Employment Area Expansion Analysis

Municipality of Middlesex Centre

Final Report

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In association with:

Stantec

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List of Acronyms and Abbreviations

F.D.I.	**Foreign Direct Investment**
G.G.H.	**Greater Golden Horseshoe**
G.T.H.A.	**Greater Toronto Hamilton Area**
G.T.A.	**Greater Toronto Area**
O.E.C.D.	**Organisation for Economic Co-operation and Developed**
O.P.	**Official Plan**
S.W.O.C.	**Strengths, Weaknesses, Opportunities and Constraints**
U.S.	**United States**

Executive Summary

Executive Summary

Introduction

Watson & Associates Economists Ltd. (Watson) and Stantec Consulting Ltd. (Stantec) were retained by the Municipality of Middlesex Centre in the Spring of 2021 to develop an Employment Area Expansion Analysis as a supplementary background study to the municipality's Official Plan Review (O.P.R.).

Middlesex Centre Employment Area Marketability and Foreign Direct Investment

The creation of a new Employment Area within Middlesex Centre provides an opportunity to develop and market the municipality to a wider range of prospective domestic and foreign businesses. The creation of a new business park will allow the municipality to plan for a cohesive Employment Area vision which supports a wide range of industrial, commercial and employment supportive business functions. Having a marketable vision for Employment Areas will allow Middlesex County and the Municipality of Middlesex Centre to attract and accommodate new and existing growing businesses, which contribute to regional economic development and growth in the local tax base. As established in the terms of reference for this study, a component of this review is to also examine how the Municipality can develop a new Employment Area which leverages foreign direct investment (F.D.I.). While this report references foreign direct investment, the findings are applicable to local, provincial and national businesses considering locations along the 401/402 corridor.

As the negative economic effects of the COVID-19 pandemic continue to gradually recede, F.D.I. will be an important component of Canada's recovery. From a local perspective, as the anticipated F.D.I. recovery in Canada occurs, it is critical that municipalities are able to offer a range of serviced employment lands, which provide an opportunity to accommodate global capital growth and business development. A new serviced Employment Area within Middlesex Centre along Highway 402 would effectively become a key marketable Employment Area in the County from both a domestic and F.D.I. context.

Target Sectors in the Preferred Middlesex Centre Employment Area

The new Middlesex Centre Employment Area should be planned as a prestige business park, with attributes and amenities to attract the region's growing knowledge-based and industrial economy. Utilizing the strategic advantages of the Highway 401/402 corridor will

allow the Municipality to attract a wider-range of potential industrial and commercial businesses which leverage the competitive features and strengths of this area. With this vision in mind, the key target sectors for the new Middlesex Centre Employment Area are summarized below:

- Manufacturing/Advanced Manufacturing;
- Distribution and Logistics;
- Professional, Scientific, and Technical Services/Business Services;
- Research and Development;
- Agri-business; and
- Food and Accommodation Services / and other Employment Supportive Uses.

Middlesex Centre Highway 401/402 Corridor Employment Area Location Options

The economic development prospects of Middlesex Centre are in many ways tied to the success of the broader regional market. The Municipality shares the relative strengths of the broader Highway 402 corridor market in terms of investment attraction, competitive property taxes and development costs. The Municipality's location along this major transportation corridor allows for the efficient movement of goods and people as well as proximity to surrounding growing employment markets. This, along with its proximity to the United States (U.S.) border provides an important competitive advantage for industrial development. The degree to which Middlesex Centre can capitalize on its regional location advantages will depend largely on the competitiveness of its employment lands.

Employment Area 1 (shown in Figure 4-1) represents the preferred location for a new Employment Area in Middlesex Centre. It offers strong cohesion with the existing designated Delaware Employment Area, has a sufficient amount of land area which is relatively unencumbered by environmental constraints, can potentially be serviced in conjunction with the Delaware Community Settlement Area and provides good access/exposure to Highway 402. Furthermore, the existing road network can accommodate the increased traffic associated with the development of this area, which is of critical importance with respect to local traffic impacts.

Conclusions and Next Steps

The Provincial Policy Statement (P.P.S)., 2020 identifies the specific requirements which must be meet by Ontario municipalities with respect to the expansion of a settlement area boundary, as set out in section 1.1.3.8.

As part of the Municipality of Middlesex Centre G.M.S. Technical Report - Final, February 2022, the need for the proposed expansion area has been addressed. The analysis conducted through this Employment Area Expansion Study also provides an initial review of infrastructure requirements associated with the proposed expansion area. Additional analysis is recommended to comprehensively assess the financial viability and long-term fiscal impacts of associated municipal infrastructure servicing. Furthermore, prime agricultural area impacts, minimum distance separation and impacts on adjacent agricultural operations will also need to be addressed prior to the approval of a local official plan amendment (O.P.A.) to permit the expansion of the municipality's settlement area boundary. Subsequent to O.P.A. approval, further planning studies associated with the new Employment Area related to land use, urban design, natural heritage and environment as well as municipal review will also be required through the development of a Secondary Plan.

Report

Chapter 1
Introduction

1. Introduction

1.1 Terms of Reference

Watson & Associates Economists Ltd. (Watson) and Stantec Consulting Ltd. (Stantec) were retained by the Municipality of Middlesex Centre in the Spring of 2021 to develop an Employment Area Expansion Analysis as supplementary analysis to the municipality's Official Plan Review (O.P.R.). The primary objectives of this study are to:

- Build of the results of the urban lands needs analysis reported in the O.P.R., to determine suitable location options along the Highway 401/402 corridor for a new urban Employment Area within the municipality;[1]
- Conduct a Strengths, Weaknesses, Opportunities and Constraints (S.W.O.C.) analysis to evaluate prospective Employment Area lands, based on:
    - Identified physical opportunities and constraints (existing land use, transportation connectivity, site configure, natural features);
    - High-level servicing opportunities and constraints associated with water, sanitary and transportation;
    - Real estate market and land use attributes (access to highway interchange, highway exposure, connectivity, site size and configuration, urban structure, etc.); and
    - Other planning and land economic criteria developed by the Consultant Team in consultation with municipal staff.
- Conduct a municipal infrastructure servicing cost analysis of the preferred Employment Area related capital costs associated with municipal water, sanitary and roads infrastructure;
- Identify target industries that would be attracted to this region which would assist the municipality to accommodate both domestic and foreign investment; and
- Conduct a marketability and investment analysis to review the opportunities and challenges associated with the attraction of domestic and foreign business investment within the subject Employment Area.

[1] Official Plan Review. Municipality of Middlesex Centre. Growth Management Strategy Technical Report – Final, February 3, 2022. This study also builds on the Economic Diversification and Growth Management Discussion Papers prepared as part of the Middlesex Centre O.P.R. Official Plan Review | Middlesex Centre

Chapter 2
Middlesex Centre Employment Area Marketability and Foreign Direct Investment

2. Middlesex Centre Employment Area Marketability and Foreign Direct Investment

2.1 Introduction

This Chapter provides a brief review of macro-economic conditions and regional employment trends influencing industrial land development in Ontario. This analysis has been provided as background to a marketability analysis for a new Employment Area within the Municipality of Middlesex Centre aimed to attract and accommodate foreign direct investment (F.D.I.) as well as domestic employment opportunities. Chapter 3 explores key industry sectors that the municipality should target in this new Employment Area and the key site requirements for each industry cluster. Chapter 4 provides a S.W.O.C. analysis for three candidate Employment Area expansion locations in the Municipality as well as recommendations regarding the preferred location option. Appendix A provides a high-level servicing feasibility analysis for the recommended new Employment Area. As previously noted, this feasibility analysis explores servicing considerations related to transportation infrastructure, municipal sanitary servicing and municipal water servicing.

2.2 Planning for Employment Lands in the New Economy

As discussed in the Municipality of Middlesex Centre G.M.S. Technical Report, February 2022 (G.M.S. Final Technical Report), recent structural changes in the regional economy have led to a shift in how Employment Areas are planned and developed. As a result of these changing structural economic trends, “place making” is increasingly recognized as an important planning component in creating diverse and vibrant communities, which in turn can help attract local population and knowledge-based job growth providing that other necessary infrastructure requirements are met. In planning for Employment Areas, this is particularly relevant for light industrial and office environments which integrate ancillary retail uses and other employment supportive amenities.

Driven by an increasing emphasis on innovation and technology, evolving and emerging export-based sectors have siting, space and built-form requirements that are significantly different from traditional industrial sectors that have occupied employment lands in Middlesex Centre and Middlesex County in the past. This may include

requirements related to broad infrastructure, transit access, energy efficiency, building and urban design standards, eco-industrial design principles and proximity to skilled labour. Site configuration and integration of uses is also evolving particularly in Industrial Parks which often integrate operations combining office, research and development, warehousing and logistics, and on-site manufacturing in a "campus-style" setting.

The G.M.S. Technical Report provides an extensive discussion regarding the structure changes and disruption occurring in the macro-economy and the importance of recognizing these factors when planning for Employment Areas. Through the background discussion papers and reports prepared as part of the Municipality's O.P.R, it is also noted that the COVID-19 pandemic has accelerated these disruptive forces, many of which were already in place, over the past two years.

As a result of COVID-19, many enterprises have been increasingly required to rethink the way they conduct business with an increased emphasis on remote (or distributed) work patterns enabled by technology. As the percentage of work at home and off-site employment continues to steadily rise, this may reduce the relative need for future non-residential space needs related to the office, retail and institutional sector. In contrast, industrial space needs, particularly related the logistics sector, have steadily increased across southern Ontario over the past several years driven by the shift of retail space from traditional "bricks and mortar" to e-commerce and associated fulfillment centres.

Across Canada, increased outsourcing of manufacturing production to emerging global markets continues to drive the need for new consolidated, land-extensive warehousing facilities to store and manage the distribution of goods produced locally as well as goods imported from abroad. This continues to drive demand for increasingly larger, more land-extensive warehousing facilities, generally in greenfield Employment Areas. The Goods Movement industry (i.e. transportation and warehousing, wholesale trade) is continuously evolving at a rapid pace responding to growing consumer demand as well as increased expectations with respect to speed of delivery. E-commerce and technological improvements represent the biggest drivers of change in the Goods Movement industry, driven by the rapid growth of mobile technology. In Ontario, these trends are anticipated to fuel further growth for distribution/logistics centres particularly in locations which are located along, or in proximity to major trade corridors such as Hwy. 401 as well as other 400-series highways. These trends are already being observed in the broader regional market area, with the sale of the former Ford

manufacturing plant in Southwold now being redeveloped for a large-scale e-commerce logistics operation.

