

Middlesex Centre Servicing Master Plan

Municipal Class Environmental Assessment

Public Information Centre 2

October 19, 2023

Komoka Community Centre, 133 Queen Street, Komoka, ON



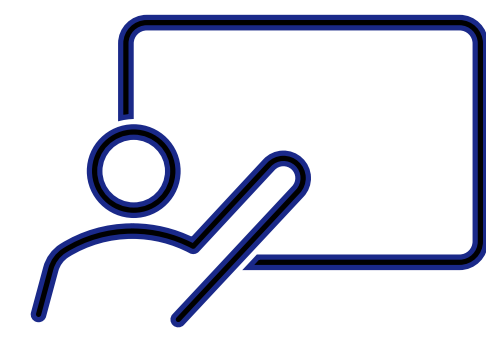
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Welcome!

The goals of this Public Information Centre (PIC) #2 are to:



- Present the evaluation criteria and evaluation process
- Present the preferred strategies and next steps
- Answer any questions you may have and provide an opportunity to be involved in the study

What are we doing?

The Municipality of Middlesex Centre (Municipality) is undertaking an update to the Servicing Master Plan (SMP) that was completed in 2010. Since the 2010 SMP, the Municipality has experienced growth in settlement areas which has prompted servicing extensions and infrastructure upgrades not captured or envisioned in the previous study. As such, this Master Plan update will examine the servicing system needs by reviewing:

- New planning policies
- Population and development growth projections
- Current and future needs and issues that exist within the Municipality

The SMP will identify shortcomings in the water, wastewater, stormwater and solid waste servicing systems, identify alternative solutions, evaluate those alternatives against a set of evaluation criteria, and identify a preferred solution(s) to support planned growth within the Municipality out to the year 2042.

What is Servicing?

Servicing refers to municipally provided services for:

- Water distribution
- Wastewater collection
- Stormwater management
- Solid Waste Collection

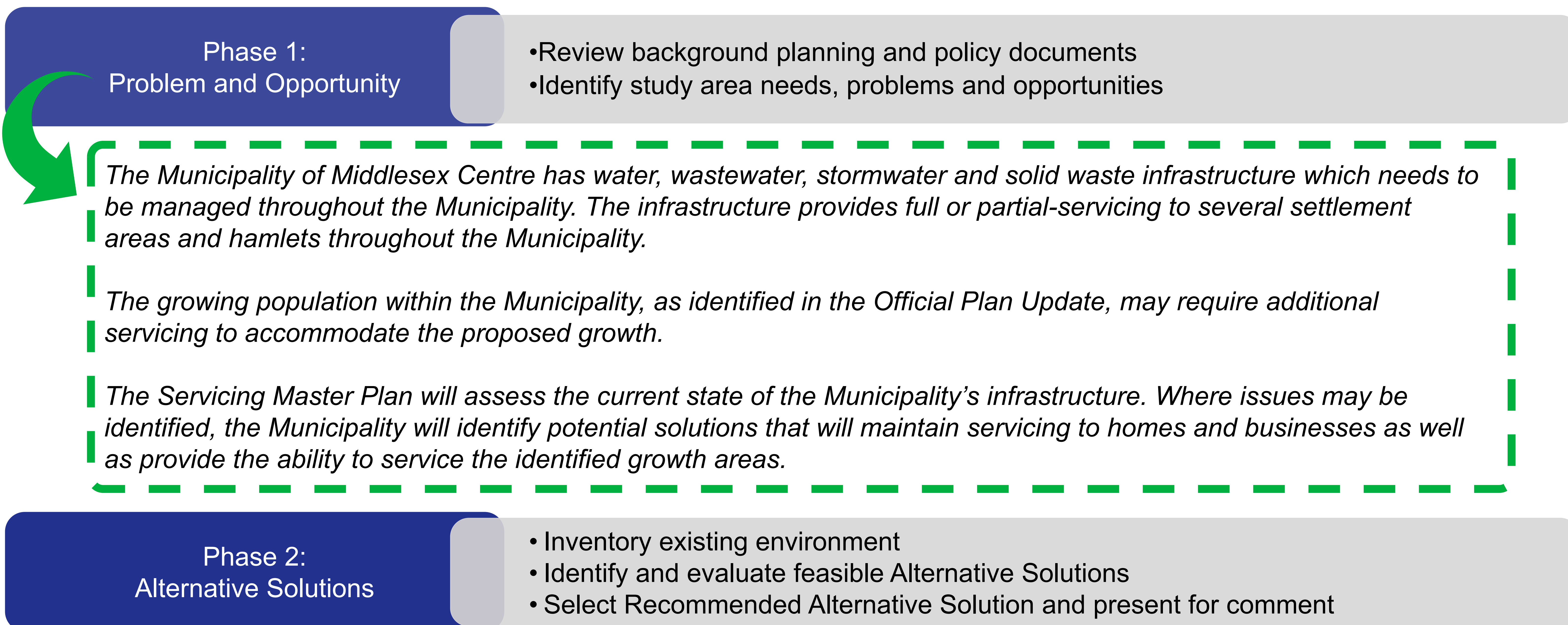
Private Servicing:

Some areas are serviced by private wells or septic systems. Although these are forms of servicing, these are privately owned and operated, and the Municipality does not take responsibility for their operation.

