



Welcome to City of Guelph

**CLYTHE WELL TREATMENT
CLASS ENVIRONMENTAL ASSESSMENT**

Open House
October 19, 2017
7 - 8:30pm

Public input will be taken into consideration throughout this process. You can participate in this study by:

- Signing the attendance register
- Reviewing the display boards
- Asking questions and discussing your ideas/concerns with City staff and the Project Team
- Providing your thoughts and comments on the Comment Sheet
- Indicating on the comment sheet whether you would like to be added to the project mailing list.



OPPORTUNITY STATEMENT AND STUDY OBJECTIVE

Master Planning and Engineering Studies completed by the City of Guelph have identified the need to develop additional local water sources, and to implement upgrades to existing wells to meet future supply requirements in the City of Guelph.

Returning Clythe Well to service with added treatment was identified in the 2014 Water Supply Master Plan¹ as a high priority project. A treatability study² completed in 2010 concluded that raw water from the Clythe Well can be successfully treated for aesthetic quality parameters with well-established technologies.

The purpose of this Schedule 'B' Municipal Class EA process is to select a preferred solution through a comprehensive, environmentally sound planning process open to public participation to address the following objective:

Provide treatment for Clythe Well (an approved water source) to return it to service, contributing to the City's ability to meet long-term water demands and integrating with the City's broader Official Plan³ to ensure 'A safe and reliable local water supply'.

1. City of Guelph, Water Supply Master Plan, AECOM (May 2014)

2. City of Guelph, Treatability Assessment of the Clythe and Helmar Wells, Gamsby and Mannerow Ltd. (Feb 2010)

3. City of Guelph, Official Plan 2001, September 2014 Consolidation



Clythe Well Treatment Class Environmental Assessment

PROJECT BACKGROUND

Clythe Well and Pumping Station are located in northeast Guelph at 24 Watson Road North. The facility was constructed to provide dual service as a water supply source and a booster pumping station (firm capacity of 10,886 m³/d) along with an underground reservoir (capacity of 672 m³).

Facility History

- 1976 Clythe Well was drilled
- 1983 Clythe Booster Station constructed and put into service
- 1990 Clythe Well put into service
- 1999 Clythe Well taken out of service. Booster station remained in service.
- 2010 Treatability Study reviewed treatment methods
- 2017 Clythe facility continues to operate as a critical supply from Zone 1 to Zone 2. Clythe Well remains out of service.

Water Quantity

- Well completed in productive Amabel formation, same as other City wells
- An approved water source with a valid Permit to Take Water (PTTW No. 1008-9J7S6G) allowing withdrawal of up to 60.6 L/s (5,237 m³/day)
- Sustainable yield of 39 L/s (3,370 m³/day) or approximately 7 per cent of average City demand (based on 2016 average annual daily City demand)

