelph's MPP, Mike Schreiner, will discuss how proposed [Bill 71- An Act to Conserve the Paris Galt Moraine](#) works with the Secondary Plan to protect the Paris Galt Moraine
- The Secondary Plan Project Team will present the Comprehensive Environmental Impact Study (CEIS) Phase 3 Impact Assessment

You will have the opportunity to ask questions for clarification following each speaker.

### **Additional Information**

The Phase 3 Impact Assessment is a technical document that assesses the



potential impacts of the planned future development to the local and neighbouring environmental systems and features. The report also establishes preliminary management requirements. The findings of the assessment will inform refinements to the land use concept and establish recommended management strategies.

The CEIS Year 3 Monitoring Report will be also be available on March 12, 2019 at <https://guelph.ca/plans-and-strategies/clair-maltby-secondary-plan/cm-documents/>. It can also be found on the project webpage, [guelph.ca/clair-maltby/](https://guelph.ca/clair-maltby/), under 'documents'.

### **Master Environmental Servicing Plan (MESP) update**

The following technical reports are now posted on the project webpage at <https://guelph.ca/plans-and-strategies/clair-maltby-secondary-plan/cm-documents/>:

- Wastewater Servicing – Existing Conditions Design Criteria & Level of Service Objectives Report
- Wastewater Servicing – Alternative Servicing Strategies Development Report
- Water Servicing – Existing Conditions Design Criteria & Level of Service Objectives Report
- Water Servicing – Alternative Servicing Strategies Development Report
- Transportation Master Plan Study

### **For more information**

Visit [guelph.ca/clair-maltby](https://guelph.ca/clair-maltby) for additional project details.

**Stacey Laughlin, MCIP, RPP**, Senior Policy Planner  
Planning and Building Services  
519-822-1260 extension 2327

**Arun Hindupur, M.Sc., P.Eng.**, Supervisor, Infrastructure Engineering  
Engineering and Transportation Services  
519-822-1260 extension 2282

[clair-maltby@guelph.ca](mailto:clair-maltby@guelph.ca)





**Phase 3 – Impact Assessment and  
Preliminary Management Strategies**

# Clair-Maltby

Transform. Connect. Community.

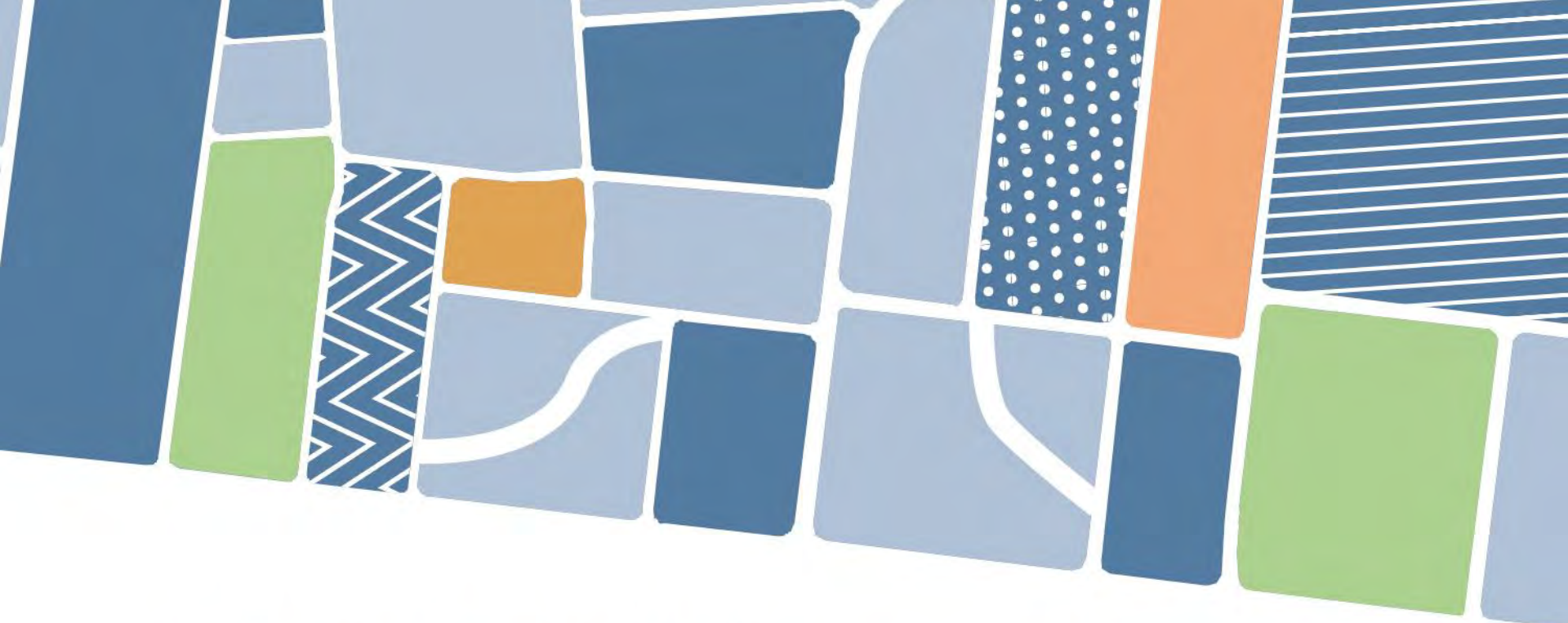


# Presentation Outline

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1. Project Background and Process
2. Study Area Characterization
3. Impact Assessment
4. Preliminary Management Approach and Strategies





# Clair-Maltby

Transform. Connect. Community.

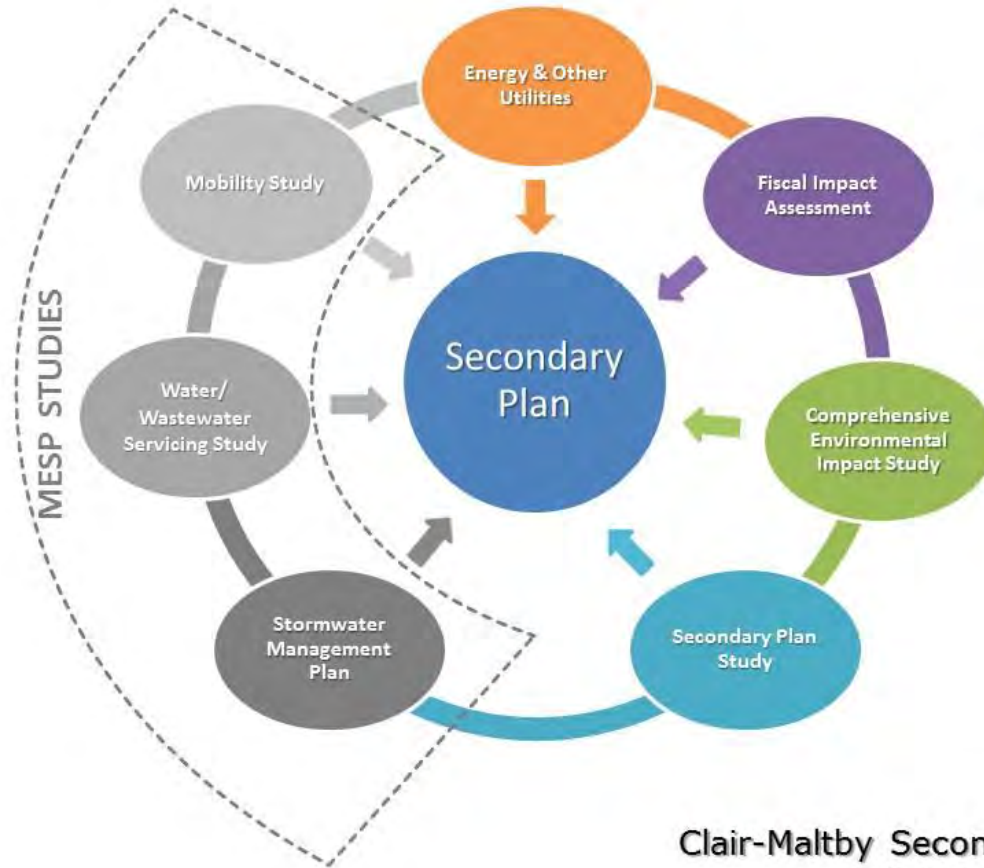
## 1. Project Background and Process





# 1. Project Background and Process

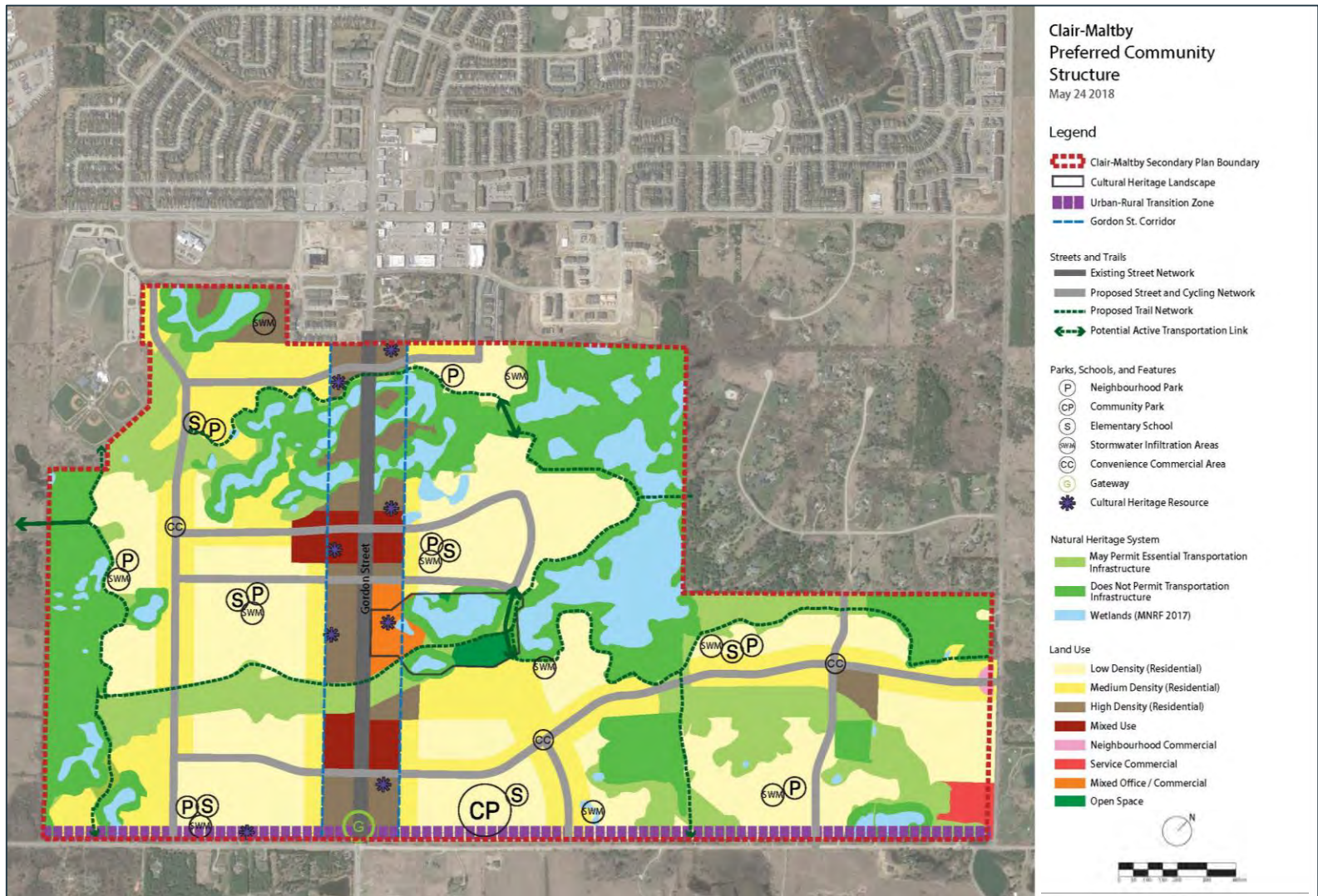
## Integrated Study Relationship



Clair-Maltby Secondary Plan  
Process Diagram



# 1. Project Background and Process – Preferred Community Structure – June, 2018





# 1. Project Background and Process

## Study Scales

Secondary Plan Area (SPA)

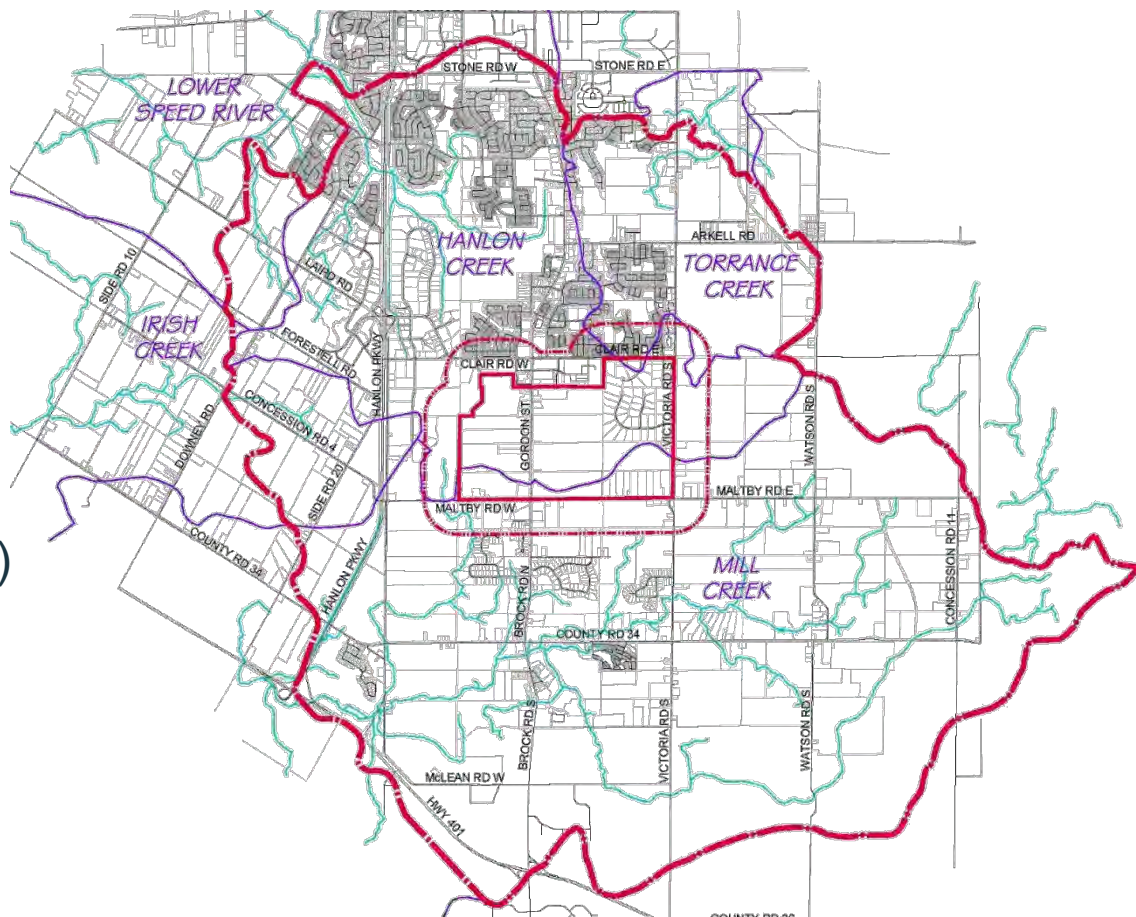
536 ha

Primary Study Area (PSA)

1127 ha

Secondary Study Area (SSA)

9624 ha





# 1. Project Background and Process

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## Key CEIS Tasks

- Phases 1 and 2
  - Verification / refinement / assessment of environmental features and functions
  - Assessment of the role of water in the study areas to support natural systems (groundwater / surface water)
  - Constraints and opportunities definition
- Phase 3
  - Assessment of impacts associated with preliminary community structure
  - Establishment of preliminary integrated management strategies
  - Input to land use refinement



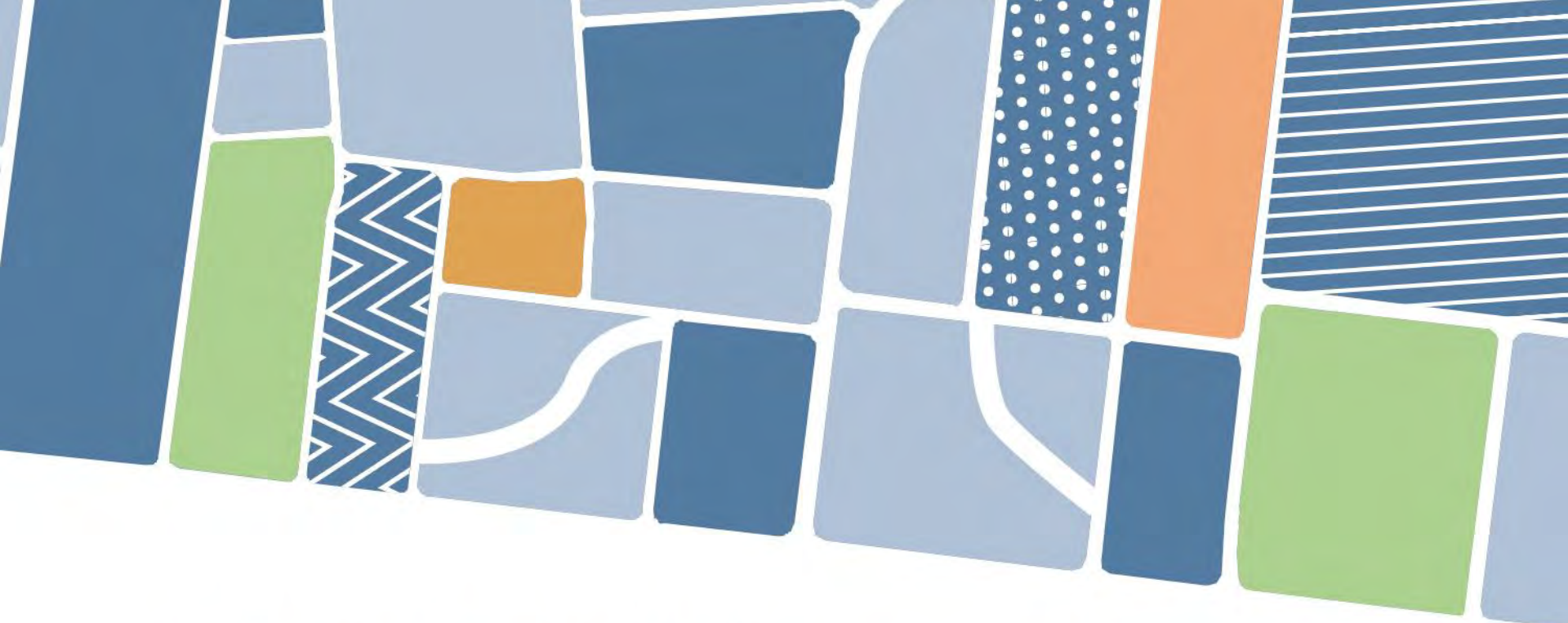
# 1. Project Background and Process

---

## Study Approach

- Review of background information
- Multi-year monitoring and field studies
  - 2016, 2017, 2018
    - *Meteorology*
    - *Surface Water*
    - *Ground Water*
    - *Natural Systems*
- Modelling of surface and groundwater
- Agency and stakeholder consultation





# Clair-Maltby

Transform. Connect. Community.

## 2. Study Area Characterization

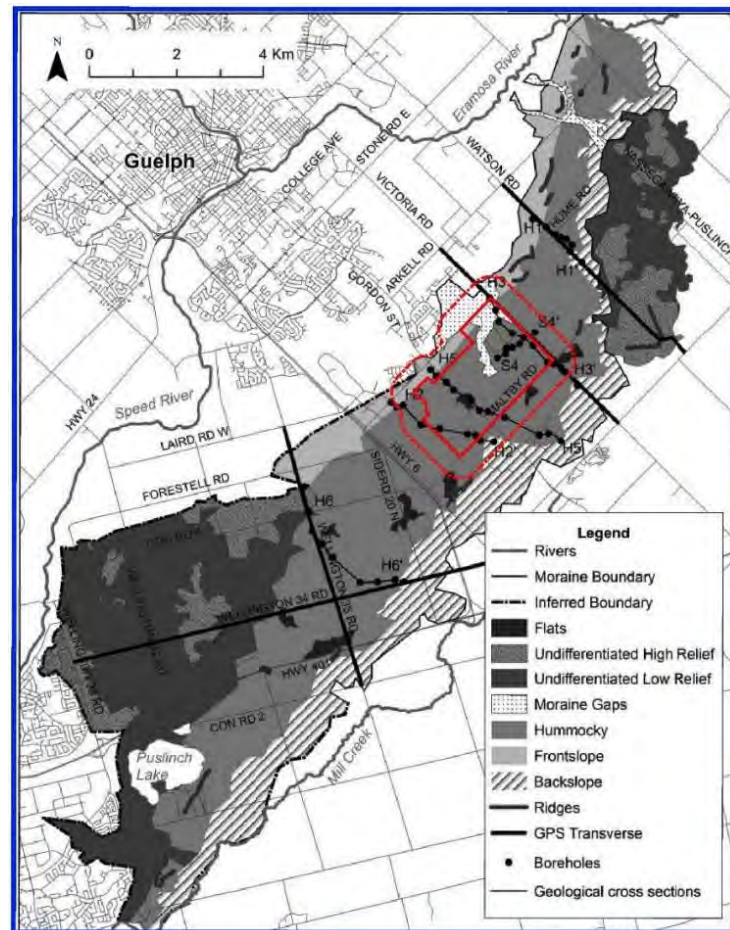
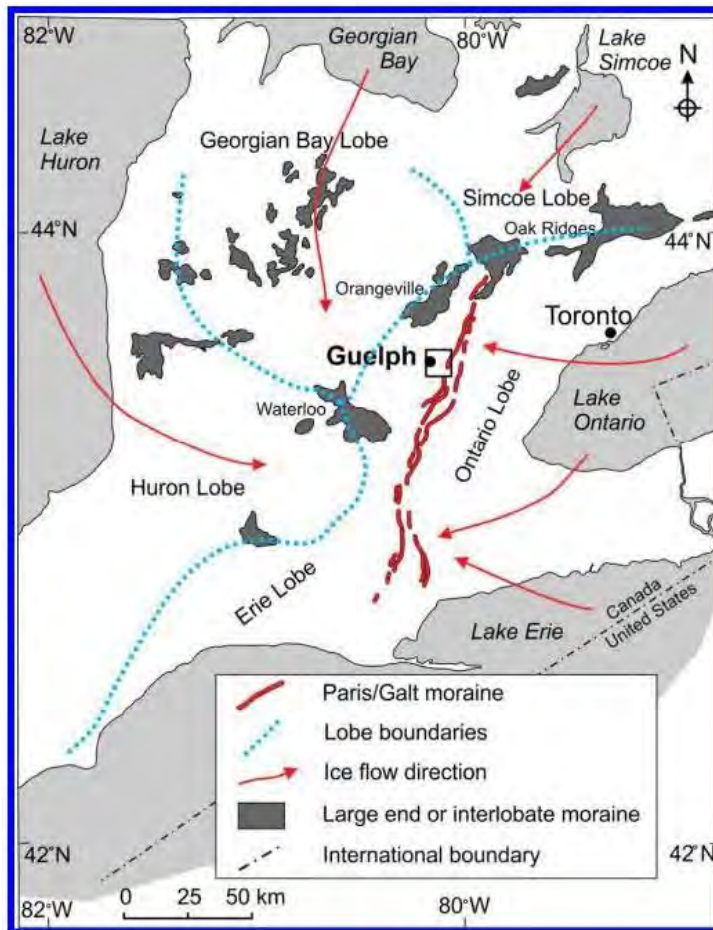
**wood.**





## 2. Study Area Characterization – Existing Conditions

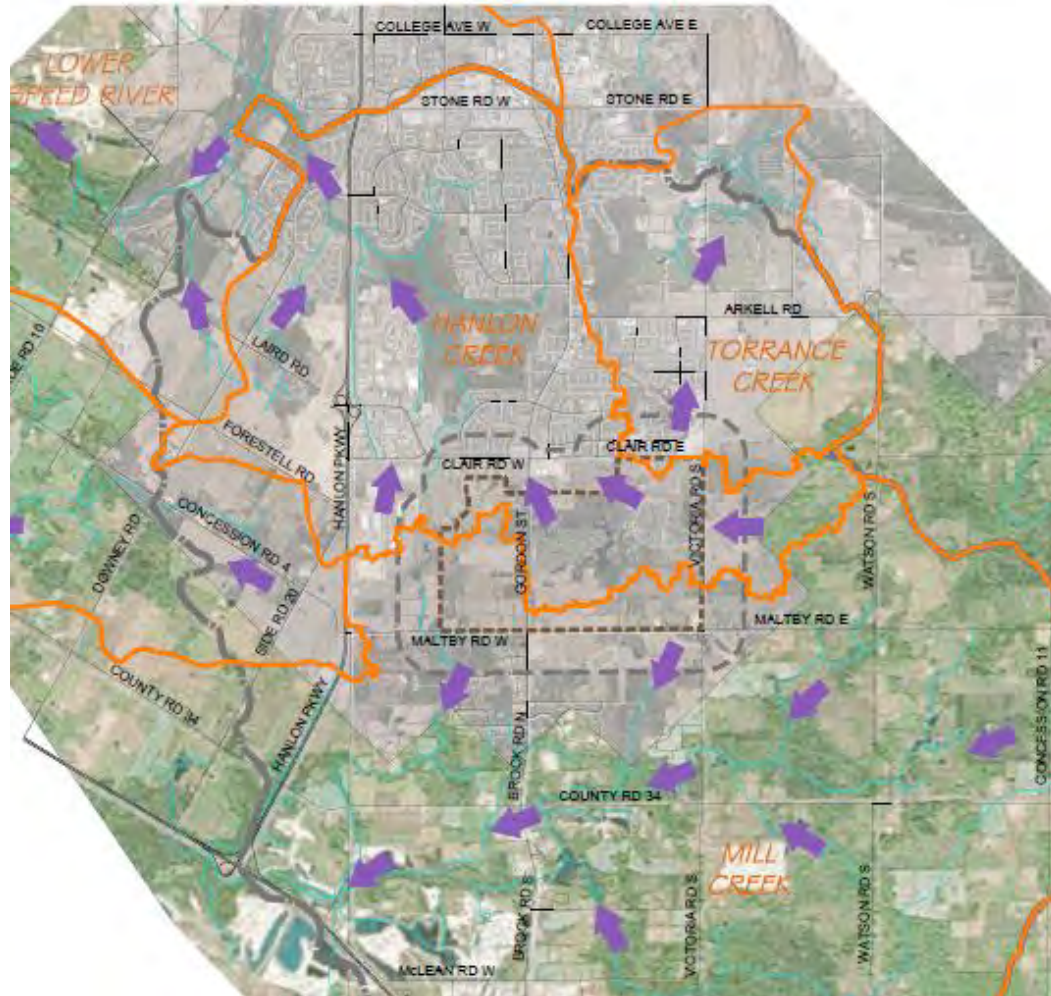
### Landform: *Paris Galt Moraine and Paris Moraine*





## 2. Study Area Characterization

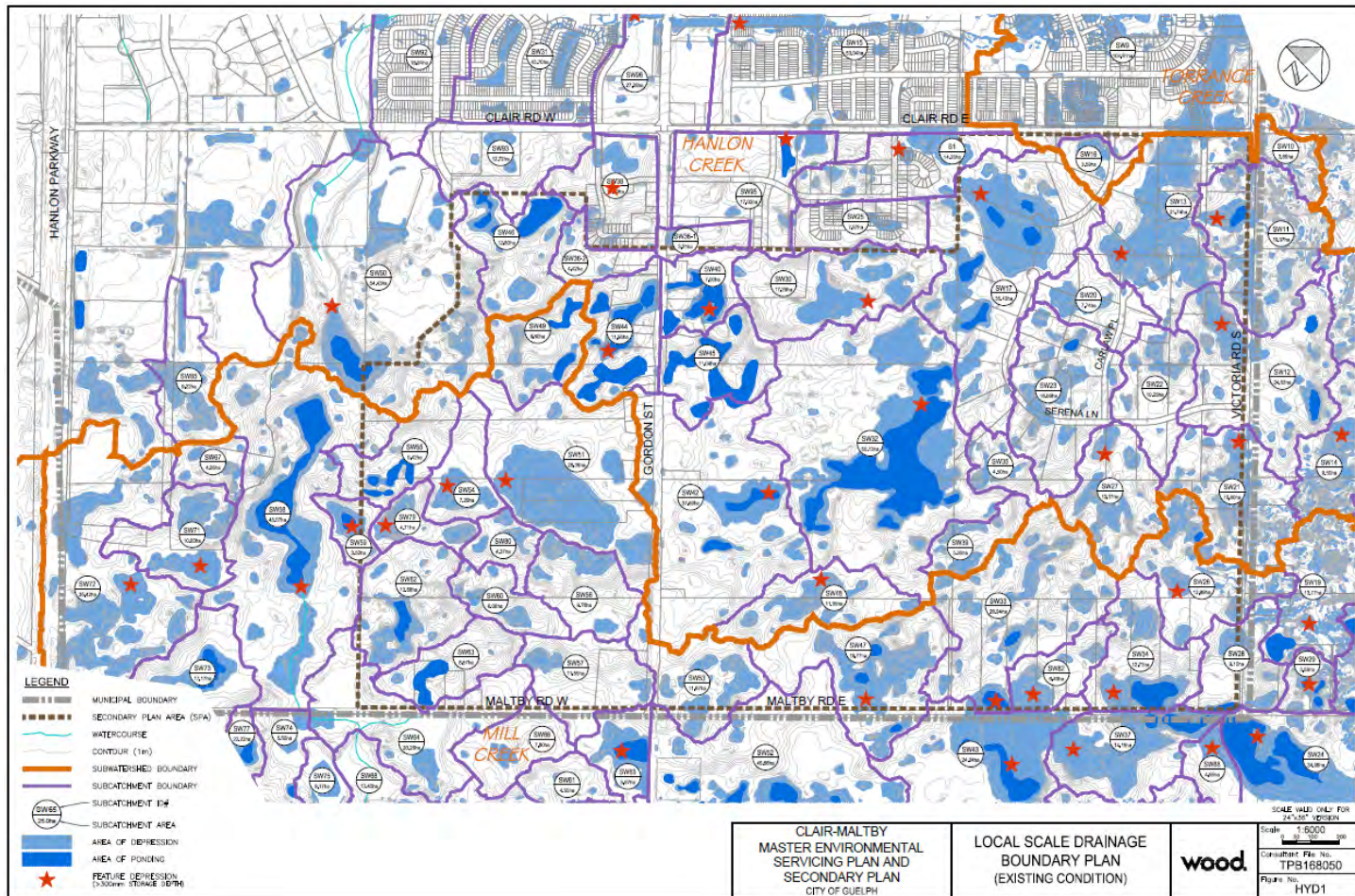
### Surface Water: *Headwaters of Mill, Torrance, Hanlon Watersheds*





## 2. Study Area Characterization

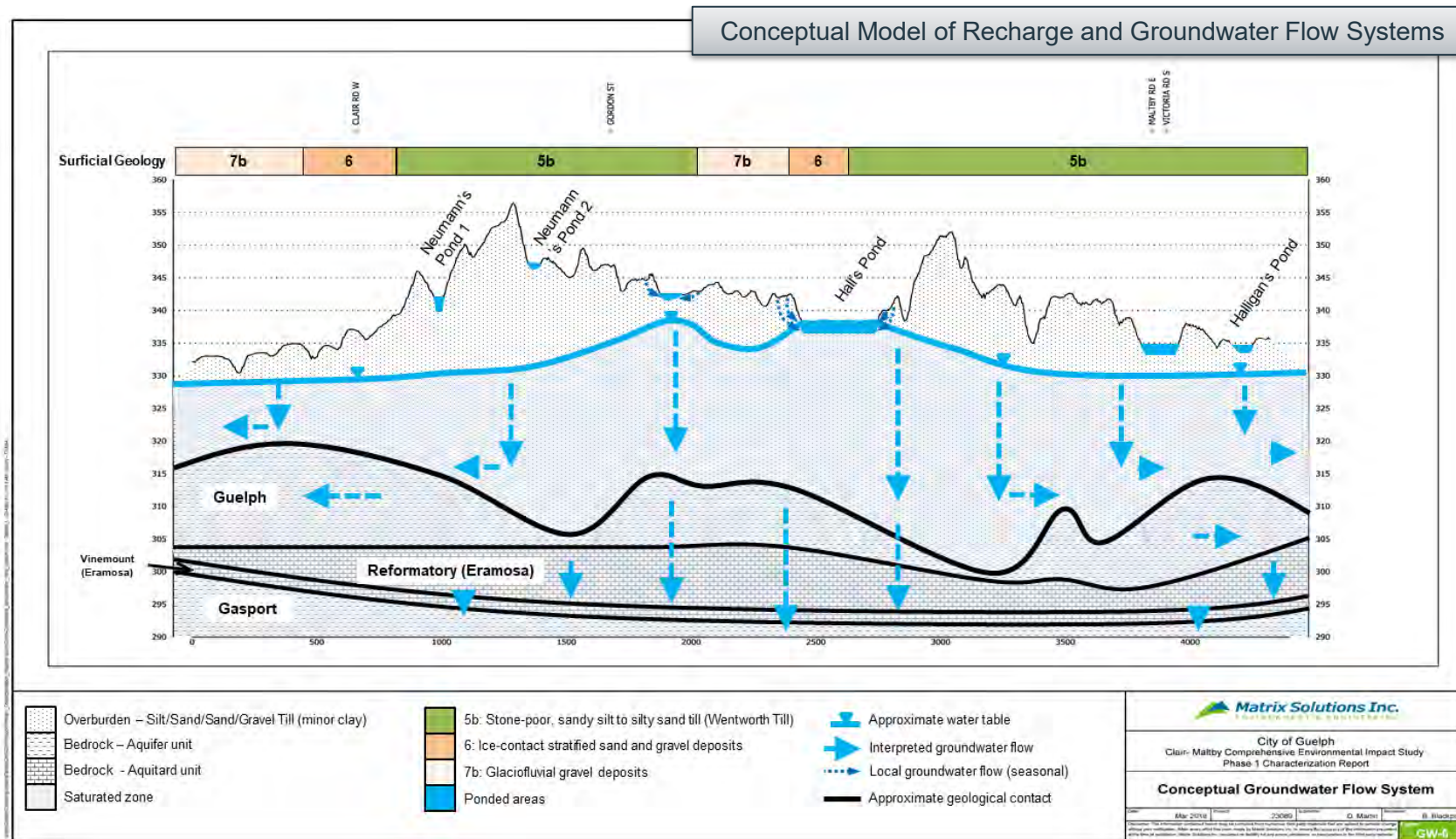
### Surface Water: Numerous Wet / Dry Depressions





## 2. Study Area Characterization

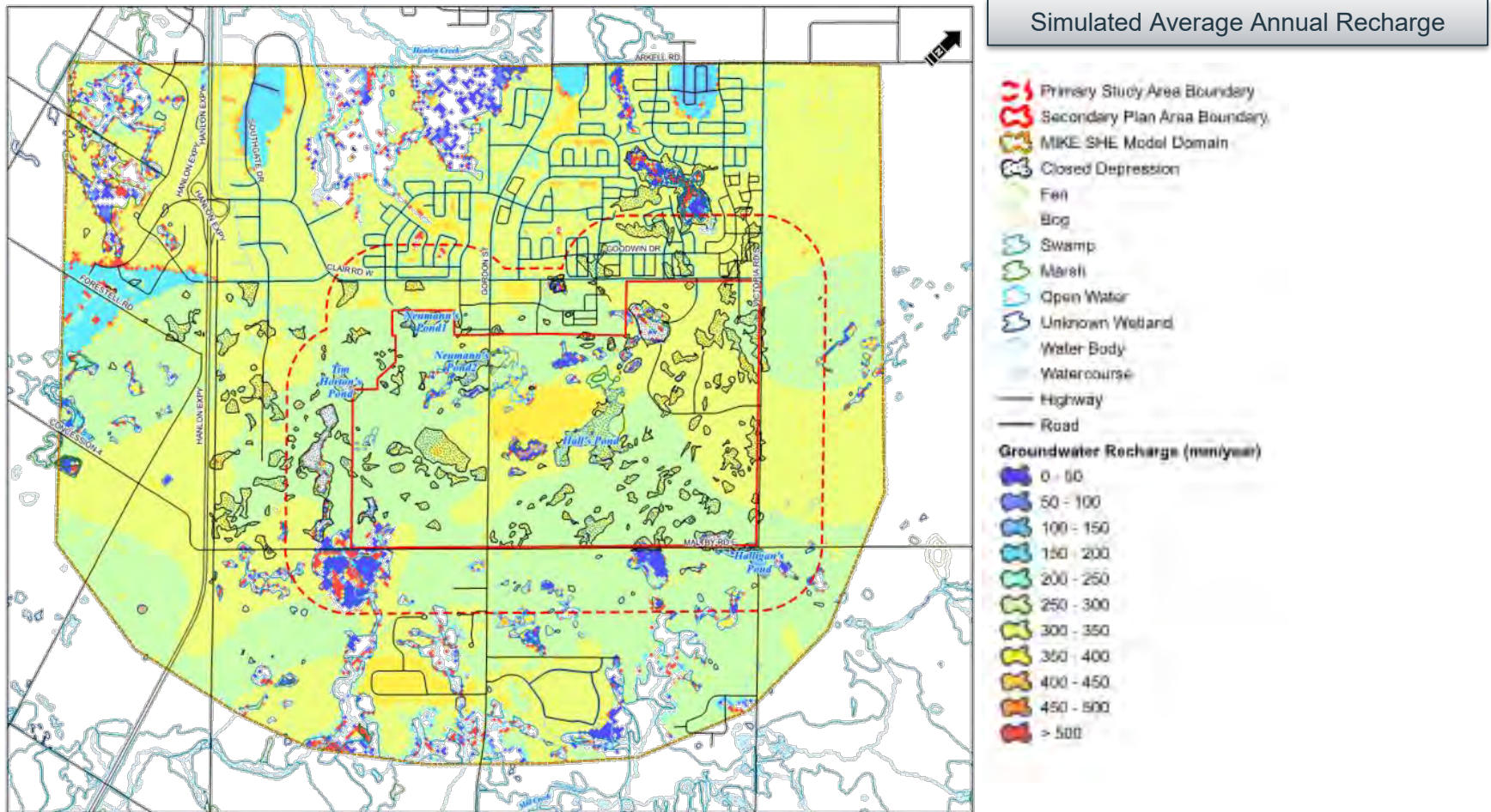
### Hydrogeology: *Surface Water Interaction with Shallow / Deep Systems*





## 2. Study Area Characterization

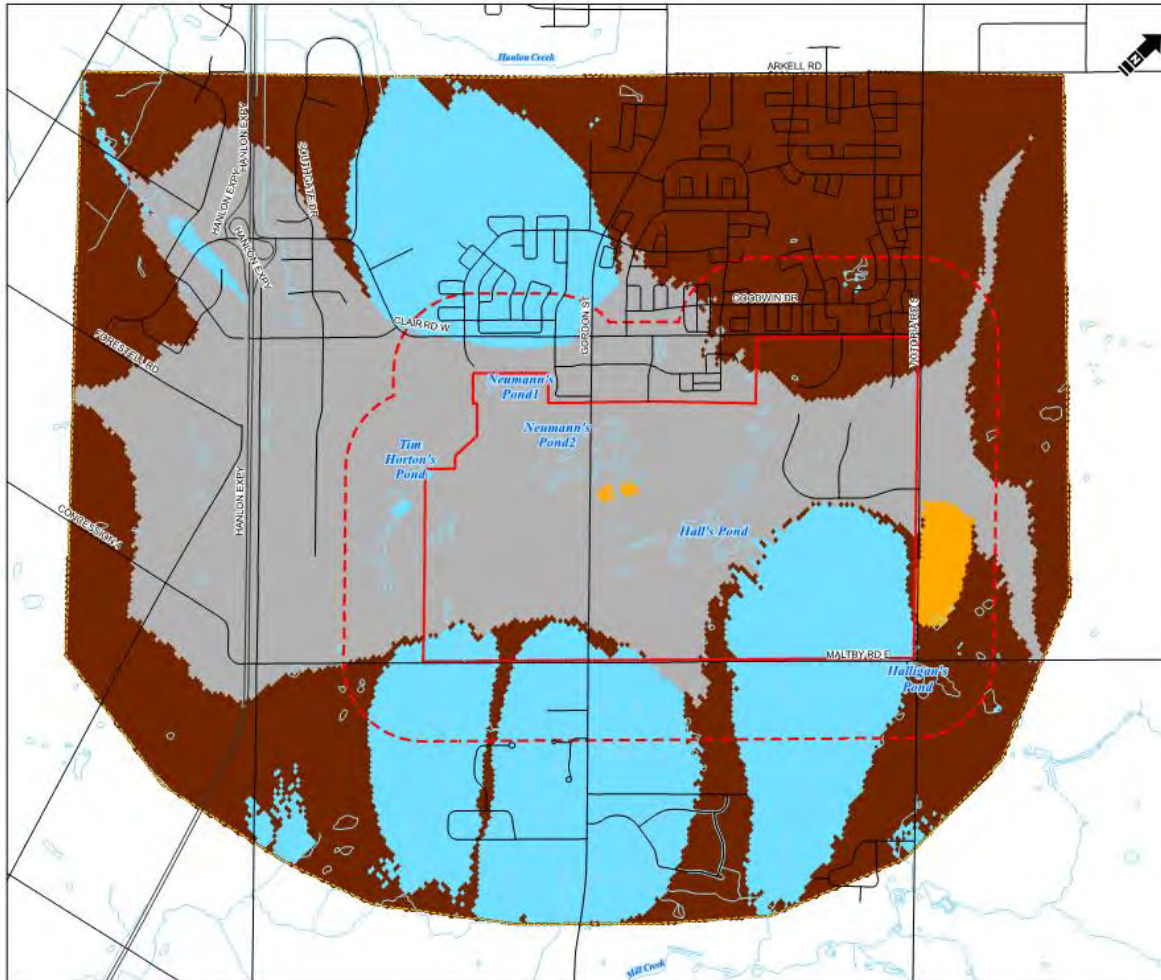
### Hydrogeology: *Significant Annual Recharge (250-400 mm/year)*





## 2. Study Area Characterization

### Hydrogeology: *Where does recharge go?*



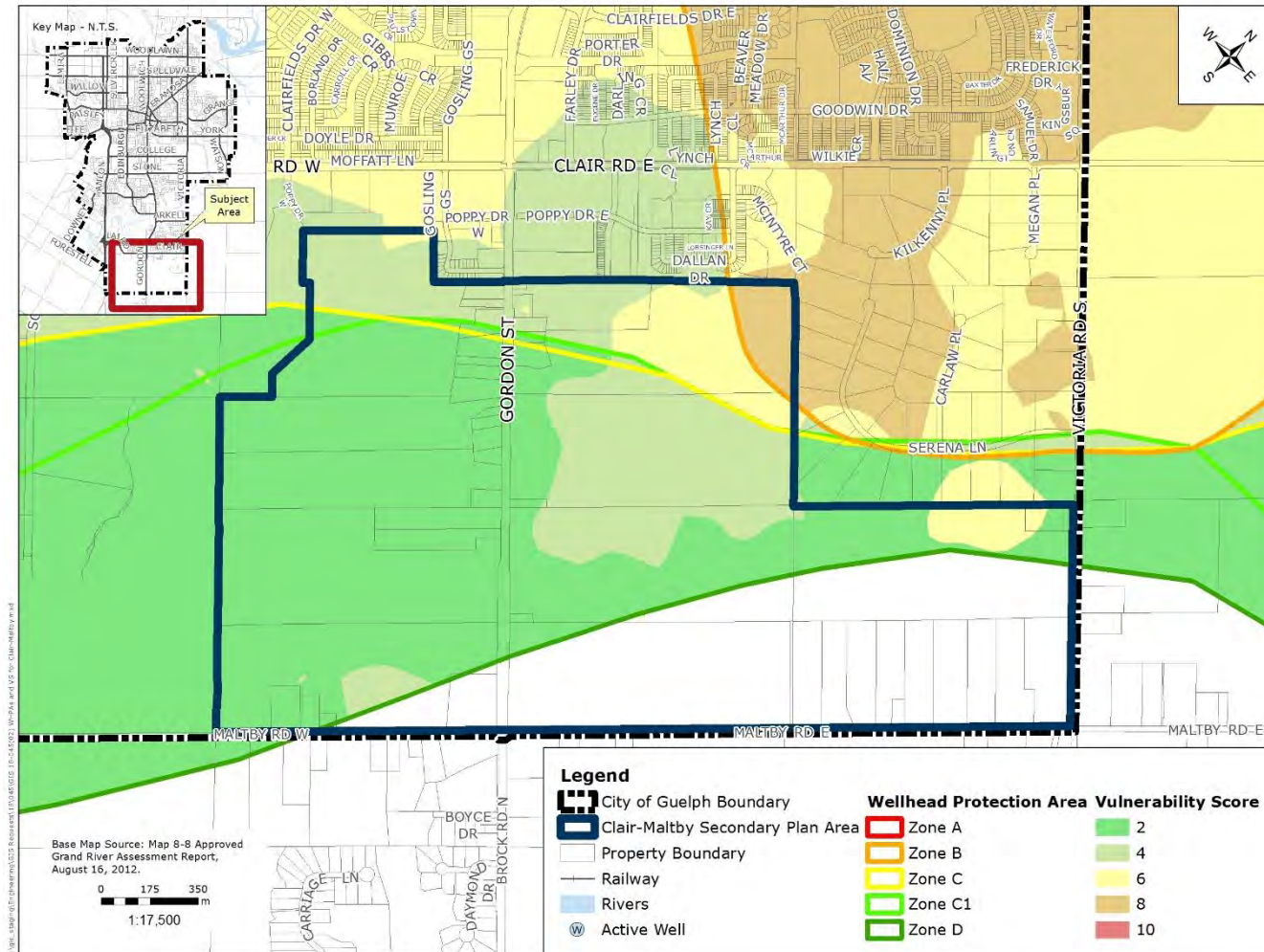
Simulated Recharge – Discharge Linkage – Where does recharge go?

- Primary Study Area Boundary
- Secondary Plan Area Boundary
- MIKE SWE Model Domain
- Water Body
- Watercourse
- Highway
- Road
- Particle Track**
  - Vertical Groundwater Flow Out (Across Vinimount Formation)
  - Lateral Groundwater Flow Out (Overburden and Bedrock)
  - Captured by Pumping Well
  - Discharge to Streams and Water Bodies



## 2. Study Area Characterization

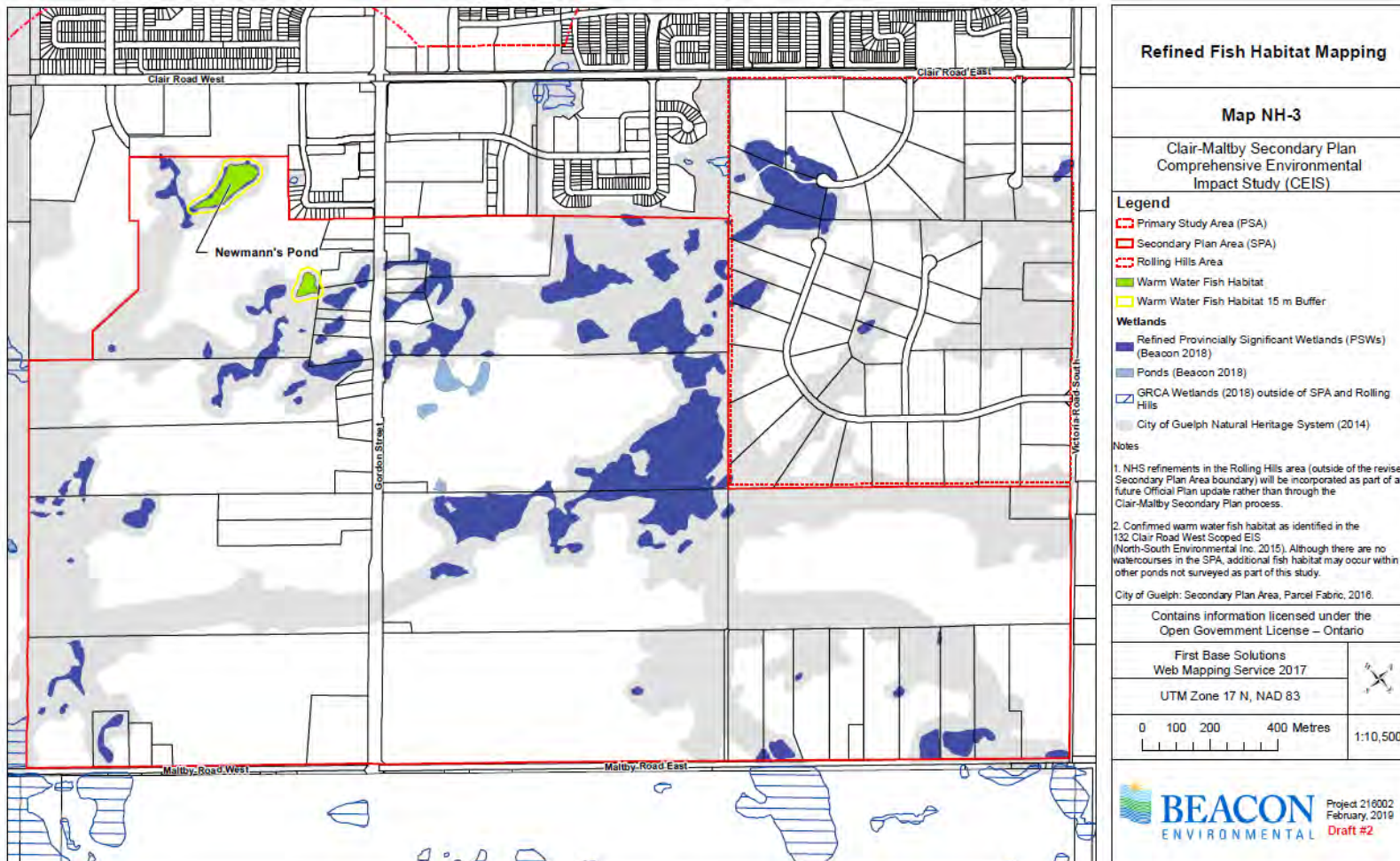
### Hydrogeology: Groundwater Vulnerability





## 2. Study Area Characterization

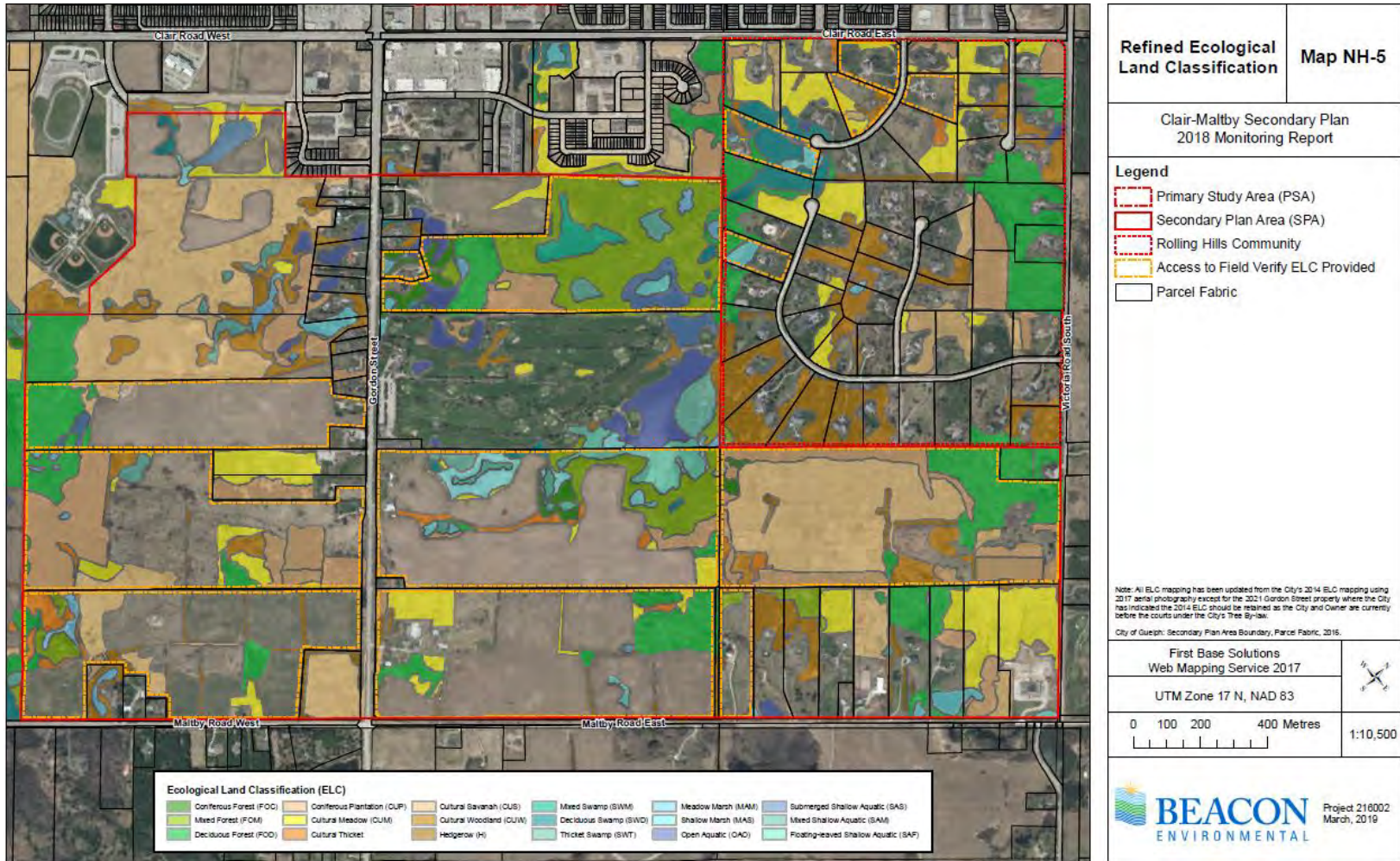
### NHS Findings: *Surface Water Features and Fish Habitat*





## 2. Study Area Characterization

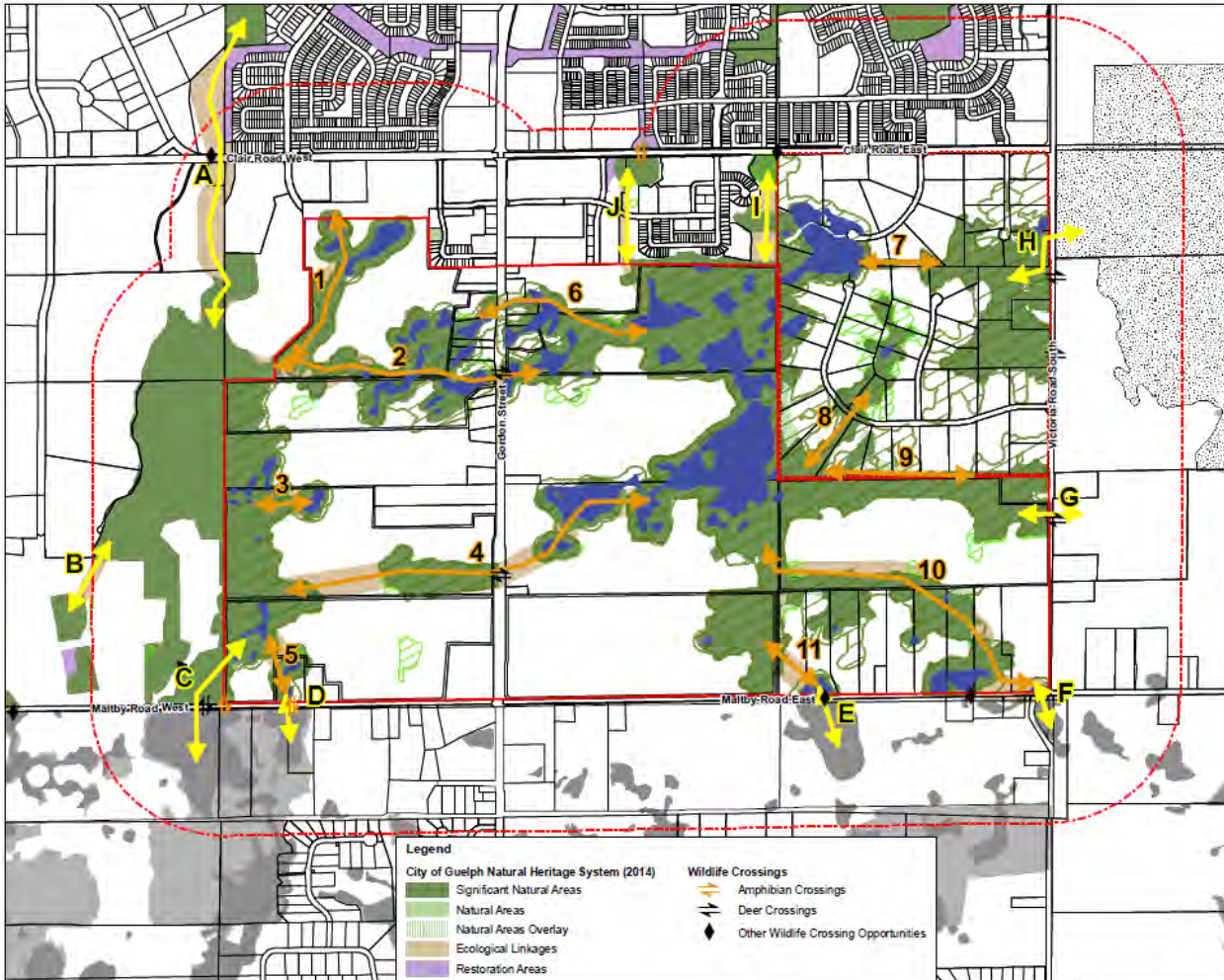
### Natural Environment: *Wetlands, Woodlands and Wildlife*





## 2. Study Area Characterization

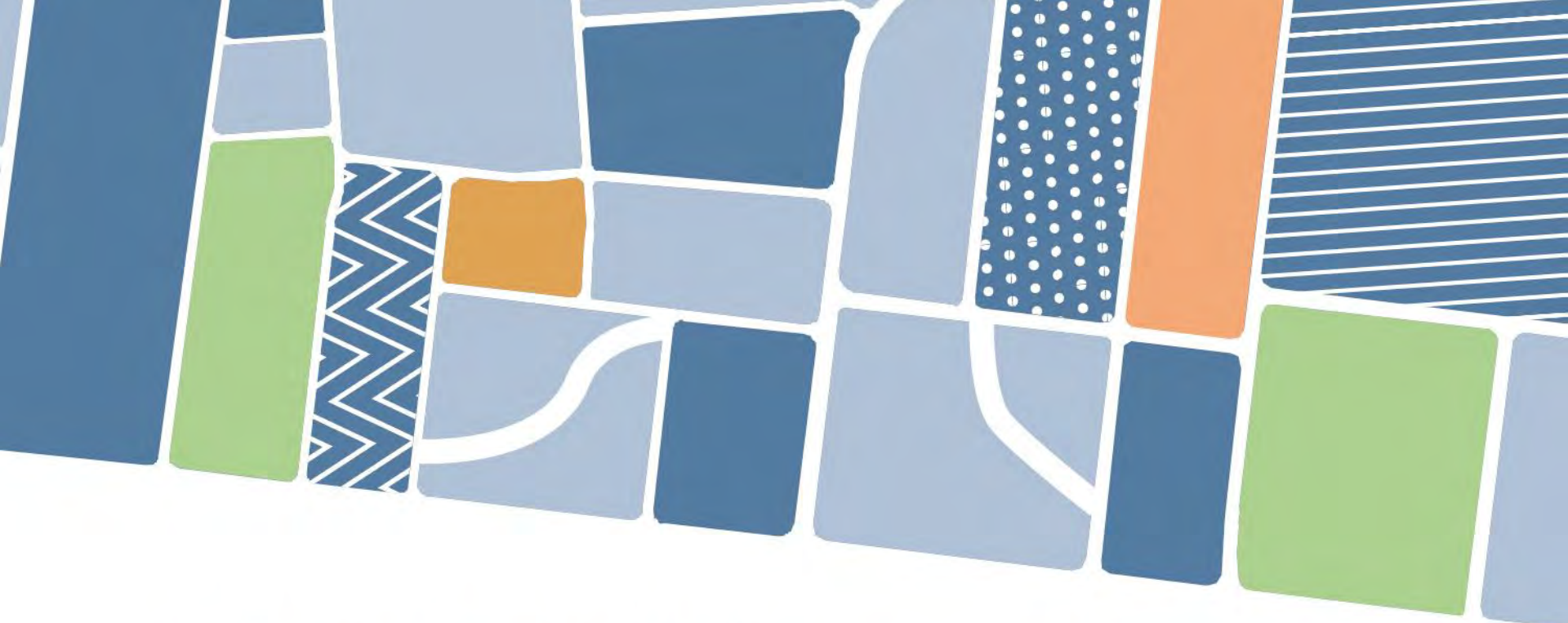
### Natural Environment: *Ecological Linkages and Connectivity*



<b>Ecological Linkages Assessment</b>	
<b>Map NH-11</b>	
Clair-Maltby Secondary Plan Comprehensive Environmental Impact Study (CEIS)	
<b>Legend</b>	
<ul style="list-style-type: none"> <li>Primary Study Area (PSA)</li> <li>Secondary Plan Area (SPA)</li> <li>Rolling Hills Community</li> <li>Ecological Linkages within the PSA</li> <li>Ecological Linkages within the SPA</li> </ul>	
<b>Refined Natural Heritage System</b>	
<ul style="list-style-type: none"> <li>Significant Natural Areas</li> <li>Natural Areas Overlay</li> </ul>	
<b>County of Wellington Greenlands System</b>	
<ul style="list-style-type: none"> <li>Core Greenlands</li> <li>Greenlands</li> </ul>	
<ul style="list-style-type: none"> <li>Paris Moraine Earth Science ANSI (MNR 2016)</li> </ul>	
Notes	
1. NHS refinements in the Rolling Hills area (outside of the revised Secondary Plan Area boundary) will be incorporated as part of a future Official Plan update rather than through the Clair-Maltby Secondary Plan process.	
Contains information licensed under the Open Government License – Ontario	
First Base Solutions Web Mapping Service 2017	
UTM Zone 17 N, NAD 83	
0 125 250 500 Metres	1:15,000
Project 216002 February, 2019 <b>DRAFT #2</b>	







# Clair-Maltby

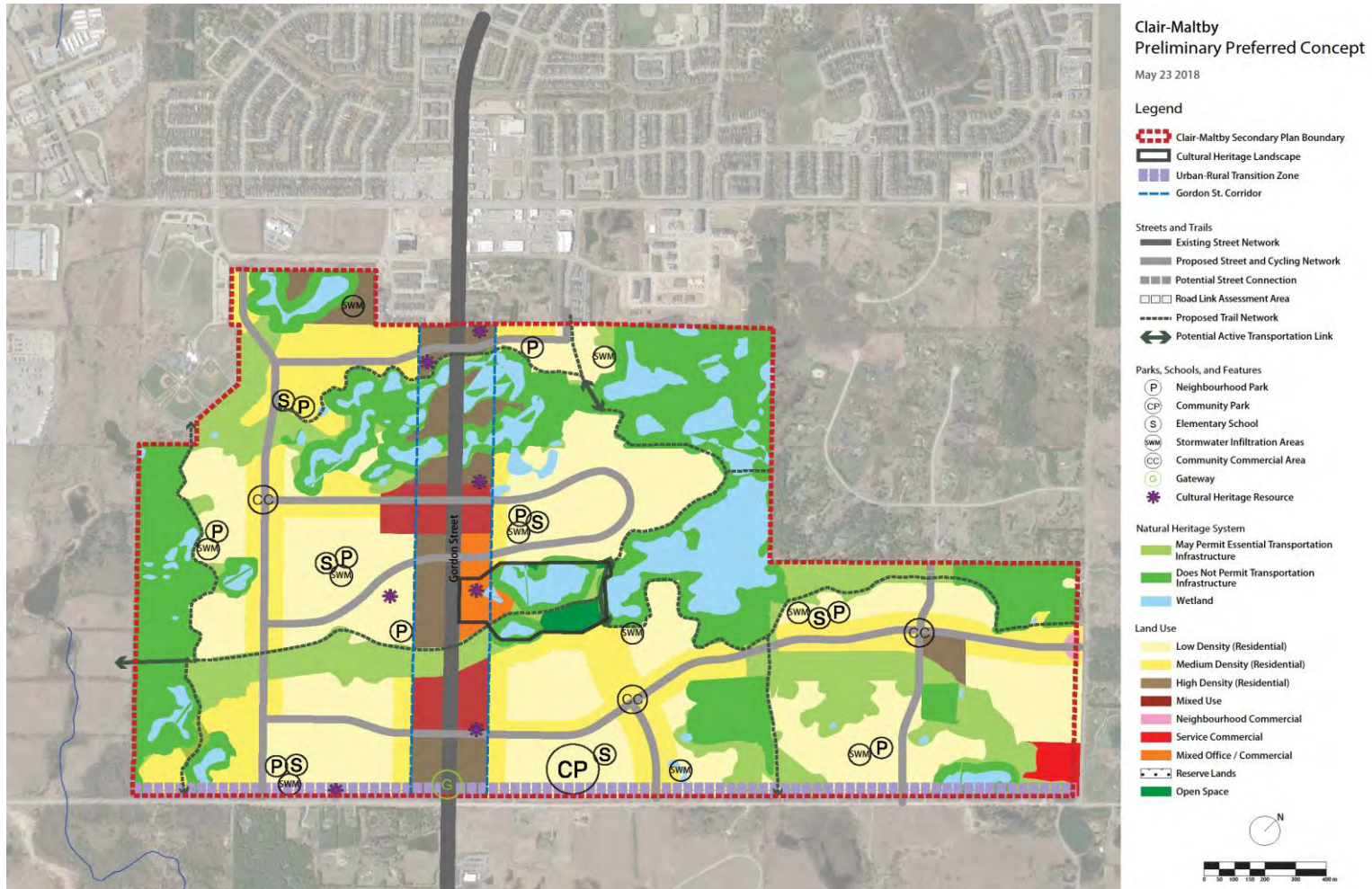
Transform. Connect. Community.

## 3. Impact Assessment



# 3. Impact Assessment

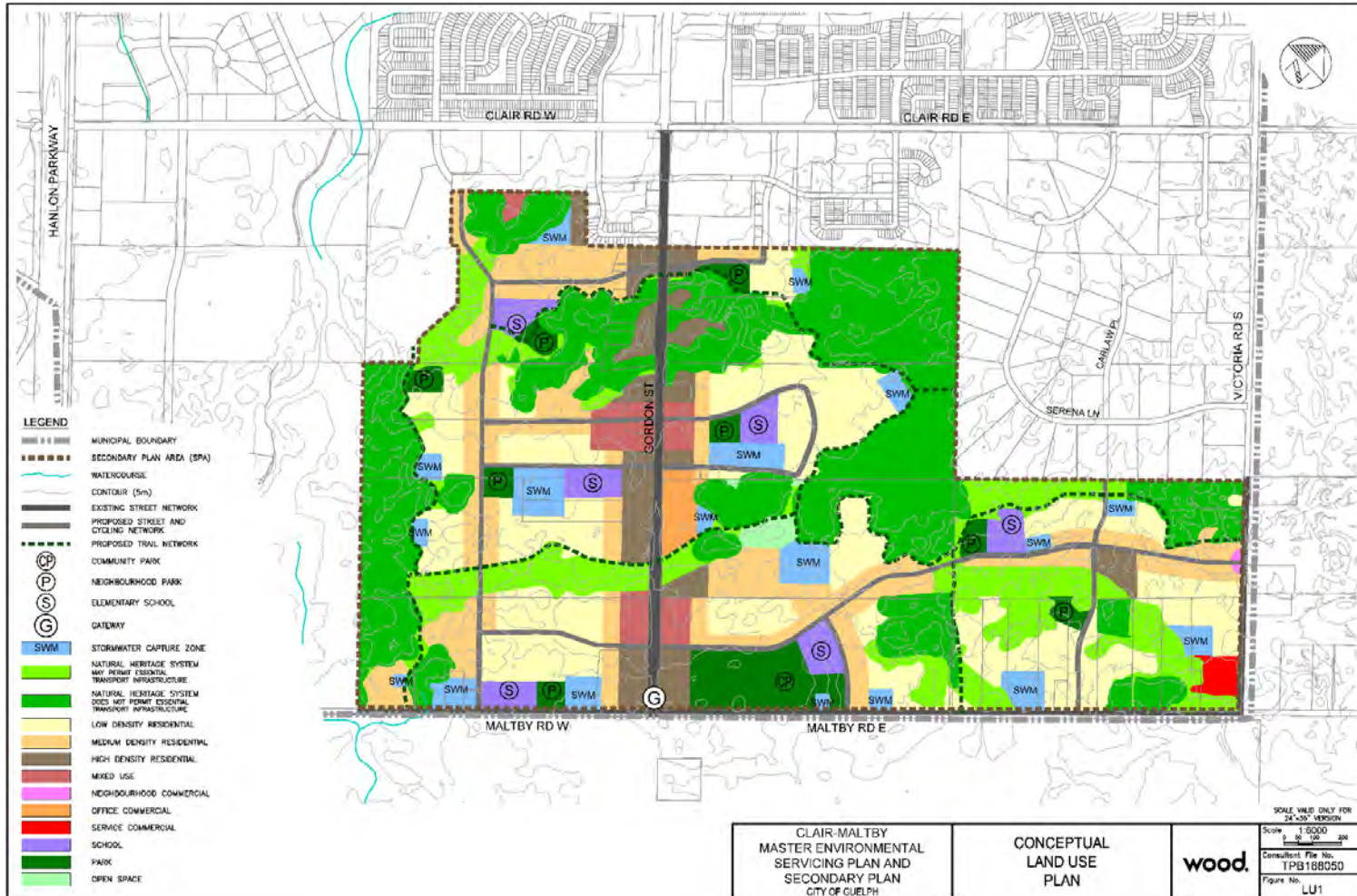
## Land Use Plan – Preliminary Preferred Community Structure





# 3. Impact Assessment

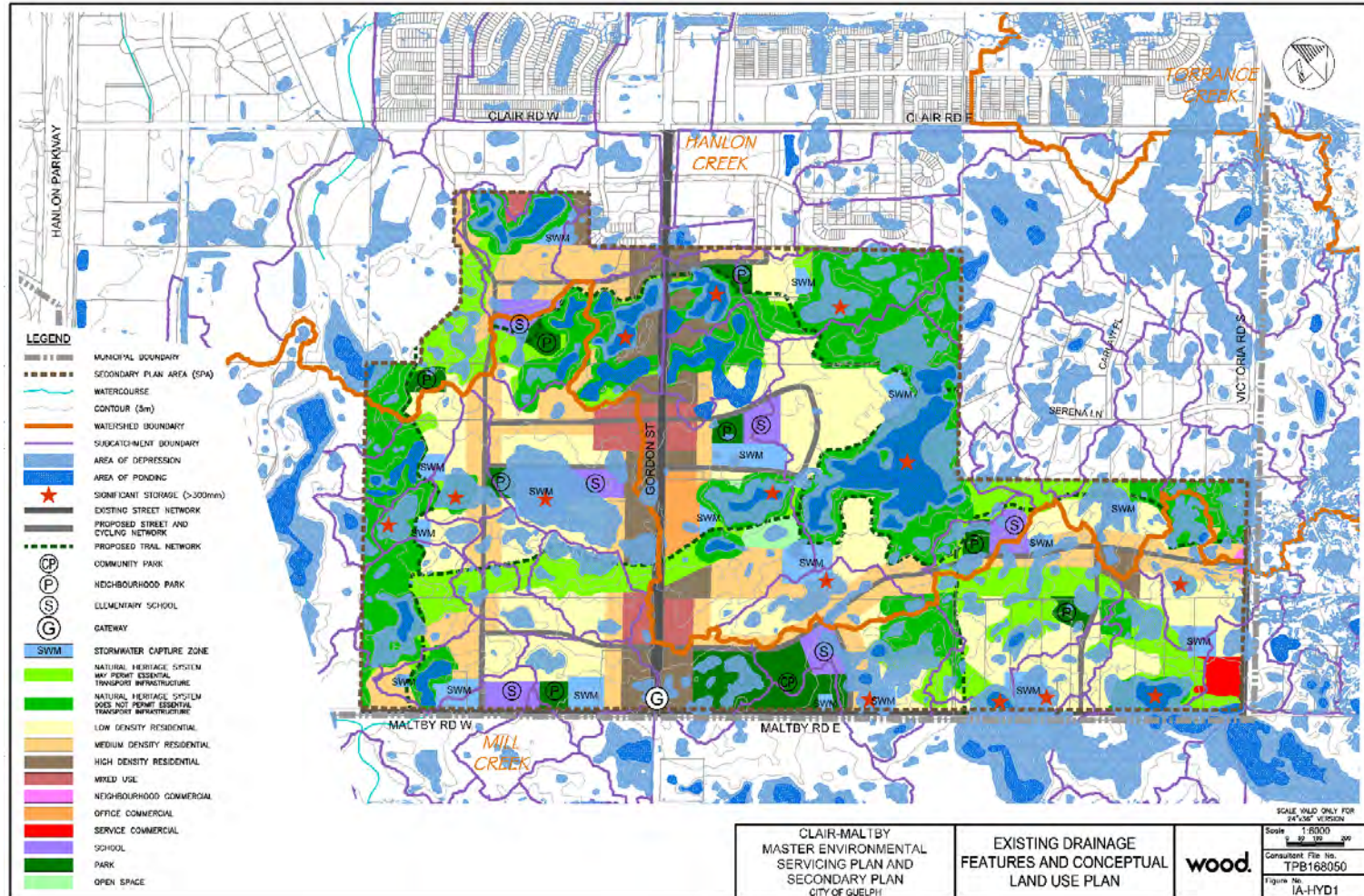
## Land Use Plan – Schools, Parks, SWCA dimensioned





# 3. Impact Assessment

## Surface Water – depressional overlay





## 3. Impact Assessment

---

### Surface Water – *analytical approach*

- Existing conditions PCSWMM hydrologic model used to assess proposed land use plan
- NHS areas and associated depressional areas maintained within PCSWMM model
- Catchment slopes (1-5%) determined based on maintaining existing grades and setting based grades for surface water capture areas
- Soil parameterization maintained as per existing conditions
- Proposed land use impervious coverages established, while existing land use coverage maintained



### 3. Impact Assessment

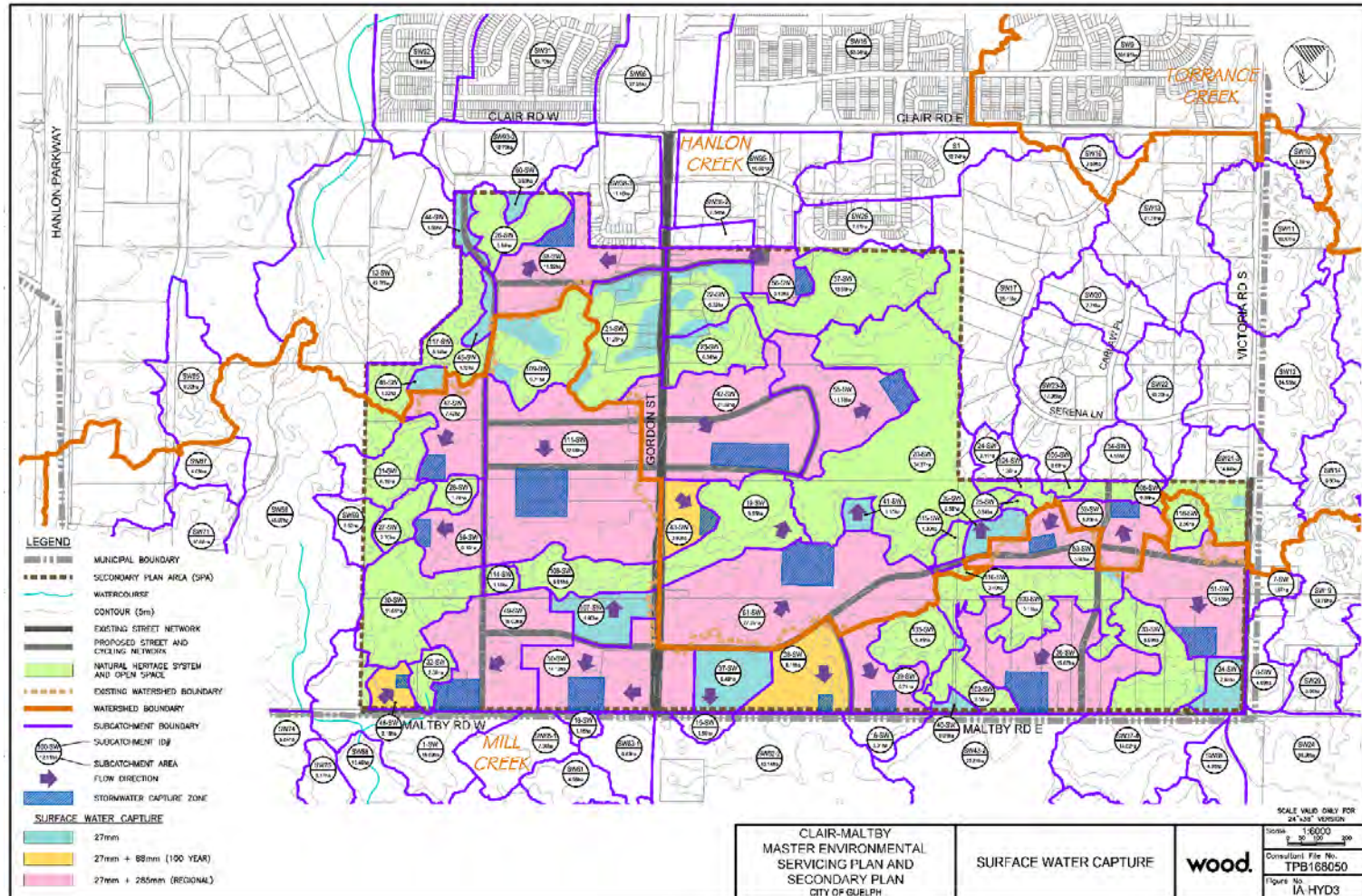
#### Surface Water: *Impervious Coverages*

Proposed Land Use Impervious Coverages		
Land Use Types	Total Imperviousness (%)	Routing Over Pervious (%)
Mixed Use	88	0
Office Commercial	85	0
Neighbourhood Commercial	85	0
Service Commercial	85	0
School	65	40
High-density Residential	80	0
Medium density Residential	70	30
Low-density Residential	65	40
ROW (Local / Collector)	65	0
ROW (Arterial)	75	0
Park (Neighbourhood)	20	25
Park (Community)	35	25
Open Space	10	100
Natural Heritage	5	100
Stormwater Management	10	100



# 3. Impact Assessment

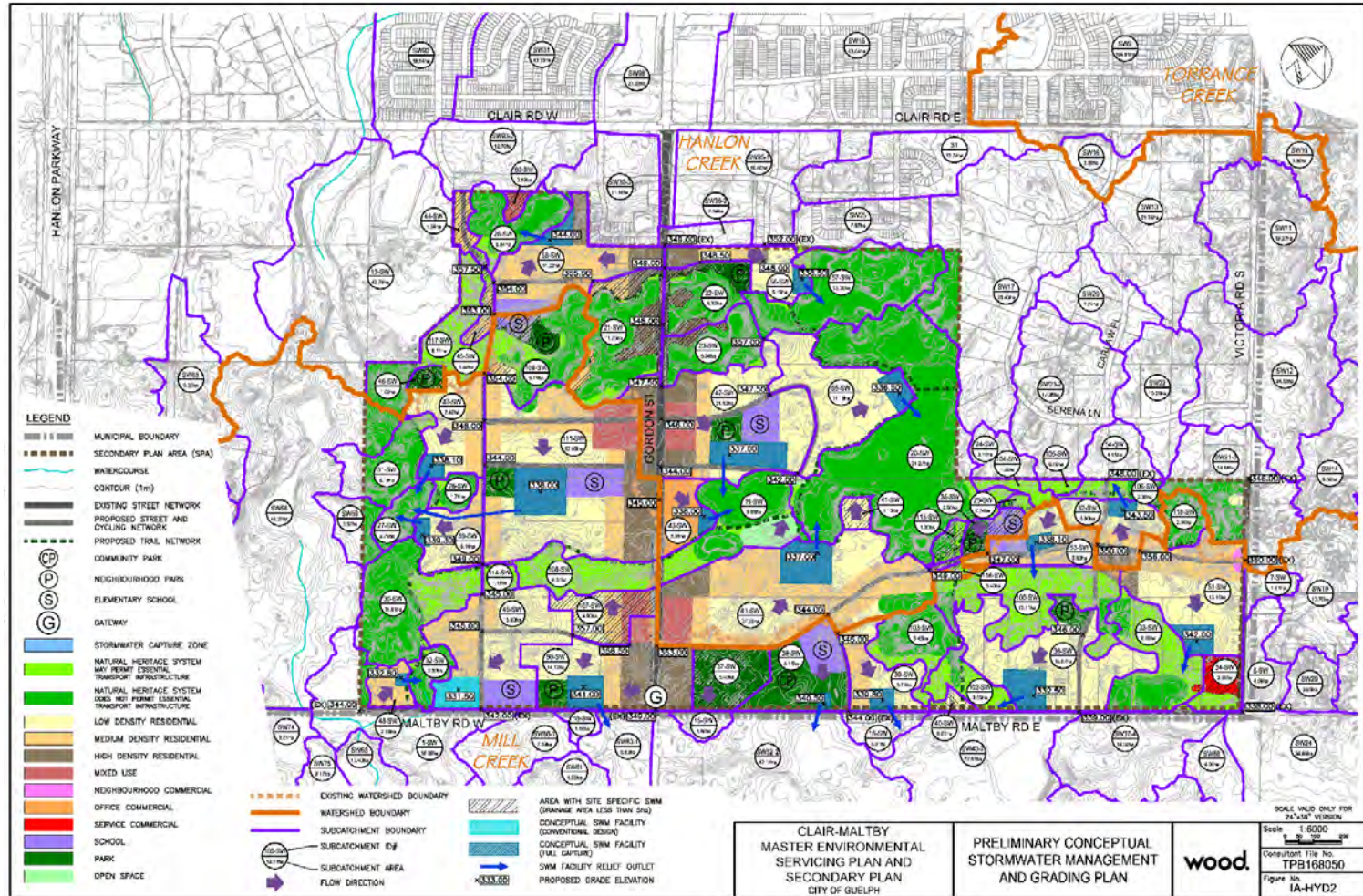
## Surface Water: Assumed future drainage areas