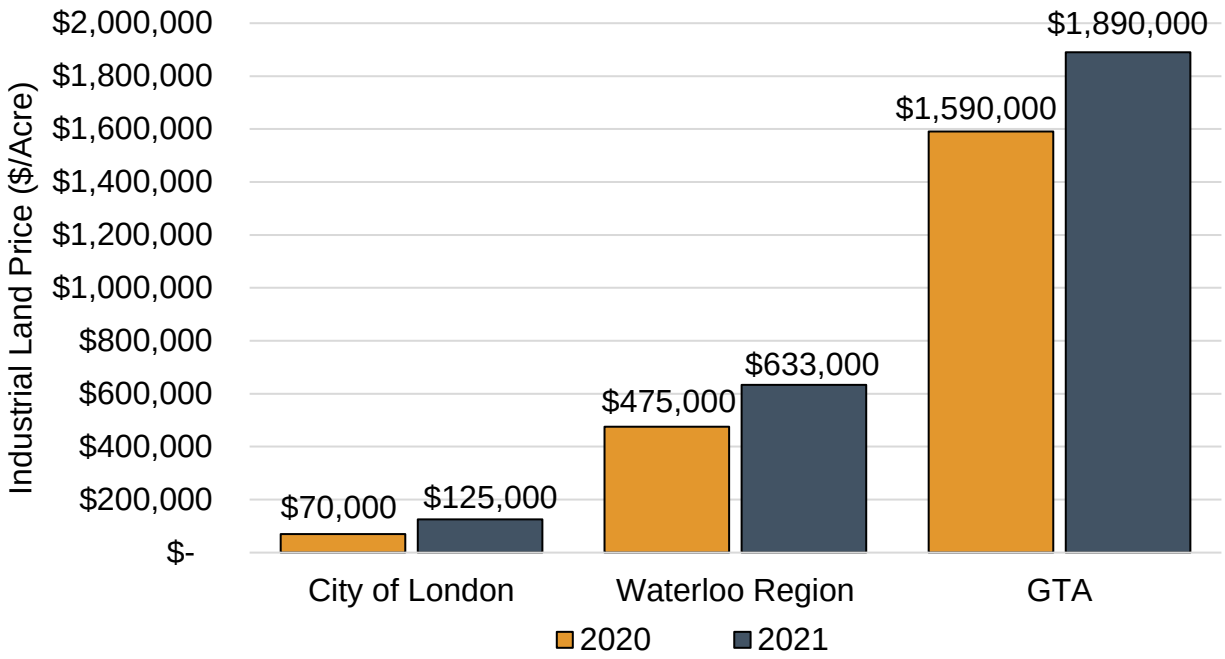
Recognizing these recent structural changes in the regional economy, there is a need for Middlesex Centre to ensure that the amount, type, and location of its established and planned Employment Areas are well aligned with anticipated market demand. This requires that near-term (i.e., shovel-ready lands) and longer-term Employment Area land needs are adequately addressed.

In assessing the local industrial market within Middlesex Centre, is also important to consider broader trends occurring within the industrial real estate market in the Greater Toronto Hamilton Area (G.T.H.A.). The industrial market within the G.T.H.A. is currently faced with rising industrial land costs, a shrinking supply of available land for development and persistently low industrial vacancy rates. This lack of available and affordable industrial land continues to place outward pressure beyond the G.T.H.A., as businesses look for opportunities in markets such as the City of Woodstock, the City of London and the Municipality of Middlesex Centre to accommodate strategically located land extensive industrial facilities.

As displayed in Figure 2-1, the average price for serviced industrial land within the City of London is considerably lower when compared to the Region of Waterloo and the Greater Toronto Area (G.T.A.) as of 2021.[1] A tightening of industrial land supply in the G.T.A. is anticipated to fuel relatively higher industrial land demand in locations such as Middlesex Centre over the next decade and beyond when compared to recent local trends experienced over the past five to 10 years.

[1] Real estate data for Middlesex Centre was not available, so the City of London was used as a comparator municipality.

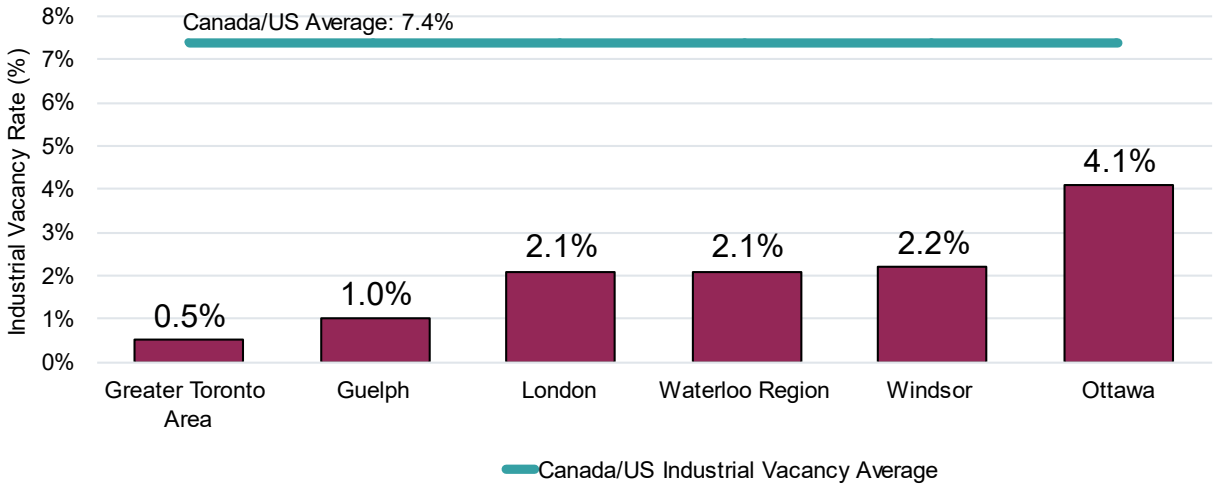
Figure 2-1
Average Price of Serviced Industrial Land in Select Ontario Markets, 2020 and 2021



Source: CBRE, 2021 and https://london.ca/city-owned-industrial-land-sale.

Figure 2-2 displays industrial vacancy rates across selected Ontario markets. As shown, the City of London had a 2020 vacancy rate of 2.1%, which is comparable to the Region of Waterloo. Compared to the Canada/United States average of 7.4%, the City of London has a significantly lower vacancy rate, which is indicative of a relatively strong industrial market for this area.

Figure 2-2
Industrial Vacancy Rates in Select Ontario Markets, 2020



Source: Derived from data from Colliers and CBRE, 2021.

2.3 Employment Area Marketability and Investment Opportunities

The creation of a new Employment Area within Middlesex Centre provides an opportunity to develop and market the municipality to a wider range of prospective domestic and foreign businesses. It is recommended that this new Employment Area is planned as a prestige business park which supports a wide range of industrial, commercial and employment supportive business functions. Having a marketable vision for the Employment Area will allow Middlesex County and the Municipality of Middlesex Centre to attract and accommodate new and existing growing businesses, which contribute to regional economic development and growth in the local tax base. As established in the terms of reference for this study, a component of this review is to examine how the Municipality can develop a new Employment Area which leverages F.D.I.

Within Middlesex County there are several plans which direct economic development initiatives. The County released a Foreign Direct Investment Strategy Report in July of 2011, the County of Middlesex Economic Development Strategic Plan in January of 2014, and an updated Middlesex County Economic Development Strategy 2021-2025 in December on 2020. Together, these documents provide guidance on economic development for the County and its area municipalities.

2.4 Foreign Direct Investment and COVID-19

Global economic uncertainty surrounding the COVID-19 pandemic has ongoing effects on the level of F.D.I. into Canada. According to Statistics Canada, F.D.I. inflow for Q2 of 2020 was $10.8B CAD, compared to $20.3B in Q2 of 2019, representing a decrease of nearly 47%.[1] This trend is not unique to Canada, as F.D.I. flows globally have reduced due to economic uncertainty caused by the pandemic. The national reduction of F.D.I. caused by an economic recession is not uncommon in Canada, as similar patterns occurred in the 1990-1992 recession, the 2002-2004 downturn related to SARS and the 2008/2009 global financial crisis. Through these previous periods of economic uncertainty, Canada had fared better than the average performance of the Organization for Economic Co-operation and Developed (O.E.C.D.) Countries. Accordingly, F.D.I. into Canada declined steadily at the onset of the 2008/2009 global financial crisis, hitting a low in 2011. By 2013, F.D.I. into Canada had exceeded the initial economic contraction.[2] As the negative economic effects of the COVID-19 pandemic continue to gradually recede, F.D.I. will be an important component of Canada's recovery. From a local perspective, as the anticipated F.D.I. recovery in Canada occurs, it is critical that municipalities are able to offer a range of market choice for serviced employment lands, which provide an opportunity to accommodate global capital growth and business development.

2.5 Foreign Direct Investment in the Municipality of Middlesex Centre

According to the December 2020 Economic Development Strategy, F.D.I. will remain a key focus in Middlesex County to leverage the U.S.-Canadian border advantage as well as the attraction of overseas businesses from Europe and Asia. According to the report, the County should aim to build on the existing strengths in the manufacturing and agriculture sectors, to promote F.D.I. in food and beverage, logistics and supply chain opportunities. In 2020, a Target Industry Snapshot was completed, which

[1] Canada's FDI Numbers for Q2 and the Economic Effects of COVID-19. Invest in Canada.
[2] Ibid.

provided sector-specific recommendations for the County's F.D.I. program.[1] These targets are as follows:

- Technology-based Manufacturing / Food Products and Supply Chain;
- Creative Industries;
- Agricultural Technology; and
- Technology-based Manufacturing / Automotive Supply Chain.

In order to leverage the strategic advantages of Middlesex County regarding the above target sectors, a vital business attraction resource is the availability of suitable vacant employment land. According to the Middlesex County Economic Development Strategy, the Strathroy-Caradoc Molnar Industrial Park is the best positioned Employment Area in the County to attract domestic and foreign investment due to the significant quantity of serviced land that this area provides as well as its strategic location to the Highway 402 corridor. While Middlesex Centre is located along Highway 401 and 402, the lack of serviced employment lands currently available along this corridor to leverage these strategic locational advantage limits the prospective industries that choose to locate in the municipality.

A new serviced Employment Area within Middlesex Centre along Highway 402 would effectively become a key marketable Employment Area in the County from both a domestic and F.D.I. context. As discussed later in Chapter 4, the new Employment Area in the Municipality will offer a significant amount of serviced employment land for development, which not only offers proximity to Highway 402, but also direct frontage along the Highway 402 corridor which can heighten the exposure prospective businesses have to their client base. The attractiveness of the Employment Area would be further bolstered by the proximity to the City of London, with access to a growing skilled labour force as well as the opportunity to develop regional synergies with the City.

[1] Middlesex County Economic Development Strategy 2021-2025. December 2020.

Chapter 3
Target Sectors in the Preferred Middlesex Centre Employment Area

3. Target Sectors in the Preferred Middlesex Centre Employment Area

3.1 Introduction

Section 8.2.7. of the G.M.S. Technical Report identifies key sectors for the Municipality and their industry requirements. This chapter builds on that work by identifying the key target sectors for the new Employment Area in Middlesex Centre, based on the following criteria:

- Locational requirements (i.e. prestige industrial or general industrial designation);
- Range of parcel sizes needed;
- Transportation access (route from highway, proximity to customer base, etc.);
- Labour force needs (skilled, unskilled, or mobile labour force);
- Land-use requirements (potential for expansion, buffers from surrounding land uses, integration with surrounding operations, etc.); and
- Development characteristics (building coverages, parking requirements, ceiling heights etc.)

3.2 General Characteristics of Industrial/Business Parks

Industrial/business parks require good access to regional transportation networks, on-site infrastructure including roadways and utilities, a critical mass, and available, zoned, shovel-ready lands. Industrial/business parks are typically located on flat to slightly rolling topography in areas with minimal environmental issues. Roadways within industrial/business parks tend to be laid out in a grid system to optimize circulation and parcel configuration. Parcels are typically square or rectangular in shape to optimize site design. Many of these attributes help to optimize the end-users' speed to market, while minimizing development costs and project risk.

At both the regional and local levels, location requirements of industry can vary considerably depending on the nature of the employment sector/use. Employment sectors typically situated in industrial areas have varying site-specific requirements. To be successful in attracting a broad range of employment sectors, it is recommended that the Municipality's Employment Areas provide the corresponding industry requirements. The specific attributes that are required for an industrial/business park to

be successful are largely based on the intended function and designations. These are discussed in more detail below within the context of general industrial parks, business parks and research and development parks.