Water Quality

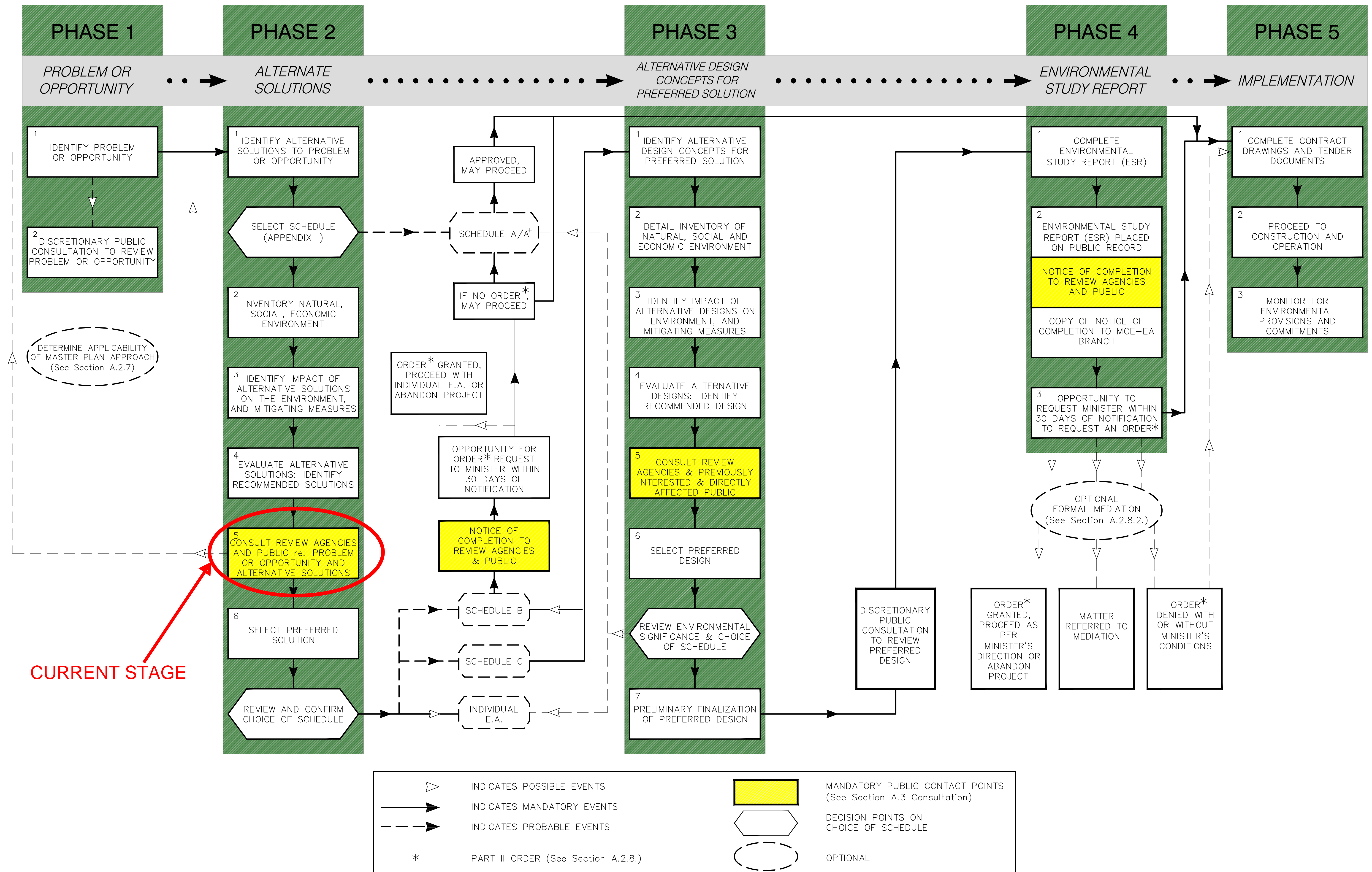
- Secure groundwater source
- Aesthetic concerns due to naturally occurring elements :
 - ✓ Iron – moderately elevated at ~0.20 mg/L (AO *= 0.30 mg/L)
 - ✓ Manganese – moderately elevated at ~0.03 mg/L (AO = 0.050 mg/L)
 - ✓ Hydrogen Sulphide - elevated at ~ 0.45 mg/L (AO = 0.050 mg/L)
- 2010 Treatability Study recommended filtration with catalytic media and polishing with activated carbon contact to bring Clythe Well back into service

This EA process will assess options to implement this treatment strategy either at the existing site or at an alternative location.

*AO = Ontario Drinking Water Quality Standard (ODWQS) Aesthetic Objective

MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA





Clythe Well Treatment Class Environmental Assessment

EVALUATION PROCESS FRAMEWORK

Approach: Overall strategy to implement treatment

Screening Step: Screening criteria were applied to a long list of alternatives to eliminate alternatives that were impractical or did not meet the threshold of acceptance.

Evaluation Step: The remaining short-listed alternatives were evaluated based on a set of criteria.