# 3. Impact Assessment

## Surface Water: SWM Layout and Grading





# 3. Impact Assessment

---

## Surface Water

- PCSWMM hydrologic model used to:
  - Set existing flow targets (Hanlon / Mill)
  - Size surface water capture areas (SWCA)
  - Simulate distributed surface water management (capture at-source)
  
- Results show:
  - SWCA (8-11% of DA) – Regional / 100 year
  - Flow Targets met (external)
  - Surface water budget met (validated with both PCSWMM and MIKE SHE)



# 3. Impact Assessment

---

## Groundwater Assessment

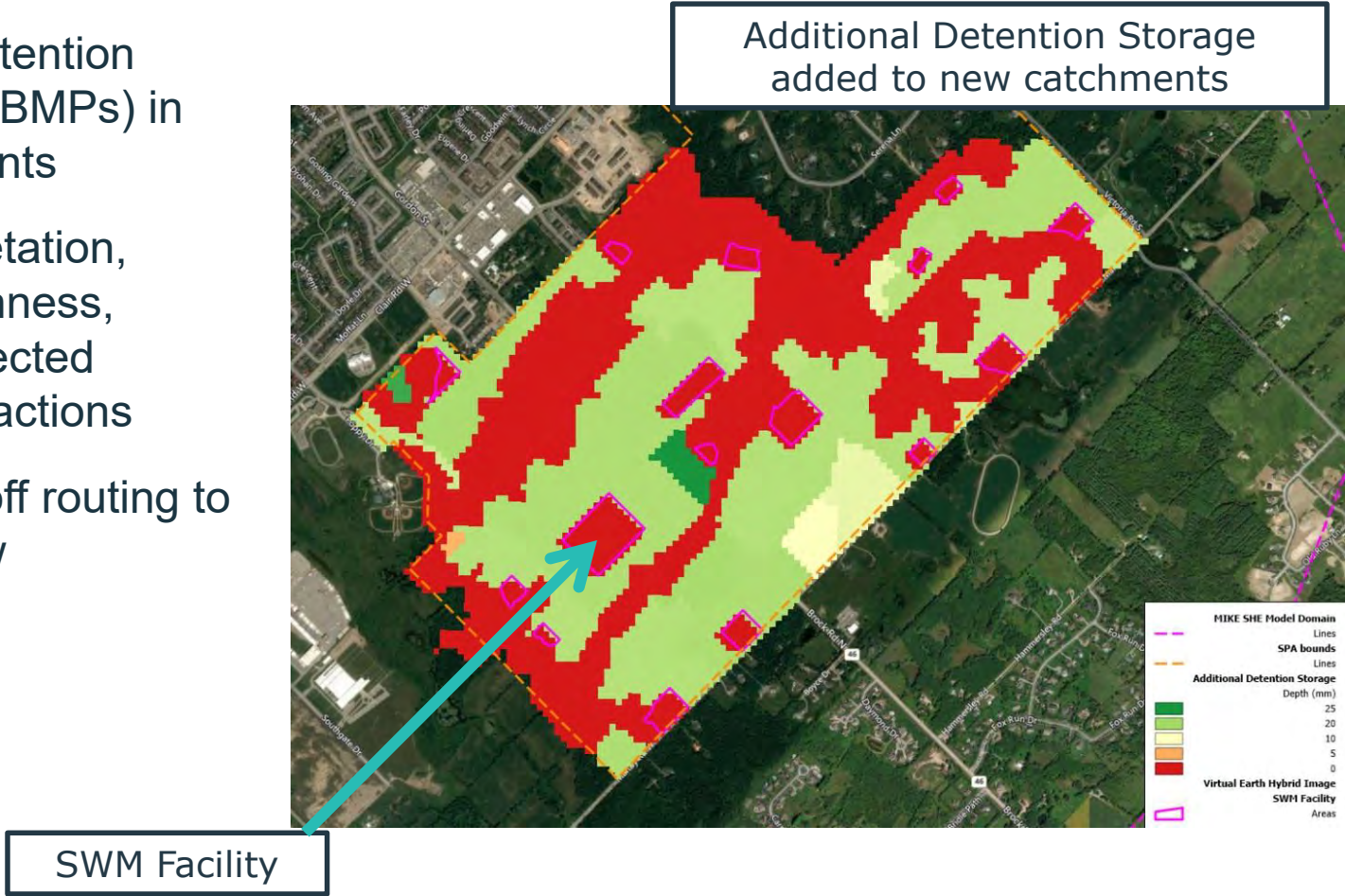
- MIKE SHE modelling:
  - Existing and proposed land use conditions
  - Simulate future land use with SWCA and distributed capture (at source)
- Metrics used include :
  - Groundwater flow directions
  - Groundwater discharge to Hanlon, Torrance, Mill Creek
  - Groundwater discharge to wetlands outside the SPA and one within the SPA.
  - Deep recharge to the bedrock aquifer, supplying Guelph municipal wells



# 3. Impact Assessment

## Hydrogeology: *Impact Simulation Approach*

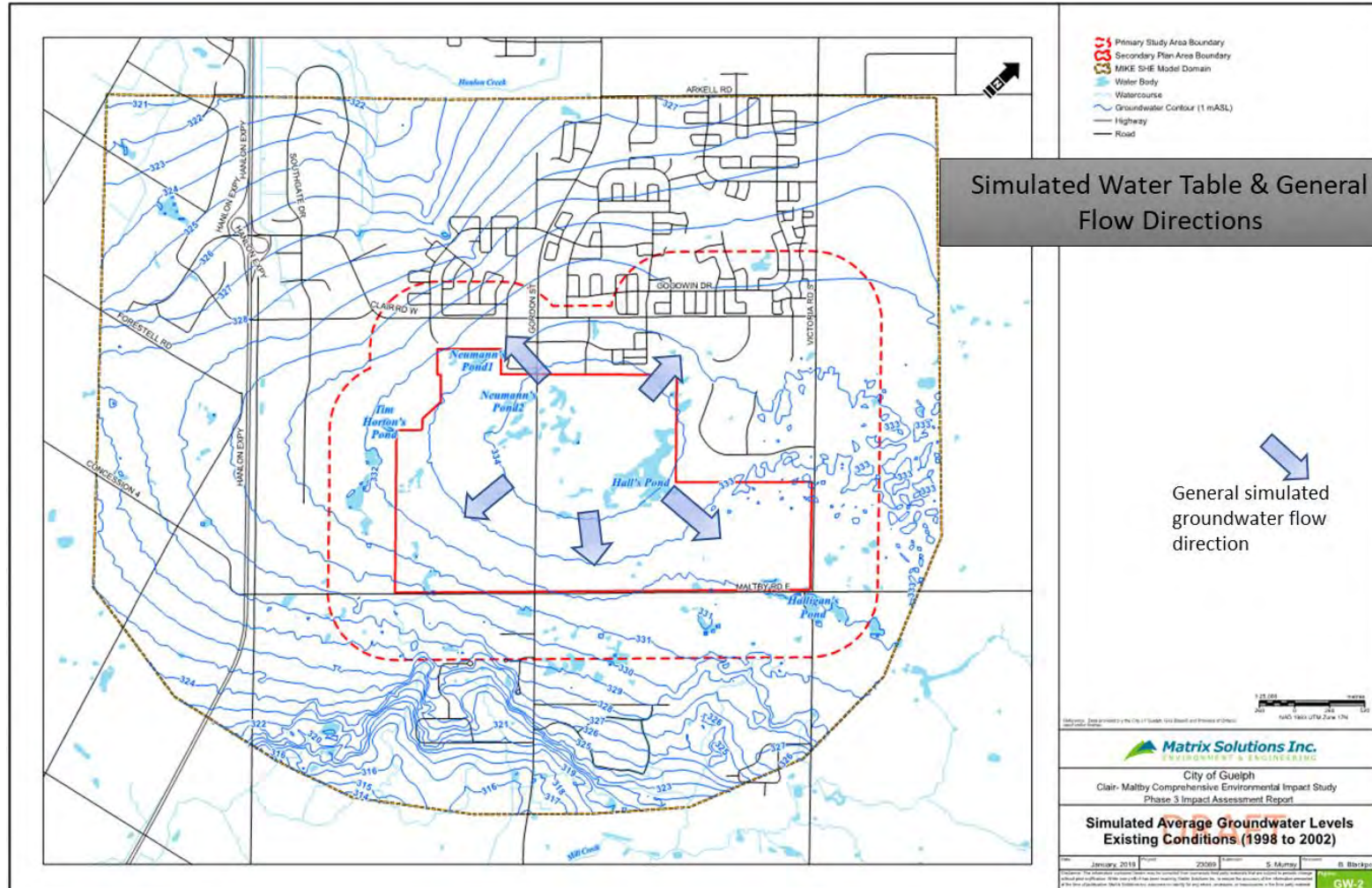
- Additional Detention Storage (LID BMPs) in new catchments
- Revised vegetation, surface roughness, directly connected impervious fractions
- Updated runoff routing to SWCA in new catchments





# 3. Impact Assessment

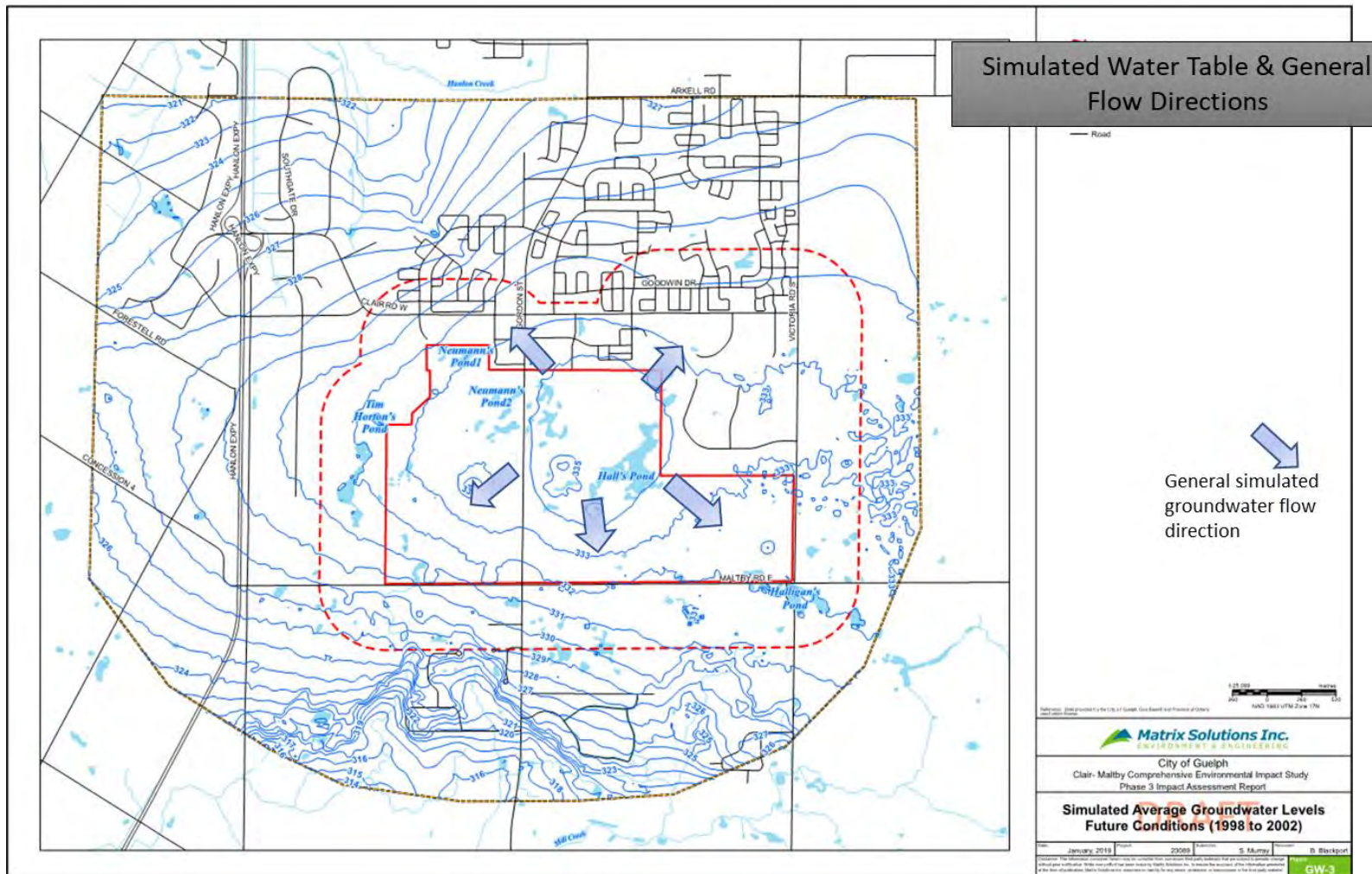
## Hydrogeology: Existing Groundwater Flow





# 3. Impact Assessment

## Hydrogeology: Future Groundwater Flow

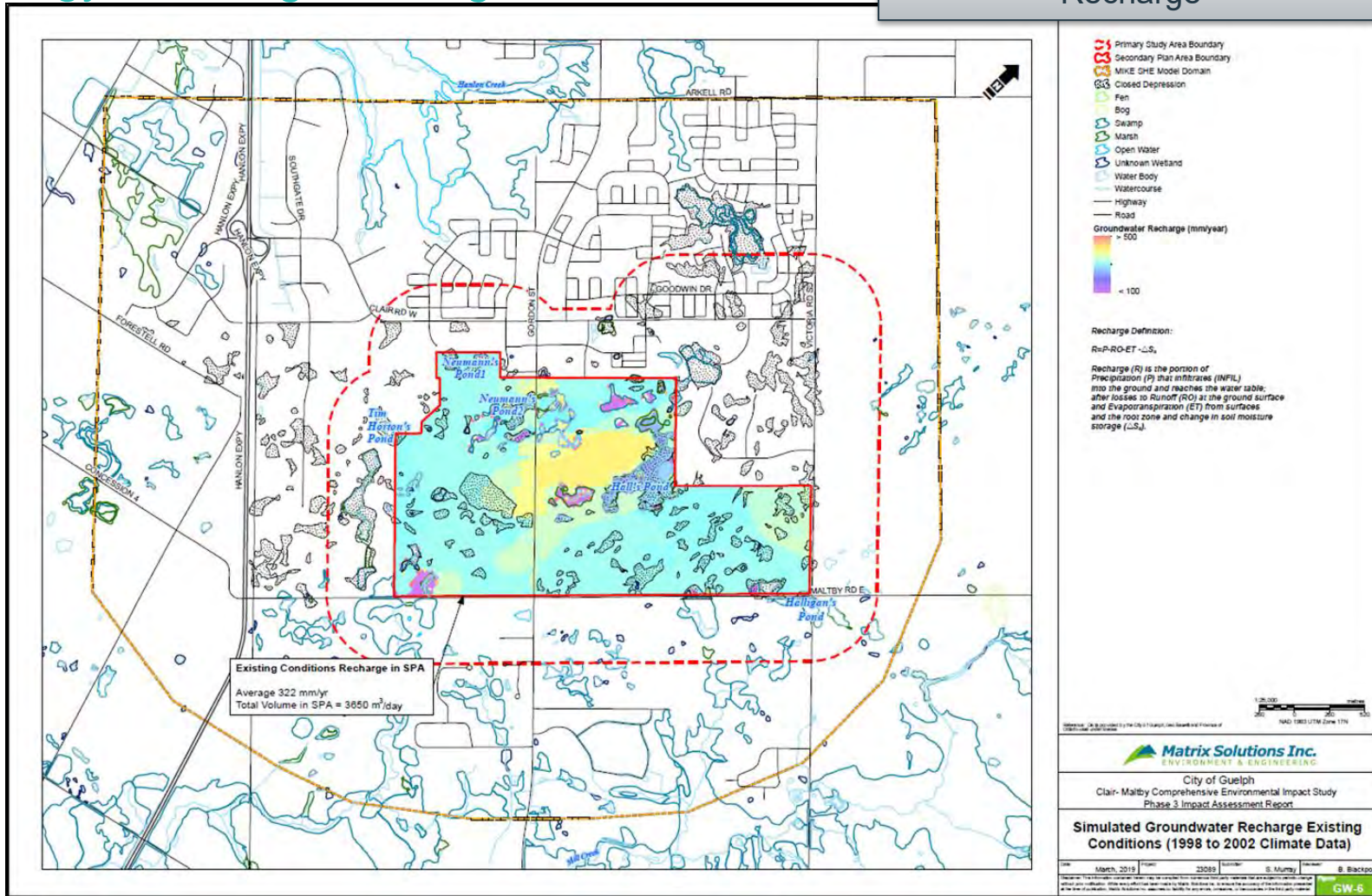




# 3. Impact Assessment

## Hydrogeology: Existing Recharge

### Simulated Average Annual Recharge

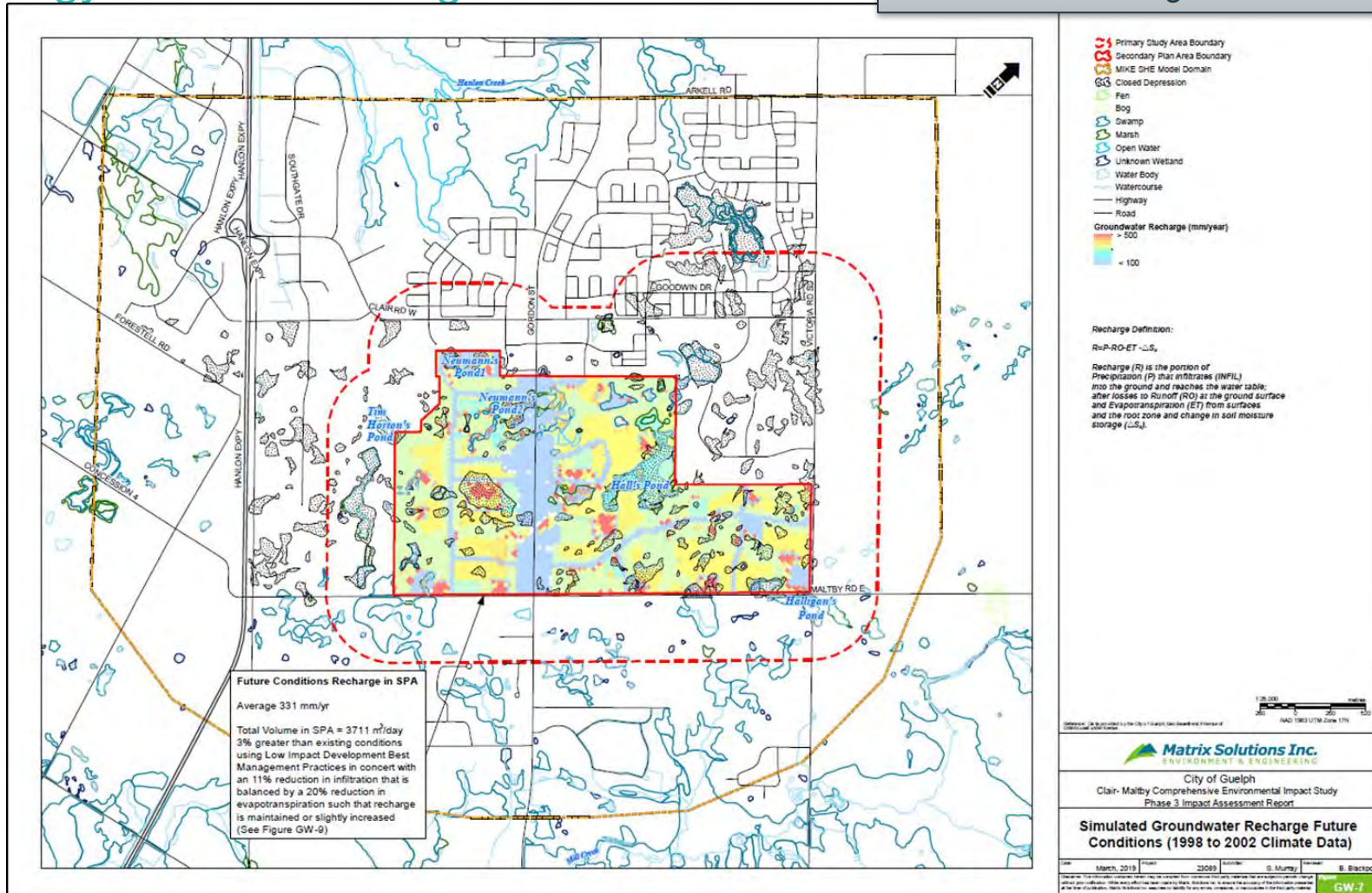




# 3. Impact Assessment

## Hydrogeology: *Future Recharge*

### Simulated Average Annual Recharge

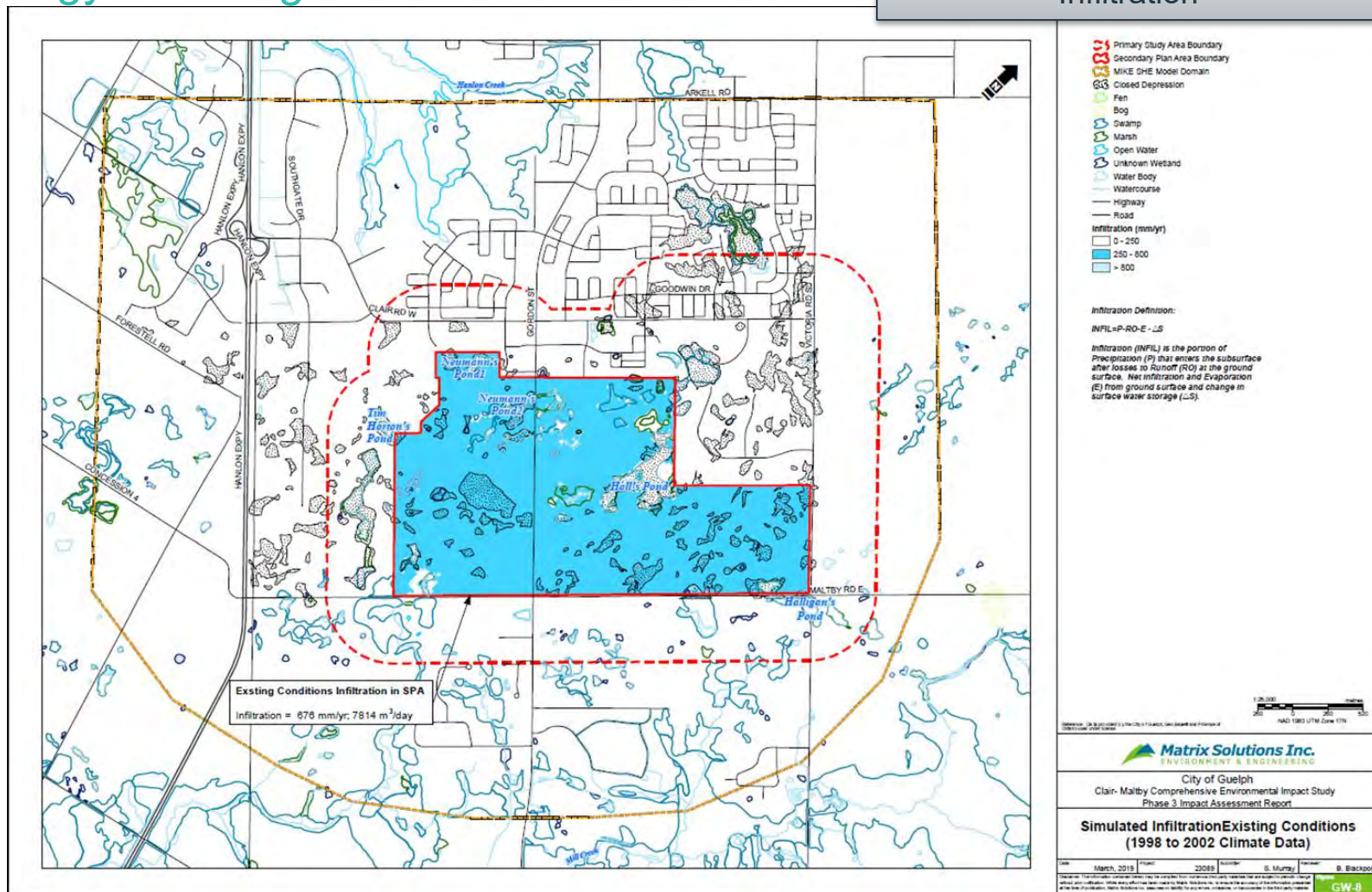




# 3. Impact Assessment

## Hydrogeology: Existing Infiltration

### Simulated Average Annual Infiltration

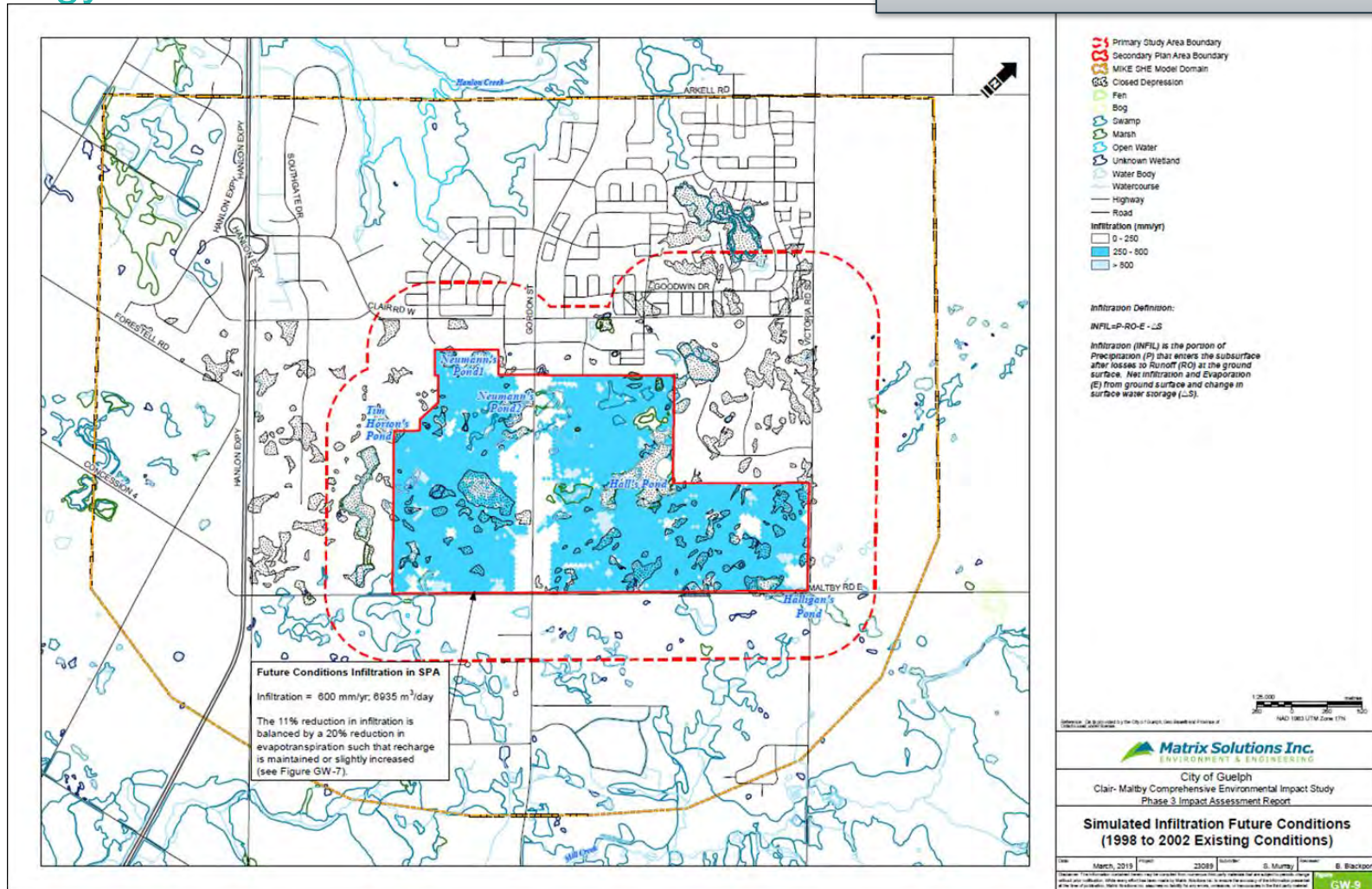




# 3. Impact Assessment

## Hydrogeology: Future Infiltration

### Simulated Average Annual Infiltration













# 3. Impact Assessment

---

## Hydrogeology: Summary

- **Maintained:**
  - Recharge to bedrock aquifer (flux out of the bottom of the model)
  - Groundwater flow directions and depth to water
  - Groundwater discharge to Hanlon, Torrance, Mill Creek
  - Groundwater discharge to wetlands outside the SPA, associated with Hanlon, Torrance and Mill Creek, including the area west of the SPA but east of the Hanlon
- **Potential Increases:**
  - Runoff increase into the Halls, Halligan, Neumann ponds, negligible (~2 cm increase in pond water level), not expected to influence hydroperiod
  - Further refinement to management strategy part of next round of assessment
- **Opportunities for Refinement.**
  - Potential to further optimize capture and still maintain function



# 3. Impact Assessment

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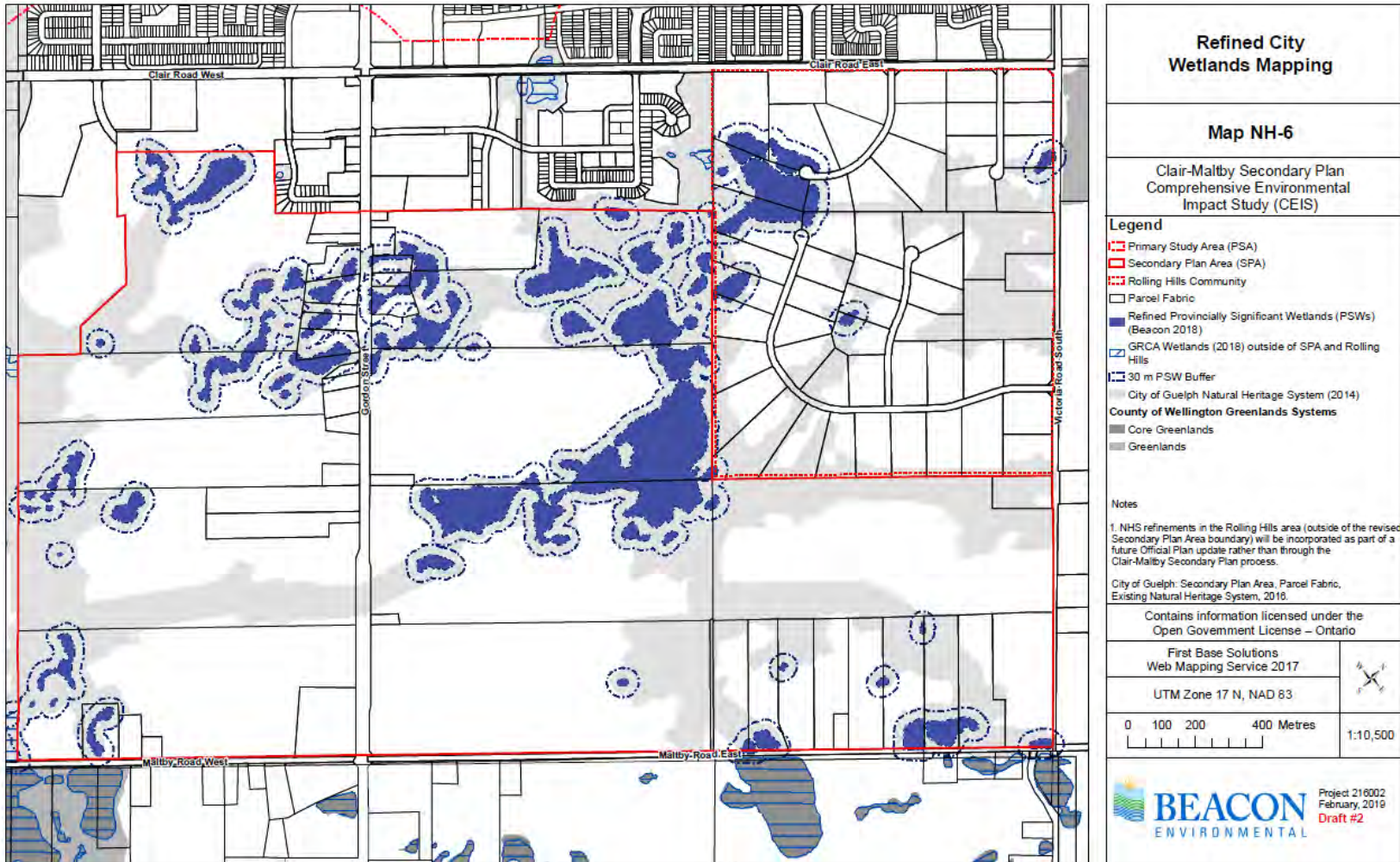
## Natural Heritage System

- Refinement of Significant Wetlands and other Wetlands
- Refinement of Woodland areas
- Significant Wildlife Habitat
- Significant Landform
- Refinement of Ecological Linkages and Wildlife Crossings
- Input to Community Structure



# 3. Impact Assessment

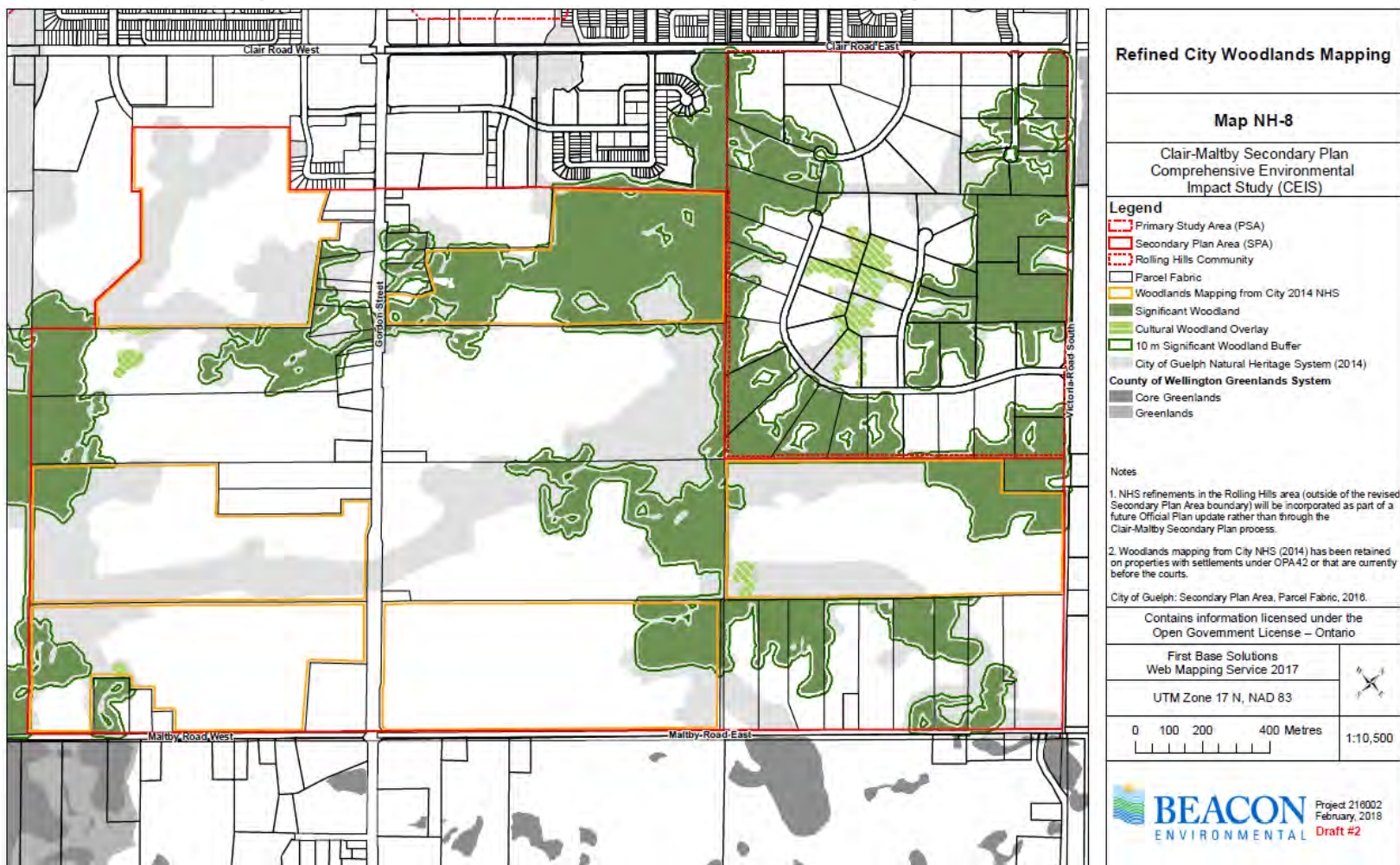
## NHS Findings: Integrated Refined Wetlands Mapping





# 3. Impact Assessment

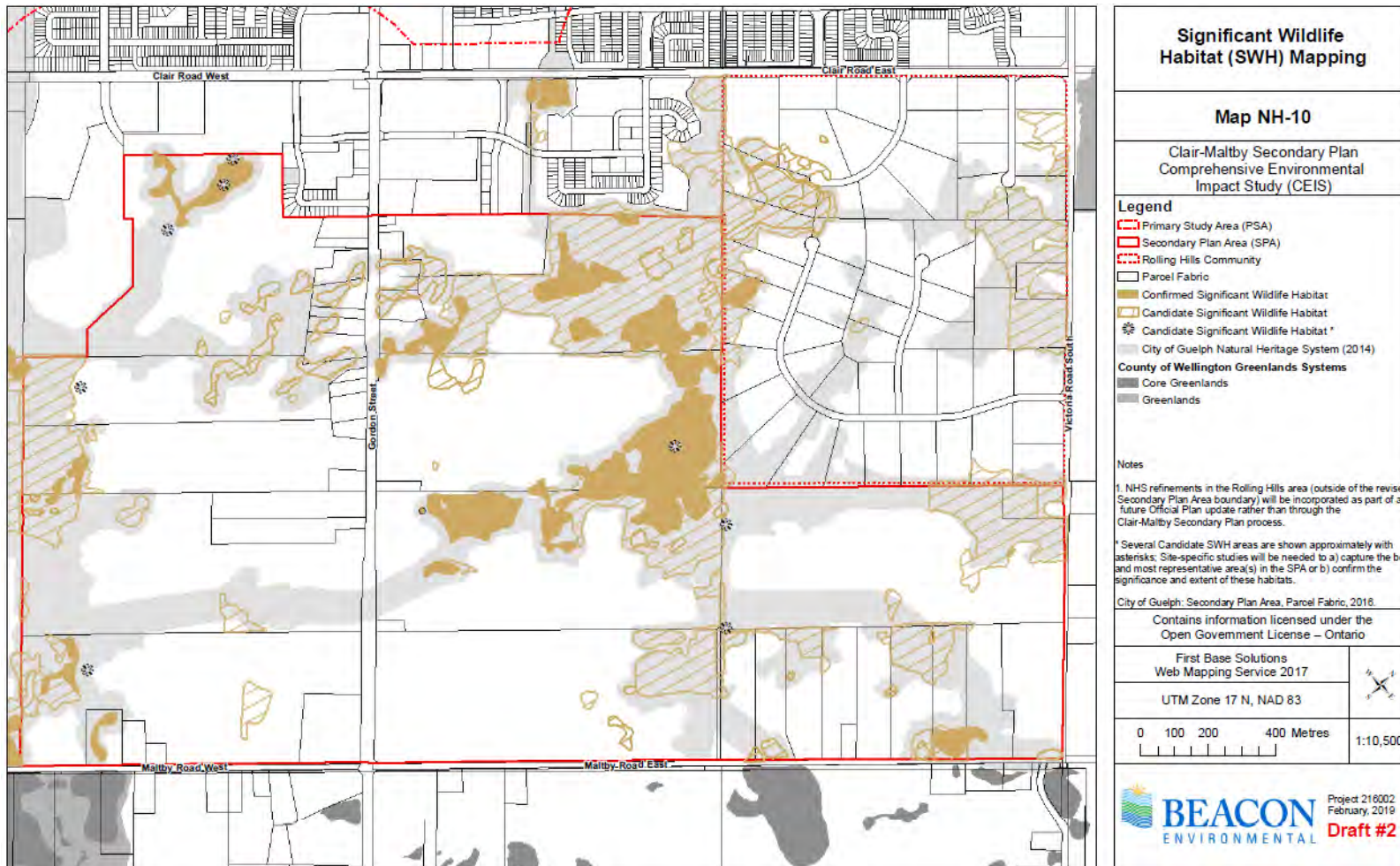
## NHS Findings: Refined Woodlands Mapping





# 3. Impact Assessment

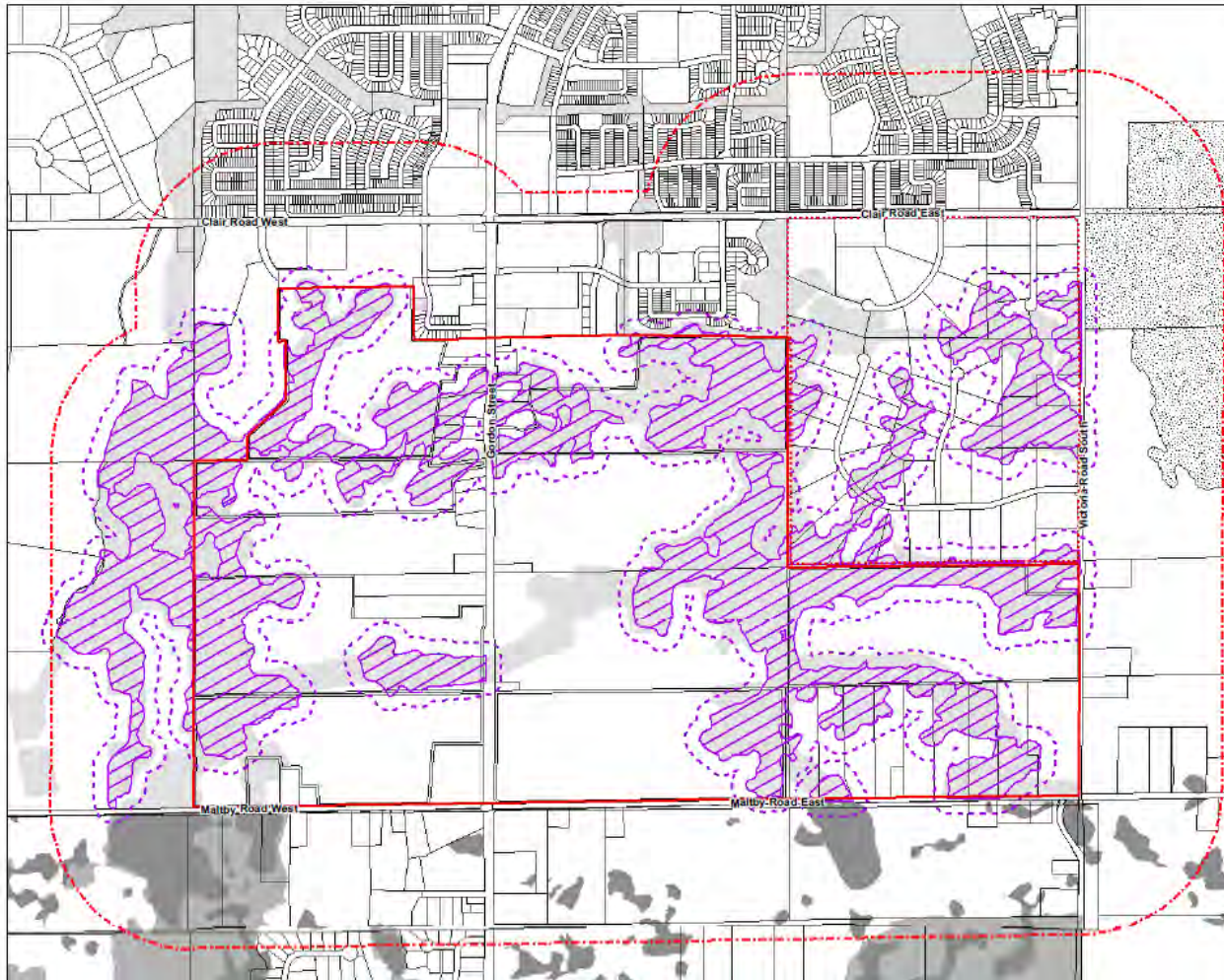
## NHS Findings: Simplified Significant Wildlife Habitat





# 3. Impact Assessment

## NHS Findings: Significant Landform



<b>Significant Landform</b>	
<b>Map NH-13</b>	
Clair-Malby Secondary Plan Comprehensive Environmental Impact Study (CEIS)	
<b>Legend</b>	
	Primary Study Area (PSA)
	Secondary Plan Area (SPA)
	Rolling Hills Community
	Significant Landform (City of Guelph 2014)
	Significant Landform (2014) 50 m Adjacent Lands Setback
	Paris Moraine Earth Science ANSI (MNR 2018)
	City of Guelph Natural Heritage System (2014)
<b>County of Wellington Greenlands Systems</b>	
	Core Greenlands
	Greenlands
<b>Notes</b>	
1. NHS refinements in the Rolling Hills area (outside of the revised Secondary Plan Area boundary) will be incorporated as part of a future Official Plan update rather than through the Clair-Malby Secondary Plan process.	
City of Guelph: Secondary Plan Area, Parcel Fabric, 2016.	
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First Base Solutions Web Mapping Service 2017	
UTM Zone 17 N, NAD 83	
0 125 250 500 Metres	1:14,000
	Project 218002 February, 2019 Draft #2



# 3. Impact Assessment

## Input to Community Structure: NHS Refinements



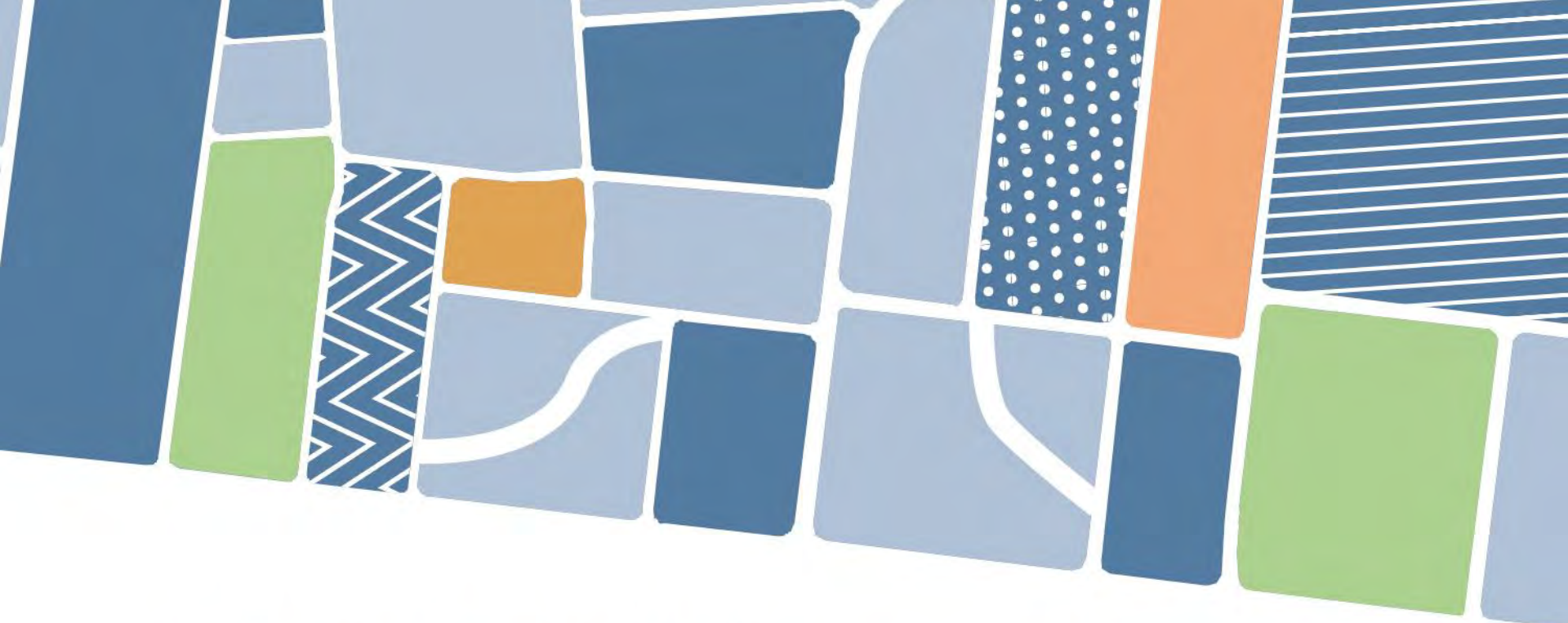


### 3. Impact Assessment

#### Input to Community Structure: NHS Refinements (Areas)

NHS Component	2014 NHS in the SPA (ha)	Refined NHS in the SPA (ha)	2014 NHS in Rolling Hills (ha)	Refined NHS in Rolling Hills (ha)
Significant Natural Areas	160.22	173.87	40.96	63.05
Natural Areas Overlay	0.76	4.31	1.58	3.74
Linkages	14.01	11.19	1.19	0.93
<b>TOTALS</b>	<b>174.99</b>	<b>189.37</b> (14.38 net gain)	<b>43.73</b>	<b>67.72</b> (23.99 net gain)





# Clair-Maltby

Transform. Connect. Community.

## 4. Preliminary Management Approach and Strategies



## 4. Preliminary Management Approach and Strategies

---

### Summary of Findings

- a. Flows within Hanlon and Mill Creek are low, but have baseflow from contributing groundwater discharge
- b. 93% to 97% precipitation either infiltrates or evaporates / transpires
- c. There are 47 significant depressional features with over 300 mm of storage depth
- d. Only 7 out of 47 significant depressional features (>300 mm capture) exhibited a discharge over 67 years of simulation period
- e. Surface water contributions to wetlands are significant



## 4. Preliminary Management Approach and Strategies

---

### SWM Considerations

1. No on-site watercourses hence traditional 'post- to pre-' runoff targets not appropriate
2. Modelling (groundwater and surface water) has shown strong connections between surface water capture / infiltration and linkage to wetlands
3. Depressional capture of surface runoff is distributed / widespread
4. Infiltration water feeds both local ecosystems and potable aquifers





## 4. Preliminary Management Approach and Strategies

---

### Stormwater Management System: *Planning Principles*

- a. 'Maintain' existing drainage boundaries
- b. 'Preserve' topography
- c. Define primary / core locations for stormwater runoff capture (SWCA)
- d. Size systems for full capture / retention of design event (100 year / Regional Storm) plus *climate change* buffer
- e. Provide relief overflow to adjacent natural features in the event of major storm beyond design capacity and to offer added resiliency for *climate change*



## 4. Preliminary Management Approach and Strategies

---

### Stormwater and Groundwater Management System: *Planning Principles*

- f. Provide pre-treatment upstream of designated capture systems:
  - Separate ‘clean’ water from ‘dirty’ water
  - Oil/Grit Separators for roadways
  - Vegetated filters prior to discharge to capture zones (lined) – *treatment train*
- g. Distributed LID BMPs throughout to mimic current condition (Public / Private Realm) – further build *Climate Change* resiliency
- h. Site porous land uses adjacent / near capture zones (schools, parks, linkages) to provide buffer / resiliency



## 4. Preliminary Management Approach and Strategies

---

### Groundwater Management System: *Planning Principles*

- a. Maintain groundwater flow directions and gradients
- b. Maintain groundwater discharge to Hanlon, Torrance and Mill Creeks
- c. Maintain groundwater discharge to wetlands outside SPA and one (1) within the SPA
- d. Maintain deep recharge to bedrock aquifer, supplying Guelph municipal wells



## 4. Preliminary Management Approach and Strategies

---

### Natural Heritage System: *Planning Principles*

#### Aquatic Habitats

- a. Protect fish habitat in accordance with applicable Federal regulations
- b. Protect, conserve, mitigate or maintain headwater drainage features in accordance with City and GRCA policies with consideration for relevant guidelines

#### Protected Species Habitat and Specialized Habitats

- c. Protect habitat for Provincially Endangered and Threatened species in accordance with the *Endangered Species Act (2007)* and in consultation with the appropriate Ministry
- d. Protect confirmed habitat for Significant Wildlife Habitat and habitat of locally significant species in accordance with the City of Guelph's policies with consideration for applicable Provincial guidance



## 4. Preliminary Management Approach and Strategies

---

### Natural Heritage System: *Planning Principles (continued)*

#### Terrestrial Habitats (including Wetlands)

- e. Protect Significant Wetlands, Significant Woodlands, Other Wetlands, Cultural Woodlands and their buffers in accordance with applicable Provincial, GRCA and City policies
- f. Ensure pre-development area-specific water balances within each catchment are maintained to sustain feature hydrology
- g. Ensure the water quality of all protected wetlands is maintained or improved
- h. Pursue opportunities to enhance local biodiversity through naturalization

#### Significant Landform

- i. Ensure no net loss of designated Significant Landform areas
- j. Protect the functional characteristics of Significant Landform areas (including associated drainage and natural heritage functions)
- k. Integrate Significant Landform into the community such that its visual uniqueness is not negatively impacted



## 4. Preliminary Management Approach and Strategies

---

### Natural Heritage System: *Planning Principles (continued)*

#### Ecological Linkages and Connectivity

- l. Maintain connections between and among Significant Natural Areas and protected Natural Areas in accordance with Provincial and City policies, and also considering connectivity to natural areas outside the City
- m. Pursue opportunities to support and enhance local biodiversity and connectivity through restoration, naturalization and implementation of measures to provide for safe wildlife movement across roads

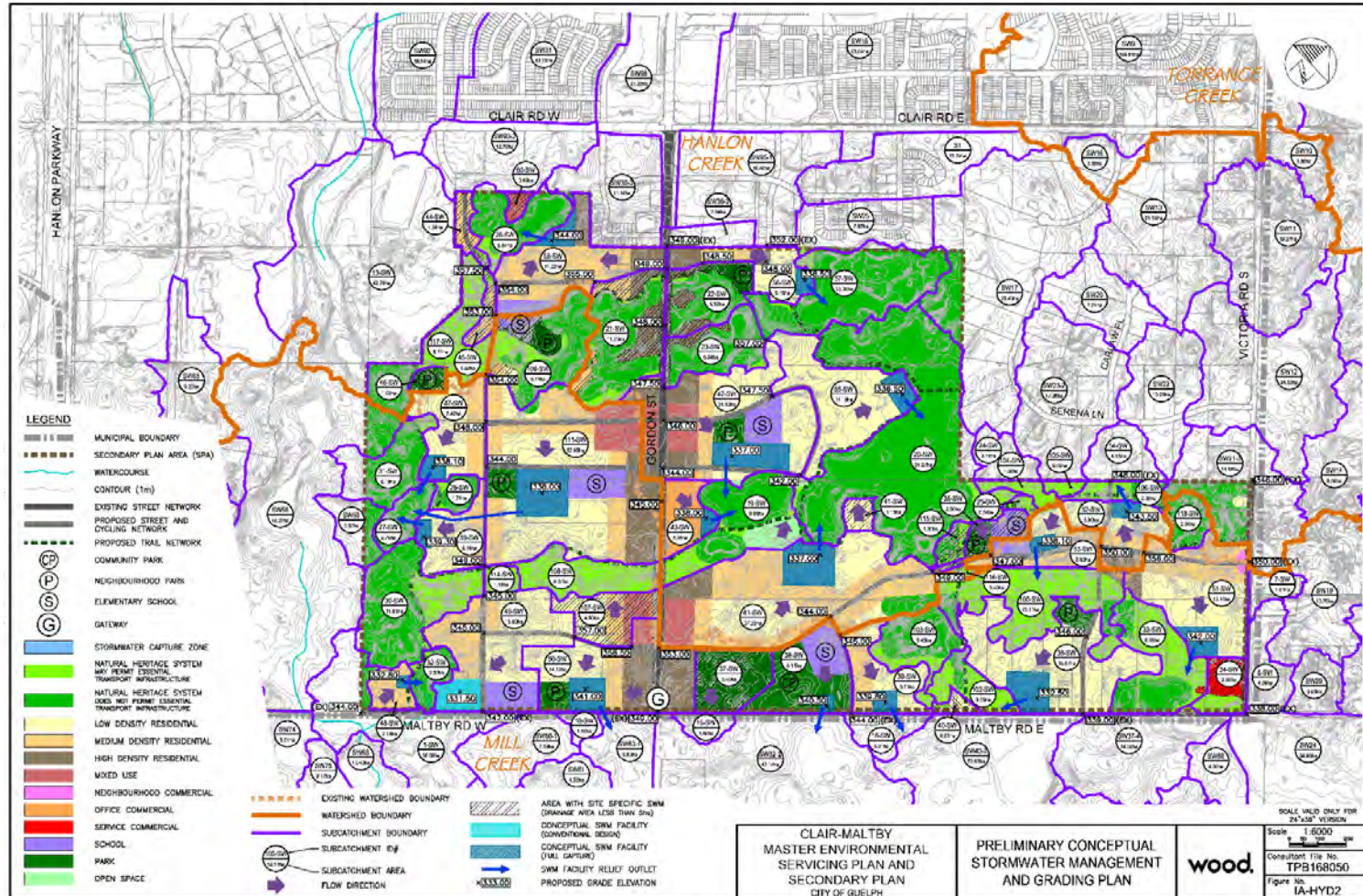
#### Minimize and manage encroachments into the NHS by:

- n. Having a sensitively designed trail system that balances access and connectivity with NHS protection
- o. Committing to ongoing stewardship education and engagement
- p. Implementing strategies intended to manage encroachments (e.g., fencing, dog parks, etc.) as the Secondary Plan is implemented



# 4. Preliminary Management Approach and Strategies

## Proposed Conditions





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# Questions?



# Wrap up and Next Steps

---

- Technical information to inform amendments to the Preferred Community Structure
- May 13 - Planning Council
  - Final Directions Report
  - Project Timelines



## City Council - Planning Meeting Agenda

**Monday, May 13, 2019 – 6:00 p.m.**  
**Council Chambers, Guelph City Hall, 1 Carden Street**

Please turn off or place on non-audible all electronic devices during the meeting.

Please note that an electronic version of this agenda is available on  
[guelph.ca/agendas](http://guelph.ca/agendas).

Guelph City Council and Committee of the Whole meetings are streamed live on  
[guelph.ca/live](http://guelph.ca/live).

---

### **Authority to move into closed meeting**

That the Council of the City of Guelph now hold a meeting that is closed to the public, pursuant to the Municipal Act, to consider:

**CS-2019.57                      Acquisition – Speedvale Avenue East**  
Section 293 (2) (c) of the Municipal Act a proposed or pending acquisition or disposition of land by the municipality or local board.

---

### **Open Meeting – 6:30 p.m.**

#### **Closed Meeting Summary**

O Canada  
Silent Reflection  
First Nations Acknowledgment  
Disclosure of Pecuniary Interest and General Nature Thereof

---

### **Items for Discussion:**

The following items have been extracted from the Committee of the Whole Consent Report and the Council Consent Agenda and will be considered separately. These items have been extracted either at the request of a member of Council or because they include a presentation and/or delegations.

**IDE.2019.02                      Procedure to Request Temporary Suspension of  
Enforcement of Driveway Regulations: Draft  
Framework Presentation**

#### **Presentation:**

Bill Bond, Zoning Inspector III/Senior By-law Administrator



**Recommendation:**

That Report IDE- 2019-02 regarding establishing a procedure to allow individual neighbourhoods to request a temporary suspension of enforcement with respect to driveway widths of semi-detached dwellings or on-street townhouses, as regulated by the City of Guelph Zoning By-law (1995)-14864, be received.

**Council Support of Bill 71, the Paris Galt Moraine Conservation Act, 2019**

**Presentation:**

Mayor Guthrie will speak to this item.

**Recommendation:**

1. That Guelph City Council supports and endorses the passage of Bill 71, the Paris Galt Moraine Conservation Act, 2019.
2. That a copy of this resolution be forwarded to the Ministry of Municipal Affairs and Housing, MPP Mike Schreiner, Conservation Halton, Credit Valley Conservation Authority, Grand River Conservation Authority, the Regional Municipality of Peel, the Regional Municipality of Waterloo, the Region of Halton, Wellington County, Norfolk County and Brant County for their information.

**IDE.2019.51**

**Clair-Maltby Secondary Plan: Phase 3 Project Update**

**Presentation:**

Stacey Laughlin, Senior Policy Planner

**Recommendation:**

1. That the updated Clair-Maltby Secondary Plan Preferred Community Structure, dated May 13, 2019 and included as Attachment 1 to report IDE-2019-51, be approved as the basis for the preparation of the draft official plan amendment, secondary plan policies and Master Environmental Servicing Plan, as well as ongoing detailed technical analysis, including numerical modelling throughout Phase 3 of the project while still allowing for flexibility to respond to updated data, and community engagement.
2. That the Clair-Maltby Secondary Plan Policy Directions Document dated May 13, 2019 and included as Attachment 3 to report IDE-2019-51, be approved to provide direction for the preparation of the draft official plan amendment, secondary plan policies and Master Environmental Servicing Plan.



3. That the feasibility of a Moraine Ribbon as part of the Open Space System in the Clair-Maltby Secondary Plan area be explored throughout the remainder of Phase 3 of the project.
  4. That the Interim Employment Lands Update prepared by Watson & Associates Economists Ltd. dated February 21, 2018 and included as Attachment 6 to report IDE-2019-51 be received.
  5. That the proposed project timeline for the remainder of Phase 3 of the project be approved as outlined in report IDE-2019-51.
- 

## **Special Resolutions**

### **By-laws**

Resolution to adopt the By-laws (Councillor Billings).

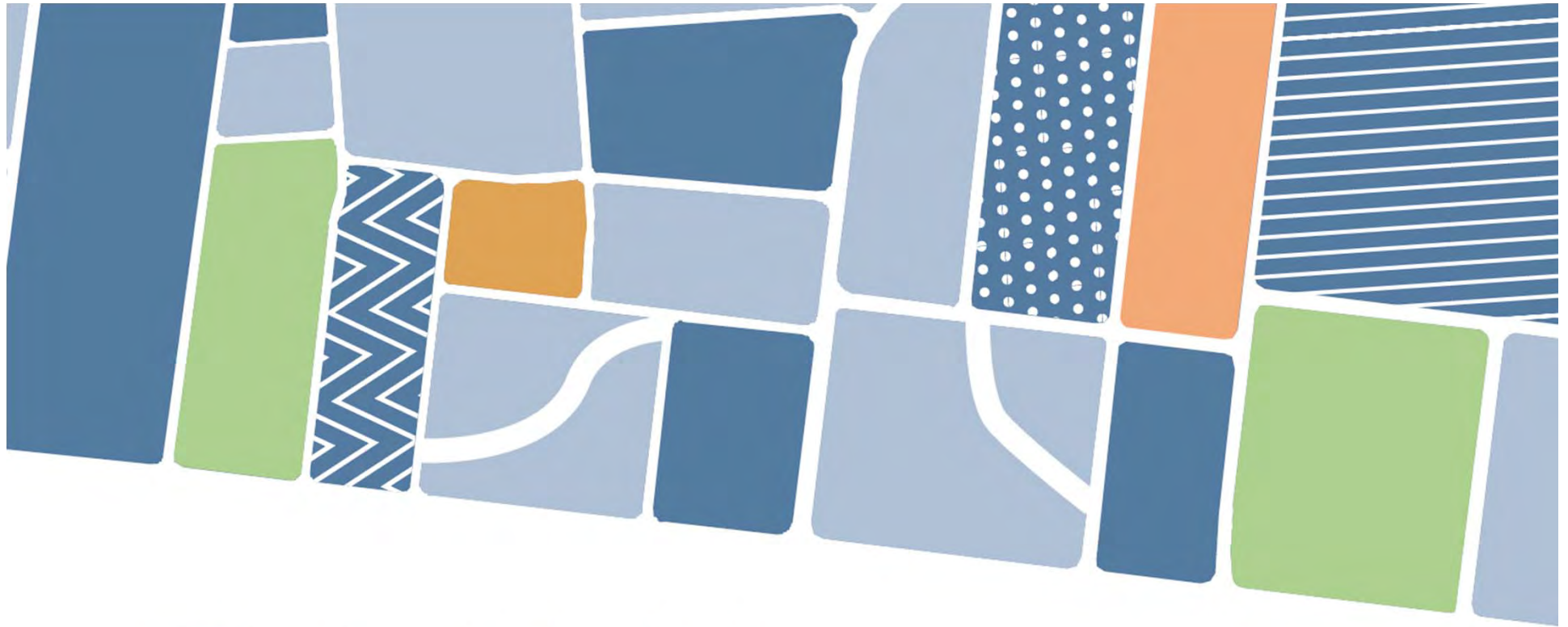
### **Mayor's Announcements**

Please provide any announcements, to the Mayor in writing, by 12 noon on the day of the Council meeting.

### **Notice of Motion**

### **Adjournment**





# Clair-Maltby

Transform. Connect. Community.

## Phase 3 Project Update






# Presentation Outline

- Phase 3 work to date
- Updated Preferred Community Structure
- Open Space System Strategy & Moraine Ribbon
- Policy Directions Document
- Project Timeline





# CEIS Phase 3 Impact Assessment

- Urban development can occur without negatively impacting the Paris Moraine, the NHS or water resources
- The Paris Moraine is an important recharge area for local wetlands and headwaters of Hanlon Creek and Mill Creek, but not for the City's drinking water supply





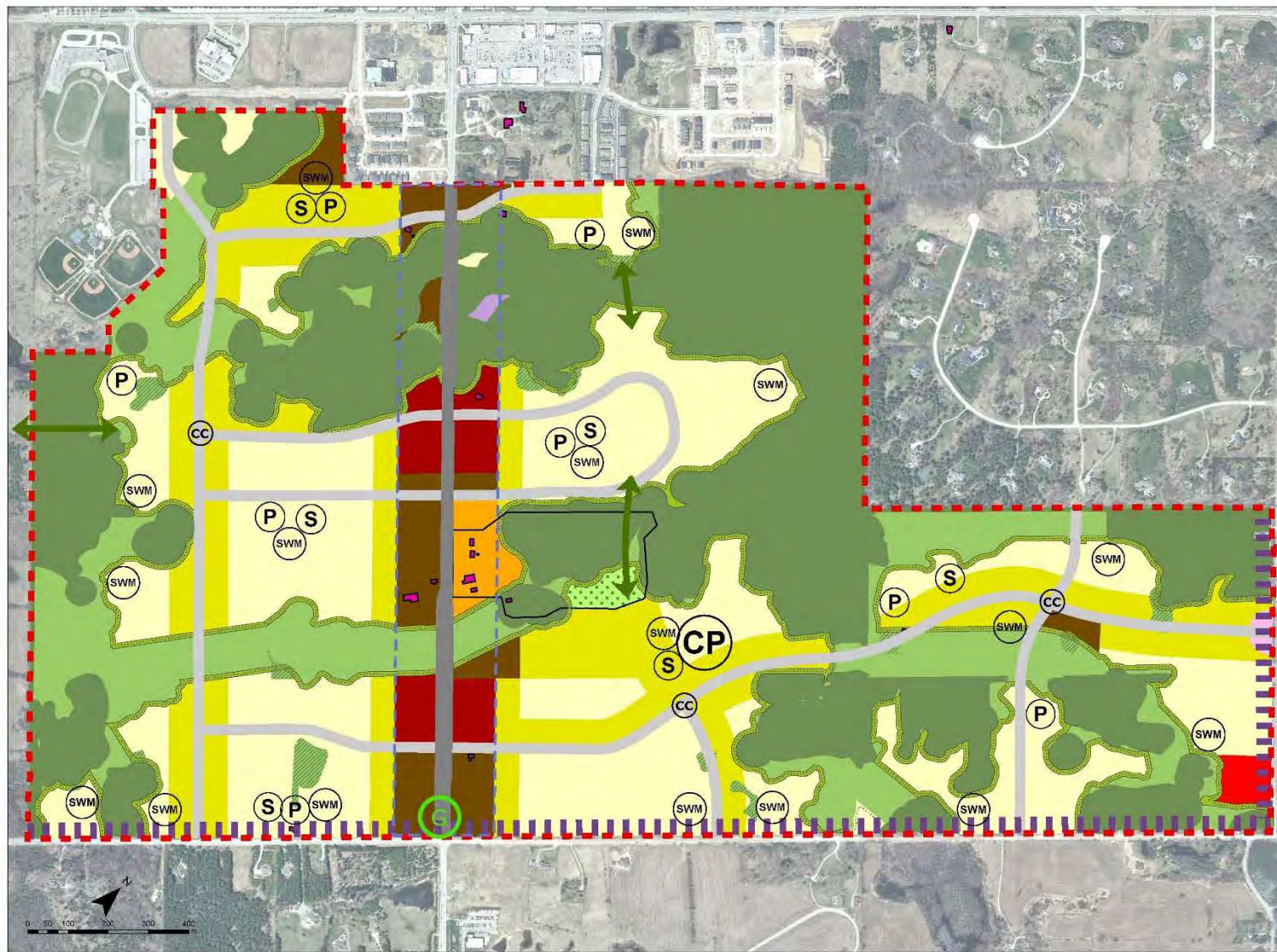
## Phase 3 Technical Work

- Water/Wastewater Servicing Study
- Stormwater Management Plan
- Mobility – Transportation Master Plan Study
- Employment Lands Update





# UPDATED PREFERRED COMMUNITY STRUCTURE



## Legend

- Clair-Maltby Secondary Plan Boundary
- Cultural Heritage Landscape
- Heritage Buildings
- Gordon Street Corridor
- Urban-Rural Transition Zone

## Streets and Trails

- Existing Street Network
- Proposed Street and Cycling Network

## Parks, Schools, and Features

- Potential Neighbourhood Parks
- Potential Community Park
- Potential Stormwater Management Areas
- Potential Elementary Schools
- Convenience Commercial Area
- Gateway
- Proposed Moraine Ribbon
- Potential Active Transportation Link

## Refined Natural Heritage System

- Does Not Permit Essential Transportation Infrastructure
- May Permit Essential Transportation Infrastructure
- Natural Areas Overlay (May Permit Essential Transportation Infrastructure)
- Restoration Area (Does Not Permit Essential Transportation Infrastructure)

## Land Use

- Low Density (Residential)
- Medium Density (Residential)
- High Density (Residential)
- Mixed Use
- Neighbourhood Commercial
- Service Commercial
- Mixed Office / Commercial
- Open Space



May 13, 2019







# Policy Directions Document

- Draft released in November 2018
- Public and stakeholder feedback has informed the recommended Directions Document
- Open space strategy and Moraine Ribbon added





# Proposed Project Timelines

Date	Milestone/Deliverable
September 2019	<ul style="list-style-type: none"><li>• Release of the first draft of the secondary plan</li><li>• Public Open House</li><li>• Additional public engagement opportunity</li></ul>
October 2019	Statutory Public Meeting (Council)
November/December 2019	Additional engagement opportunities and stakeholder meetings to inform changes to the draft
November 2019-January 2020	Revisions to the draft to finalize and prepare Recommended Secondary Plan
Q1 2020	Council Decision Meeting for Recommended Secondary Plan

\*Tentative timeline dependent upon changes occurring to Provincial Policy and Legislation\*



# Staff Report



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To	<b>City Council</b>
Service Area	Infrastructure, Development and Enterprise Services
Date	Monday, May 13, 2019
Subject	<b>Clair-Maltby Secondary Plan: Phase 3 Project Update</b>
Report Number	IDE-2019-51

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## Recommendation

1. That the updated Clair-Maltby Secondary Plan Preferred Community Structure, dated May 13, 2019 and included as Attachment 1 to report IDE-2019-51, be approved as the basis for the preparation of the draft official plan amendment, secondary plan policies and Master Environmental Servicing Plan, as well as ongoing detailed technical analysis, including numerical modelling throughout Phase 3 of the project while still allowing for flexibility to respond to updated data, and community engagement.
  2. That the Clair-Maltby Secondary Plan Policy Directions Document dated May 13, 2019 and included as Attachment 3 to report IDE-2019-51, be approved to provide direction for the preparation of the draft official plan amendment, secondary plan policies and Master Environmental Servicing Plan.
  3. That the feasibility of a Moraine Ribbon as part of the Open Space System in the Clair-Maltby Secondary Plan area be explored throughout the remainder of Phase 3 of the project.
  4. That the Interim Employment Lands Update prepared by Watson & Associates Economists Ltd. dated February 21, 2018 and included as Attachment 6 to report IDE-2019-51 be received.
  5. That the proposed project timeline for the remainder of Phase 3 of the project be approved as outlined in report IDE-2019-51.
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## Executive Summary

### Purpose of Report

The purpose of this report is to provide Council with:

1. A summary of the Phase 3 work completed to date.
2. The Updated Preferred Community Structure (see Attachment 1) for approval as the basis for the preparation of the draft secondary plan policies and official plan amendment and the Master Environmental Servicing Plan (MESP).
3. The final Policy Directions Document (see Attachment 3) for approval.



4. The concept of a Moraine Ribbon as part of the Open Space System in the Clair-Maltby Secondary Plan area and receive direction from Council to explore the feasibility of this concept.
5. The timeline for the remainder of the project for approval.
6. The Interim Employment Lands Update (see Attachment 6) for receipt.

## **Key Findings**

The Updated Preferred Community Structure and the policy directions conform to the approved Vision and Guiding Principles for the Clair-Maltby Secondary Plan (CMSP) project. The updated structure and policy directions are:

- Green and Resilient
- Healthy and Sustainable
- Vibrant and Urban
- Interconnected and Interwoven
- Balanced and Liveable

The Updated Preferred Community Structure and Policy Directions puts protection of the Paris Moraine and the City's natural heritage and water resources first. Further, the Updated Preferred Community Structure and Policy Directions create a framework to enable carbon neutral policies to be developed for this area in line with the City's goal of being a Net Zero Carbon Community by 2050.

The changes to the Preferred Community Structure were informed by the detailed technical work that has been undertaken to date in Phase 3, including data analysis and numerical modelling, as well as public and stakeholder feedback.

The technical work completed as part of the Comprehensive Environmental Impact Study (CEIS) has concluded that urban development can occur in the Clair-Maltby area without negatively impacting the Paris Moraine, the Natural Heritage System or water resources.

The modelling completed confirms the City's understanding that the Paris Moraine is not a significant recharge area for the City's drinking water supply, however, is an important recharge area for the local wetlands and headwaters of creeks in the surrounding area.

The feasibility of including a Moraine Ribbon as part of the Open Space System in the CMSP area should be explored throughout the remainder of the CMSP project and recommendations will be provided with the draft secondary plan.

The Updated Preferred Community Structure and the Policy Directions Document will be the basis for the preparation of the draft secondary plan policies. The Updated Preferred Community Structure will be refined in the land use schedule and associated schedules as part of the draft Secondary Plan in response to ongoing community and stakeholder engagement and additional technical information.

## **Financial Implications**

Capital funding to undertake this project was approved through the 2013-2015 and 2017 capital budgets.



The financial implications of future growth for this area will be assessed through the fiscal impact assessment to be completed as part of preparing the draft Secondary Plan and Master Environmental Servicing Plan (MESP).

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## Report

### Purpose

The CMSP is being undertaken to comprehensively plan the last unplanned greenfield area of the City. The Secondary Plan will develop a land use plan for the study area which provides more detailed planning objectives and policies than those found in the overall Official Plan. The MESP component of the study will determine preferred municipal infrastructure and servicing related to water, wastewater, stormwater management and mobility for the secondary plan area.

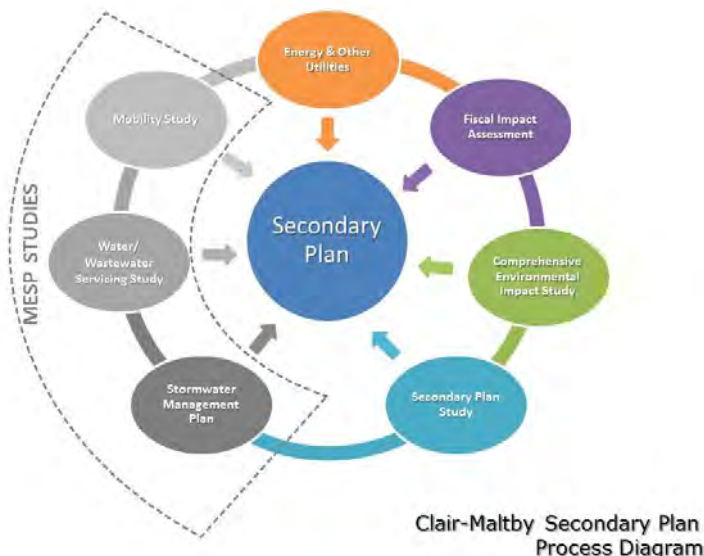
### Background

The CMSP project includes several components or tasks:

- Comprehensive Environmental Impact Study (CEIS)
- Water/Wastewater servicing study
- Stormwater management plan
- Mobility study
- Energy and other utilities study
- Secondary plan
- Fiscal impact assessment
- Community engagement and communications

The MESP component of the study includes the water/wastewater servicing study, stormwater management plan and the mobility study. Collectively, the project is referred to as the CMSP – see Figure 1.

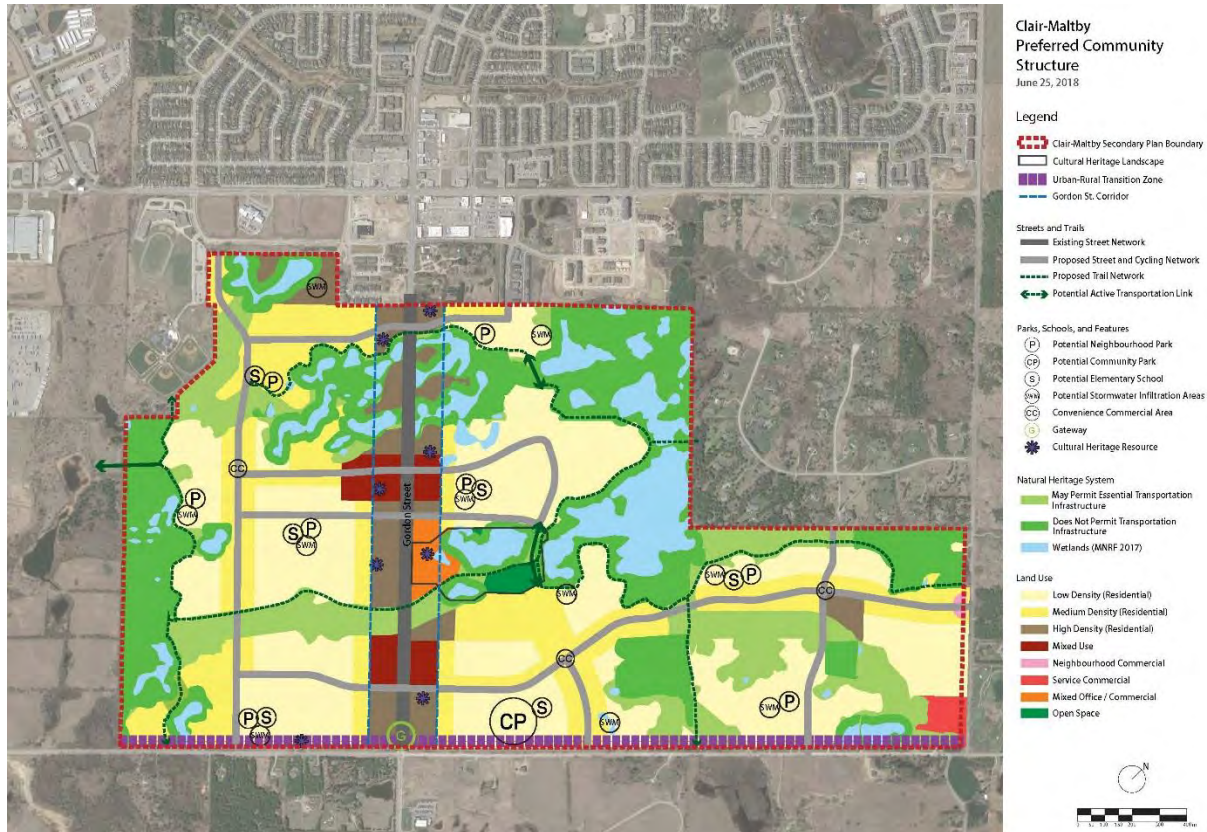
Figure 1: Clair-Maltby Secondary Plan Process Diagram





On June 25, 2018 Council approved the Preferred Community Structure (see Figure 2) as the basis for detailed technical analysis, numerical modeling and the development of draft policies and the draft land use schedule throughout Phase 3 of the project while allowing for maximum flexibility to respond to updated data and enhanced community engagement.

Figure 2 Preferred Community Structure (June 25, 2018)



## Water Supply and Source Water Protection

The CMSP will provide for protection of existing municipal water supply and conform with the City's Source Water Protection Program. The City's Source Water Protection Program has been ongoing since 2006 and, under the requirements of the Clean Water Act, the City has water quality protection policies in place and is in the process of developing water quantity policies. The CMSP area has been considered in Source Protection water budget studies and the same modelling tools used in the Source Protection projects have been used in the Clair-Maltby studies to assess potential water quantity impacts of future development of the lands. The City's Source Protection Program is foundational to the CMSP since it establishes clear policies with respect to protection of water quality and water quantity for the City's municipal water supply. Integration of Source Protection and the Clair-Maltby Secondary Plan will result in the following:

- Assessments of water budgets to define and maintain recharge and infiltration targets to protect the hydrological functions of the moraine



- Balancing water quality and water quantity in stormwater management to achieve infiltration targets while preventing water quality impacts
- Conformity with existing Source Protection water quality policies and proposed water quantity policies for the protection of existing and future municipal water supplies

### **Project Update: Phase 3 project work**

Phase 3 work is currently underway and since June 2018 the following has been undertaken:

#### **1. Comprehensive Environmental Impact Study**

- A Public Information Session to present the Phase 1 and 2 CEIS Characterization Report was held on September 26, 2018
- The [CEIS Phase 3 Impact Assessment](#) has been completed and presented at a Public Information Session on March 28, 2019. Using the Preferred Community Structure and related technical information, this report documents the assessment of the impacts of the proposed land use/development scenario and advances preliminary mitigation and restoration recommendations. This report has been informed by the terrestrial, wildlife and water monitoring data, as well as the outputs of the integrated ground and surface water modelling. All of this information has been used to determine and demonstrate that this area of the City can be developed for urban uses without negatively impacting the City's water resources or natural heritage resources.
- It is expected that ongoing environmental monitoring will be recommended as part of the final MESP and Secondary Plan. The ongoing monitoring will rely on the three years of monitoring that has been completed to date as baseline data. Accordingly, the scope of the secondary plan project is being modified to include environmental monitoring for this year (2019) to avoid having gaps in the data between the project and the anticipated monitoring program.
- See Attachment 5 for a summary of the CEIS Phase 3 Impact Assessment

#### **2. Water/Wastewater Servicing Study**

- Alternative water and wastewater servicing solutions have been developed based on the Preferred Community Structure. Detailed analysis and consultation regarding these alternatives is underway. The water and wastewater models will be updated and the preferred water and wastewater servicing solutions will be recommended as part of the draft MESP. The detailed technical reports can be found at the following links:
  - [Wastewater Servicing: Existing Conditions Design Criteria & Level of Service Objectives Report](#)
  - [Wastewater Servicing: Alternative Servicing Strategies Development Report](#)
  - [Water Servicing: Existing Conditions Design Criteria & Level of Service Objectives](#)
  - [Water Servicing: Alternative Servicing Strategies Development Report](#)

#### **3. Stormwater Management Plan**

- Alternative stormwater management solutions based on the Preferred Community Structure have been considered and evaluated as part of the CEIS.