General Industrial Areas

Industrial Areas have a more general industrial orientation and accommodate largely industrial uses such as advanced manufacturing, logistics, distribution, and transportation sectors. These areas typically offer the following physical requirements:

- **Access** – Proximity to controlled access highways (i.e. Highway 402) is critical for the success of general industrial parks that have a significant degree of manufacturing, warehousing, distribution, and logistics uses. These parks do not necessarily have to be adjacent to a controlled access highway but must be in proximity and easily accessible via major arterials that pass through limited residential or mixed-use commercial area(s);
- **Critical Mass** – Size is vital to ensure a wide selection/flexibility of land options, and parks must include a sufficient supply of large parcels. As a minimum, 80 ha (200 acres) is generally a suitable size for a park, in order to reach the critical mass needed to provide reasonable presence, choice and economies of scale;
- **Location** – The location must provide efficient and effective vehicular access and circulation, particularly for heavy truck traffic, with a minimum of two access points to enter/exit the industrial park;
- **Land-Use Compatibility** – Buffering is important for general industrial parks in order to minimize noise and air pollution to neighbouring residential and other sensitive land uses;
- **Market Choice** – Parcel size and configuration need to be conducive for a wide range of industrial land uses, especially for land-extensive uses such as wholesale trade and transportation; and
- **Competitive Development/Operating Costs** – Land prices must be competitive, given the land-extensive nature associated with many uses in general industrial parks.

Business Parks

A strong employment growth outlook in knowledge-based sectors continues to generate an increasing need to accommodate light industrial and office uses on both employment

lands and within commercial, mixed-use areas. In terms of built form, knowledge-based sectors are typically accommodated in multi-tenant and standalone industrial and office buildings. To address the broad needs of the knowledge-based sector, a range of lands by type, size, and location should be considered. In industrial/business parks, prestige office uses are often positioned at gateway locations (i.e. at major highway interchanges) with direct highway access/exposure as well as strong connectivity to arterial roads. Employment Areas which are designated as business parks typically have a more prestige character than general industrial parks.[1] The following are characteristics typically associated with prestige employment uses, such as:

- **Access** – Access and exposure/visibility to controlled access highways or major arterial roadways are more critical for business parks, particularly for corporate offices;
- **Critical Mass** – Size is less important to prestige business parks relative to general industrial areas; however, the business park must be generally large enough to foster a sense of place within a well-defined precinct and to allow for on-site amenities;
- **Land-Use Compatibility** – Buffering is often required for prestige business parks located in proximity to general Employment Areas or residential uses. Open space/parkland and recreational trails are also often provided for pedestrian movement and leisure; and
- **Character** – Business parks typically present a more prestigious image, created through higher quality building design, stricter urban design standards (i.e. curb and gutter, streetlighting, buried utilities, stormwater management, etc.) and landscaping requirements to create a campus style setting. Typically, such areas would also impose stricter land-use permission regarding heavy industrial uses and outdoor storage.

Research and Development Parks

Research parks represent communities of innovation that link industry with government and academia. These parks are typically developed in partnership with key stakeholders

[1] Prestige or light industrial lands typically accommodate a larger share of office employment and a relatively higher share of employment-supportive employment uses when compared to general industrial areas. For these reasons, prestige or light industrial areas often have higher average density levels compared to general industrial areas.

such as municipal, provincial, and federal governments, affiliated universities, and economic development agencies. Typically, research and development parks are developed with the objective to attract, accommodate, and facilitate business ventures and investment as well as to create synergies related to the commercialization of research activities. Research and development parks also tend to provide resources (i.e. incubators) to support existing and new business ventures. The sizes of research parks in Canada range from a single parcel with one building adjacent to a university to larger standalone campuses. In terms of uses, research parks are comprised primarily of office, institutional, research and development facilities and a limited retail base. Key features of a research park include:

- Large anchor;
- Cluster of firms and organization in the knowledge-based sector;
- Prestige "campus-like" setting for office and light industrial uses;
- Access and exposure to highways and arterial roads, and transportation connectivity;
- Access to skilled and unskilled labour;
- Proximity to markets and related industry clusters;
- Access to on-site amenities and proximity to off-site amenities;
- Availability of office space for lease or purchase;
- Partnership and support with government, organizations, and firms;
- Land area ranging from a single parcel with one building to a large campus with a developable land area of 30 to 50 ha;
- High quality design environment to stimulate creativity and innovation; and
- Availability of supporting infrastructure and resources (i.e. training/research and incubator facilities, synergies with post-secondary institutions).

3.3 Vision for the New Middlesex Centre Employment Area

As discussed above, the new Middlesex Centre Employment Area should be planned as a cohesive business park, with prestige attributes to attract more knowledge-based sectors. Utilizing the strategic advantages of the Highway 402 corridor will allow the Municipality to attract a wider-range of potential employment uses and create a diverse business park environment. With this vision in mind, the key target sectors for the new Middlesex Centre Employment Area are explored in detail in Figure 3-1 and are summarized below:

- Manufacturing/Advanced Manufacturing;
- Distribution and Logistics;
- Professional, Scientific, and Technical Services/Business Services;
- Research and Development;
- Agri-business; and
- Food and Accommodation Services / and other Employment Supportive Uses.

Figure 3-1
Target Employment Sectors Profile for the Future Middlesex Centre Employment Area

Employment Sector/Land Use	Location	Parcel Sizes	Transportation	Labour Force	Surrounding Context	Development Characteristics
Manufacturing / Advanced Manufacturing	General or prestige setting	1 to 4 ha and greater	• Access to 400 series/controlled access highways. • Proximity to markets and related industries.	• Access to skilled and unskilled labour.	• Expansion potential. Buffers from surrounding non-industrial uses. Emphasis on integrated operations (logistics and office), landscaping and enclosed storage.	• Low to high design quality. • 10,000 to 250,000 sq.ft. High building coverage and on-site. employment density. • Range of building types, including small, large single-tenant and multi-tenant buildings. • Loading/unloading areas.
Distribution and Logistics	General or prestige setting	5 to 20 ha Flexibility in parcel configuration to accommodate large-scale users	• Access to 400 series/controlled access Hwy. • Excellent access/traffic circulation for heavy truck traffic; Truck access, loading/ unloading requirements. • Proximity to markets, customer base and related industries.	• Mobile labour force.	• Need for open storage or enclosed vertical storage. • Compatible surrounding land uses/ buffers from surrounding non-industrial uses. • Access to on-site and proximity to off-site services Expansion potential.	• Low to moderate design quality. • 10,000-1,000,000 sq. ft. • Ceiling height - 30 ft.+ • Large parcels with flat topography. • Low to high building coverage and low on-site employment density. • Loading/unloading areas.

Employment Sector/Land Use	Location	Parcel Sizes	Transportation	Labour Force	Surrounding Context	Development Characteristics
Professional, Scientific, and Technical Services/Business Services	Prestige Industrial or Business Parks	Type of buildings: flexible leasing structures and market choice (multi-tenant vs. free standing office, Class A vs. B office space)	• Proximity to transit or within walkable environments.	• Access to skilled labour force.	• Access to on-site amenities and proximity to off-site services. • Prestige setting.	• Low to high design quality. • 2,000 to 10,000 sq.ft. • <1 to 2 ha lots. • Storefront entrance for general public. • High building coverage and on-site employment density. • Small multi-tenant and flex office space. • Street lighting.
Research and Development/"Knowledge-based" Sectors	Prestige Industrial or Business Parks	1 to 2 ha For stand-alone building or facility	• Proximity to transit or within walkable environments.	• Access to skilled labour force.	• Proximity to related industry cluster (companies and public institutions). • Prestige "campus-like" setting. • Access to on-site amenities and proximity to off-site services.	• Low to high design quality. • 2,000 to 10,000 sq.ft. • 1-2 ha lots. • High building coverage and on-site employment density. • Space for manufacturing / research as well as multi-tenant or flex office space.

Employment Sector/Land Use	Location	Parcel Sizes	Transportation	Labour Force	Surrounding Context	Development Characteristics
Agri- Business	General or Light Industrial Setting	1 to 4 ha and greater	• Access to highways and multi modal facilities. • Access to warehousing, markets and distribution centres.	• Access to both skilled and semi-skilled labour force.	• Access to upstream & downstream industries. • Storage space for material and equipment. • Loading / unloading requirements.	• Low to high design quality. • High building coverage and on-site employment density. • Range of building types, including small, large single-tenant and multi-tenant buildings. • Loading/unloading areas.
Food and Accommodation Services / and other Employment Supportive Uses	Prestige Industrial or General Industrial	1 to 5 ha lots	• High traffic exposure from major road and surrounding employment and commercial uses.	• Access to skilled and semi-skilled labour force.	• Prestige and general industrial setting. • Surrounding a large employment base. • Clustering of retail uses in a retail court or at high traffic areas (e.g. major intersections, gateway entrances to Employment Area).	• High design quality. • 2,000 (fast food restaurant) to 50,000 sq.ft. (hotel/convention centre). • Commercial floor space per acre ratio of 200 to 400 sq.ft. of retail/service space per acre of developed Employment Area. • High building coverage and on-site employment density. • Street lighting.

Chapter 4
Middlesex Centre Highway 401 Corridor Employment Area Location Options

4. Middlesex Centre Highway 401 Corridor Employment Area Location Options

4.1 Employment Area Characteristics

4.1.1 Industry Cluster Requirements

In accordance with the specific requirements for each of the industry clusters identified in Chapter 3, location options for a future Employment Area in the Municipality are evaluated below which are best positioned to accommodate employment growth over the long term. These considerations are summarized as follows:

- Existing and future land uses surrounding the proposed Employment Area;
- Market choice of developable land in terms of site size, configuration, environmental constraints, access, zoning, servicing, and future expansion potential;
- Opportunities for large contiguous areas for development (large areas of land provide for larger economies of scale and greater efficiencies, in addition to providing multiple siting options for individual users);
- The location of the lands in relation to key highways and transit corridors; and
- The effects of residential encroachment on the prospective employment lands.