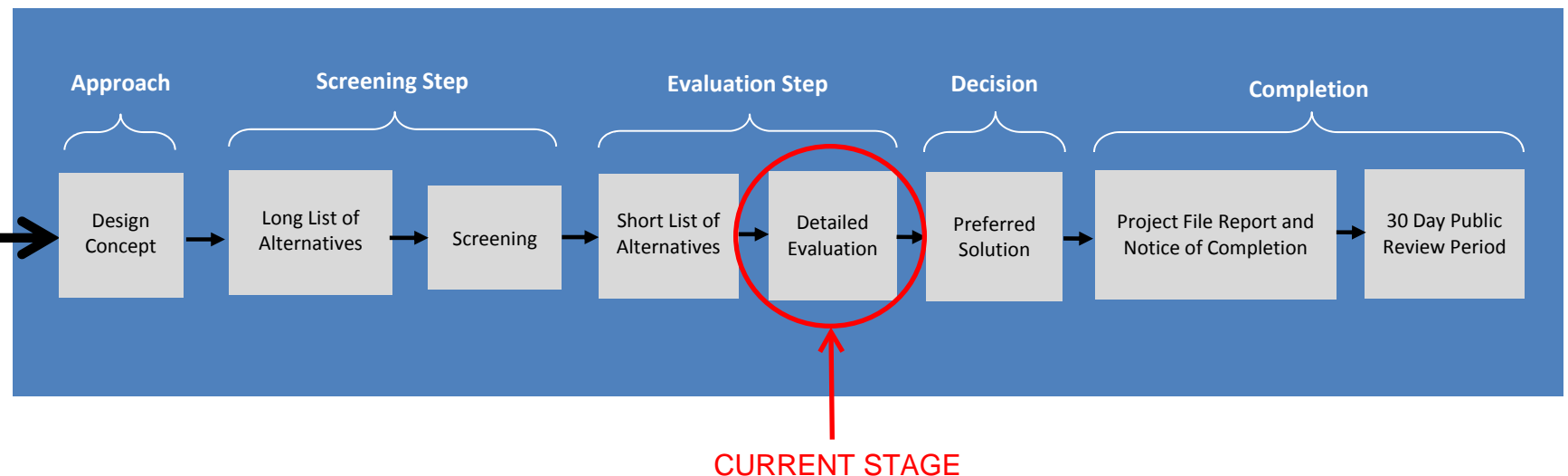
Decision: Preferred solution will be selected based on results of detailed evaluation supplemented with agency and public consultation.

Completion: The Notice of Completion will be issued and the project file report will be submitted to the public record. After a 30 day public review period the file will be approved to proceed or elevated via a Part II Order for further review.