Municipal Class EA Process

A Municipal Class Environmental Assessment (EA) is a process that allows for the planning and implementation of municipal infrastructure (sewers, watermains, roads, etc.) and is legislated by the Ontario Environmental Assessment Act. The process can be used for planning individual projects or to address groups of projects, through a Master Plan.

Master Plans are long range plans which look at existing and future needs. This Master Plan is intended to meet the documentation and consultation requirements for Phase 1 and 2 of the Municipal Class EA process. For most projects, this is sufficient study work to allow projects to proceed to design and construction. For more complex projects with greater impacts, further study is required.



Study Area

The study area includes the following Settlement Areas and Hamlet Areas within the Municipality.

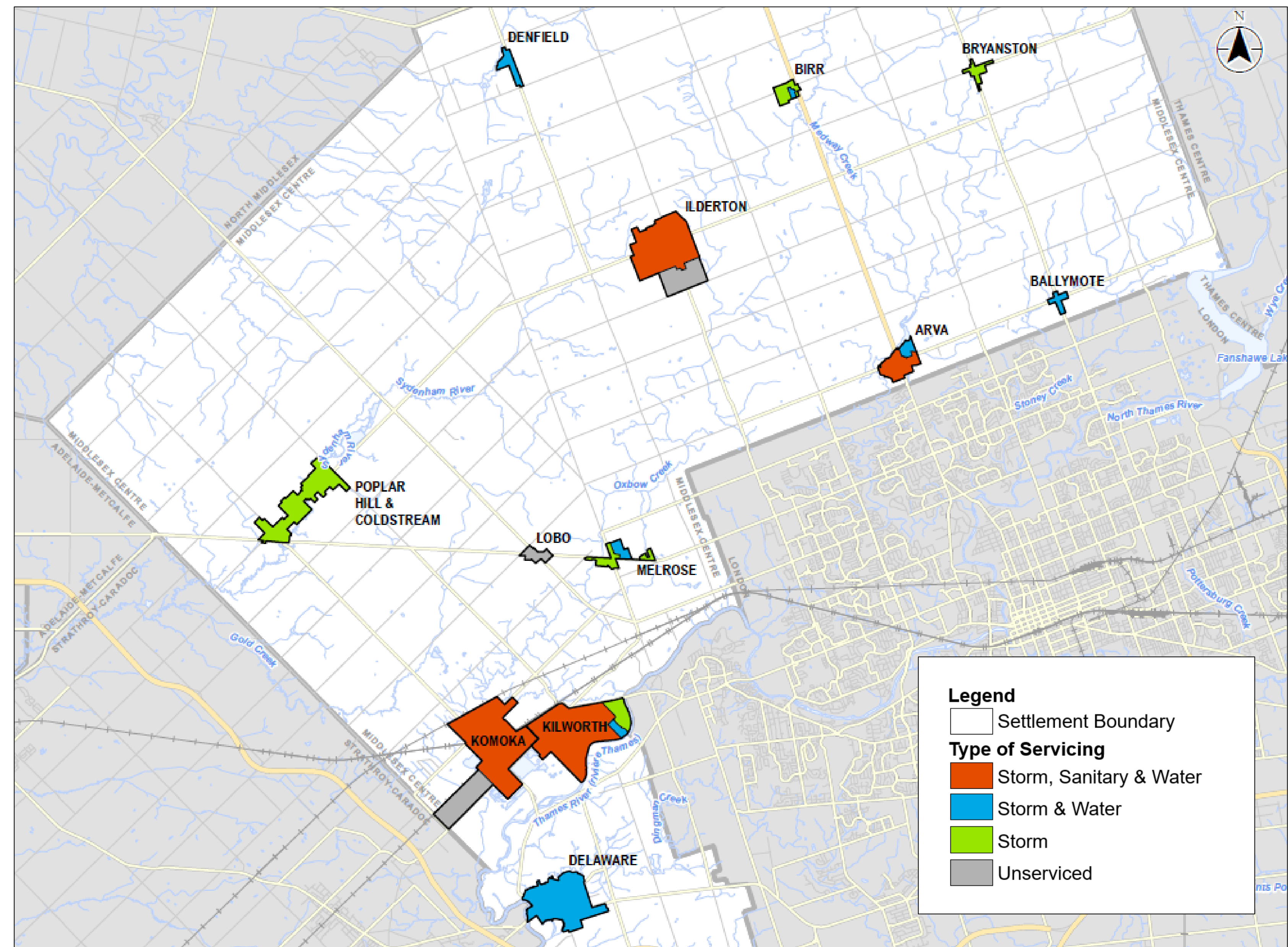
Settlement Areas:

- Ilderton
- Komoka-Kilworth
- Arva
- Delaware

Hamlet Areas:

- Ballymote
- Birr
- Bryanston
- Denfield
- Lobo
- Melrose
- Poplar Hill-Coldstream

How did we do this study?



The following work was completed as part of this study to identify shortcomings within the existing servicing system:

1. Reviewed the existing servicing and examined the existing capacity of the system.
2. Reviewed servicing priorities and operational constraints with Municipality to identify existing and future needs.
3. Identified growth areas and growth forecasts in order to determine future servicing requirements to the year 2042.
4. Identified a list of constraints where servicing solutions or upgrades are required.
5. Developed a list of alternative solutions and evaluated those solutions through the evaluation criteria.
6. Selected a preferred solution for each of the servicing constraints.