4.2 Profile of Proposed Middlesex Centre Employment Areas

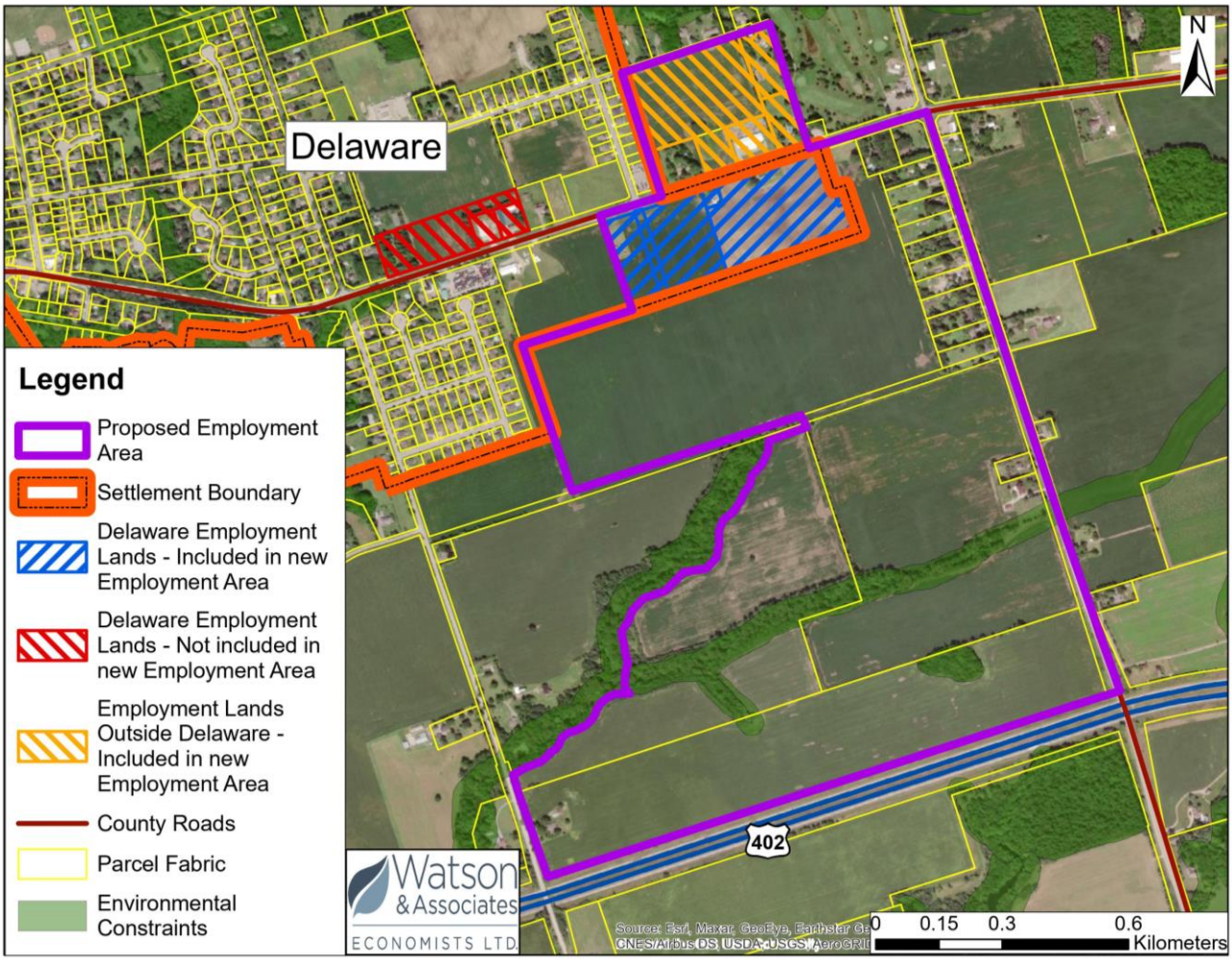
The following provides an overview of three potential new Employment Areas within Middlesex Centre. All three Employment Areas are intended to be serviced and utilize the strategic advantage of the Highway 402 corridor. Through the Middlesex Centre G.M.S., a Settlement Area Boundary Expansion to accommodate the need for a new Employment Area of approximately 135 developable hectares (ha) has been identified for the Municipality.[1]

[1] Municipality of Middlesex Centre – Official Plan Review, Growth Management Strategy Technical Report – Final. February 4, 2022.

4.2.1 Proposed Employment Area 1 – Southeast of Delaware

As shown in Figure 4-1, proposed Employment Area 1 would connect with the existing Delaware settlement area boundary, to include existing vacant employment lands within Delaware as well as rural employment lands which fall just outside of the Delaware boundary. The total land area of this proposed Employment Area is 162 hectares, with a developable land area of 147 hectares. Of this total land area, approximately 12 developable hectares were identified in the Middlesex Centre O.P.R and were included in the land needs calculation. Accordingly, this proposed Employment Area adds an additional 135 developable hectares to the Municipality's employment land supply. Additional information regarding this Employment Area is provided in the S.W.O.C. analysis to determine the preferred location for a new Employment Area in Middlesex Centre in provided herein under section 4.3.1.

Figure 4-1: Map of Proposed Employment Area 1 – Southeast of Delaware

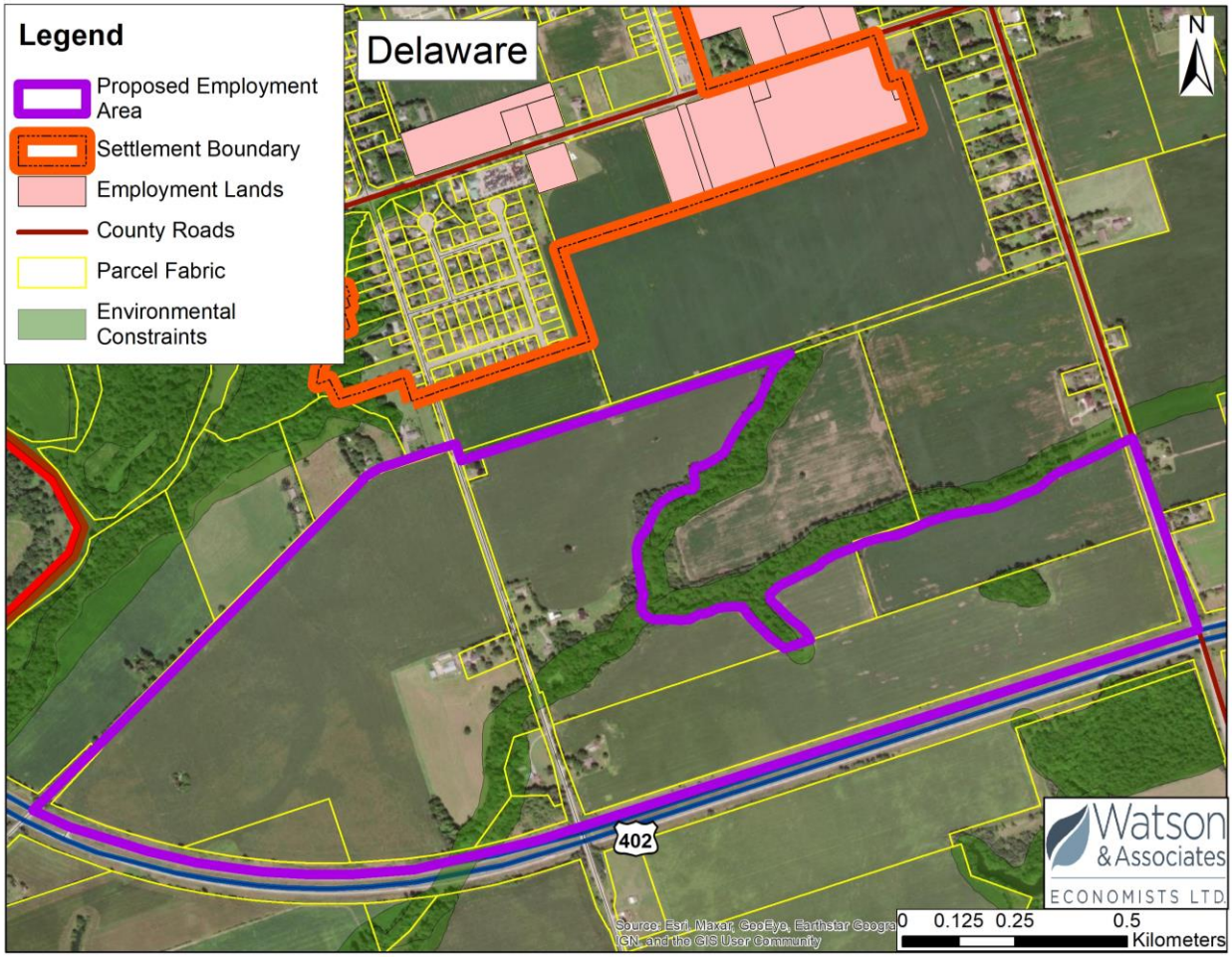


4.2.2 Proposed Employment Area 2 – Southwest of Delaware

Proposed Employment Area 2 would not connect with the current Delaware settlement area boundary. A residential expansion to the Delaware settlement area would provide a cohesive connection with the proposed Employment Area delineation. Unlike Employment Area 1, this proposed Employment Area would not capture the designated employment lands inside the Delaware settlement area. As a result, this would detract from the potential cohesion of the two Employment Areas, and potentially create land use compatibility challenges for the remaining rural lands located between the existing Delaware urban boundary and the proposed Employment Area. The total land area of this proposed Employment Area is 144 hectares, with a developable land area of 137 hectares, considerably increasing the Municipal employment land supply. This location

offers considerable frontage along Highway 402, leveraging the Municipality's strategic advantage along the highway corridor.

Figure 4-2: Map of Proposed Employment Area 2 – Southwest of Delaware

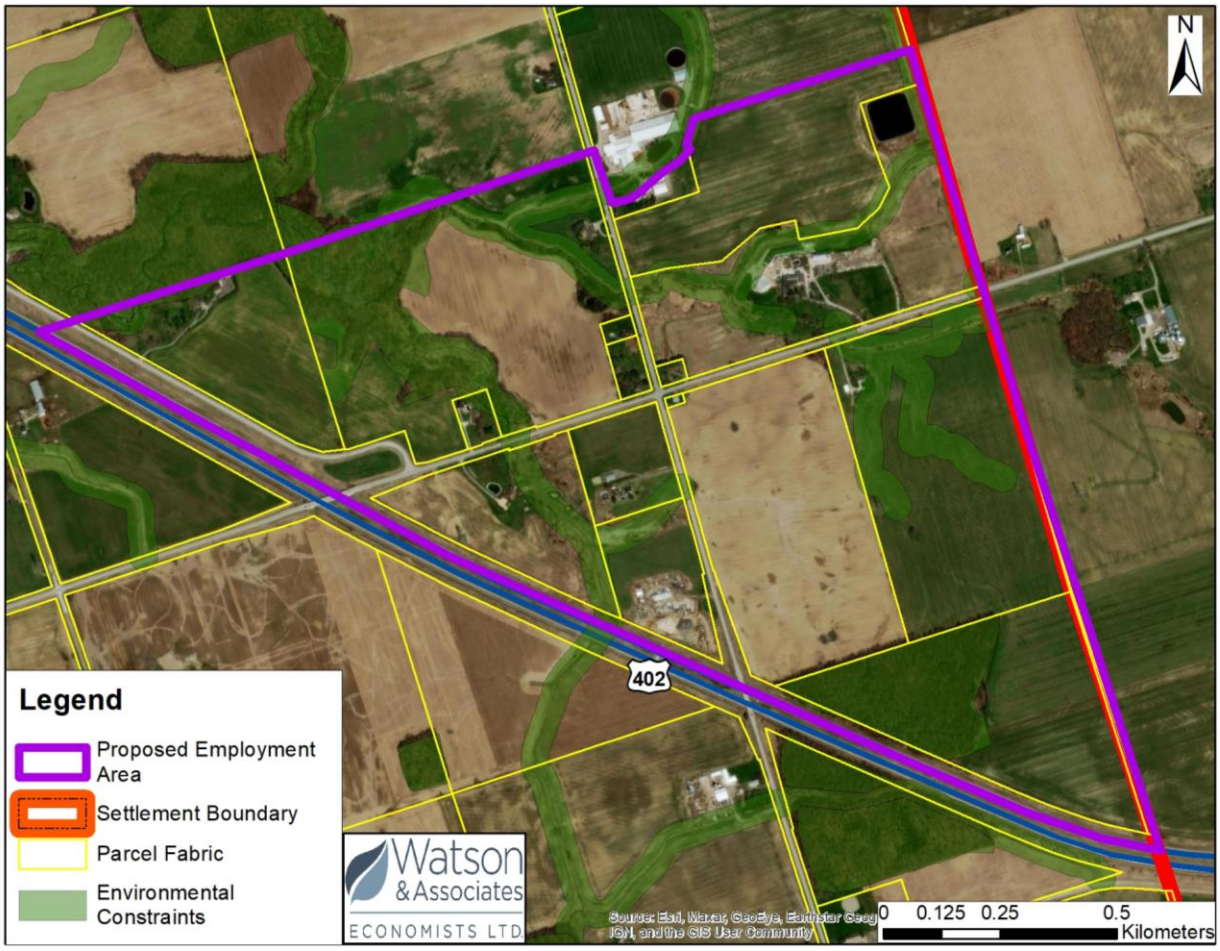


4.2.3 *Proposed Employment Area 3 – Middlesex Centre and London Boundary*

Unlike the previous two configurations, proposed Employment Area 3 would be located away from an existing Middlesex Centre settlement area. This area is located on the eastern border of Middlesex Centre, with close proximity to the City of London. The total land area is 186 hectares, with a developable land area of 138 hectares. While this area offers considerable frontage along Highway 402, there are a high degree of environmental constraints that could lead to parcel fragmentation and configuration issues. Additional information regarding this area is provided the S.W.O.C. analysis

provided herein in Section 4.3.1, to determine the preferred location for a new Employment Area in Middlesex Centre.