Schedule 'B' Municipal Class EA Process

Phase 1: Problem Statement

Phase 2: Alternative Solutions

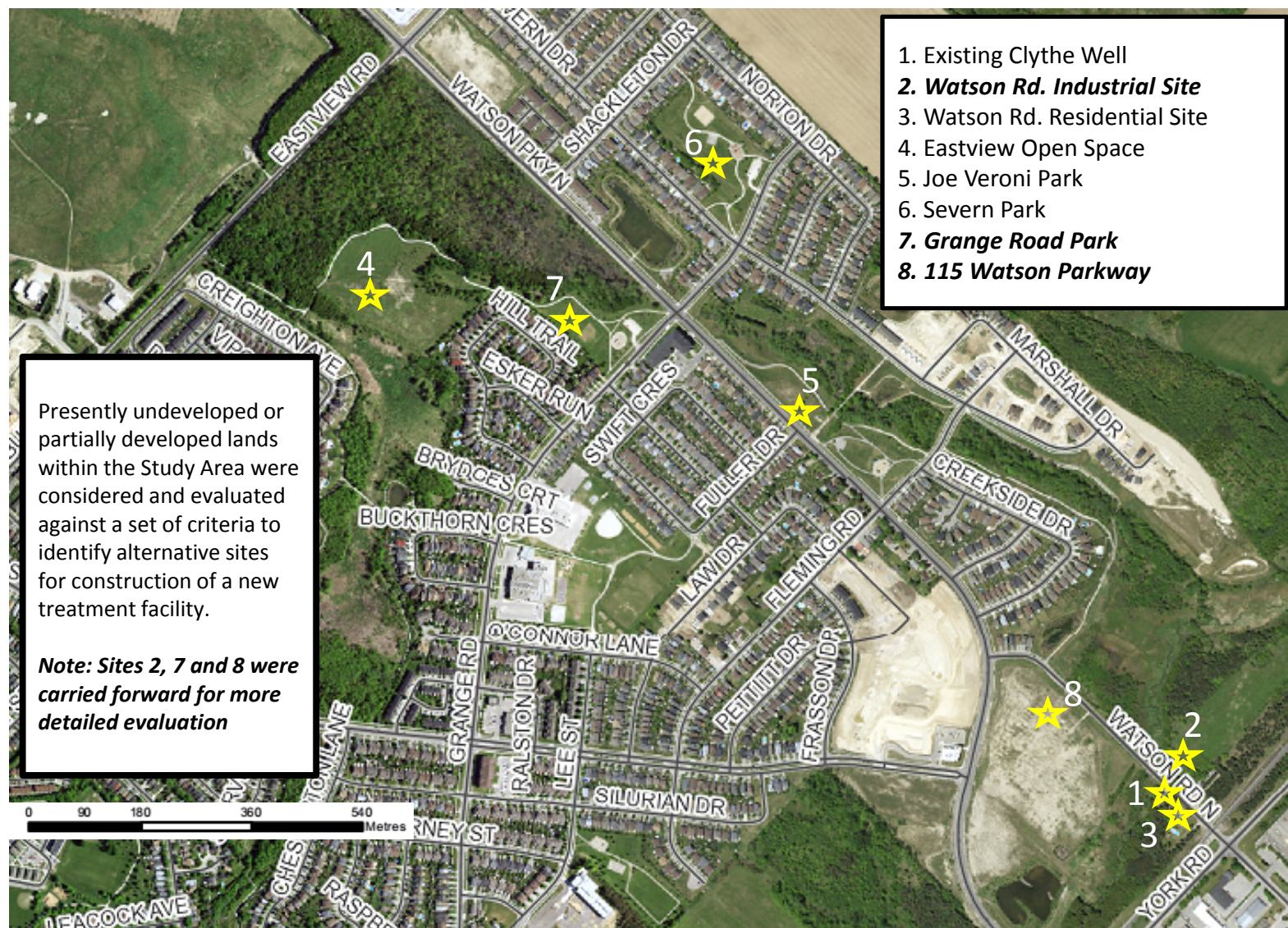


CURRENT STAGE



Clythe Well Treatment Class Environmental Assessment

LONG LIST OF ALTERNATIVES





Clythe Well Treatment Class Environmental Assessment

RESULTS OF SCREENING-LEVEL SITE EVALUATION

Site Identification	Screening-Level Evaluation	Result
1. Existing Clythe Booster Station Site	City-owned property, limited available space	
2. Watson Road Industrial	Privately owned, not developed, adequate size, located across road from existing Clythe Well site	Carried Forward as Option A
3. Watson Road Residential	Privately owned residential property located adjacent to existing Clythe Well site	
4. Eastview Open Space	City property, adequate size, undeveloped, designated for other use	
5. Joe Veroni Park	City-owned property, adequate size, currently developed as a public park, treatment facility would reduce park open space and negatively impact aesthetics	
6. Severn Drive Park	City-owned property, adequate size, currently developed as a public park, treatment facility would reduce park open space and negatively impact aesthetics	
7. Grange Road Park	City-owned property, adequate size, currently developed as a public park. Area available that would not impact park open space.	Carried Forward as Option B
8. 115 Watson Parkway	Privately owned, not developed, adequate size, located in close proximity to existing Clythe Well site	Carried Forward as Option C