Further formal analysis and consultation regarding the stormwater management alternatives is underway. A stormwater management model has been developed for this area and the preferred stormwater management solution will be recommended as part of the CEIS and draft MESP.

#### **4. Mobility Study**

- The [Transportation Master Plan Study](#) for this area has been completed based on the Preferred Community Structure and including general roadway cross-sections. Building on that work, detailed roadway cross-sections are proposed to be developed for roads within the CMSP area.

#### **5. Secondary Plan Study**

- A Draft Directions Consultation Document was developed and released for public review and comment. A public workshop was held in December 2018, along with an online survey which was available immediately following the workshop until January 2019. The final version of the Policy Directions Document is attached to this report (see Attachment 3) and was modified to incorporate and to respond to the available technical information as well as stakeholder feedback received at and following the December 2018 public workshop.

#### **6. Energy and Other Utilities Study**

- The updated Preferred Community Structure creates a framework to enable carbon neutral supportive and energy efficiency policies. The next step is to continue with a more detailed energy analysis of the updated Preferred Community Structure. The energy analysis will make recommendations to: improve the energy efficiency of the plan; provide a preliminary high-level analysis of the feasibility of district energy; and, provide direction with respect to how the plan can meet the City's goal of being a net zero carbon community by 2050. The energy analysis will inform the draft secondary plan policies.

### **Open Space System Strategy**

The CMSP area is located on the Paris Moraine, which is a unique natural feature in the City and as such, innovative approaches to achieving the City's open space objectives are required.

Approximately 40-45% of the Clair-Maltby Secondary Plan area is within the City's Natural Heritage System. This system is made up of significant natural areas, linkages and restoration areas. The Open Space System being planned for CMSP is being designed to be supportive of and complementary to this extensive protected NHS, and will be comprised of a range of elements including traditional parkland and innovative features such as stormwater management (SWM) areas and a 'ribbon'.

Throughout the CMSP project, the City heard from residents and stakeholders that there is a strong desire to protect the Moraine as well as natural heritage and water resources. There is also a desire for connected, off-road sustainable transportation routes (i.e. for pedestrians and cyclists), an alternative approach to SWM including green infrastructure and Low Impact Development (LID) SWM areas. Stakeholders have also requested that in addition to the planned neighbourhood and community parks, opportunities for passive recreation and access to the NHS be provided. The



area is also to be planned to achieve the amount of parkland set out in the Official Plan targets; this point has been highlighted by public input.

The City's open space system accommodates a variety of recreational pursuits while having regard for and complementing the City's natural areas. The open space system consists of parks, trails and open space areas that are not part of but may be interconnected with or supportive of the NHS and conservation lands. The open space system plays an important role in defining the character of the City and promoting community health and wellness.

The Preferred Community Structure endorsed by Council in June 2018 plans for a Community Park and eight neighbourhood parks. The intent is that these parks will meet the design criteria outlined in the Official Plan. As such, the Community Park is planned to provide a minimum of 10 ha of open space and each Neighbourhood Park is planned to be approximately 1 ha in size.

In addition to the above-noted parkland, and in order to respond to the public and stakeholder feedback received to date, the City will be investigating the following:

#### **Designing and/or engineering SWM areas to be multi-functional**

The opportunity to use SWM areas as multi-functioning facilities is unique to Clair-Maltby (within the City) because it anticipated that these areas will be dry except in extreme weather conditions. This potential opportunity may allow the City to provide additional parkland inventory separate from the parkland dedication process. Identifying these opportunities and how these areas would be considered within the City's parkland inventory requires further investigation.

#### **Co-location of schools, park and SWM areas**

The co-location of these uses has been identified through this process as something that should be pursued in order to efficiently use land and share resources where feasible. Through the remainder of Phase 3 of the study, the opportunity to share resources, including parking areas, will continue to be explored.

#### **The introduction of a Moraine Ribbon as part of the Open Space System**

The Moraine Ribbon is a unique feature that is proposed to be a connected linear open space system that runs along the NHS throughout the CMSP area and provides the following:

- A compatible/complementary land use adjacent to the NHS to assist in transitioning to future urban land uses such as residential or commercial uses;
- Reduced pressure for recreation opportunities such as trails to be provided within the NHS which may have a negative impact on NHS features, buffers and functions;
- Visual access to the NHS, including Significant Landforms, so that future residents can benefit from exposure to nature;
- Increased amount of land functioning as parkland;
- Potential additional plantable spaces, areas for naturalization and/or areas to accommodate pollinator habitat and increase tree canopy cover;
- The facilitation of sustainable transportation through the provision of an interconnected trail system; and,



- Additional opportunities to implement LIDs for SWM.

### **What is the Moraine Ribbon?**

The Moraine Ribbon is proposed to be comprised of a series of generally continuous linear interconnected open spaces. These open spaces will run adjacent to the NHS and may include and interconnect park areas, stormwater management areas, cultural heritage resources, natural areas that do not meet the criteria to be included within the NHS, and other open spaces. This Ribbon Feature will accommodate a trail, or its equivalent, throughout in order to accommodate active recreational movement, and may accommodate Active Transportation routes in locations where it corresponds with identified Active Transportation routes. Resting and/or gathering areas, as well as opportunities to provide views of the natural environment and the Paris Moraine, will add to the enjoyment of the Moraine Ribbon.

The City's Open Space System is made up of trails, parks and open space areas that are not part of, but may be interconnected with or supportive of, the Natural Heritage System. The current Park Hierarchy, as identified in Section 7.3.2 of the Official Plan (OP), includes Urban Squares, Neighbourhood Parks, Community Parks and Regional Parks. The proposed Moraine Ribbon will be a new component of the City's Open Space System and may be seen as a hybrid of trail, park and open space areas that builds on and complements the morainal topography of the area. Accordingly, it will need to be defined as something unique to the Clair-Maltby area with area specific policies incorporated into the Secondary Plan. The City will need to determine how this will be defined, how it will be conveyed and how it will form part of the trail, park and SWM inventories.

### **Next steps regarding the Open Space System for the CMSP area**

An overall open space system strategy for the CMSP area will be developed in the next steps of Phase 3 to more fully detail how the City's open space objectives will be achieved. The open space system strategy for the CMSP area will inform the detailed policies of the secondary plan and subsequent implementation measures.

If Council is supportive of the feasibility of a Moraine Ribbon being explored as part of an overall open space system strategy for the CMSP area, a more detailed analysis of the proposed Moraine Ribbon will be completed to better understand the following:

- How much additional land would potentially be required for the Moraine Ribbon after understanding the portions of the Feature that would be:
  - acquired for stormwater management purposes;
  - located within a neighbourhood or community park;
  - located on a potential future school block and whether this land would have to be acquired or could be used for the Moraine Ribbon by way of an agreement; and,
  - located within a right-of-way and therefore acquired as part of the road;
- How different sections of the Moraine Ribbon would be included in the City's SWM, trail and park inventories;



- The financial implications of planning for a Moraine Ribbon including the cost of and options for acquiring the land and, further the cost of developing the Moraine Ribbon; impacts to future development charges and anticipated parkland dedication within the secondary plan area; and,
- The impact, if any, to the population and density numbers for Clair-Maltby.

Additional information regarding the Open Space System for the CMSP area, including the proposed Moraine Ribbon is included in Attachment 2 to this report. The open space system strategy for the CMSP area will be outlined in a future public discussion paper.

### **Policy Directions Document**

The [Policy Directions Document](#) is Attachment 3 to this report and has been updated based on the feedback received in late 2018 and early 2019. The purpose of the Policy Directions Document is to provide high-level direction for the first draft of the secondary plan policies.

A number of comments were received in response to the draft directions document that was released in November 2018. These comments were received at the public workshops in early December, as part of an online survey and submitted via email. All of the comments received have been compiled and included as Appendix C to the Policy Directions Document. In addition, Attachment 4 to this staff report provides high-level responses to the themes that emerged from the public and stakeholder comments.

The draft directions were generally aligned with many of the comments received from the public and stakeholders, except in instances where conflicting comments were received. Because the Policy Directions Document includes high-level directions, only minor refinements and clarifications were required in response to comments received. In addition, the detailed comments received from the public and stakeholders will inform the development of the detailed policies.

A notable amendment to the Policy Directions Document is the introduction of the Moraine Ribbon and a direction that the feasibility of this concept be explored.

Appendix D has also been added to the Policy Directions Document. This Appendix outlines what assumptions have been made in conjunction with the density ranges included in the Directions Document for each land use to determine a more refined estimate of the future population of the CMSP area. With these assumptions, it is estimated that Clair-Maltby will have a population in the range of 16,000 residents.

### **Updated Preferred Community Structure**

The Updated Preferred Community Structure conforms to the approved Vision and Guiding Principles for the CMSP project. The updated plan is:

- Green and Resilient
- Healthy and Sustainable
- Vibrant and Urban
- Interconnected and Interwoven
- Balanced and Liveable

The Updated Preferred Community Structure continues to be primarily residential in character, with the ability to accommodate a full range and mix of housing types,



as well as a mix of uses at key locations. A multi-modal mobility network, including major roads, bicycle infrastructure and trails, is planned to provide strong connectivity throughout the Clair-Maltby area and to the rest of the City. A connected system of parks, open spaces and trails are proposed to provide both active and passive recreation opportunities. The updated Preferred Community Structure creates a framework to enable carbon neutral policies to be developed for this area in line with the City's goal of being a Net Zero Carbon Community by 2050.

### **Natural heritage and water resources will not be impacted**

The Updated Preferred Community Structure continues to put protection of the Paris Moraine and the City's natural heritage and water resources, including the City's drinking water supply, first.

The updates to the Preferred Community Structure have been informed by detailed technical work, including data analysis and numerical modelling. The technical work and modelling completed as part of the CEIS has concluded that urban development, with appropriate and contemporary management practices in place, can occur in this area without negatively impacting the moraine, the Natural Heritage System or water resources. Further, the modelling confirms the City's previous understanding that the Paris Moraine is not a significant recharge area for the City's drinking water supply; however, it is an important recharge area for the local wetlands and headwaters of Hanlon Creek and Mill Creek. See Attachment 5 for a Summary of the CEIS Phase 3 Impact Assessment. The Updated Preferred Community Structure illustrates the refined NHS.

### **The Moraine Ribbon is conceptually shown on the plan**

The Updated Preferred Community Structure illustrates the conceptual location of the proposed Moraine Ribbon as part of the Open Space System in the CMSP area with the understanding that the feasibility, as well as the configuration, of this feature is to be further explored.

### **The location of the proposed Community Park has changed**

It is proposed that the Community Park be moved so that it nestles beside the southerly edge of Halls Pond and the surrounding NHS.

As outlined above, a significant amount of work has now been completed for the stormwater management plan for this area. With a more detailed understanding of the size and extent of required stormwater management areas, the Community Park is proposed to be located where a larger stormwater management area is required. Following the direction to pursue the co-location of parks and stormwater management areas, this allows for lands that are acquired for stormwater management purposes to be designed and/or engineered to be multi-functional. Depending on the level of engineering proposed, these areas may provide passive or active recreation opportunities complementary to adjacent park uses. The opportunity to use stormwater management areas as multi-functioning facilities is unique to Clair-Maltby (within the City) because it is anticipated that these areas will be dry except in extreme weather conditions.

Moving the Community Park also addresses some of the public and stakeholder feedback received that suggested the Community Park or another park should be



located beside Halls Pond in order to provide visual access to it and that the Community Park should not be located on an arterial road. It is important that appropriate access be provided to the Community Park for both active and vehicular transit, therefore it is proposed to be connected to the proposed east-west collector road, the Moraine Ribbon and/or a future trail network to facilitate that access.

### **Modifications to the low and medium density residential lands**

The amount of medium density residential has been decreased in order to increase the amount of low density residential areas. This has been done to improve the balanced mix of unit types to be provided within the CMSP area. The low density residential land use is proposed to accommodate a range of 20 to 60 units per hectare. This range allows for most low-rise housing types and, therefore creates flexibility for development to respond to the changing needs of the community over the next 20 years and beyond.

In addition, it is assumed that low density residential areas will have more pervious areas, allowing for more infiltration. Creating the opportunity for more infiltration will further assist in ensuring that development in this area will not impact the moraine, natural heritage or water resources.

### **General amendments to the plan have been made**

The following outlines a list of general amendments that have been made to the Updated Preferred Community Structure Plan:

- The urban-rural transition zone has been extended along both Maltby Road and Victoria Road. The urban-rural transition will ensure that low-rise buildings are located in proximity to the surrounding rural area including the area shown as high density along Gordon Street at the entrance to the City;
- A high density residential area just south of Poppy Drive has been changed to low density residential in order to assist with the mitigation of potential impacts to the wetland in that area;
- Stormwater management areas have been shifted and modified as a result of more detailed analysis being completed. The stormwater management areas are still largely co-located with parks and schools in most instances;
- Potential school and park locations have been shifted to remain co-located with stormwater management areas; and,
- Conceptual road alignments have been modified in response to refinements to the NHS and stormwater management area locations.

The Updated Preferred Community Structure and the Policy Directions Document will be the basis for the preparation of the draft secondary plan policies. The approval sought from Council will still allow for refinements to the concept in response to ongoing community and stakeholder engagement and additional technical information.

### **Project Timelines**

In February 2019 Council and project stakeholders were advised that although it was originally anticipated that the final Policy Directions Document would be released at the end of January 2019, release of the document was being delayed until May 2019 for the following reasons:



- To allow additional time to carefully review and consider the feedback received in December 2018/January 2019 and assess how it impacts the Policy Directions Document;
- To carefully consider the implications of the proposed Amendment 1 to the Growth Plan for the Greater Golden Horseshoe (2017) which was released by the Province on January 15, 2019; and,
- To ensure that the community has the updated technical information before the Policy Directions are finalized.

With the above timing shift for the final Policy Directions Document, the remainder of the project timing needed to be modified. To allow for sufficient time for community and stakeholder input into the secondary plan policies, the following timeline is being proposed:

September 2019	Release of the first draft of the secondary plan Public Open House Additional Engagement Opportunity (may include a workshop, or focused/facilitated conversations regarding the draft policies, etc.)
October 2019	Statutory Public Meeting – the same draft that is presented at the Public Open House will be presented to receive Council, agency and further community input
November/December 2019	Additional engagement opportunities and stakeholder meetings to inform changes to the draft secondary plan
November 2019 – January 2020	Revisions to the draft Secondary Plan in order to finalize and prepare a Recommended Secondary Plan
Q1 2020	Council Decision Meeting on the Recommended Secondary Plan

If needed, a second Public Open House may be held. This will be dependent upon the extent of the changes to the draft secondary plan.

The revised timeline is dependent upon several factors including changes that are occurring to Provincial policy and legislation. The province released [Proposed Amendment 1 to the Growth Plan for the Greater Golden Horseshoe, 2017](#) on January 15, 2019. The implications of the changes to the Growth Plan on the timing for the CMSP project cannot be fully evaluated until Amendment 1 is finalized. Further, it is the City’s understanding that the provincial government is also



considering changes to the Planning Act and the Provincial Policy Statement and these changes may impact planning decisions and the review of major planning documents, including this Secondary Plan.

## **Employment Lands**

Watson & Associates Economists Ltd. (Watson) was retained to prepare an Interim Employment Lands Update for the City. The analysis provides an assessment of long-term employment land needs through 2041, in accordance with forecast employment land demand and available employment lands supply. This interim update revises key elements of the City's 2010 Employment Lands Strategy with respect to forecast employment growth and employment land needs in accordance with the 2017 Growth Plan for the Greater Golden Horseshoe (prior to Amendment 1), while having regard for the Guelph Innovation District (G.I.D.) Secondary Plan. The study also considers and recommends areas for employment land conversions from a planning and economic perspective.

The study serves as a background document to the CMSP and informs the decision to convert the employment lands in the CMSP area to other uses and for Clair-Maltby to be primarily residential in character.

The study is also considered to be an interim update to provide background information and support for the City's next Official Plan update to conform to the Growth Plan, also known as the Municipal Comprehensive Review (MCR).

### **Summary of relevant findings**

The key findings of the Interim Employment Lands Update are summarized below:

- Employment lands form a vital component of Guelph's land-use structure and are an integral part of the local economic development and employment growth potential.
- The City of Guelph has a relatively large, stable and diverse employment lands base highly oriented to manufacturing that has evolved significantly over the past decade with respect to the mix of uses and location of new development.
- Guelph has experienced strong employment growth and development activity over the past decade, about half of which was accommodated on employment lands.
- Guelph is expected to have a surplus of employment land in 2041. Accordingly, the City should consider the redesignation of approximately 50 hectares of employment lands to non-employment uses. This includes approximately 40 net hectares of land currently designated for employment uses within the CMSP area.

### **Financial Implications**

Capital funding to undertake this project was approved through the 2013-2015 and 2017 capital budgets. Work completed to date is within the approved budget.

Modifications to the scope of the project are being considered which would require additional funds. These modifications include the development of road cross-sections that include details for both above ground needs, as well as below-ground needs. In addition, it is expected that ongoing environmental monitoring will be



recommended as part of the final MESP and Secondary Plan using the three years of monitoring that has been completed to date as the baseline data. Accordingly, additional funds are being allocated to this project to fund the ongoing monitoring program beginning this year (2019) to avoid having gaps in the data.

### **Consultations**

September 26, 2018	Public Information Session to present the Phase 1 and 2 CEIS Characterization Report
December 4, 2018	Two Public Workshops were held to receive feedback and input with respect to the policy directions
December 5, 2018 – January 9, 2019	Online survey to receive feedback and input with respect to the policy directions
March 28, 2019	Public Information Session to present the Phase 3 CEIS Impact Assessment

### **Corporate Administrative Plan**

#### **Overarching Goals**

Innovation

Service Excellence

Financial Stability

#### **Service Area Operational Work Plans**

Our Services - Municipal services that make lives better

Our People - Building a great community together

Our Resources - A solid foundation for a growing city

#### **Attachments**

Attachment-1 Updated Preferred Community Structure

Attachment-2 Open Space System Strategy Framework

Attachment-3 Policy Directions Document for the Clair-Maltby Secondary Plan

Attachment-4 Response to Community and Stakeholder input on the Draft Directions Consultation Document

Attachment-5 Summary of the CEIS Phase 3 Impact Assessment

Attachment-6 Interim Employment Lands Update dated February 21, 2018

#### **Departmental Approval**

Not Applicable



**Report Author**

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**Approved By**

Melissa Aldunate, MCIP, RPP  
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**Approved By**

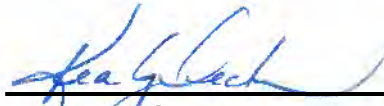
Terry Gayman, P. Eng.  
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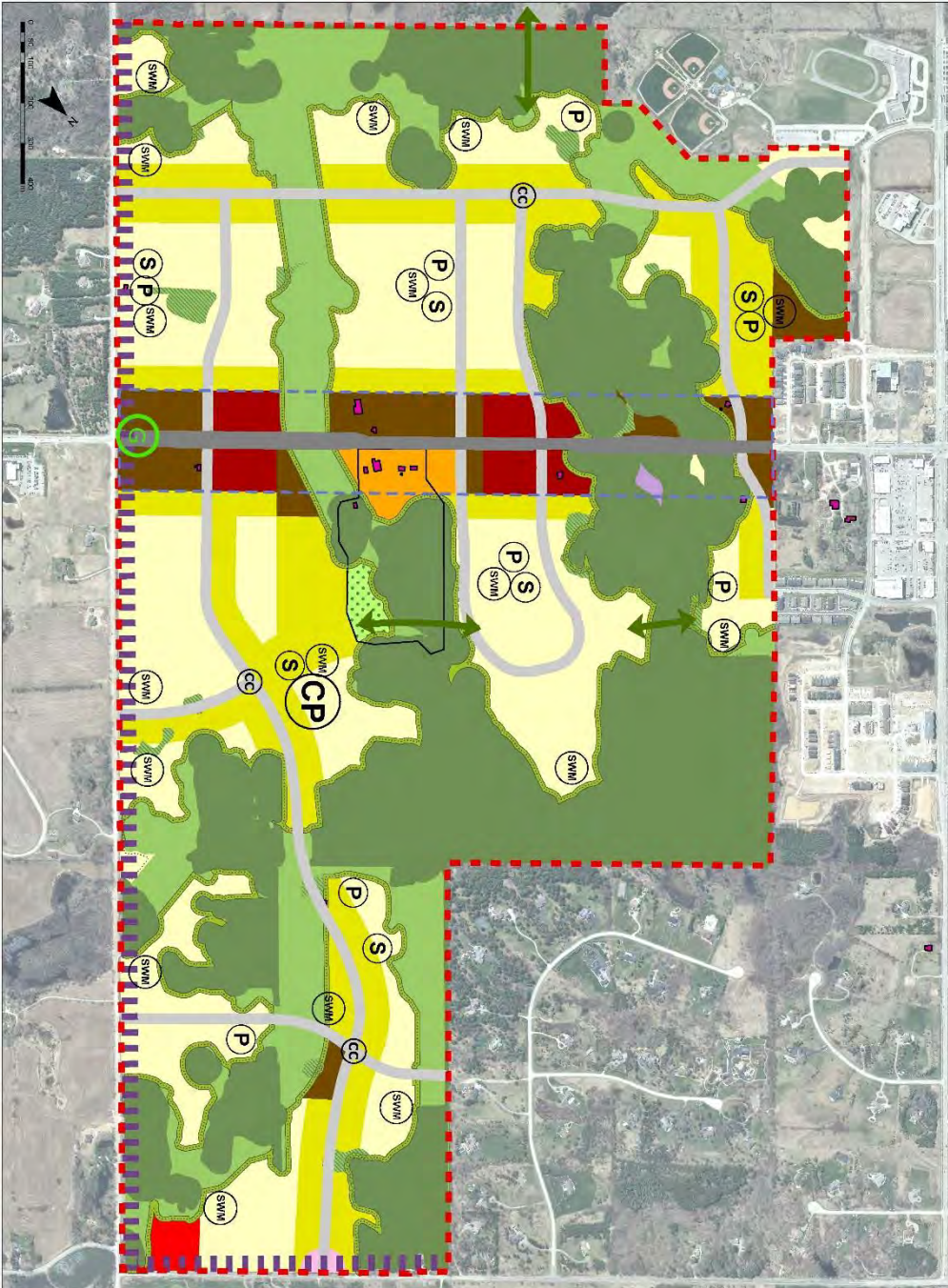
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# Attachment 1 – Updated Preferred Community Structure

# UPDATED PREFERRED COMMUNITY STRUCTURE



- Legend**
- - - Clair-Maitly Secondary Plan Boundary
  - - - Cultural Heritage Landscape
  - - - Heritage Buildings
  - - - Gordon Street Corridor
  - - - Urban-Rural Transition Zone
- Streets and Trails**
- - - Existing Street Network
  - - - Proposed Street and Cycling Network
- Parks, Schools, and Features**
- P Potential Neighbourhood Parks
  - S Potential Community Park
  - M Potential Stormwater Management Areas
  - E Potential Elementary Schools
  - CC Convenience Commercial Area
  - G Gateway
  - R Proposed Moraine Ribbon
  - T Potential Active Transportation Link
- Refined Natural Heritage System**
- Does Not Permit Essential Transportation Infrastructure
  - May Permit Essential Transportation Infrastructure
  - Natural Areas Overlay (May Permit Essential Transportation Infrastructure)
  - Restoration Area (Does Not Permit Essential Transportation Infrastructure)
- Land Use**
- Low Density (Residential)
  - Medium Density (Residential)
  - High Density (Residential)
  - Mixed Use
  - Neighbourhood Commercial
  - Service Commercial
  - Mixed Office / Commercial
  - Open Space



## **Attachment 2 – Open Space System Strategy Framework**

The CMSP area is located on the Paris Moraine, which is a unique natural feature in the City and as such, innovative approaches to achieving the City's open space objectives are required.

Approximately 40-45% of the Clair-Maltby Secondary Plan area is within the City's Natural Heritage System. This system is made up of significant natural areas, linkages and restoration areas. The Open Space System being planned for CMSP is being designed to be supportive of and complementary to this extensive protected NHS, and will be comprised of a range of elements including traditional parkland and innovative features such as stormwater management (SWM) areas and a 'ribbon'.

Throughout the CMSP project, the City heard from residents and stakeholders that there is a strong desire to protect the Moraine as well as natural heritage and water resources. There is also a desire for connected, off-road sustainable transportation routes (i.e. for pedestrians and cyclists), an alternative approach to SWM including green infrastructure and Low Impact Development (LID) SWM areas. Stakeholders have also requested that in addition to the planned neighbourhood and community parks, opportunities for passive recreation and access to the NHS be provided. The area is also to be planned to achieve the amount of parkland set out in the Official Plan targets; this point has been highlighted by public input.

The City's open space system accommodates a variety of recreational pursuits while having regard for and complementing the City's natural areas. The open space system consists of parks, trails and open space areas that are not part of but may be interconnected with or supportive of the NHS and conservation lands. The open space system plays an important role in defining the character of the City and promoting community health and wellness.

The Preferred Community Structure endorsed by Council in June 2018 plans for a Community Park and eight neighbourhood parks. The intent is that these parks will meet the design criteria outlined in the Official Plan. As such, the Community Park is planned to provide a minimum of 10 ha of open space and each Neighbourhood Park is planned to be approximately 1 ha in size.

In addition to the above-noted parkland, and in order to respond to the public and stakeholder feedback received to date, the City will be investigating the following:

### **Designing and/or engineering SWM areas to be multi-functional**

The opportunity to use SWM areas as multi-functioning facilities is unique to Clair-Maltby (within the City) because it anticipated that these areas will be dry except in extreme weather conditions. This potential opportunity may allow the City to provide additional parkland inventory separate from the parkland dedication process. Identifying these opportunities and how these areas would be considered within the City's parkland inventory requires further investigation.

### **Co-location of schools, park and SWM areas**

The co-location of these uses has been identified through this process as something that should be pursued in order to efficiently use land and share resources where feasible. Through the remainder of Phase 3 of the study, the opportunity to share resources, including parking areas, will continue to be explored.



## **The introduction of a Moraine Ribbon as part of the Open Space System**

The Moraine Ribbon is a unique feature that is proposed to be a connected linear open space system that runs along the NHS throughout the CMSP area and provides the following:

- A compatible/complementary land use adjacent to the NHS to assist in transitioning to future urban land uses such as residential or commercial uses;
- Reduced pressure for recreation opportunities such as trails to be provided within the NHS which may have a negative impact on NHS features, buffers and functions;
- Visual access to the NHS, including Significant Landforms, so that future residents can benefit from exposure to nature;
- Increased amount of land functioning as parkland;
- Potential additional plantable spaces, areas for naturalization and/or areas to accommodate pollinator habitat and increase tree canopy cover;
- The facilitation of sustainable transportation through the provision of an interconnected trail system; and,
- Additional opportunities to implement LIDs for SWM.

### **What is the Moraine Ribbon?**

The Moraine Ribbon is proposed to be comprised of a series of generally continuous linear interconnected open spaces. These open spaces will run adjacent to the NHS and may include and interconnect park areas, stormwater management areas, cultural heritage resources, natural areas that do not meet the criteria to be included within the NHS, and other open spaces. This Ribbon Feature will accommodate a trail, or its equivalent, throughout in order to accommodate active recreational movement, and may accommodate Active Transportation routes in locations where it corresponds with identified Active Transportation routes. Resting and/or gathering areas, as well as opportunities to provide views of the natural environment and the Paris Moraine, will add to the enjoyment of the Moraine Ribbon.

The Moraine Ribbon may be narrower or wider in specific locations in order to respond to site-specific context, grading challenges or to provide open areas for various passive recreational opportunities. It will generally be located outside of any required NHS buffer with the final location and configuration being determined based on an Environmental Impact Study carried out as part of future development applications.

The overall width and program of the feature will be explored as part of the investigation; however, the designed width will ideally accommodate a trail and some or all of the identified programming. The width shown on the Updated Preferred Community Structure is 12m for illustration purposes only.

### **Open Space System: Trails and Parks**

The City's Open Space System is made up of trails, parks and open space areas that are not part of, but may be interconnected with or supportive of, the Natural



Heritage System. The current Park Hierarchy, as identified in Section 7.3.2 of the Official Plan (OP), includes Urban Squares, Neighbourhood Parks, Community Parks and Regional Parks. The proposed Moraine Ribbon will be a new component of the City's Open Space System and may be seen as a hybrid of trail, park and open space areas. Accordingly, it will need to be defined as something unique to the Clair-Maltby area with area specific policies incorporated into the Secondary Plan. The City will need to determine how this will be defined, how it will be conveyed and how it will form part of the trail, park and SWM inventories.

### **Why should there be a Moraine Ribbon in Clair-Maltby?**

The Moraine Ribbon, as described above, will provide a range of benefits. In particular, users will have visual access to the City's NHS and the Paris Moraine, as well as opportunities for both active and passive recreation. As a connected linear open space system, it will allow users to move throughout the area using a system that is separate from the road network.

In addition, Clair-Maltby has the unique opportunity to use SWM areas as functioning park areas. While it is necessary that the SWM areas be acquired for SWM purposes, they can be designed and/or engineered to provide functioning parkland as they will be primarily dry areas. Recognizing the gap that exists between the maximum amount of parkland dedication that can be acquired through development applications in accordance with the Planning Act and the City's parkland targets, using lands acquired for other purposes (i.e. SWM) as functioning parkland will assist in meeting the needs of residents with less financial burden to acquire lands. It is recognized that the cost to develop an area to function as both a SWM area and a park may cost more than if it is being developed for only one function, however, this additional cost is anticipated to be less than the cost of acquiring additional land.

### **Benefits to Stakeholders**

#### **Council**

- Potential increased amount of land functioning as parkland in Clair-Maltby with the ability to acquire lands that can function as parkland through means other than parkland dedication or purchase;
- Increased amount of potential plantable spaces to assist in increasing our urban tree canopy cover;
- Potential opportunities for the creation of pollinator habitat in keeping with our Bee City designation and OP policy direction (4.1.7.4);
- Protect the NHS through the provision of an intact buffer that is not compromised by the installation of trail surfaces and human impacts, and by surrounding the NHS with a 'softer' less impactful land use;
- Access to nature through a well-designed open space system, thereby mitigating potential 'people' impacts to the NHS; and,
- The scale and extent of the Moraine Ribbon can be varied to respond to constraints, including financial constraints. The width of the Moraine Ribbon can be increased or decreased and its location could be limited to one side or another of the NHS if necessary provided connectivity is maintained.



## **Public**

- Potential increased amount of land functioning as parkland in Clair-Maltby;
- Opportunities for various types of recreation in addition to the planned Community Park, Neighbourhood Parks and Urban Square(s); and,
- Visual access to the NHS, the Paris Moraine and/or exposure to nature.

## **Development Community**

- Potential increased amount of land functioning as parkland in Clair-Maltby to market to future home buyers/residents;
- Increased certainty with respect to where main trails will be located which enable pedestrian routes and trails to be more easily identified within individual plans of subdivisions; and,
- The potential opportunity to receive credit toward a development's parkland dedication requirement for that land depending on its planned function or program.

## **Next steps regarding the Open Space System for the CMSP area**

An overall open space system strategy for the CMSP area will be developed in the next steps of Phase 3 to more fully detail how the City's open space objectives will be achieved. The open space system strategy for the CMSP area will inform the detailed policies of the secondary plan and subsequent implementation measures.

If Council is supportive of the feasibility of a Moraine Ribbon being explored as part of an overall open space system strategy for the CMSP area, a more detailed analysis of the proposed Moraine Ribbon will be completed to better understand the following:

- How much additional land would potentially be required for the Moraine Ribbon after understanding the portions of the Feature that would be:
  - acquired for stormwater management purposes;
  - located within a neighbourhood or community park;
  - located on a potential future school block and whether this land would have to be acquired or could be used for the Moraine Ribbon by way of an agreement; and,
  - located within a right-of-way and therefore acquired as part of the road;
- How different sections of the Moraine Ribbon would be included in the City's SWM, trail and park inventories;
- The financial implications of planning for a Moraine Ribbon including the cost of and options for acquiring the land and, further the cost of developing the Moraine Ribbon; impacts to future development charges and anticipated parkland dedication within the secondary plan area; and,
- The impact, if any, to the population and density numbers for Clair-Maltby.

The open space system strategy for the CMSP area will be outlined in a future public discussion paper.



## Attachment 3 – Policy Directions Document

[Policy Directions: Framework for the Clair-Maltby Secondary Plan](#)



## **Attachment 4 – Summary of Responses to input on the Draft Directions Consultation Document**

Included as Appendix C to the Policy Directions Document is a compilation of the feedback the City heard at the December 2018 public workshop, as well as through online survey responses and email submissions following the workshop. What follows is a high-level summary of the key feedback themes and a brief description of how the updated Preferred Community Structure or revised policy directions respond to the feedback.

### **Energy and Climate Change**

Several comments were received encouraging the use of: renewable energy sources, electric vehicles and charging stations; policies that support or require environmental buildings (i.e. LEED, net zero, One Planet, Passivhaus, etc.); and, incentive programs to encourage sustainable development within the Clair-Maltby area. In addition, consideration for extreme weather and climate change adaptation and mitigation measures was also encouraged in the design of the secondary plan area.

The updated Preferred Community Structure creates a framework to enable carbon neutral supportive and energy efficiency policies. The next step is to continue with a more detailed energy analysis of the updated Preferred Community Structure. The energy analysis will make recommendations to: improve the energy efficiency of the plan; provide a preliminary high-level analysis of the feasibility of district energy; and, provide direction with respect to how the plan can contribute to meeting the City's goal of being a net zero carbon community by 2050. The energy analysis will inform the draft secondary plan policies.

The stormwater management system is being tested under various future projected climate conditions to ensure the sizing is adequate to provide a level of resiliency to potential changes in design conditions.

### **Mobility**

The majority of the comments received with respect to mobility encouraged a focus on designing for pedestrian, cycling and transit movement. However, some comments identified a need to accommodate personal vehicles both in road design and in the provision of parking.

The updated Preferred Community Structure creates a framework for a balanced approach to be taken with respect to mobility. The conceptual road cross-sections are intended to accommodate pedestrian, cyclist, transit and personal vehicles. The proposed trail network as well as the Moraine Ribbon will allow for the safe movement of pedestrians and cyclists whether it is for destination-oriented travel or recreational travel. The proposed road network, as well as accompanying policy directions, are intended to provide a well-connected network that will accommodate all modes of travel.

### **Land Use**

Comments were received about the concentration of higher density uses along Gordon Street. Some of the comments encourage the concentration of high density in this location. Further comments were received requesting that the maximum



permitted density in high density areas be increased from 200 to 250 units per hectare. In contrast, comments were received suggesting that high density should be avoided along Gordon Street generally because of traffic concerns and that the proposed permitted density range for all residential land uses should be significantly lowered.

The updated Preferred Community Structure continues to propose a higher density corridor along Gordon Street to allow this corridor to be transit supportive. It is also intended that Gordon Street will be designed to accommodate all modes of travel including pedestrian, cyclist, transit and personal vehicles to ensure people can move through this area to other parts of Clair-Maltby, to the rest of the City and outside of the City. Built form policies will ensure there is an appropriate transition in height from the high density residential area to surrounding areas including the rural area to the south.

## **Parks**

Comments related to parks were varied and in some instances may be considered opposing:

- Provide additional parkland and consider adding a regional park in this area
- The community park should be integrated with Halls Pond
- Reconsider the need for a Community Park in this area due to the proximity to the South End Community Park
  
- Parks should be adjacent to, but separated from the NHS by fencing
- Parks should facilitate access to the NHS and some parts of the NHS can meet recreation needs
  
- Parks should not be located near arterial roads
- Parks should be located along a corridor or at prominent high points

In addition, comments were received requesting that different types of parks be considered and should include trails, playgrounds, passive benches, community gardens, picnic tables, etc.

As outlined above, it is proposed that a fulsome strategy for the Open Space System within the CMSP area be developed. The strategy would include: exploring the feasibility of a Moraine Ribbon; designing and/or engineering SWM areas to be multi-functional in order to increase the amount of land functioning as parkland; and, co-location of schools, parks and SWM areas.

The updated Preferred Community Structure also proposes that the Community Park be moved so that it can benefit from co-location with a larger stormwater management area as well as provide visual access to Halls Pond.

## **Urban Design**

Comments were received both in favour and opposed to the implementation of architectural control, specifically a request to not impose architectural control for low-rise housing. Other comments included:

- Ensure the built form considers Guelph's character and honours the agricultural history and local architecture.



- Consider local style materials such as brick and stone.
- Avoid creating a 'tunnel' effect on Gordon Street.
- Maintain the topography of the area.
- Incorporate green infrastructure into urban design.
- Encourage on-street parking, except for on arterial roads.
- Consider more flexibility regarding cul-de-sacs.

In general the above comments do not conflict with or are explicitly supported by the draft policy directions. The detailed comments provided will assist with informing the draft policies which will be more detailed than the policy direction.

### **Water and Wastewater Servicing, Stormwater Management**

The comments that were received included how stormwater management would be integrated with land use, the implementation of low impact development best management practices as well as climate change considerations.

As previously noted, the updated Preferred Community Structure includes opportunities for stormwater management areas to be designed and used as multi-functional facilities. The updated Preferred Community Structure also proposes that the Community Park be moved so that it can benefit from co-location with a larger stormwater management area, as well as provide visual access to Halls Pond. With respect to the implementation of low impact development (LID) measures, as part of the preliminary management strategies, it has been recommended to mimic the performance and function of the existing depressional features, through a distributed approach of public and private realm LID best management practices (BMPs). By capturing 27 mm runoff at source (addresses up to 90% of all storm events) site impacts can be mitigated and water budgets maintained. Furthermore, the Stormwater Management Capture Areas (SWCA), as identified in the CEIS, have been sized to provide a buffer of approximately 5% to 10% area, to allow for climate change resilience and for extreme conditions, such as frozen ground during back to back significant events. A proposed relief or overflow system (since the SWCA are fully internally draining systems) will protect public safety by discharging excess drainage under extreme conditions to the existing NHS, while maintaining existing drainage patterns.



# **Attachment 5 – Summary of the Comprehensive Environmental Impact Study**

## **Introduction**

The Comprehensive Environmental Impact Study (CEIS) establishes the existing environmental conditions within the CMSP area, models and predicts the environmental impacts from the Preferred Community Structure and then recommends mitigative and management measures to prevent and/or manage impacts. The CEIS is being conducted by the Wood Team, comprised of Wood Environment & Infrastructure Solutions, Matrix Solutions and Beacon Environmental.

A Master Environmental Servicing Plan (MESP) is also being prepared concurrently. The MESP is intended to concurrently satisfy the requirements of the Municipal Engineers Environmental Assessment Act and the Planning Act. The MESP will determine the preferred servicing strategies (water, wastewater, stormwater and mobility) required for the CMSP area.

The purpose of the CEIS is to serve as a comprehensive and strategic document to address natural heritage and water resource protection and management based on a subwatershed scale assessment to inform environmental, land use and infrastructure planning and associated decision making, as part of a broader integrated development framework for informing the Secondary Plan and its policies.

## **Summary of Phase 1 and 2 Characterization**

The Phase 1 and 2 Characterization and Integration Report was presented at a Public Information Session on September 26, 2018. This report provided a summary of existing conditions associated with each discipline and a related integrated process to established guidance in developing and assessing various Community Structure Alternatives. The following provides a summary of key information from the Phase 1/2 Characterization discipline findings.

### **Hydrology (Surface Water)**

The purpose of assessing the surface water systems for urbanizing subwatersheds is to provide a better understanding of the operative factors which influence the amount and movement of water in the system, both under existing land use and proposed future land use conditions. By developing representative numerical models, which reasonably predict seasonal and storm-based runoff response, the impacts of proposed future urbanization can be better quantified and thereby appropriate management strategies can be established in the future, as part of integrated management plans. Through this process, a hydrologic model was developed (PCSWMM) that determines the peak flows, runoff volumes, infiltration and evaporation that occurs within the existing drainage system in the CMSP area.

The CMSP area is located at the headwaters of the Hanlon Creek, Torrance Creek and Mill Creek and is characterized by a significant number of depressional features and a general lack of overland drainage routes and watercourses. Surface runoff is predominantly infiltrated or evaporated. Each creek system, within the CMSP area, annually has a loss (infiltration and evaporation) of 93% to 98% of the total precipitation, with Torrance Creek infiltrating the least, due to some existing



development within its limits. The remaining surface water (not infiltrated or evaporated) ends up as discharge/runoff from the system, which for Hanlon Creek is 0.4% and Mill Creek is 9%. Each creek system exhibits high annual infiltration, due to the depressional features and greenways, which will need to be considered within the CMSP area.

## **Hydrogeology**

A background review of existing hydrogeological data and documentation, including regional and local scale information was completed to provide a preliminary understanding of the local and regional hydrogeological setting. The conceptual understanding derived from existing information was used to inform the groundwater field program and modelling for simulating existing and future conditions.

The conceptual model of groundwater flow developed in Phase 1 and 2 provides a summary of the existing spatial and temporal understanding of the groundwater flow system in the CMSP area and the linkage with intermediate and regional flow system connections with the Primary Study Area (PSA) and Secondary Study Area (SSA). The conceptual model was informed by existing information and reports on regional and local hydrogeology.

The CMSP area is predominantly within the Horseshoe Moraine physiographic region and transitions into the Guelph Drumlin Field to the north in proximity to Clair Road. The main features of the Horseshoe Moraine are the Paris and Galt Moraines occurring as a broad composite moraine through the CMSP area and are responsible for the rough, hummocky terrain and often steep, irregular slopes. As noted earlier, streams and creeks are absent in the CMSP area reflecting the high infiltration capacity of the area. The headwaters of Hanlon, Mill and Torrance Creek form on the north and south slopes of the moraine. Flow measurements, seep observations, and presence of riparian wetlands in these headwater areas, indicate the groundwater discharge supports these creeks.

A groundwater field program was completed to support refinements to the understanding of groundwater function within the CMSP area and PSA. The understanding of the groundwater flow systems under existing conditions provided support for the design of future land use plans to minimize potential impacts to the groundwater system function. In Phase 2 the conceptual model of existing groundwater flow system was represented in an integrated surface water and groundwater flow model (MIKESHE).

The MIKESHE model represents all the relevant processes to represent existing and future conditions including rainfall, snow melt, runoff, infiltration, evapotranspiration, flow above and below the water table and ponding of water. The model inputs include surface and subsurface conditions in three-dimensions, using a 25 x 25 m grid and daily time step to represent spatial variation in spatial properties and rainfall and snowmelt events. The inputs were calibrated based on field measurements such as hydraulic conductivity and comparison of simulated water levels, groundwater discharge, or ponding to observed conditions.

The calibrated model simulation represents linkage of features and processes and provides a three-dimensional and time-varying understanding of infiltration, recharge, evapotranspiration, recharge, groundwater flow directions, and



groundwater discharge. Based on the conceptual model and calibrated integrated model recharge (water table, shallow and deep bedrock amounts) within in the CMSP area and regional groundwater flow provides the following groundwater functions:

- Groundwater discharge to wetlands and headwaters in Mill Creek outside the CMSP area.
- Groundwater discharge to wetland north of Hall's pond within the CMSP area.
- Groundwater flow and discharge to Hanlon, Torrance, Mill Creeks.
- Recharge to the water table, shallow (Guelph Formation) and deep (Gasport Formation) bedrock aquifers.

The permeable nature of the surficial sediments, as well as the interconnected permeable nature throughout the thickness of overburden allows for significant infiltration, subsequent recharge to the water table (overburden aquifer) and shallow and deep bedrock aquifers. Groundwater flow tends to radiate out from the CMSP area to contribute groundwater flow to the Mill Creek and Hanlon Creek watersheds.

Closed depressional features are shown to provide enhanced infiltration and recharge.

Water budget analysis of Neumann's Pond, Hall's Pond and Halligan's Pond indicate these features are predominantly maintained by direct precipitation and minor overland flow contribution to these features which reflects the lower groundwater levels near these wetlands. Groundwater discharge appears to be derived locally and during spring melt or longer-term precipitation events. Wetlands within the CMSP area can exhibit perched conditions such as Neumann's Pond (i.e. unsaturated zone beneath the pond) or be connected to the water table such as Hall's Pond, Halligan's Pond (i.e. saturated zone beneath the pond) and other wetland/pond features within the CMSP area (i.e. northwestern portion of CMSP area).

Groundwater quality analysis indicates the overburden water consistently represents a calcium-magnesium carbonate system with no significant difference in most basic anions and cations between the shallow and deeper groundwater in the overburden monitoring wells. In addition, the basic anions and cations within the two PGMN bedrock wells appears to be like the overburden monitoring wells. Localized elevated levels of chloride and nitrate reflect potential quality degradation related to winter de-icing or agricultural applications.

The thick overburden provides a degree of groundwater quality protection from potential contaminant sources particularly those species that are considered conservative (i.e. those that do not biodegrade or are not adsorbed such as chloride). The Vinemount aquitard provides greater protection for the municipal aquifer.

### **Surface Water Quality**

The purpose of the water quality assessment has been to characterize the water quality health of the CMSP area based on both available (desktop) information from the associated subwatershed studies and also study data collection with respect to contaminant loadings under existing land use conditions. Most of the surface water



drains to depressional features including natural features (i.e. wetlands and woodlots), as such surface water impacts from land use change could impact groundwater quality; that said it should be noted that Guelph's water supply is not linked to the groundwater sourced within the CMSP area.

A three (3) year water quality monitoring program commenced as of June 2016 and extended to late 2018. As part of the monitoring program, surface water quality monitoring has been conducted at key locations within the CMSP area and beyond to characterize the surface water chemistry under existing land use conditions. Based on the monitoring results, existing surface water quality within the CMSP area and immediately downstream is generally of reasonable quality, with exceedances to Provincial and Federal water quality guidelines in parameters linked to agricultural and golf course land uses and roadways.

### **Natural Heritage**

As part of Guelph's Natural Heritage Strategy, Natural Heritage System (NHS) mapping and policies were developed for the entire City, including the CMSP Area. These NHS policies and maps were included in the City's updated Official Plan in 2010, refined through the Ontario Municipal Board process, and finalized in June 2014.

From a natural heritage perspective, the CMSP Area is unique in the City because it is dominated by the Paris Moraine. This area has no watercourses and is dominated by hummocky topography that supports woodlands, wetlands and transitional habitats scattered among lands that are currently being farmed.

As part of the CMSP project, the natural heritage experts on the consulting team were asked to:

- a. make refinements to the NHS mapping and characterization in the CMSP area based on a combination of existing and new information collected, and current environmental legislation/policies/guidelines;
- b. help design the Community Structure and Land Use Plan to avoid and minimize negative impacts to the NHS to the greatest extent possible while still accommodating the various Secondary Plan requirements; and
- c. provide recommendations for avoiding, minimizing and managing impacts anticipated in relation to the final Community Structure and Land Use Plan, including identification of, measures specifically tailored to the CMSP Area to protect, enhance and restore the unique natural heritage features and areas in the CMSP area.

The natural heritage work undertaken between June 2016 and December 2018 in support of this project within and adjacent to the CMSP Area included:

- Assessments of the range of water levels, water temperatures and water quality in selected wetlands;
- A review and analysis of current air photos to help refine vegetation community mapping;
- A review of background from all available environmental studies undertaken since about 2004; and



- Scoped field surveys of plants, wildlife and their associated habitats to further refine mapping and inform analyses of the significance of the various natural heritage features and areas.

The results of this natural heritage work (as documented in annual Monitoring Reports and in the CEIS completed for this project) have resulted in a Refined NHS consisting of the following components:

- i. Significant Natural Areas (including Significant habitat for Provincially Endangered and Threatened species; Surface Water Features and Fish Habitat (warm water) plus a 15 m minimum buffer; Provincially Significant Wetlands (PSWs) plus minimum 30 m buffer); Significant Woodlands plus minimum 10 m buffers; Significant Landform; Confirmed Significant Wildlife Habitat (SWH);
- ii. Ecological Linkages; and
- iii. Potential Natural Areas (mapped as an Overlay) (including Candidate SWH; Cultural Woodlands plus minimum 10 m buffers; and Habitat of Significant Species).

A "Draft 1" Refined NHS based on information collected through to the end of 2017 was presented the spring of 2018. The Phase 3 Impact Assessment Report includes the "Draft 2" Refined NHS based on information collected through to the end of 2018. This version is expected to be very close to the Final Refined NHS to be used as a primary development constraint for the Secondary Plan.

### **Phase 3 Impact Assessment and Management**

A detailed assessment of the Preferred Community Structure has been completed to determine the potential impacts of the future planned development to the local and neighbouring environmental systems and features, and to establish preliminary management requirements accordingly, as detailed in the following sections. The key findings of this assessment serve as input to the land use refinement process to update and finalize the Preferred Community Structure and ultimately establish the recommended (preferred) management strategies.

#### **Hydrology (Surface Water)**

The hydrologic model (PCSWMM) has been used to assess the hydrologic impacts from the Preferred Community Structure. Typical impacts from urbanization include additional runoff, less infiltration and higher peak flows. As noted, the CMSP area is characterized by a significant number of depressional features, with certain features providing over 300 mm capture of runoff, which is greater than the Regional Storm (Hurricane Hazel) at 285 mm of precipitation. To mimic the existing depressional features, a distributed approach has been advanced of using low impact development (LID) best management practices (BMPs) capturing 27 mm runoff (captures up to 90% of all storm events) and designated surface water capture areas (SWCAs), for capturing and infiltrating drainage not captured by the LID BMPs. Hydrologic modelling results indicate that peak flows (external to the SPA) within Hanlon Creek and Mill Creek would be maintained at predevelopment levels. In addition, the amount of water available for infiltration would match existing drainage conditions.



## Hydrogeology

The conceptual understanding of groundwater flow conditions within the CMSP area and PSA was used to inform the location of future land use types found in the Preferred Community Structure. This understanding also informed the development of the Stormwater Management (SWM) plan and associated LID BMPs plan for the Preferred Community Structure. As noted above, the SWM plan takes advantage of the high infiltration capacity of the soils and thick unsaturated zone to replicate the function of existing depression features in the landscape which would be removed in development. Additional depression storage depth is incorporated into all development areas, outside of the NHS, to facilitate infiltration. Centralized SWM infiltration facilities or Stormwater Management Capture Areas (SWCAs) are planned to capture excess runoff and infiltrate additional runoff during precipitation events within the development area.

The Preferred Community Structure future conditions scenario was simulated using the MIKE SHE model developed as part of the Existing Conditions Characterization. The representation of the development area was updated to reflect changes in topography, imperviousness, reduced vegetation and new stormwater management practices. Additional depression storage was incorporated to all development areas to represent the role of onsite LID and BMP practices which facilitate infiltration. Stormwater volumes in excess of local depression storage were simulated to be routed to the centralized Storm Water Capture Areas (SWCAs) consistent with the proposed SWM plan.

Impacts of the Preferred Community Structure future conditions scenario and effectiveness of the LID BMPs and SWM measures were assessed by comparison to the existing conditions simulations for the period of 1998-2002. The impacts of the future land use change associated with the PCS were based on changes to:

- Water budgets in the CMSP area, PSA and key NHS features in, and adjacent to, the CMSP area
- Groundwater flow directions and depth to water table
- Recharge to the water table, shallow and deep bedrock aquifers
- Groundwater discharge to streams and wetlands

The LID BMP and SWCA as simulated, combined with reductions in evapotranspiration due to reductions in vegetation in future land uses, are predicted to result in slight increases in recharge within the SPA and lateral groundwater outflow to Mill Creek subwatershed. A small reduction in groundwater outflow to Hanlon Creek subwatershed overall. While localised increases and decreases in groundwater recharge to the water table are predicted within the SPA the distributed detention storage in development areas and the additional capture capacity provided by the SWCA is predicted to maintain or slightly increase recharge and maintain overall groundwater flow directions and recharge to shallow and deep bedrock aquifers by infiltrating water as close to source as possible. By maintaining groundwater flow, gradients and linkages between recharge and discharge areas the PCS with LID BMP and SWCA, is predicted to maintain groundwater function within the study areas.



## Surface Water Quality

Water quality from urban land uses has been characterized by various studies that runoff from roads, agriculture and golf courses, as having the highest contaminant loadings. The Preferred Community Structure includes various densities of residential land uses, commercial, institutional (schools) and parks, instead of the existing predominant agriculture land use and one golf course. As such, contaminant loadings typically associated with agriculture and golf courses, should be reduced, but contaminants from urban areas (typically from road areas) will increase.

To address the water quality impacts of the urbanized land use, drainage will be conveyed through a series of LID BMPs, with the overflow being directed towards surface water capture areas that will infiltrate the captured drainage. The foregoing approach has been described below:

- i. Apply a distributed approach for 27 mm capture within LID BMPs
- ii. Separate 'clean' water (rooftop and landscaped areas runoff) from dirty water, with dirty water typically resulting from roadways and parking areas
- iii. Apply water quality measures in series to protect the surface water capture area's function of infiltration
- iv. LID BMP selection and locations to be determined based on land ownership, land use, development form and grading (public and private realm)
- v. Reduce the use of salt through the City of Guelph Salt Management Plan
- vi. Low impact development measures and other stormwater quality management measures would need to be reviewed and refined through the MESP/EA process

## Natural Heritage

The identified NHS is a well-connected system that occupies more than 45% of the land base in the CMSP Area. "Environment first" strategies that have influenced the development of the Community Structure to date and will be carried forward into the final Community Structure and Land Use Plan include:

- Respecting the limits of the NHS by excluding all proposed land uses from identified natural heritage features and areas, and their applicable minimum buffers;
- Keeping municipal roads from crossing through Significant Wetlands and Significant Woodlands and generally limiting road crossings of the NHS to the greatest extent possible;
- Keeping the proposed trail network along the outer edges of the NHS (i.e., largely outside of the buffers to protected features and the features themselves) and limiting trail crossings of NHS features and buffers while still accommodating connectivity for active transportation;
- Co-location of stormwater capture areas (SWCAs) with schools and parks to maximize infiltration in existing closed depressions and sustain local hydrologic and hydrogeologic functions; and
- Placement of SWCAs / parks / schools adjacent to the NHS where possible to provide some open spaces in the immediately adjacent lands, further "buffering" the NHS from more intensive residential and commercial land uses.



In addition, "Restoration Areas" as defined in the City's Official Plan have not yet been identified in the CMSP Area, and opportunities will be explored as part of the Community Structure and Land Use Plan finalization process, and other opportunities for habitat naturalization and restoration in other components of the NHS will be strongly supported through the Secondary Plan policies.

Although the strategies listed above will help avoid and mitigate most major potential development-related impacts to the NHS, there are still some anticipated unavoidable impacts related to implementation of the Secondary Plan. The primary challenges to maintaining and enhancing existing NHS functions in the CMSP Area are expected to be related to:

- Maintaining the local amphibian and reptile populations as population density and traffic increases;
- Effectively integrating the protected Significant Landform into the CMSP Area so that its visual uniqueness and hydrologic functions are maintained;
- Protecting the NHS from encroachments from adjacent land uses while supporting community connectivity and access to nearby natural areas.

A series of recommendations for measures to help avoid, minimize and manage potential negative impacts to the NHS at the Secondary Plan scale are included in this Phase 3 Report. In addition, as part of the implementation of the Secondary Plan, site-specific impacts will need to be addressed as part of area or site-specific studies undertaken as part of the development process.

The Refined NHS is expected to undergo one more round of minor edits based on feedback from the City, Grand River Conservation Authority (GRCA), Ministry of Natural Resources and Forestry (MNR), Technical Advisory Group, Technical Steering Committee, stakeholder groups, and the public. The final Refined NHS will then be integrated in the final version of the Community Structure to be developed over 2019.

### **Next Steps**

The Phase 3 Impact Assessment has been reviewed and updated based upon input from the City and GRCA. Further review from the Technical Advisory Group, Technical Steering Committee, stakeholder groups and the public, may result in additional revisions, with the input to be considered into the revised Draft Secondary Plan.



## Attachment 6 – Interim Employment Lands Update

See [guelph.ca/clair-maltby](http://guelph.ca/clair-maltby) for the [Guelph Interim Employment Lands Update](#)





# Clair-Maltby

**Transform. Connect. Community.**

June 24, 2021 Open House  
Overview Session  
1:00 pm





# Land Acknowledgement

As we gather, we are reminded that Guelph is situated on treaty land that is steeped in rich indigenous history and home to many First Nations, Inuit and Métis people today.

As a City we have a responsibility for the stewardship of the land on which we live and work.

Today we acknowledge the Mississaugas of the Credit First Nation of the Anishinaabek Peoples on whose traditional territory we are meeting.





# Overview Agenda

- Secondary Plan Process
- Vision and Guiding Principles
- Draft Secondary Plan Overview
- Draft Master Environmental Servicing Plan (MESP) Overview
- Next Steps





# Clair-Maltby Secondary Plan process

## **Phase 1 (April 2016 - July 2017)**

- Background data collection
- Identify problem/opportunity statement
- Develop principles/goals

## **Phase 2 (July 2017 - June 2018)**

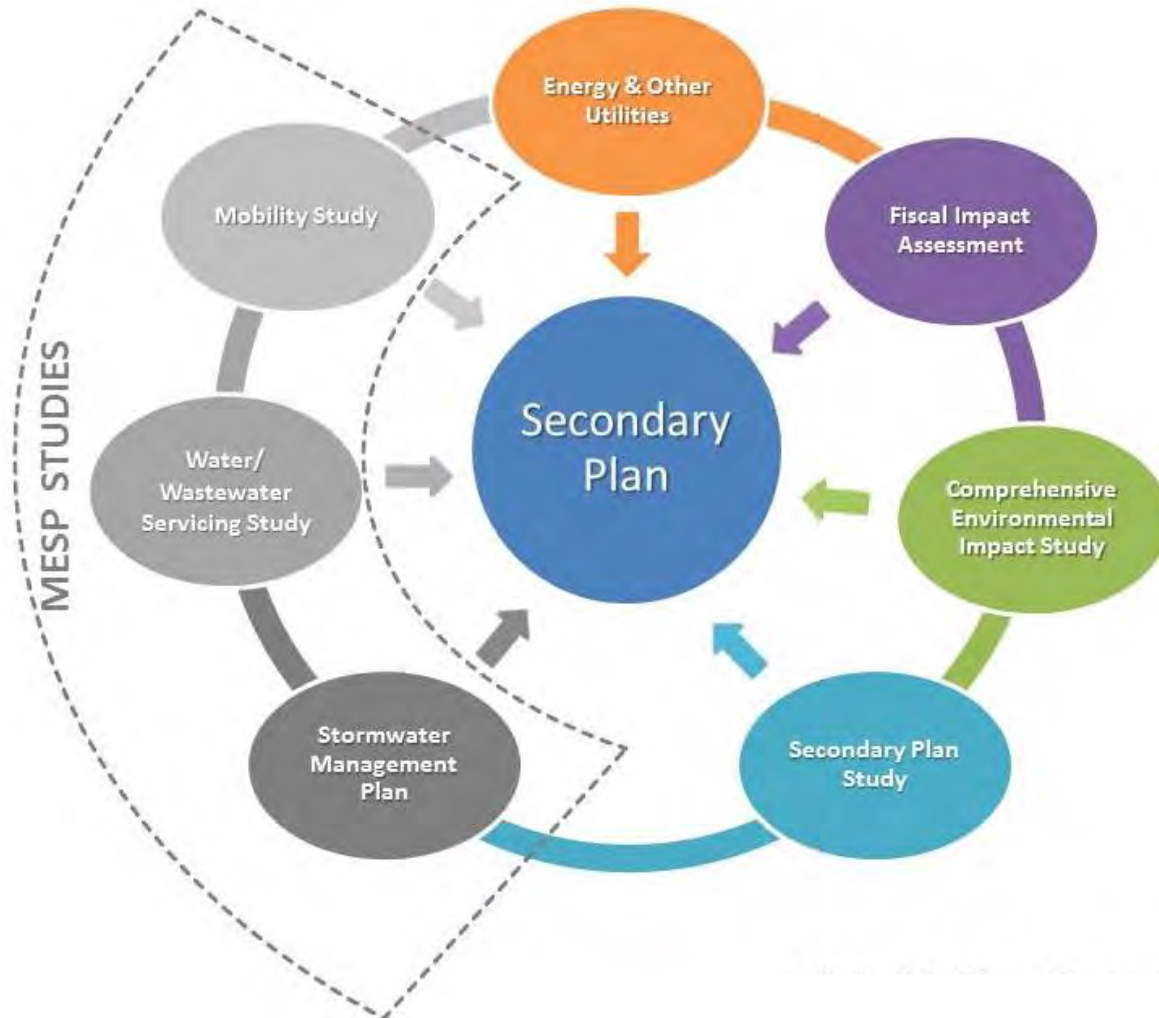
- Develop Conceptual Community Structure
- Detailed studies
- Consideration of Community Structure Alternatives

## **Phase 3 (July 2018 - 2022)**

- Preferred Alternative
- Draft Master Environmental Servicing Plan and Secondary Plan
- Final Master Environmental Servicing Plan and Secondary Plan to Council



# Clair-Maltby Secondary Plan Process Diagram





# Clair-Maltby vision







# Clair-Maltby vision

Clair-Maltby will be a vibrant, urban village that is integrated with Guelph's southern neighbourhoods, as well as having strong connections to Downtown, employment areas and the rest of the city.

The Natural Heritage System (NHS) and the Paris Galt Moraine provide the physical and ecological framework for the balanced development of interconnected and sustainable neighbourhoods following the City's environment-first approach.

The area will be primarily residential in character with a full range and mix of housing types, which will allow for affordable and market-based housing, and a variety of other uses to meet the needs of all residents.

A system of parks, open spaces and trails will be interwoven throughout to provide opportunities for active and passive recreation.



# Guiding principles



Vibrant and Urban



Green and Resilient



Healthy and Sustainable



Interconnected and Interwoven



Balanced and Liveable





# Draft Secondary Plan

Implements previous Council decisions through approval of:

- Policy Directions
- Preferred Community Structure
- Open Space Strategy

A few differences:

- Multi-use overpass over Gordon
- High Density/Mixed Use density increase from 200 to 250 units per hectare



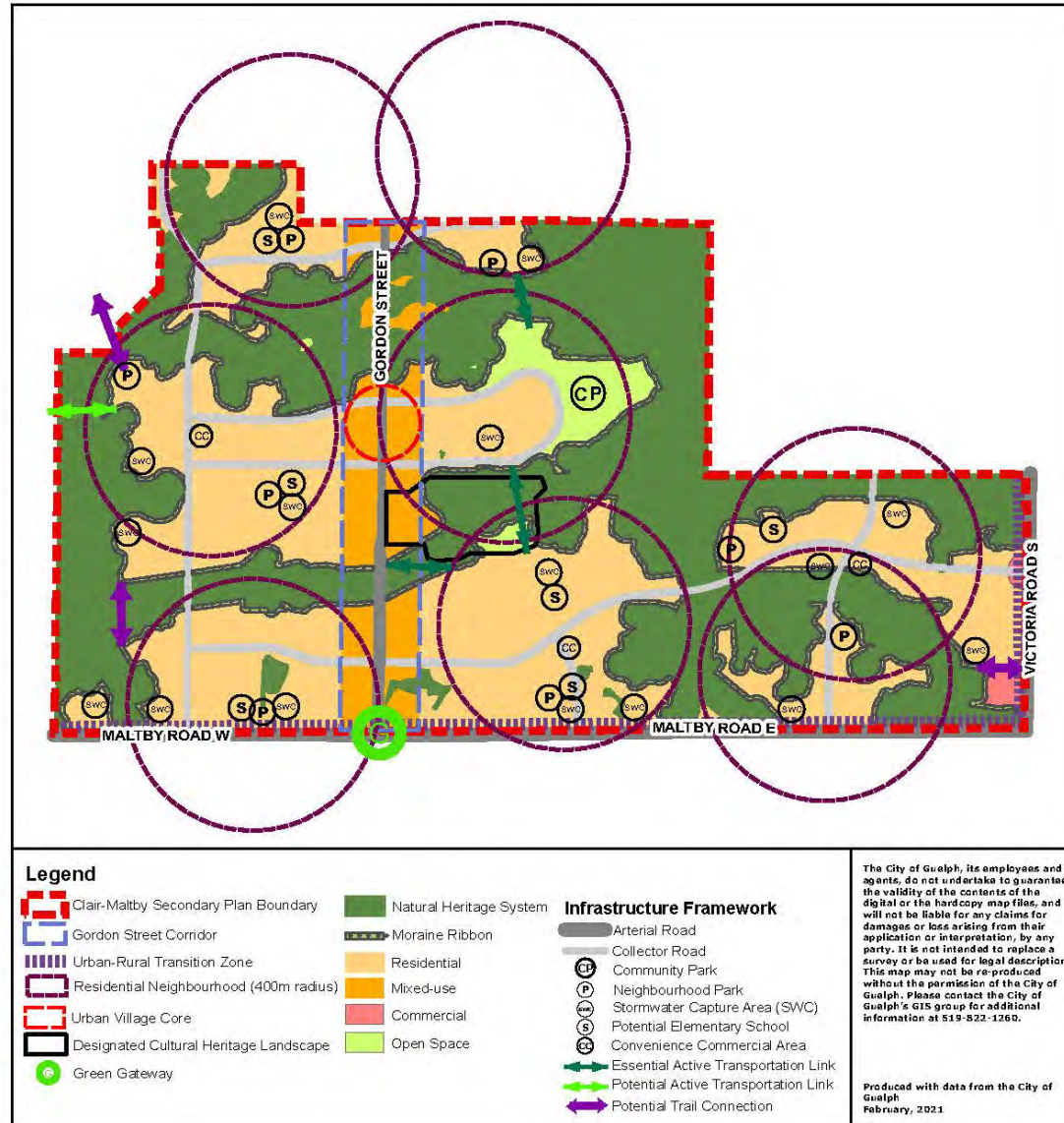


# Draft Secondary Plan

- Policies of the Official Plan apply to Clair-Maltby
- Secondary Plan policies provide more direction for this area
- Clair Maltby remains primarily residential
- Natural Heritage System remains a key component of the Plan and is protected

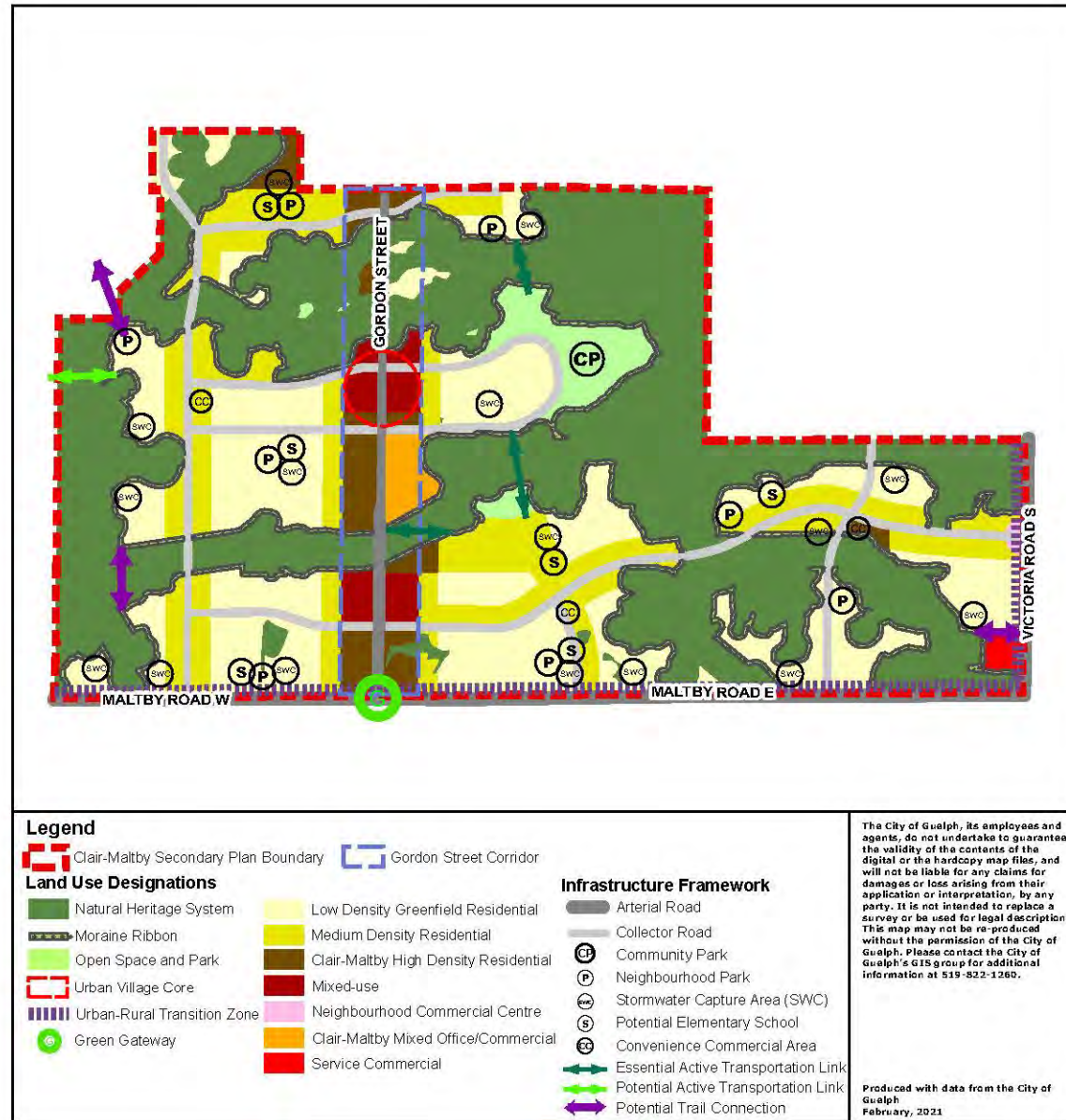


# Schedule A: Community Structure





# Schedule B: Land Use







# Draft Secondary Plan

- High density residential and mixed use are focused on the Gordon Street corridor
- Medium density residential is focused on the proposed collector roads
- Interior portions of neighbourhoods are proposed to be low density residential



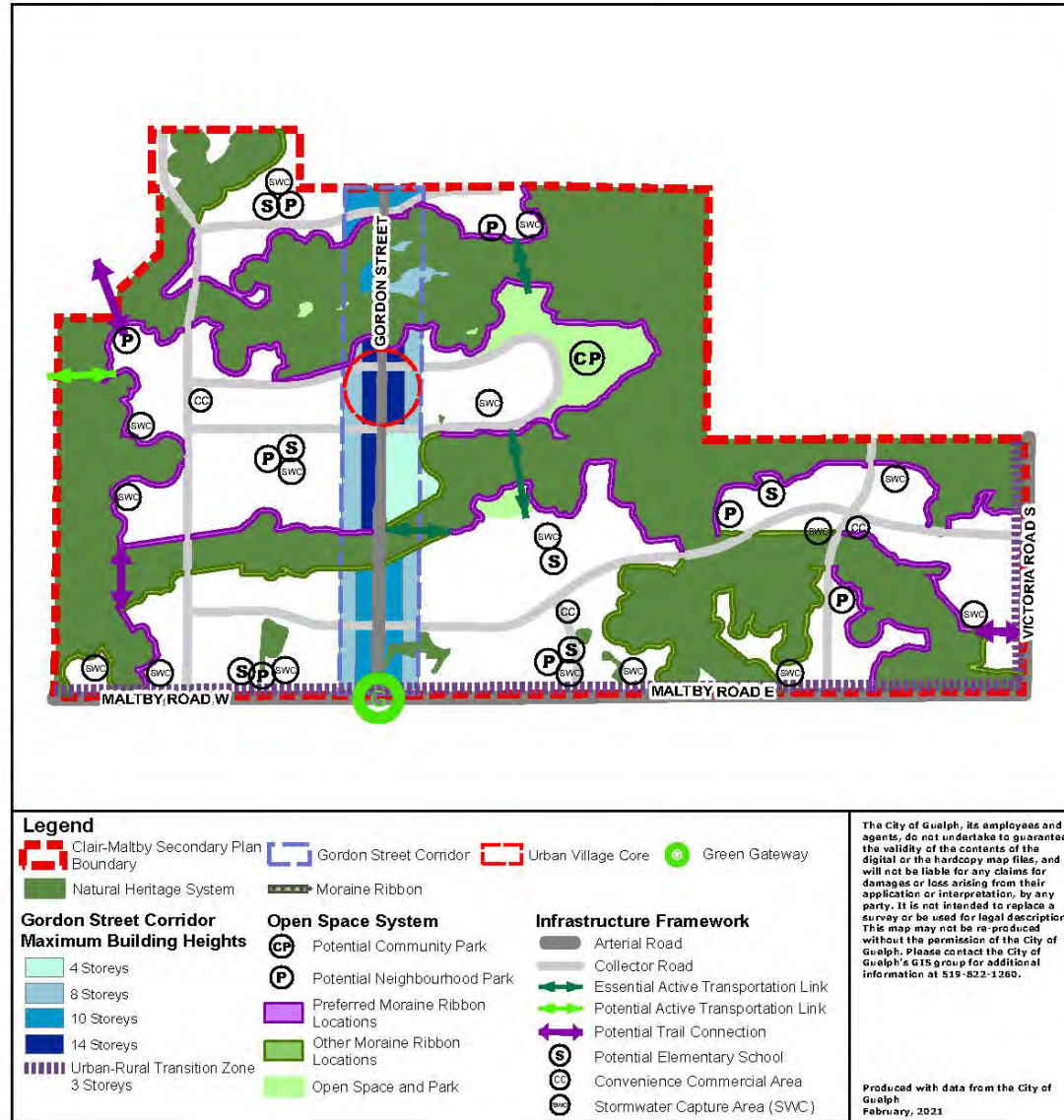


# Draft Secondary Plan

- Natural Heritage System continues to be protected
- Proposed Open Space System includes:
  - Ten hectare community park
  - Eight neighbourhood parks
  - Moraine Ribbon

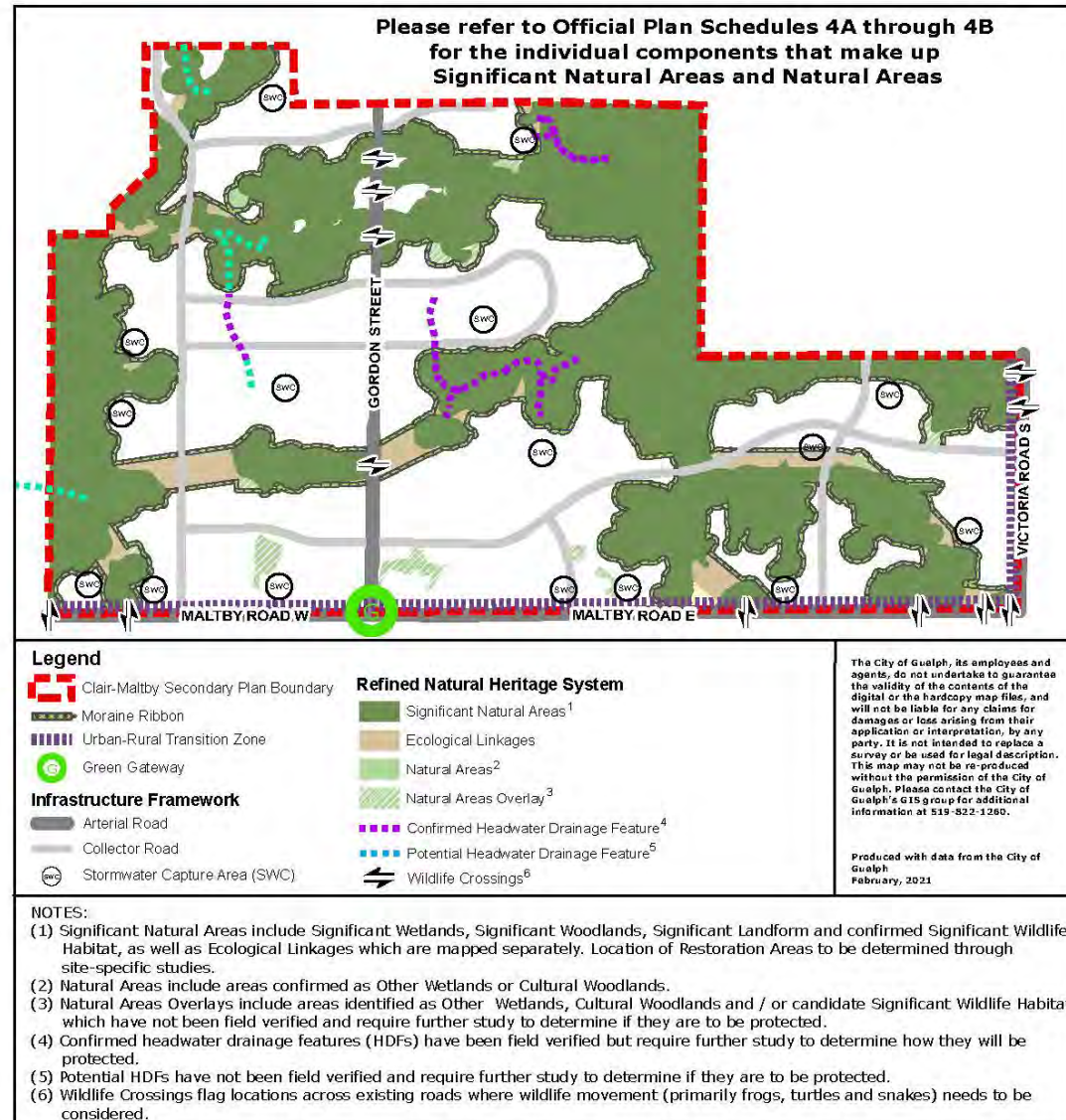


# Schedule D: Built Form and Open Space System Elements





# Schedule E: Natural Heritage System





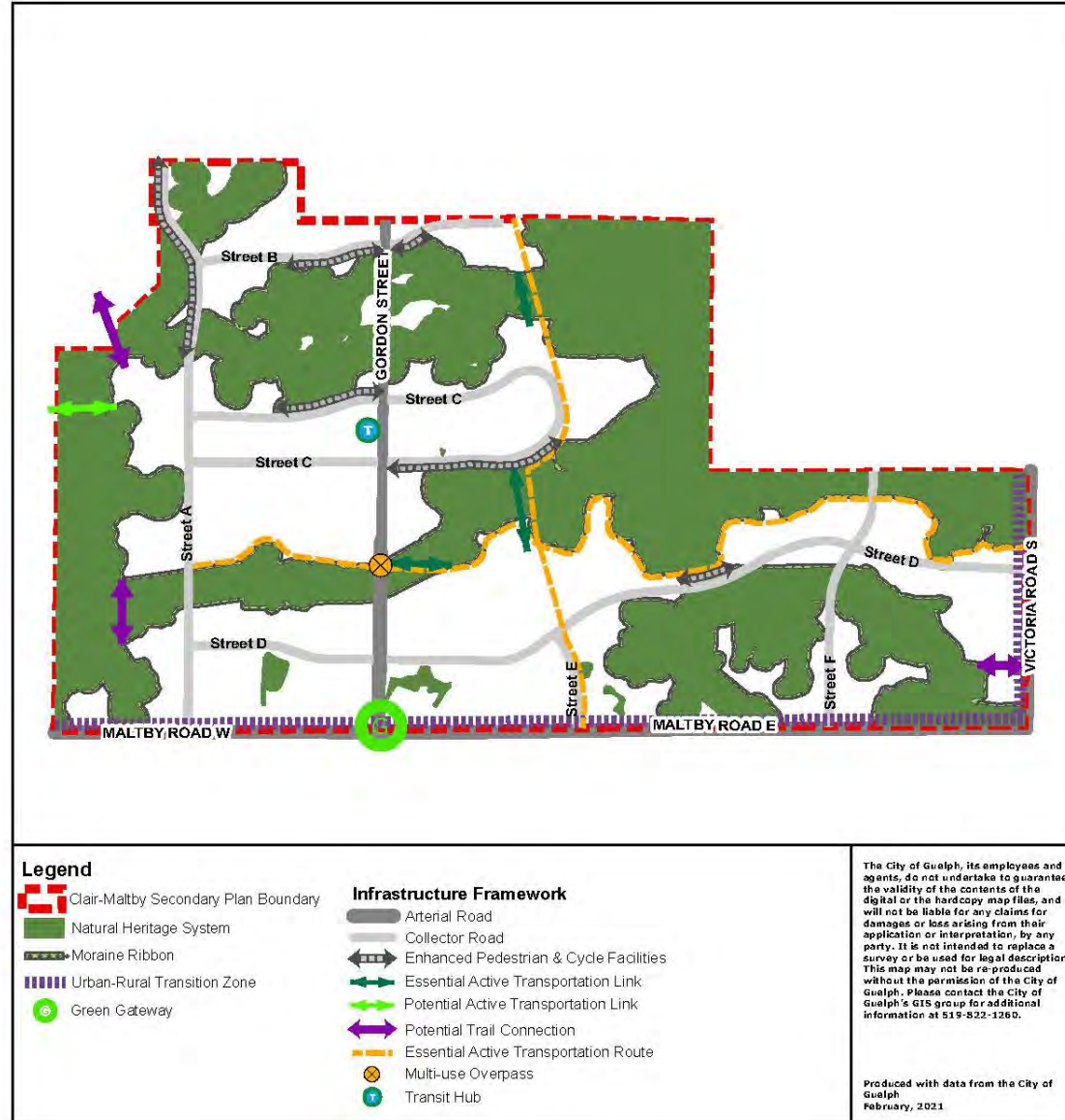


# Draft Secondary Plan

- The mobility network identifies an appropriate road network balancing road connectivity while limiting the number of instances a proposed road crosses the NHS
- Right-of-way cross sections have been developed to ensure complete streets for all modes of transportation
- Essential active transportation routes have been identified

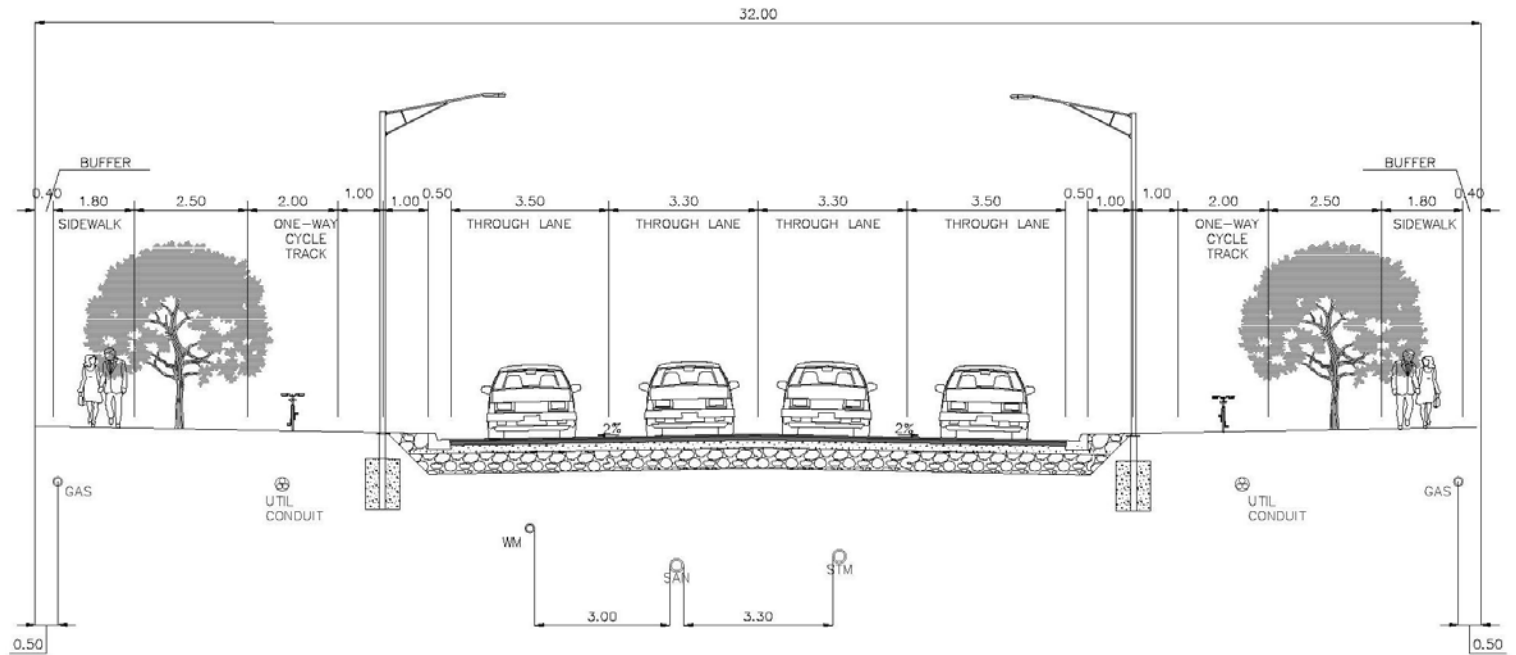


# Schedule C: Mobility Plan



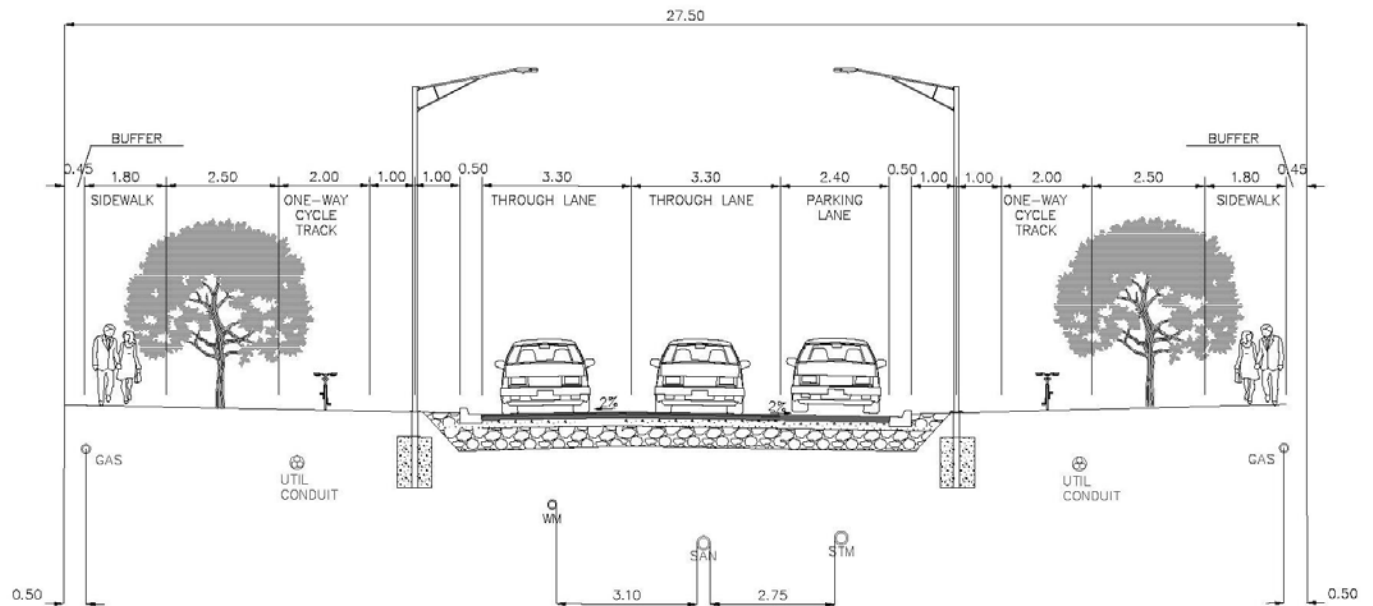


# Arterial Roadway Cross-section



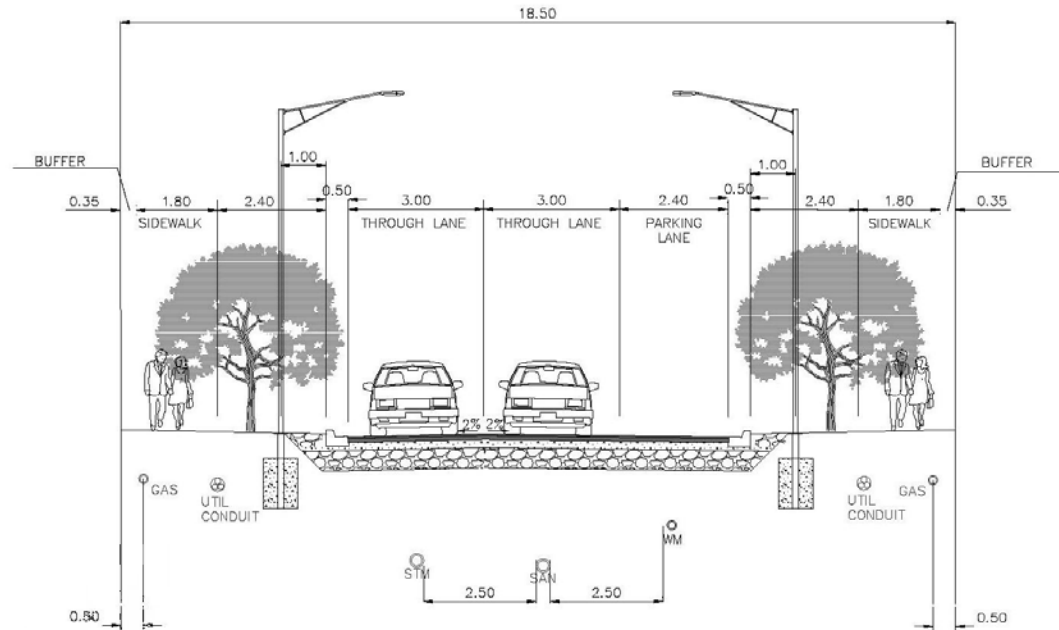


# Collector Roadway Cross-Section





# Local Roadway Cross-section





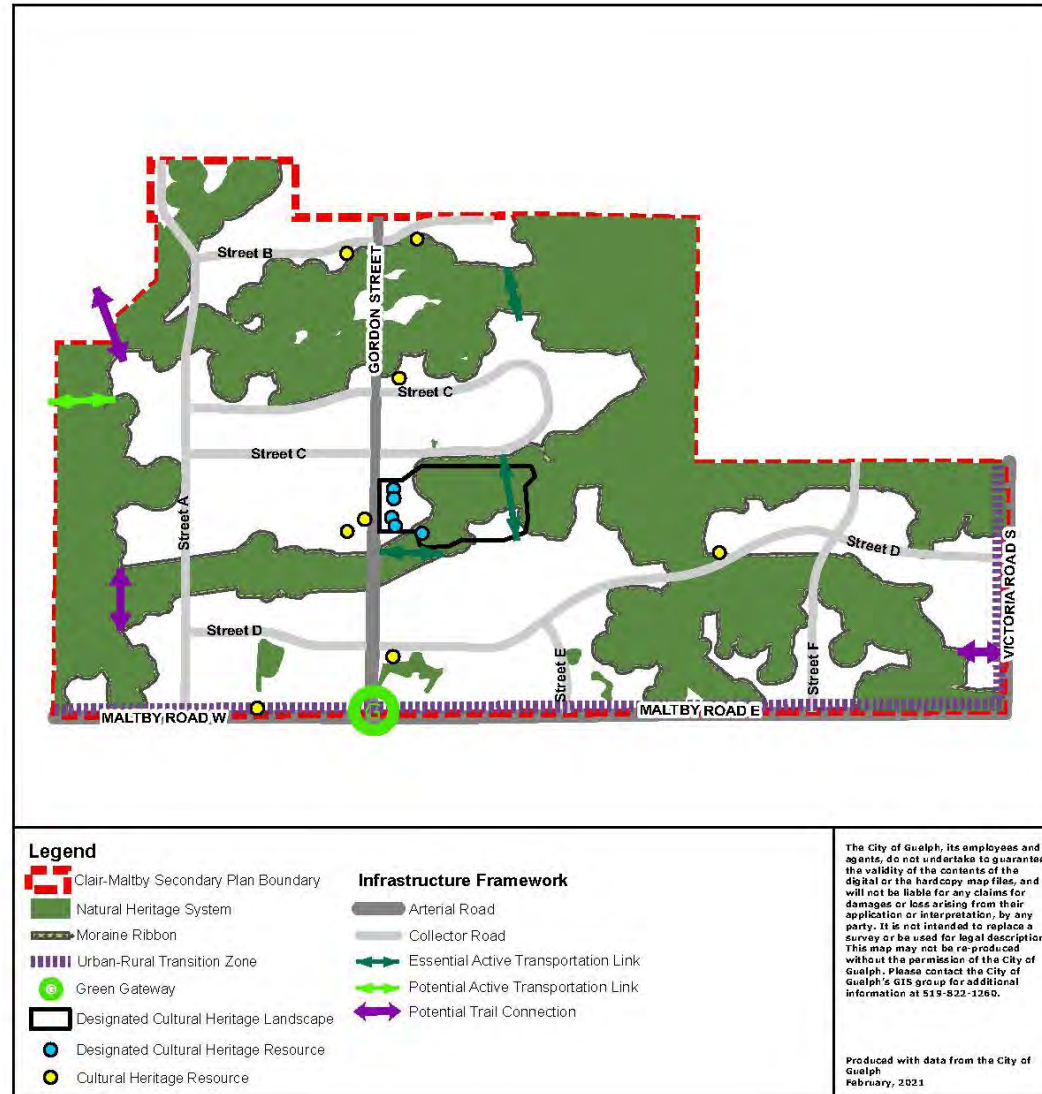


# Draft Secondary Plan

- The cultural heritage policies ensure the conservation of the cultural heritage resources.
- The cultural heritage resources reflect the rural/agricultural heritage of Guelph, and the former Township of Puslinch, as well as the cultural heritage landscape at 2162 Gordon St.