Figure 4-3: Map of Proposed Employment Area 3 – Middlesex Centre and London Boundary



4.3 Location Options for a New Employment Area

The economic development prospects of Middlesex Centre are in many ways tied to the success of the broader regional market. The Municipality shares the relative strengths of the broader Highway 402 corridor market in terms of investment attraction, and competitive property taxes and development costs. The Municipality's location along a major transportation corridor – Highways 402 and 401 – allows for the efficient movement of goods and people as well as proximity to surrounding growing employment markets along this corridor. This, along with its proximity to the United

States (U.S.) border provides an important competitive advantage for industrial development. The degree to which Middlesex Centre can capitalize on its regional location advantages will depend largely on the competitiveness of its employment lands.

Market competitiveness is typically driven by a broad range of factors that can strongly influence business location decisions, both for new development and expansion. These factors include access to transportation infrastructure, access to labour and employment markets, developable land supply and market choice of land development opportunities for sale or lease, cost structure of the business environment, design standards, and quality of life aspects within the community. All of these factors are important when evaluating a preferred location for a new Employment Area.

As previously noted, recent structural changes to the economy have been particularly challenging for many of Ontario's small to mid-sized municipalities. While there will continue to be a manufacturing focus in southwestern Ontario, the nature of industrial processes is rapidly shifting, becoming more capital/ technology intensive and automated, with lower labour requirements. The highly competitive nature of the manufacturing sector will require production to be increasingly cost effective and value-added oriented, which bodes well for firms that are specialized and innovative.

To remain competitive and attractive to an increasingly skilled labour force, industrial businesses must be accommodated in locations which are equipped with municipal and other local infrastructure which support goods movement and business connectivity (e.g. broadband infrastructure, transportation networks and utilities). Employment Areas should also provide local amenities such as restaurants, personal services and indoor/outdoor recreation opportunities in gateway locations which can cluster together. The planning and development of these services/amenities in conjunction with the primary employment land uses can help improve the quality of life for employees by offering them access to services/amenities before or after work, or over lunch. In concert with this approach is the design of Employment Areas to be more pedestrian-friendly such that employees can easily access services/amenities which helps to reduce the number and duration of trips via private automobile.

The following attributes were reviewed for each Employment Area to determine the most suitable location to accommodate short- and long-term employment growth within the Municipality:

- Land assembly characteristics (e.g. clustered, fragmented, etc.);
- Transportation and infrastructure (e.g. access to major highways and to goods movement infrastructure such as railway, airport, etc.);
- Highway 402 exposure;
- Presence of a supportive business environment and amenities;
- Land supply (total and developable area of Employment Areas, in addition to potential configuration constraints Employment Areas);
- Ability of the local road infrastructure to accommodate the increased traffic caused by the prospective Employment Area; and
- High-level costing analysis to determine the price of servicing the prospective Employment Area.

4.3.1 Strengths, Weaknesses, Opportunities, and Constraints Review of Prospective Employment Areas in the Municipality of Middlesex Centre

Figure 4-4 summarizes the review that was undertaken in comparing the three candidate Employment Areas previously discussed in Section 4.2. As established through this S.W.O.C., Employment Area 1 represents the preferred location for a new Employment Area in Middlesex Centre. It offers strong cohesion with the existing designated Delaware Employment Area, has a sufficient amount of land area which is relatively unencumbered by environmental constraints, can potentially be serviced in conjunction with the Delaware Community Settlement Area, has a high degree of highway exposure and provides good access to Highway 402. Furthermore, the existing road network can accommodate the increased traffic associated with the development of this area, which is of critical importance with respect to local traffic impacts.

Figure 4-4
Review of Physical Attributes of Candidate Employment Areas

Employment Area	**Land Assembly Characteristics** (e.g. clustered, fragmented, etc.)	**Transportation and Infrastructure** (e.g. access to highway 400-series and to goods movement infrastructure (e.g. railway, airport, etc.))	**Proximity to Business-Supportive Amenities**
Proposed Location of Employment Area 1	✓Creates a cohesive connection with the existing employment lands within Delaware, as well as the existing employment lands which are located just outside the settlement area boundary. ✓Employment Area configuration generally form a contiguous extension of the Delaware settlement area boundary to the south. ✓The total land area of this proposed Employment Area is 162 hectares, with a developable land area of 147 hectares. Further refinements to the net developable land area may be required as a result of further review of development impacts on the local natural heritage system and potential requirements for additional buffering from natural areas. This proposed Employment Area adds an additional 135 developable hectares to the Municipality's employment land supply. ☒ Environmental features throughout the Employment Area can create site-specific configuration constraints. ✓ Existing watercourse in the Employment Area would require some natural heritage setbacks and buffers but this also provides a stormwater outlet for the subject property.	✓Well-connected to the highway and County road network. Fronts highway 402, with proximity to highway 401. ✓Longwoods Road (Highway 2) and Carriage Road (Highway 15) connect directly to prospective Employment Area and provide greater connectivity opportunities from the surrounding area. ✓Approximately 2km of developable land fronting Highway 402 and 1.5km front Highway 15, providing opportunities for business development with direct highway exposure. ✓The proposed Employment Area is approximately 2.5km away from the Highway 2 and Highway 402 interchange. •Currently no municipal water or wastewater. Water and wastewater would need to be expanded to the Employment Area. The area could be serviced in conjunction with future Delaware servicing or could be serviced alone by the construction of a pumping station and a force main to direct flows. Chapter 2 discusses this in greater detail. ✓County Road 15 runs north to south adjacent to the proposed Employment Area. Direct access to County Road 15 and Springer Road can accommodate the expected increases in traffic caused by the Employment Area.	✓ Close proximity to the population base in Delaware as well as the currently operating retail businesses within the settlement area, provide close access to business supportive amenities. ✓ There are opportunities for the development of employment-supportive uses along the north of this proposed Employment Area which function as a land-use buffer between residential uses in Delaware. ✓ Location in proximity to the growing Community of Delaware provides potential synergies with respect to labour force attraction and access to urban amenities.

Employment Area	**Land Assembly Characteristics** (e.g. clustered, fragmented, etc.)	**Transportation and Infrastructure** (e.g. access to highway 400-series and to goods movement infrastructure (e.g. railway, airport, etc.))	**Proximity to Business-Supportive Amenities**
Proposed Location of Employment Area 2	☒ Proposed Employment Area located in proximity to designated employment lands in Delaware but does not form a contiguous extension of the existing designated Employment Area or settlement area boundary in Delaware. ✓ The proposed Employment Area is approximately 144 hectares, with 7 hectares of land covered in environmental constraints resulting in approximately 137 hectares of developable land. Further refinements to the net developable land area may be required as a result of further review of development impacts on the local natural heritage system and potential requirements for additional buffering from natural areas. ☒ Environmental features throughout the Employment Area can create site-specific configuration constraints. ✓ Existing watercourse in the Employment Area would require some natural heritage setbacks and buffers but this also provides a stormwater outlet for the subject property.	✓Adjacent to highway 402 and highway 15, with proximity to highway 401 ✓Adjacent to Springer Road, providing direct access to the Delaware settlement area. ✓ There is approximately 3km of land fronting highway 402. • Currently no municipal water or wastewater. Water and wastewater would need to be expanded to the Employment Area. Servicing expansions to Delaware could be extended to this location. ✓The proposed Employment Area is approximately 1km away from the Highway 2 and Highway 402 interchange. ☒ Springer Road has load restrictions imposed in spring which would limit the ability of the road to properly service the area. Transportation upgrades would likely be limited.	✓ Close proximity to the population base in Delaware as well as the currently operating retail businesses within the settlement area, provide close access to business supportive amenities. ✓ There are opportunities for the development of employment-supportive uses along the north of this proposed Employment Area which function as a land-use buffer between Delaware and provide businesses locating in the Employment Area close access to Delaware's consumer base. ✓ Location in proximity to the growing Community of Delaware provides potential synergies with respect to labour force attraction and access to urban amenities.

Employment Area	**Land Assembly Characteristics** (e.g. clustered, fragmented, etc.)	**Transportation and Infrastructure** (e.g. access to highway 400-series and to goods movement infrastructure (e.g. railway, airport, etc.))	**Proximity to Business-Supportive Amenities**
Proposed Location of Employment Area 3	✓ The proposed Employment Area is approximately 186 hectares, with nearly 48 hectares of land covered in environmental constraints resulting in approximately 138 hectares of developable land. Further refinements to the net developable land area may be required as a result of further review of development impacts on the local natural heritage system and potential requirements for additional buffering from natural areas. ☒ The Proposed Employment Area is not located within proximity to a Middlesex Centre Settlement Area. ☒ With nearly 50 hectares of environmental features throughout the proposed Employment Area Boundary, significant fragmentation and potential site configuration issues would exist.	✓Adjacent to highway 402, with closer access to highway 401 than proposed Employment Areas 1 and 2. ✓Approximately 2.5km of developable land front Highway 402, providing opportunities for business development with direct highway exposure. • Currently no municipal water or wastewater. Water and wastewater would need to be expanded to the Employment Area. • The area could be serviced in conjunction with future Delaware servicing or by construction of own pumping station; however this would require 10km of servicing construction in addition to constructing a pumping station, making the development of this proposed Employment Area more costly than configurations 1 and 2. • Both Sharon Drive and Woodhull Drive have load restrictions in spring which would limit development of the employment lands and require additional cost to upgrade roads for commercial activity.	☒ Located further away from a Middlesex Centre Settlement Area than prospective Employment Areas 1 and 2. ✓Located at the border of Middlesex Centre and the Municipality of London. Closer proximity to the Municipality of London would provide direct access urban amenities, suppliers and a large consumer base. ✓ Bordering Municipality of London presents easier opportunities for drawing a highly technical/educated workforce, including student opportunities from the University of Western Ontario and Fanshawe College.

Checkmark (✓) indicates a strength, a bullet indicates a potential area of improvement, and an ☒ represents a negative attribute of developing the proposed Employment Area. Source: Watson & Associates Economists Ltd., 2021.

Chapter 5
Conclusions and Next Steps

5. Conclusions and Next Steps

5.1 Conclusions

As determined through this study, Employment Area 1 is recommended as the preferred location for a new Employment Area in Middlesex Centre. This recommended configuration would create a cohesive extension of the existing designated employment lands in the Delaware Community Settlement Area. In summary, the size, configuration, location and Highway 402 exposure offered by this location provide market choice for medium and large-scale operations across a range of industrial and office sectors, making this area a highly marketable location for business attraction within Middlesex County. The infrastructure servicing analysis completed in Appendix A also supports this area as viable location for a fully serviced Employment Area.