Clythe Well Treatment

Class Environmental Assessment



City Owned

Option B: Grange Road Park



Privately Owned

Option C: 115 Watson Pkwy

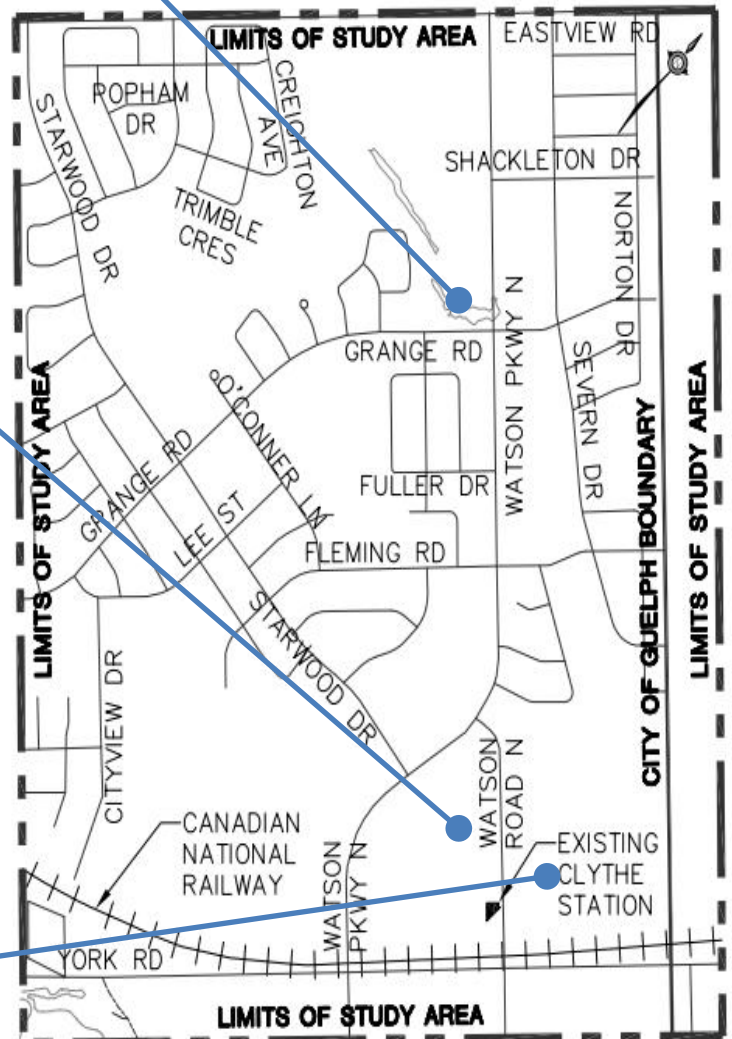