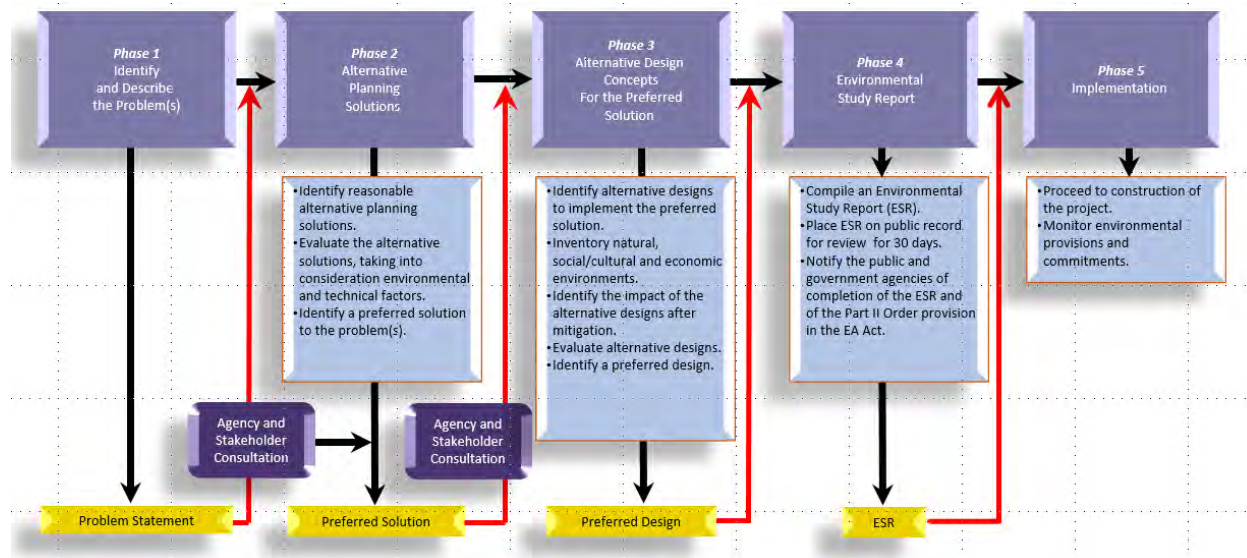
# Schedule F: Cultural Heritage Resources





# Draft MESP Overview

- The MESP has followed Phases 1 and 2 of the Class EA process and identifies a series of servicing projects that will be required to service the Clair-Maltby SPA.







# Draft MESP Overview

- MESP has determined preferred servicing strategies for:
  - Water;
  - Wastewater;
  - Stormwater management, and
  - Mobility (transportation)for the Clair-Maltby SPA preferred land use plan.





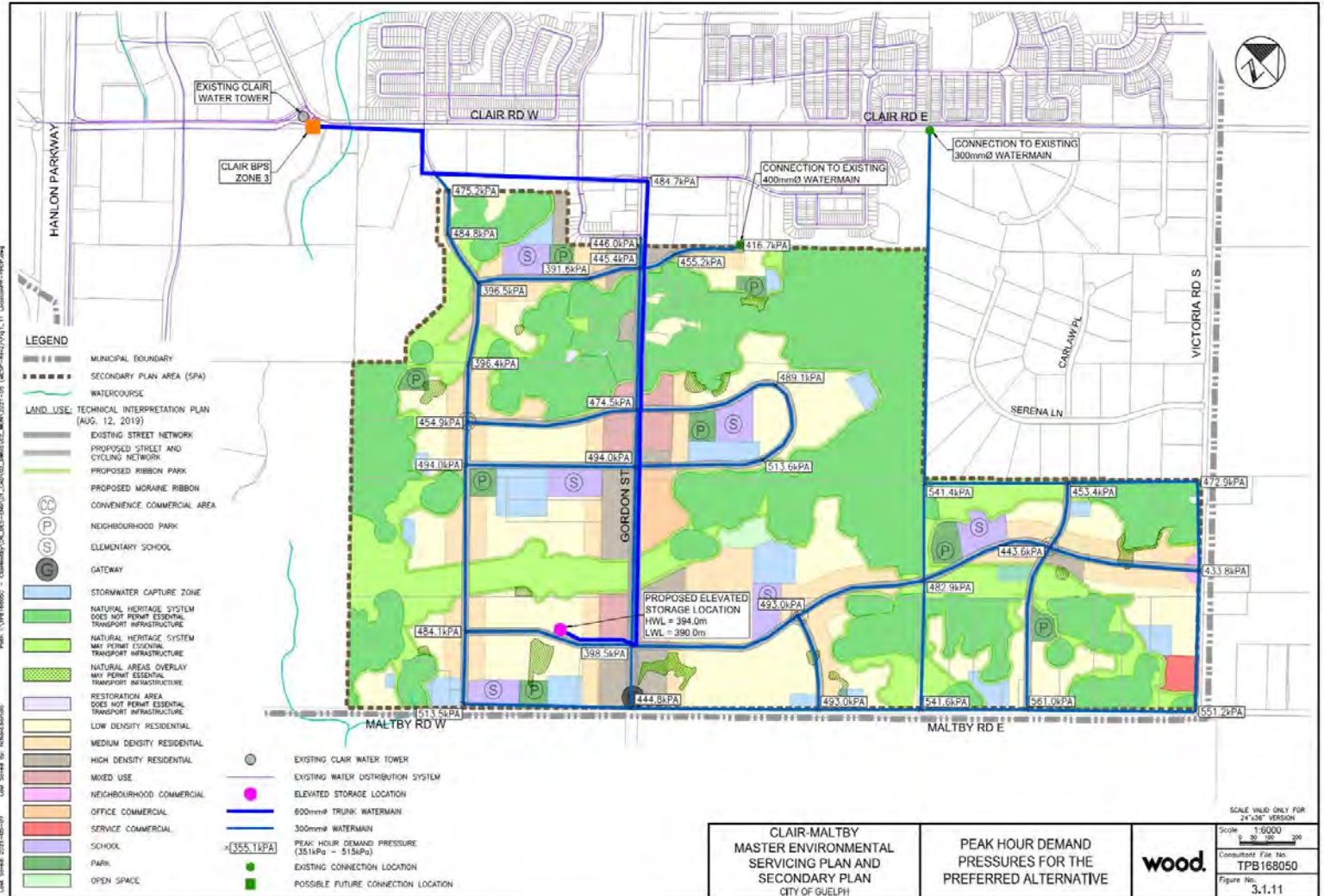
# Draft MESP Overview

## **Water Servicing**

- Water servicing for the CMSP lands will be provided by a system of water distribution mains, an above-ground reservoir, and a transmission main bringing water from the Clair Booster Pump Station to the overhead reservoir, with associated hydrants, valves and appurtenances as required.



# Draft MESP Overview Water Servicing







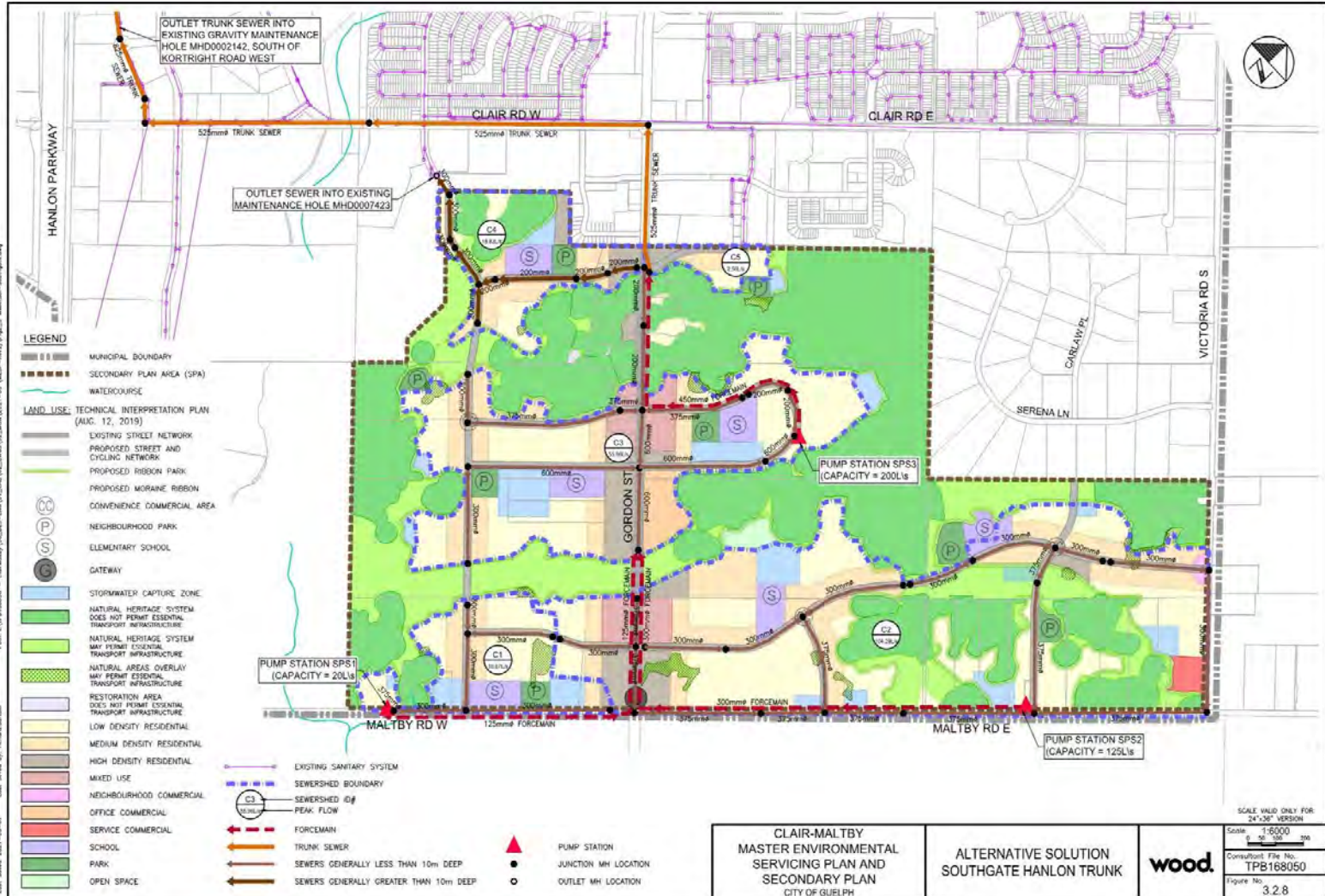
# Draft MESP Overview

## **Wastewater Servicing**

- The wastewater servicing for the updated land use within CMSP lands will be provided by a system of wastewater mains, sanitary pump stations and sanitary forcemains.
- A new trunk sewer routed along Gordon Street to Clair Road, Laird Road and Kirkby Ct. will connect into the Hanlon Trunk system.



# Draft MESP Overview Wastewater Servicing







# Draft MESP Overview

## **Stormwater Management**

- Stormwater management will be needed to address drainage impacts from the proposed land use conditions. Stormwater management strategy is designed to meet surface water and ground water targets set in the Comprehensive Environmental Impact Study (CEIS).



# Draft MESP Overview

## Stormwater Management

Stormwater management will include:

- Distributed low impact development (LID) best management measures (BMPs) to capture 20 mm runoff within both public and private lands.
- Stormwater capture areas, sized to capture the Regional Storm (Hurricane Hazel), with overflow to existing depression areas.





# Draft MESP Overview

## Stormwater Management

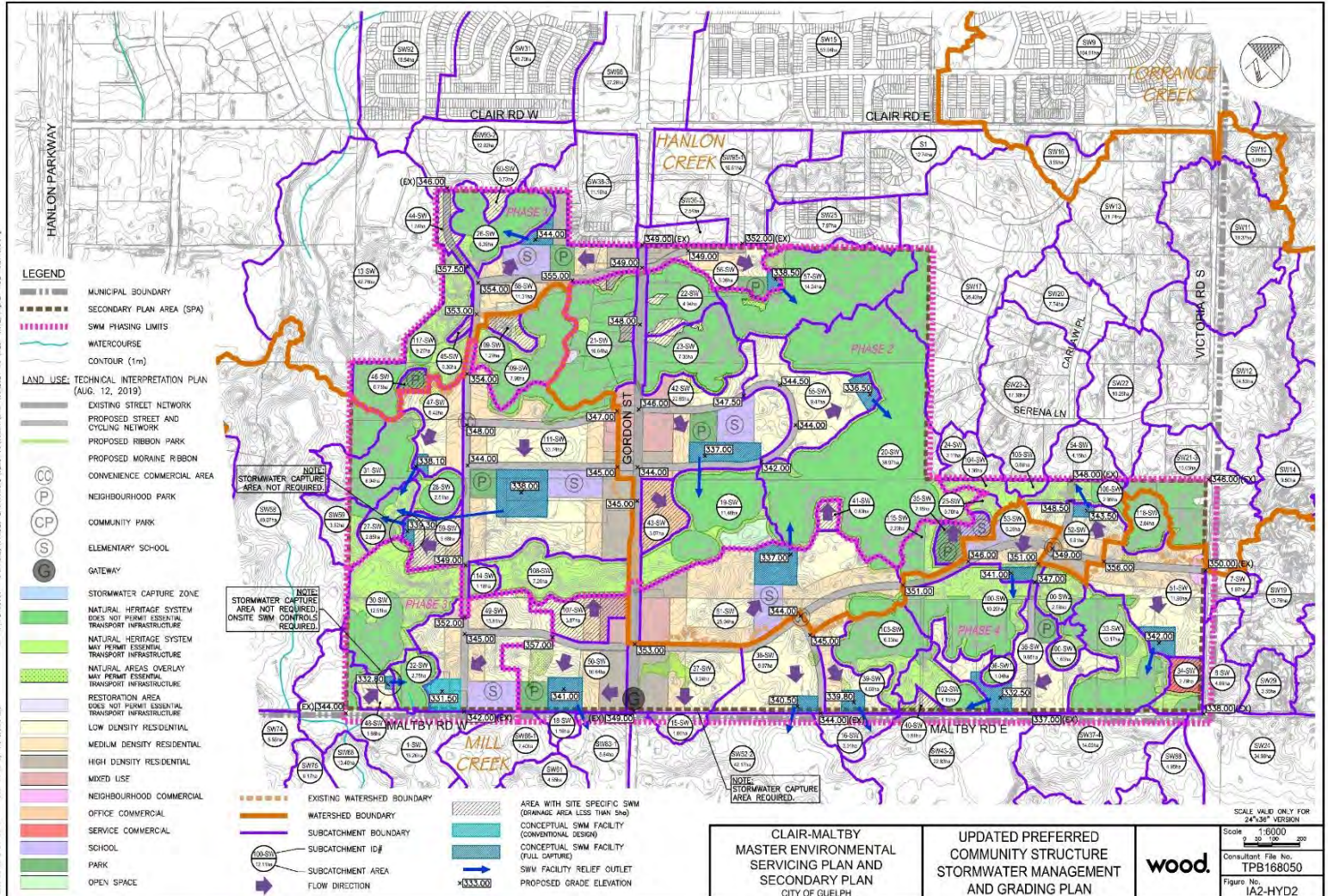
- Infiltrative LID BMPs that receive runoff from paved surfaces will require pretreatment to prevent groundwater contamination.
- A treatment train approach will be used to protect the stormwater capture areas' function of infiltration and to protect groundwater quality.





# Draft MESP Overview

## Stormwater Management







# Draft MESP Overview

## **Mobility**

The mobility network will ensure that active transportation and transit are attractive and efficient modes of transportation within the area and connecting to surrounding areas.

This is proposed to be achieved through a multi-modal active-transportation focused mobility system inclusive of an integrated network with roads, bicycling facilities, sidewalks and paths designed, built and maintained with consideration of all users.





# Draft MESP Overview

## **Mobility**

- Collector roads (2 traffic lanes with on-street parking and separated bicycle lanes)
- Intersection improvements at 9 locations
- Clair Road East widen to 4 lanes
- Gordon Street widen to 4 lanes
- Victoria Road South and Maltby Road East to be urbanized









# Next Steps

- Continue to receive stakeholder input over the summer and early fall
- Statutory public meeting – Council Meeting
- Review and consider of community and stakeholder feedback
- Preparation of final Secondary Plan and MESP for adoption by Council





# THANK YOU

## Questions?

[haveyoursay.guelph.ca/Clair-Maltby](https://haveyoursay.guelph.ca/Clair-Maltby)

- Provide your thoughts and ideas on the 'Idea Boards' until August 8, 2021
- Ask Questions
- Attend our virtual office hours
- email us at [clair-maltby@guelph.ca](mailto:clair-maltby@guelph.ca)





# Clair-Maltby

**Transform. Connect. Community.**

June 24, 2021 Open House  
Water & Wastewater Servicing Session  
2:00 pm



# Servicing: Water & Wastewater







# Land Acknowledgement

As we gather, we are reminded that Guelph is situated on treaty land that is steeped in rich indigenous history and home to many First Nations, Inuit and Métis people today.

As a City we have a responsibility for the stewardship of the land on which we live and work.

Today we acknowledge the Mississaugas of the Credit First Nation of the Anishinaabek Peoples on whose traditional territory we are meeting.





# Agenda

Session 1 – Overview

**Session 2 - Servicing: Water & Wastewater**

Session 3 – Environment and Stormwater Management

Session 4 – Overview + Land Use and Parks

Session 5 – Mobility









# Draft MESP Summary

- MESP has determined preferred servicing strategies for:
  - **Water & Wastewater;**
  - Stormwater management, and
  - Mobility (transportation)for the Clair-Maltby SPA preferred land use plan.





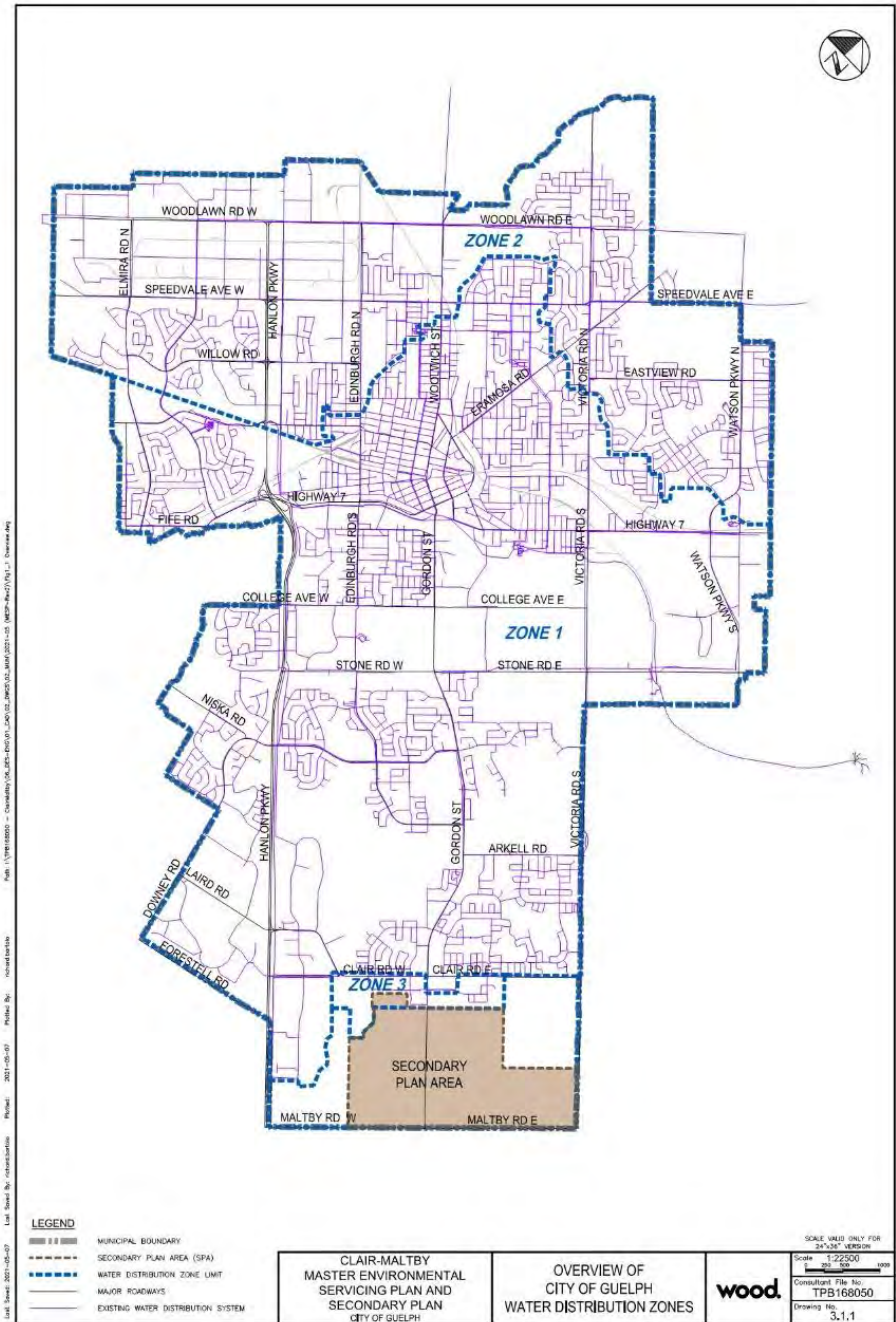
# Water Servicing

- Water servicing for the Clair Maltby Secondary Plan (CMSP) lands is proposed to be provided by a system of water distribution mains, an above-ground reservoir, and a transmission main bringing water from the Clair Booster Pump Station to the new above-ground reservoir, with associated hydrants, valves and appurtenances as required.



# Water Servicing Existing System

- The CMSP lands are higher in elevation than much of the rest of the City.
- The City's water distribution system is currently being expanded in the south side of Guelph through a new pressure zone (Zone 3) that will operate at elevations that are suitable for the CMSP Lands.
- As demand increases in Zone 3, it will require water storage to meet mandated operating requirements.







# Water Servicing

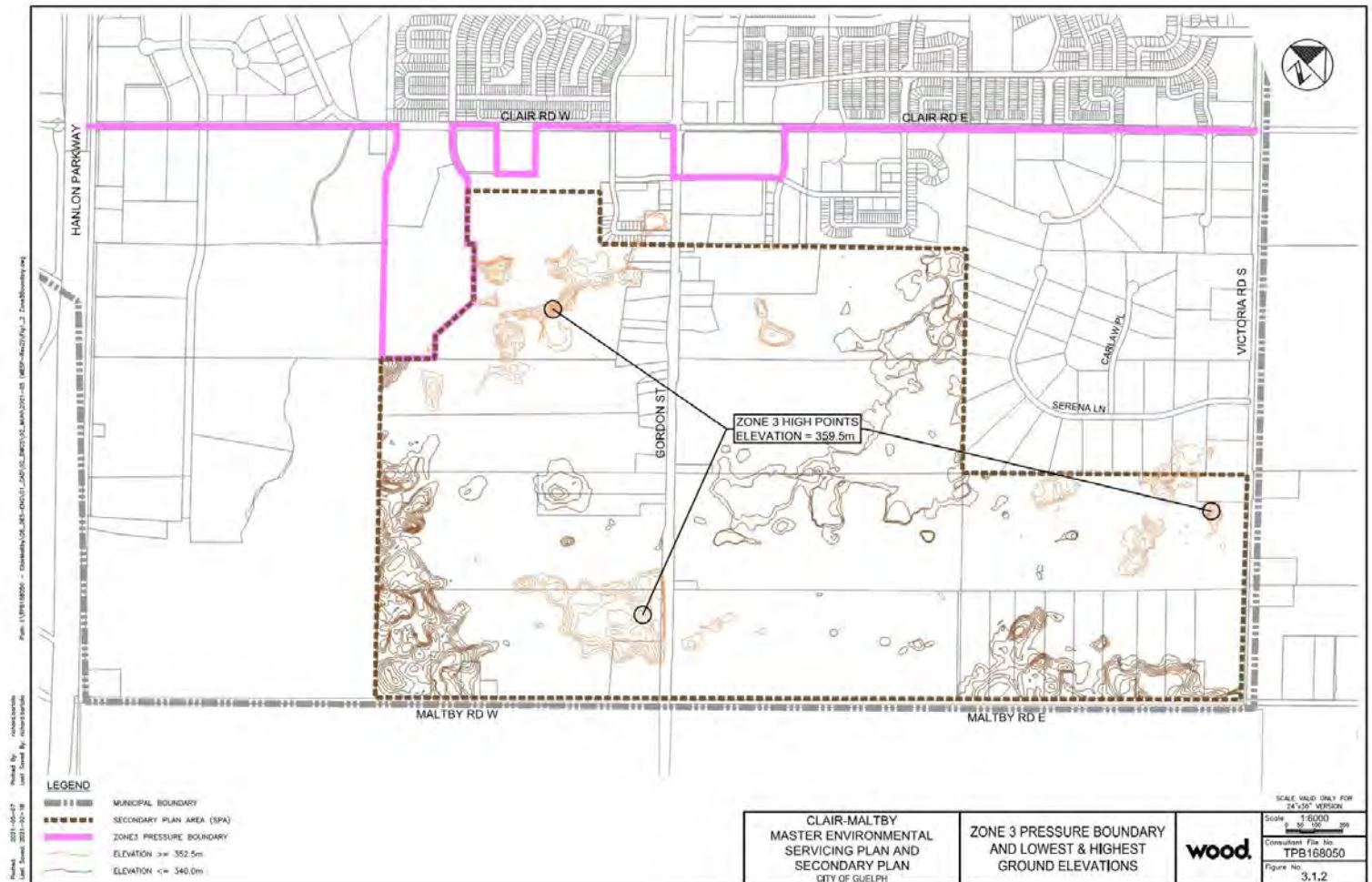
## **Storage Reservoir**

- A 5ML storage reservoir will be required at one of the high points within the CMSP Lands.
- Three potential locations were considered for the water storage reservoir
  - Location 1 in the northern portion of the lands near Gordon Street,
  - Location 2 in the southwest portion of the lands near Gordon Street and Maltby Road,
  - Location 3 in the eastern portion of the lands near Victoria Road.



# Water Servicing

## Alternative Storage Locations

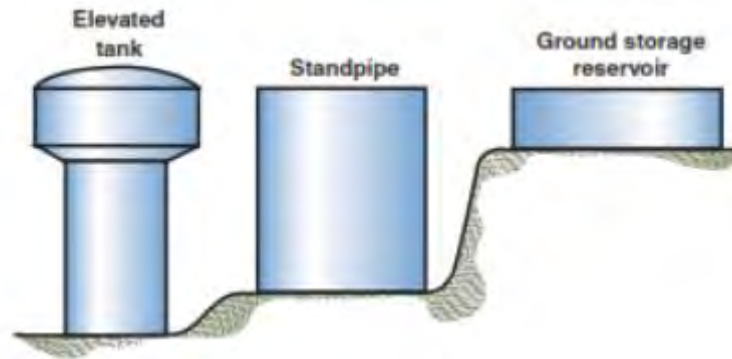




# Water Servicing

## Water Storage Options

- Elevated storage which is operated by gravity



- Subsurface storage which requires a suitably sized pumping station





# Water Servicing Evaluation Criteria

Evaluation	Criteria
Social/Cultural Environment	Impacts or opportunities created by the alternative as related to the people and their current or historic relationship with the study area.
Economic Environment	Capital, operation and maintenance costs associated with an alternative.
Natural Environment	Impacts or opportunities that an alternative may have related to the natural environment (i.e., fisheries, wildlife, water quality, etc.).
Functional (Technical) Environment	Considers the ability of the alternative to address the Problem Statement and how it may impact existing physical systems. These include ease of maintenance, impact to existing infrastructure, ability to utilize available capacity in the existing infrastructure, capability of phased implementation, and ability to be implemented in concert with wastewater servicing, stormwater servicing and mobility



# Water Servicing Evaluation Matrix

Table 3.1.17. Comparative Evaluation Matrix – Above Ground Tank

Category	Criteria	Criteria Indicator	Do Nothing	Limit Community Growth	Above Ground Tank – Location 1 Cost Option 1(a)	Above Ground Tank – Location 2 Cost Option 1(b)	Above Ground Tank – Location 3 Cost Option (c)
<b>Natural Environment</b>	Terrestrial/Aquatic Environment Resources	Potential adverse effects on ecological sensitive lands, impacts to water bodies and aquatic species.	No impact as no new lands will have to be developed or utilized.	Minimal impact as watermains would be aligned along proposed road network. Overall smaller network and therefore less impact.	Minimal impact as watermains would be aligned along proposed road network.	Minimal impact as watermains would be aligned along proposed road network.	Minimal impact as watermains would be aligned along proposed road network.
<b>Social, Cultural Environment</b>	Impact on Local Residents and Businesses	Cultural Heritage and Archaeology	No impact as no servicing will be provided.	Moderate impact for connection to the existing Clair Booster Pump Station.	Moderate impact for connection to the existing Clair Booster Pump Station.	Moderate impact for connection to the existing Clair Booster Pump Station.	Moderate impact for connection to the existing Clair Booster Pump Station.
<b>Social, Cultural Environment</b>	Sustainable Growth	Impacts on Adjacent Properties	No impact to adjacent properties as no servicing will be provided.	Limited impact to adjacent properties due to limited growth and greenfield development.	Limited impact as most of the development is expected to be greenfield development.	Limited impact as most of the development is expected to be greenfield development.	Limited impact as most of the development is expected to be greenfield development.
<b>Social, Cultural Environment</b>	Reliability	Impact to adjacent properties.	Not applicable	Dependent on whether storage would be above or below ground.	Reasonably reliable due to above ground tank.	Reasonably reliable due to above ground tank.	Reasonably reliable due to above ground tank.
<b>Social, Cultural Environment</b>	Regulatory Environment	Compliance with provincial/municipal regulations and standards	Not applicable	Complies with guidelines.	Complies with guidelines.	Complies with guidelines.	Complies with guidelines.
<b>Social, Cultural Environment</b>	Land use	Impact on surrounding land use.	No impact on surrounding land use	Construction Impacts, Visual Impact of aboveground storage tank	Construction Impacts, Visual Impact of aboveground storage tank adjacent to park, school and existing residential.	Construction Impacts, Visual Impact of aboveground storage tank. Location 2 is adjacent to large demand non-residential user compared to Location 1 which is next to a park and school.	Construction Impacts, Visual Impact of aboveground storage tank





# Water Servicing

## **Preferred Storage Option**

- Elevated storage and underground storage with a pumping station were assessed for all three geographic locations for storage
- All scenarios were evaluated using Social/Cultural, Economic, Natural and Functional (Technical) Environment criteria.
- The preferred alternative proposes an elevated 5ML Storage reservoir at location 2, near the corner of Gordon Street and Maltby Road
- In this application the above-ground ground storage offered significant advantages in reliability (gravity versus mechanical equipment), capital cost and operating costs, as well as impact to the environment due to the smaller footprint of the facility.





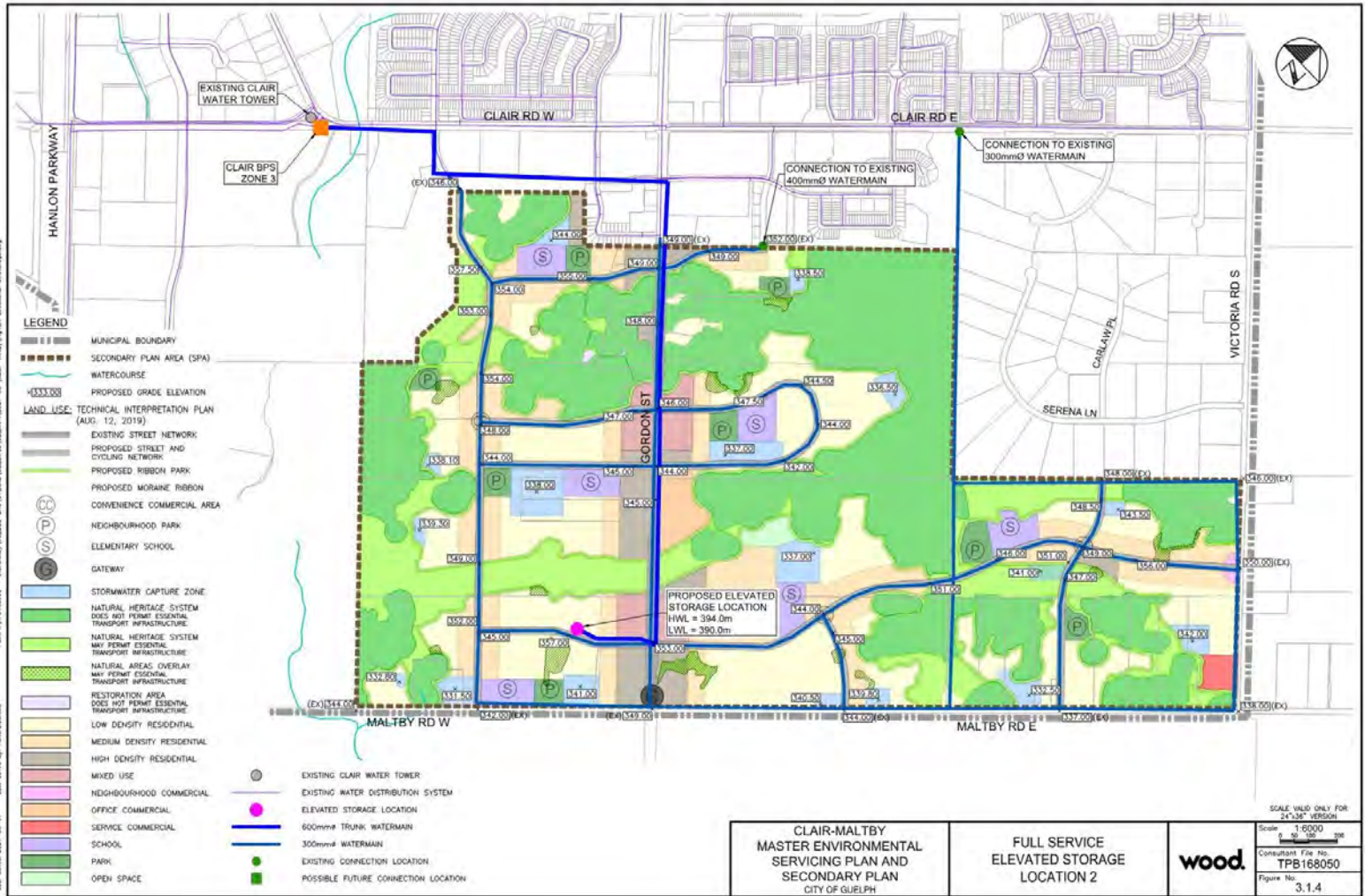
# Water Servicing

## **Preferred Storage Option Cont'd**

- For the location of the above-ground storage site, Location 3 is the most expensive in terms of both capital and operating costs. Location 1 and Location 2 both offer similar system reliability, performance, as well as similar capital and operating costs.
- Location 1 has the disadvantage of its' visual proximity to a park and school, while Location 2 offers the advantage of a more central location to the CMSP development as compared with the other two locations identified.
- Additionally, Location 2 is closer to a large non-residential commercial center and would facilitate in meeting the higher fire flow requirements or this land-use.
- As a result, Location 2 was deemed to be the preferential location for above-ground storage.



# Water Servicing Preferred Storage Option







# Water Servicing

## **System Components**

- All new collector and arterial roads shown in the land use plan will be serviced with 300 mm distribution mains;
- Distribution mains will be looped (no dead ends)
- Transmission mains will be constructed along major system connections (Pump to Storage) and distribution mains will be connected to the transmission mains at suitable locations.
- As noted, the preferred alternative uses an elevated 5ML Storage reservoir at location 2, near the corner of Gordon Street and Maltby Road





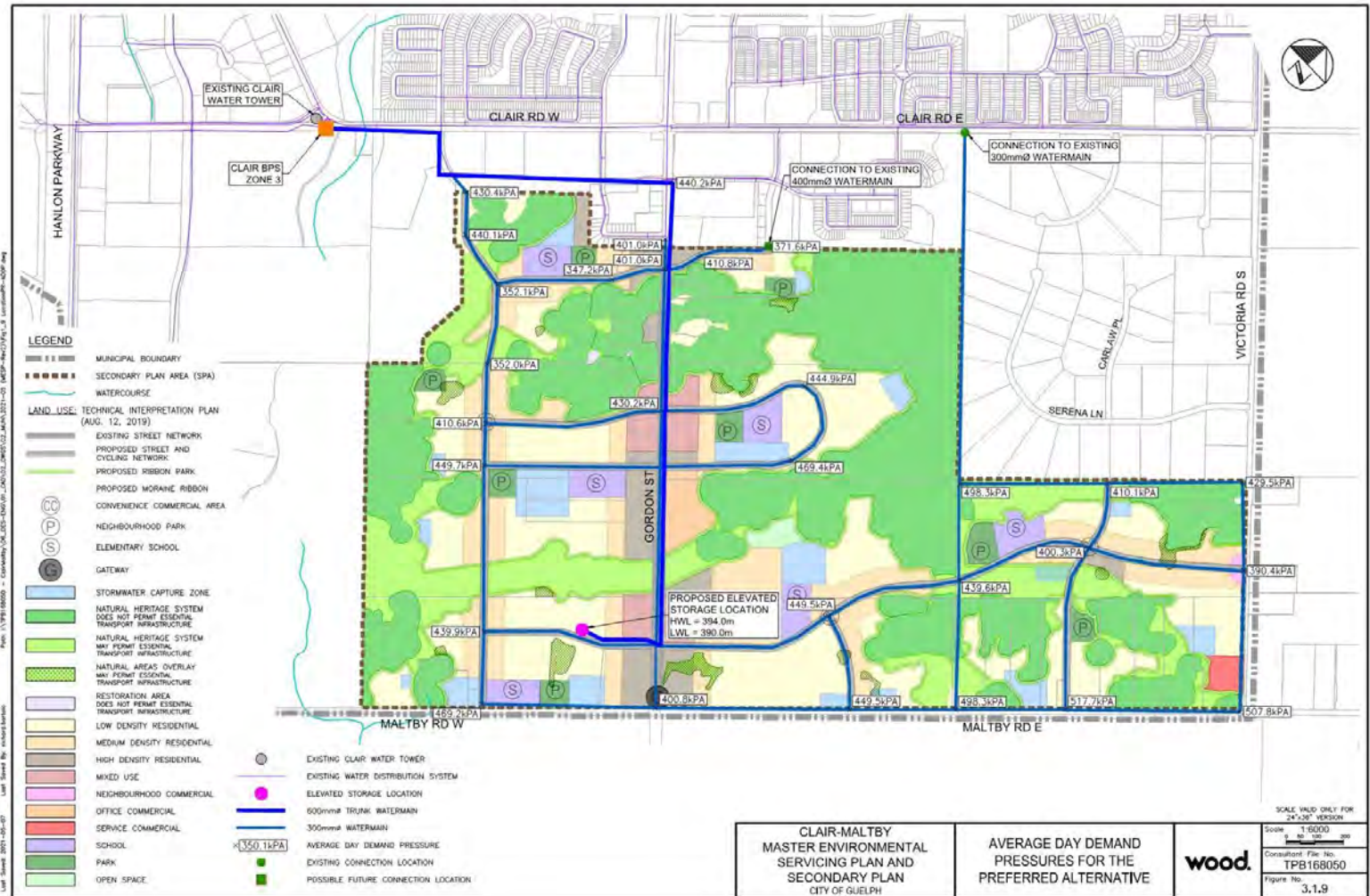
# Water Servicing

## System Performance

- **Average Day Demand** - The pressures range from a maximum of 517 kPa (75 psi) to a minimum of 347 kPa (50 psi), which are within the acceptable range.
- **Fire-flows under Maximum Day Demand** – the available fire flows meet the requirements established in the MECP fire flow guidelines, the “Water Supply for Public Fire Protection” published by the Fire Underwriters Survey, and the Fire flow guidelines provided in the Guelph Master Servicing Plan, 2008.
- **Peak Hour Demand** - The pressures range from a maximum of 561 kPa (81psi) to a minimum of 391 kPa (56 psi), which are within the acceptable range.

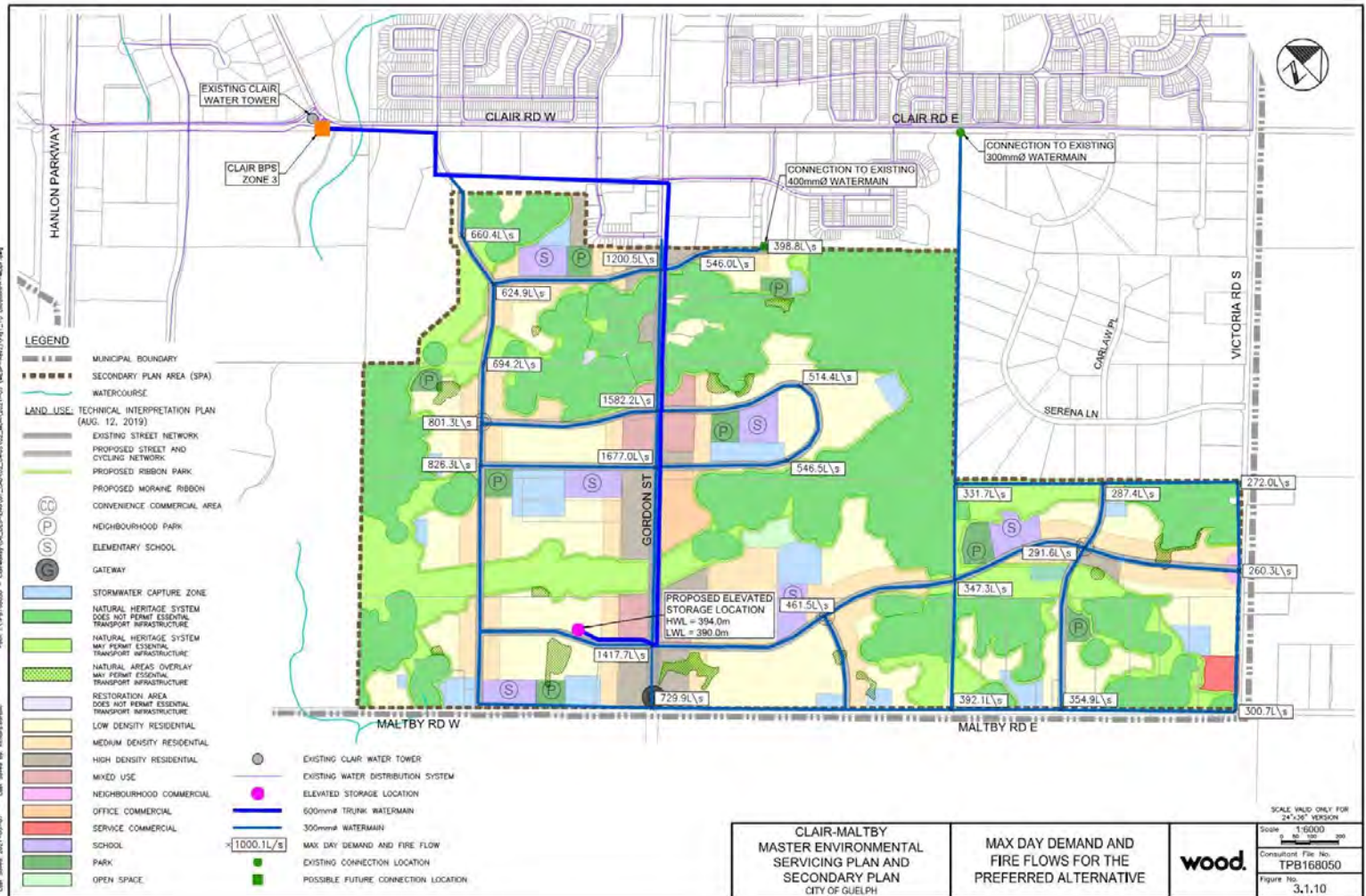


# Water Servicing Average Day Demand



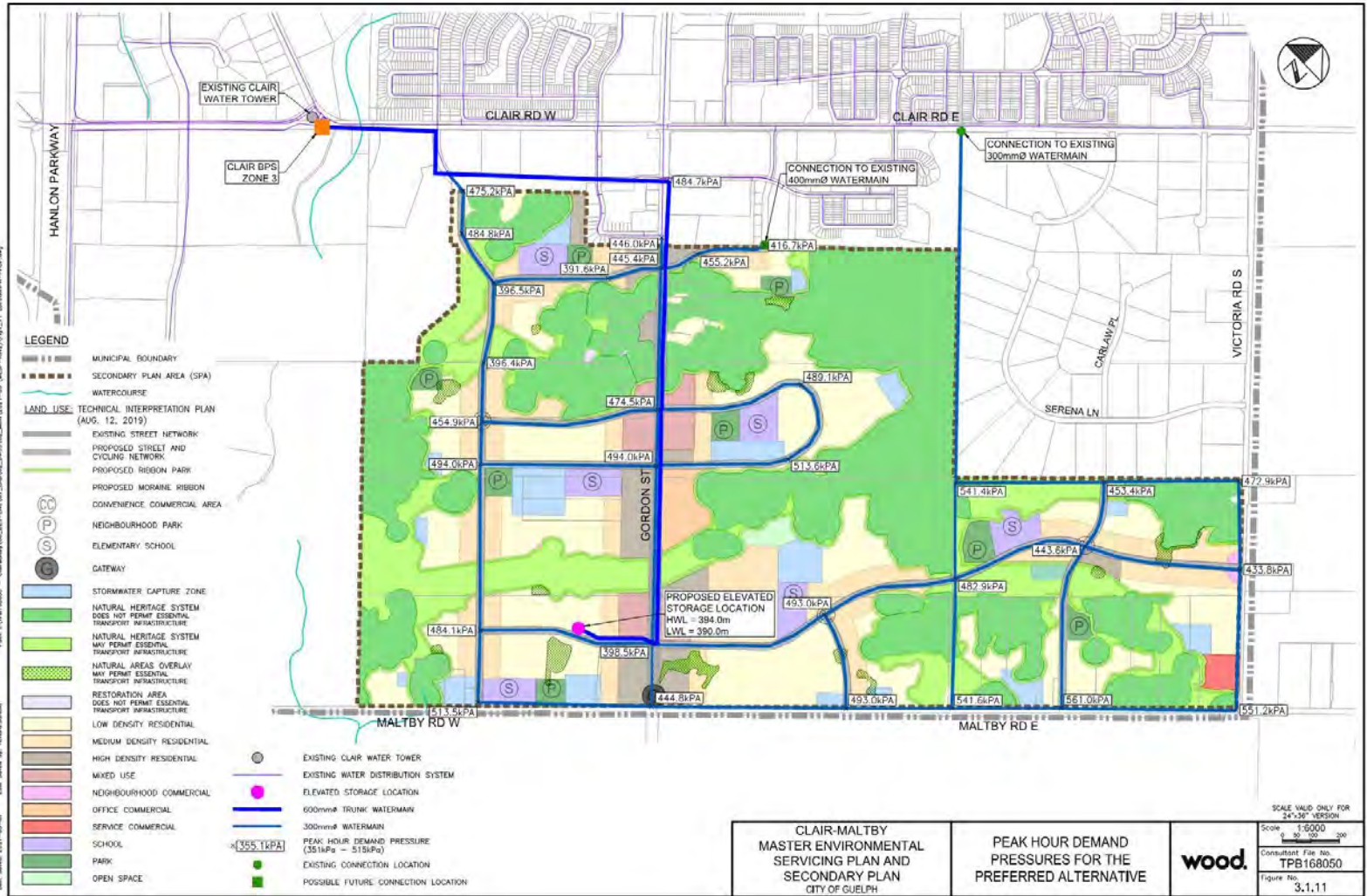


# Water Servicing Fire Flow / Max Day





# Water Servicing Peak Hour Demand







# Wastewater Servicing

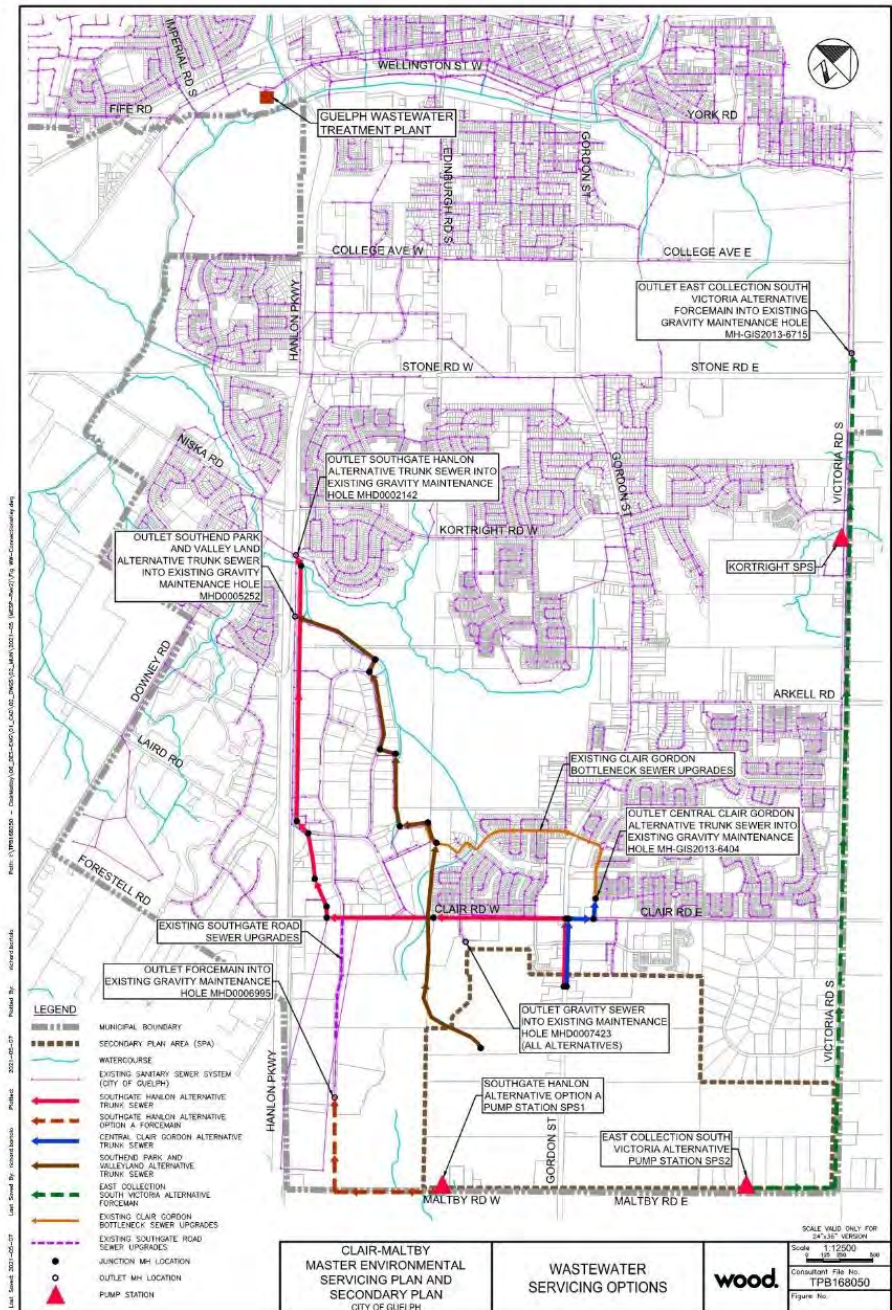
- The wastewater servicing for the proposed land uses within CMSP lands is proposed to be provided by a system of wastewater gravity mains, sanitary pump stations and sanitary forcemains.
- A new trunk sewer is proposed along Gordon Street to Clair Road, Laird Road and north to connect into the Hanlon Trunk system.



# Wastewater Servicing

## Existing System

- Before evaluating internal servicing options for the CMSP Lands, routing options for conveying the flows to the Guelph Wastewater Treatment Plant were assessed
- Three main Receiving Branches were considered potentially available to receive all or part of the wastewater flow from the CMSP area. Their estimated available capacities at various points along the trunk sewers were investigated.

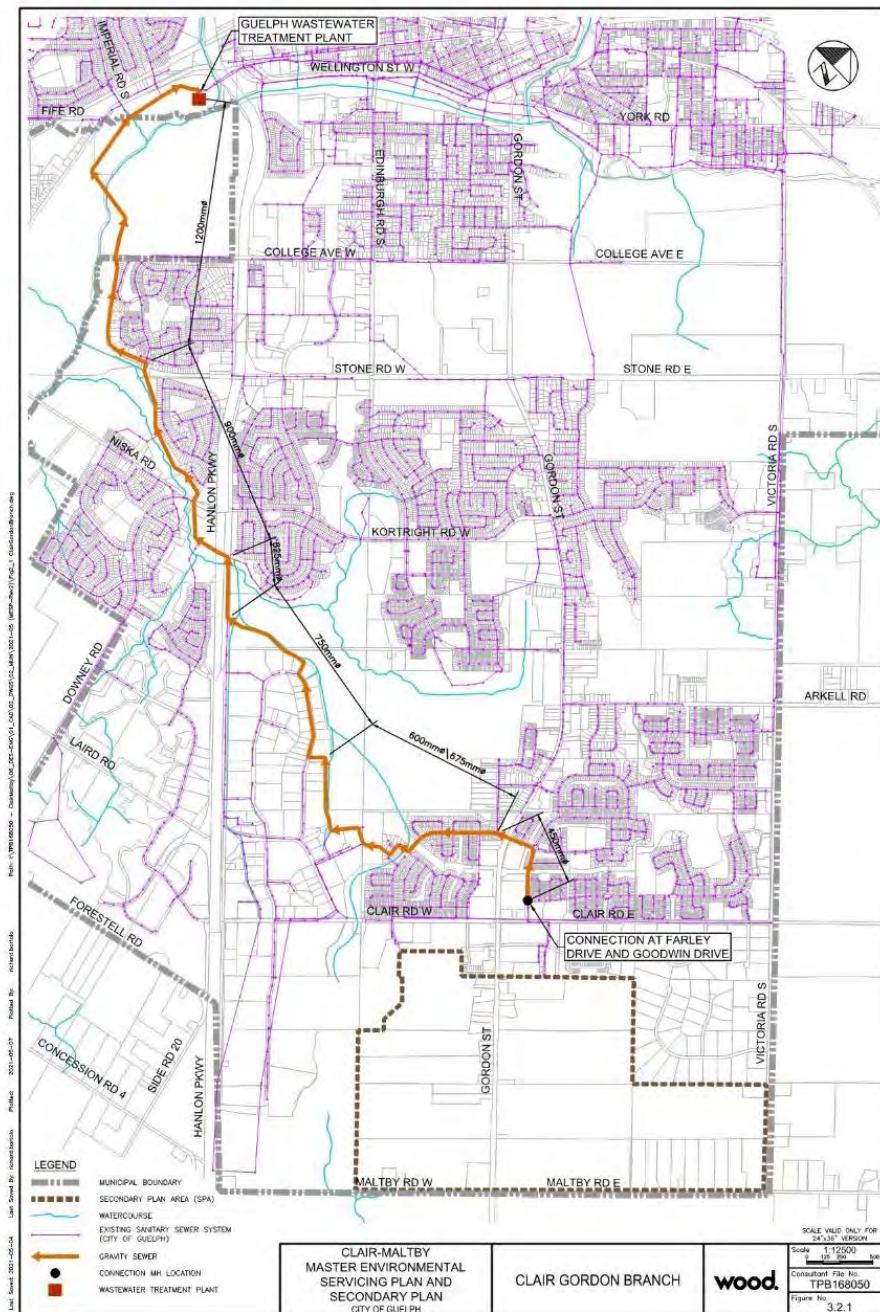




# Wastewater Servicing

## Clair Gordon Branch

- The Clair-Gordon Receiving Branch sewer is a collection system which begins at the Farley Drive and Goodwin Drive intersection and runs north to Clairfields Drive and west to the industrial park near Kirkby Court, eventually connecting to the trunk sewer at the Hanlon Road, north of the industrial park.
- Local sewers range in size from 450 mm diameter at the southernmost connection point and increase to 1200mm diameter prior to the Treatment Plant.
- This 450 mm pipe segment can accept 40 per cent of the Clair-Maltby flows without causing surcharging downstream

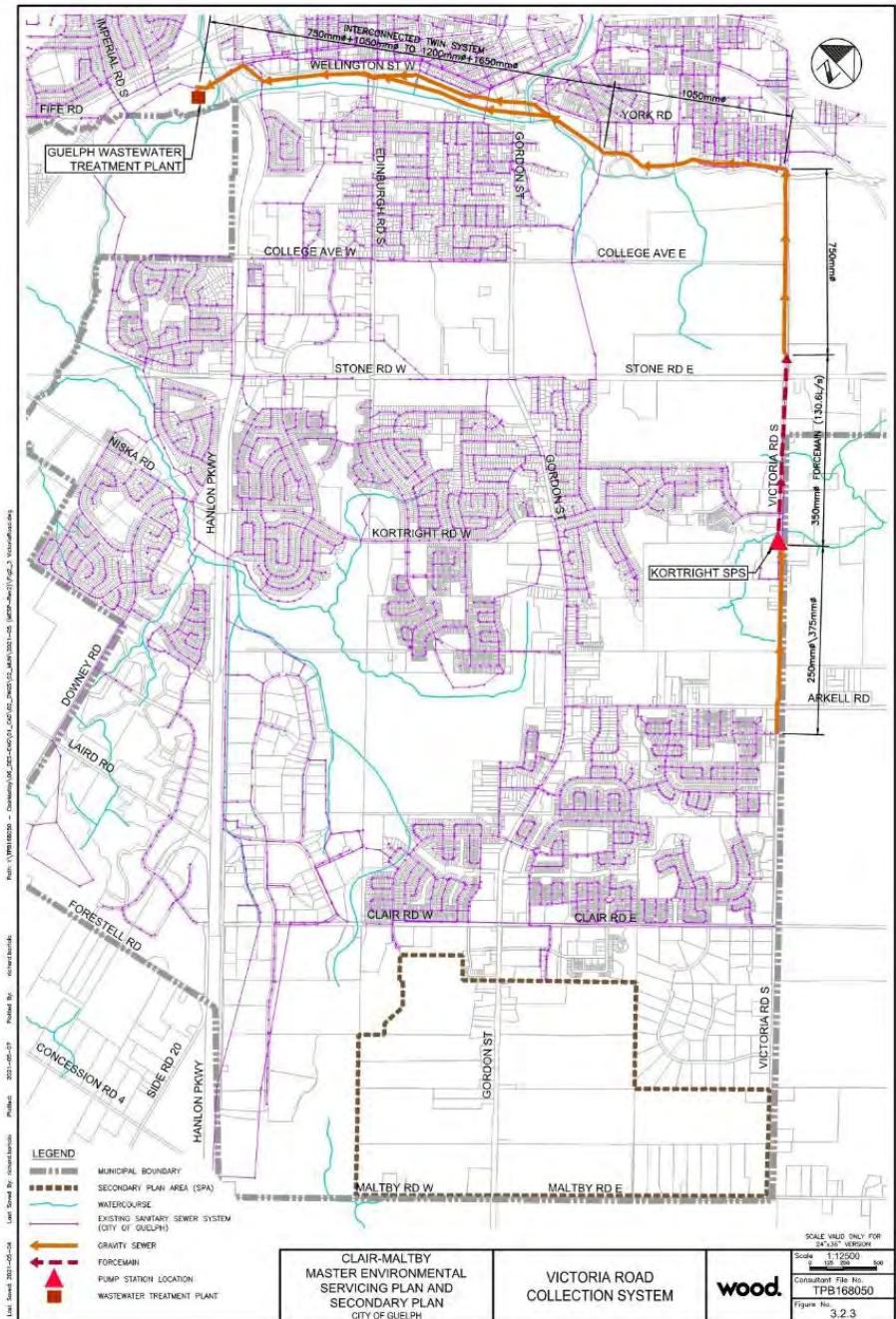




# Wastewater Servicing

## Victoria Road Branch

- The Victoria Road Branch is a collection system located South-East of Victoria Road South and Arkell Road
- Local sewers along Victoria Road range in size from 200 mm diameter at the connection point and increase to 375mm diameter prior to the Kortright East Sewage Pumping Station.
- This 375 mm pipe segment can accept 40 per cent of the Clair-Maltby demands without causing surcharging downstream

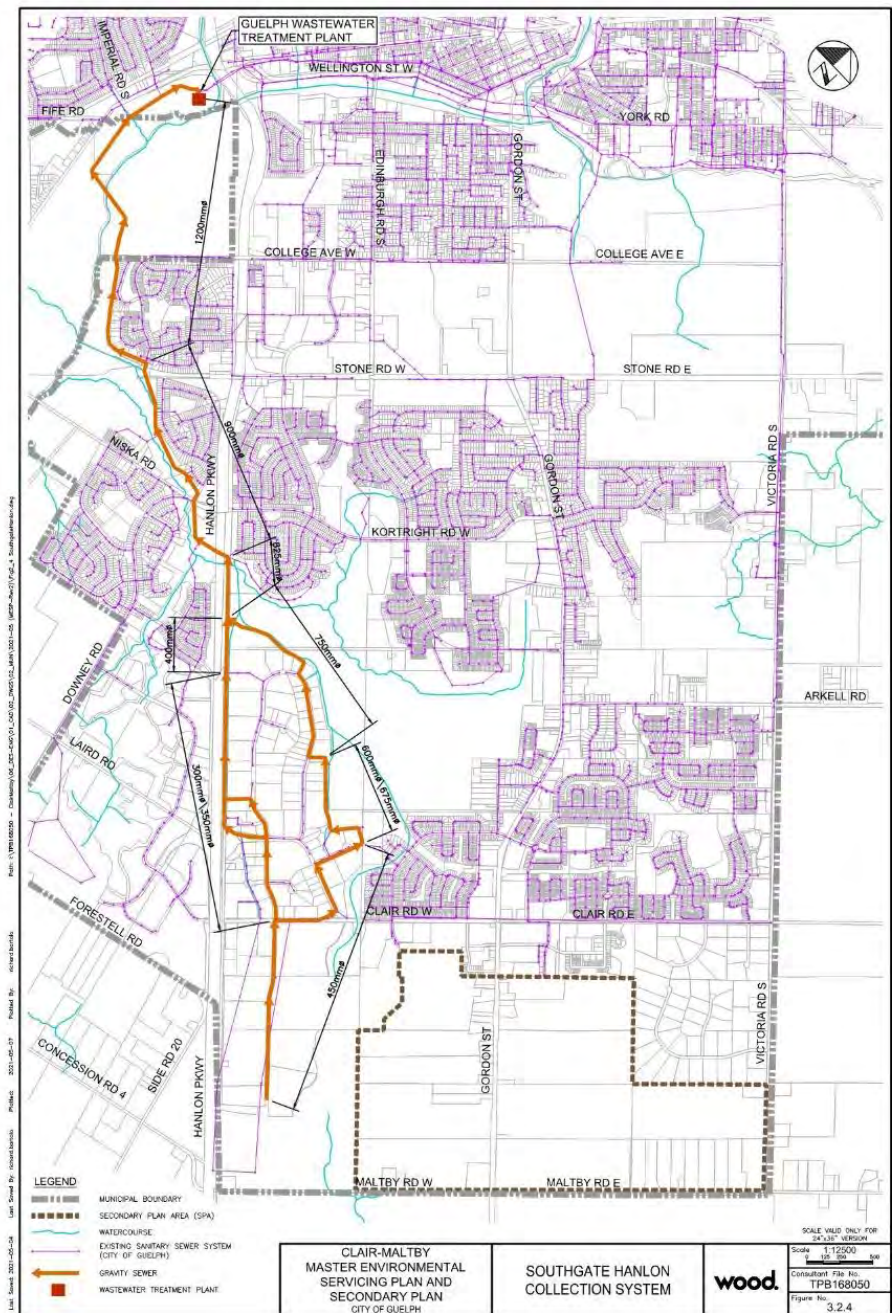




# Wastewater Servicing

## Southgate Hanlon Branch

- The Southgate Hanlon Branch is a collection system located South-East of Southgate Drive and Clair Road W.
- The collection system discharges to the same trunk as the Clair-Gordon collection system.
- Local sewers range in size from 300mm diameter (450 mm diameter at the southernmost connection point) and increase to 1200mm diameter prior to the Treatment Plant.
- This 450 mm pipe segment can accept 10 per cent of the Clair-Maltby demands without causing surcharging downstream







# Wastewater Servicing Evaluation Criteria

Evaluation	Criteria
Social/Cultural Environment	Impacts or opportunities created by the alternative as related to the people and their current or historic relationship with the study area.
Economic Environment	Capital, operation and maintenance costs associated with an alternative.
Natural Environment	Impacts or opportunities that an alternative may have related to the natural environment (i.e., fisheries, wildlife, water quality, etc.).
Functional (Technical) Environment	Considers the ability of the alternative to address the Problem Statement and how it may impact existing physical systems. These include ease of maintenance, impact to existing infrastructure, ability to utilize available capacity in the existing infrastructure, capability of phased implementation, and ability to be implemented in concert with wastewater servicing, stormwater servicing and mobility



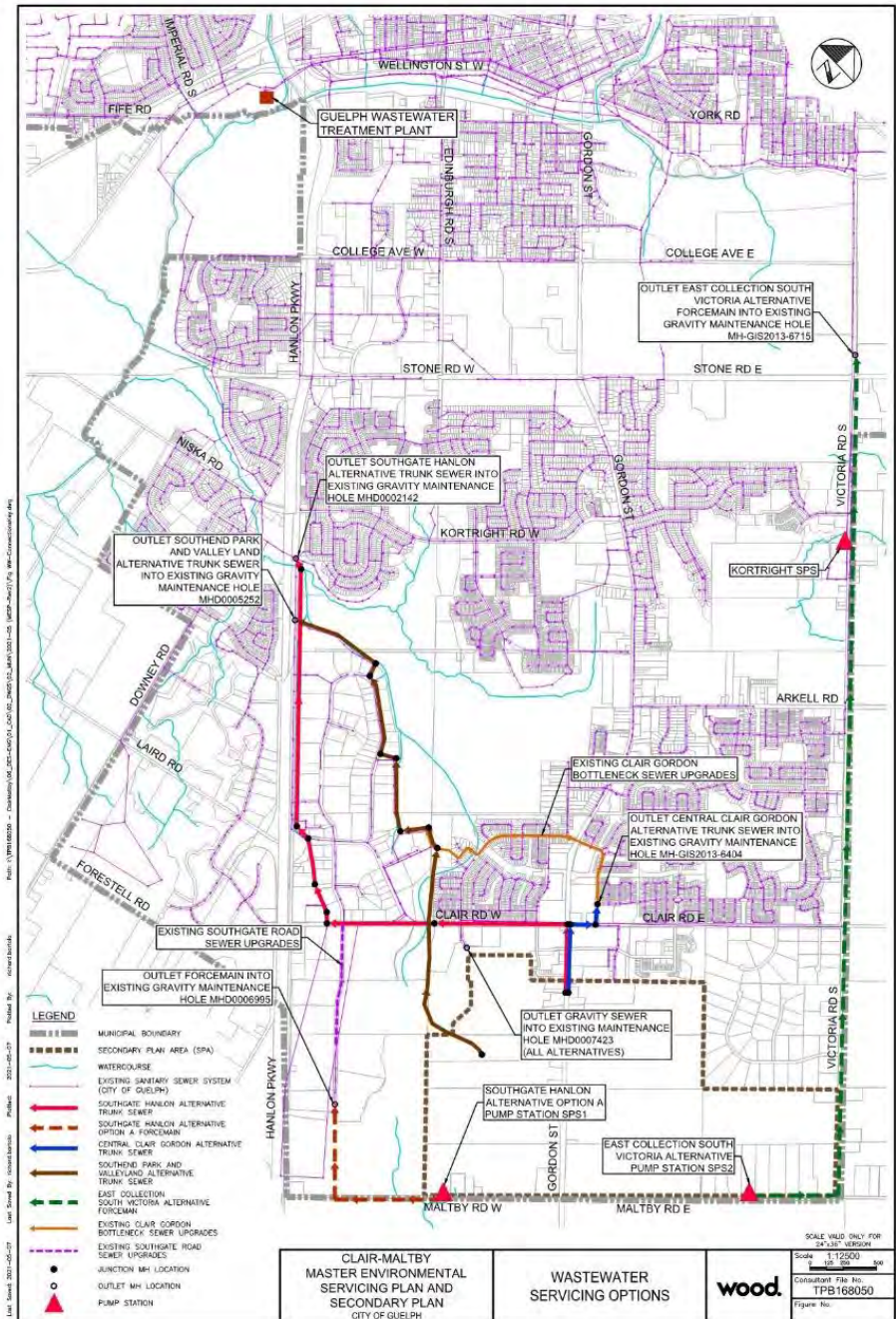




# Wastewater Servicing

## Receiving Branch Preferred Option

- Extending a new 525mm diameter trunk sewer to connect to the Southgate Hanlon Receiving Branch at a Maintenance Hole North of the Industrial Park was determined to be the preferred option. This Maintenance Hole is able to accept 100 per cent of the Clair-Maltby flows without causing surcharging downstream
- The new 525mm Trunk sewer will run north along Gordon St, West Along Clair Rd and north along Hanlon Parkway to connect to a Maintenance Hole north of the industrial park as shown in Red on the adjacent figure







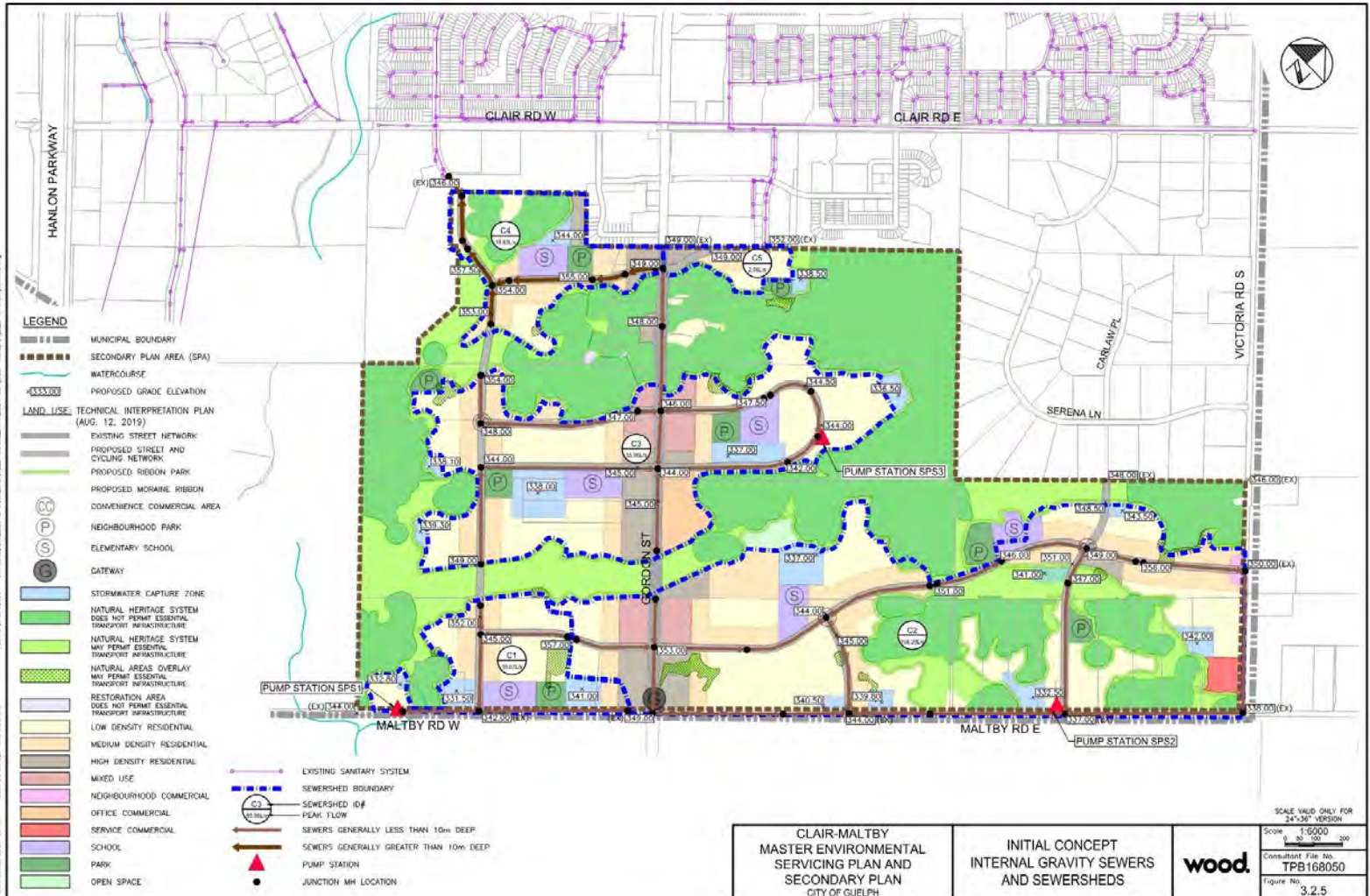
# Wastewater Servicing

## **Internal Servicing Concept**

- The preliminary grading along the roads was initially established for the stormwater servicing; this was used to evaluate the internal sanitary servicing within the CMSP lands.
- The elevations vary from a maximum of 357.5m to 331.5m above sea level.
- In general, the topography of the lands is very undulating making it a challenge to optimize wastewater servicing.
- Based on the topography of the subject lands, the area can be generally demarcated into three distinct catchments, with each having its controlling low point. These three low points represent good/preferred candidate locations for sewage pump stations.