It is recommended that the broader vision for this area should include planning and design standards which support a Prestige Business Park concept, which would target industry sectors in Manufacturing/Advanced Manufacturing; Distribution and Logistics; Professional, Scientific, and Technical Services/Business Services; Research and Development; and Agri-Business amongst other emerging knowledge-based and employment supportive industries. Over the medium to long-term, the recommended Employment Area would provide a marketable opportunity within the County to capture both domestic investment as well as increased F.D.I. capital inflows.

The results of the servicing analysis indicate a total cost of $46.5 million to develop this Employment Area as a fully serviced Employment Area. It is noted that a more detailed servicing analysis should be provided which would further consider local infrastructure requirements (i.e. stormwater). Potential synergies should also be explored regarding the extension of full municipal services to the recommended expansion area as well as residents within the Delaware Community Settlement Area.

5.2 Next Steps

Building on the results of the Municipality of Middlesex Centre G.M.S. Technical Report - Final, February 2022, the analysis provided herein offers broad direction with respect to the location, size, vision and municipal servicing implications regarding the creation of a new Employment Area within the Municipality of Middlesex Centre along the Highway

402 corridor. It is noted that the P.P.S., 2020, specifically identifies a number of specific requirements which must be meet with respect to the expansion of a settlement area boundary. Section 1.1.3.8 states:

"A planning authority may identify a settlement area or allow the expansion of a settlement area boundary only at the time of a comprehensive review and only where it has been demonstrated that:

a) sufficient opportunities to accommodate growth and to satisfy market demand are not available through intensification, redevelopment and designated growth areas to accommodate the projected needs over the identified planning horizon;

b) the infrastructure and public service facilities which are planned or available are suitable for the development over the long term, are financially viable over their life cycle, and protect public health and safety and the natural environment;

c) in prime agricultural areas:

1. the lands do not comprise specialty crop areas;

2. alternative locations have been evaluated,

i. there are no reasonable alternatives which avoid prime agricultural areas; and

ii. there are no reasonable alternatives on lower priority agricultural lands in prime agricultural areas;

d) the new or expanding settlement area is in compliance with the minimum distance separation formulae; and e) impacts from new or expanding settlement areas on agricultural operations which are adjacent or close to the settlement area are mitigated to the extent feasible."

As part of the Municipality of Middlesex Centre G.M.S. Technical Report, February 2022, the need for the proposed expansion area, as required under Section 1.1.3.8 (a), has been addressed. The results of this analysis also provide an initial review of infrastructure requirements associated with the proposed expansion area. Additional analysis is recommended to comprehensively assess the financial viability and long-term fiscal impacts of associated municipal infrastructure servicing (Section 1.1.3.8 (b). Furthermore, as set out in Section 1.1.3.8 (c and d) prime agricultural areas impacts, minimum distance separation and impacts on adjacent agricultural operations will also need to be addressed prior to the approval of a local O.P. amendment (O.P.A.) to permit the expansion of the municipality's settlement area boundary. Subsequent to

O.P.A. approval, further planning studies associated with the new Employment Area related to land use, urban design, natural heritage and environment as well as municipal will also be required through the development of a Secondary Plan.

Appendix A
Servicing Feasibility Analysis

Middlesex Centre Foreign Direct Investment – Servicing Feasibility Report

January 31, 2022

Prepared for:

The Municipality of Middlesex Centre

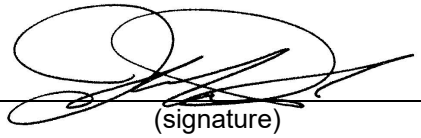
Prepared by:

Stantec Consulting Ltd.
600-171 Queens Avenue
London ON N6A 5J7

MIDDLESEX CENTRE FOREIGN DIRECT INVESTMENT – SERVICING FEASIBILITY REPORT

Revision	Description	Author		Quality Check	
1	Draft Report	JP	Nov 12/21	NO	Nov 12/21
2	Final Report	JP	Nov 19/21	NO	Nov 19/21
3	Revised Report	JP	Jan 28/22	NO	Jan 28/22

This document entitled Middlesex Centre Foreign Direct Investment – Servicing Feasibility Report was prepared by Stantec Consulting Ltd. (“Stantec”) for the account of the Municipality of Middlesex Centre (the “Client”). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec’s professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by 
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Reviewed by 
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Nelson Oliveira, P.Eng.

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1.0 BACKGROUND

Watson & Associates Economists Ltd. ("Watson") has been engaged by the Municipality of Middlesex Centre (Municipality) as part of the Official Plan Review. As a part of this review, a Foreign Direct Investment Strategy was requested to include a comprehensive long-term assessment of the Municipality's employment land needs to 2046 along the Highway 401/402 corridor. Based on the discussion with the Municipality and County of Middlesex staff, a development site that is adjacent to the Delaware settlement area was selected as the preferred new employment lands. This selected new employment lands are located southeast of Delaware and 15 km southwest of the core area of the City of London. This site is adjacent to the Provincial Highway 402 to the north and the County Highway 2 (local name as Longwoods Road) to the south, and it was intersected by the County Highway 15 (local name as Carriage Road). **Figure 1** illustrates the location of the selected new employment lands.

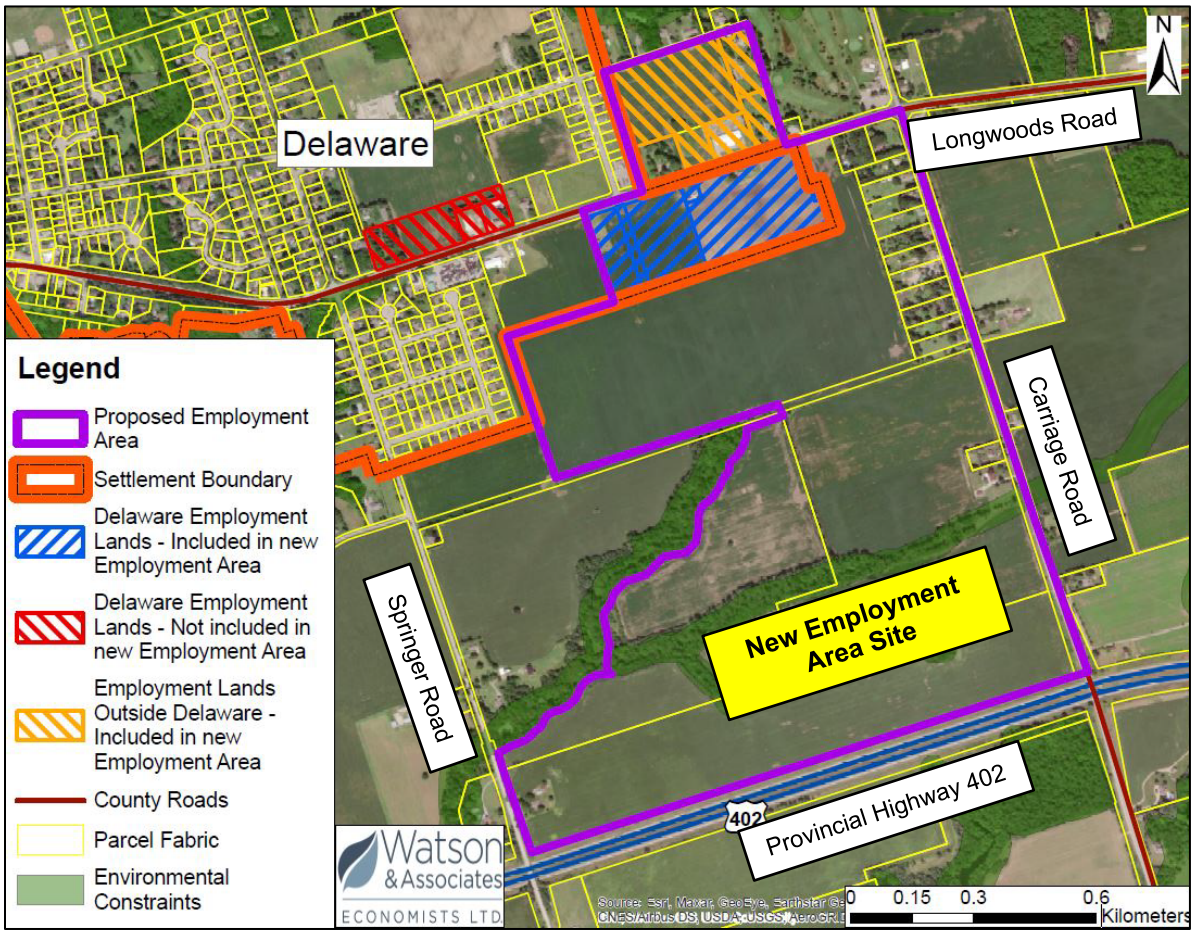


Figure 1 – Location of the Selected New Employment Area Site

Background

As shown in **Figure 1**, this proposed site consists of some existing but vacant Employment Lands within Delaware Settlement Boundary in addition to the proposed employment lands. The total area of the employment lands (both new employment lands and existing employment lands) is approximately 162 ha. It is estimated that some of these lands will not be developable and this report assumes that the total developable acreage will be approximately 147 ha.

2.0 TRANSPORTATION ANALYSIS

2.1 SCOPE OF ANALYSIS

The scope of this report included the requirement to undertake a high-level Transportation Assessment ("TA") of the proposed new employment lands to determine the transportation feasibility to support future developments at this site. Specific elements of the TA included:

- Collecting and reviewing existing conditions and available traffic volume data in the study area, and other development-relevant background information
- Establishing future background traffic in 2046 (i.e., assumed future horizon year when the new employment lands is fully developed)
- Estimating trips generated by all potential developments in the new employment lands and conducting trip distribution and assignment on the roadway network which is adjacent to the site
- Conducting a high-level traffic operational assessment based on future total traffic volumes (i.e., the summation of future background traffic and site-generated traffic) in 2046
- Conducting a high-level site access assessment

Currently, there is no existing site conceptual plan to illustrate the details of future developments on site. It was assumed in this study that the potential future site accesses will be proposed on Carriage Road and Springer Road (see more details in the following sections).

2.2 ROADWAY NETWORK

As shown in **Figure 1**, the major roads in the study area are:

Highway 402 is an east-west two-way provincial freeway in Ontario under the jurisdiction of MTO to connect Blue Water Bridge International Crossing near Sarnia to Highway 401 in the City of London. The section of **Highway 402** to the south of the site has four lanes with a wide grass median and a posted speed limit of 100 km/h. There are no at-grade intersections or interchanges between Highway 402 and Springer Road or Carriage Road in the study area.

Longwoods Road is an east-west undivided two-lane county road (County Road 2) under the jurisdiction of the County of Middlesex with a posted speed limit of 80 km/h within the study area.

Carriage Road is a north-south undivided two-lane county road (County Road 15) under the jurisdiction of the County of Middlesex with a posted speed limit of 60 km/h within the study area.

Springer Road is a north-south undivided two-lane local road under the jurisdiction of the Municipality of Middlesex Centre. There is no posted speed limit on the Springer Road section within the study area. According to the Ontario Traffic Act, any road is restricted to 50 km/h without posted speed.

2.3 DATA COLLECTION AND EXISTING CONDITIONS

Based on the County's latest 2019 Traffic Counts Spreadsheet, the average daily traffic counts on the following site-adjacent roadway sections were provided:

- Longwoods Road (County Road 2): 6,230 vehicles/day
- Carriage Road (County Road 15): 1,865 vehicles/day

No other background traffic data was available for this report.

2.4 FUTURE BACKGROUND TRAFFIC VOLUMES

Based on the Growth Management Study Technical Report (draft, October 25, 2021) for the Municipality's Official Plan Review, which was prepared by Watson, in association with WSP, a compound annual traffic growth rate of 2.3%, which is consistent with the recommended 2.3% annual population growth rate between 2011 and 2016 for Middlesex Centre in this report, was applied to the collected 2019 daily traffic counts to establish the future 2046 background daily traffic volumes on the roadway sections of Longwoods Road and Carriage Road in this study.