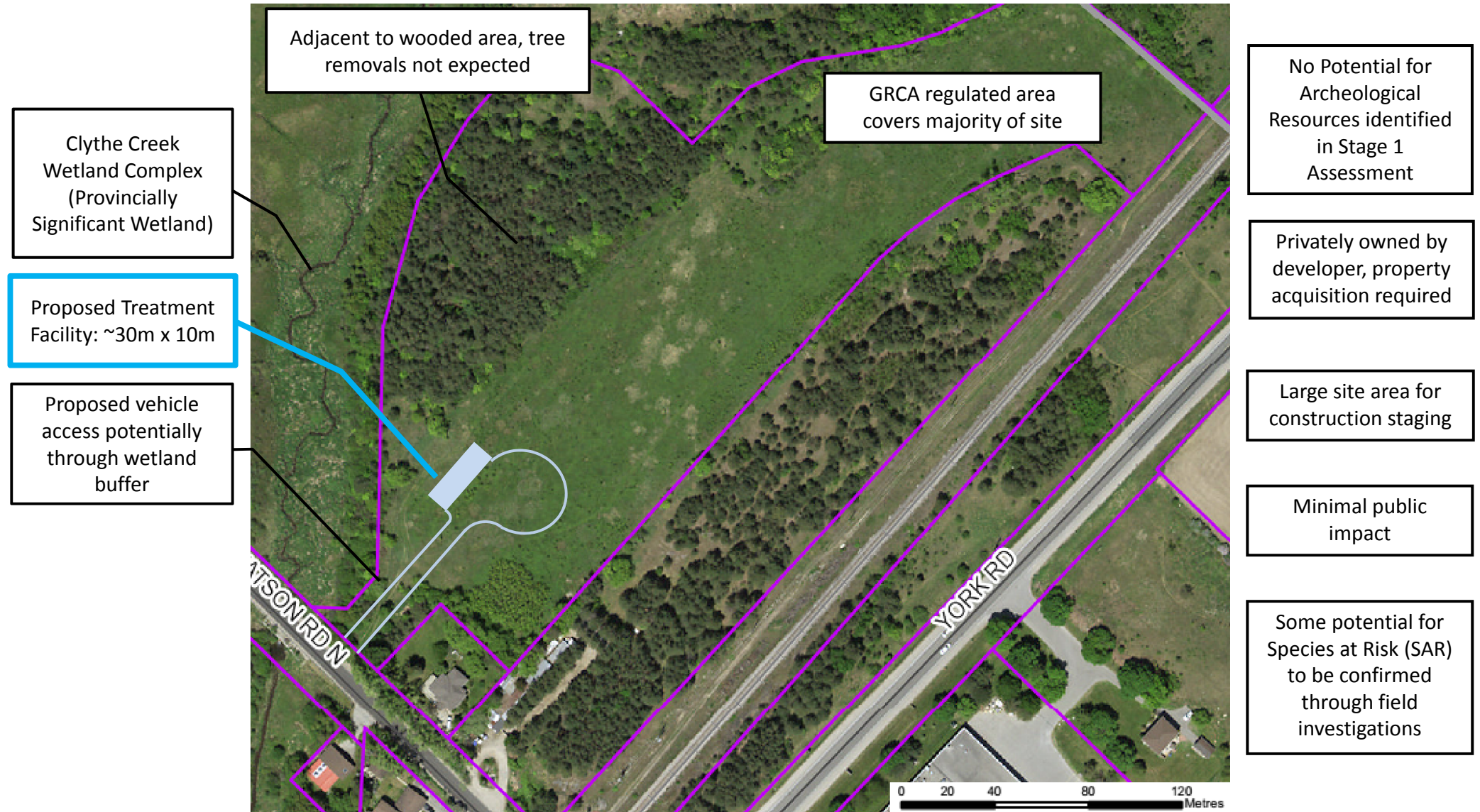
Privately Owned

Option A: Watson Road Industrial

TOP 3 RANKED SITES

Project implementation at either Option A or Option C is subject to successful property acquisition.