# Wastewater Servicing Internal Servicing







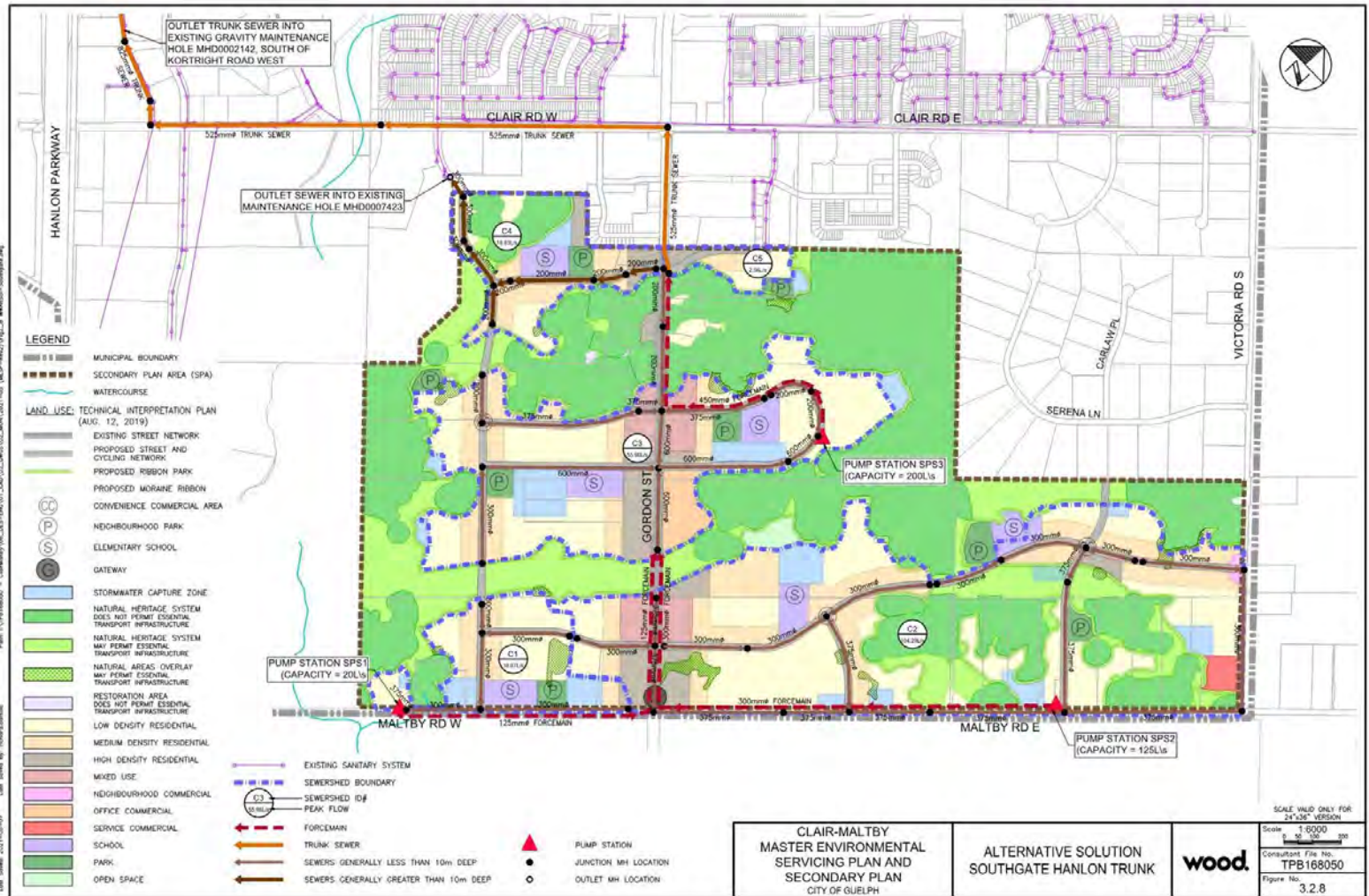
# Wastewater Servicing

## Internal Servicing Concept

- Three main catchment areas have been identified, each draining to a sewage pumping station.
- Gravity Sewers within Catchments 1, 2 and 3 will deliver sanitary flows to the three proposed sewage Pumping Stations.
- In addition to the three main catchment areas, areas on either side of Gordon Street, immediately south of Clair Road have been classified as two smaller catchments, each capable of draining by gravity to existing sewers. These are defined as Catchments 4 and 5.
- The areas west of Gordon Street (Catchment 4) is proposed to drain to the Poppy Drive sewer, and those to the east of Gordon Street (Catchment 5) would connect to the Hawkins Drive sewer.



# Wastewater Servicing Preferred Option







# Wastewater Servicing

## Preferred Option

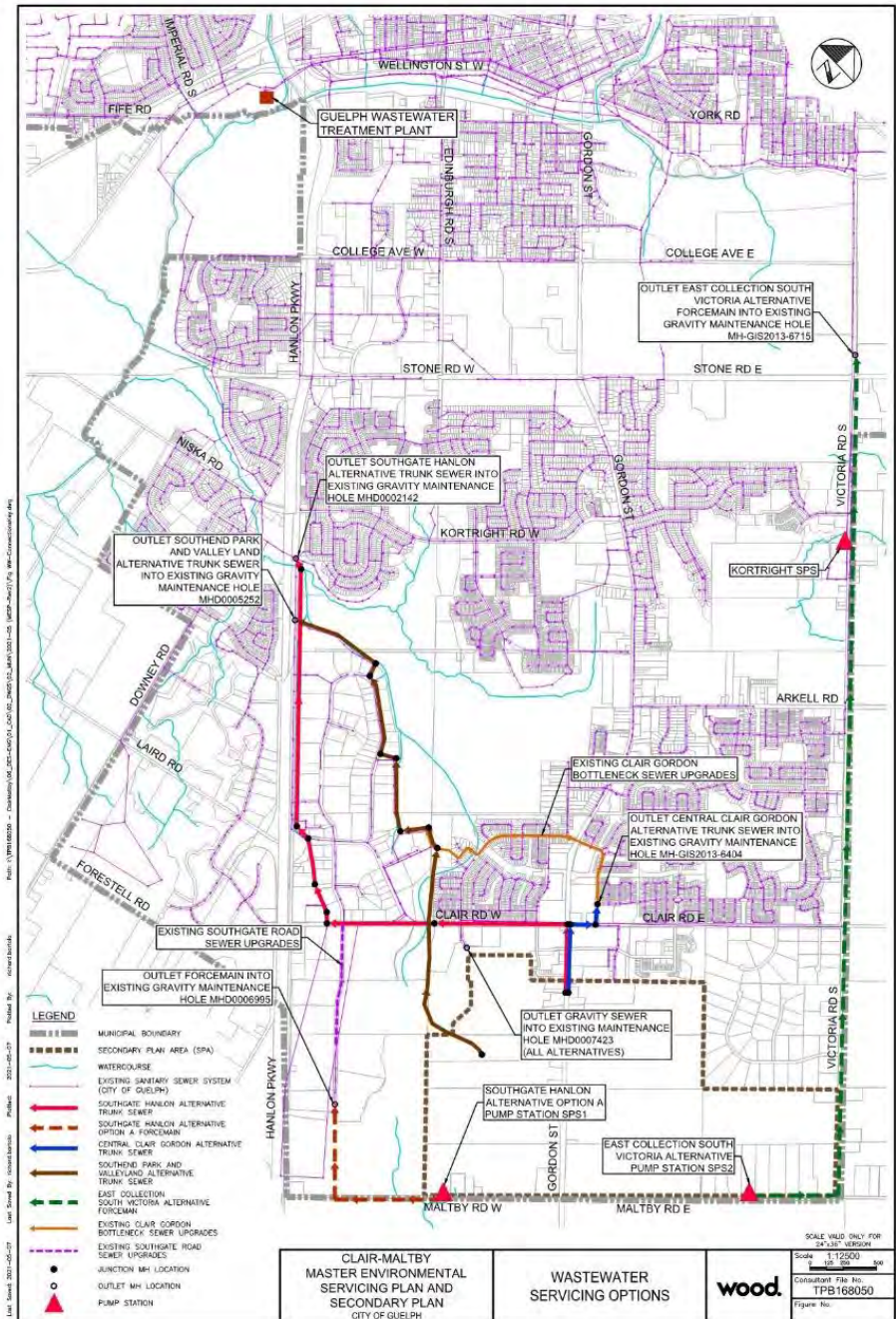
- All scenarios were evaluated using Social/Cultural, Economic, Natural and Functional (Technical) Environment criteria.
- The preferred option features the following:
  - Catchment 4 and Catchment 5 drain by gravity to existing sewers on Poppy Drive and Hawkins Drive
  - Catchment 1, Catchment 2 and Catchment 3 drain by gravity to their respective Sewage Pumping Stations.
  - The flows from Catchments 1 and 2 are pumped north to Catchment 3.



# Wastewater Servicing

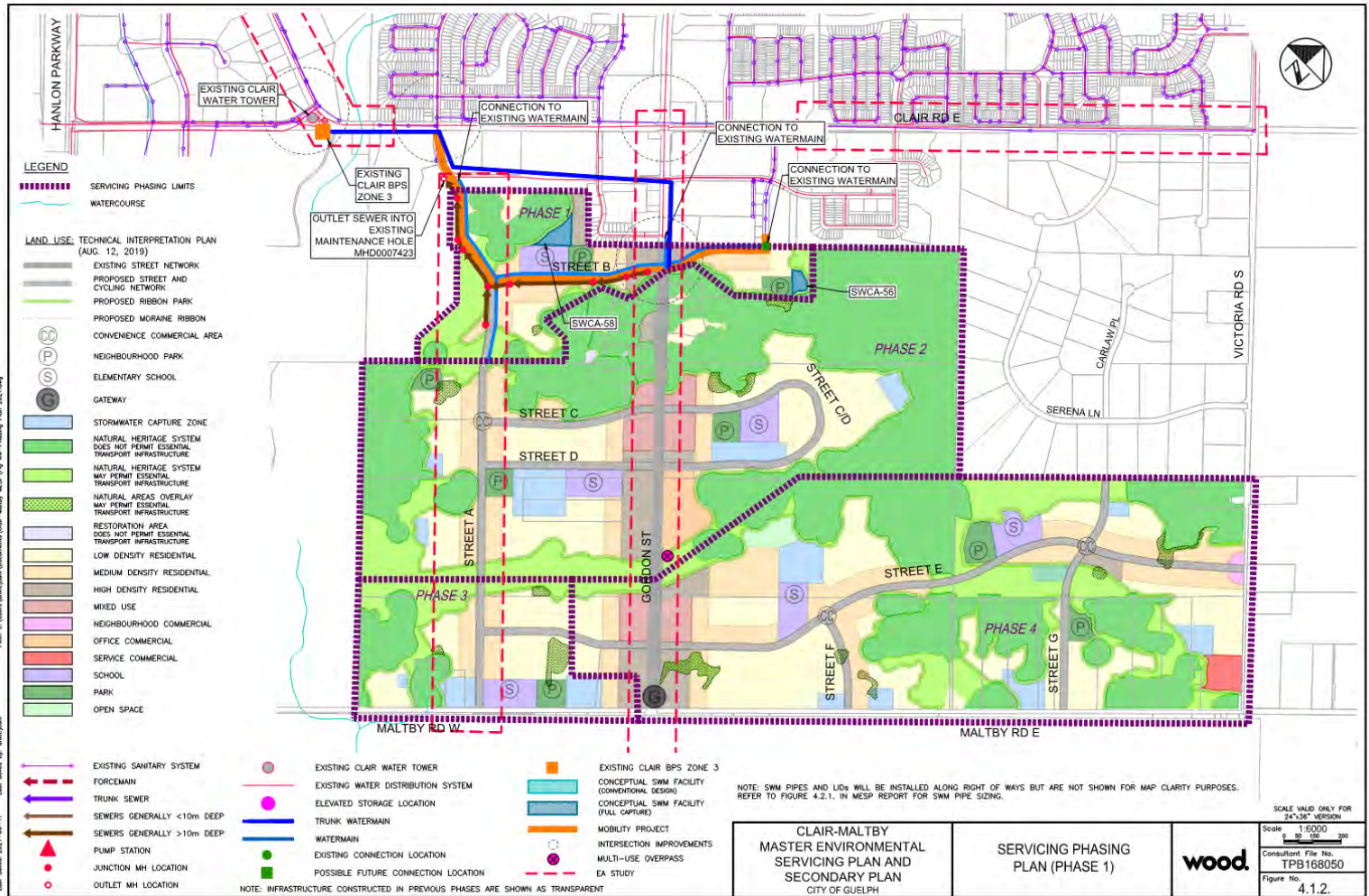
## Preferred Option (Cont'd)

- The Sewage Pumping Station in Catchment 3 Pumps north to a new 525mm diameter Sanitary Trunk Sewer.
- The new 525mm Trunk sewer will run north along Gordon St, West Along Clair Rd and north along Hanlon Parkway to connect to a Maintenance Hole north of the industrial park as shown in Red on the adjacent figure



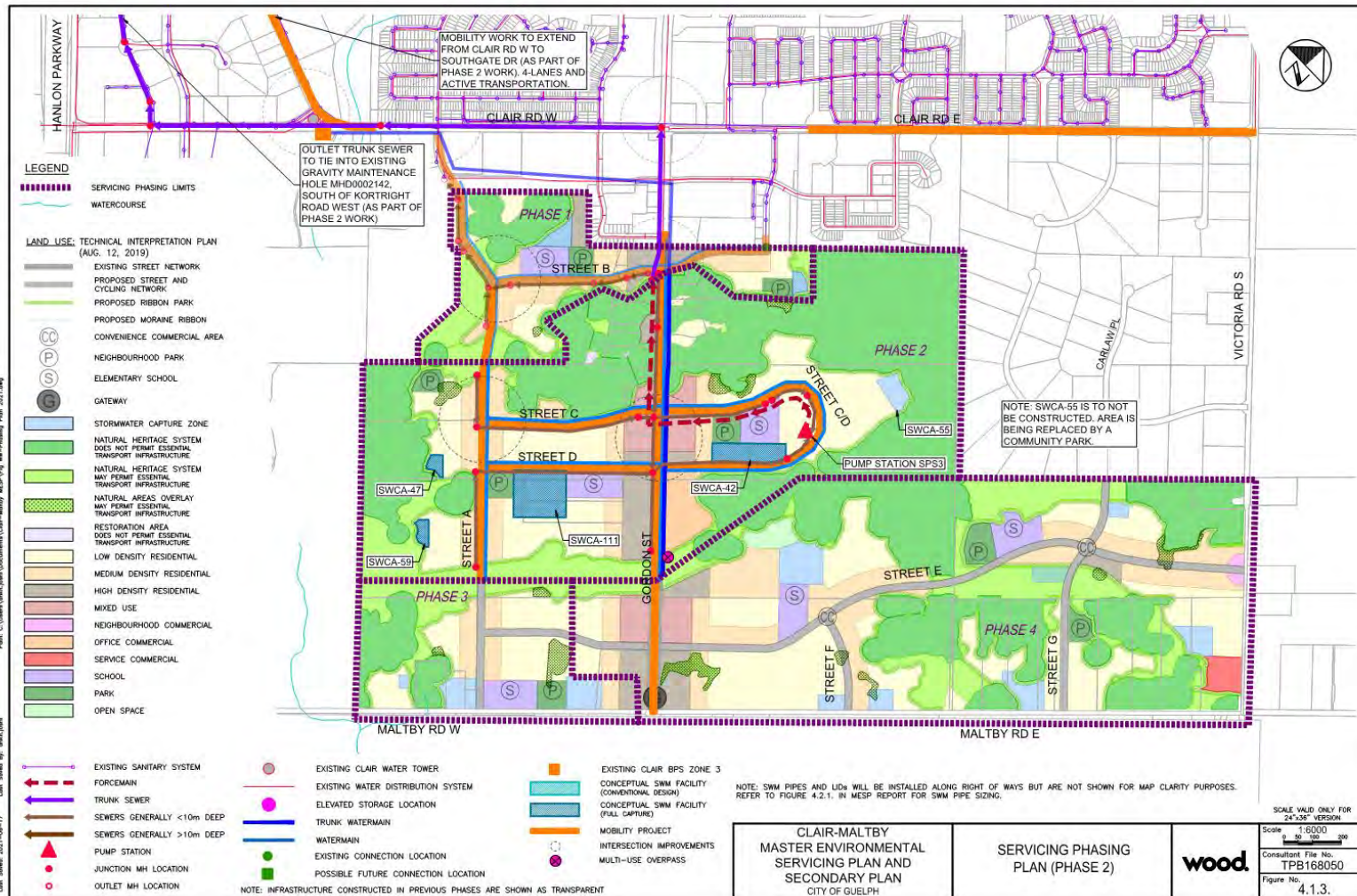


# Water and Wastewater Servicing Phase 1



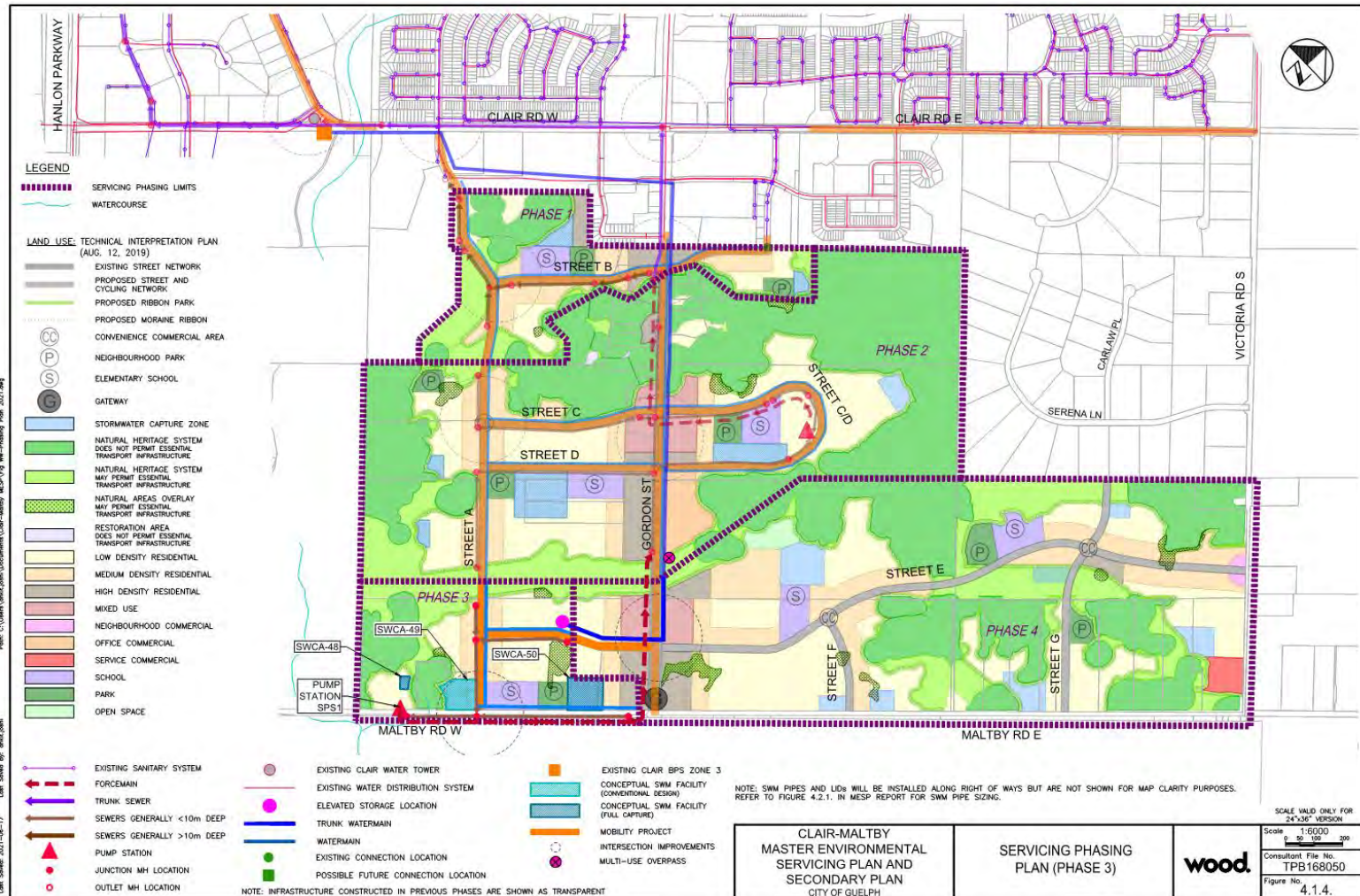


# Water and Wastewater Servicing Phase 2



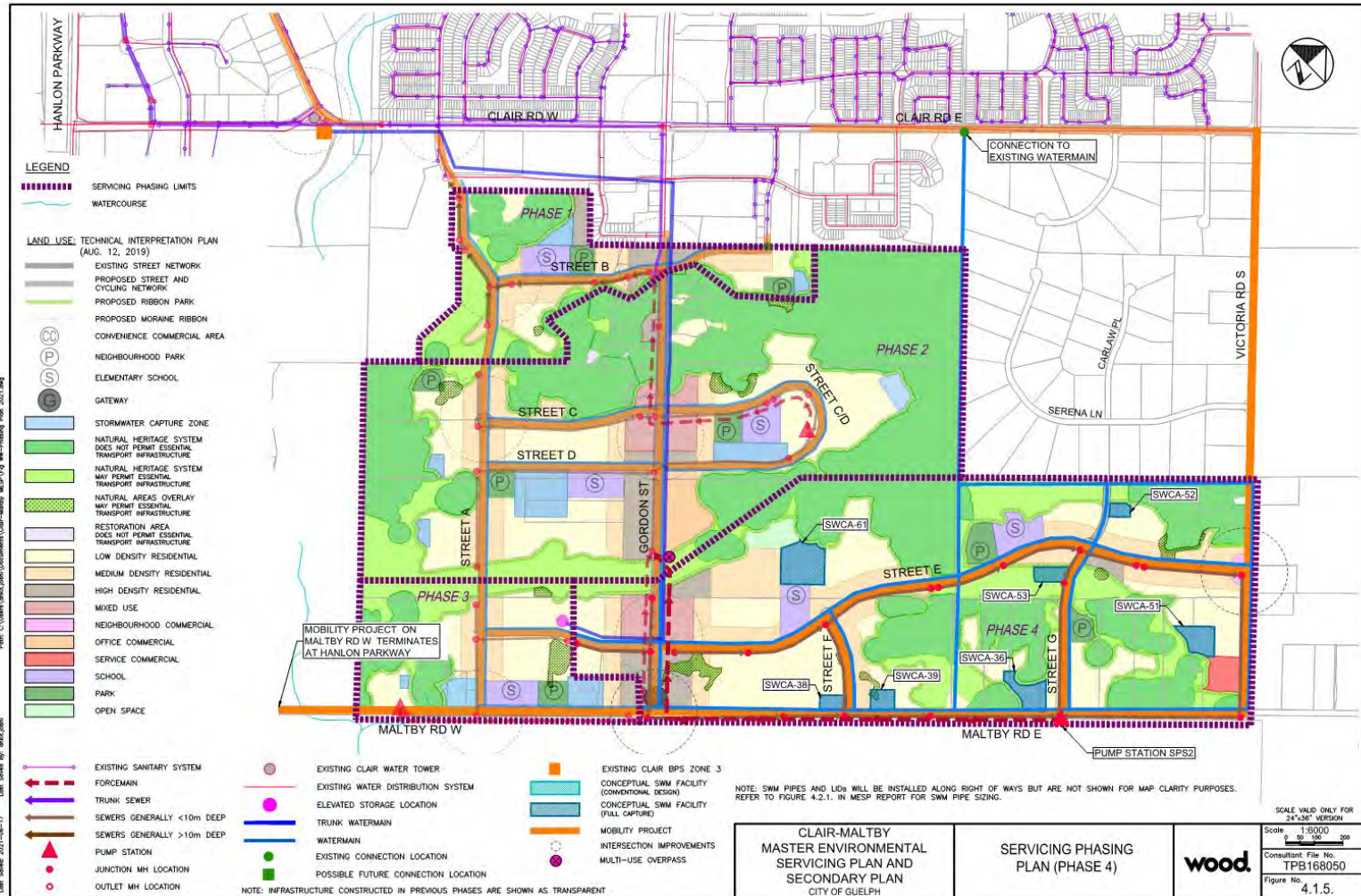


# Water and Wastewater Servicing Phase 3





# Water and Wastewater Servicing Phase 4







# Water and Wastewater Servicing

## Phasing

- Phasing of the development will generally align with the Wastewater Servicing and will be sequential from downstream to upstream, i.e. North to South.
- Phase 1 will consist of Catchments 4 and 5, gravity sewers to existing services. The water distribution system will include construction of a portion of the water transmission main from the Clair Maltby Water Booster Station.
- Phase 2 will include gravity sewers to Sewage Pumping Station 3 (SPS3), the downstream trunk sewer to the receiving branch and a forcemain from SPS3 to the Trunk Sewer. The water distribution system will include construction of a portion of the water transmission main from the Clair Maltby Water Booster Station.
- Phase 3 will include gravity sewers to Sewage Pumping Station 1 (SPS1), and a forcemain from SPS3. The water distribution system will include construction of the remaining portion of the water transmission main from the Clair Maltby Water Booster Station and the Water Storage Tank.
- Phase 4 will include gravity sewers to Sewage Pumping Station 2 (SPS2), and a forcemain from SPS2. The water distribution system will connect to the water transmission main from the Clair Maltby Water Booster Station and the Water Storage Tank.





# THANK YOU

## Questions?

[haveyoursay.guelph.ca/Clair-Maltby](https://haveyoursay.guelph.ca/Clair-Maltby)

- Provide your thoughts and ideas on the 'Idea Boards' until August 8, 2021
- Ask Questions
- Attend our virtual office hours
- email us at [clair-maltby@guelph.ca](mailto:clair-maltby@guelph.ca)





# Clair-Maltby

**Transform. Connect. Community.**

June 24, 2021 Open House  
Environment and Stormwater Management  
Session  
3:00 pm





# Land Acknowledgement

As we gather, we are reminded that Guelph is situated on treaty land that is steeped in rich indigenous history and home to many First Nations, Inuit and Métis people today.

As a City we have a responsibility for the stewardship of the land on which we live and work.

Today we acknowledge the Mississaugas of the Credit First Nation of the Anishinaabek Peoples on whose traditional territory we are meeting.



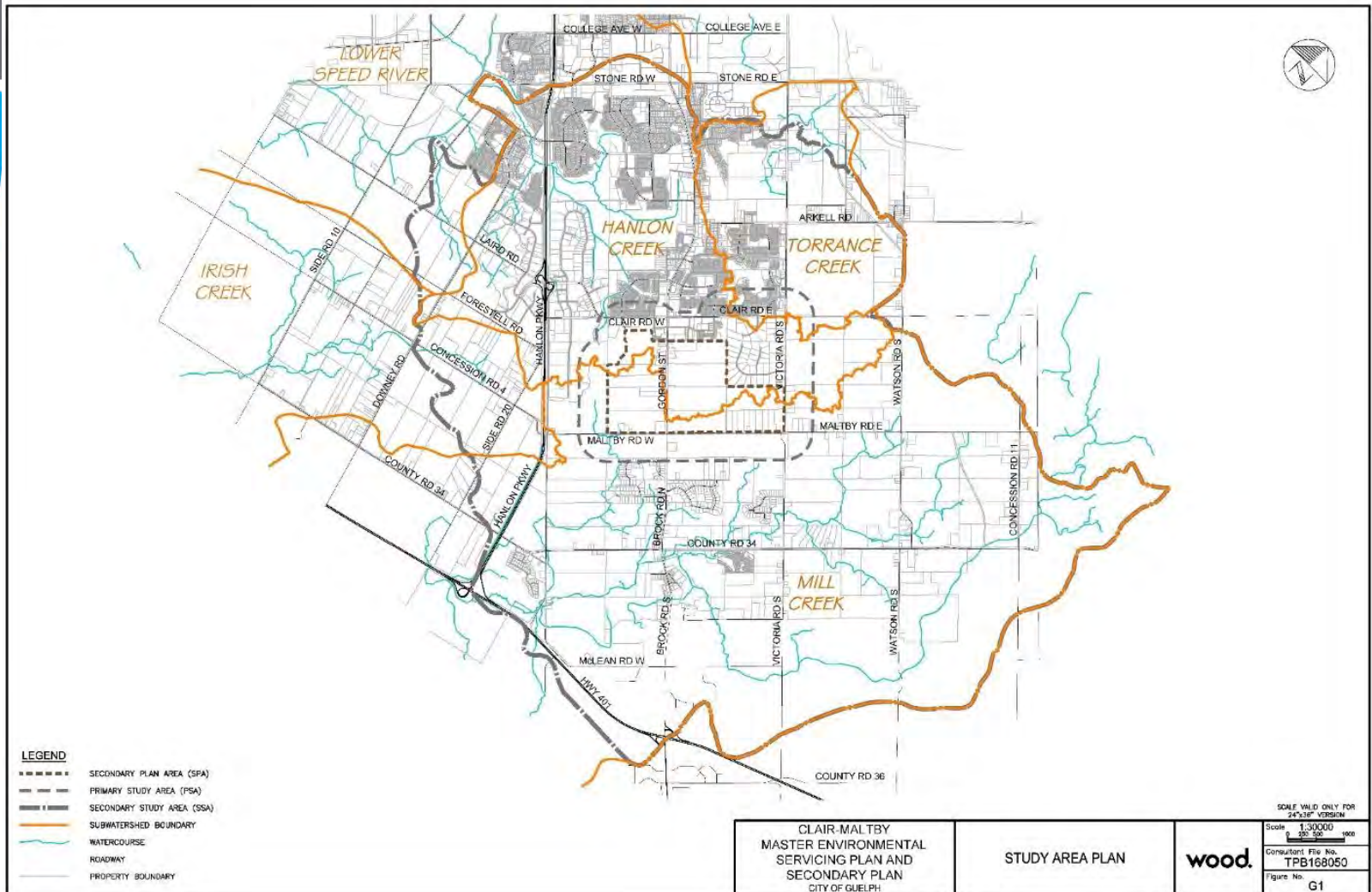


# Overview Agenda

- Introduction and Overview
- Comprehensive Environmental Impact Study (CEIS) and Master Environmental Servicing Study (MESPP)
  - Natural Heritage
  - Groundwater
  - Surface Water
  - Conclusions



# Introduction and Overview





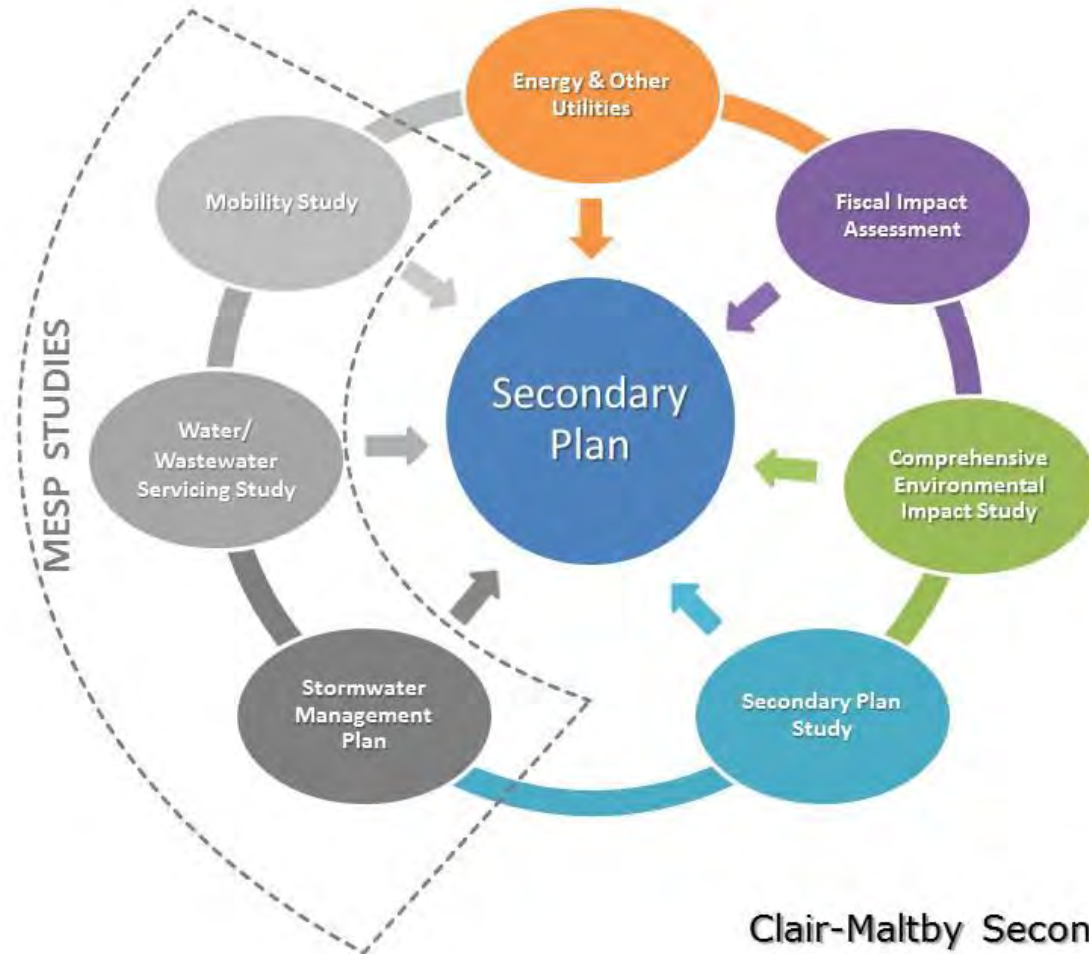


# Introduction and Overview

- Comprehensive Environmental Impact Study (CEIS)
  - Informed land use process
  - Technical basis for groundwater, surface water and natural heritage assessment
  - Technical basis for integrated impact management plan(s) and implementation and monitoring plan(s)



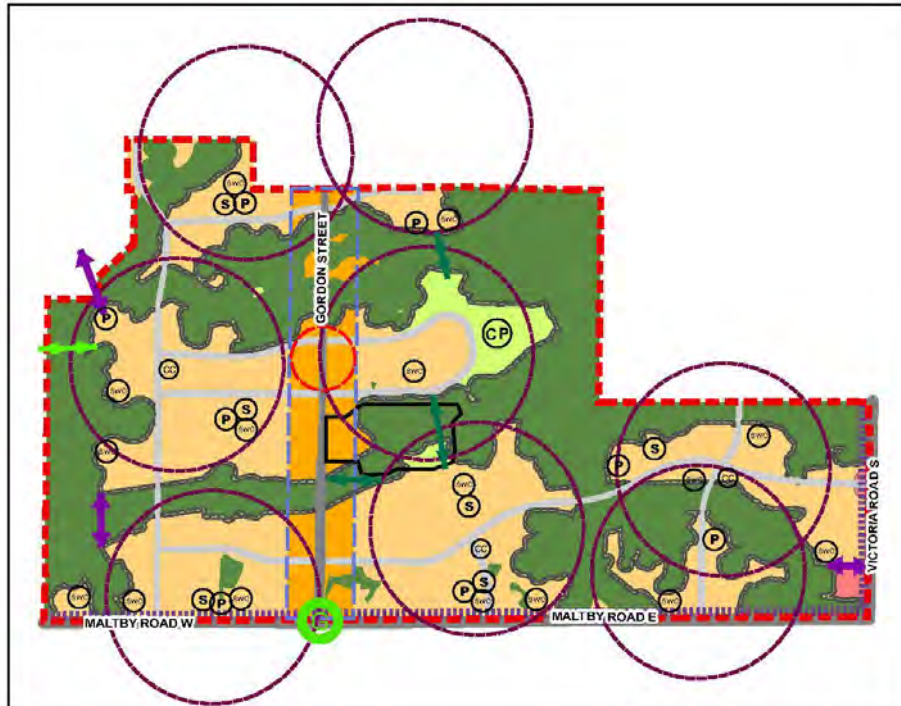
# Introduction and Overview



Clair-Maltby Secondary Plan  
Process Diagram



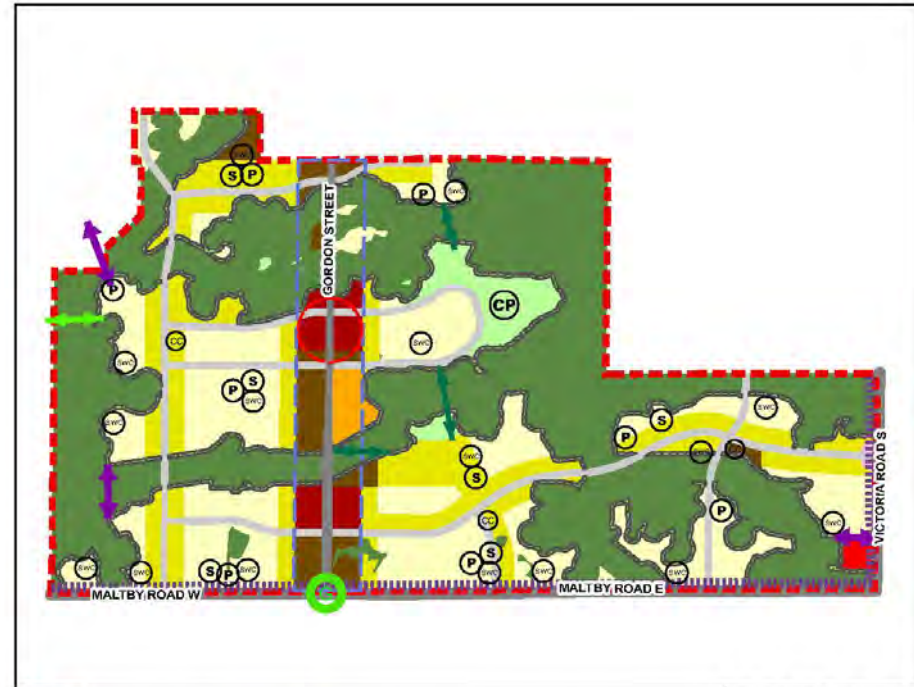
# Introduction and Overview



Legend		Infrastructure Framework	
Clair-Maltby Secondary Plan Boundary	Natural Heritage System	Arterial Road	Stormwater Capture Area (SWC)
Gordon Street Corridor	Moraine Ribbon	Collector Road	Potential Elementary School
Urban-Rural Transition Zone	Residential	Community Park	Convenience Commercial Area
Residential Neighbourhood (400m radius)	Mixed-use	Neighbourhood Park	Essential Active Transportation Link
Urban Village Core	Commercial	Stormwater Capture Area (SWC)	Potential Active Transportation Link
Designated Cultural Heritage Landscape	Open Space	Potential Elementary School	Potential Trail Connection
Green Gateway		Convenience Commercial Area	

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Legend		Infrastructure Framework	
Clair-Maltby Secondary Plan Boundary	Gordon Street Corridor	Arterial Road	Stormwater Capture Area (SWC)
<b>Land Use Designations</b>		Collector Road	Potential Elementary School
Natural Heritage System	Low Density Greenfield Residential	Community Park	Convenience Commercial Area
Moraine Ribbon	Medium Density Residential	Neighbourhood Park	Essential Active Transportation Link
Open Space and Park	Clair-Maltby High Density Residential	Stormwater Capture Area (SWC)	Potential Active Transportation Link
Urban Village Core	Mixed-use	Potential Elementary School	Potential Trail Connection
Urban-Rural Transition Zone	Neighbourhood Commercial Centre	Convenience Commercial Area	
Green Gateway	Clair-Maltby Mixed Office/Commercial	Potential Elementary School	
	Service Commercial	Convenience Commercial Area	

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Produced with data from the City of Guelph February, 2021

**CITY OF GUELPH**  
**OFFICIAL PLAN**  
**SCHEDULE A:**  
**CLAIR-MALTBY**  
**SECONDARY PLAN**  
**COMMUNITY STRUCTURE**

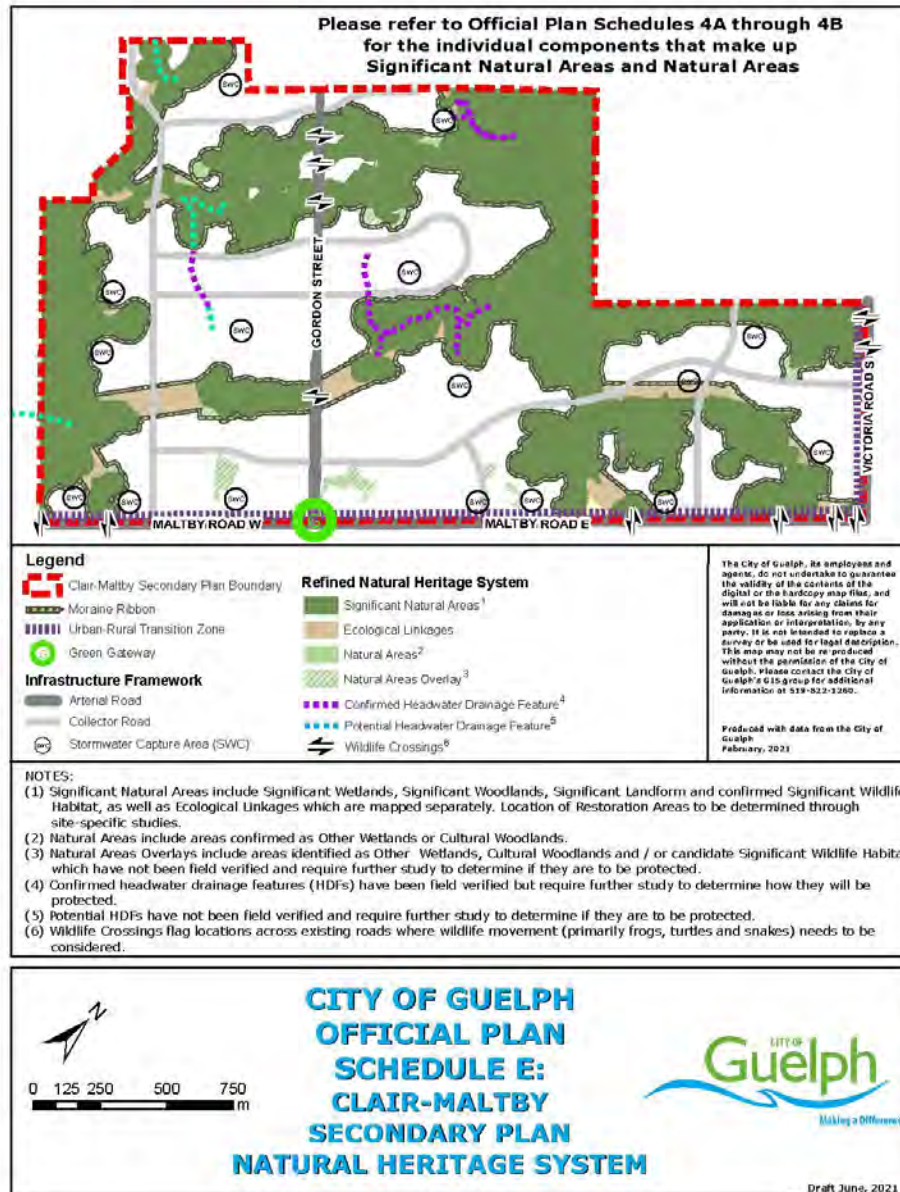
Draft June, 2021

**CITY OF GUELPH**  
**OFFICIAL PLAN**  
**SCHEDULE B:**  
**CLAIR-MALTBY**  
**SECONDARY PLAN**  
**LAND USE**

Draft June, 2021

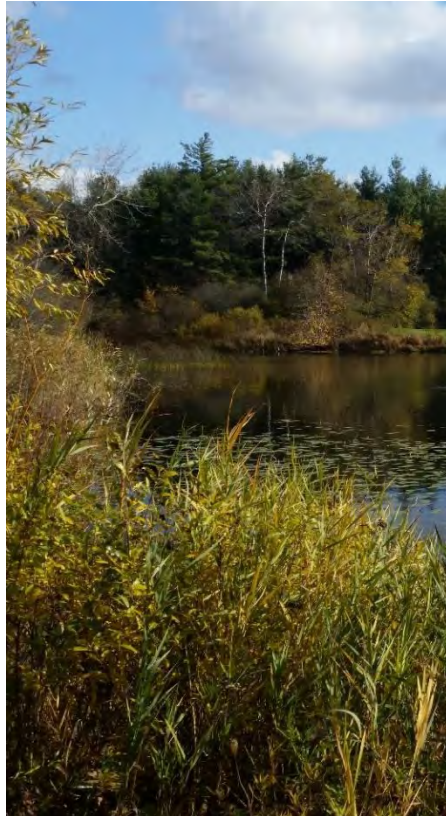


# Introduction and Overview





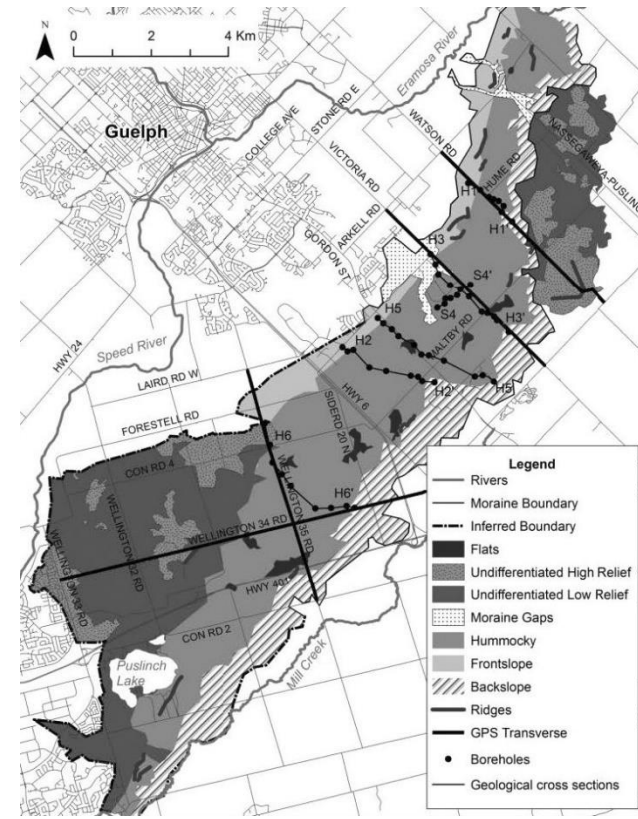
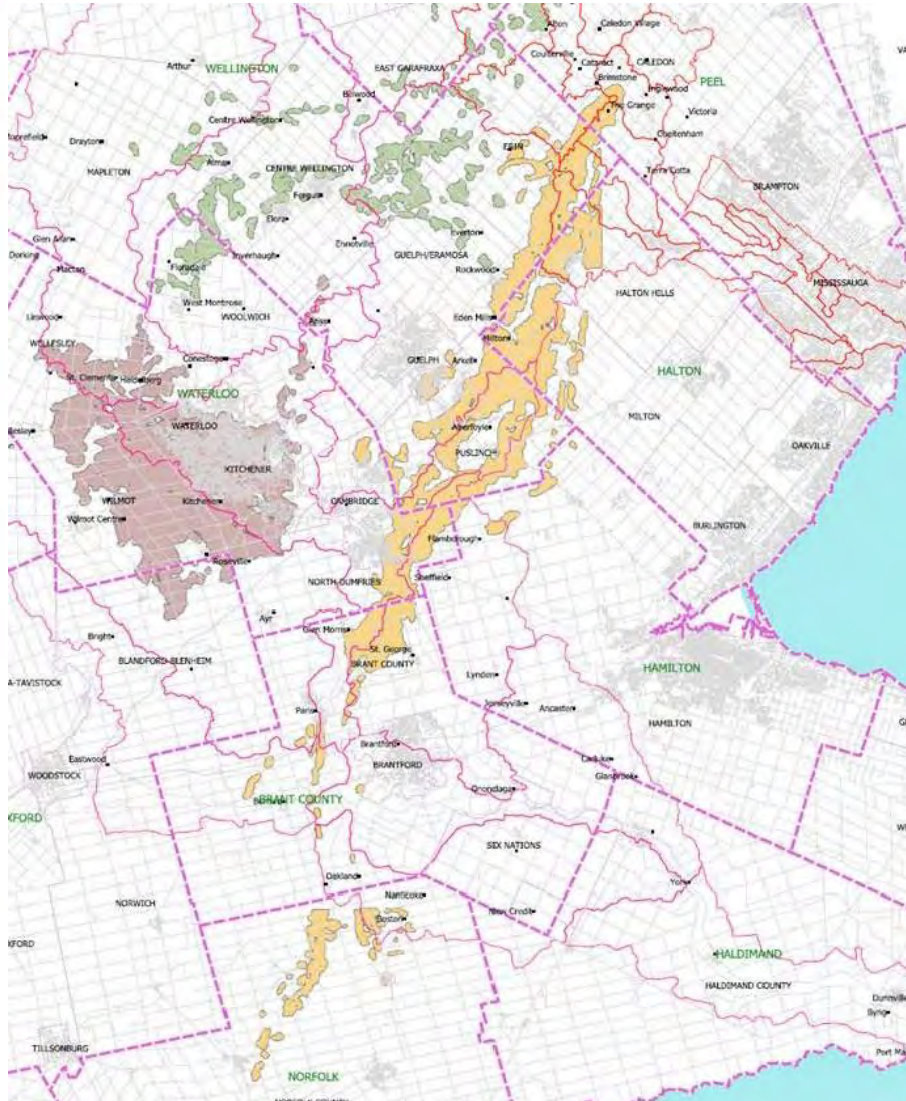
# Natural Heritage





# Where are we?

## Biophysical Context: Landform

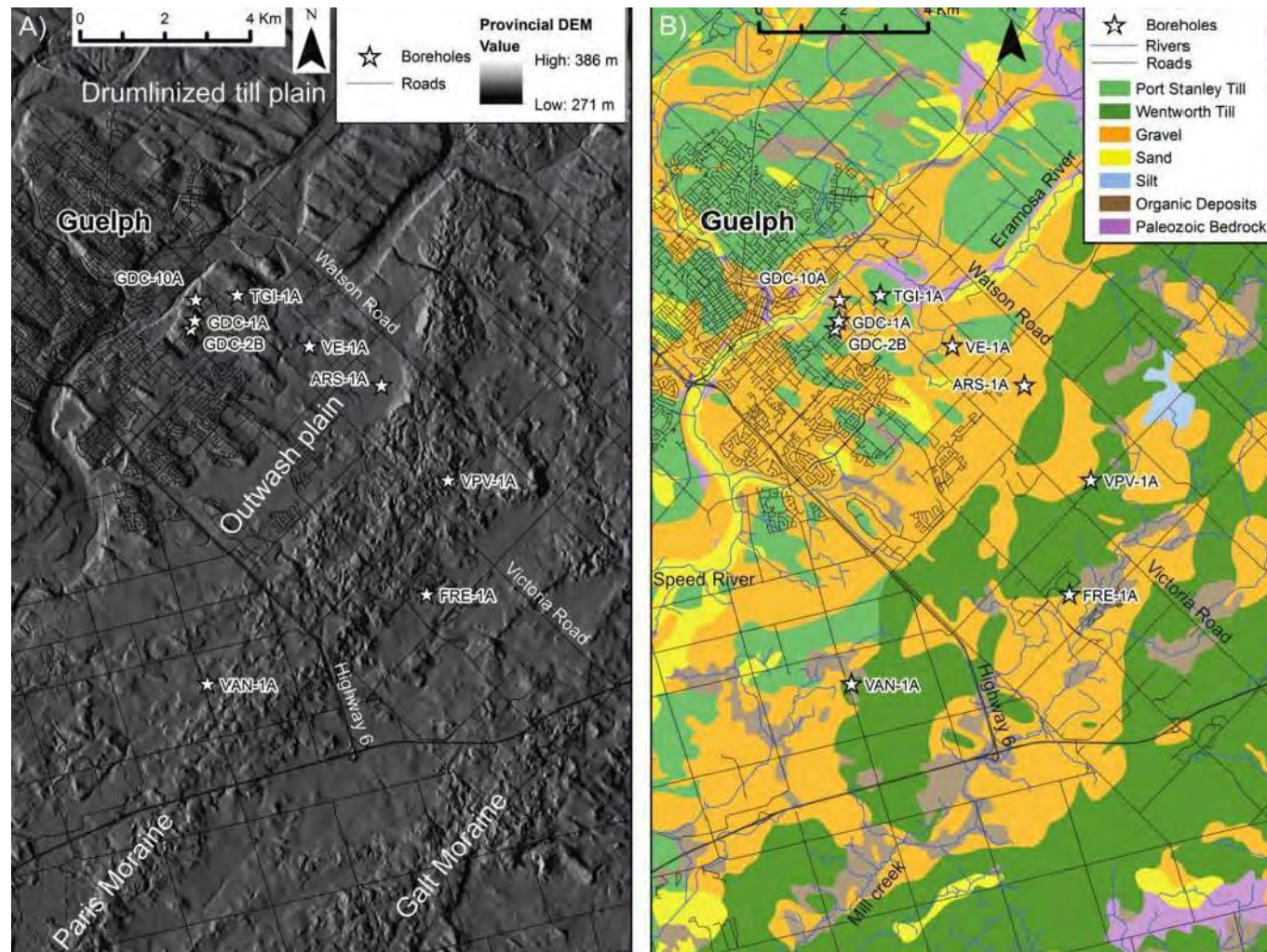


Credit: *Subsurface heterogeneity in the geological and hydraulic properties of the hummocky Paris Moraine, Guelph, Ontario (Arnaud et al., 2017)*



# Where are we?

## Biophysical Context: Geology

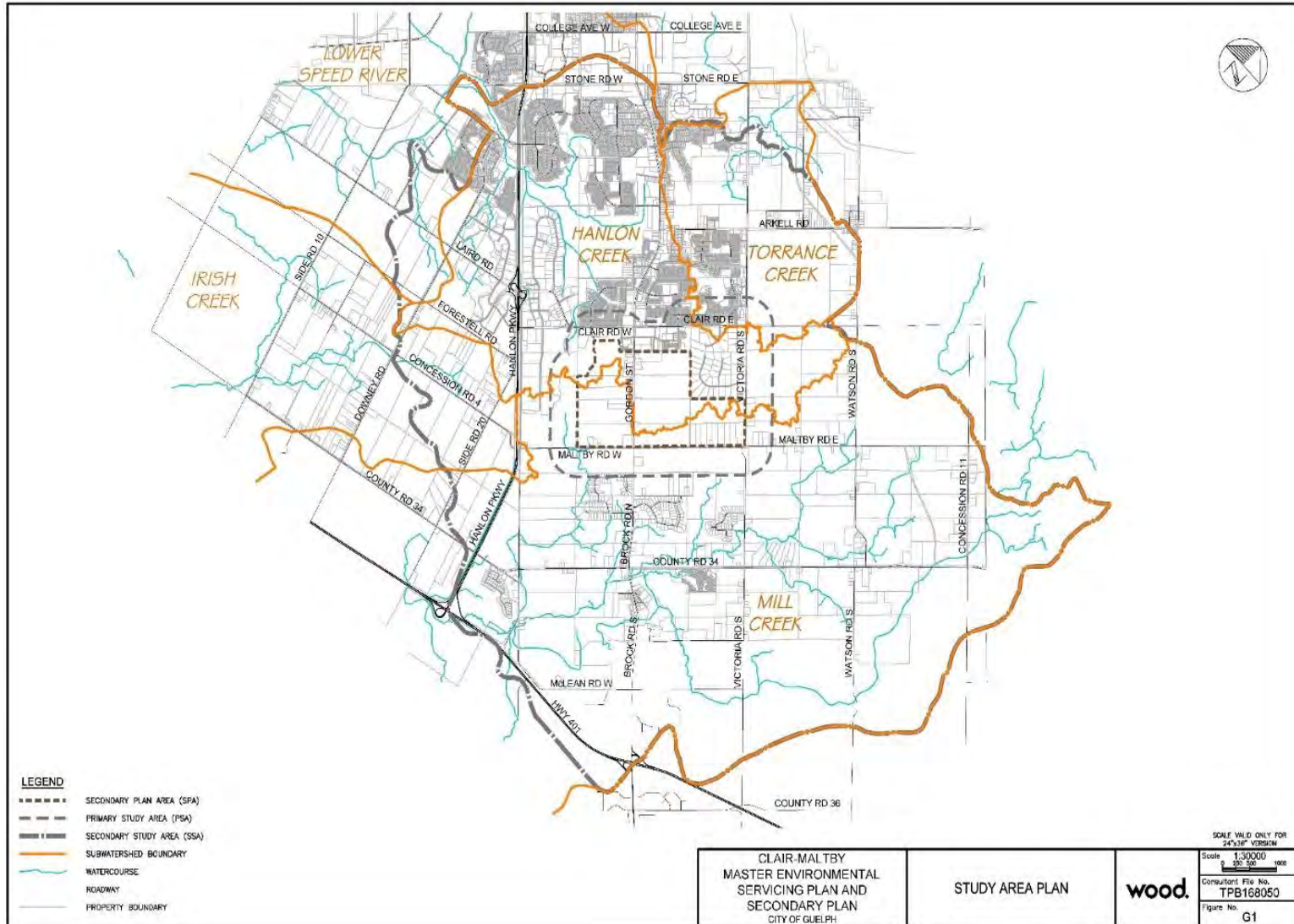


Credit: *Subsurface heterogeneity in the geological and hydraulic properties of the hummocky Paris Moraine, Guelph, Ontario* (Arnaud et al., 2017)



# Where are we?

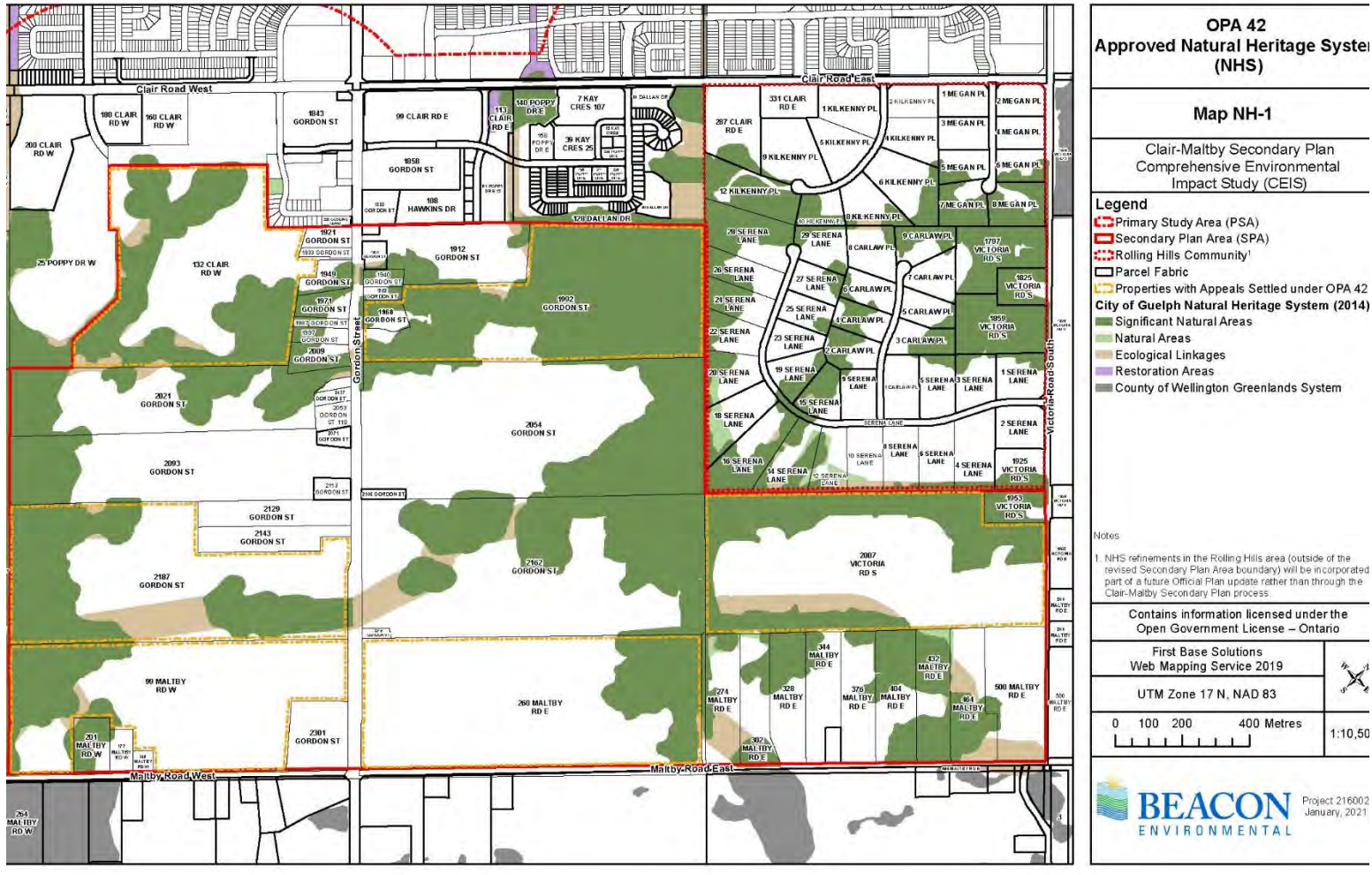
## Biophysical Context: Watersheds





# Where are we?

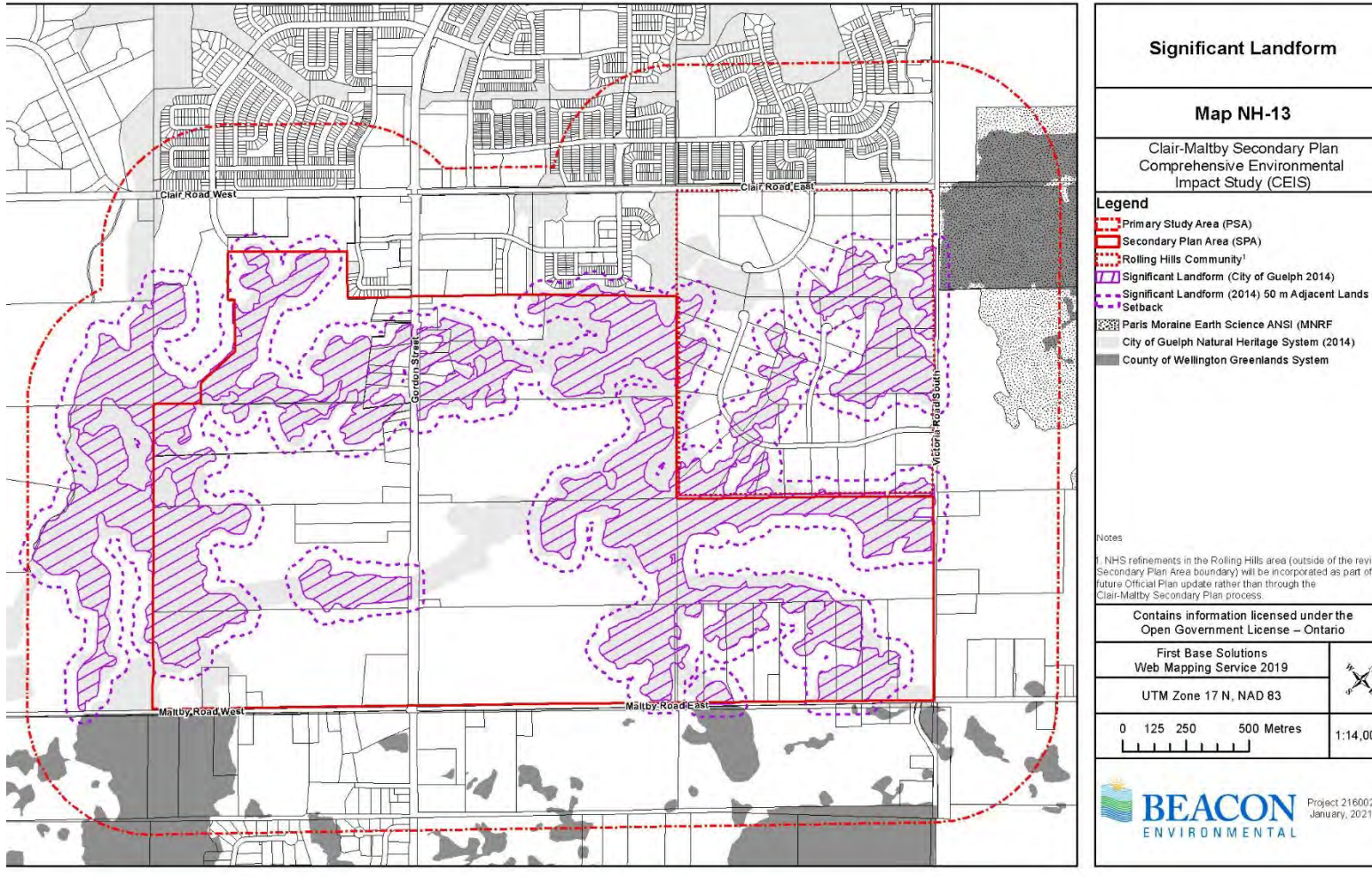
## Local Natural Heritage Context





# Where are we?

## Significant Landform (2014)







# What did we do?

## Overview of Environmental Work

### **Phase 1 and 2 (April 2016 - October 2019)**

- Verification / refinement / assessment of environmental features and functions
- Integrated assessment of the role of groundwater/surface water to support natural systems
- Constraints and opportunities identification
  - 4 years of surface and groundwater monitoring
  - 3 years of scoped ecological monitoring

### **Phase 3 (July 2018 - 2022)**

- Assessment of impacts associated with different community structure options
- Establishment of integrated management strategies, including monitoring framework





# What did we look at?

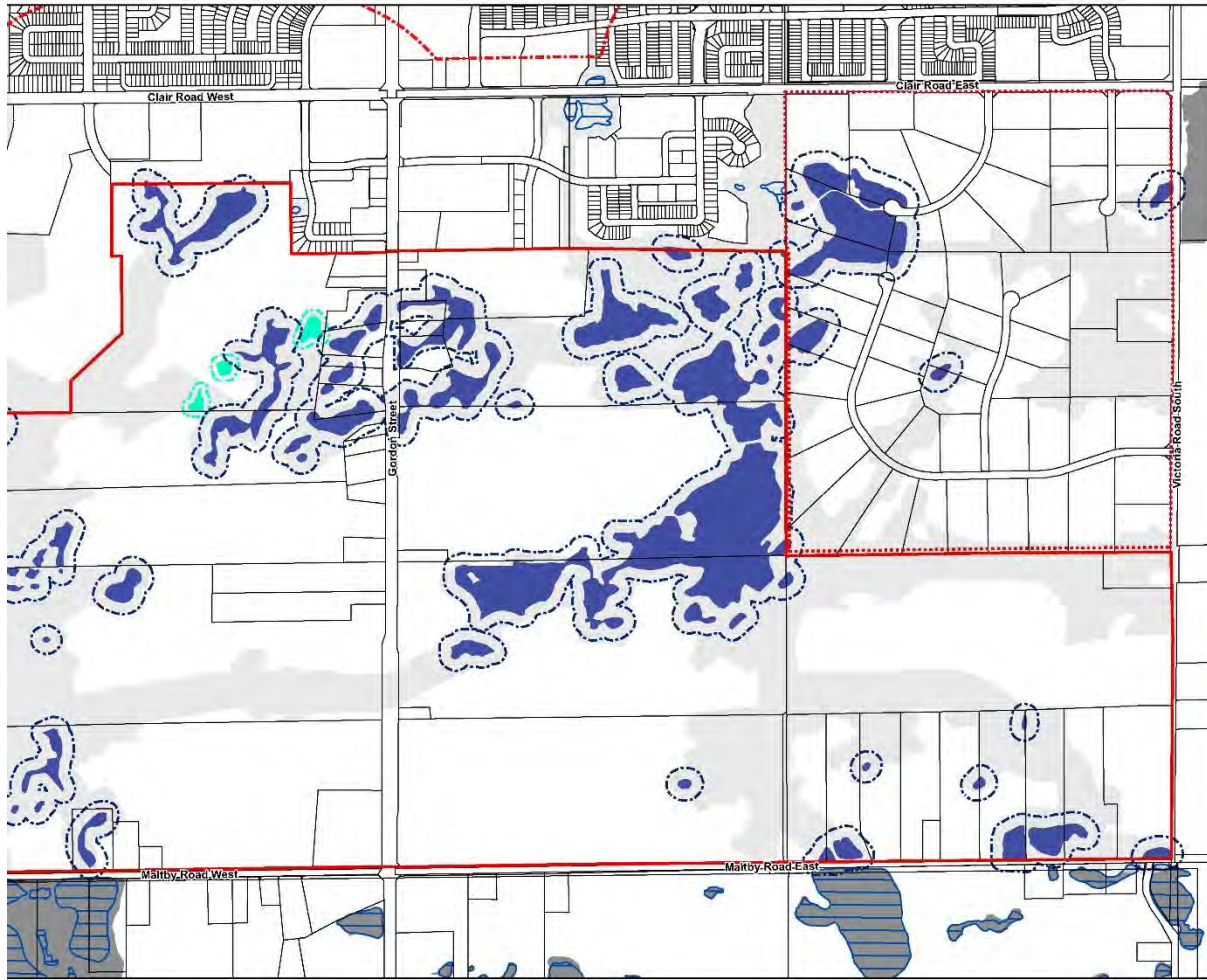
## Natural Heritage System Components

- Surface Water Features & Fish Habitat
- Significant Wetlands & Other Wetlands
- Significant Woodlands & Cultural Woodlands
- Significant Wildlife Habitat (SWH)
- Significant Landform
- Habitat for Provincially & Locally Significant Species
- Ecological Linkages



# What did we find?

## Significant & Other Wetlands



### Refined City Wetlands Mapping

#### Map NH-6

Clair-Maltby Secondary Plan  
Comprehensive Environmental  
Impact Study (CEIS)

#### Legend

- Primary Study Area
- Secondary Plan Area
- Rolling Hills Community
- Parcel Fabric
- Refined Provincially Significant Wetlands (PSWs) (Beacon 2020)
- Refined Other Wetlands (Beacon 2020)
- GRCA Wetlands (2018) outside of SPA and Rolling Hills
- 30 m PSW Buffer
- 15 m Other Wetland Buffer
- City of Guelph Natural Heritage System (2014)
- County of Wellington Greenlands System

#### Notes

1. NHS refinements in the Rolling Hills area (outside of the revised Secondary Plan Area boundary) will be incorporated as part of future Official Plan update rather than through the Clair-Maltby Secondary Plan process.

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First Base Solutions  
Web Mapping Service 2019

UTM Zone 17 N, NAD 83

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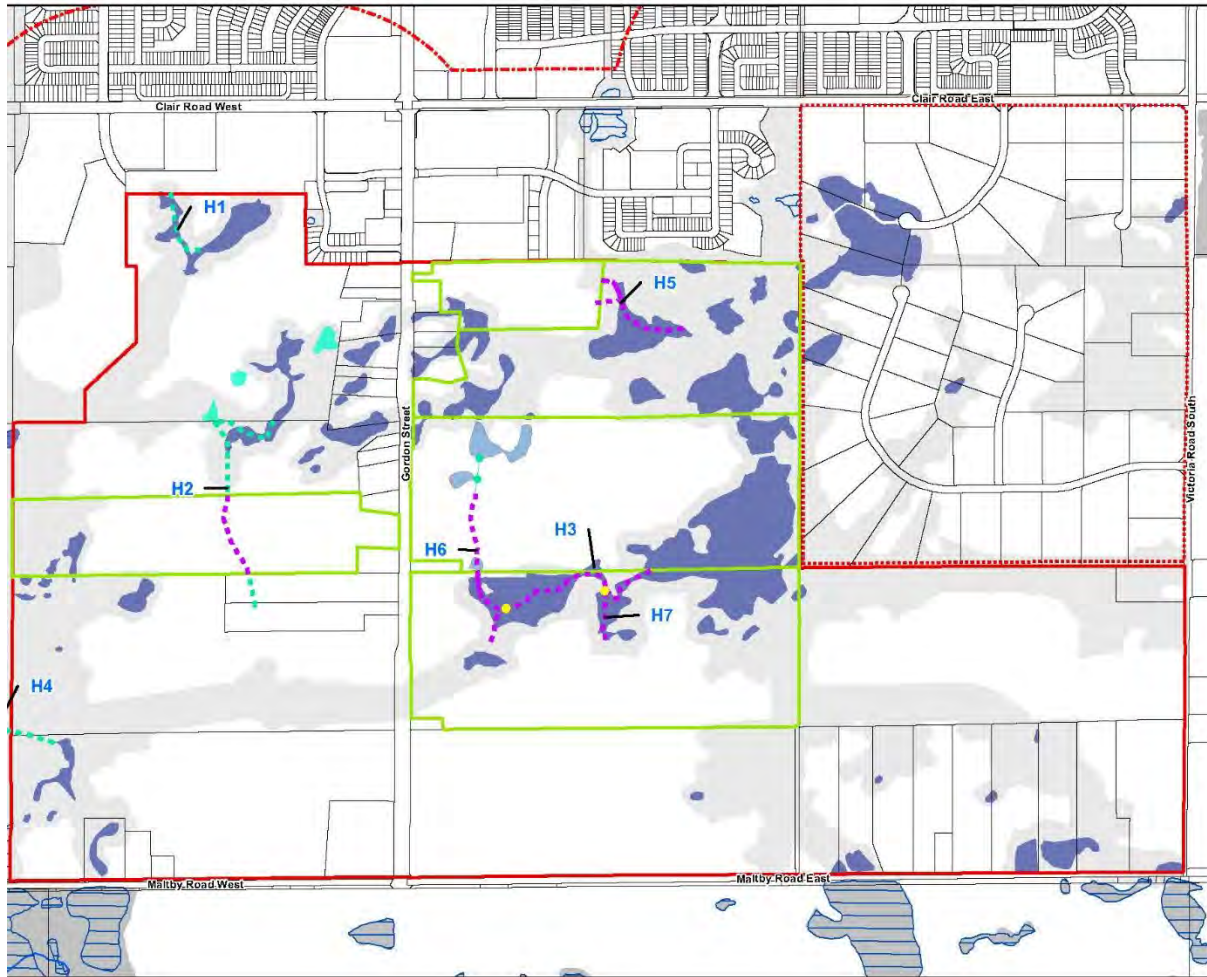
 **BEACON**  
ENVIRONMENTAL

Project 218002  
February, 2021



# What did we find?

## Headwater Drainage Features



### Scoped Headwater Drainage Feature Assessment (Potential HDFs)

#### Map NH-4A

Clair-Maltby Secondary Plan Comprehensive Environmental Impact Study (CEIS)

#### Legend

- Primary Study Area (PSA)
- Secondary Plan Area (SPA)
- Rolling Hills Community<sup>1</sup>
- Parcel Fabric
- Access Provided for HDF Assessment
- Refined Provincially Significant Wetlands (PSWs) (Beacon 2021)
- Other Wetlands (Beacon 2020)
- GRCA Wetlands (2018) outside of SPA and Rolling Hills
- Ponds (Beacon 2020)
- Watercourse (MNRFP 2017)
- HDF (Beacon 2020)
- Potential HDF (to be field verified) (Beacon 2020)
- Buried Tile Drain
- Reach Breaks
- City of Guelph Natural Heritage System (2014)
- County of Wellington Greenlands System

#### Notes

1. NHS refinements in the Rolling Hills area (outside of the revised Secondary Plan Area boundary) will be incorporated as part of a future Official Plan update rather than through the Clair-Maltby Secondary Plan process.

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UTM Zone 17 N, NAD 83

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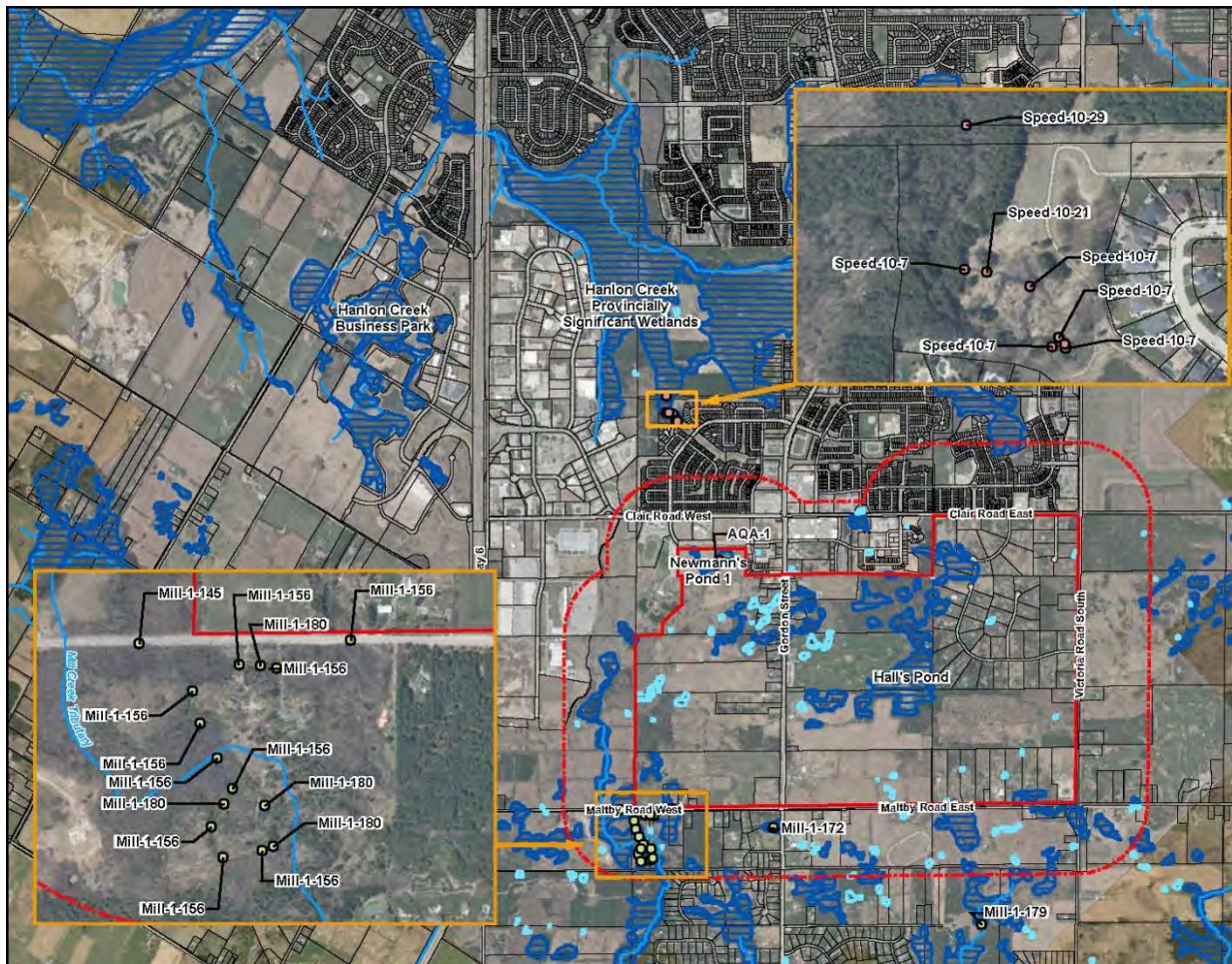
 **BEACON**  
ENVIRONMENTAL

Project 21600  
January, 2021



# What did we find?

## Fish Habitat



### Scoped Fisheries Assessment

#### Map NH-3

#### Clair-Maltby Secondary Plan Phase 1 and 2 Characterization Report

#### Legend

- Primary Study Area
- Secondary Plan Area
- Watercourse (MNR 2017)
- Hanlon Creek (MNR 1999)
- Mill Creek (MNR 2010-2012)
- Aquafor Beech Limited Data (2012)
- Wetlands**
- ▨ Provincially Significant Wetlands (MNR 2017)
- ▨ Unevaluated Wetlands (MNR 2017)

Beacon Environmental: Watercourse, Primary Study Area Boundary, 2016;  
City of Guelph: Secondary Plan Area Boundary, Parcel Fabric, 2016;  
Ministry of Natural Resources and Forestry: Hanlon Creek, Mill Creek,  
Aquafor Beech Limited: Sample Data, 2011

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First Base Solutions  
Web Mapping Service 2017

UTM Zone 17 N, NAD 83

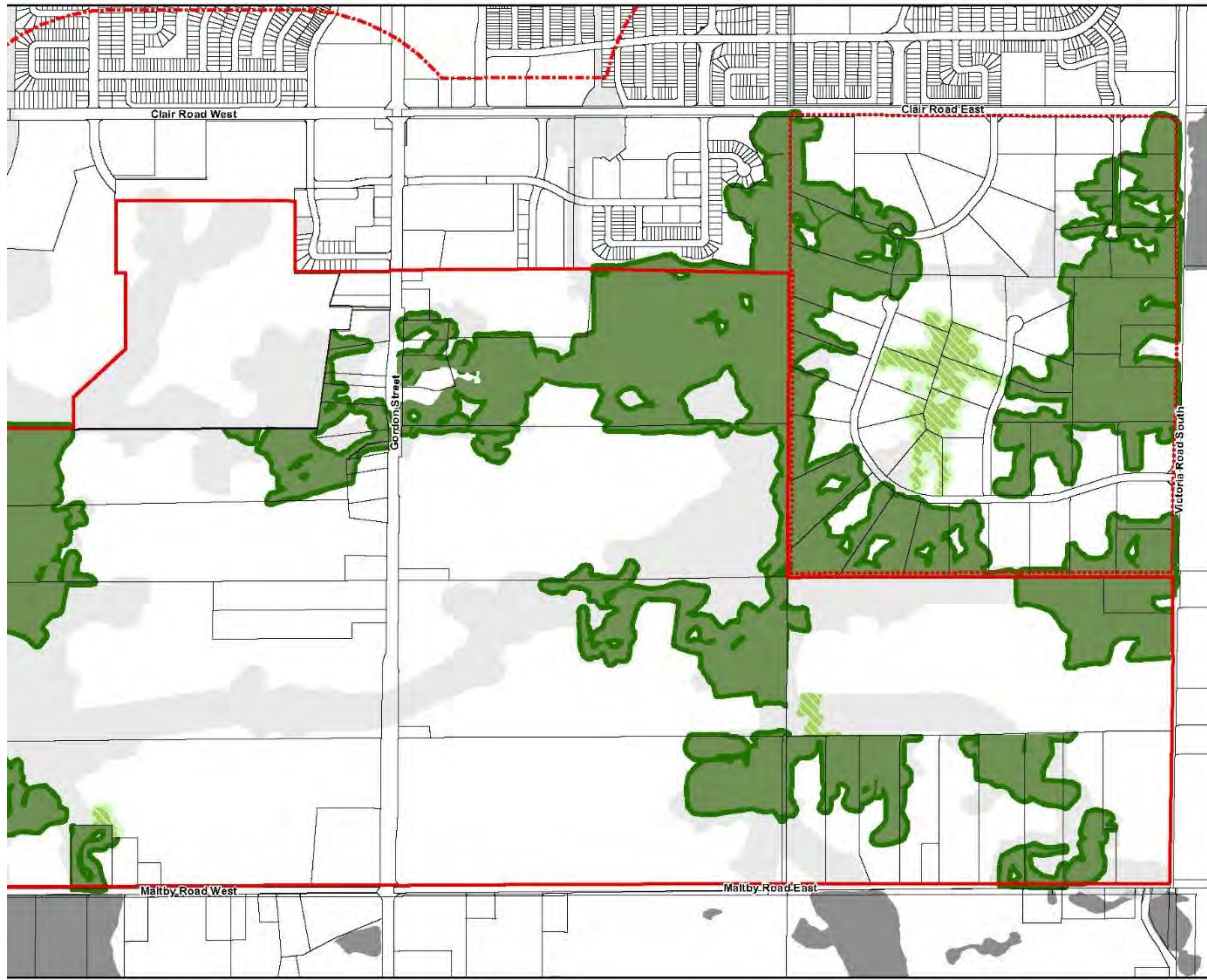
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# What did we find?