Also, potential COVID-19 impacts that may reduce traffic along those two roadway sections were not considered in this study to reflect a conservative analysis result.

The established daily traffic volumes on Longwoods Road and Carriage Road within the study area in 2046 are:

- Longwoods Road (County Road 2): 10,099 vehicles/day
- Carriage Road (County Road 15): 3,023 vehicles/day

According to similar traffic assessments in Ontario that were completed by Stantec, conservatively, it can be assumed that traffic volumes during a peak hour are approximately 1/8 of daily traffic volumes on a roadway section. Thus, the typical peak hour traffic volumes for the above-mentioned two-lane roadway sections are:

- Longwoods Road (County Road 2): 1,262 vehicles/peak hour
- Carriage Road (County Road 15): 378 vehicles/peak hour

2.5 SITE TRIPS

2.5.1 Site Trip Generation

As mentioned above, currently, there are no available development details of the proposed employment lands. The employment density provided by the Municipality, which is 10 jobs per gross hectare, was used in this study to calculate the total employment jobs on the Employment lands. As a result, a maximum of 1,470 employment jobs at the site's full buildout in 2046 was estimated by Watson.

There are some employment lands in the boundary of the Delaware settlement ("the Delaware employment lands") but not included in the new employment lands (i.e., red rectangles), as shown in **Figure 1,** which may also generate some future trips on the adjacent roads such as Longwoods Road and Carriage Road. Similarly, no development details for these employment lands are available. The total area of these Delaware employment lands is approximately 4 hectares. Based on the assumed employment density provided by the Municipality, these employment lands should provide approximately 40 employment jobs. As a conservative approach, it was assumed that all these lands will also be fully developed by 2046.

Trips generated by both the proposed Employment lands and the Delaware employment lands were estimated by using the Institute of Transportation Engineers ("ITE") Trip Generation Manual, 10th Edition. AM and PM peak hour trips were calculated by using trip generation rates for General Light Industrial (ITE Code 110).

The proposed Employment lands peak hour trip generation is provided in **Table 1**.

Table 1 – Site Trip Generation – Proposed Employment lands

Description/ITE Code	Units	ITE Vehicle Trip Generation Rates						Generated Trips			
		AM	PM	AM In	AM Out	PM In	PM Out	AM In	AM Out	PM In	PM Out
General Light Industrial 110	1,470 (employees)	0.52	0.49	83%	17%	22%	78%	634	130	158	562
							Total:	**764**		**720**	

The proposed Delaware employment lands peak hour trip generation is provided in **Table 5.2**.

Table 2 – Site Trip Generation – Delaware Employment Lands

Description/ITE Code	Units	ITE Vehicle Trip Generation Rates						Generated Trips			
		AM	PM	AM In	AM Out	PM In	PM Out	AM In	AM Out	PM In	PM Out
General Light Industrial 110	40 (employees)	0.52	0.49	83%	17%	22%	78%	17	4	4	16
							Total:	**21**		**20**	

Based on the 2016 Middlesex County Census Profile – Main Mode of Commuting, a conservative 5% trip reduction was applied to the generated trips shown in **Table 1** and **Table 2**, due to the potential traffic split to active transportation (i.e., walking and biking) and transit modes, once these proposed developments are fully built out in 2046. The final generated trips are shown in **Table 3**.

Table 3 – Reduced Trip Generation

Proposed Development	Generated Trips					
	AM In	AM Out	PM In	PM Out	AM Total	PM Total
Proposed Employment Area Site	602	124	150	534	726	684
Delaware Employment Lands	16	4	4	15	20	19
Total	**618**	**128**	**154**	**549**	**746**	**703**

2.6 SITE TRIP DISTRIBUTION AND ASSIGNMENT

In this TA, it was assumed that four accesses will be proposed on Carriage Road and Longwood Road to support the proposed Employment lands and the Delaware employment lands, as shown in **Figure 2**.

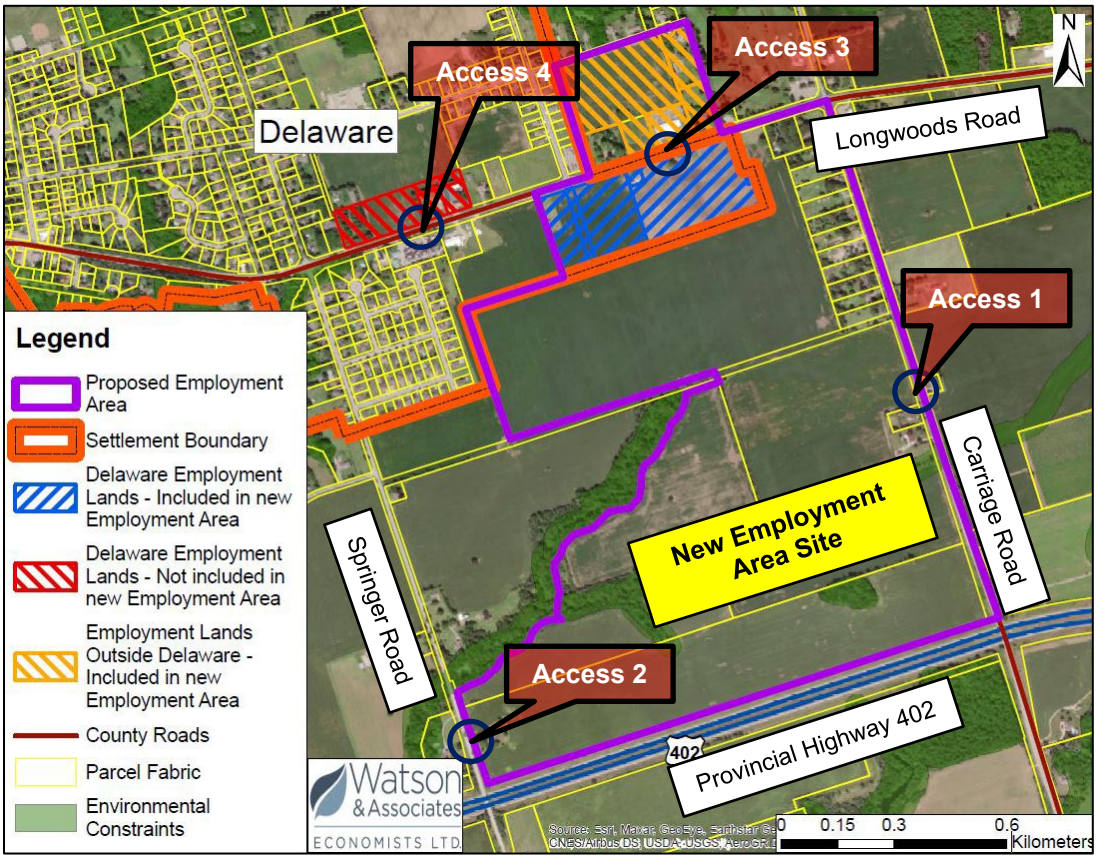


Figure 2 – Proposed Site Accesses

Two scenarios below were developed to indicate possible site trip distribution and assignment, as well as traffic operational assessment which was included in the following section:

- Scenario 1:
    - 100% trips generated by the proposed Employment lands will be assigned to Carriage Road at Access 1 and Access 3; specifically, it was assumed that 86% of these trips, the trips generated by the developments on vacant/existing rural residential lands, will be assigned to Access 1 and 14% of these trips, the trips generated by other lands in the employment lands, will be assigned to Access 3
    - 100% trips generated by the Delaware employment lands will be evenly assigned to Longwood Road at Access 4

- Scenario 2:
    - 85% trips generated by the proposed employment lands will be assigned to Carriage Road at Access 1 and Access 3 (the trip splits between Access 1 and Access 3 are the same shown in Scenario 1; 15% trips generated by the proposed employment lands will be assigned to Springer Road at Access 2
    - 100% trips generated by the Delaware employment lands will be evenly assigned to Longwood Road at Access 4

It was assumed that the site trips generated by both developments will be distributed to the adjacent roadway network based on local traffic patterns and contexts surrounding the site locations. The assumed site trip distribution percentages were shown in **Table 4**.

Table 4 – Site Trip Distribution

Direction	Inbound		Outbound	
To/From	**AM**	**PM**	**AM**	**PM**
South (Carriage Road, south of Highway 402)	5%	5%	5%	5%
North (Carriage Road, north of Longwoods Road)	35%	35%	35%	35%
East (Longwoods Road, east of Carriage Road)	40%	40%	40%	40%
West (Longwoods Road, west of Gideon Drive (County Road 3))	20%	20%	20%	20%

2.7 TOTAL FUTURE TRAFFIC ASSESSMENT (2046)

Future total peak hour traffic volumes were established by adding the site-generated peak hour traffic volumes[1], to the background peak hour traffic volumes in 2046 to which are:

- Scenario 1:
    - Longwoods Road (west leg of the Carriage Road & Longwoods Road intersection): 1,262 (background traffic 2046) + 16 (Delaware employment land trip generation) + 127 (proposed employment lands trip generation) = 1,405 vehicles/peak hour
    - Longwoods Road (east leg of the Carriage Road & Longwoods Road intersection): 1,262 (background traffic 2046) + 8 (Delaware employment land trip generation) + 292 (proposed employment lands trip generation) = 1,562 vehicles/peak hour
    - Carriage Road (north leg of the Carriage Road & Longwoods Road intersection): 378 (background traffic 2046) + 7 (Delaware employment land trip generation) + 253 (proposed employment lands trip generation) = 638 vehicles/peak hour

[1] In this study, site-generated traffic volumes during AM peak hour in **Table 3** were applied to calculate future total peak hour traffic volumes since it represents a worst-case scenario comparing to PM peak hour volumes.

  - Carriage Road (south leg of the Carriage Road & Longwoods Road intersection): 378 (background traffic 2046) + 1 (Delaware employment land trip generation) + 520 (proposed employment lands trip generation) = 899 vehicles/peak hour

- Scenario 2:
  - Longwoods Road (west leg of the Carriage Road & Longwoods Road intersection): 1,262 (background traffic 2046) + 16 (Delaware employment land trip generation) + 213 (proposed employment lands trip generation) = 1,491 vehicles/peak hour
  - Longwoods Road (east leg of the Carriage Road & Longwoods Road intersection): 1,262 (background traffic 2046) + 8 (Delaware employment land trip generation) + 290 (proposed employment lands trip generation) = 1,560 vehicles/peak hour
  - Carriage Road (north leg of the Carriage Road & Longwoods Road intersection): 378 (background traffic 2046) + 7 (Delaware employment land trip generation) + 255 (proposed employment lands trip generation) = 640 vehicles/peak hour
  - Carriage Road (south leg of the Carriage Road & Longwoods Road intersection): 378 (background traffic 2046) + 1 (Delaware employment land trip generation) + 464 (proposed employment lands trip generation) = 843 vehicles/peak hour

Based on some local roadway characteristics, the single lane capacities for both Longwoods Road and Carriage Road, which are both categorized as Rural Collector, were assumed as:

- Longwoods Road: 800 vehicle/hour/lane * 2 lanes = 1,600 vehicle/hour
- Carriage Road: 800 vehicle/hour/lane* 2 lanes = 1,600 vehicle/hour

The volume to capacity (“V/C”) ratio indicates the level of congestion for a lane. A V/C ratio equal to or greater than 1.00 indicates that the lane is operating at or above capacity, and a V/C ratio equal to or less than 0.85 is recommended. The maximum calculated peak hour V/C ratios for these two roads are:

- Longwoods Road: V/C ratio = 0.98 (Scenario 1, east leg of the Carriage Road & Longwoods Road intersection); V/C ratio = 0.93 (Scenario 1, west leg of the Carriage Road & Longwoods Road intersection)
- Carriage Road: V/C ratio = 0.56 (Scenario 1, south leg of the Carriage Road & Longwoods Road intersection); V/C ratio = 0.40 (Scenario 1, north leg of the Carriage Road & Longwoods Road intersection)

The calculated V/C ratios for both roadways show that Longwoods Road will be close to (both east and west of Carriage Road) its capacity but it should still be capable to accommodate traffic once both the proposed employment lands and the Delaware employment lands in this study are fully built out in 2046; while Carriage Road will have extra capacity to accommodate traffic in 2046.