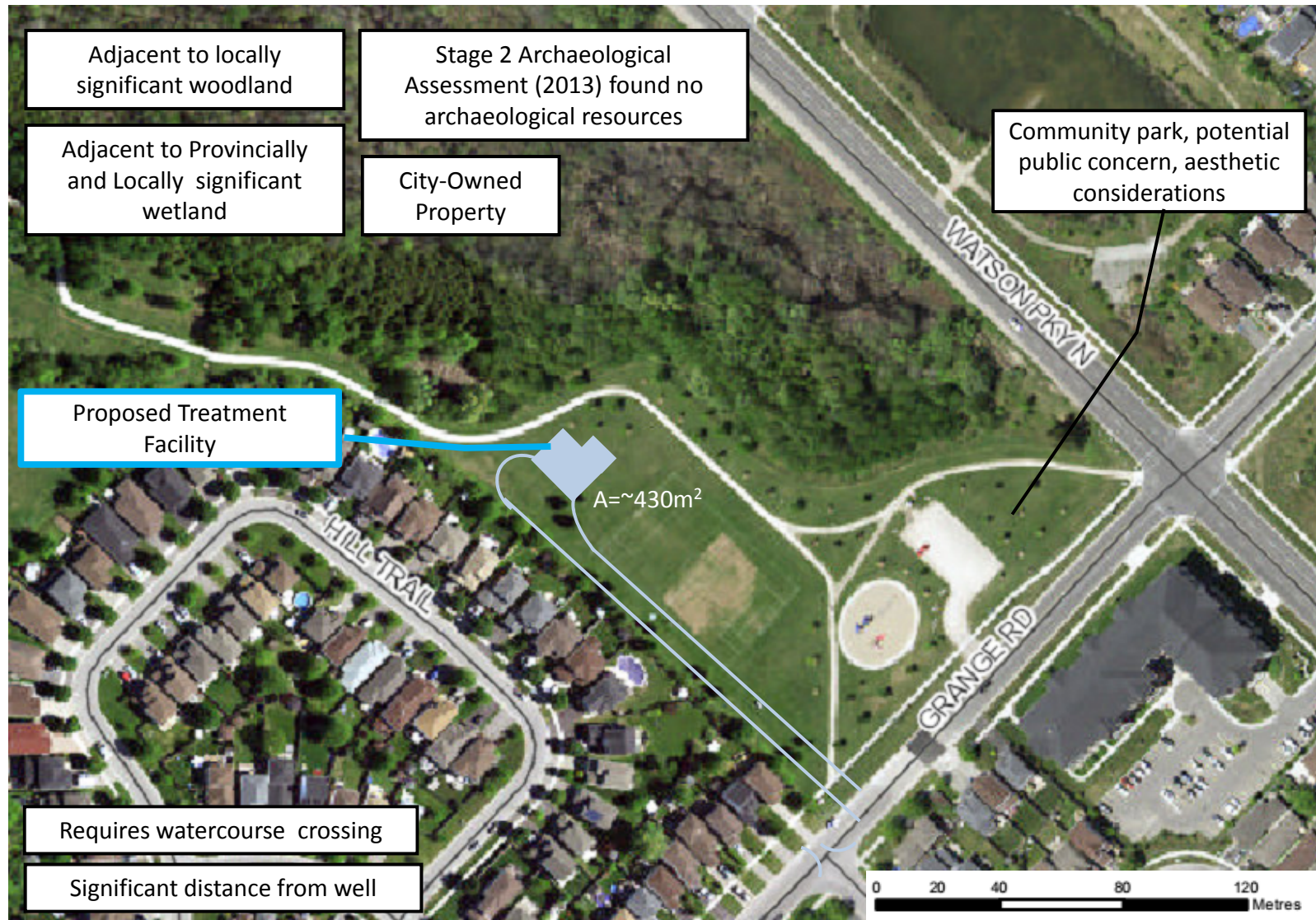


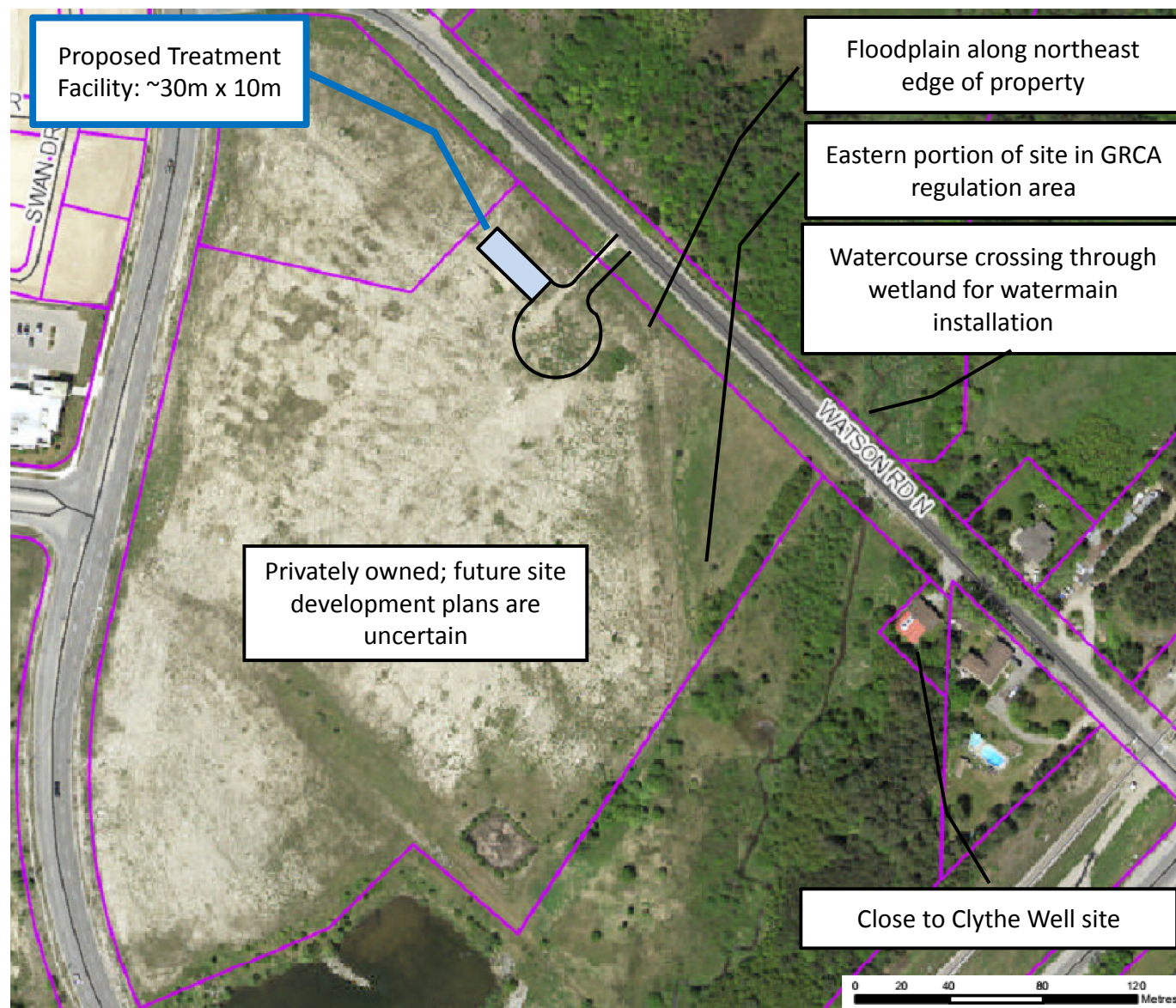


Clythe Well Treatment
Class Environmental Assessment

CONCEPTUAL SITE LAYOUT

OPTION B – GRANGE ROAD PARK







Clythe Well Treatment
Class Environmental Assessment

PRELIMINARY EVALUATION OF ALTERNATIVES

ITEM	Option A Watson Road Industrial	Option B Grange Road Park	Option C 115 Watson Parkway
Site Requirements	<div></div> <ul style="list-style-type: none"> -large area -one viable site access location 	<div></div> <ul style="list-style-type: none"> -limited space 	<div></div> <ul style="list-style-type: none"> -large area -multiple site access locations
Land Use Planning Objectives	<div></div> <ul style="list-style-type: none"> -privately owned -currently for sale 	<div></div> <ul style="list-style-type: none"> -City owned -park 	<div></div> <ul style="list-style-type: none"> -privately owned -application for development is pending; future of development is uncertain
Natural Environment	<div></div> <ul style="list-style-type: none"> -vehicle access driveway could potentially impact wetland, Species at Risk and Significant Wildlife Habitat 	<div></div> <ul style="list-style-type: none"> -requires watercourse crossing through wetland 	<div></div> <ul style="list-style-type: none"> -requires watercourse crossing through wetland
Social and Cultural Environment	<div></div> <ul style="list-style-type: none"> -Minimal public impact during construction and operation 	<div></div> <ul style="list-style-type: none"> -Use of park temporarily disrupted, and permanent reduction of parkland -construction impacts (noise/dust) 	<div></div> <ul style="list-style-type: none"> -Compatible with future site uses -minor construction impacts (noise/dust)