## Significant & Cultural Woodlands



### Refined City Woodlands Mapping

#### Map NH-8

Clair-Maltby Secondary Plan  
Comprehensive Environmental  
Impact Study (CEIS)

#### Legend

- Primary Study Area (PSA)
- Secondary Plan Area (SPA)
- Rolling Hills Community<sup>1</sup>
- Parcel Fabric
- Significant Woodland<sup>2</sup>
- 10 m Significant Woodland Buffer
- Cultural Woodland Overlay<sup>2</sup>
- 10 m Cultural Woodland Buffer
- City of Guelph Natural Heritage System (2014)
- County of Wellington Greenlands System

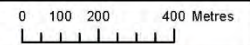
#### Notes

1. NHS refinements in the Rolling Hills area (outside of the revised Secondary Plan Area boundary) will be incorporated as part of a future Official Plan update rather than through the Clair-Maltby Secondary Plan process.
2. Woodlands mapping from City NHS (2014) has been retained on properties with settlements under OPA 42.

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Web Mapping Service 2019

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# What did we find?

## Significant Wildlife Habitat (SWH)



**Detailed Significant Wildlife Habitat (SWH) Mapping**

**Map NH-9**

Clair-Maltby Secondary Plan Comprehensive Environmental Impact Study (CEIS)

**Legend**

- Primary Study Area Boundary (PSA)
- Secondary Plan Area (SPA)
- Rolling Hills Area<sup>1</sup>
- Parcel Fabric
- City of Oshawa Natural Heritage System (2014)

**Significant Wildlife Habitat**

- Candidate Amphibian Breeding Habitat (Woodland)
- Confirmed Amphibian Breeding Habitat (Woodland)
- Candidate Amphibian Breeding Habitat (Wetland)
- Candidate Turtle Winter Areas
- Confirmed Turtle Winter Areas
- Candidate Waterfowl Stopover and Staging Habitat (Aquatic)
- Confirmed Waterfowl Stopover and Staging Habitat (Aquatic)
- Confirmed Rare Vegetation Community
- Candidate Bat Maternity Colonies

**Candidate Significant Wildlife Habitat<sup>2</sup>**

- Shrub/Early Successional Breeding Bird Habitat
- Raptor Wintering Area
- Reptile Hibernaculum
- Waterfowl Nesting Area

1 NHR refinements in the Rolling Hills area (outside of the revised Secondary Plan boundary) will be incorporated as part of a future Critical Plan update rather than through the Clair-Maltby Secondary Plan process.

2 Several Candidate SWH areas are shown approximately with asterisks. Site-specific studies will be needed to capture the best and most representative area(s) in the SPA or to confirm the significance and extent of these habitats.

3 Halligan's pond could be considered Candidate SWH for amphibian breeding, waterfowl stopover and turtle wintering but has not been mapped as such as it is outside the City of Oshawa.

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Web Mapping Service 2019

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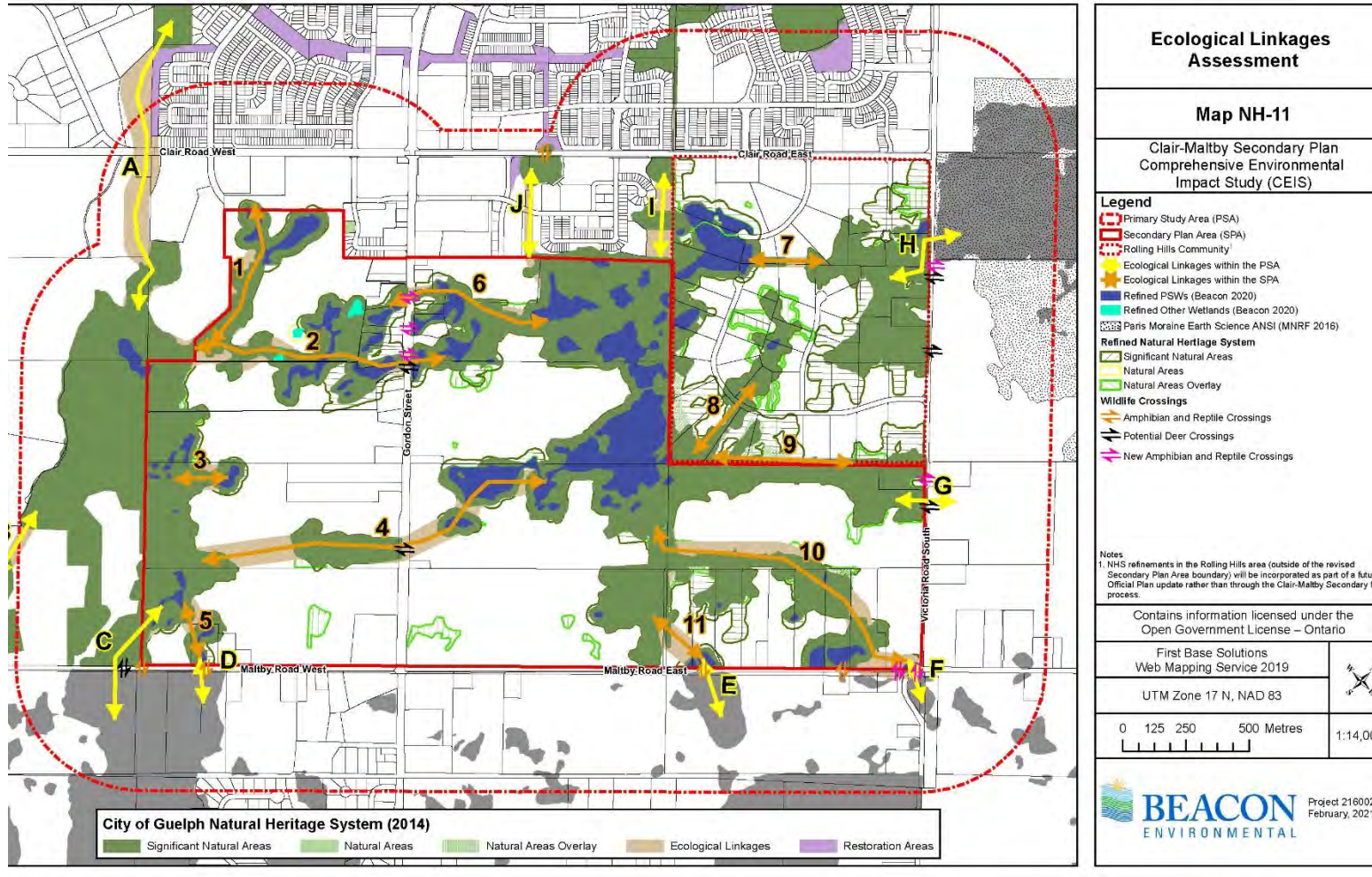
**BEACON ENVIRONMENTAL** Project 216001 January, 2021





# What did we find?

## Ecological Linkages





# What did we find?

## Natural Heritage



PLANTS: 467 species

- 1 Provincially Endangered (Butternut) and 20 locally significant species (i.e., in the County)

BIRDS: 112 species

- 6 Species at Risk and 46 species locally significant and/or rare

AMPHIBIANS: 10 species

- 1 Federally Threatened from, 2 species of frogs, 2 locally significant frog and 1 locally significant salamander species

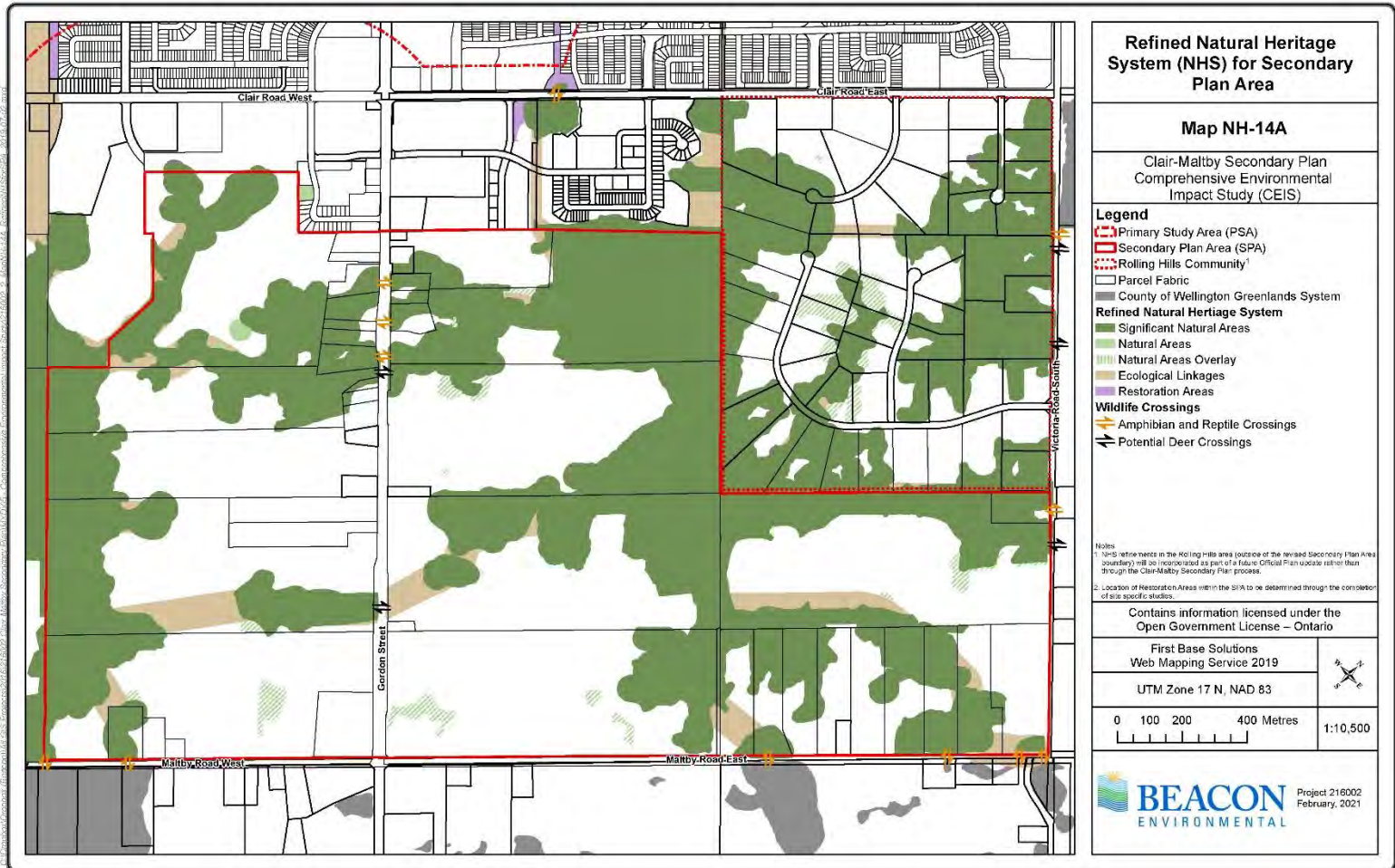
REPTILES: 3 spp. of turtle, 4 spp. of snake

- 7 frog, 1 salamander and 3 snake species all locally significant



# What did we find?

## Refined Natural Heritage System





# What did we find?

## Refined Natural Heritage System

Clair-Maltby Secondary Plan Area	2014 (hectares)	2021 (hectares)
Significant Natural Areas	160.22	170.23
Natural Areas	0.00	0.39
Natural Areas Overlay	0.76	4.09
Ecological Linkages	14.01	11.90
<b>TOTALS</b>	<b>174.99</b>	<b>186.25</b> (11.26 net gain)
	42% of CMSPA	45% of CMSPA

Note: Restoration Areas within and/or adjacent to the Refined Natural Heritage System are to be identified through the site-specific planning process





# What did we recommend?

## Avoiding & Minimizing Impacts

### AS PART OF THE CLAIR-MALTBY PROCESS

- Mapping all known components of the NHS as exclusive land use designations, including applicable buffers
- Keeping arterial roads from crossing Significant Wetlands and Significant Woodlands and generally limiting road crossings of the NHS
- Building on the wildlife crossing infrastructure already incorporated by confirming existing and identifying new locations for wildlife crossing infrastructure (and / or other mitigative measures)
- The Moraine Ribbon - keeping major trails largely outside / on the periphery of the NHS
- Placement of storm water capture areas (SWCAs) / parks / schools adjacent to the NHS where possible to provide supplemental “buffering” of the NHS from more intensive land uses





# What did we recommend?

## Managing Unavoidable Impacts

Some key examples include...

### GOOD PLANNING

- Protect features and functions as per approved Official Plan policies with supporting guidelines (e.g., with buffers, linkages)

### ECOLOGICALLY SENSITIVE SITE DESIGN

- Significant Landform: Minimize grading in adjacent lands, restore disturbed topography, allow gradual transitions to developed lands where possible

### LOCALLY APPROPRIATE WATER MANAGEMENT

- Implement distributed infiltration and stormwater management measures to maintain surface and groundwater inputs to wetlands

### MAINTAINING & ENHANCING CONNECTIVITY

- Naturalizing linkages, installing amphibian and reptile tunnels under roads, bridge crossing over Gordon (for pedestrians and wildlife)

### ONGOING MANAGEMENT & TARGETED MONITORING

- Fencing between public protected natural areas and other land uses
- Tracking changes in vegetation and tree cover, wildlife movement



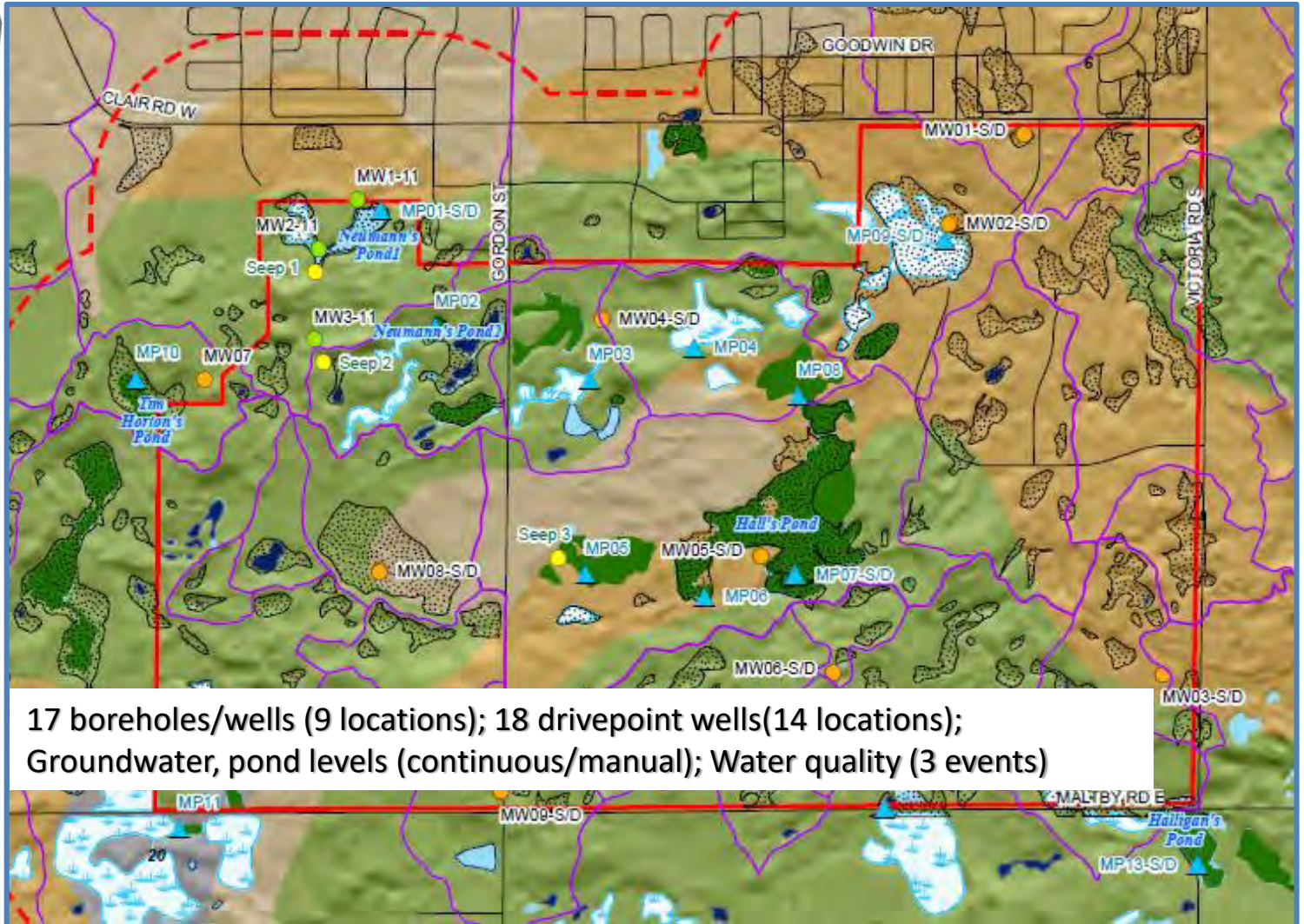
# Groundwater





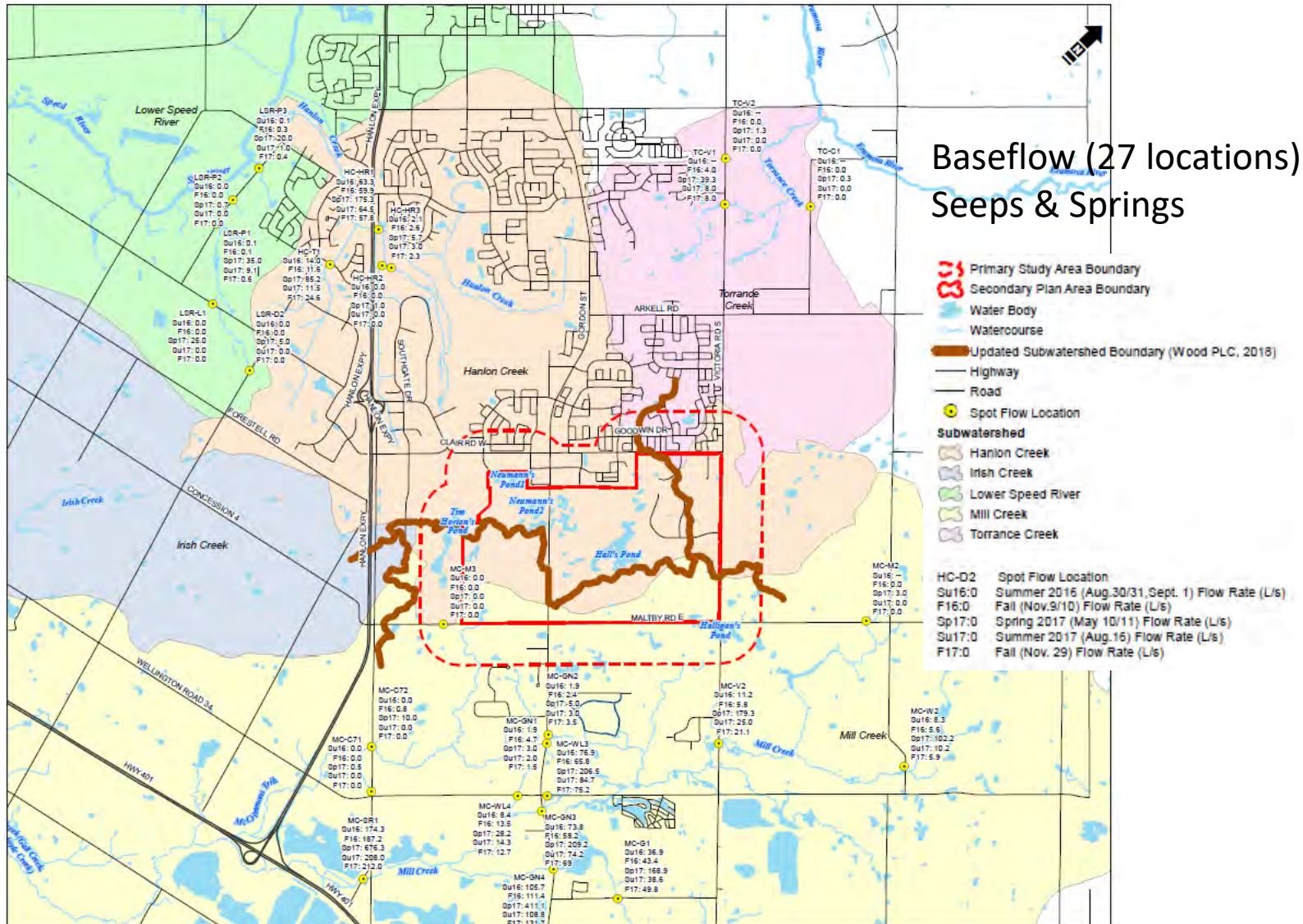
# Hydrogeologic Characterization

## Groundwater & Pond Level Monitoring Locations





# Hydrogeologic Characterization Baseflow Monitoring Locations

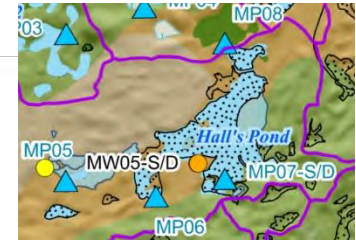
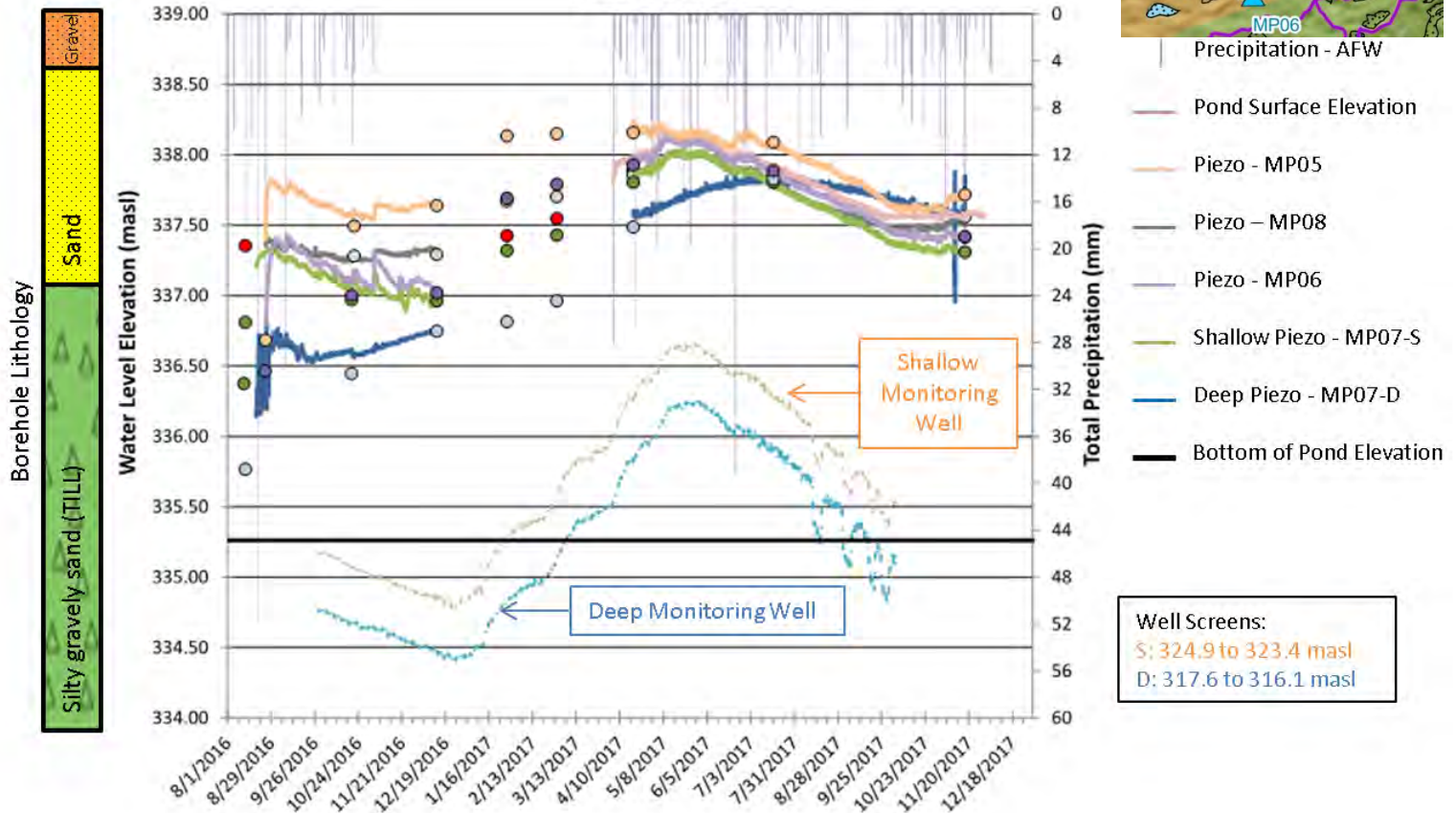




# Hydrogeologic Characterization

## Seasonal Variation in Groundwater & Pond Levels

Clair-Maltby Secondary Plan  
Long Term Groundwater Level Monitoring  
Hall's Pond

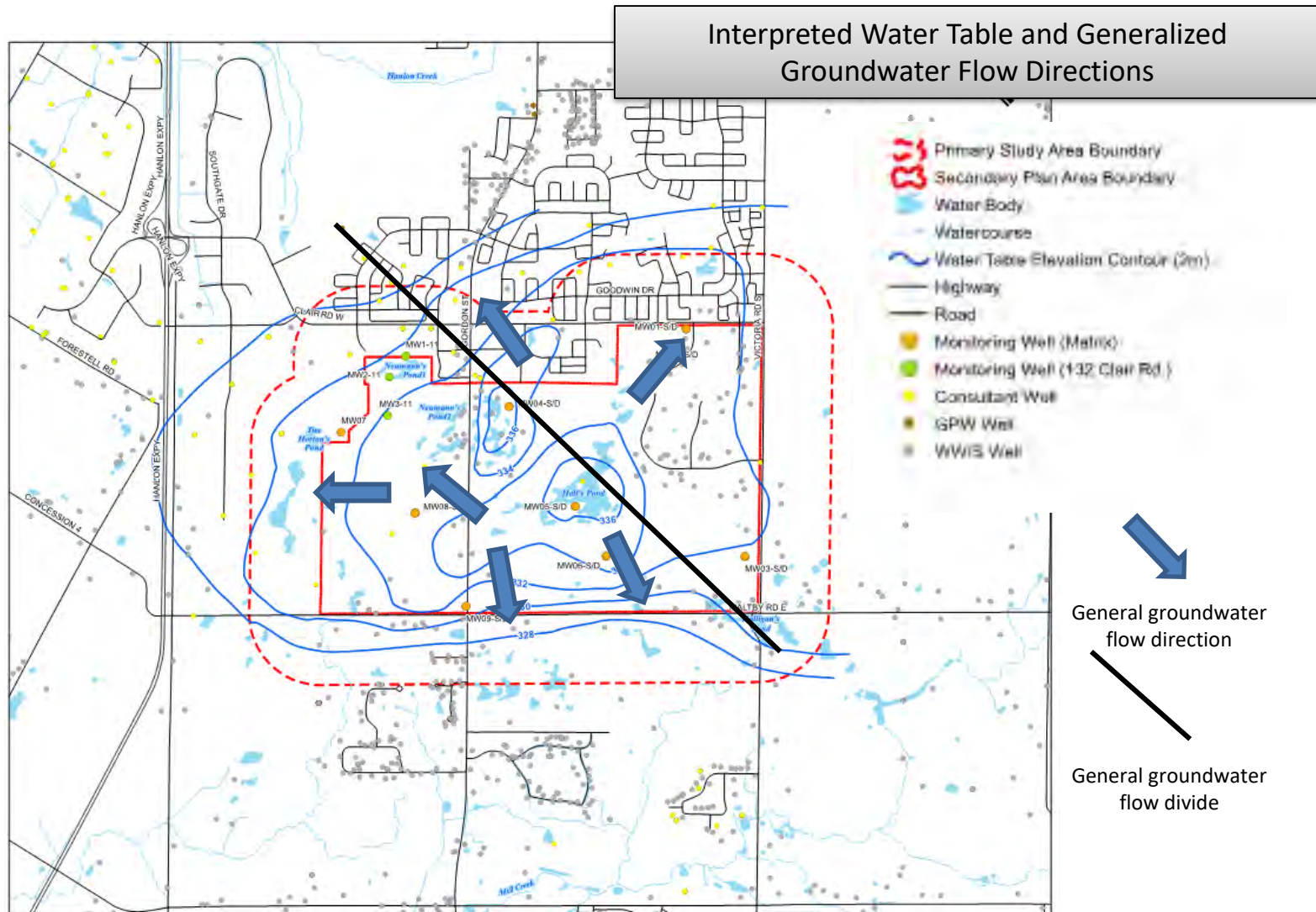


Precipitation - AFW: Data set from rain gauge installed by AMEC Foster-Wheeler at 500 Maltby Rd. E.



# Hydrogeologic Characterization

## Groundwater Flow and Function









# Integrated Surface Water – Groundwater Simulation

## Groundwater Flow and Function

Integrated Surface Water-Groundwater Model Domain

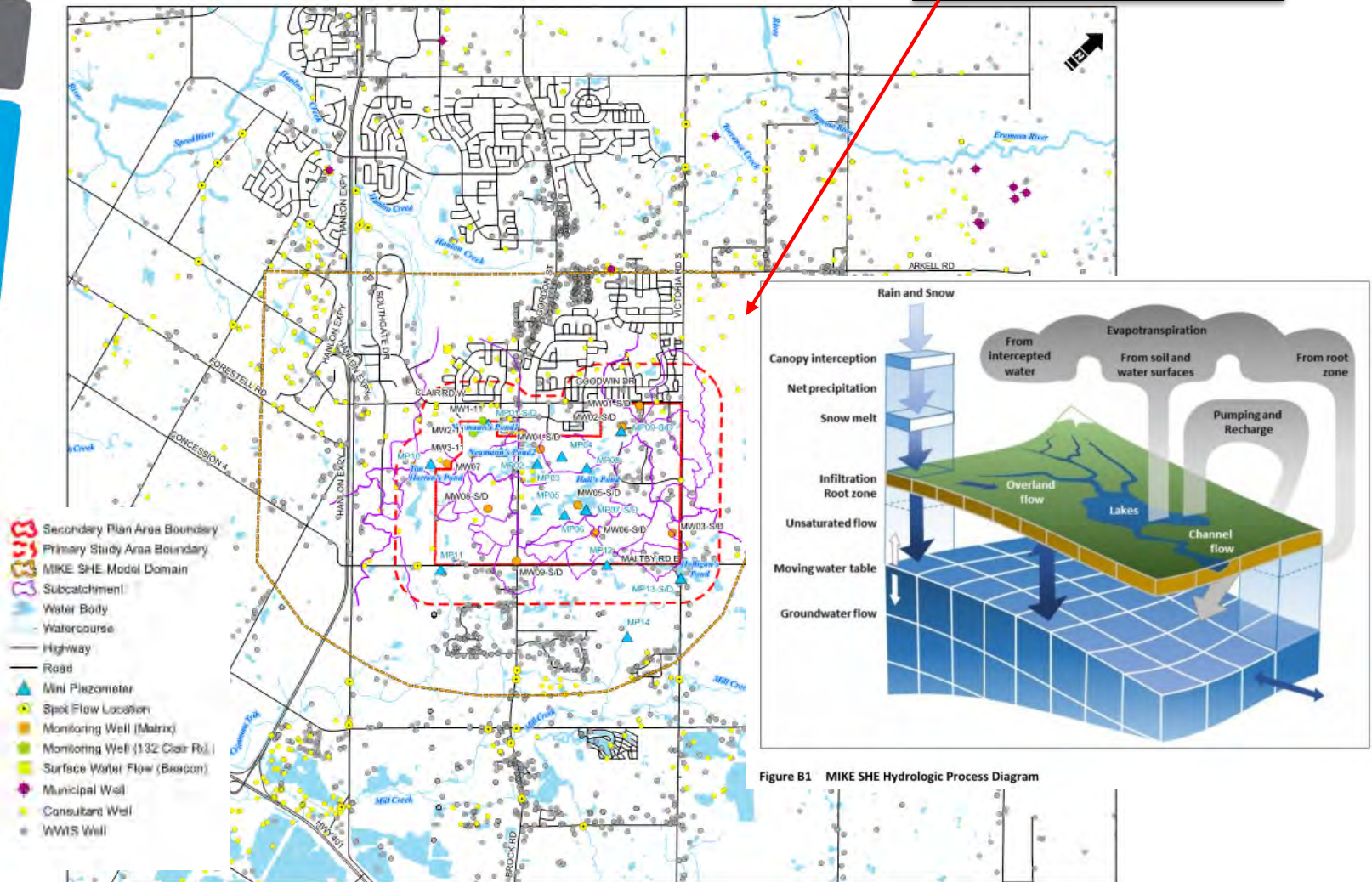
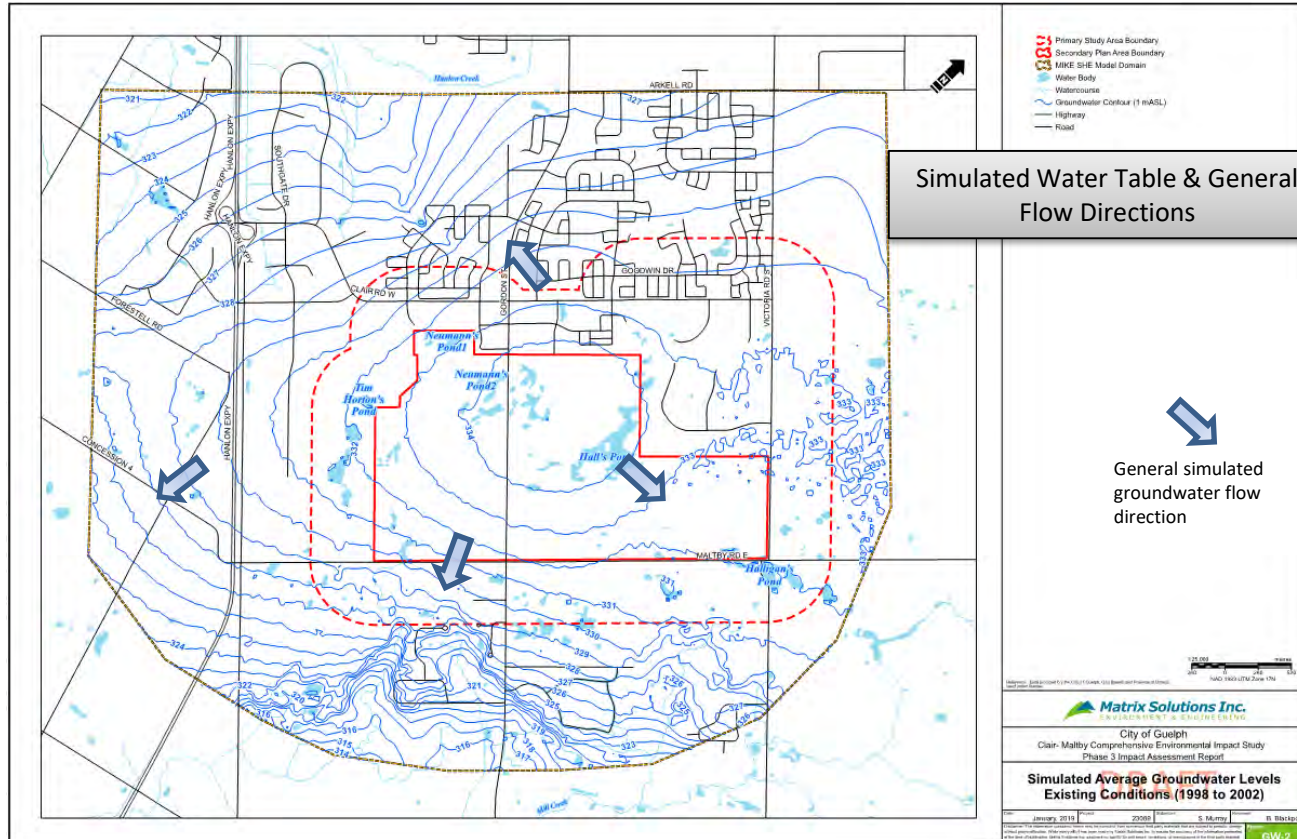


Figure B1 MIKE SHE Hydrologic Process Diagram



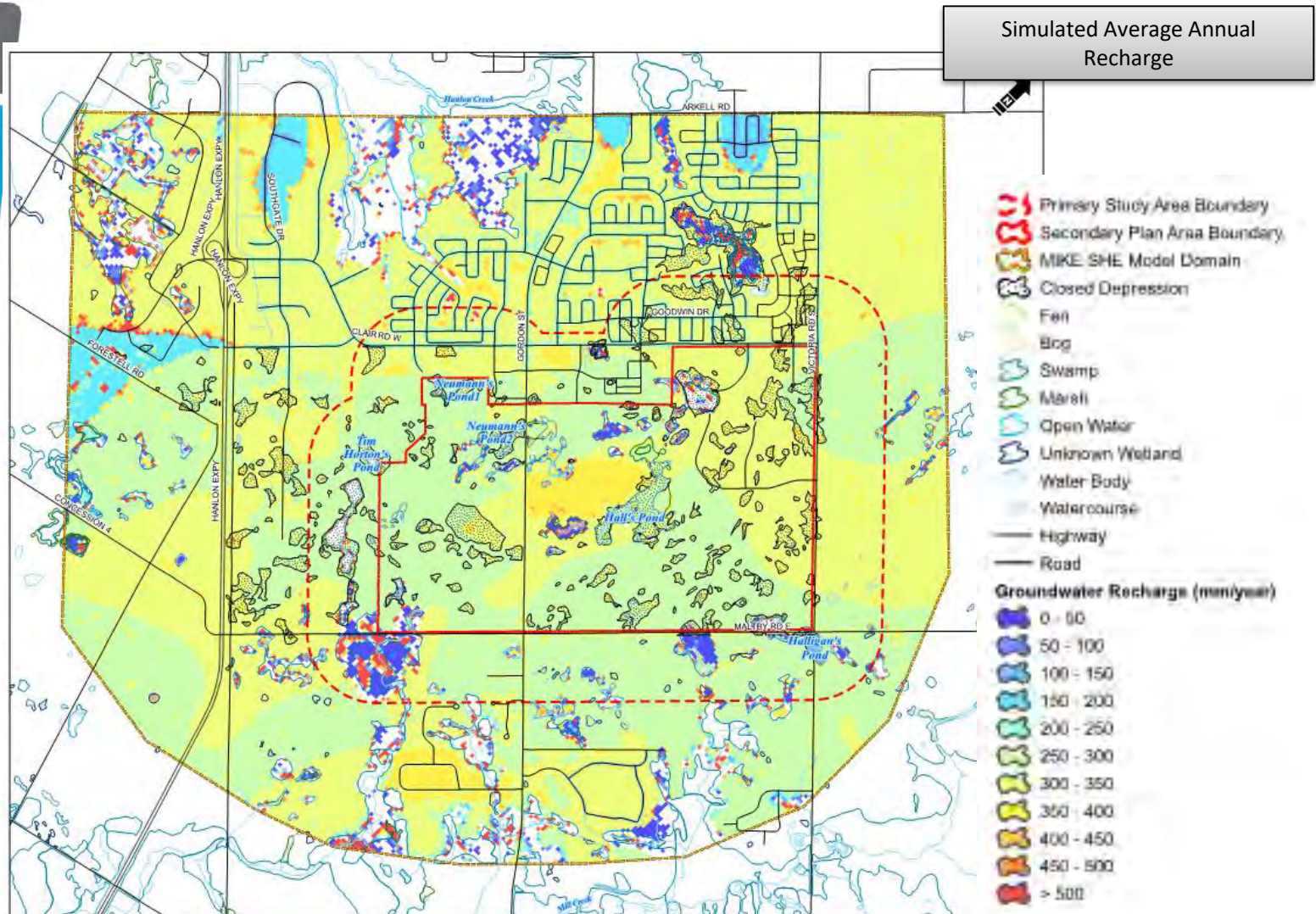
# Integrated Surface Water – Groundwater Simulation Groundwater Flow and Function





# Integrated Surface Water – Groundwater Simulation

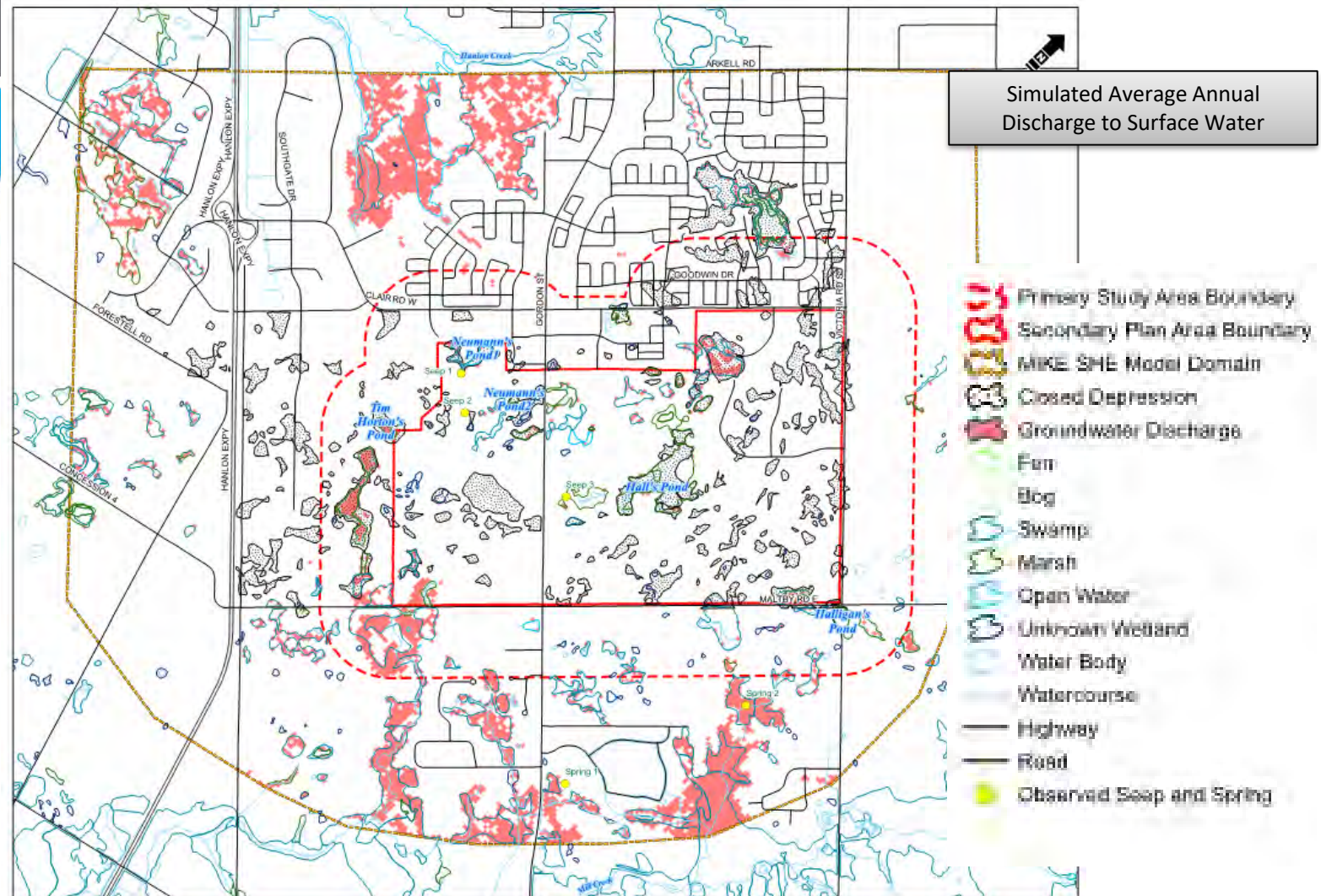
## Current Conditions Recharge





# Integrated Surface Water – Groundwater Simulation

## Current Conditions Groundwater Discharge





# Impact Assessment Hydrogeology

- Integrated Surface Water – Groundwater Model used to simulated change in land use and represent proposed stormwater management;
  - Low Impact Development BMPs (source infiltration)
  - Storm Water Capture Areas for Large Events
- 1. Initial Preferred Community Structure (May 2018)
- 2. Updated Preferred Community Structure (May 2019)

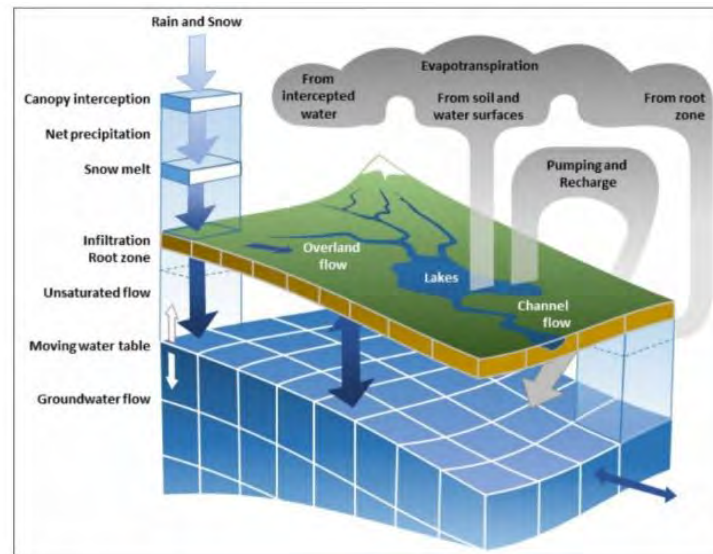


Figure B1 MIKE SHE Hydrologic Process Diagram





# Impact Assessment Hydrogeology

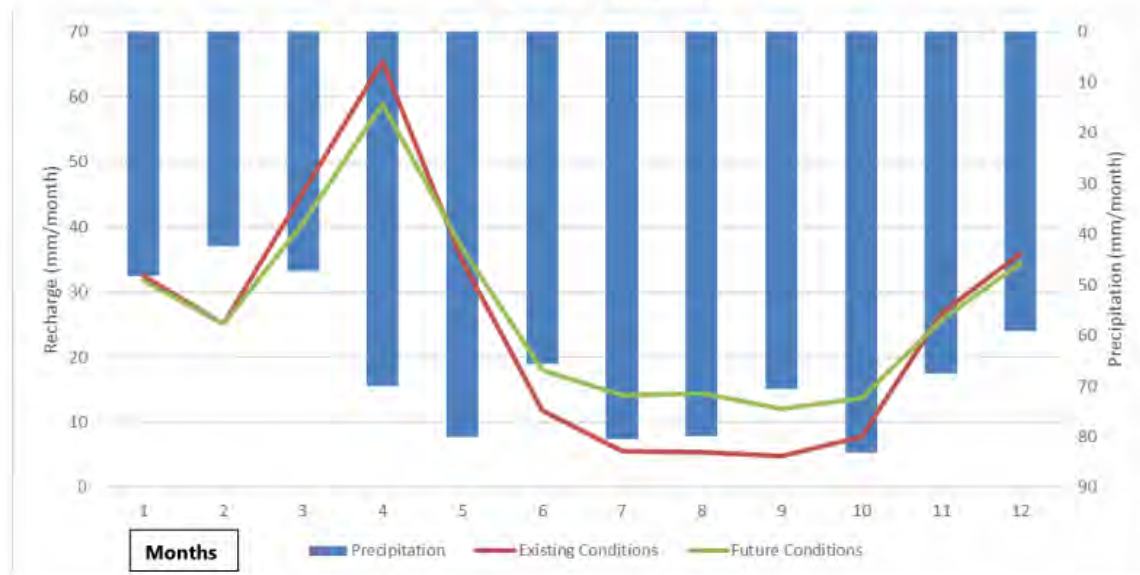
- Impacts assessed
  - Water budgets in the SPA, PSA and key NHS features in, and adjacent to, the SPA,
  - Groundwater flow directions and depth to water table,
  - Recharge to the water table, shallow and deep bedrock aquifers,
  - Groundwater discharge to streams and wetlands,
  - Average annual ponded water elevation in wetlands.




# Impact Assessment Iterations 1 & 2 Results

- Water budgets for SPA, PSA Halls, Neumann and Halligans Ponds maintained
- Groundwater flow and discharge locations maintained
- Recharge to water table and bedrock aquifers maintained

**Figure 6.1. Mean Monthly Groundwater Recharge – Existing vs. Future Conditions (Updated PCS) (2003-2017)**







# Impact Assessment Iterations 1 & 2

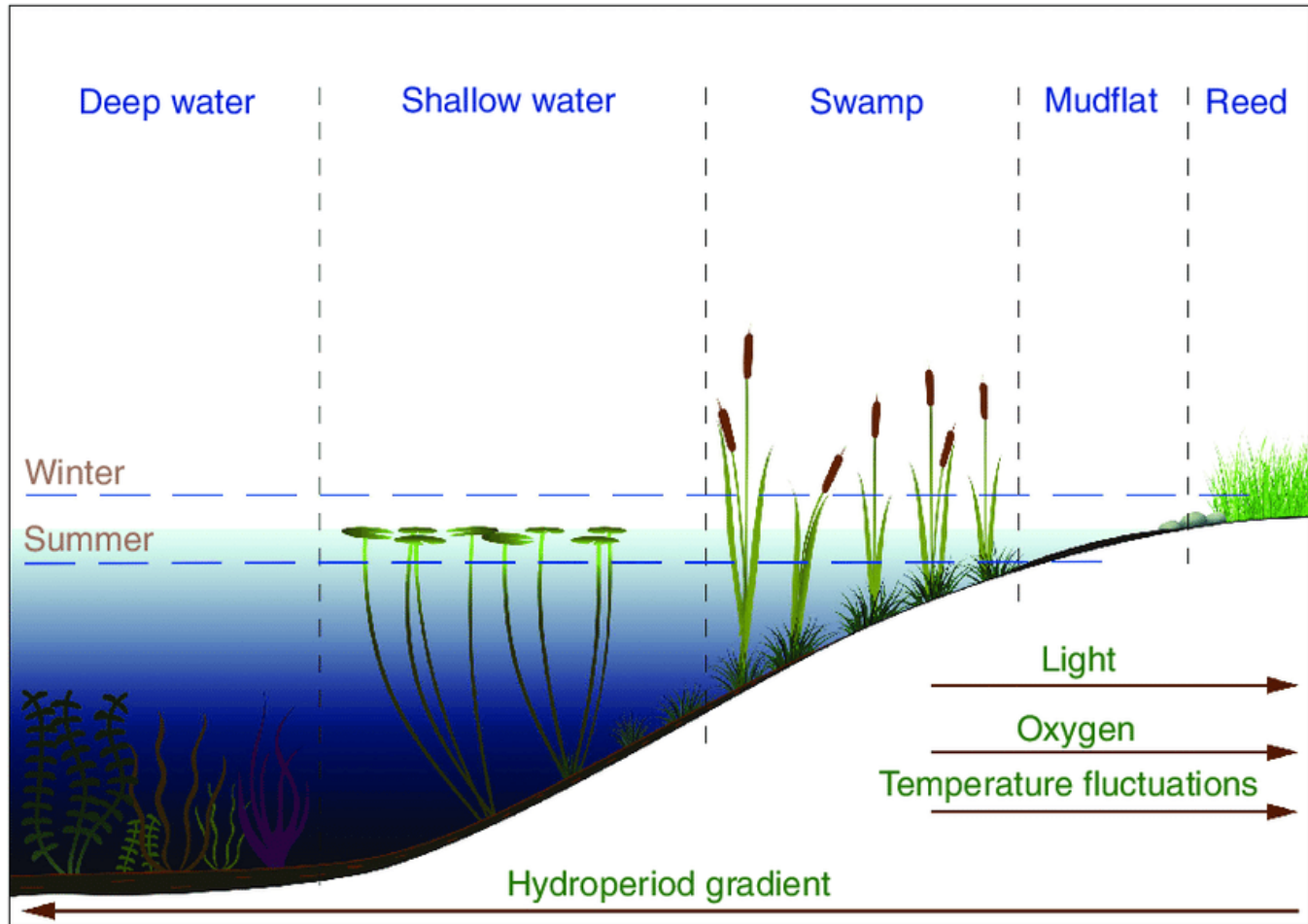
## Results

- Increase in ponded water levels at Halls and Neumanns Ponds
- Does the small increase in average annual ponded water levels represent a significant impact to wetland hydroperiod and vegetation communities?
- Can impact be mitigated by refinement of Land Use and SWM?



# Impact Assessment Iteration 3

## Hydroperiod and Halls Pond

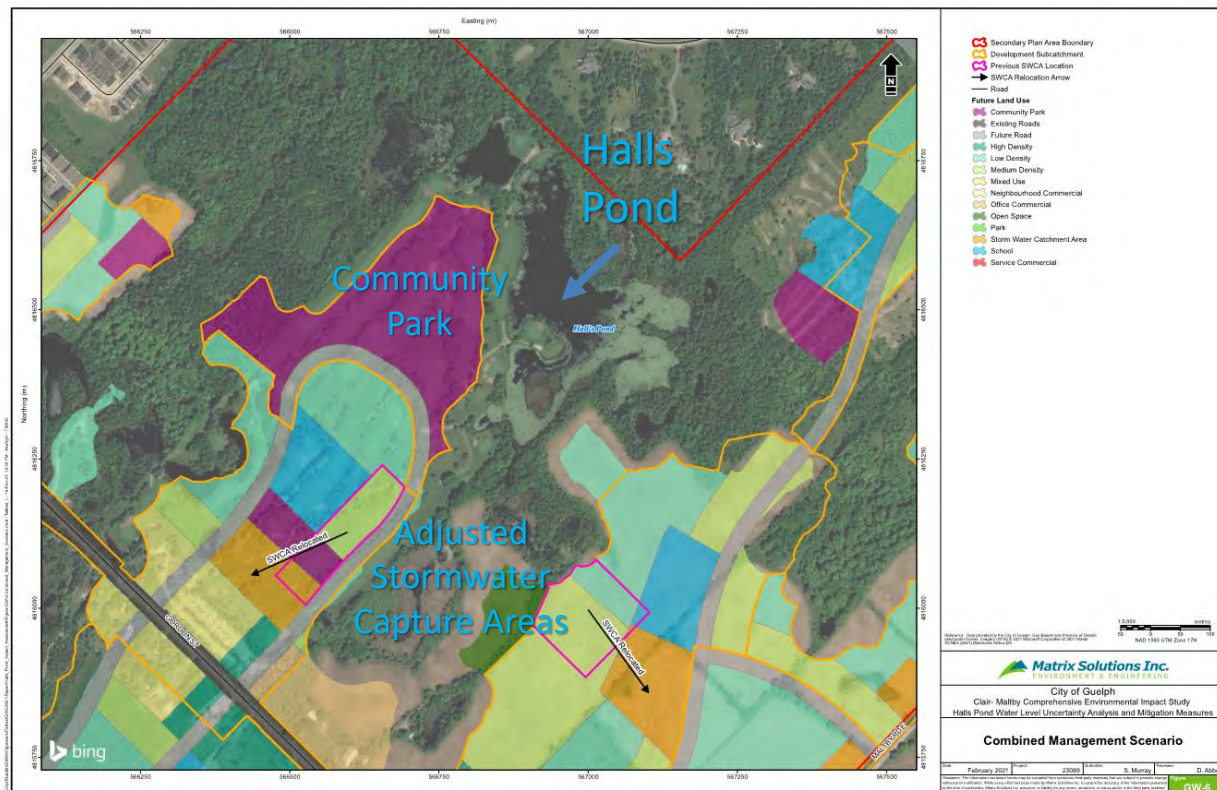


Wetland hydroperiod – the length of time and portion of the year the wetland holds ponded water



# Impact Assessment Iteration 3 Results

Additional simulation to account for finalized community park location and refined representation of Halls Pond to assess potential impacts to hydroperiod (Final PCS ,2021)





# Impact Assessment Iteration 3

## Hydroperiod and Halls Pond

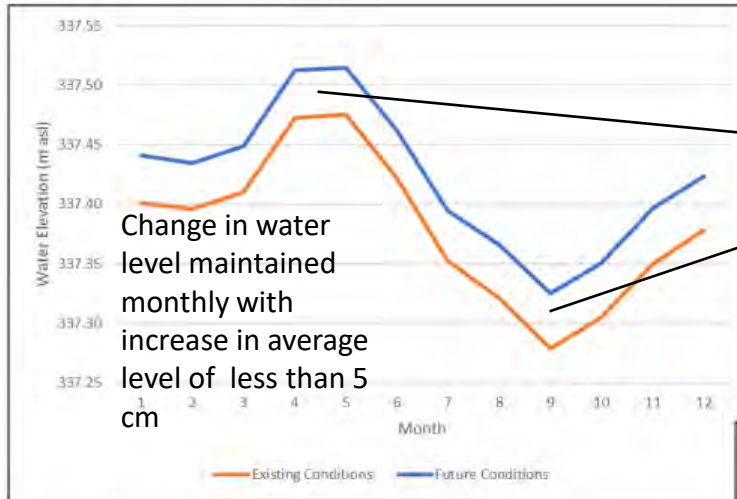
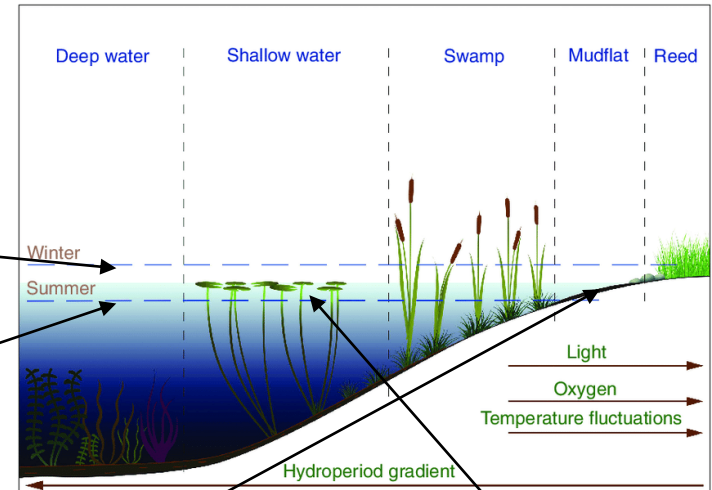


FIGURE A Mean Monthly Water Levels at Halls Pond (2003-2017)



Hydroperiod – Pond and Buffer Area, Frequency of Ponding Maintained

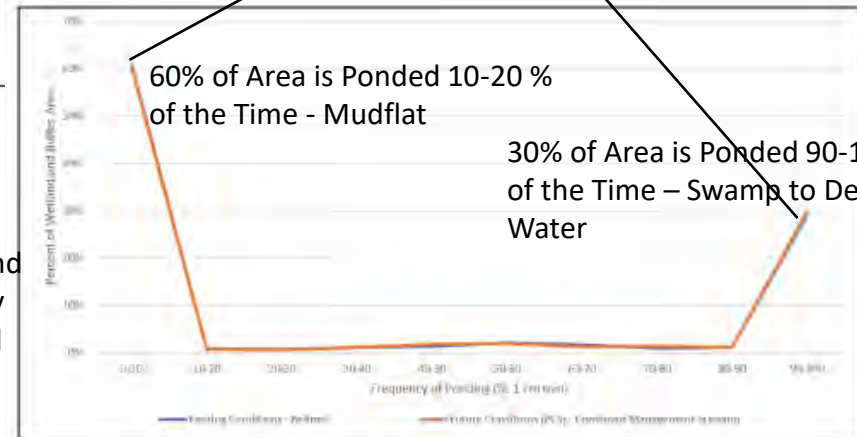


FIGURE B Halls Pond and Buffer Area Ponding Frequency >1 cm (2003-2017)

- Hydroperiod maintained despite less than 5 cm change in average annual water level

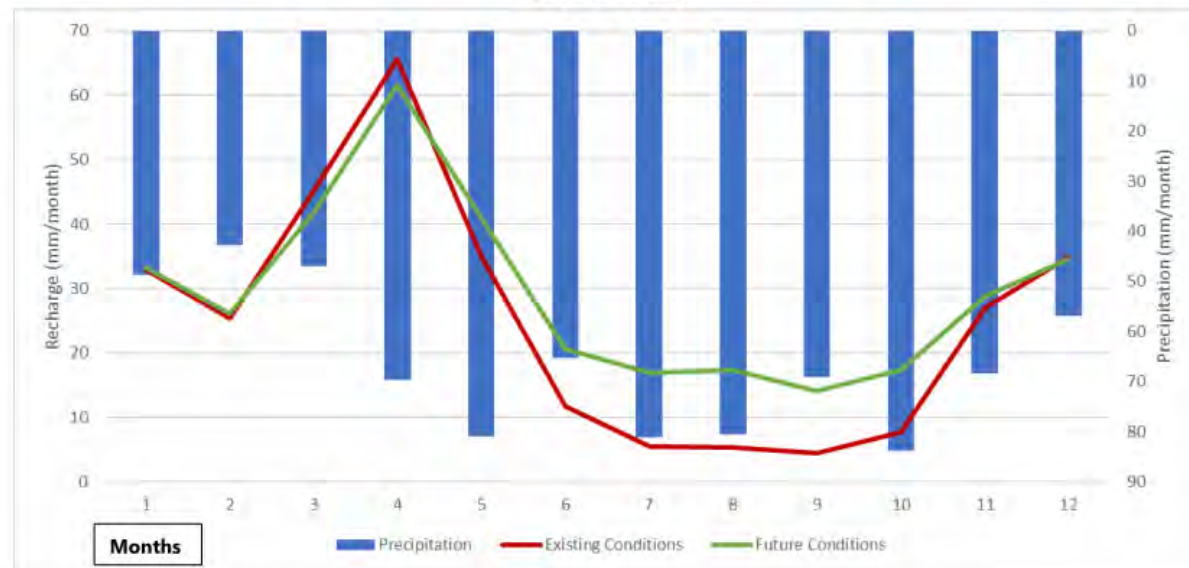


# Impact Assessment Iteration 3

## Groundwater Recharge and Discharge

- Water budgets for SPA, PSA Halls, Neumann and Halligans Ponds maintained
- Groundwater flow and discharge locations maintained
- Recharge to water table and bedrock aquifers maintained

Figure 6.3. Mean Monthly Groundwater Recharge – Existing (revised) vs. Future Conditions (Final PCS) (2003-2017)





# Surface Water







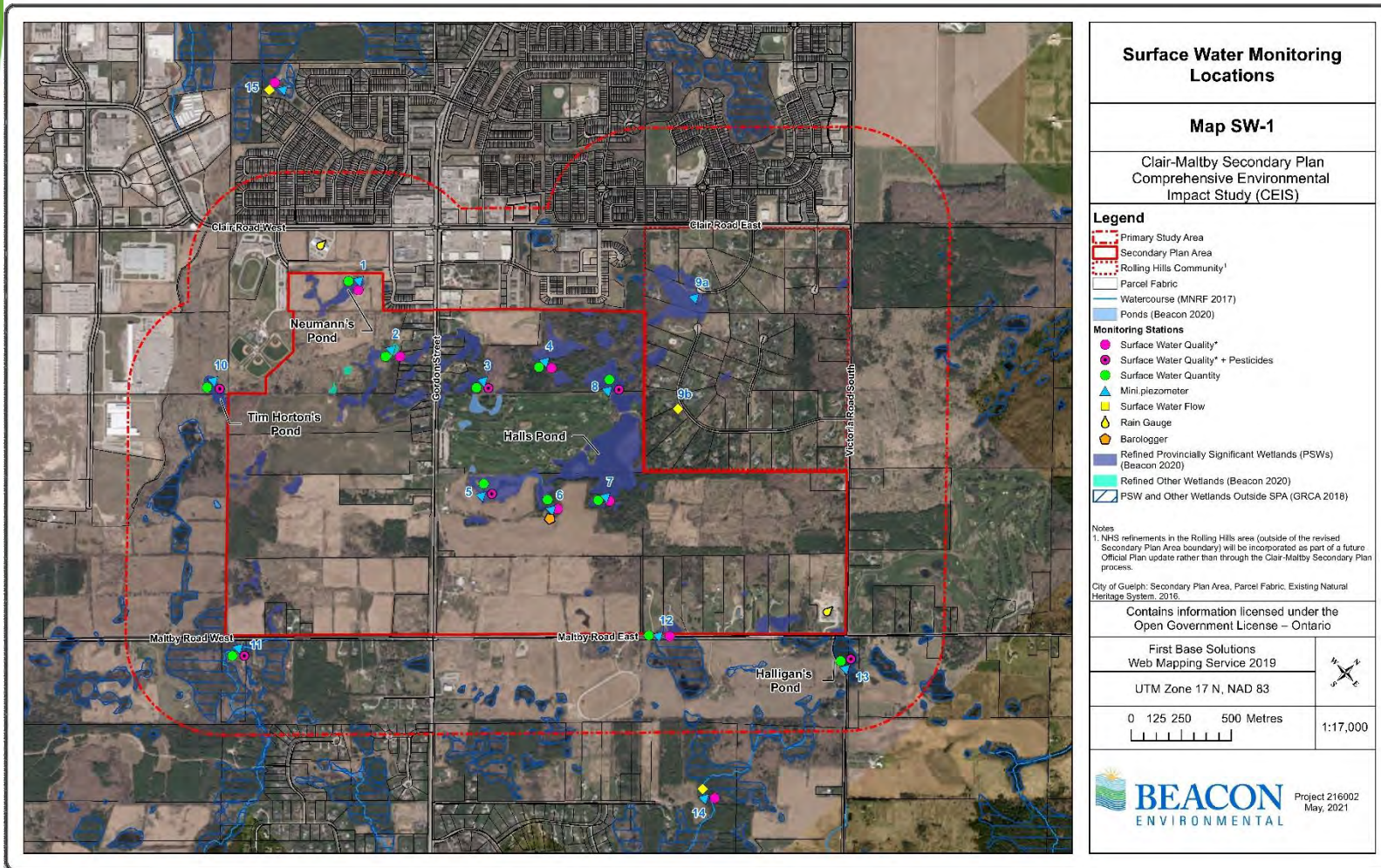
# Surface Water

## **Objective / Purpose**

- Need to define runoff characteristics (peak and volume) in the study area (Headwaters of Mill, Hanlon and Torrance Creeks)
- Assist in the definition of the role of water in supporting natural systems functionality
- Fundamental component of Stormwater Management Plan development



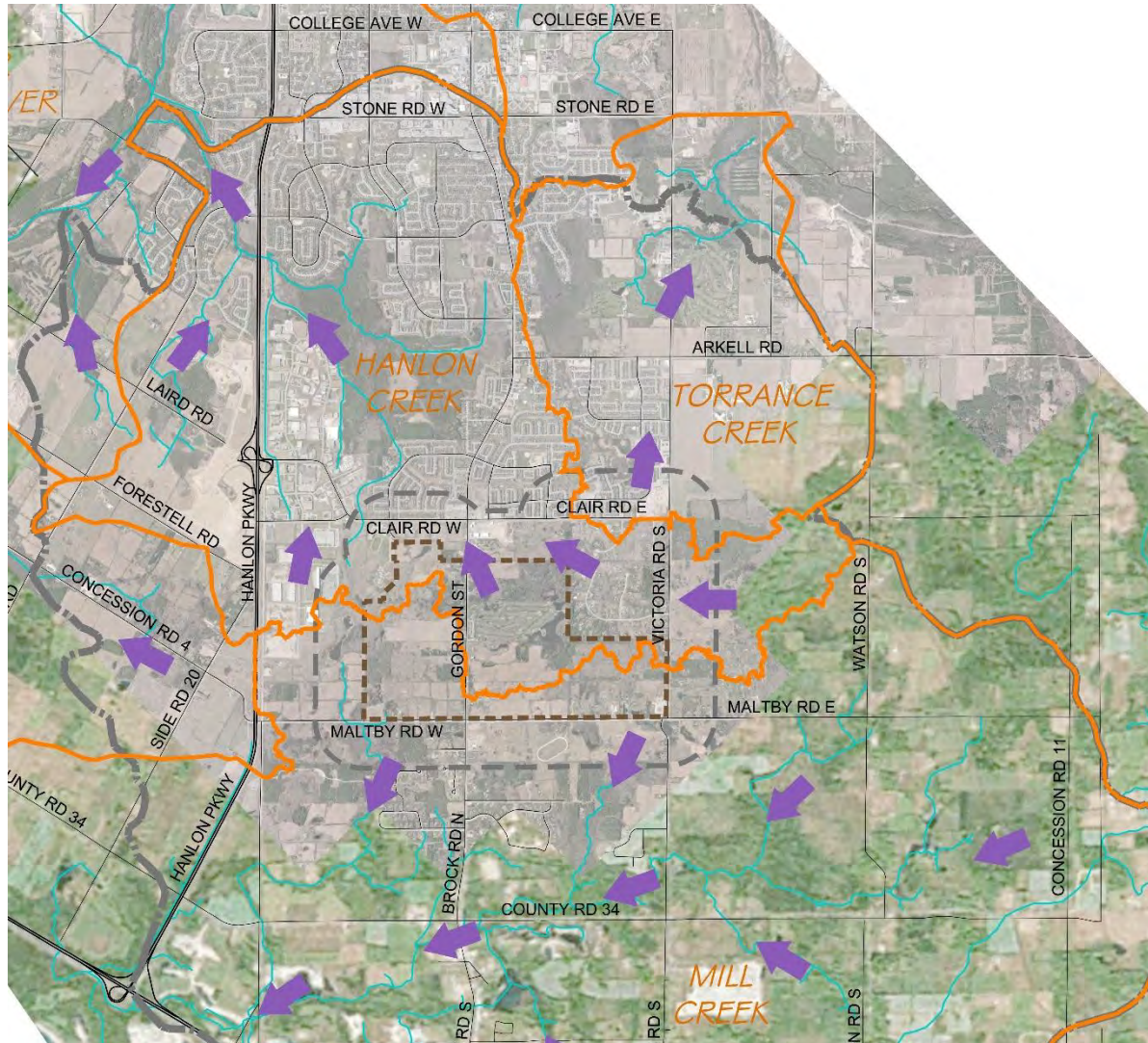
# Surface Water



- Monitoring surface water quantity and quality (2016-2019)



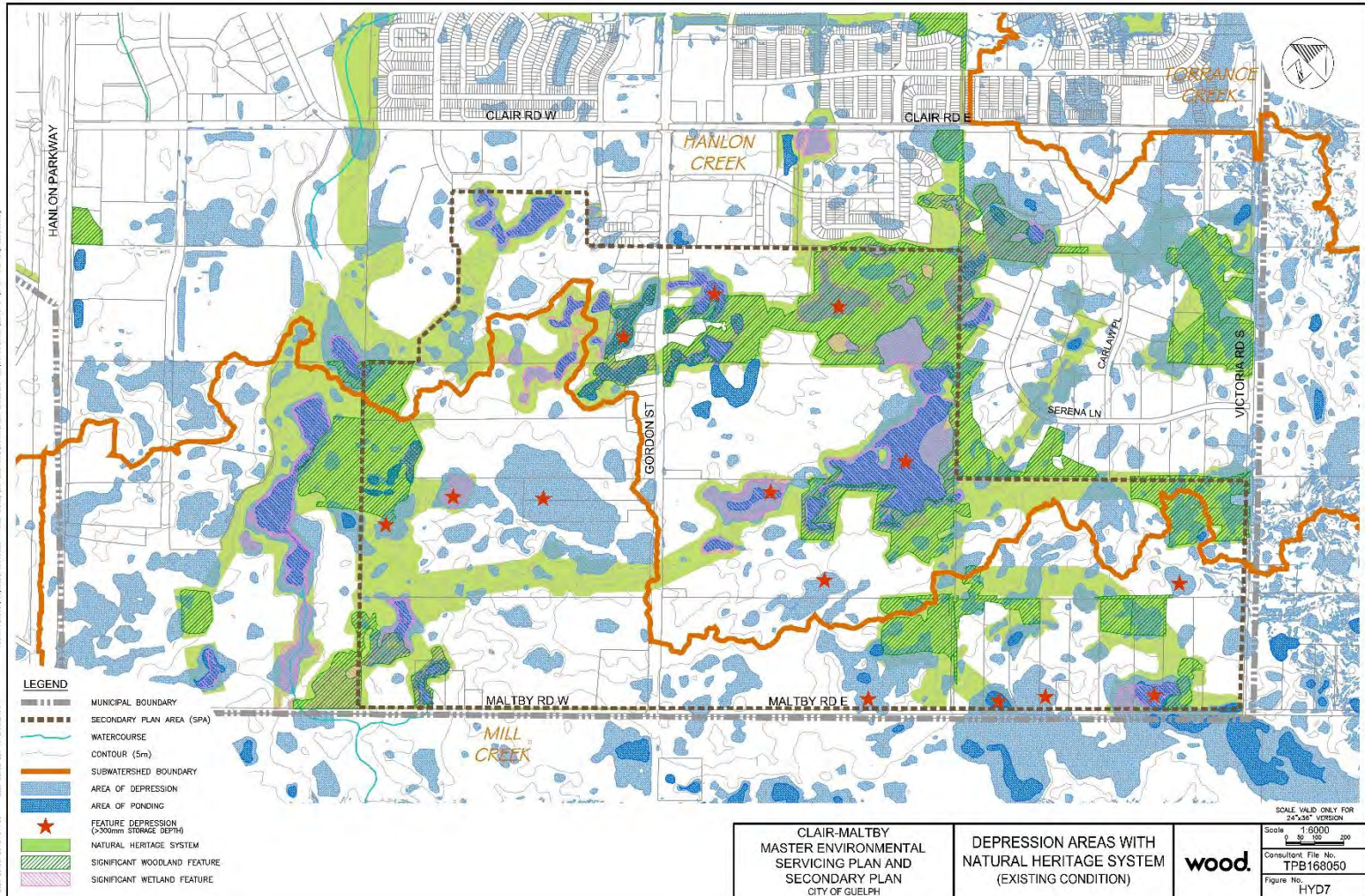
# Surface Water



- Drainage Directions



# Surface Water



- Depressional features and NHS





# Surface Water

## **Analytical Approach**

- Hydrologic computer model (PCSWMM) used to determine runoff response (flows, runoff volumes) to both synthetic design storm events and observed historical rainfall.
- Model uses soil conditions, topography and land use to determine runoff response.





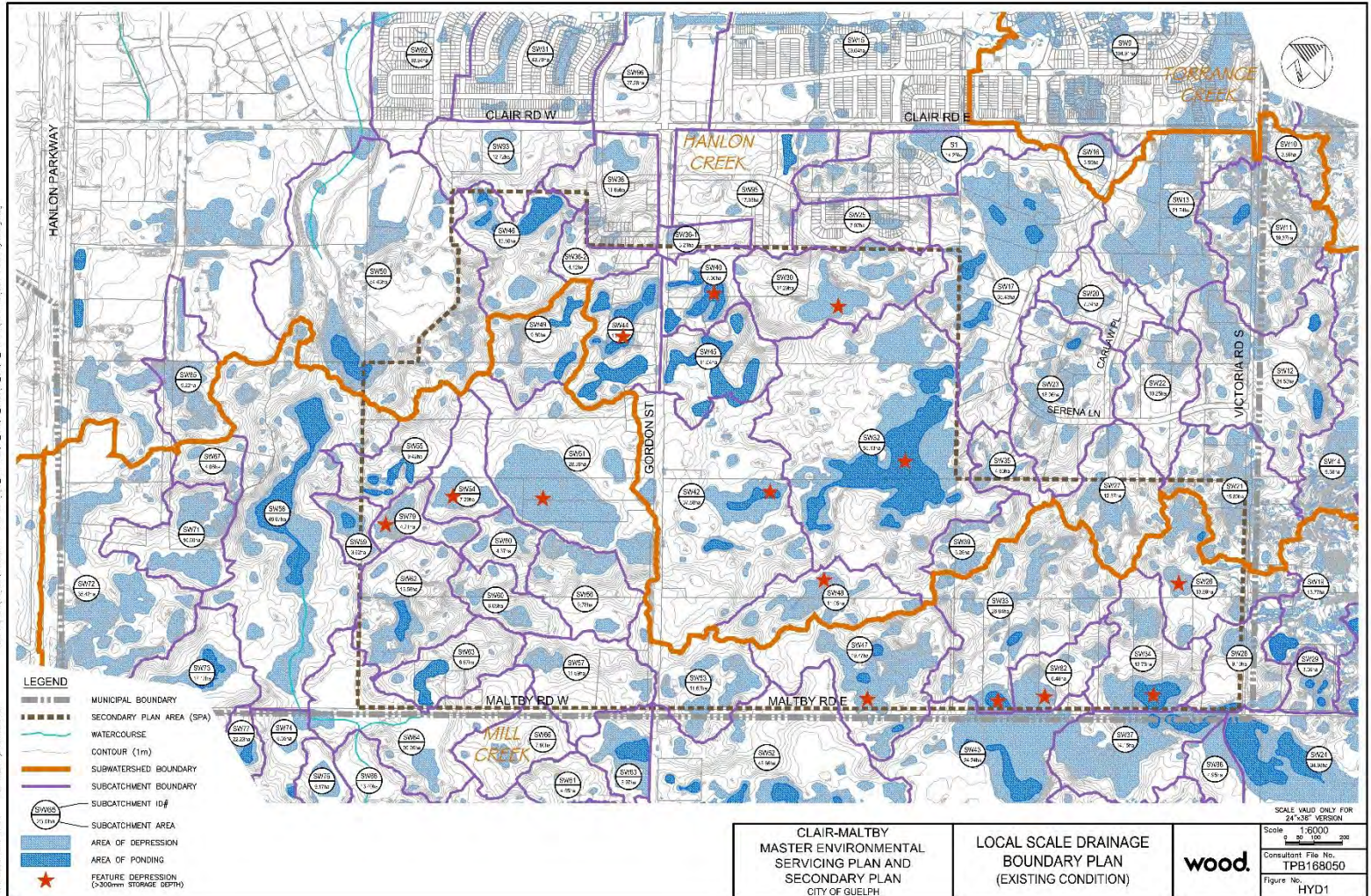
# Surface Water

## **Analytical Approach**

- Hydrologic modelling used to determine runoff response for both existing and future land uses (Preferred Community Structure) and assess stormwater management strategies and alternatives.



# Surface Water



- Existing drainage conditions





# Surface Water

## **Stormwater Management**

- Stormwater management needed to address drainage impacts from the proposed land use conditions.
- Stormwater management strategy to meet surface water and groundwater targets set in the Comprehensive Environmental Impact Study (CEIS).





# Surface Water

## **Stormwater Management**

- Stormwater management alternatives have been assessed as part of the MESP, in accordance with the MEA Class EA Process (Schedule B).





# Surface Water

## Stormwater Management

- MESP Alternative Assessment Evaluation Criteria consider:
  - Impacts or opportunities that an alternative may have related to the natural environment and to the people and their relationship to the study area.
  - Costing of alternatives.
  - Ability of alternatives to address impacts (i.e. effectiveness).





# Surface Water

## Stormwater Management

- Alternative Assessment included:
  - Traditional (end of pipe)
  - Innovative (low impact development best management practices)
  - Consideration for climate change





# Surface Water

## Stormwater Management

- Community structure alternatives assessed to determine impacts to:
  - Quantity (peaks)
  - Quality (contaminants)
  - Water Budget (volumes)





# Surface Water

## Stormwater Management

- SWM Plan includes:
  - Distributed low impact development (LID) best management measures (BMPs) to capture 20 mm runoff within both public and private lands.
  - Stormwater capture areas, sized to capture the Regional Storm (Hurricane Hazel), with overflow to existing depression areas.