Evaluation Criteria

Alternative Solutions were assessed using the factors and criteria listed below.

Natural Environment

- Potential to impact fish and fish habitat
- Potential to impact water resources including surface water (i.e., rivers, creeks, etc.), groundwater recharge areas and wellhead protection areas
- Potential to impact significant natural heritage features
- Potential to impact significant wildlife habitat and species at risk

Socio-Economic

- Potential to impact existing residences, businesses and community features
- Potential effect on approved/planned land uses
- Potential impacts to known or potential significant archaeological resources, built heritage resources and cultural landscape features
- Potential to accommodate planned significant population and job growth within strategic growth areas

Technical Considerations

- Potential land requirements, including land acquisition and temporary/permanent easements
- Constructability & feasibility
- Effect on existing utilities and infrastructure (number of potential conflicts)
- Ability to coordinate with existing and planned infrastructure improvements
- System resiliency to climate change and large weather events and system suitability
- Ability to phase implementation

Financial Considerations

- Lifecycle operations and maintenance cost
- Estimated capital cost
- Ability to phase implementation

Evaluation Process

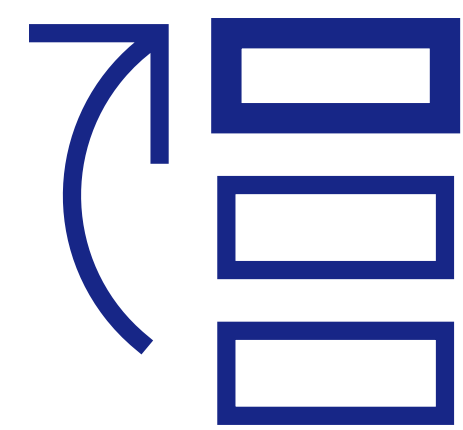


1. Alternatives were developed for each Settlement and Hamlet area. The alternatives address the following servicing system improvements:

- Water
- Wastewater
- Stormwater
- Solid waste



2. The alternatives were evaluated against evaluation criteria identified by the project team.



3. The alternatives were ranked as Least Preferred, Moderately Preferred, or Most Preferred.

4. The Most Preferred alternatives are the Recommended Solutions for servicing systems improvements in each settlement and hamlet area.



5. The Recommended Solutions for each Settlement and Hamlet area are presented on the following slides.

Detailed evaluation tables will be provided in the final Servicing Master Plan report.

- 1

Sanitary sewage treatment is recommended to continue to be provided through agreement with the City of London. The current agreement allows limited growth and will need to be renegotiated in future as growth occurs.
- 2


Sanitary conveyance for growth in Arva is recommended to be provided by a new sanitary pumping station at the west end of Medway Road on proposed development lands. This new PS will discharge flows to the existing PS on Richmond Street which will remain in service and, in turn, discharge flows to the City of London sewer system.
- 3

A new water storage facility is recommended and is proposed to be located at the west end of Medway Road adjacent to the proposed sanitary pumping station. The size of the facility is estimated at 900 m³.
- 4


The construction of a new feeder watermain on Medway Road from the proposed water storage facility to PS #4 at the Arva Reservoir is recommended which will allow Arva to be supplied from the Lake Huron Water Supply system. The length of the new watermain is approximately 1.25 km. The current watermain connection to the City of London would be decommissioned and the Municipality can realize a cost savings due to the lower water cost from the Lake Huron System.
- 5

Stormwater management for new growth in Arva will be provided by on-site controls within the development lands.