Economic Environment	<div></div> <ul style="list-style-type: none"> Lower cost 	<div></div> <ul style="list-style-type: none"> Higher cost 	<div></div> <ul style="list-style-type: none"> Moderate cost
Technical Feasibility	<div></div> <ul style="list-style-type: none"> -compatible with future development -good constructability 	<div></div> <ul style="list-style-type: none"> -watercourse crossing may pose challenge from geotechnical perspective -further distance from well 	<div></div> <ul style="list-style-type: none"> -compatible with future development -watercourse crossing may pose challenge from geotechnical perspective

	Low Impact (most preferred)
	Low to Moderate Impact
	Moderate Impact
	Moderate to High Impact
	High Impact (least preferred)



PROPOSED IMPLEMENTATION PLAN

Proposed timeline for implementation of preferred solution is presented below.

CLASS ENVIRONMENTAL ASSESSMENT

Oct - Dec 2017	Completion of the Clythe Well Class EA and Conceptual Design
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DETAILED DESIGN AND CONSTRUCTION

Jan – Jun 2018	Land acquisition, if required
Apr – Jul 2018	Environmental Field Studies
Jul 2018 – May 2019	Completion of detailed design drawings and specifications
Jun 2019	Tendering and contract award for construction
Jul 2019 – Dec 2020	Facility construction and commissioning