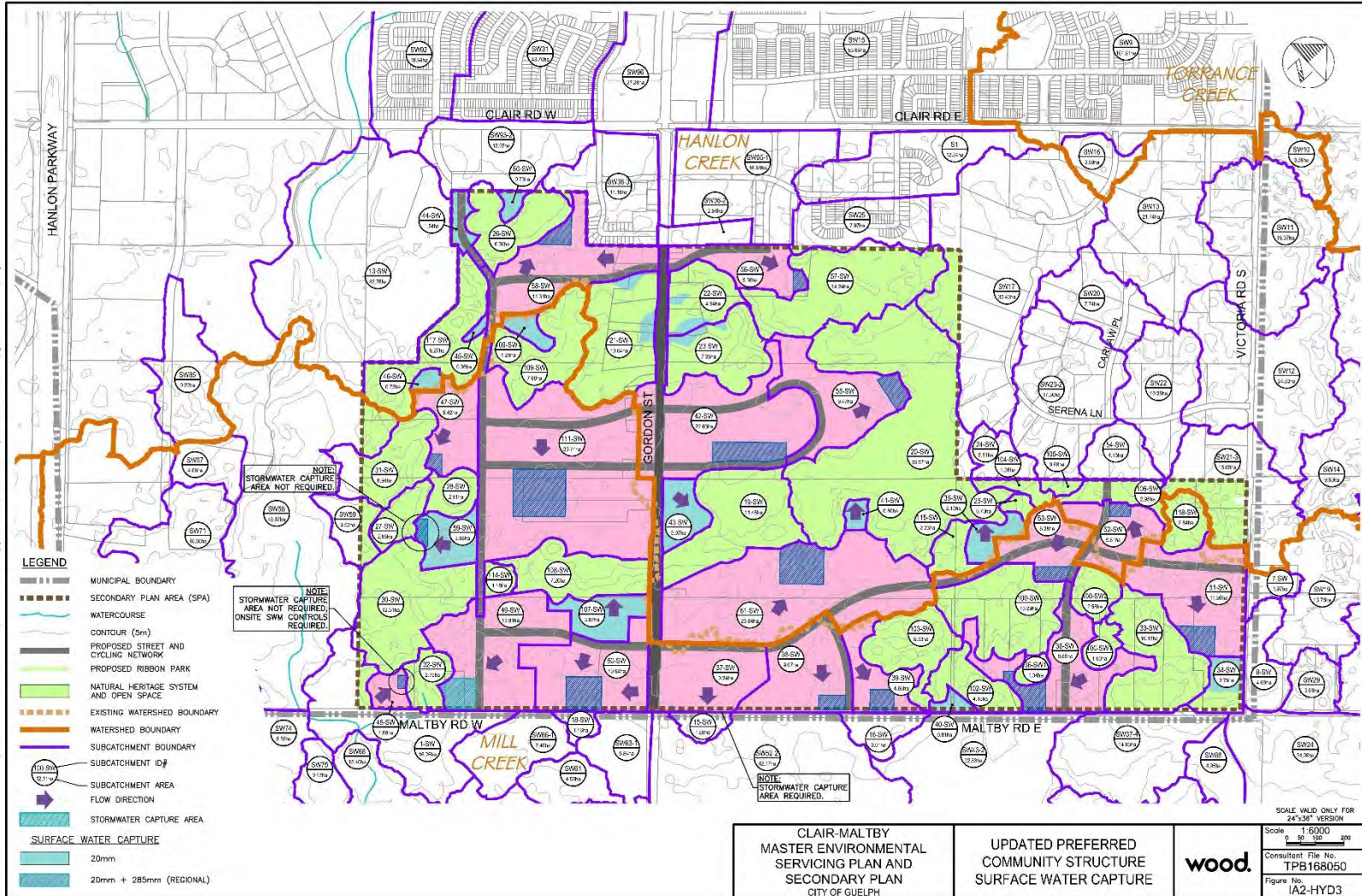
# Surface Water

## **Stormwater Management**

- Infiltrative LID BMPs that receive runoff from paved surfaces will require pretreatment to prevent groundwater contamination.
- A treatment train approach will be used to protect the stormwater capture areas' infiltration function and groundwater quality.

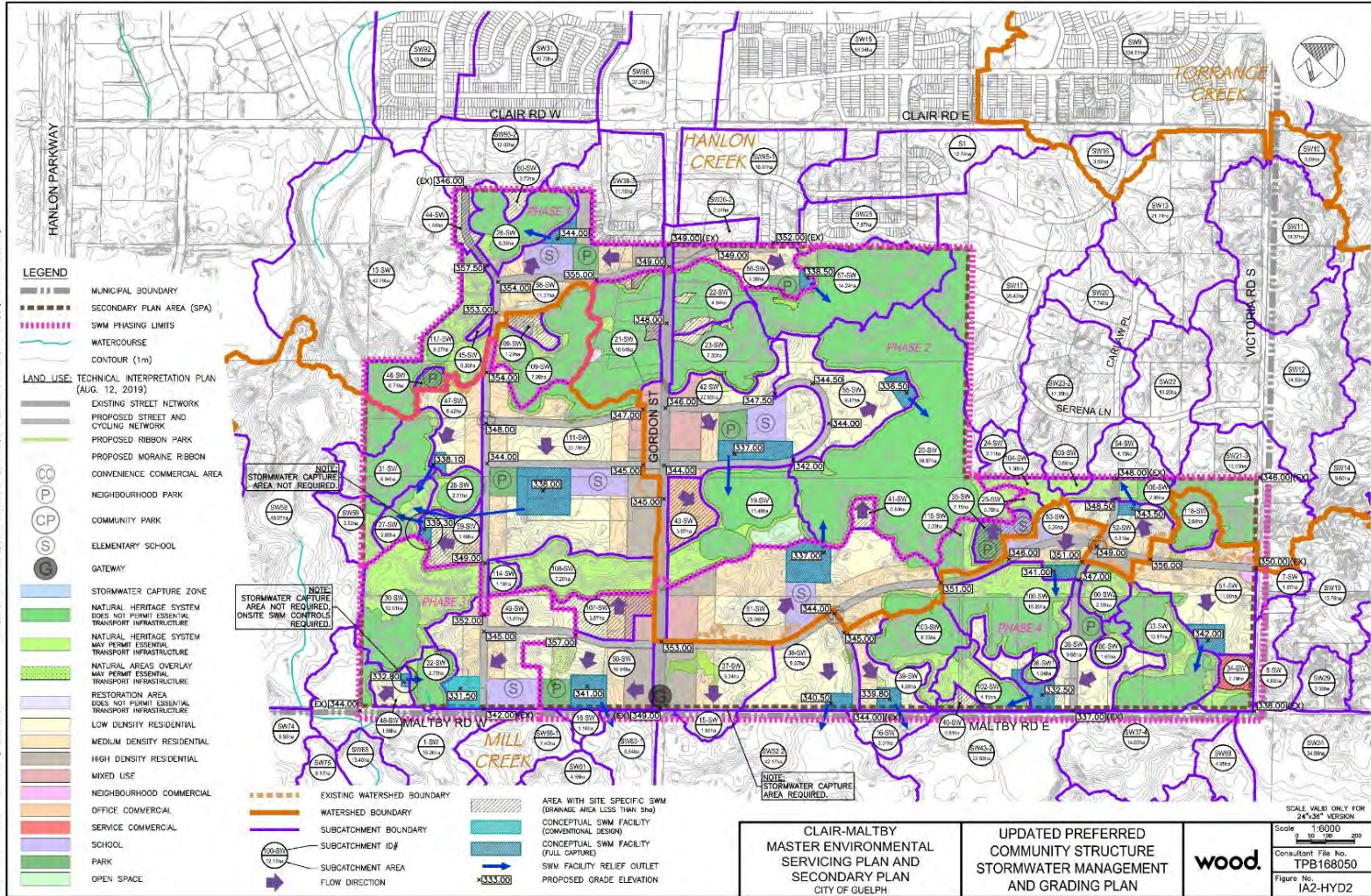


# Surface Water Drainage Capture





# Surface Water Future Drainage Plan







# Surface Water

## Results

- Flow targets met at Hanlon Creek and Mill Creek (external to the Clair-Maltby )
- Surface water budget met (validated by both surface water and groundwater modelling)
- Stormwater management to be phased



# THANK YOU

## Questions?



[haveyoursay.guelph.ca/Clair-Maltby](https://haveyoursay.guelph.ca/Clair-Maltby)

- Provide your thoughts and ideas on the 'Idea Boards' until August 8, 2021
- Ask Questions
- Attend our virtual office hours
- email us at [clair-maltby@guelph.ca](mailto:clair-maltby@guelph.ca)





# Clair-Maltby

**Transform. Connect. Community.**

June 24, 2021 Open House  
Overview, Land use and Parks Session  
6:30 pm





# Land Acknowledgement

As we gather, we are reminded that Guelph is situated on treaty land that is steeped in rich indigenous history and home to many First Nations, Inuit and Métis people today.

As a City we have a responsibility for the stewardship of the land on which we live and work.

Today we acknowledge the Mississaugas of the Credit First Nation of the Anishinaabek Peoples on whose traditional territory we are meeting.





# Overview Agenda

- Secondary Plan Process
- Vision and Guiding Principles
- Draft Secondary Plan Land Use and Parks Overview
- Related Draft Master Environmental Servicing Plan (MESP) Overview
- Next Steps





# Clair-Maltby Secondary Plan process

## **Phase 1 (April 2016 - July 2017)**

- Background data collection
- Identify problem/opportunity statement
- Develop principles/goals

## **Phase 2 (July 2017 - June 2018)**

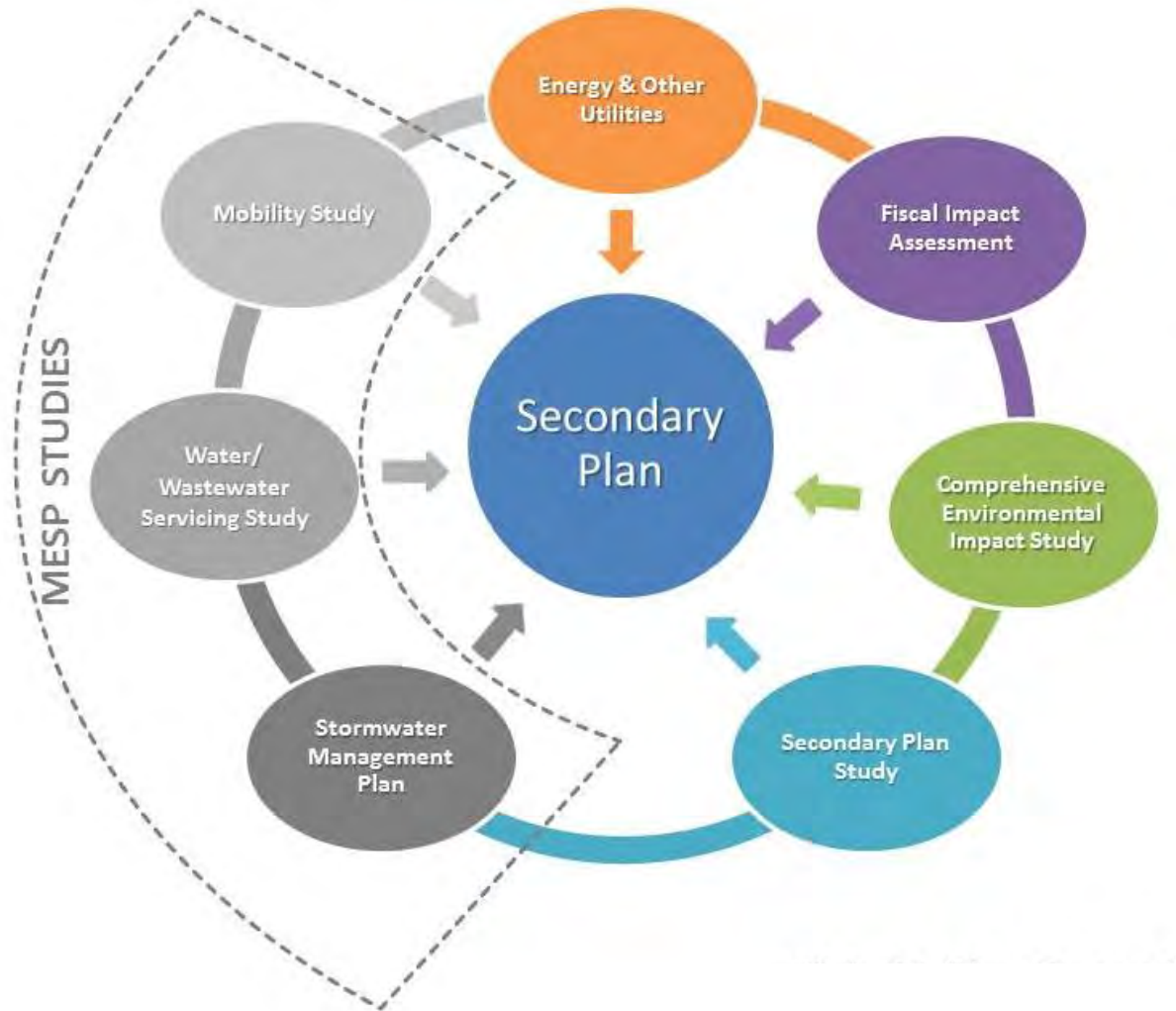
- Develop Conceptual Community Structure
- Detailed studies
- Consideration of Community Structure Alternatives

## **Phase 3 (July 2018 - 2022)**

- Preferred Alternative
- Draft Master Environmental Servicing Plan and Secondary Plan
- Final Master Environmental Servicing Plan and Secondary Plan to Council



# Clair-Maltby Secondary Plan Process Diagram





# Clair-Maltby vision







# Clair-Maltby vision

Clair-Maltby will be a vibrant, urban village that is integrated with Guelph's southern neighbourhoods, as well as having strong connections to Downtown, employment areas and the rest of the city.

The Natural Heritage System (NHS) and the Paris Galt Moraine provide the physical and ecological framework for the balanced development of interconnected and sustainable neighbourhoods following the City's environment-first approach.

The area will be primarily residential in character with a full range and mix of housing types, which will allow for affordable and market-based housing, and a variety of other uses to meet the needs of all residents.

A system of parks, open spaces and trails will be interwoven throughout to provide opportunities for active and passive recreation.



# Guiding principles



Vibrant and Urban



Green and Resilient



Healthy and Sustainable



Interconnected and Interwoven



Balanced and Liveable





# Draft Secondary Plan

Implements previous Council decisions through approval of:

- Policy Directions
- Preferred Community Structure
- Open Space Strategy

A few differences:

- Multi-use overpass over Gordon
- High Density/Mixed Use density increase from 200 to 250 units per hectare



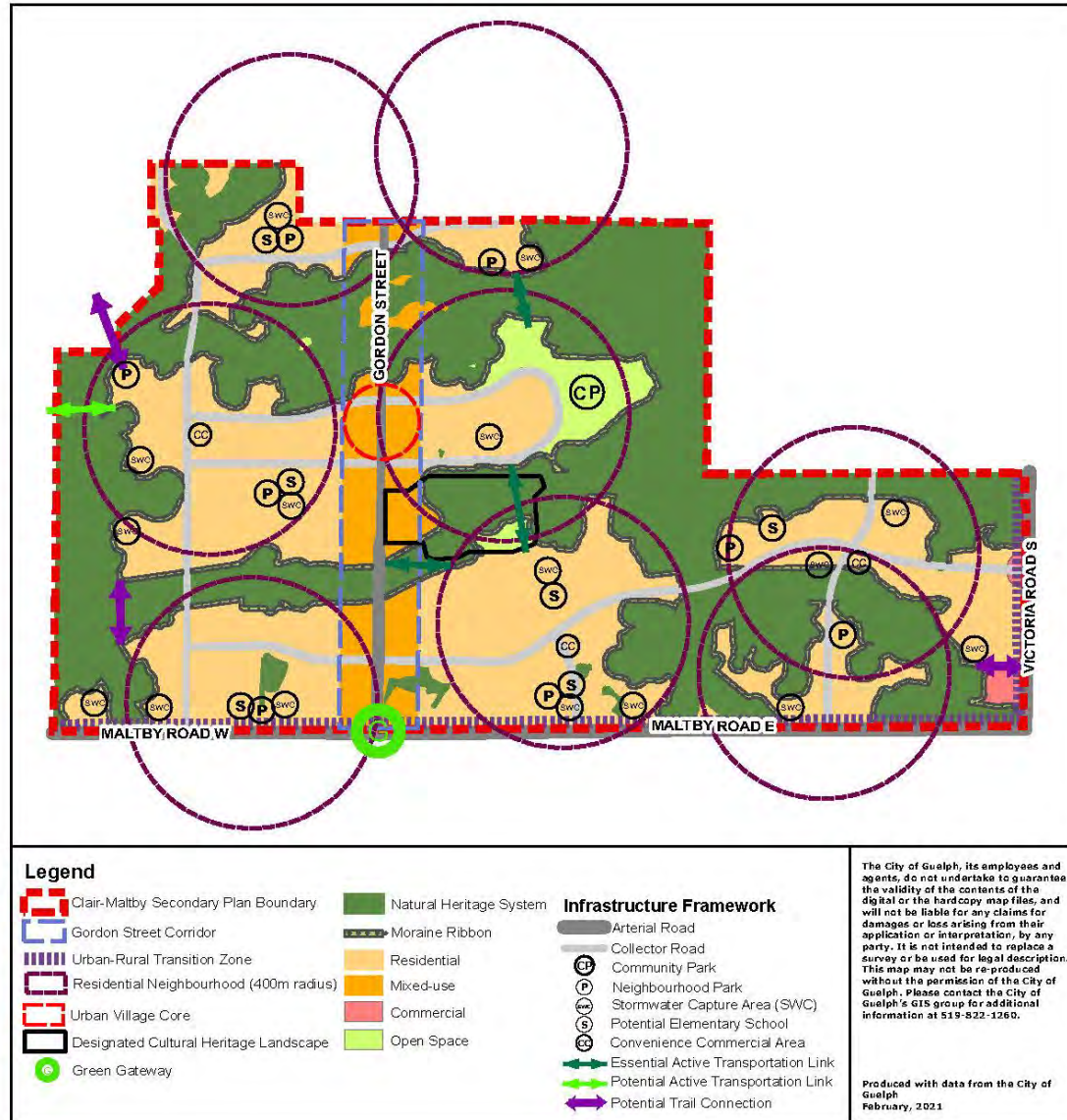


# Draft Secondary Plan

- Policies of the Official Plan apply to Clair-Maltby
- Secondary Plan policies provide more direction for this area
- Clair Maltby remains primarily residential
- Natural Heritage System remains a key component of the Plan and is protected

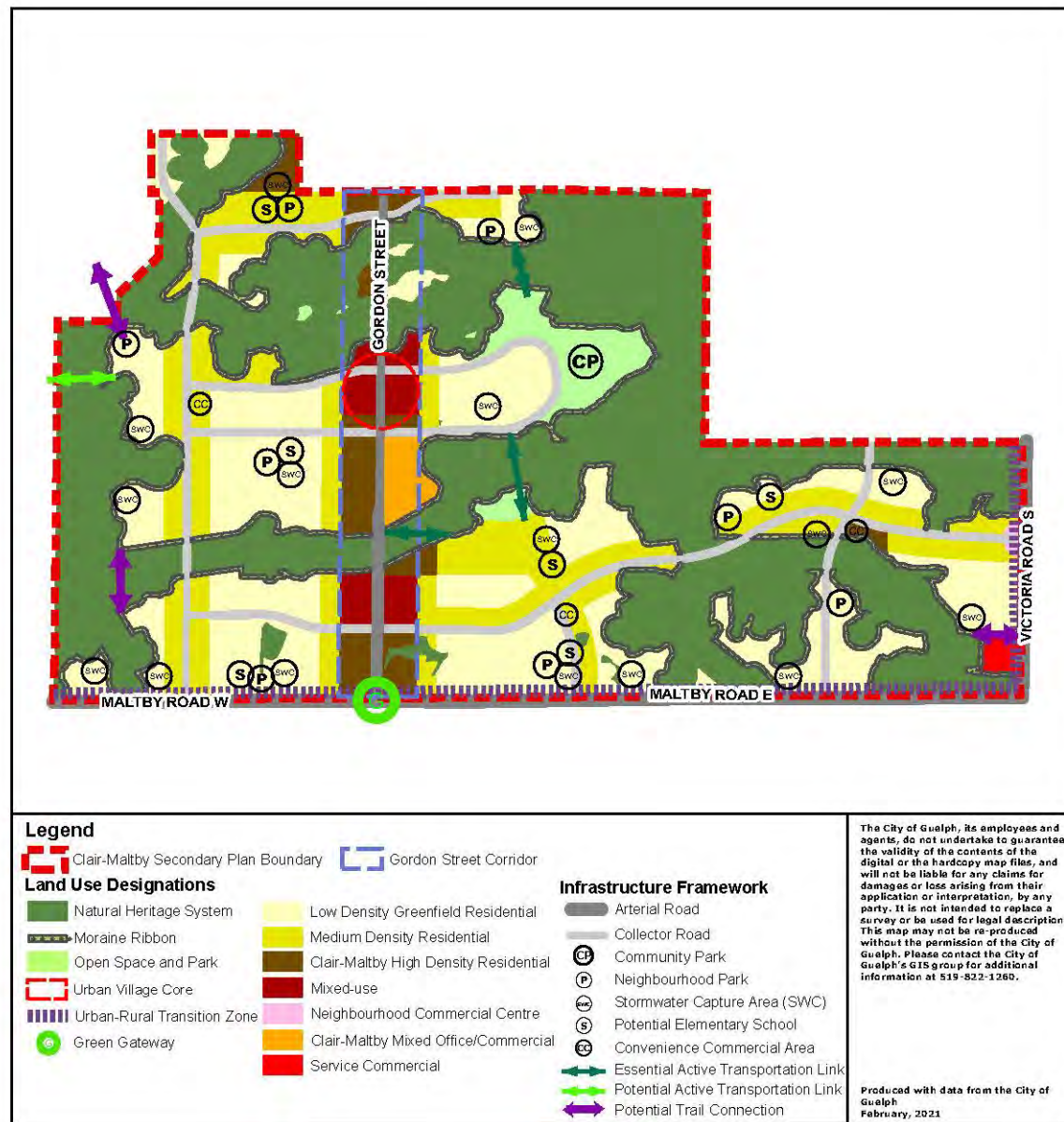


# Schedule A: Community Structure





# Schedule B: Land Use







# Draft Secondary Plan

- High density residential and mixed use are focused on the Gordon Street corridor
- Medium density residential is focused on the proposed collector roads
- Interior portions of neighbourhoods are proposed to be low density residential



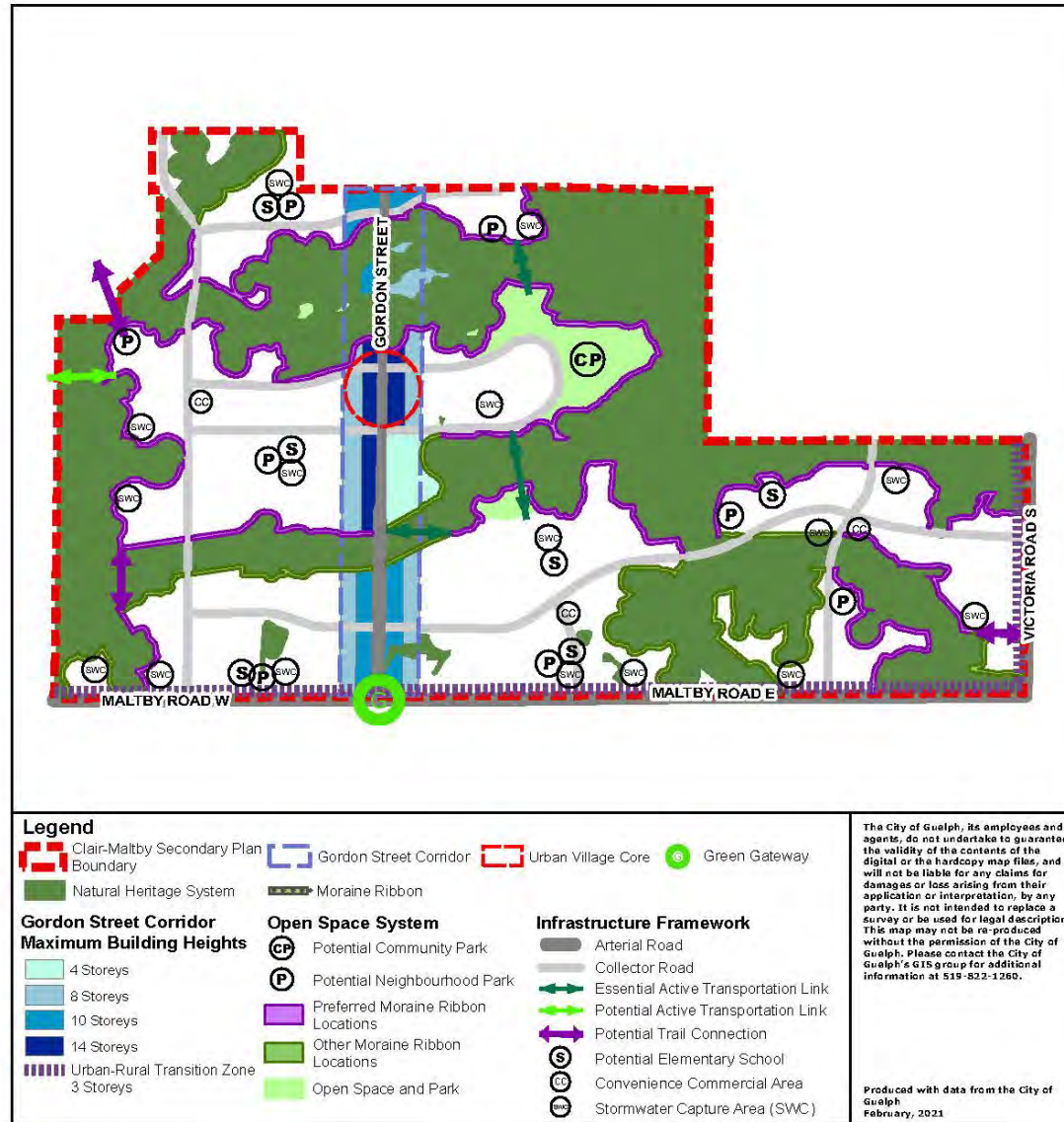


# Draft Secondary Plan

- Natural Heritage System continues to be protected
- Proposed Open Space System includes:
  - Ten hectare community park
  - Eight neighbourhood parks
  - Moraine Ribbon

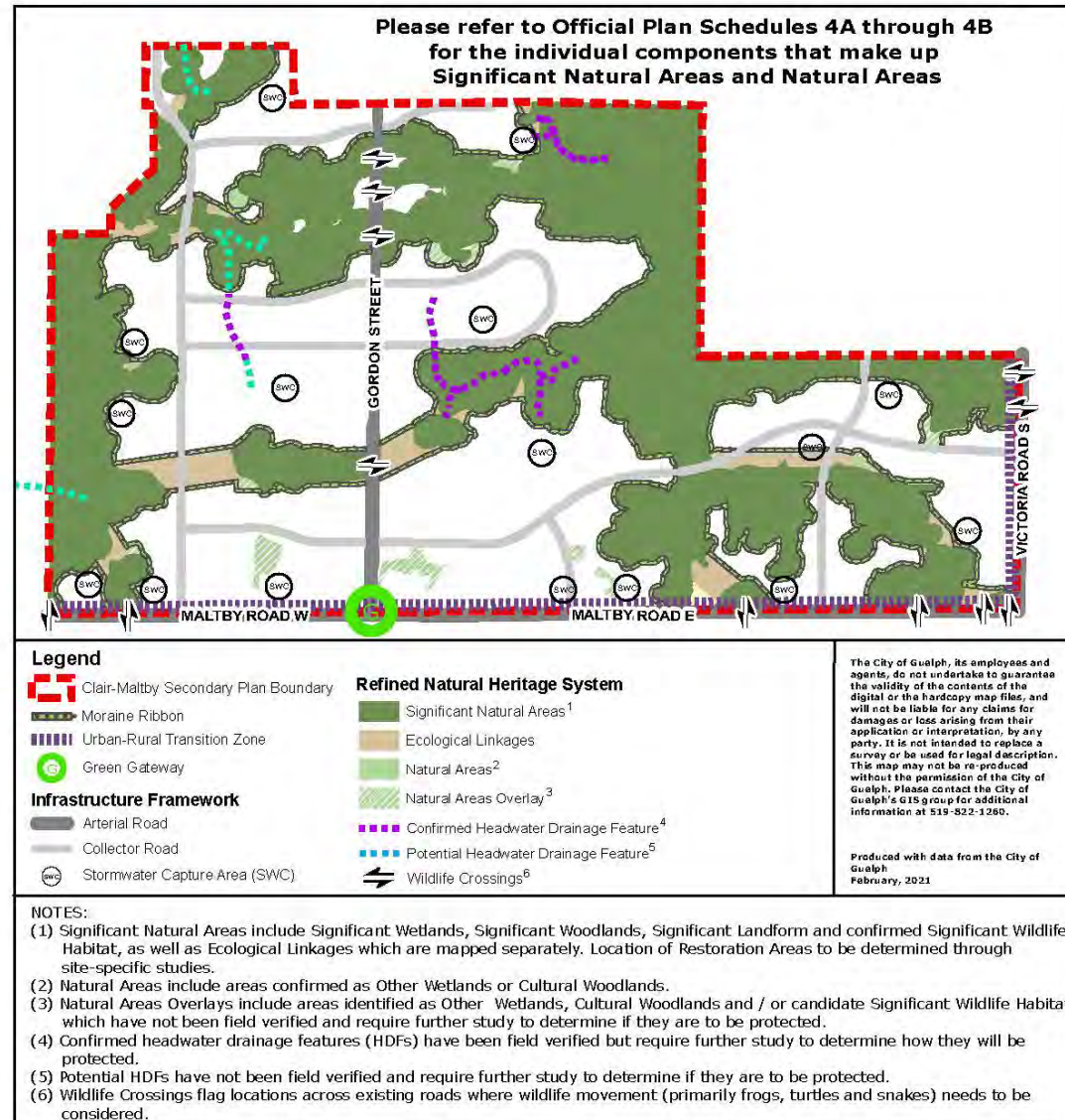


# Schedule D: Built Form and Open Space System Elements





# Schedule E: Natural Heritage System





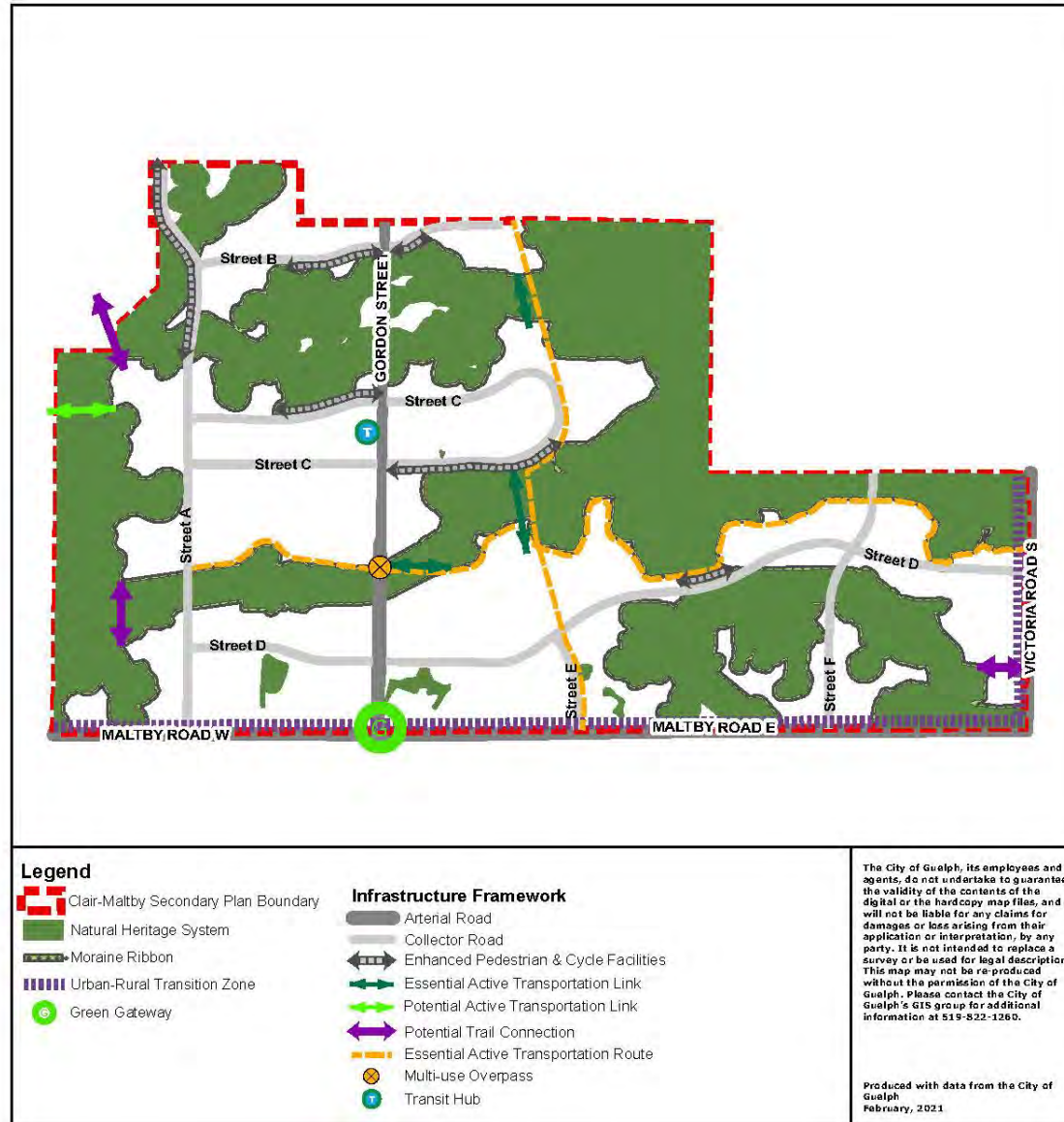


# Draft Secondary Plan

- The mobility network identifies an appropriate road network balancing road connectivity while limiting the number of instances a proposed road crosses the NHS
- Right-of-way cross sections have been developed to ensure complete streets for all modes of transportation
- Essential active transportation routes have been identified

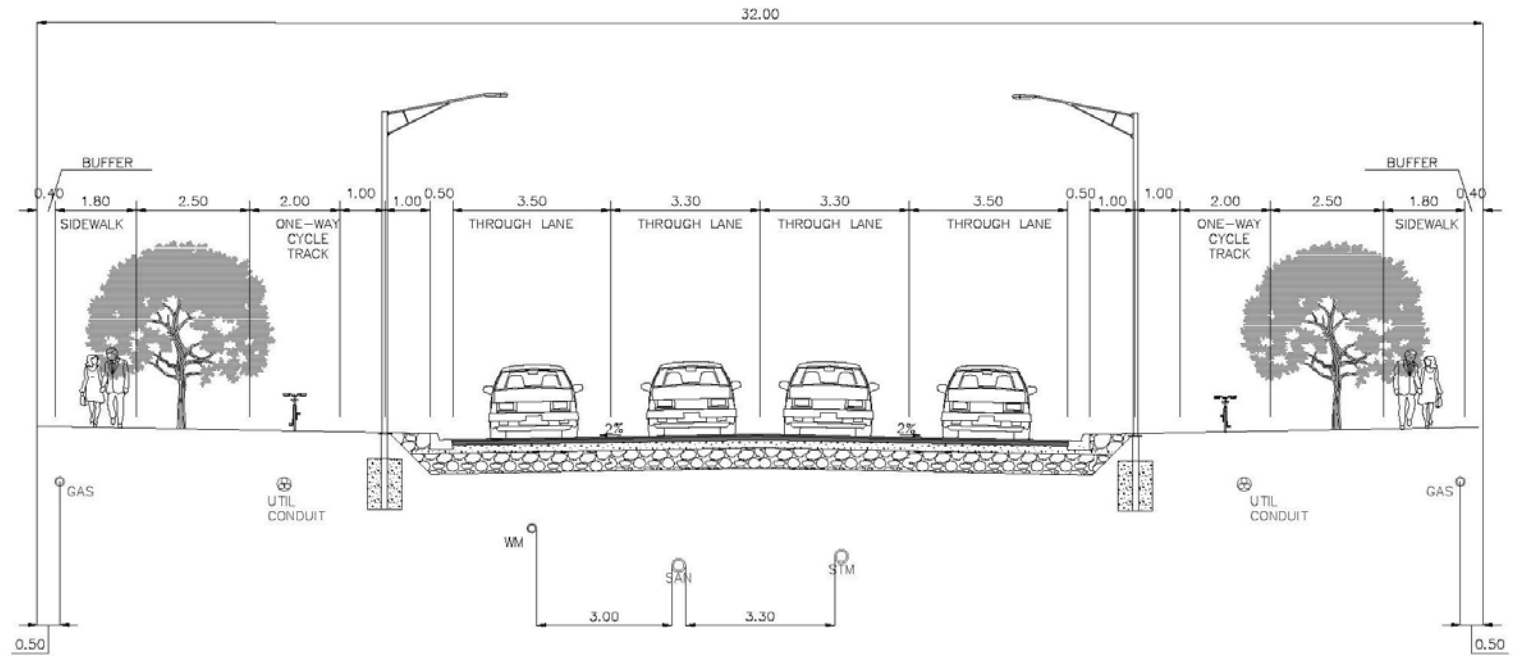


# Schedule C: Mobility Plan



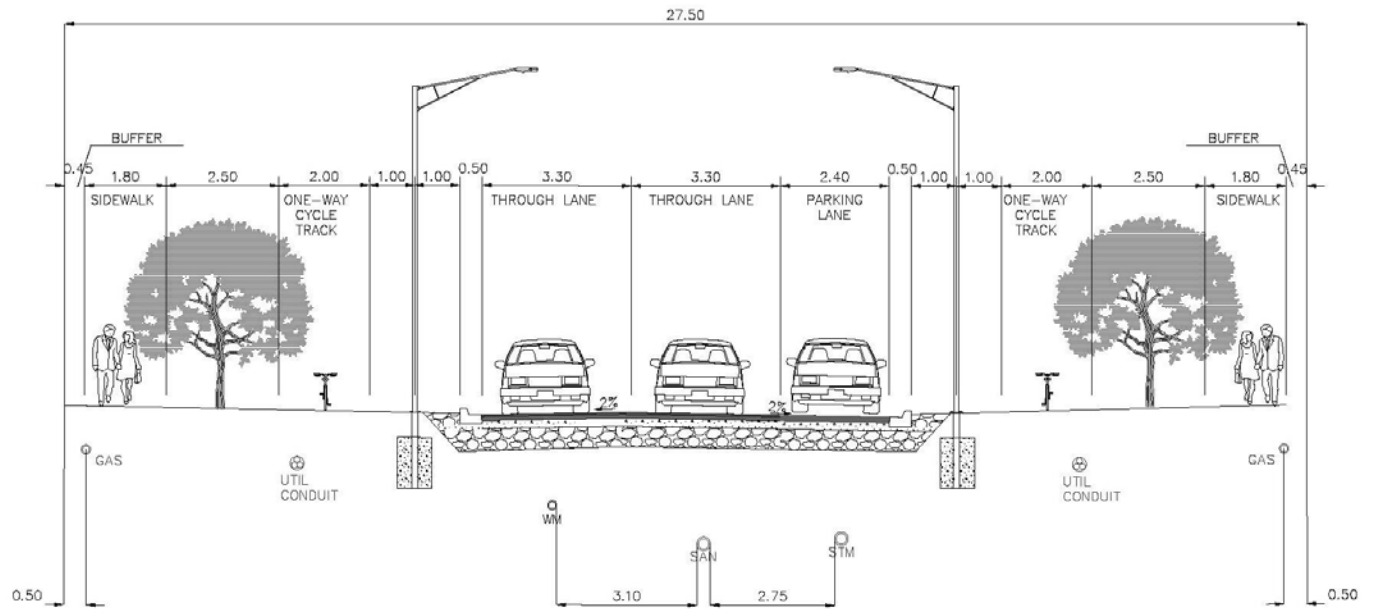


# Arterial Roadway Cross-section



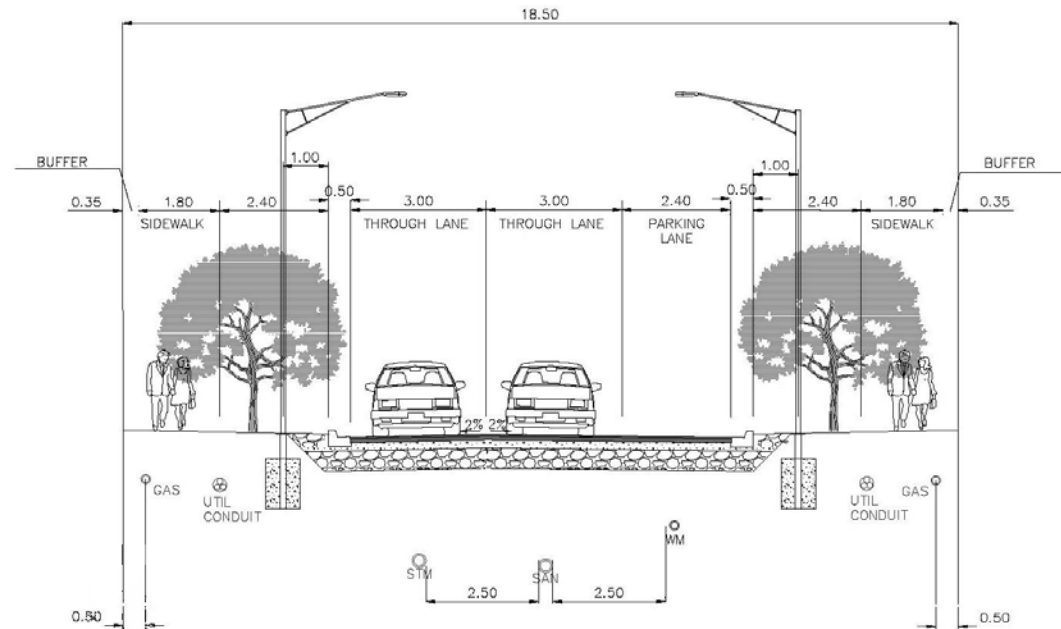


# Collector Roadway Cross-Section





# Local Roadway Cross-section





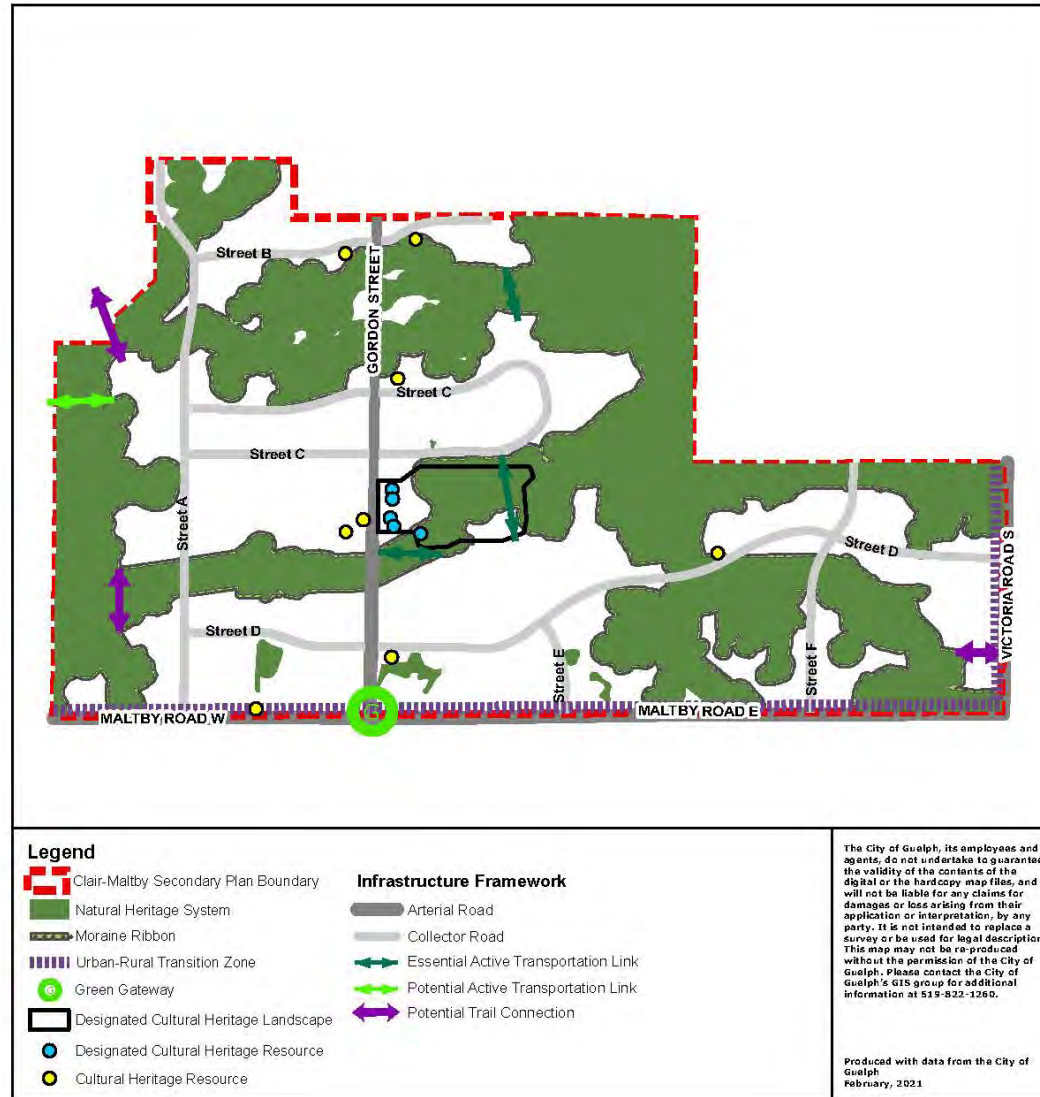


# Draft Secondary Plan

- The cultural heritage policies ensure the conservation of the cultural heritage resources.
- The cultural heritage resources reflect the rural/agricultural heritage of Guelph, and the former Township of Puslinch, as well as the cultural heritage landscape at 2162 Gordon St.



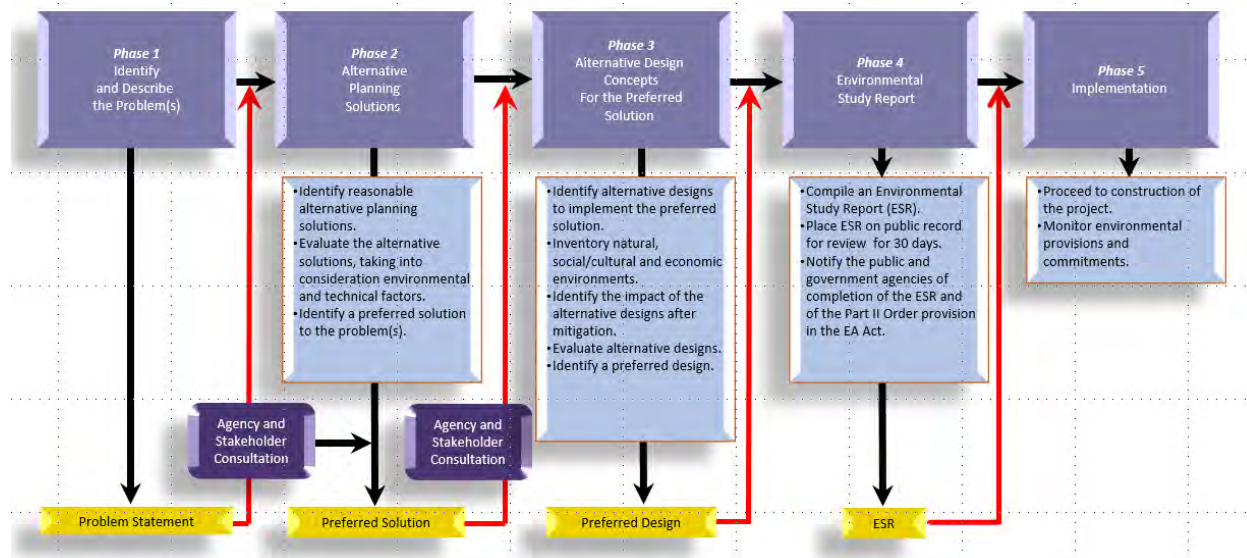
# Schedule F: Cultural Heritage Resources





# Draft MESP Overview

- The MESP has followed Phases 1 and 2 of the Class EA process and identifies a series of servicing projects that will be required to service the Clair-Maltby area







# Draft MESP Overview

- MESP has determined preferred servicing strategies for:
  - Water;
  - Wastewater;
  - Stormwater management, and
  - Mobility (transportation)for the Clair-Maltby SPA preferred land use plan.













# Draft MESP Overview

## Stormwater Management

Stormwater management will be needed to address drainage impacts from the proposed land use conditions. Stormwater management strategy is designed to meet the surface water and ground water targets set in the Comprehensive Environmental Impact Study (CEIS).



# Draft MESP Overview

## Stormwater Management

Stormwater management will include:

- Distributed low impact development (LID) best management measures (BMPs) to capture 20 mm runoff within both public and private lands.
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# Draft MESP Overview

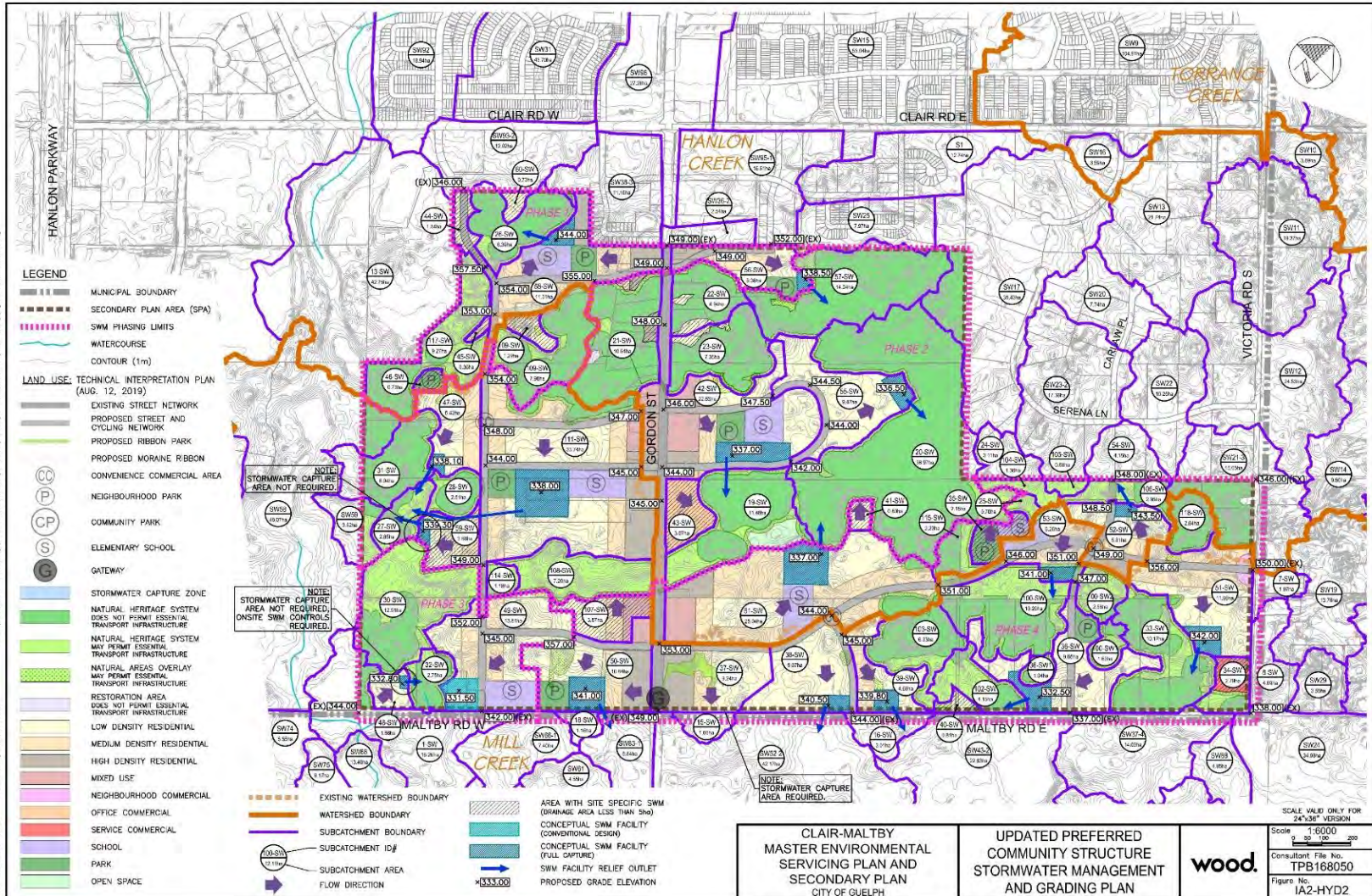
## Stormwater Management

- Infiltrative LID BMPs that receive runoff from paved surfaces will require pretreatment to prevent groundwater contamination.
- A treatment train approach will be used to protect the stormwater capture areas' function of infiltration and to protect groundwater quality.





# Draft MESP Overview Stormwater Management







# Draft MESP Overview

## Mobility

The mobility network will ensure that active transportation and transit are attractive and efficient modes of transportation within the area and connecting to surrounding areas.

This is proposed to be achieved through a multi-modal active-transportation focused mobility system inclusive of an integrated network with roads, bicycling facilities, sidewalks and paths designed, built and maintained with consideration of all users.





# Draft MESP Overview

## Mobility

- Collector roads (2 traffic lanes with on-street parking and separated bicycle lanes)
- Intersection improvements at 9 locations
- Clair Road East widen to 4 lanes
- Gordon Street widen to 4 lanes
- Victoria Road South and Maltby Road East to be urbanized





# Next Steps

- Continue to receive stakeholder input over the summer and early fall
- Statutory public meeting – Council Meeting
- Review and consider of community and stakeholder feedback
- Preparation of final Secondary Plan and MESP for adoption by Council





# THANK YOU

## Questions?

[haveyoursay.guelph.ca/Clair-Maltby](https://haveyoursay.guelph.ca/Clair-Maltby)

- Provide your thoughts and ideas on the 'Idea Boards' until August 8, 2021
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# Clair-Maltby

**Transform. Connect. Community.**

June 24, 2021 Open House  
Mobility Session  
8:00 pm





# Land Acknowledgement

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Today we acknowledge the Mississaugas of the Credit First Nation of the Anishinaabek Peoples on whose traditional territory we are meeting.





# Agenda

## **Transportation Context and Background**

- Area Infrastructure and Policy / Planning Framework

## **Clair-Maltby Secondary Plan Planning Process**

- Mobility Objectives and Considerations in developing a plan

## **Analysis**

- Multi-modal Travel Demands, Transit, Traffic Impacts

## **Evaluation**

- Preferred Mobility Alternative

## **Implementation / Phasing**

- Next Steps / Required Studies

## **Questions / "Have Your Say"**



# Transportation Context

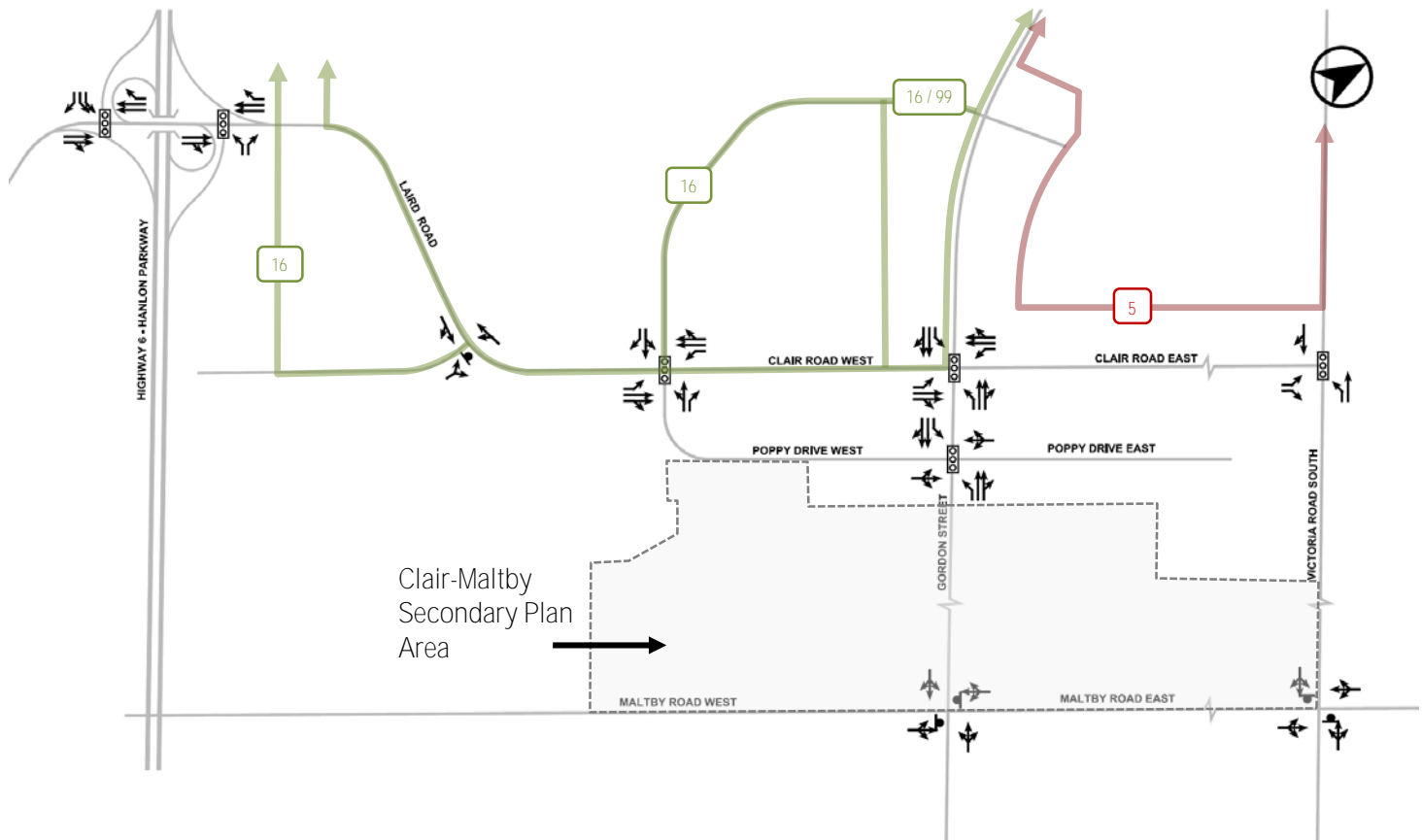
## Site Location and Study Area





# Transportation Context

## Study Area, Existing Traffic Controls, and Transit Services





# Transportation Context

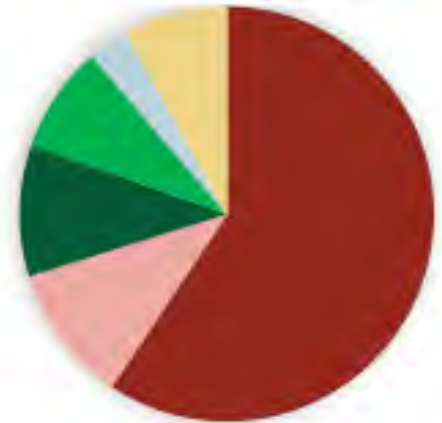
## Existing Travel Behaviour – All Modes

### South Guelph - Local Trips

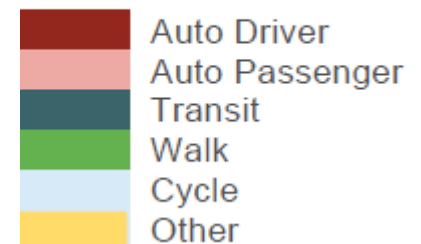
- 70% Auto-Driver/Passenger
- 22% Walk/Cycle/Transit

### South Guelph – All Trips

- 82% Auto-Driver/Passenger
- 13% Walk



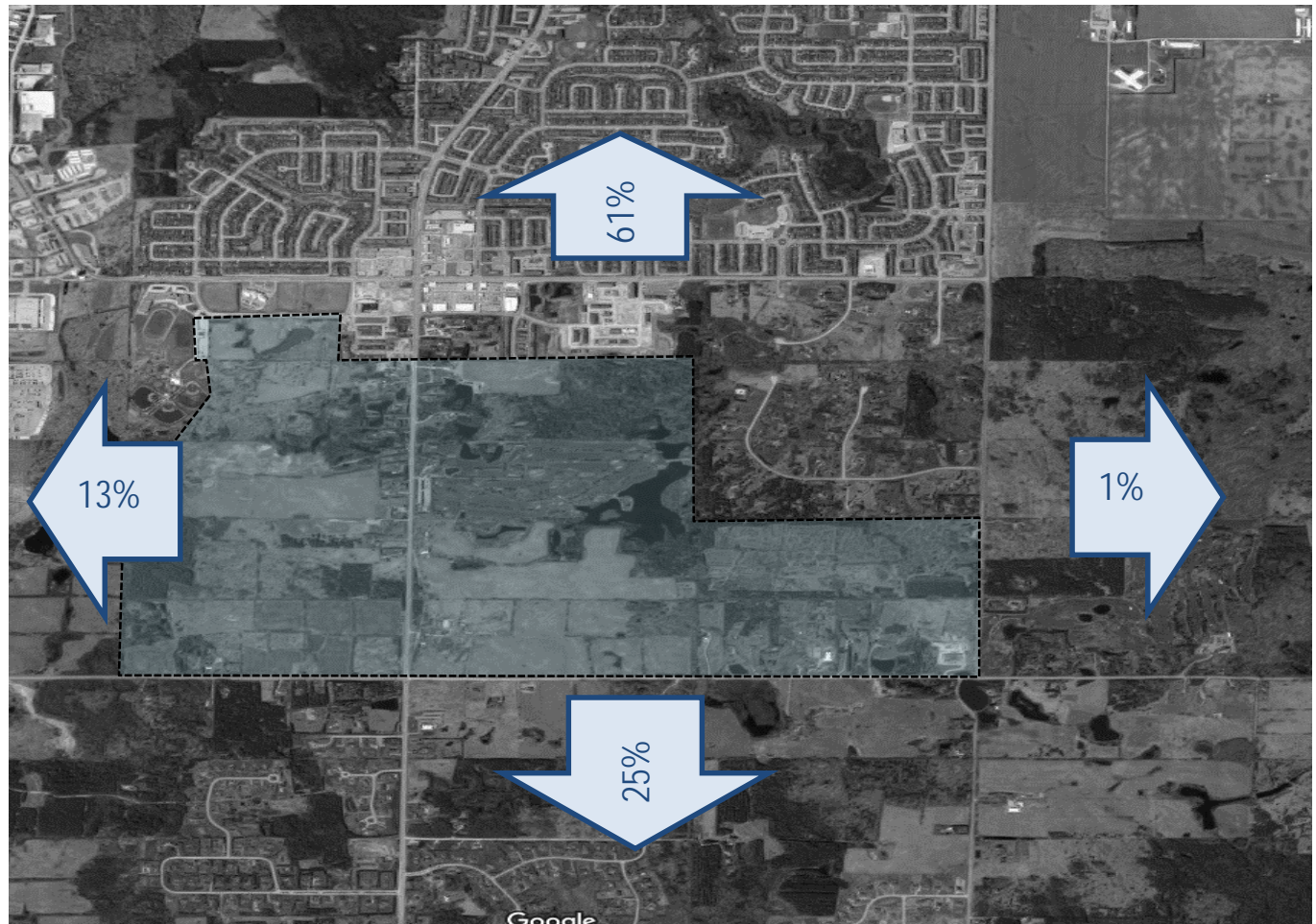
Travel Mode





# Transportation Context

## Existing Travel Behaviour – All Trips







# Transportation Context

## Existing Traffic Conditions

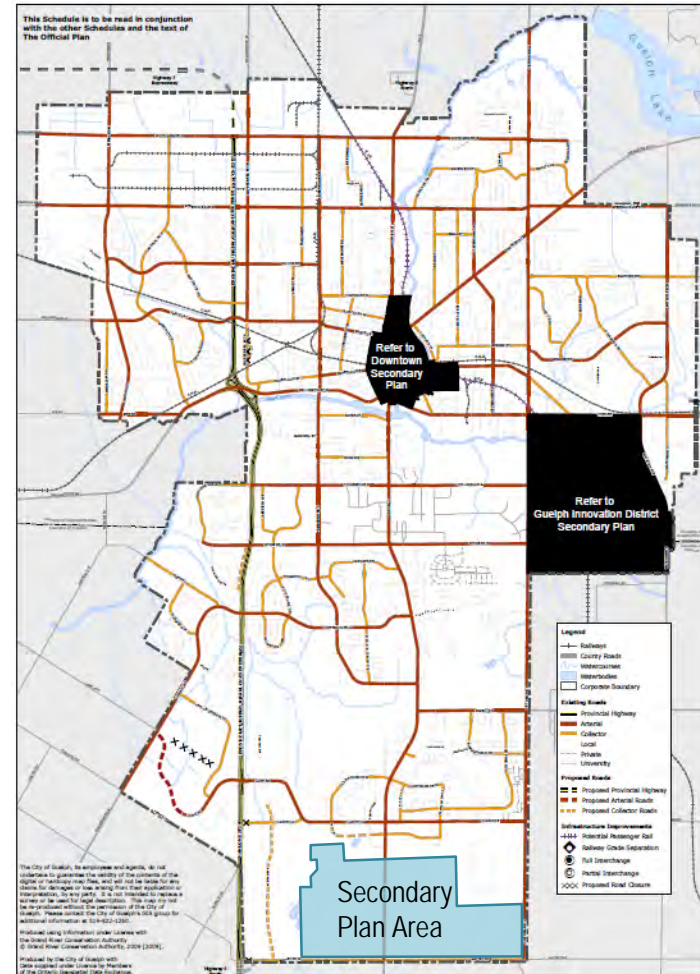
- Gordon Street is the main Traffic Corridor through the Study Area
- Gordon Street / Clair Road, and Victoria Road / Clair Road intersections can be busy during peak travel periods under existing conditions.
- Eastbound and westbound movements at Gordon Street / Maltby Road can experience longer delays.



# Transportation Context

## Guelph-Wellington Transportation Study (TMP)

- Widening of Gordon Street from 2 to 4 lanes (approved 2001 EA) from Kortright Road to Wellington Road 34;
- Widening of Clair Road from 2 to 4 lanes from Hanlon Parkway to Beaver Meadow Drive (approved 2003 EA) – COMPLETE
- Southerly extension of Southgate Drive to Maltby Road; and
- Development of an internal collector road system within the Clair-Maltby Secondary Plan area connecting to Gordon Street and Maltby Road.







# Transportation Context

## **Other Key Studies**

- Guelph Active Transportation Network Study
- Bicycle Friendly Guelph: Cycling Master Plan
- Guelph Transit, Transit Growth Strategy and Plan
- Guelph Trails Master Plan
- Wellington County Active Transportation Plan
- Various Environmental Assessments (i.e. Gordon Street, Victoria Road)
- Various Ongoing Development Applications (i.e. approved, under construction, or under review)





# Clair-Maltby Secondary Plan process

## **Phase 1 (April 2016 - July 2017)**

- Background data collection
- Identify problem/opportunity statement
- Develop principles/goals

## **Phase 2 (July 2017 - June 2018)**

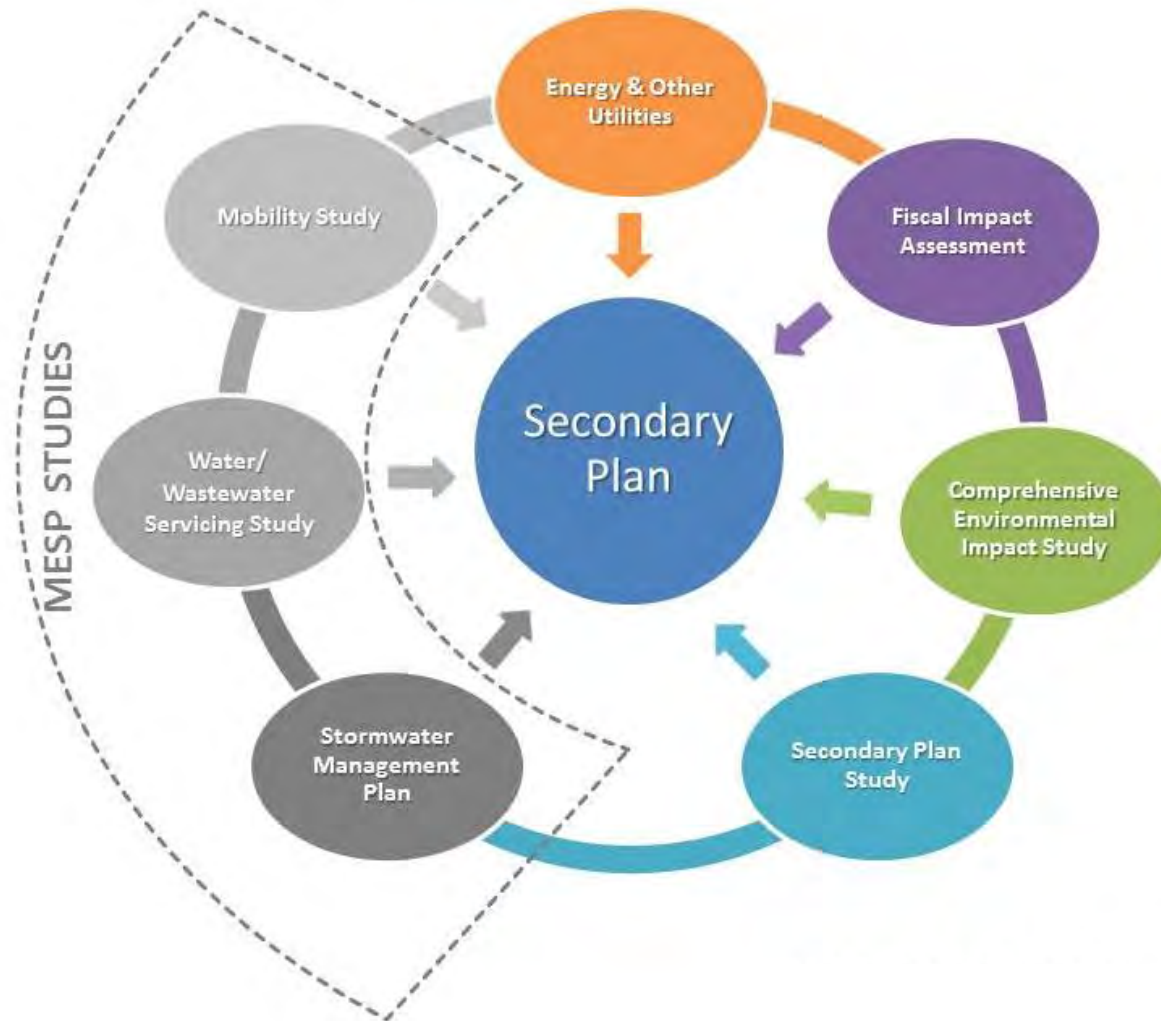
- Develop Conceptual Community Structure / Charette
- Detailed studies
- Consideration of Community Structure Alternatives

## **Phase 3 (July 2018 - 2022)**

- Preferred Alternative
- Draft Master Environmental Servicing Plan and Secondary Plan
- Final Master Environmental Servicing Plan and Secondary Plan to Council



# Clair-Maltby Secondary Plan process diagram

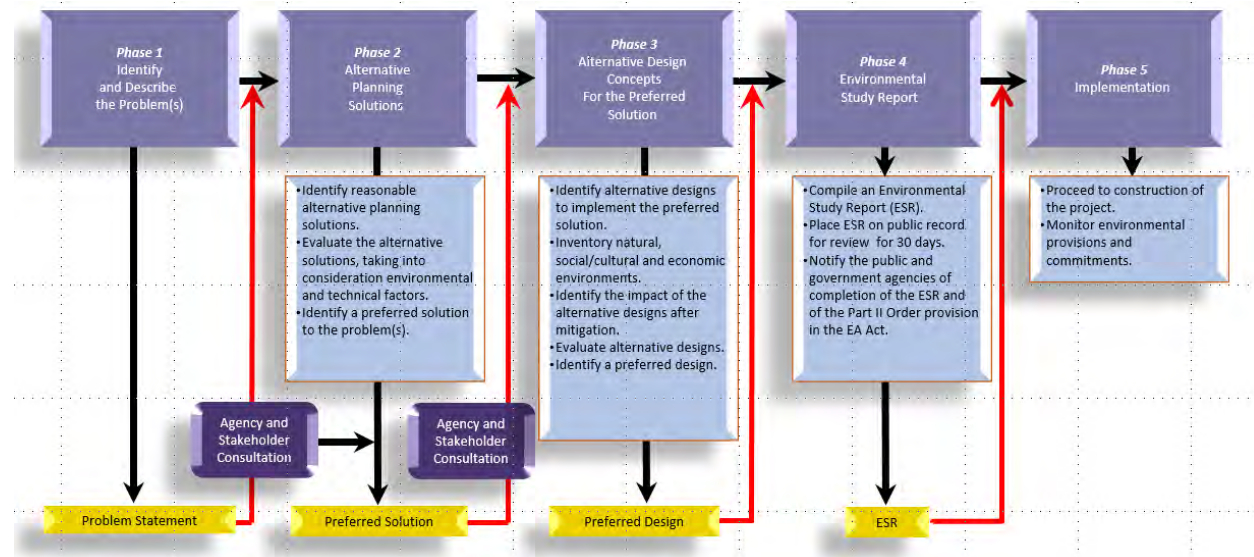




# Clair-Maltby Secondary Plan process

## Municipal Class EA

- Mobility was studied as part of the Master Environmental Servicing Plan, which was undertaken in accordance with the MCEA process
- The MESP has followed Phases 1 and 2 of the Class EA process and identifies a series of mobility projects that will be required to service the Clair-Maltby SPA.





# Guiding principles



Vibrant and Urban



Green and Resilient



Healthy and Sustainable



Interconnected and Interwoven



Balanced and Liveable





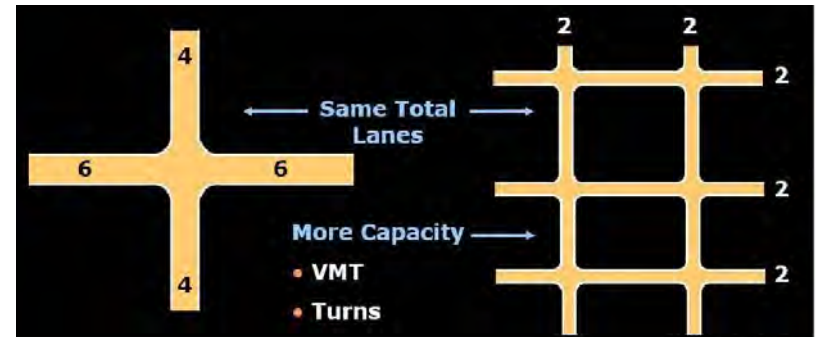
# Principles of Transportation Network

1. Provide flexibility, redundancy, and continuity;
2. Support transit service operations;
3. Support multi-modal transportation;
4. Enhance connectivity for all travel modes (mobility choice);
5. Provide robust and frequent connectivity internal to the neighbourhood, and to adjacent neighbourhoods; and
6. Respect natural heritage features.



# Benefits of a Well-Planned Street Network

## 1. Street Capacity



Credit: Tim Jackson

## 2. Walkability



Driving-only transportation pattern

Walkable connected transportation network

Credit: Seattle Transit Blog

## 3. Safety

- Accommodate all street users
- Reduce street crossing distances
- Reduce vehicle speeds



# Community Structure Alternatives

- Alternative community structures were presented at the Charrette event.
- Consultation amongst various technical staff to consider road network requirements / options.

ALTERNATIVE 2: FOCUS ON COMMUNITY SERVICES



ALTERNATIVE 1: FEATURING THE GREEN



ALTERNATIVE 3: URBAN AND CONNECTED

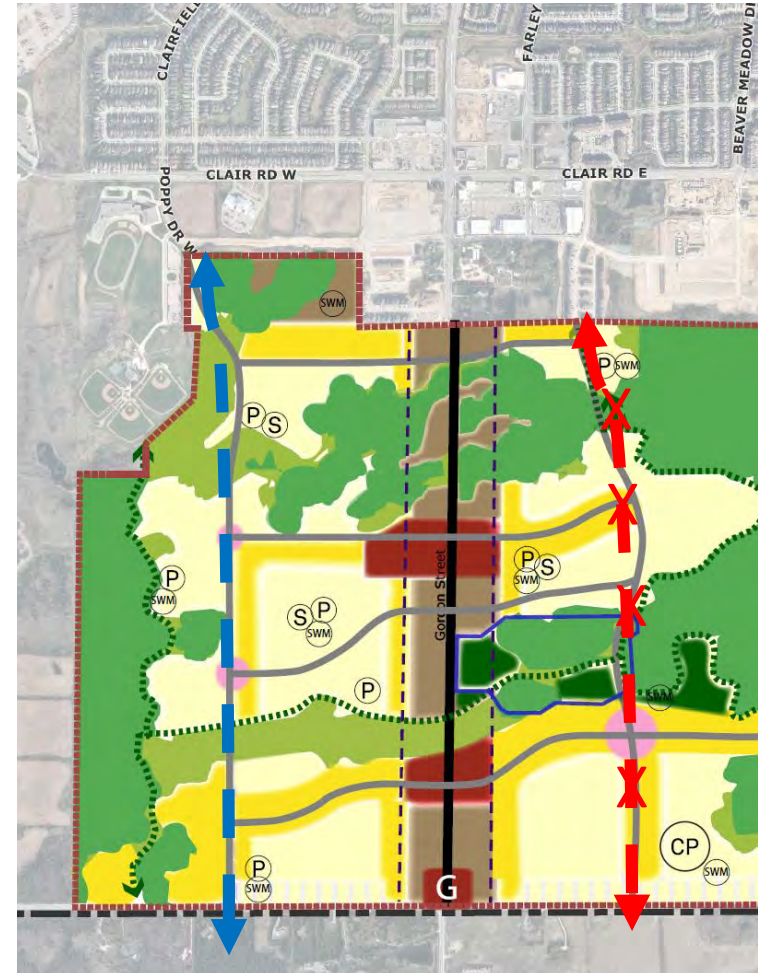




# Analysis of North-South Street Network

## Analysis

1. Support for removal of continuous north-south collector road east of Gordon Street.
2. Support for 4-lane Gordon Street cross-section with left turn lanes where left turns are permitted.
3. North-south collector road west of Gordon Street required to support development of the Secondary Plan Area







# Evaluation Criteria

## 1. Street Network

- Modified grid collector street system with a fine-grained block structure to disperse traffic and encourage walking and cycling.
- Cost of implementing street network.
- Ability to provide property access.
- Potential to service future travel demands.
- New street network continuity and connectivity internal to Secondary Plan area.
- Multiple vehicular connections with local, regional and provincial roads to connect with the existing street network and distribute traffic.
- Impact to Natural Heritage System and natural / environmental

## 2. Active Transportation

- Provide facilities within the public and private realm which encourage cycling, and includes off-road cycling facilities.
- Active transportation links to the Clair-Gordon mixed use node, South End Community Park, and other community facilities (schools, parks, community centres).
- Safety





# Evaluation Criteria

## 3. Transit

- Extends and connects to existing transit routes and facilities within the City of Guelph
- Transit hub along Gordon Street in a location that connects riders with high density residential, commercial and mixed use areas.
- Bus stops are provided at regular intervals, generally within 400m of 90 per cent of residence and business.
- Opportunity to provide efficient transit routing options.