Legend



Settlement Boundary




Parcel




Future Growth Area


Proposed Project



Sanitary




Water




Storm


Existing Servicing




Sanitary Facility




Sanitary Sewer




Sanitary Forcemain



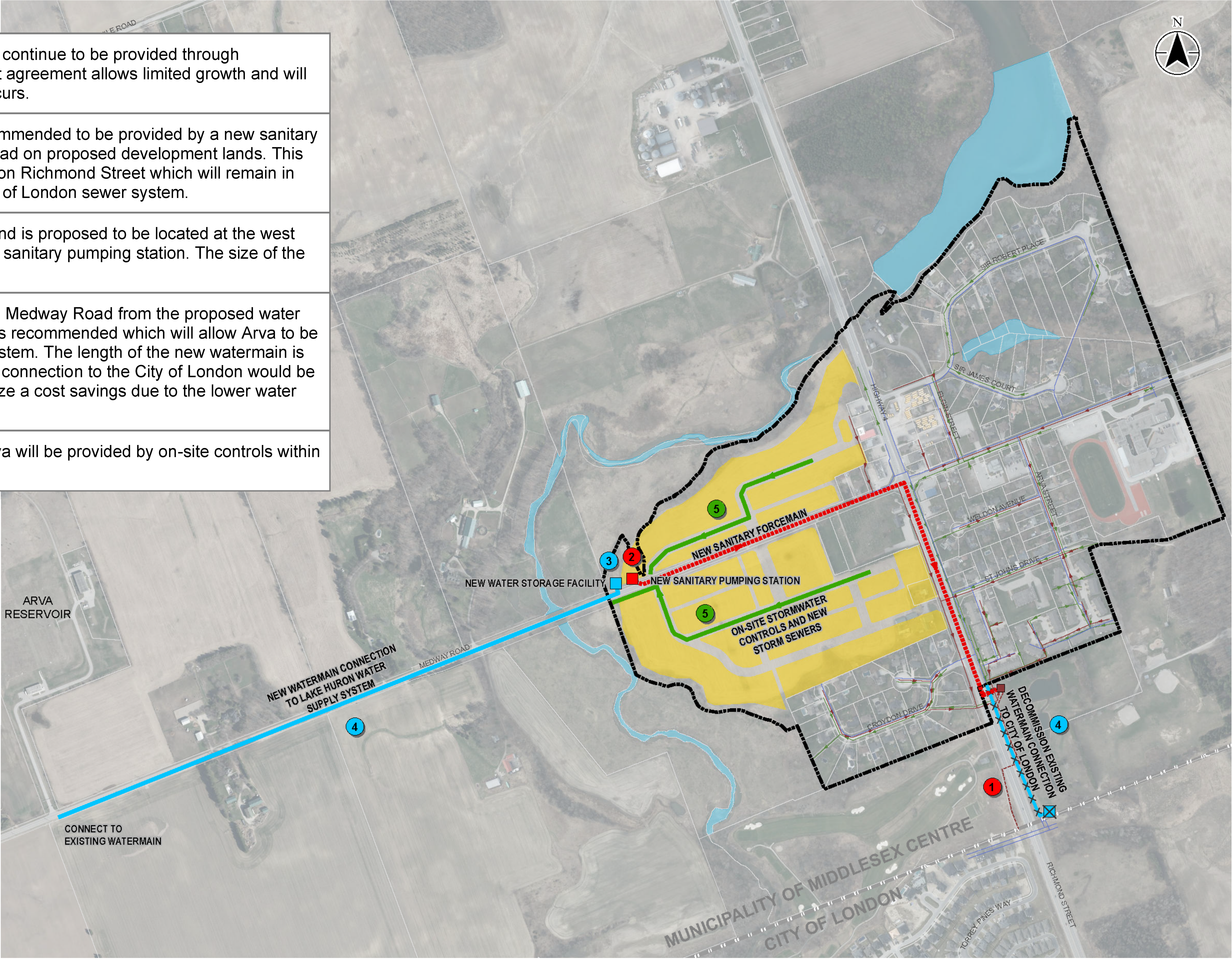
Water Facility

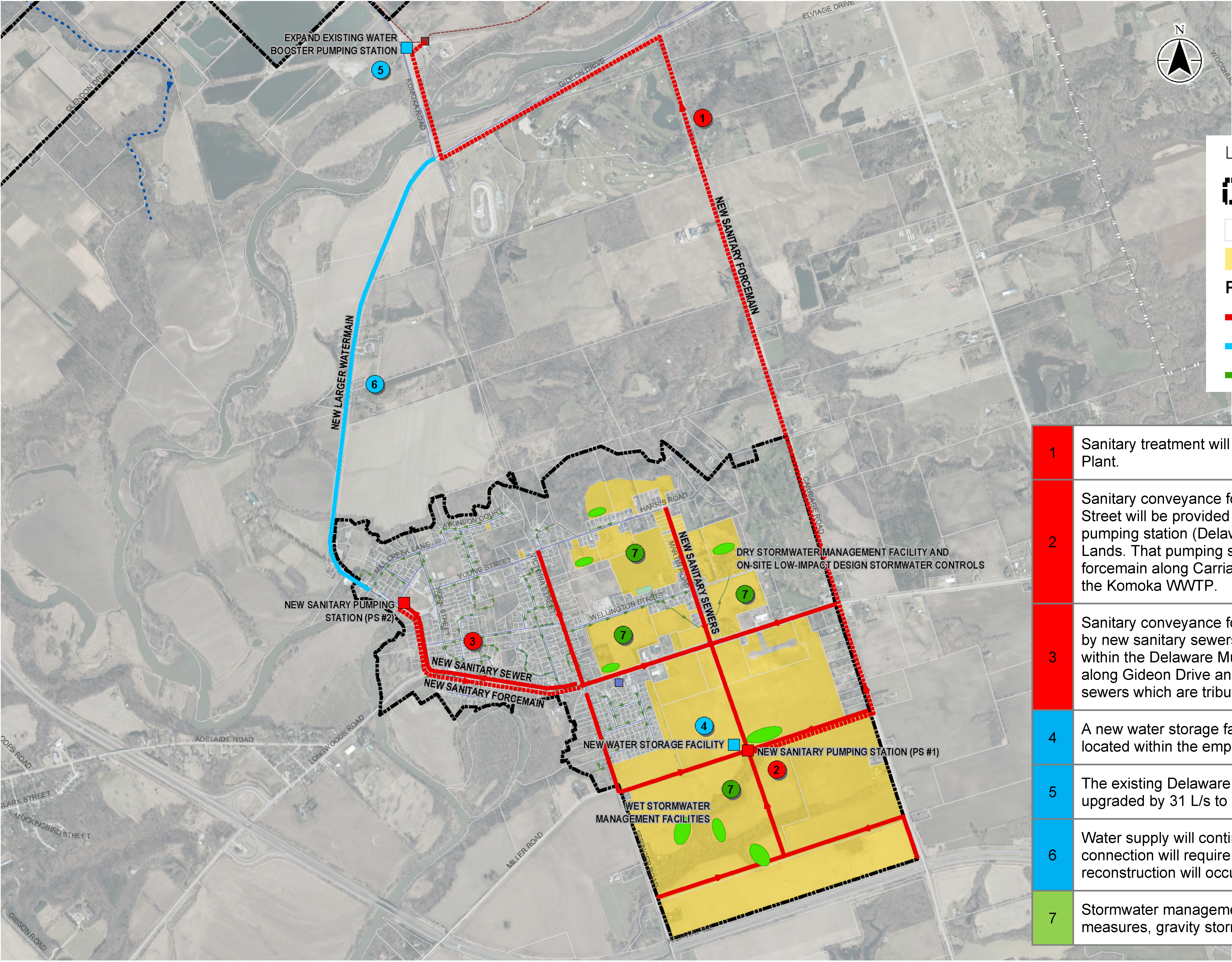


Watermain





Storm Sewer







Legend


 Settlement Boundary


 Parcel

 Future Growth Area


Proposed Project


 Sanitary


 Water


 Storm


Existing Servicing


 Sanitary Facility

 Sanitary Sewer

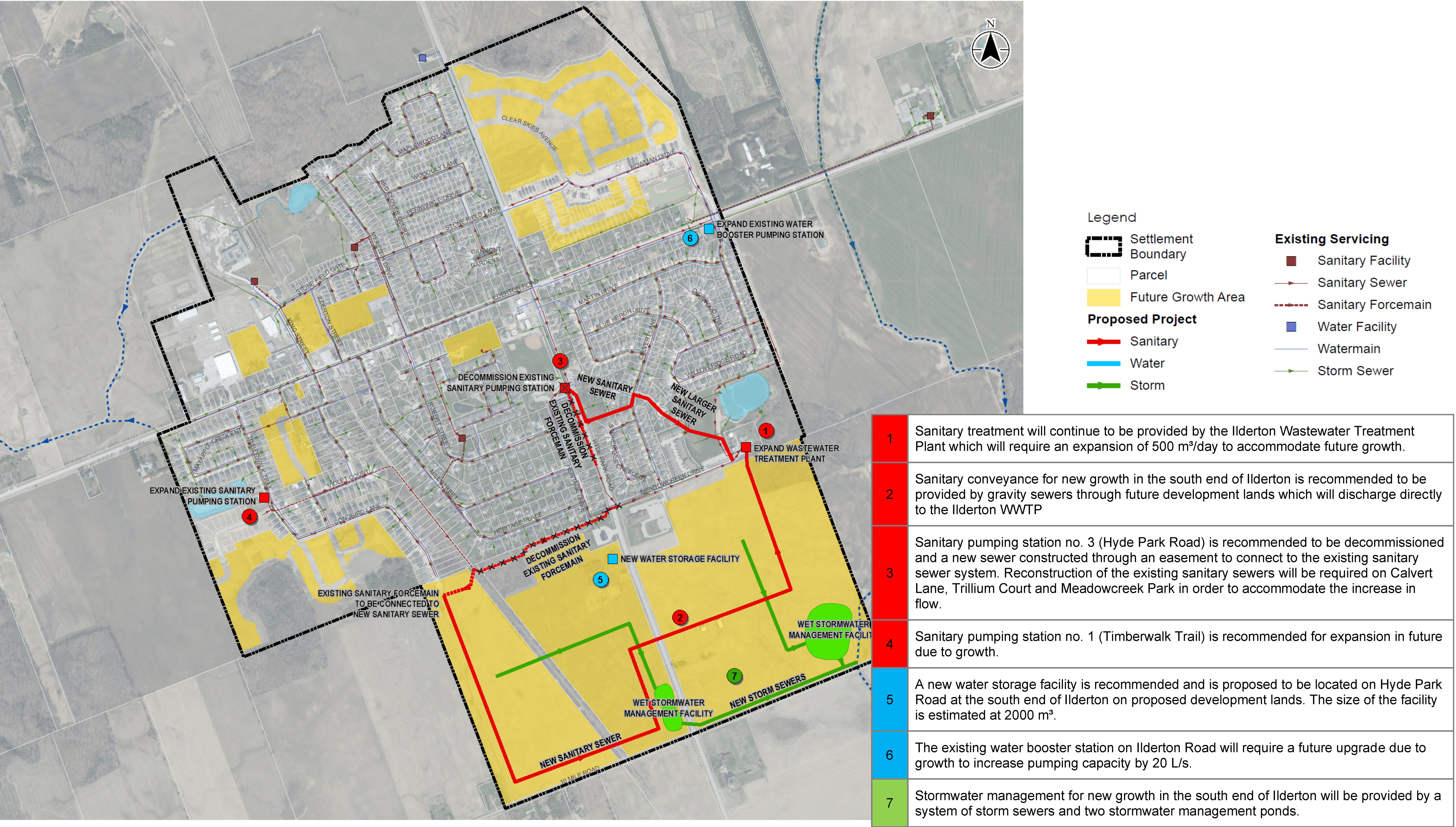
 Sanitary Forcemain

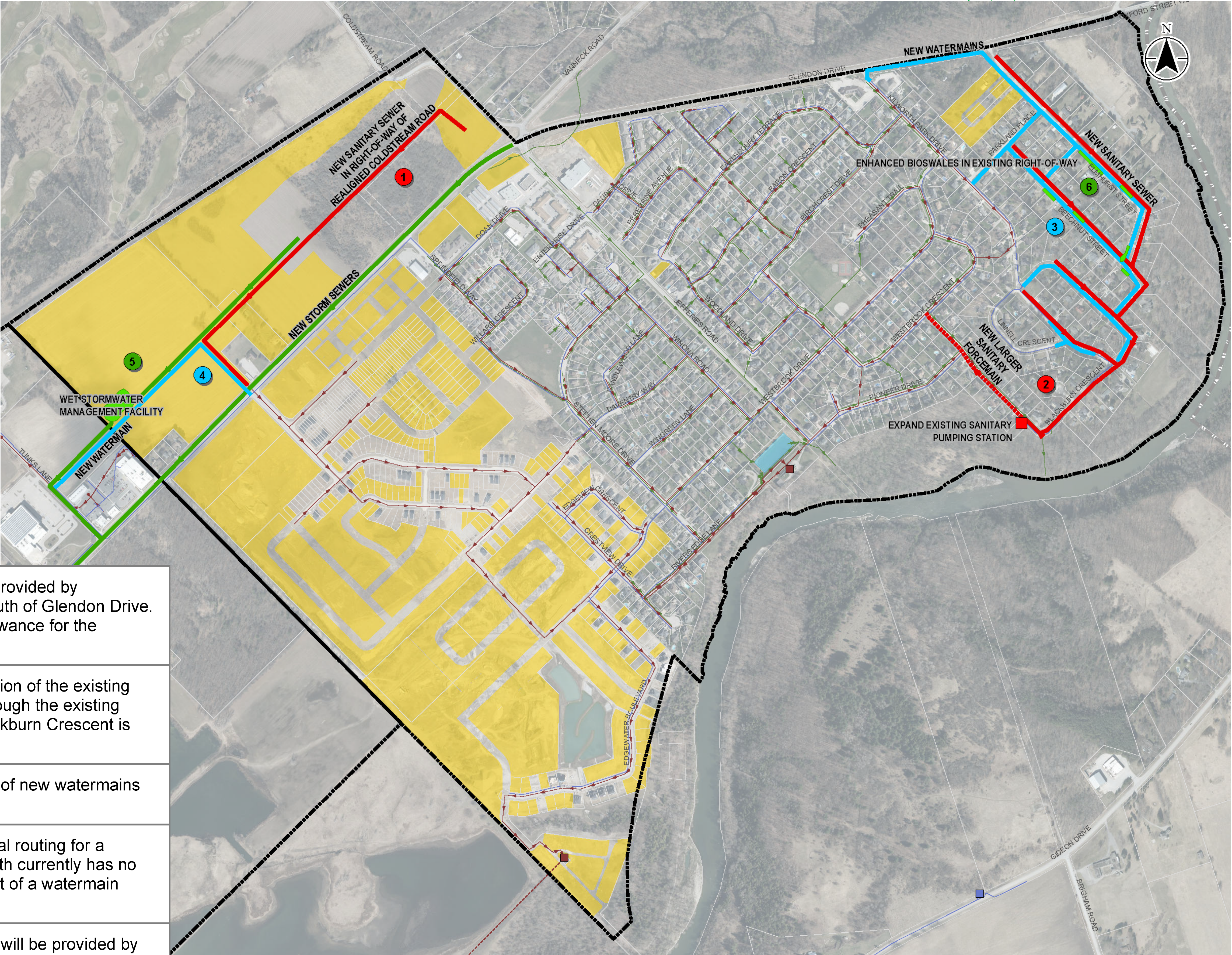
 Water Facility

 Watermain

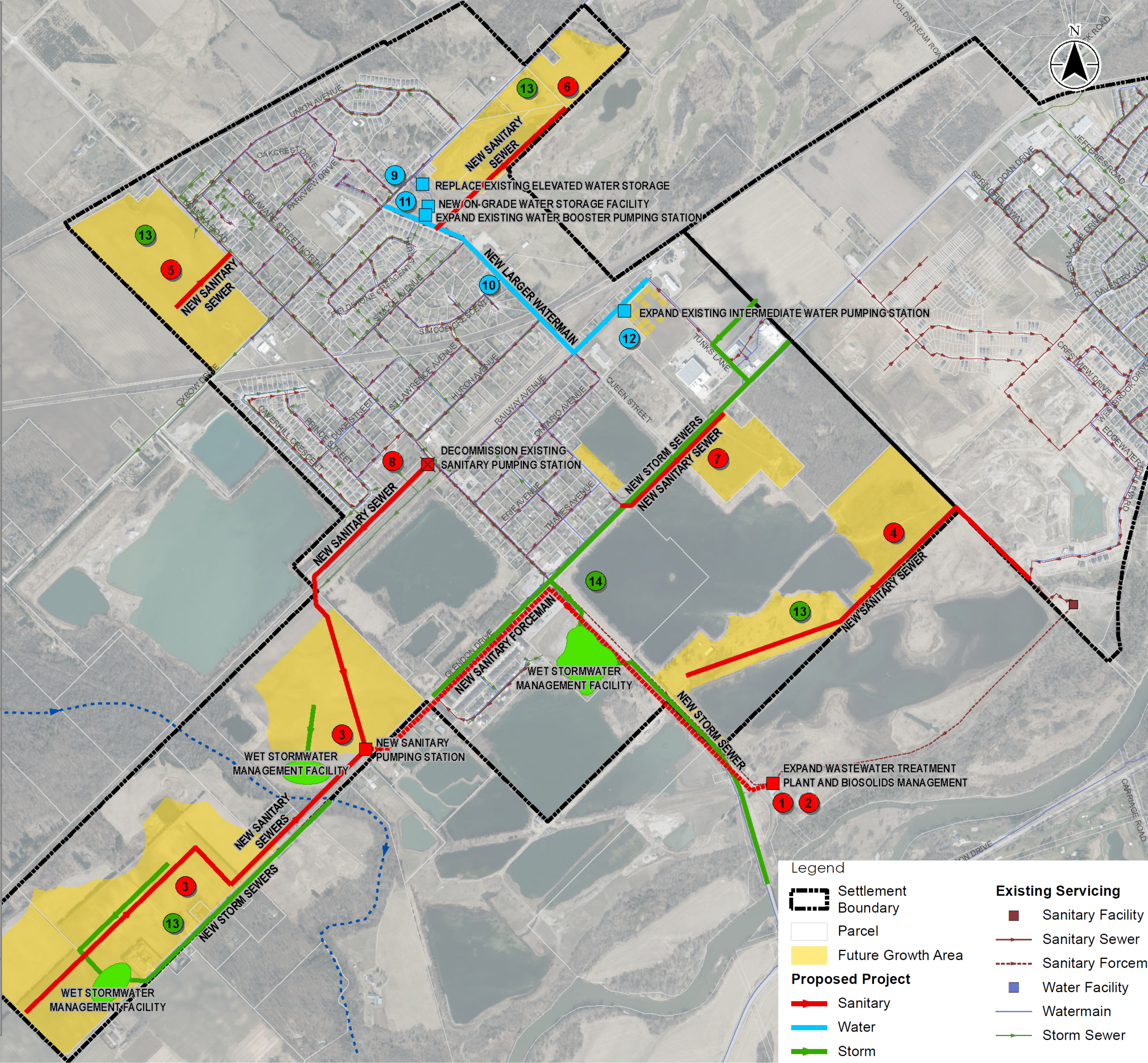
 Storm Sewer

1	Sanitary treatment will be provided by a connection to the Komoka Wastewater Treatment Plant.
2	Sanitary conveyance for new growth in Delaware and lands generally east of Victoria Street will be provided by the construction of new sanitary sewers and a new sanitary pumping station (Delaware sanitary PS #1) which will be located within the Employment Lands. That pumping station will be designed to receive flows and discharge by a forcemain along Carriage Road, Gideon Drive and Komoka Road in order to discharge to the Komoka WWTP.
3	Sanitary conveyance for existing neighbourhoods west of Victoria Street can be provided by new sanitary sewers and a new sanitary pumping station (Delaware sanitary PS #2) within the Delaware Municipal Park. That pumping station will convey flows by forcemain along Gideon Drive and Longwoods Road and discharge into the proposed sanitary sewers which are tributary to proposed Delaware sanitary PS #1.
4	A new water storage facility of an approximate size of 1700 m ³ is recommended to be located within the employment lands adjacent to proposed Delaware sanitary PS #1.
5	The existing Delaware water booster station on Komoka Road is recommended to be upgraded by 31 L/s to accommodate growth.
6	Water supply will continue to be provided by connection to Komoka, however, this connection will require reconstruction with a larger watermain. This watermain reconstruction will occur on Gideon Drive (from Komoka Road to Millcreek Lane).
7	Stormwater management for the growth lands will be provided by infiltration (LID) measures, gravity storm sewers with end of pipe stormwater management ponds.