## 4. Trails

- Facilities for recreational trail use.
- Facilitates for day-to-day travel demand.
- Connections to City-wide trail network
- Local connections between residential areas and community facilities / commercial areas






























# Evaluation Criteria

## **5. Alignment with Objectives of the Secondary Plan (Interconnected & Interwoven)**

- Green and Resilient
- Healthy and Sustainable
- Vibrant and Urban
- Interconnected and Interwoven
- Balanced and Livable



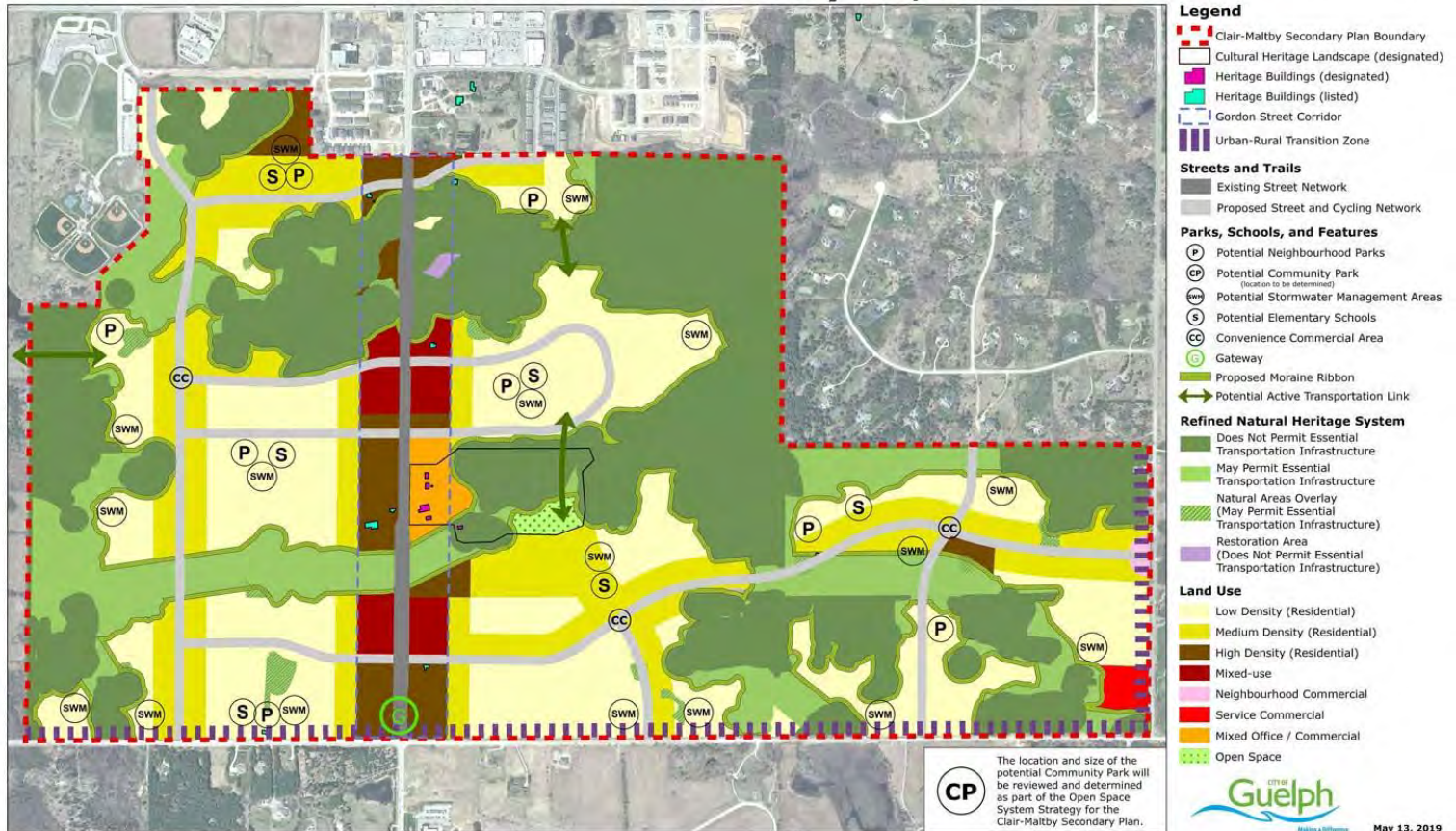
# Principles of Transportation Network

Criteria	Alternative 1: "Do Nothing"	Alternative 2: "Featuring the Green"	Alternative 3: "Focus on Community Services"	Alternative 4: "Urban and Connected"	Alternative 5: "Preferred Community Structure Plan"
Street Network					
Active Transportation					
Transit					
Trails					
Alignment with Objectives of the Secondary Plan					



# Preferred Community Structure

## PREFERRED COMMUNITY STRUCTURE: Council Endorsed May 13, 2019





# Travel Analyses

## Multi-modal Trip Forecasting

- Traffic, transit rider, cycling, and pedestrian travel demands
- Person / vehicle trip distribution

## Transit Demands and Impacts

## Traffic Demands and Impacts

- Recommended street network improvements
- Traffic controls
- Lane configurations





# Multi-Modal Trip Forecasting





# Multi-Modal Trip Forecasting

## Secondary Plan Travel Demands (PM Peak Hour)

1,100 Auto Passenger Trips

4,700 Vehicle Trips

350 Active Transportation Trips

550 Transit Rider Trips

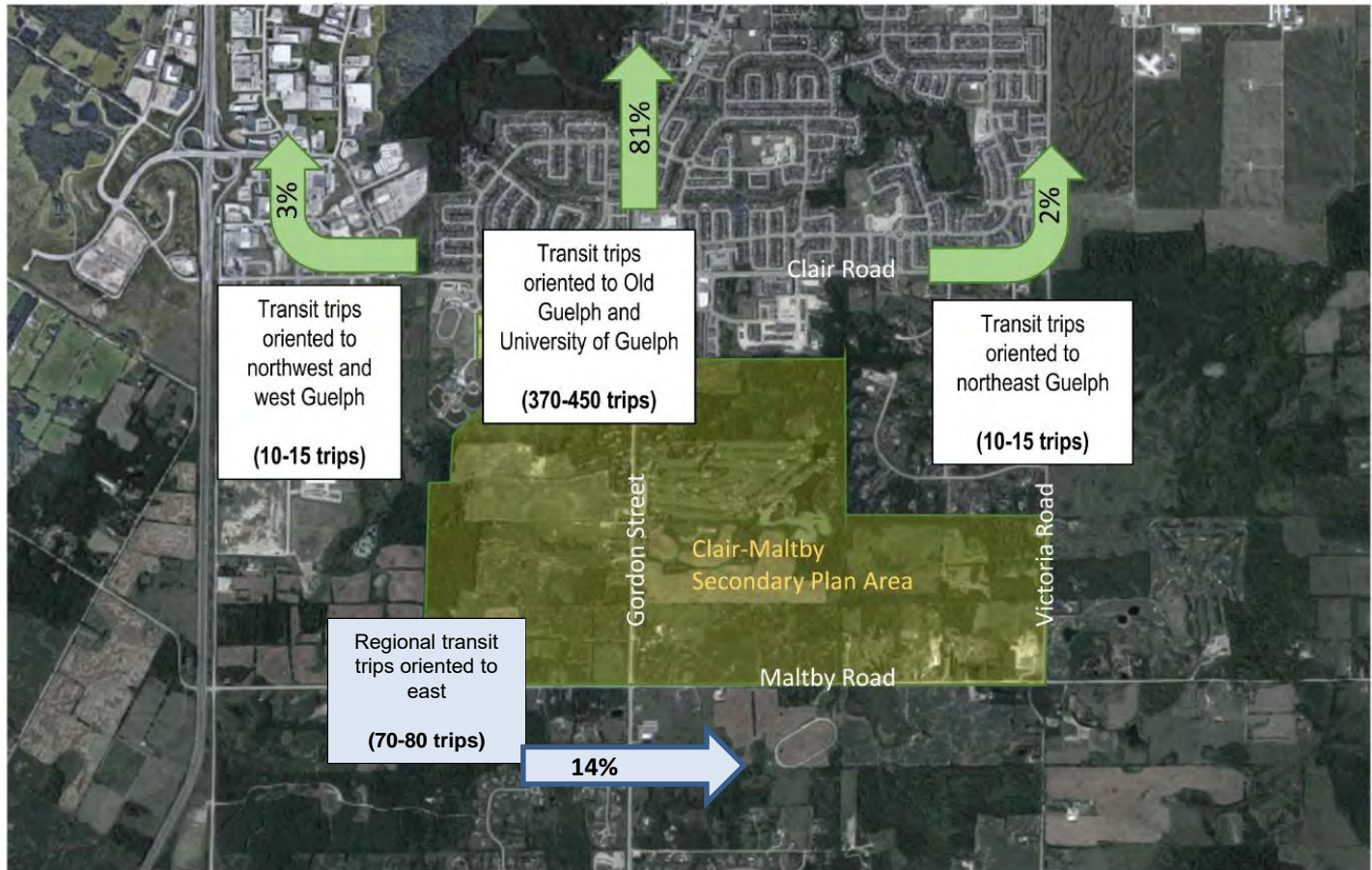
6,700 Person Trips





# Transit Ridership Demands

## Transit Distribution







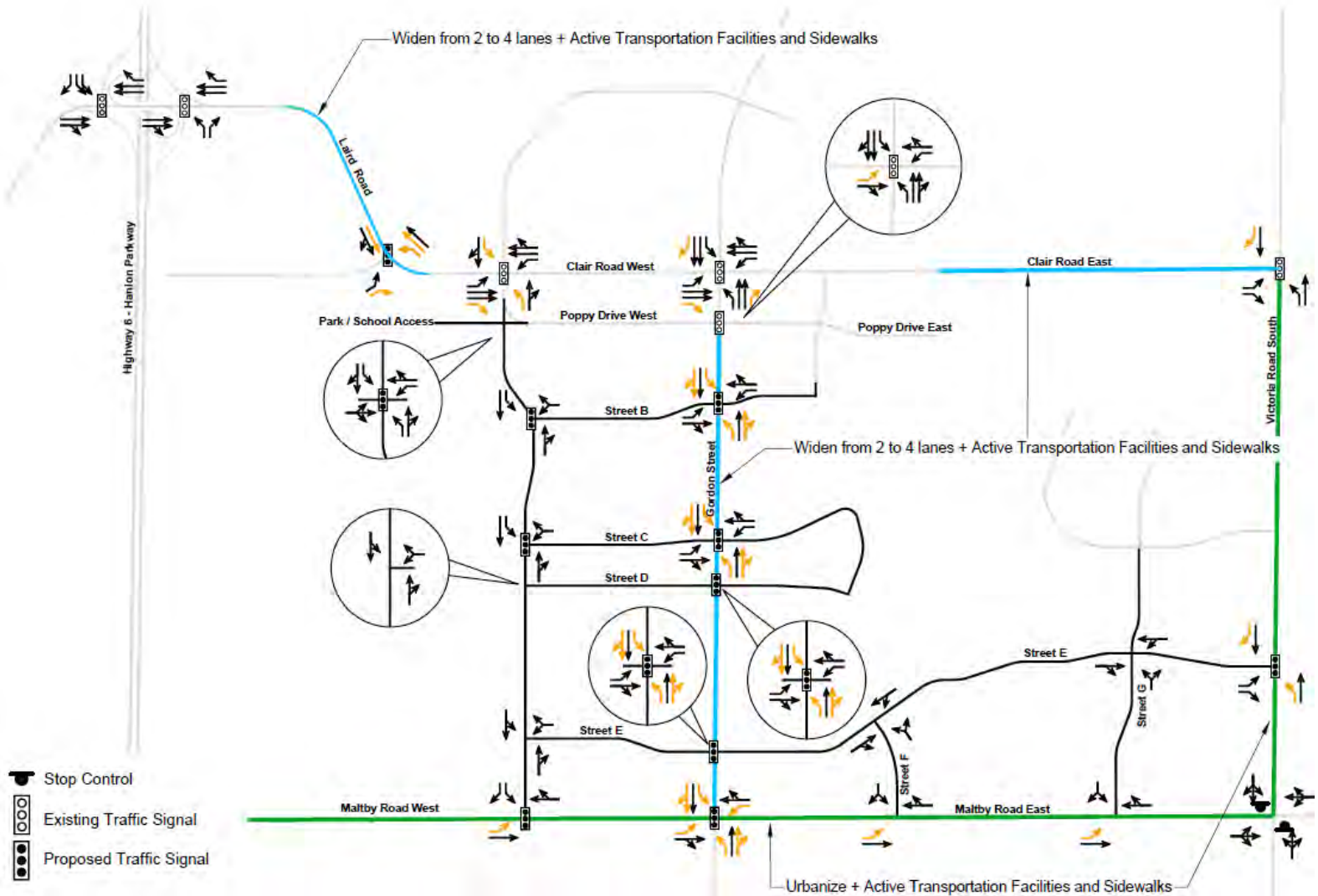
# Transit Hub Requirements

- Guelph Transit currently utilizes Nova Bus LFS 40-foot buses, which have a total passenger capacity of 50-60 persons per vehicle (per Guelph Transit).
- A total of 6 to 8 buses would be required to accommodate peak direction, peak time transit ridership demands associated with travel between the Clair-Maltby Secondary Plan area and central Guelph areas.



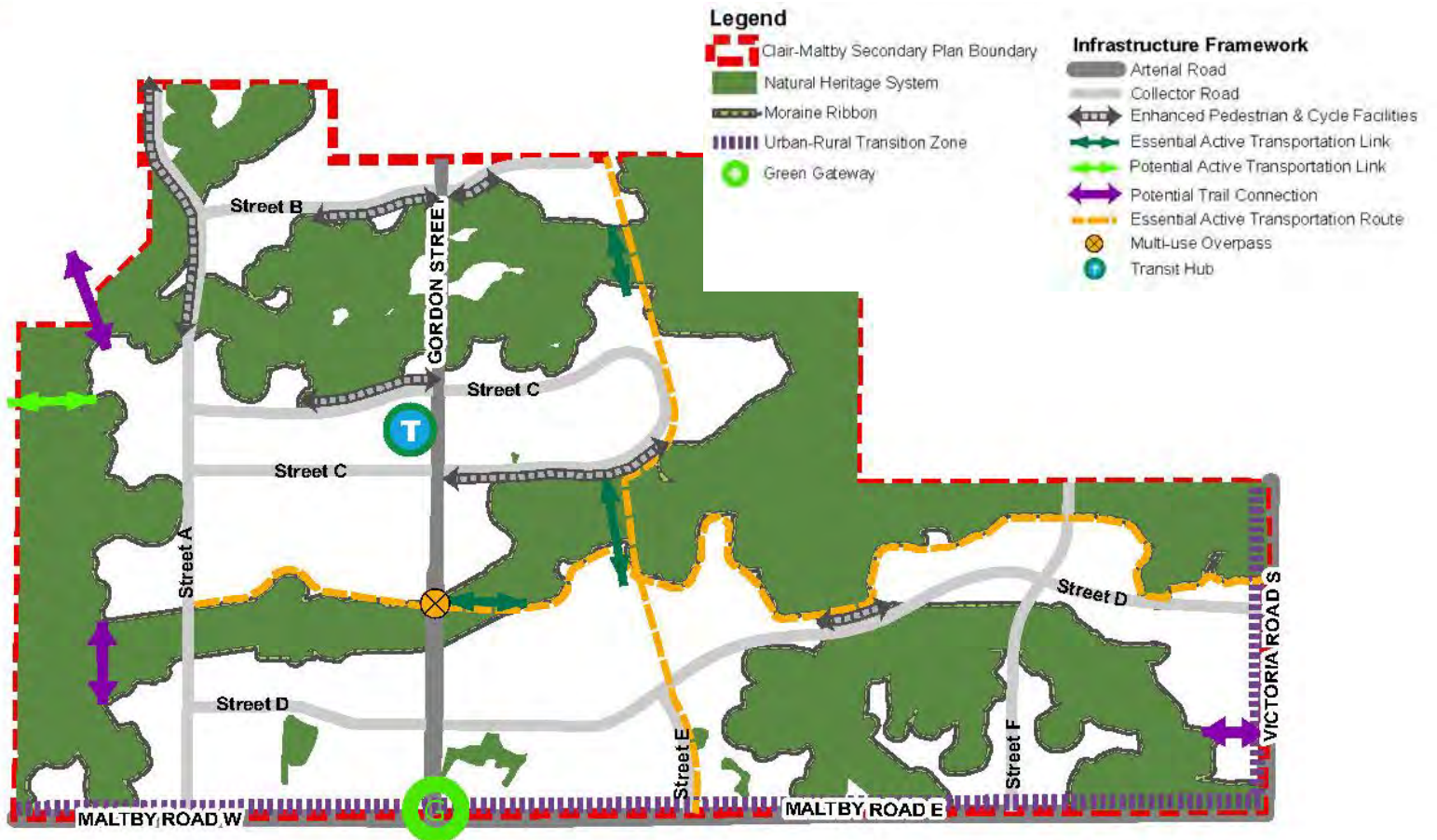
# Traffic Analysis

## Recommended Future Improvements



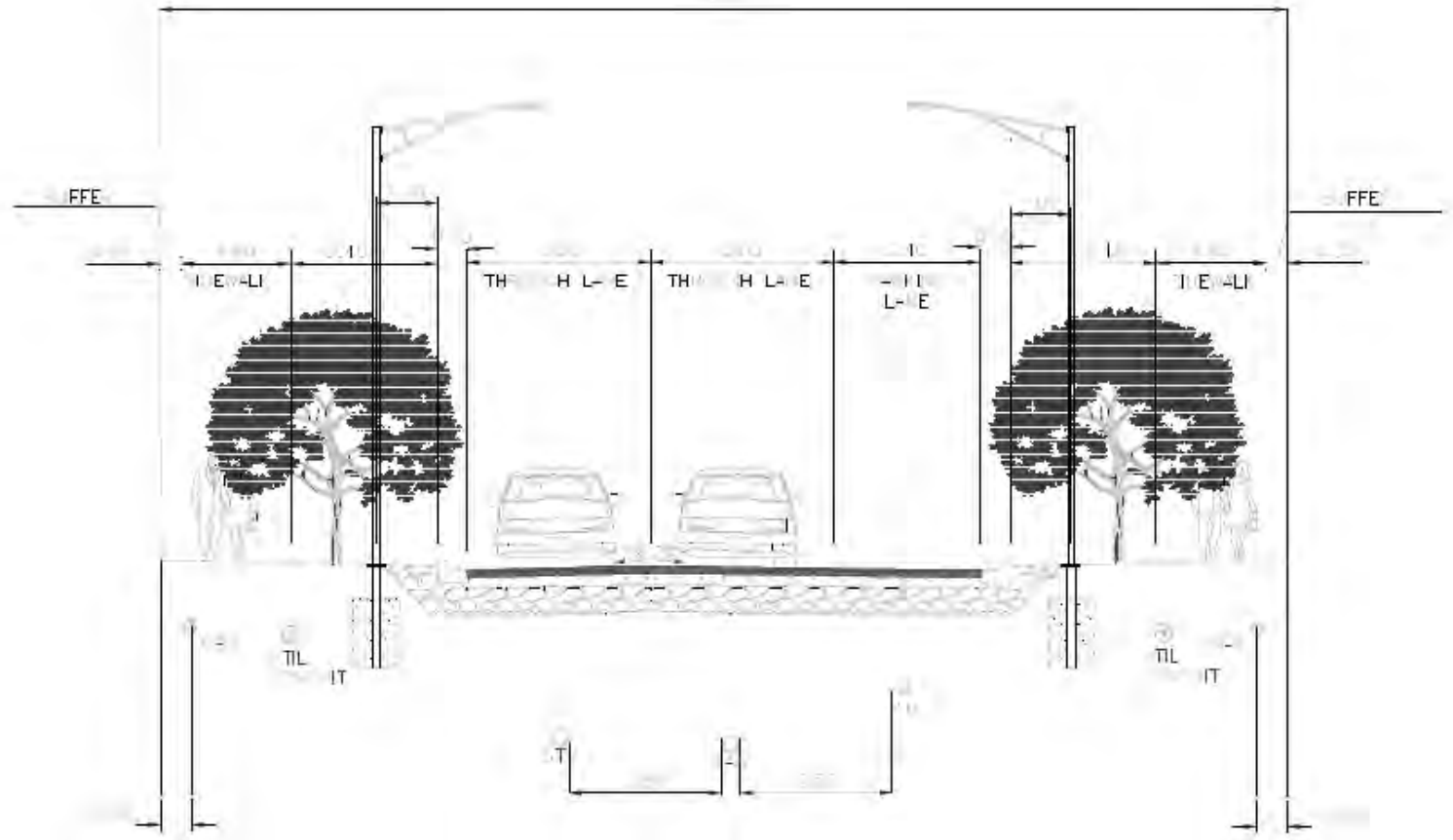


# Mobility Schedule





# Road Cross Sections

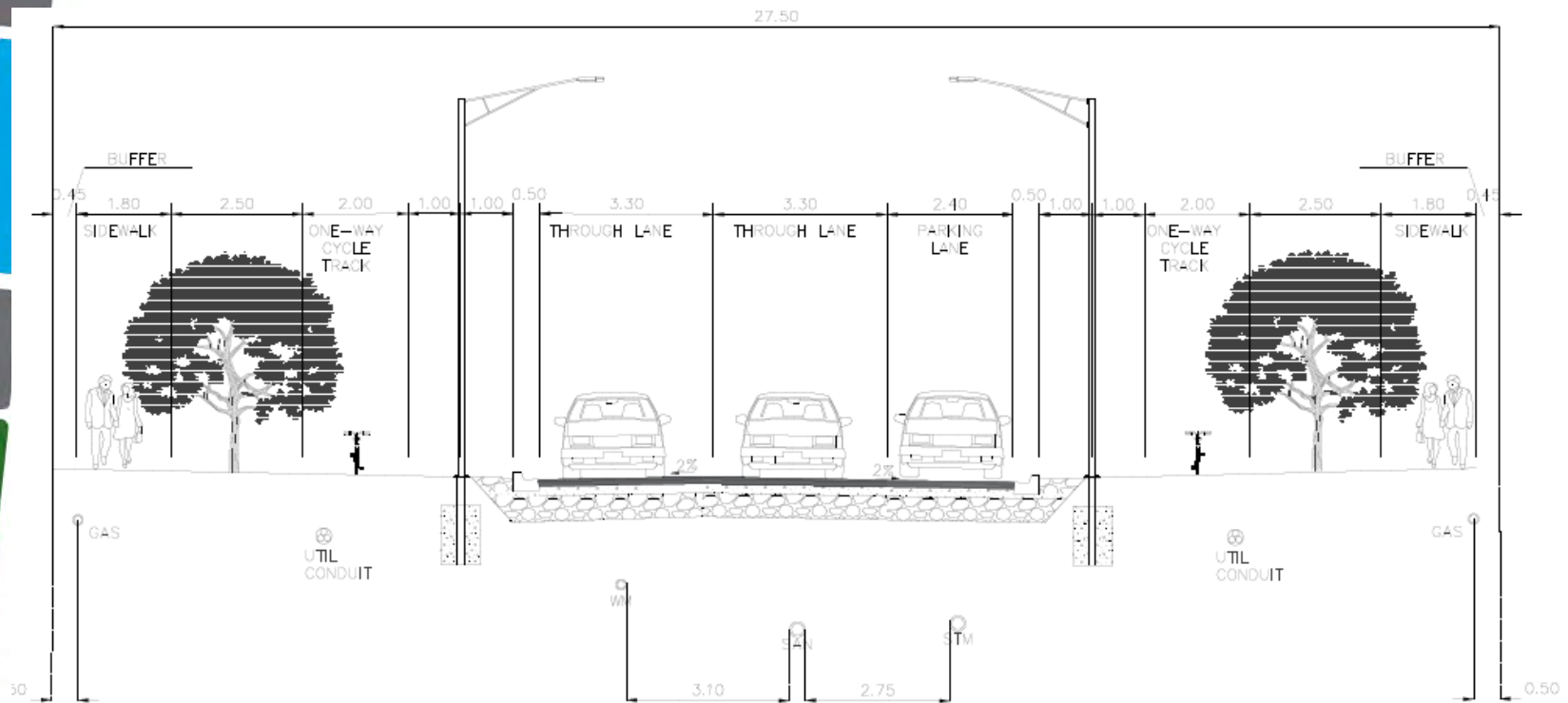


Credit: Wood PLC



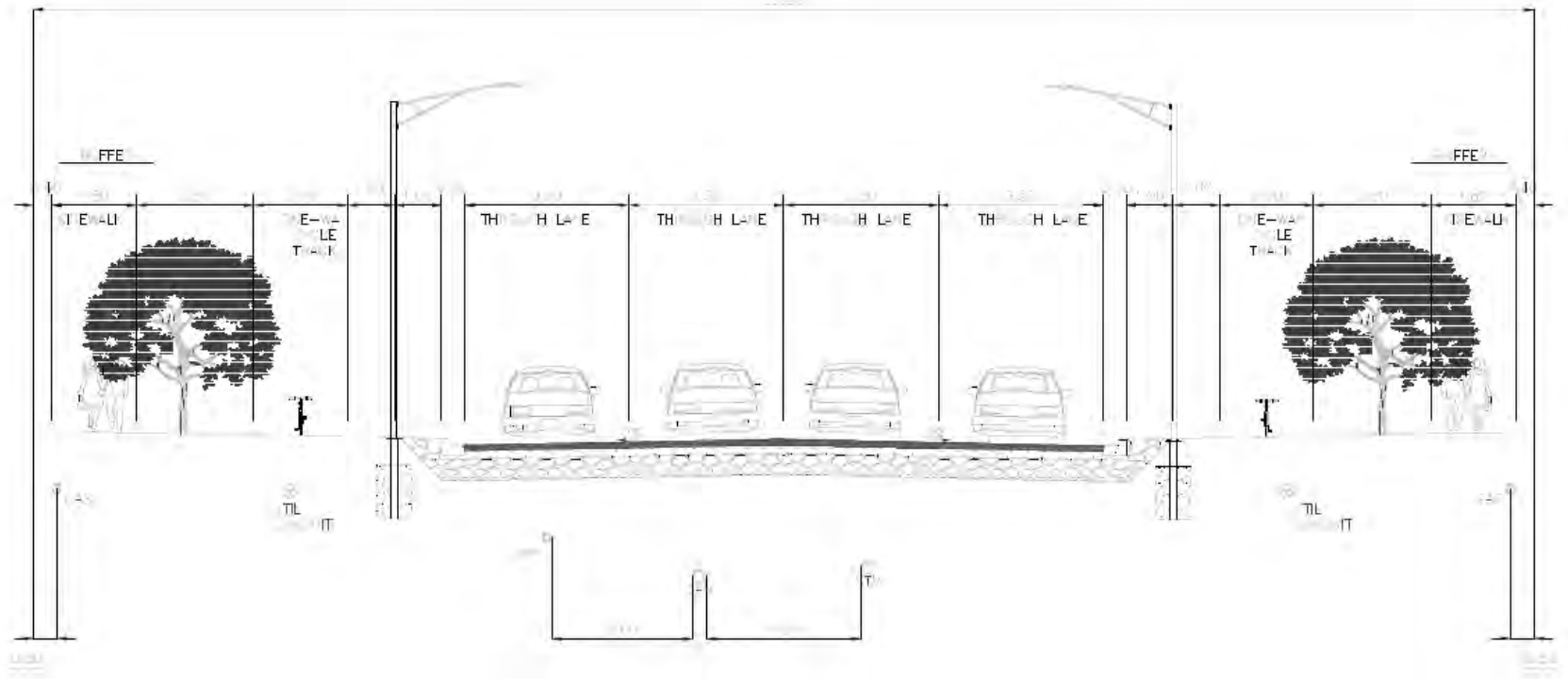
# Road Cross Sections

## Collector



# Road Cross Sections

## Arterial







# Road Improvements Requiring Further EA Study

## **2 to 4 Lanes, Plus Active Transportation (Schedule C EA):**

- Clair Road: Beaver Meadows Drive to Victoria Road
- Laird Road: Southgate Drive to west of Poppy Drive
- Gordon Street: Clair Road to Maltby Road (EA Update)

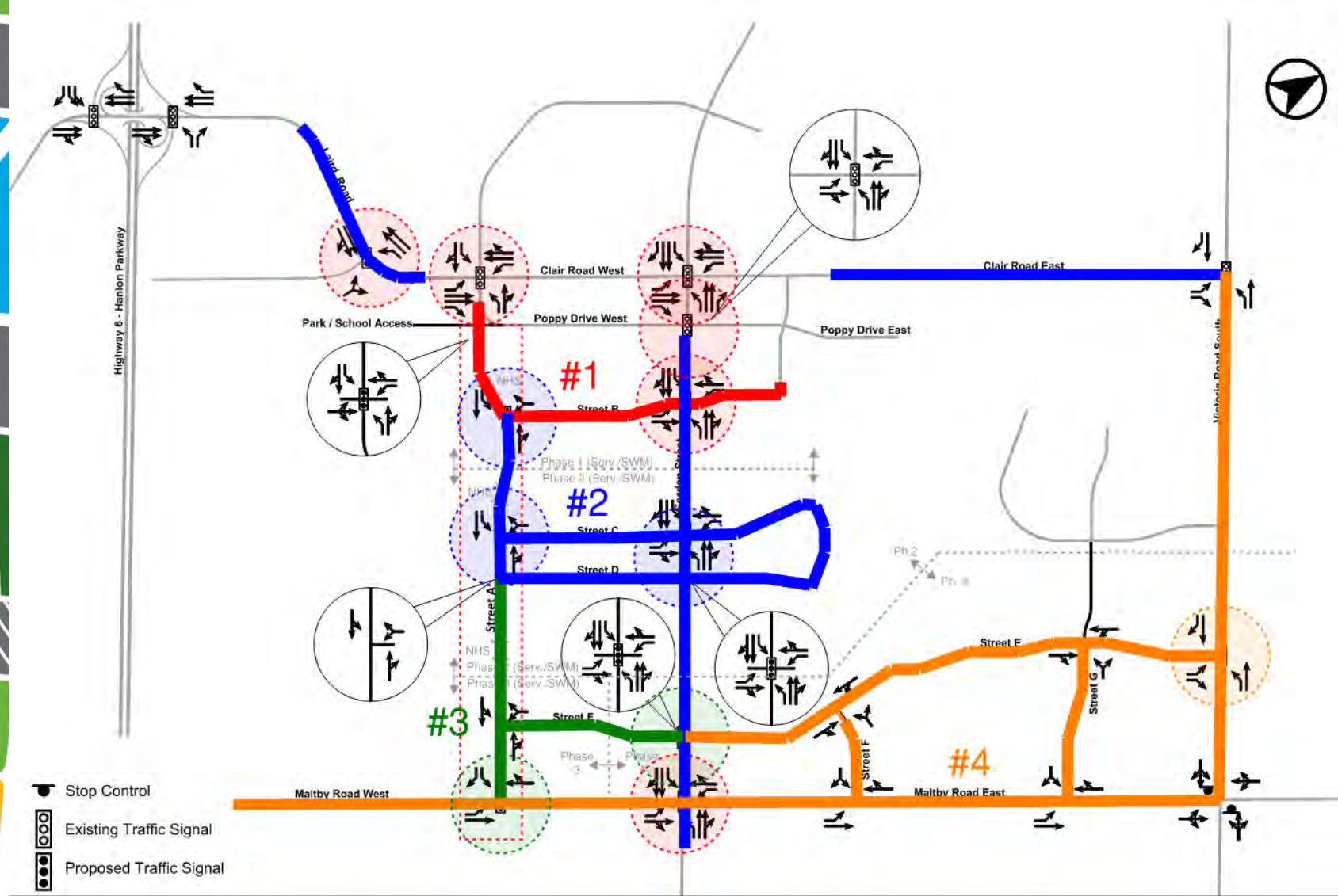
## **Urbanization, Plus Active Transportation (Schedule A+ EA):**

- Victoria Road: Clair Road to Maltby Road
- Maltby Road: Hanlon Parkway to Victoria Road

## **Collector Roads (Schedule C EA):**

- Street A
- Street E

# Phasing







# THANK YOU

## Questions?

[haveyoursay.guelph.ca/Clair-Maltby](https://haveyoursay.guelph.ca/Clair-Maltby)

- Provide your thoughts and ideas on the 'Idea Boards' until August 8, 2021
- Ask Questions
- Attend our virtual office hours
- email us at [clair-maltby@guelph.ca](mailto:clair-maltby@guelph.ca)



# Clair-Maltby

**Transform. Connect. Community.**

July 29, 2021

Clair-Maltby Secondary Plan Overview  
Breezy Breakfast Presentation





# Overview Agenda

- Secondary Plan Process
- Vision and Guiding Principles
- Draft Secondary Plan Land Use and Parks Overview
- Draft Master Environmental Servicing Plan (MESP) and Comprehensive Environmental Impact Assessment (CEIS) Overview
- Next Steps



# Clair-Maltby Secondary Plan process

## **Phase 1 (April 2016 - July 2017)**

- Background data collection
- Identify problem/opportunity statement
- Develop vision/principles

## **Phase 2 (July 2017 - June 2018)**

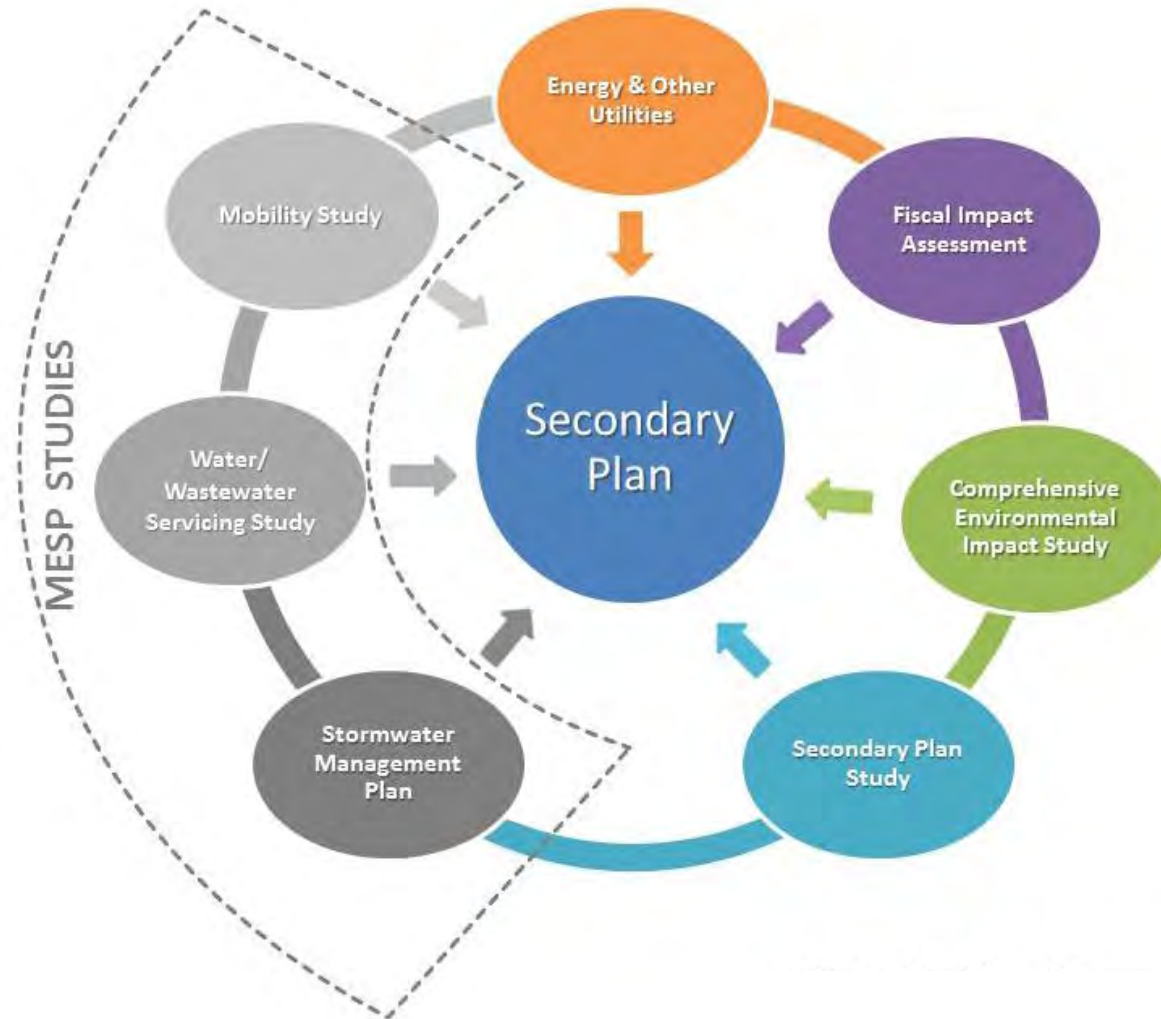
- Develop Conceptual Community Structure
- Detailed studies
- Consideration of Community Structure Alternatives

## **Phase 3 (July 2018 - 2022)**

- Preferred Alternative
- Open Space System Strategy
- Draft Master Environmental Servicing Plan and Secondary Plan
- Final Master Environmental Servicing Plan and Secondary Plan to Council



# Clair-Maltby Secondary Plan Process Diagram





# Clair-Maltby vision

Clair-Maltby will be a vibrant, urban village that is integrated with Guelph's southern neighbourhoods, as well as having strong connections to Downtown, employment areas and the rest of the city.

The Natural Heritage System (NHS) and the Paris Galt Moraine provide the physical and ecological framework for the balanced development of interconnected and sustainable neighbourhoods following the City's environment-first approach.

The area will be primarily residential in character with a full range and mix of housing types, which will allow for affordable and market-based housing, and a variety of other uses to meet the needs of all residents.

A system of parks, open spaces and trails will be interwoven throughout to provide opportunities for active and passive recreation.



# Guiding principles



Vibrant and Urban



Green and Resilient



Healthy and Sustainable



Interconnected and Interwoven



Balanced and Liveable



# Draft Secondary Plan

Implements previous Council decisions through approval of:

- Policy Directions
- Preferred Community Structure
- Open Space Strategy

A few differences:

- Multi-use overpass over Gordon
- High Density/Mixed Use density increase from 200 to 250 units per hectare

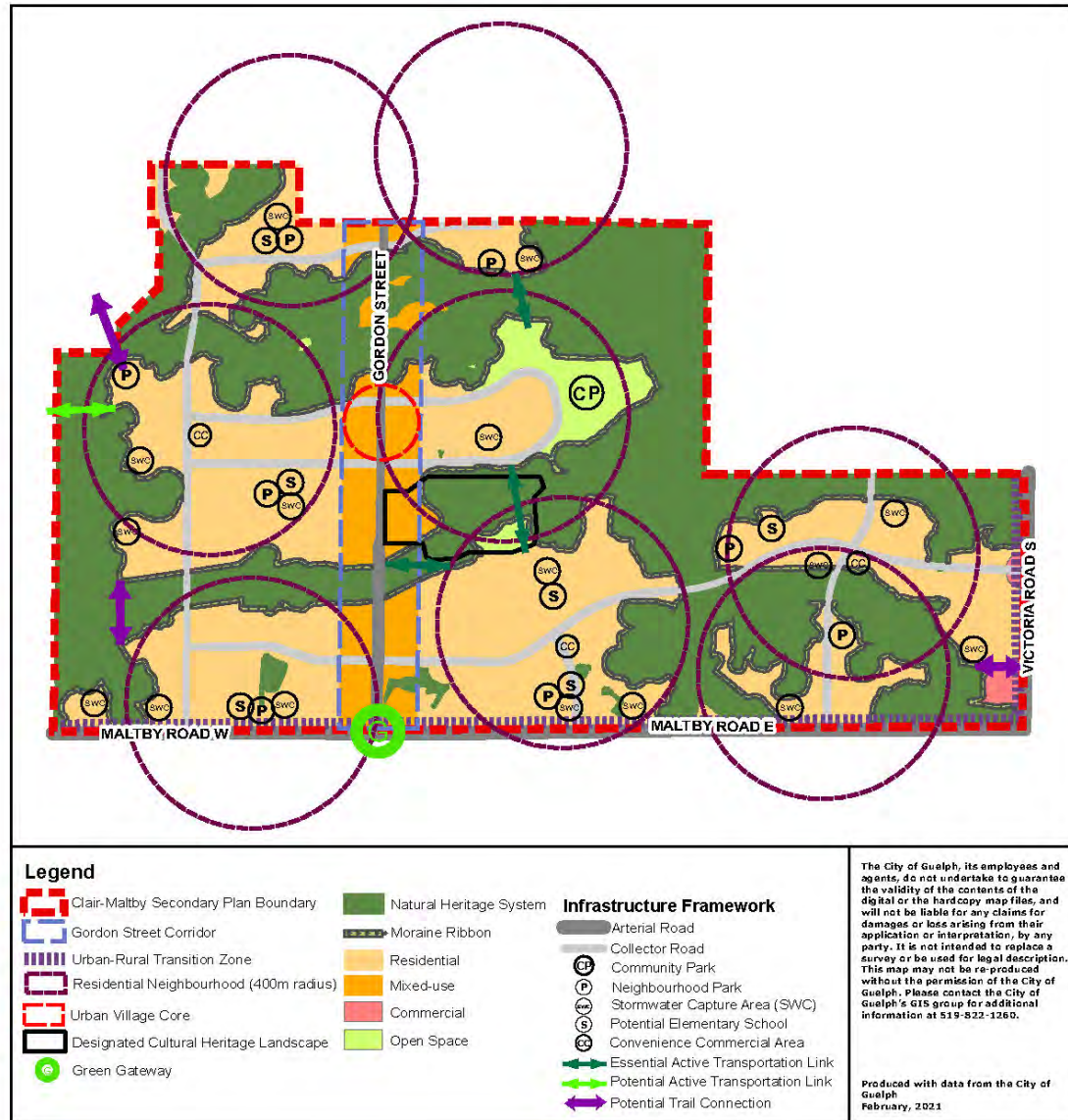




# Draft Secondary Plan

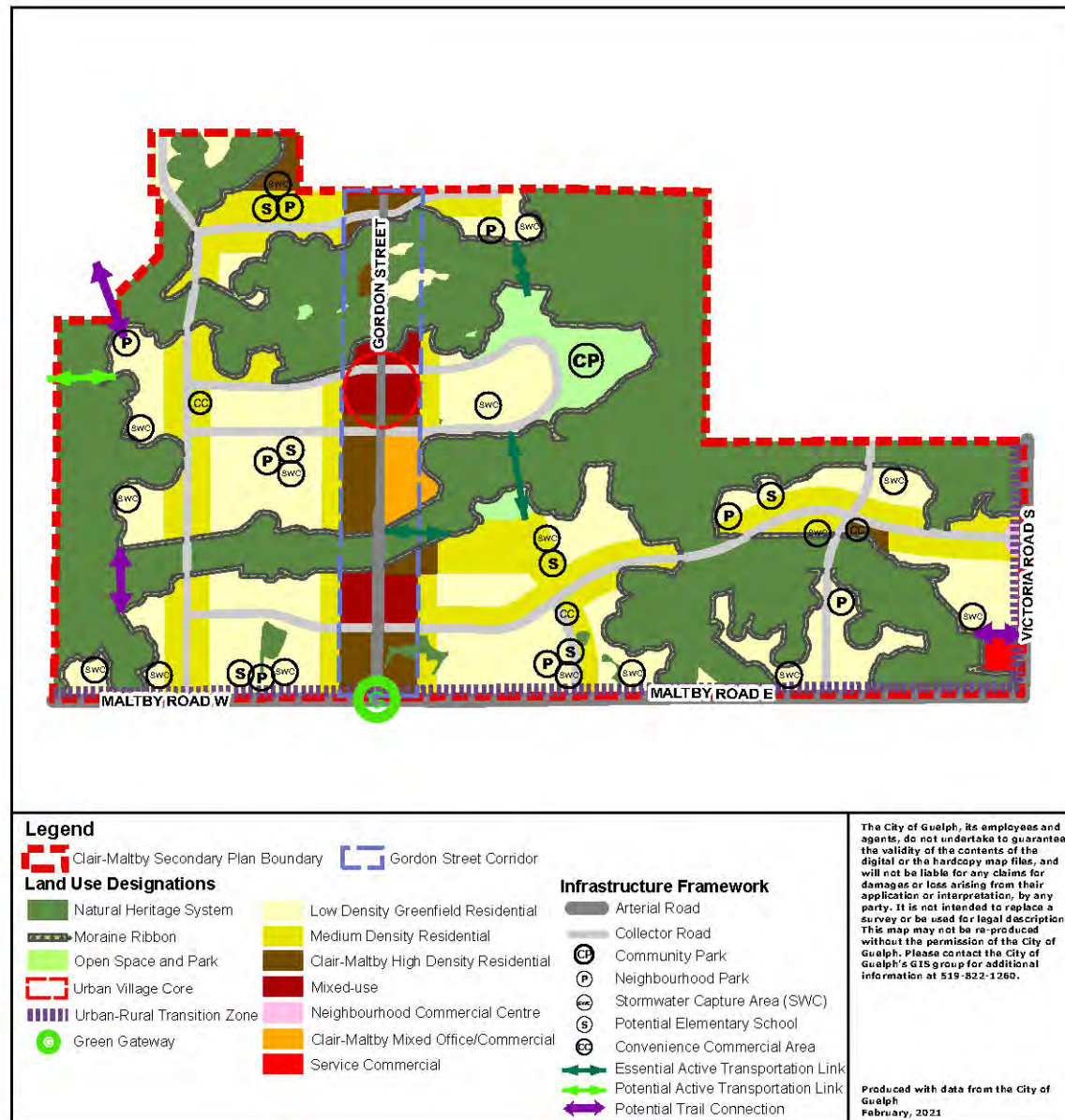
- Policies of the Official Plan apply to Clair-Maltby
- Secondary Plan policies provide more direction for this area
- Clair Maltby remains primarily residential
- Natural Heritage System remains a key component of the Plan and is protected

# Schedule A: Community Structure





# Schedule B: Land Use





# Draft Secondary Plan

- High density residential and mixed use are focused on the Gordon Street corridor
- Medium density residential is focused on the proposed collector roads
- Interior portions of neighbourhoods are proposed to be low density residential

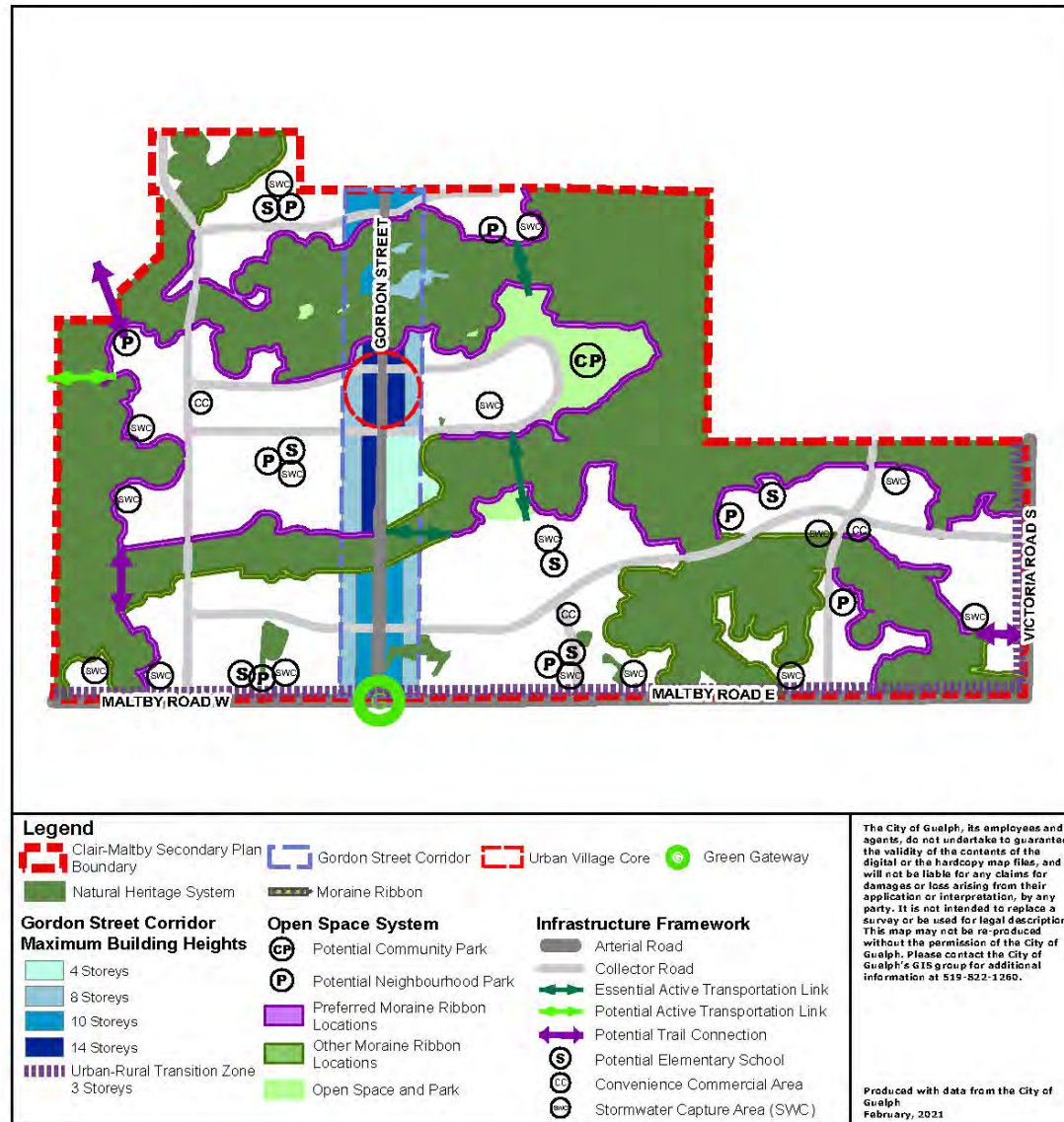




# Draft Secondary Plan

- Natural Heritage System continues to be protected
- Proposed Open Space System includes:
  - Ten hectare community park
  - Eight neighbourhood parks
  - Moraine Ribbon

# Schedule D: Built Form and Open Space System Elements



## Legend

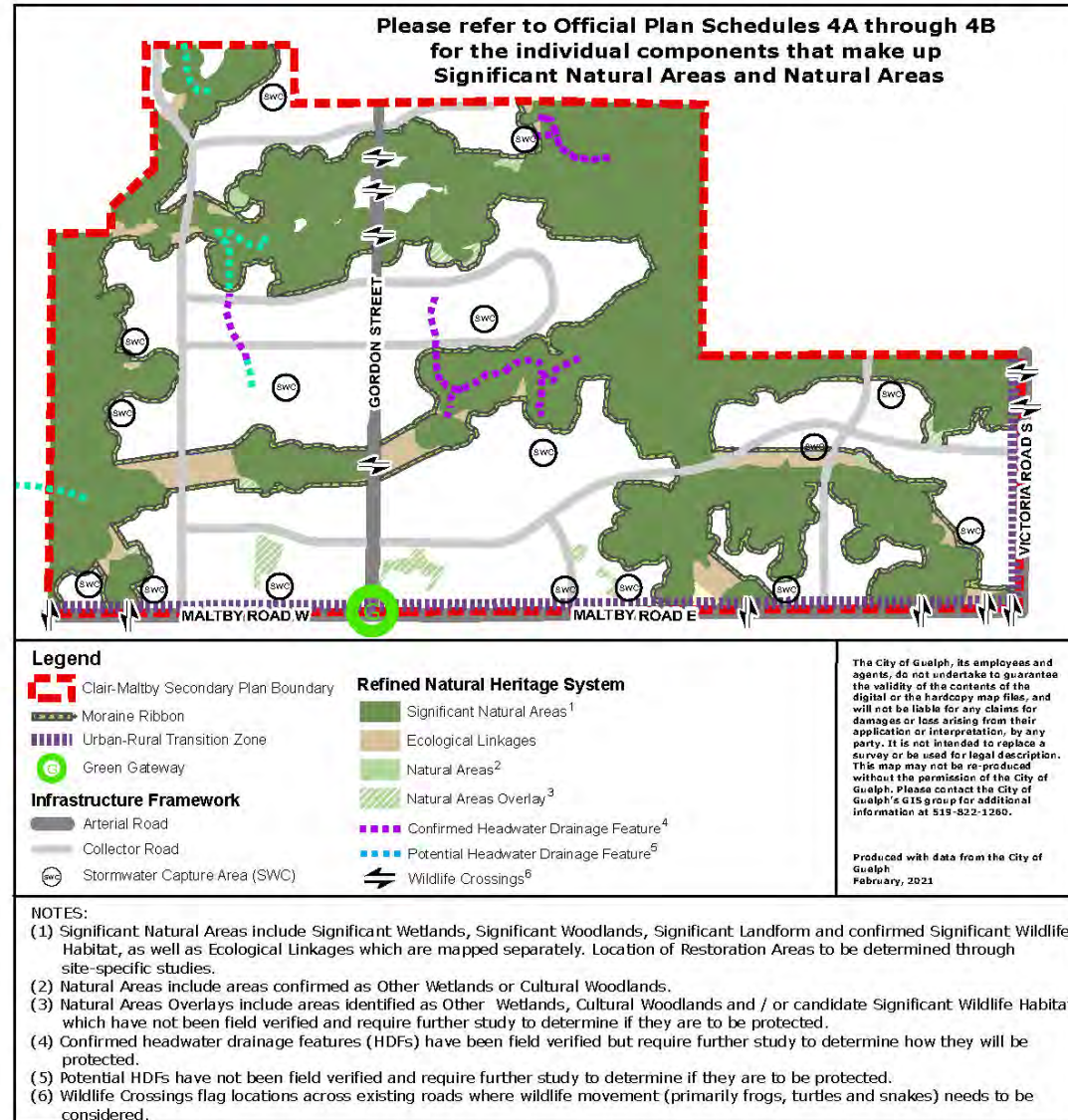
- |                                      |                                    |                                      |               |
|--------------------------------------|------------------------------------|--------------------------------------|---------------|
| Clair-Maltby Secondary Plan Boundary | Gordon Street Corridor             | Urban Village Core                   | Green Gateway |
| Natural Heritage System              | Moraine Ribbon                     |                                      |               |
| <b>Gordon Street Corridor</b>        | <b>Open Space System</b>           | <b>Infrastructure Framework</b>      |               |
| 4 Storeys                            | Potential Community Park           | Arterial Road                        |               |
| 8 Storeys                            | Potential Neighbourhood Park       | Collector Road                       |               |
| 10 Storeys                           | Preferred Moraine Ribbon Locations | Essential Active Transportation Link |               |
| 14 Storeys                           | Other Moraine Ribbon Locations     | Potential Active Transportation Link |               |
| Urban-Rural Transition Zone          | Open Space and Park                | Potential Trail Connection           |               |
| 3 Storeys                            |                                    | Potential Elementary School          |               |
|                                      |                                    | Convenience Commercial Area          |               |
|                                      |                                    | Stormwater Capture Area (SWC)        |               |

The City of Guelph, its employees and agents, do not undertake to guarantee the validity of the contents of the digital or the hardcopy map files, and will not be liable for any claims for damages or loss arising from their application or interpretation, by any party. It is not intended to replace a survey or be used for legal description. This map may not be re-produced without the permission of the City of Guelph. Please contact the City of Guelph's GIS group for additional information at 519-822-1260.

Produced with data from the City of Guelph  
February, 2021



# Schedule E: Natural Heritage System



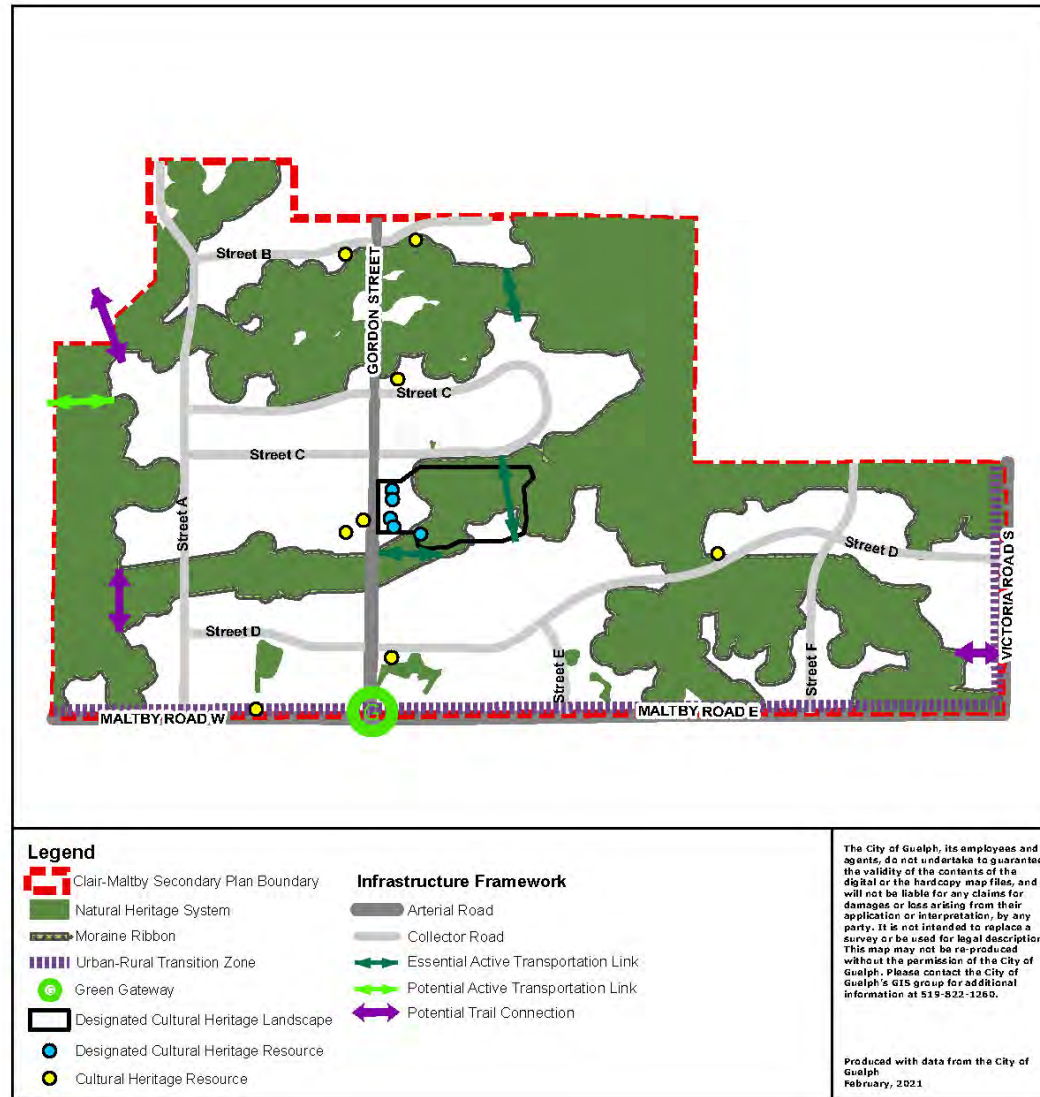


# Draft Secondary Plan

- The cultural heritage policies ensure the conservation of the cultural heritage resources.
- The cultural heritage resources reflect the rural/agricultural heritage of Guelph, and the former Township of Puslinch, as well as the cultural heritage landscape at 2162 Gordon St.

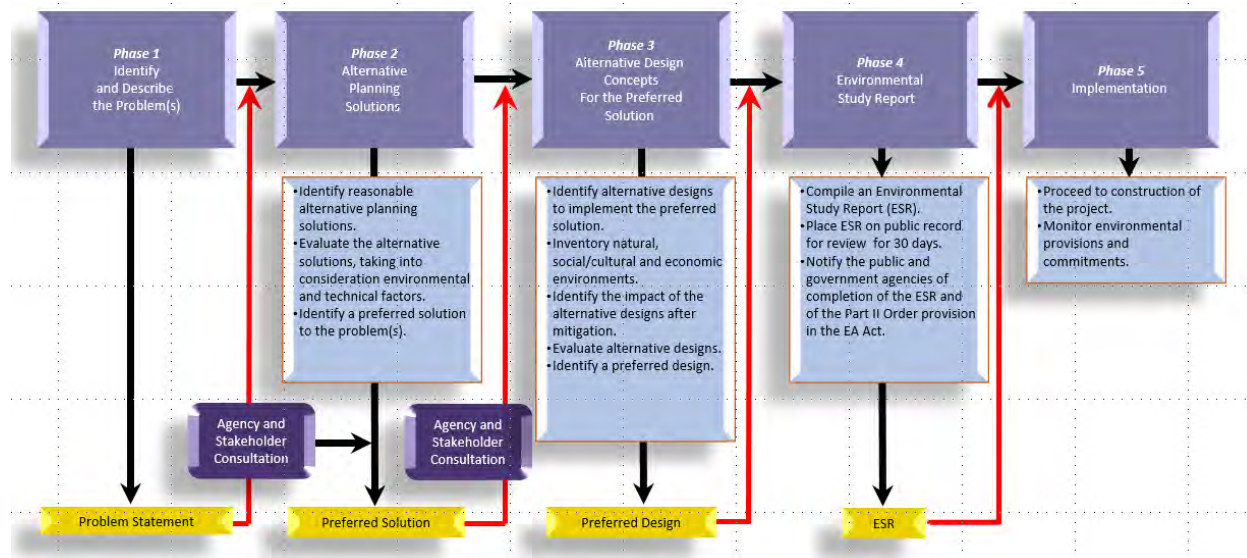


# Schedule F: Cultural Heritage Resources



# Draft MESP Overview

- The MESP has followed Phases 1 and 2 of the Class EA process and identifies a series of servicing projects that will be required to service the Clair-Maltby area







# Draft MESP Overview

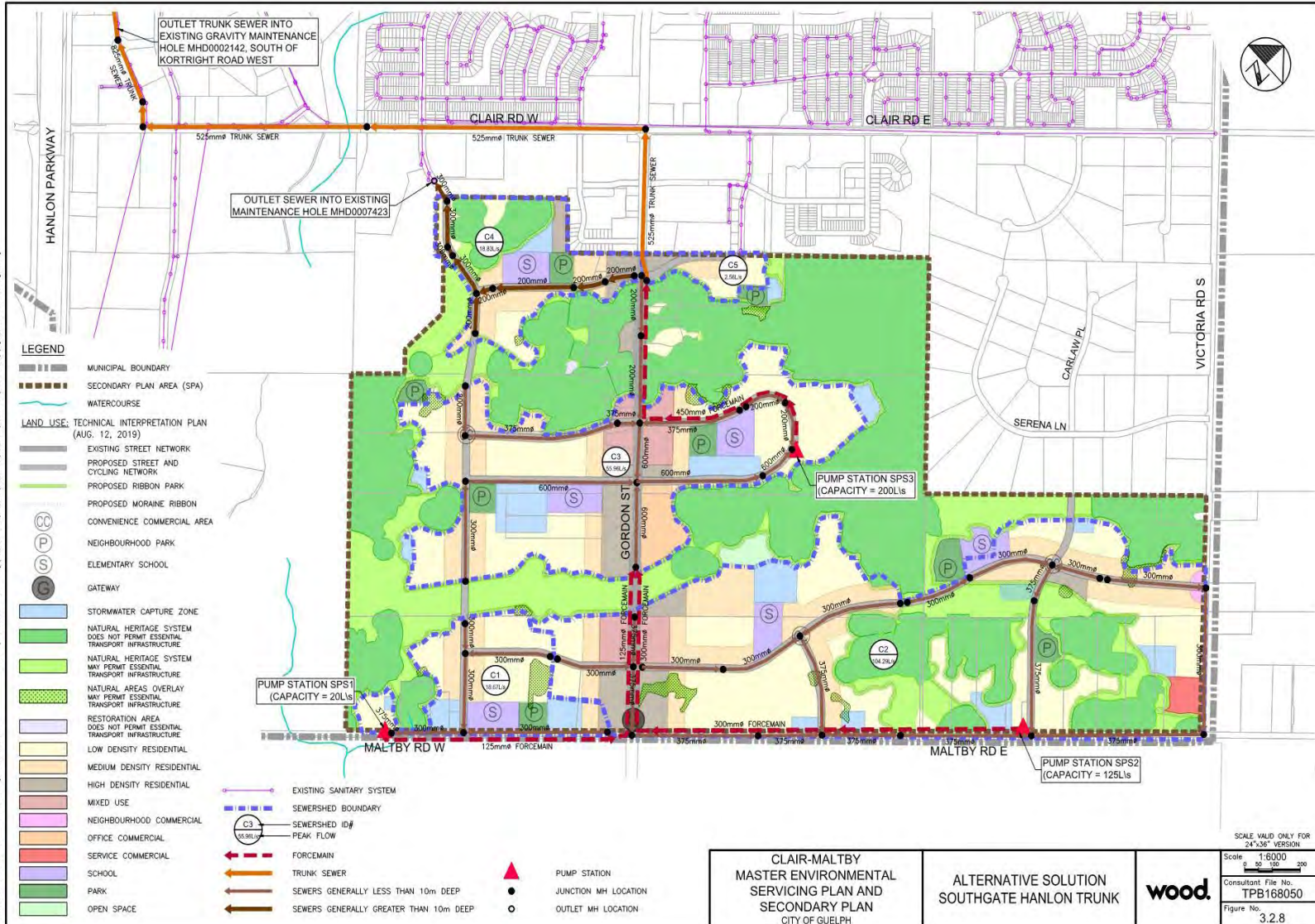
- MESP has determined preferred servicing strategies for:
  - Water;
  - Wastewater;
  - Stormwater management, and
  - Mobility (transportation)for the Clair-Maltby SPA preferred land use plan.





# Draft MESP Overview

## Wastewater Servicing



Path: \\TPB168050 - Client\mty\_06\_16ES-RV\01\_24\02\_02\_2023\02\_16MSP-Rev02\Fig\_2\_WWESP-Overview.dwg  
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 Last Saved By: rcham.borisko

SCALE VALID ONLY FOR 24"x36" VERSION  
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 Figure No. 3.2.8

CLAIR-MALTBY MASTER ENVIRONMENTAL SERVICING PLAN AND SECONDARY PLAN CITY OF GUELPH	ALTERNATIVE SOLUTION SOUTHGATE HANLON TRUNK	<b>wood.</b>
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# Draft MESP Overview

## Stormwater Management

Stormwater management will be needed to address drainage impacts from the proposed land use conditions. Stormwater management strategy is designed to meet the surface water and ground water targets set in the Comprehensive Environmental Impact Study (CEIS).



# Draft MESP Overview

## Stormwater Management

Stormwater management will include:

- Distributed low impact development (LID) best management measures (BMPs) to capture 20 mm runoff within both public and private lands.
- Stormwater capture areas, sized to capture the Regional Storm (Hurricane Hazel), with overflow to existing depression areas.



# Draft MESP Overview

## Stormwater Management

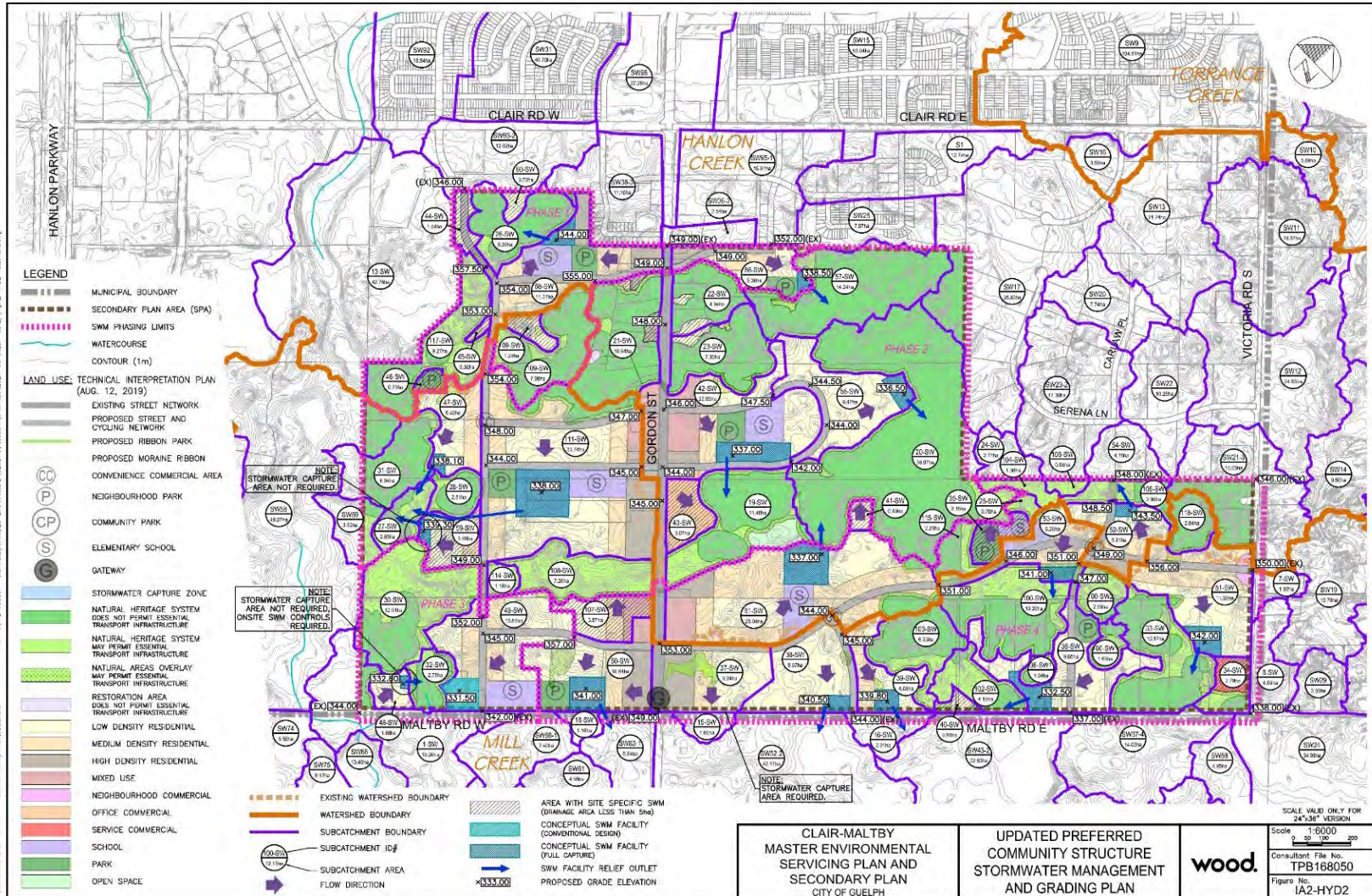
- Infiltrative LID BMPs that receive runoff from paved surfaces will require pretreatment to prevent groundwater contamination.
- A treatment train approach will be used to protect the stormwater capture areas' function of infiltration and to protect groundwater quality.





# Draft MESP Overview

## Stormwater Management







# Draft MESP Overview

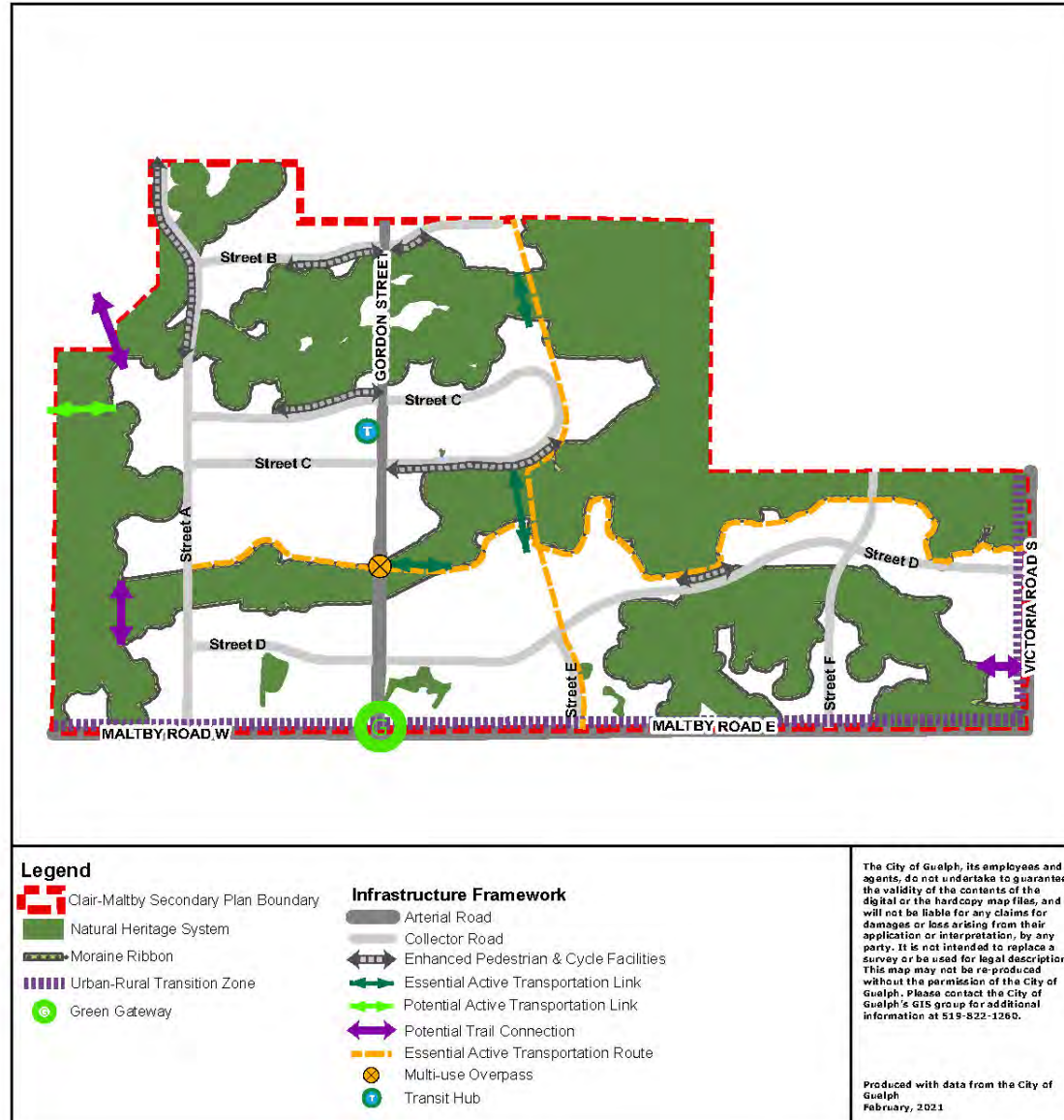
## Mobility

The mobility network will ensure that active transportation and transit are attractive and efficient modes of transportation within the area and connecting to surrounding areas.

This is proposed to be achieved through a multi-modal active-transportation focused mobility system inclusive of an integrated network with roads, bicycling facilities, sidewalks and paths designed, built and maintained with consideration of all users.



# Schedule C: Mobility Plan





# Next Steps

- Continue to receive stakeholder input over the summer and early fall
- Statutory public meeting – Council Meeting
- Review and consider of community and stakeholder feedback
- Preparation of final Secondary Plan and MESP for adoption by Council





# THANK YOU

## Questions?

[haveyoursay.guelph.ca/Clair-Maltby](https://haveyoursay.guelph.ca/Clair-Maltby)

- Provide your thoughts and ideas on the 'Idea Boards' until August 8, 2021
- Ask Questions
- email us at [clair-maltby@guelph.ca](mailto:clair-maltby@guelph.ca)

## **Attachment-7 Summary of Consultation and Engagement Opportunities**

Numerous and varied community engagement opportunities have been provided to stakeholders throughout the development of the Secondary Plan. The results of these opportunities have been considered in the various Committee and Council reports on key foundational material that received Council support leading to the development of the Official Plan Amendment.

In July 2017 the recommended vision and principles for the Clair-Maltby Secondary Plan were made public and presented at Committee of the Whole (COW) and Council. Council supported the vision and principles as the basis for the Secondary Plan.

On June 14, 2018, the recommended Preferred Community Structure Plan was presented to Council. Council supported the Preferred Community Structure as a basis for detailed technical analysis, numerical modelling and the development of draft policies and a draft land use schedule.

On May 13, 2019, the updated Clair-Maltby Secondary Plan Preferred Community Structure, and the Clair-Maltby Secondary Plan Policy Directions Document were approved as the basis for the preparation of the draft Official Plan Amendment, Secondary Plan policies and Master Environmental Servicing Plan, as well as ongoing detailed technical analyses, including numerical modelling throughout Phase 3 of the project, while still allowing for flexibility to respond to updated data, and community engagement. However, staff was also directed to further review the location, size and function of the potential Community Park and the policy direction of co-locating the Community Park with stormwater management facilities and schools, as well as to explore the feasibility of the Moraine Ribbon as part of the Open Space System. This work included a series of professionally facilitated public workshops and stakeholder meetings. The Open Space System Strategy was presented to Committee of the Whole in March 2020 and approved by Council in May 2020.

Throughout the afternoon and evening of June 24, 2021, a virtual public Open House was held through a series of facilitated online presentations which detailed the content of the [draft Secondary Plan](#), Master Environmental Servicing Plan and Comprehensive Environmental Impact Study. This Open House provided another opportunity for members of the public and stakeholders to ask questions of project team members.

The Clair-Maltby [draft Secondary Plan](#) was presented to Council on September 22, 2021 at the Statutory Public Meeting.

The Clair-Maltby [draft Secondary Plan](#) underwent a circulation period with Indigenous communities, agencies, landowners and other stakeholders which included presentations to interested groups over the summer/fall of 2021.



## **Detailed Summary of Consultation and Engagement**

### **Secondary Plan Project Initiation: 2015**

Clair-Maltby Secondary Plan: Project Initiation Report to Council	Outline of the proposed MESP and Secondary Plan process to Council for approval	June 22, 2015
Public Open House	Project introduction	August 11, 2015
Terms of Reference Focus Group Meeting	Focus group meeting with stakeholders to gather input for the Terms of Reference	September 17, 2015
Clair-Maltby Secondary Plan: Draft Terms of Reference	A draft Terms of Reference was released for public review and input prior to finalization	October 2015
Clair-Maltby Secondary Plan: Terms of Reference	Council approval of project Terms of Reference	December 14, 2015

### **Phase 1: 2016-2017**

Property access landowner meeting	An information session for landowners to ask questions and provide comments to better understand the request for access to property within the study area	May 26, 2016
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Joint Environmental Advisory Committee/ River Systems Advisory Committee meeting	Meeting to present and discuss the CEIS work plan	November 16, 2016
Establishment of Technical Advisory Group		December 2016
Technical Advisory Group Meeting #1	Review of the CEIS Work Plan	February 7, 2017
Establishment of Community Working Group		March 2017
Notice of Study Commencement	Notice of Study Commencement provided to the public, stakeholders, First Nations Communities and agencies	April 6, 2017
Community Working Group Meeting #1	Visioning exercise to receive input regarding key ideas to inform the development of the vision and guiding principles for the study	April 11, 2017
Public Information Centre #1 and Visioning Workshop	Visioning workshop to receive input regarding key ideas to inform the development of the vision and guiding principles for the study	April 27, 2017
Technical Advisory Group Meeting #2	Review of Stormwater Management, Water/Wastewater and Mobility work plans	May 18, 2017



## Phase 2: 2017-2018

Township of Puslinch Council Meeting	Presented the approved Vision and Guiding Principles	August 9, 2017
Notice of Visioning Workshop No. 2	Provided to the public, stakeholders, First Nations Communities and agencies	September 7, 2017
Joint Community Working Group and Technical Advisory Group Conceptual Community Structure Visioning Workshop	Visioning workshop that included a hands on community planning and mapping exercise to receive input from the community and technical experts.	September 12, 2017
Community Visioning Workshop No. 2 to inform the Conceptual Community Structure	Visioning workshop that included a hands on community planning and mapping exercise to receive input from the community and technical experts.	September 26, 2017
Joint Community Working Group and Technical Advisory Group meeting	Presented the CCS and received feedback	November 28, 2017
Committee of the Whole meeting	Presented the CCS for consideration	December 4, 2017
Council Meeting	CCS was approved	December 18, 2017
Township of Puslinch Council Meeting	Presented the approved CCS	February 7, 2018

Joint Community Working Group and Technical Advisory Group meeting	Presented the findings of technical work and the Community Structure Alternatives	February 27, 2018
Joint Environmental Advisory Committee/ River Systems Advisory Committee meeting	Presented the findings of technical work and the Community Structure Alternatives	March 14, 2018
Council Workshop	Project update and Evaluation of the Community Structure Alternatives	March 21, 2018
Planning and Design Charrette (included Public Information Centre #2 for the MESP)	The 5-day planning and design charrette for the CMSP was a multi-disciplinary, intensive and collaborative design and planning workshop inclusive of all affected stakeholders. It evaluated the three Community Structure Alternatives in order to result in the development of a Preliminary Preferred Community Structure for the secondary plan area.	April 3-6 & 9, 2018
Rolling Hills Landowner Meeting	Presented the history of the Rolling Hills area since it's annexation into the City. Feedback forms were distributed and returned by May 18, 2018	May 10, 2018
Heritage Guelph Meeting	Presented the Preferred Community Structure to the Committee.	June 11, 2018



Council Meeting	Preferred Community Structure Plan was approved	June 14, 2018
Public Information Session	Presented the CEIS Phase 1 and 2 Characterization Report to members of the community, interested stakeholders, members of the Environmental Advisory Committee, River Systems Advisory Committee, Clair-Maltby Community Working Group and the Clair-Maltby Technical Advisory Group	September 26, 2018
<b>Phase 3: 2018-2021</b>		
Public Workshop – secondary plan policy directions	Public workshop to participate in focused conversations and discussion to help establish and refine the policy directions that inform the creation of the draft secondary plan.	December 4, 2018

Public Information Session – planning for growth while protecting the moraine, water resources and natural heritage resources	Presented the detailed technical work undertaken to inform the draft secondary plan related to the moraine, water resources and natural heritage resources. The information was presented to members of the community, interested stakeholders, members of the Environmental Advisory Committee, River Systems Advisory Committee, Clair-Maltby Community Working Group and the Clair-Maltby Technical Advisory Group	March 29, 2019
Technical Advisory Group meeting	Presented information regarding water and wastewater servicing	April 16, 2019
Technical Advisory Group meeting	Presented information regarding mobility	May 8, 2019
Council Meeting	Presented a Phase 3 project update as well as the Updated Preferred Community Structure and Policy Directions Document for approval	May 13, 2019
Township of Puslinch Council Meeting	Presented the Policy Directions and Updated Preferred Community Structure for information	June 19, 2019
Open Space System Strategy Public Workshops	Community workshops to develop a comprehensive plan for the parks and open spaces of Clair Maltby.	September 25 and November 19, 2019



Committee of the Whole (CoW) Meeting	Presented the Clair-Maltby Secondary Plan Open Space System Strategy	March 2, 2020
Council Meeting	Open Space System Strategy was approved	May 25, 2020 *note delay between CoW and Council was due to COVID-19.
Township of Puslinch Council Meeting	Presented a project update	February 10, 2021
Draft Secondary Plan and draft MESP	Drafts of these documents were released for public review and input prior to the public open house and statutory public meeting.	June 18, 2021
Public Information Centre #3 for draft Secondary Plan and draft MESP	Public open house to inform the public and stakeholders of the draft documents.	June 24, 2021 (live virtual event) June 24, 2021 – August 8, 2021 (online virtual open house)
Presentation to the Breezy Breakfast community group	Presentation of the draft Secondary Plan and MESP to the community group followed by questions and answers.	July 30, 2021
Heritage Guelph	Presented the draft Secondary Plan	September 13, 2021
Statutory Public Meeting	Presented the draft Secondary Plan and MESP	September 20, 2021

Clair-Maltby Landowners Meeting	Discussed land use/policy, servicing, and fiscal impact assessment	October 19, 2021.
Planning Advisory Committee	Presented an overview of the draft Secondary Plan and MESP followed by question and answer.	October 27, 2021
Technical Advisory Group Meeting	Collected feedback on water, wastewater, stormwater and mobility from the MESP.	November 2, 2021
Joint Technical Advisory Group / Community Working Group Meeting	Collected feedback on the draft Secondary Plan	November 16, 2021
Clair-Maltby Landowners Meeting - NHS	Discussed NHS-related feedback received and approaches to resolutions	December 6, 2021.
Clair-Maltby Landowners Meeting	Discussed FIA-related feedback.	December 14, 2021
Clair-Maltby Landowners Meeting - Servicing	Discussed Servicing-related feedback received and approaches to revisions.	December 15, 2021
Decision Meeting	To present the recommended Secondary Plan and obtain approval to file the MESP Notice of Completion.	May 16, 2022



## Detailed Summary of Indigenous Engagement

A Notice of Study Commencement was circulated to Metis Nation of Ontario Region 9 Consultation Committee (MNO), Mississaugas of the Credit First Nation (MCFN) and Six Nations of the Grand River First Nation (SNGRFN) in April of 2017.

Further, there were check point communications with each of the three groups listed above in October of 2018 summarizing the end of Phase 2, and in May of 2019 to provide an update at the mid-point of Phase 3.

Finally, the draft final documents were circulated to MNO, MCFN and SNGRFN in July of 2021. Subsequently, the City attending meetings to collect feedback and provide responses to comments and questions as noted below.

### Phase 1: 2016-2017

Meeting with Mississaugas of the Credit First Nation	Meeting to introduce the Clair-Maltby Secondary Plan Project	June 19, 2017
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### Phase 3: 2018-2022

Meeting with Six Nations of the Grand River First Nation Meeting	Presented the Clair-Maltby draft Secondary Plan and CEIS for feedback	October 7, 2021
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Métis Nation of Ontario Region 9 Consultation Committee Meeting	Presented the Clair-Maltby draft Secondary Plan and CEIS for feedback	November 10, 2021
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Mississaugas of the Credit First Nation Meeting	Presented the Clair-Maltby draft Secondary Plan and CEIS for feedback	November 16, 2021
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A full, detailed log of engagement and meetings is available at the following links:

[Record of Consultation with Métis Nation of Ontario – Region 9 Consultation Committee](#)

[Record of Consultation with Six Nations of the Grand River First Nation](#)

[Record of Consultation with Mississaugas of the Credit First Nation](#)