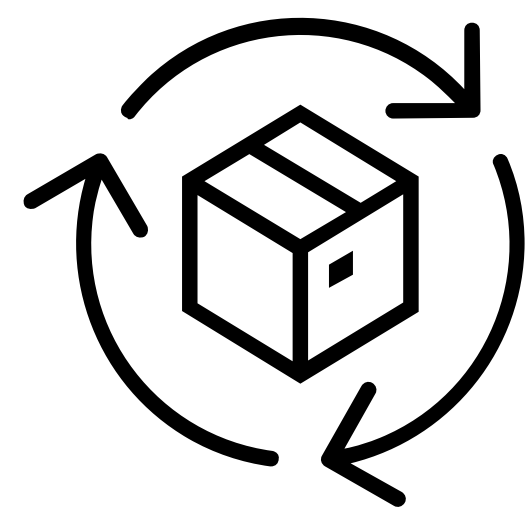


1	Sanitary treatment will continue to be provided by the Komoka Wastewater Treatment Plant which require expansion by 2,350 m³/day to accommodate future growth. This expansion includes accommodating future growth in Kilworth and Delaware.
2	Biosolids management at the Komoka Wastewater Treatment Plant will require expansion due to the increase in flows.
3	Sanitary conveyance for new growth in the west end of Glendon Drive will be provided by gravity sewers and a new sanitary pumping station on development lands north of Glendon Drive. The pumping station will discharge flows by forcemain along Glendon Drive and Komoka Road to the Komoka WWTP.
4	Sanitary conveyance for new growth southeast of Komoka Road (north of Komoka Provincial Park) can be serviced by connecting to the existing sanitary sewers to the east on Edgewater Boulevard.
5	Sanitary conveyance for new growth west of Komoka Road and north of Oxbow Drive will be provided by connection to the existing sewers on Komoka Road.
6	Sanitary conveyance for new growth south of Oxbow Drive and east of Queen Street will be provided by connection to the existing sewers on Queen Street through an easement within Komoka Park.
7	Sanitary conveyance for new growth along south side of Glendon Drive will be provided by connection to the existing sewers on Glendon Drive at Springer Street.
8	The sanitary pumping station in Komoka is recommended to be decommissioned in future with the recommended extension of sewers through municipal lands to the west and a sewer connection through growth lands on Glendon Drive. Flows will discharge to the proposed pumping station on Glendon Drive.
9	Decommissioning of the existing elevated water tower on Oxbow Drive is recommended due to pressure issues. It is recommended that a combination of new elevated storage at the site of the existing tower and on-grade storage in Komoka Park be provided. The estimated storage required for new growth and to replace the existing elevated tower is 5,800 m³.
10	Watermain reconstruction will be required on Queen Street (from Oxbow Drive to Railway Avenue) and Railway Avenue (from Queen Street to Tunks Lane) to provide better water supply and pressures to Kilworth.
11	The existing water booster station in Komoka Park will require a future upgrade due to growth to increase pumping capacity by 61 L/s.
12	Intermediate pump station on Railway Avenue is recommended to be upgraded to provide additional pumping for future growth.
13	Stormwater management for development lands will be provided by gravity storm sewers with end of pipe stormwater management ponds.
14	Stormwater management for existing development and proposed growth in the central area of Komoka (lands around Komoka Road and Glendon Drive) will be provided by a planned stormwater management pond to be located on the west side of Komoka Road.



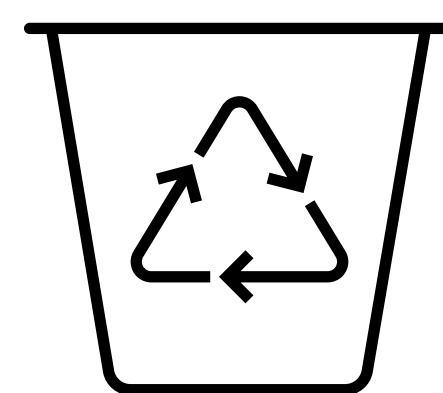
Solid Waste Servicing

Middlesex Centre currently provides solid waste collection and disposal to its residents by contracting this work to the Bluewater Recycling Association. This is an Association of 21 member municipalities of which Middlesex Centre is one member.



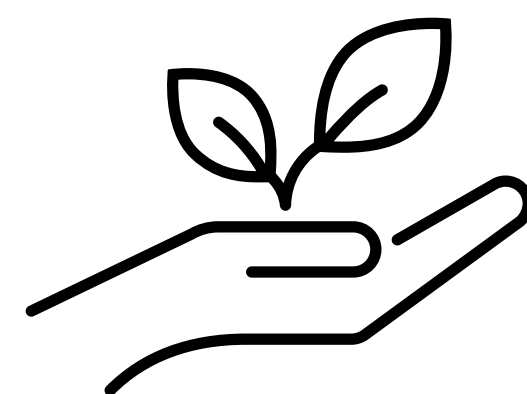
Significant regulatory changes in solid waste management have been legislated and are pending, including:

- Climate change requirements to reduce the impact of solid waste on the environment;
- Extended Producer Responsibility (EPR) to ensure that companies putting products on the market are considering the full life-cycle of products and packaging. By making them responsible, they produce less waste and recycle more;
- Excess Soil Management Regulations to reduce usable soils from ending up in landfills



Opportunities to increase diversion rates from landfills still exist:

- An estimated 68% of the average waste bag contains organic matter that can be composted or digested
- Recycling has leveled off, but can be increased with EPR legislation.



Recommendations of the plan include:

- Continue to contract with BRA for waste and recycling.
- Review opportunities to introduce an organic matter collection system with diversion to composting or anaerobic digestion.



Thank you for participating!

Following this PIC, the project team will complete the next steps identified below:

- Review and respond to comments received, and continue to consult Indigenous communities, agencies and the public
- Confirm Recommended Solution and Implementation Strategy
- Prepare Servicing Master Plan reporting for 30-day review period

The results of this study will be documented in a Servicing Master Plan. The Master Plan will be made available on the Municipality of Middlesex Centre's website for a 30-day public review period, tentatively scheduled for early 2024.

Thank you for participating this PIC #2 for the Municipality of Middlesex Centre Servicing Master Plan. Please provide comments by contacting a member of the project team below:



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