Since this transportation assessment is a high-level study for this early stage of all proposed employment lands, a detailed analysis to further confirm the capacity of the study roadway sections should be conducted in the future during different phases of the projects for those lands.

2.8 CONCLUSIONS

Based on the results of the roadway capacity analysis for two selected roadway sections on Longwoods Road and Carriage Road, which are adjacent to these sites, it was concluded that both roadway sections will be capable to accommodate traffic with the full development of the sites in 2046 and based on the existing roadway configurations. No traffic operational issues were identified.

3.0 STORMWATER MANAGEMENT

3.1 SCOPE OF ANALYSIS

Under this report, the scope of our analysis was to conduct a high-level feasibility analysis to determine if stormwater management could be provided for the proposed employment lands. This report considers servicing feasibility only and does not include the development of a stormwater servicing strategy.

3.2 STORMWATER SERVICING FEASIBILITY

The study area exhibits a generally flatter topography with slightly higher elevations in the north east corner of the study area. The topography indicates that much of the study area discharges existing flows to the existing watercourse that bisects the site. This watercourse flows in a westerly direction before discharging into a series of small ponds. The watercourse / pond system crosses Springer Road before then crossing Highway 402. South of Highway 402, the watercourse continues in a southwesterly direction before discharging directly into the Thames River. No study has been undertaken on this watercourse and any recommendations in this report are high level and will need further study.

Stormwater servicing for the employment lands will require further study, however, it is recommended that a combination of low impact development measures be considered in conjunction with end of pipe facilities. While not studied as part of this report, soil conditions in the Delaware area are generally sandy in nature with higher permeability which are conducive to the implementation of infiltration measures. High groundwater levels, however, are also known to be present in the Delaware area which may limit the ability to implement these measures. Further study of soil conditions as well as the groundwater regime will be necessary to develop a stormwater servicing strategy.

These measures, when considered in a treatment train approach including at-source controls and end of pipe treatment are anticipated to provide a feasible stormwater servicing strategy. The presence of the watercourse noted above is anticipated to provide a discharge point for end of pipe facilities, although this will need to be confirmed by further study.

Due to the high-level nature of this report, stormwater servicing costs have not been considered. Further study will need to be undertaken to determine the scope and cost of these projects. Additionally, as a part of the stormwater servicing strategy, consideration will need to be provided as to whether these works are constructed as a part of individual development applications or whether an overall servicing strategy for the study area will be advanced.

4.0 SANITARY SERVICING

4.1 EXISTING SERVICING

Currently there is no sanitary servicing to the Delaware settlement area. The existing development is currently serviced by individual septic systems. New growth in the area is currently limited and also serviced by individual septic systems.

Municipal sanitary servicing and treatment is currently provided to the Komoka-Kilworth settlement area by connection to the Komoka Wastewater Treatment Facility (WWTF) which is located on Komoka Road just north of the Thames River.

Development of the Employment Lands considered under this study will require full municipal sanitary servicing. This area should be considered within the context of a municipal wide Sanitary Master Plan which would look holistically at the entirety of the Municipality and consider future growth lands in the Delaware settlement area in addition to the proposed employment lands to provide appropriate sanitary servicing strategy for the entire community. For the purposes of this study, the Employment Lands were considered on a 'stand-alone' basis.

4.2 DESIGN FLOW

The design criteria used for the purpose of this study are taken from the current design standards for the Municipality of Middlesex Centre. Relevant sections of the standard are summarized below:

Flow Allowance for Light Industrial	20,000 litres/hectare/day
Uncertain Development Factor	1.1
Peaking Factor	0.8 x Harmon peaking factor
Infiltration Allowance	0.100 litres/second/hectare

Based on the design criteria noted and using a developable area of 147 ha, the average day sanitary flow for the study area is calculated to be 52.1 l/s and the peak flow is calculated to be 105.42l/s.

4.3 PROPOSED SERVICING STRATEGY

In order to provide sanitary servicing to the Employment Lands, a sanitary pumping station will need to be constructed to receive flows and to pump those flows to the Komoka WWTF. While there is some topographic relief across the study area, the topography is generally flat and the degree of relief does not lend itself to a pumping station at the lowest point given that this point is at the extreme south east corner of the site. A pumping station in this location would likely be prohibitively deep. This study instead

proposes a sanitary pumping station more centrally located along Carriage Road central to the employment lands area as shown in Figure 3. This preliminary location appears to provide a depth that would be considered feasible. From this location, flows can be collected by local sewers within the Employment Lands and pumped via 6.1km of forcemain to the Komoka WWTF as outlined in **Figure 3.**

Capacity at the Komoka WWTF will need to be considered as the magnitude of the flows noted will exceed the current capacity of the plant. This study did not review current treatment plant capacity, however, from previous study work, Stantec is aware that additional land is available for expansion of this facility. Expansion of the plant will be triggered as development of the employment lands occur and flows are generated.

4.4 PHASING

The sanitary pumping station and forcemain would need to be constructed in conjunction with the first phase of the Employment Lands. The construction of the pumping station could be phased to allow for a slightly lower initial cost which would also allow the station to be sized for actual flows from the Employment Lands. We do not recommend phasing the forcemain (i.e., installing a smaller diameter forcemain initially) as this would cause redundant costs.

4.5 OPINION OF PROBABLE CONSTRUCTION COST

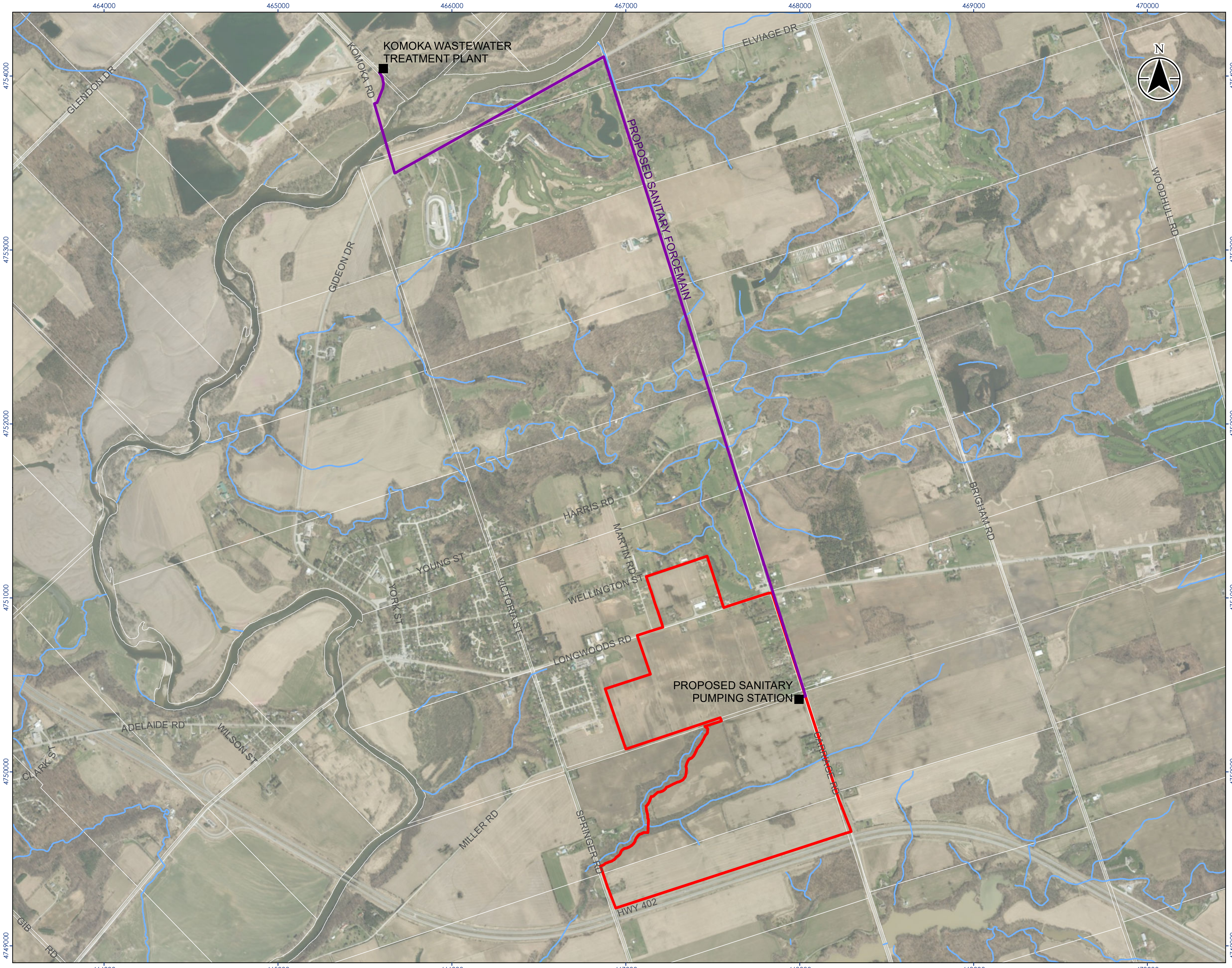
The following are a high-level Opinion of Probable Construction Cost provided in 2021 dollars and based on historic construction costs of similar works:

Sanitary Pumping Station	$ 5.0 M
Sanitary Forcemain	$ 4.6 M
Sanitary Treatment	$ 27.0M

Sanitary sewers from the pumping station to the individual development blocks in the Employment Lands have not been considered in this study and are assumed to be part of the cost of the individual blocks as they are developed.

Both the pumping station and forcemain should be considered in conjunction with future servicing of the existing Delaware settlement area and future growth in the area. Consideration of these future needs could allow for some of these costs to be shared by other sources of funding.

The cost of sanitary treatment considers full development of the Employment Lands at the flow rate prescribed by the Middlesex Centre design standards. It should be noted that expansion of the Komoka WWTF will occur based on actual flows so this cost may vary based on the actual sanitary flow generation of the proposed development, and that the increased plant capacity to suit buildout will likely be phased over a period of many years.



Stantec

Legend

Approximate Study Area

0 250 500 metres

1:22,500 (At original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Produced with data used under Ontario Open Data License.
3. Orthoimagery © First Base Solutions, 2021. Imagery Date, 2010.

Project Location
Municipality of
Middlesex Centre

165630207 REVB
Prepared by KDB on 2022-01-27

Client/Project
MIDDLESEX CENTRE FDI
PROPOSED EMPLOYMENT AREA

Figure No.
3

Title
Proposed Sanitary Servicing

5.0 MUNICIPAL WATER SERVICING

5.1 EXISTING SERVICING

The existing settlement area of Delaware is serviced by Municipal water. This system is fed by the Lake Huron Water supply system. Historically this connection came from the City of London through a watermain connection on Gideon Drive. Currently, the Municipality is completing a new connection along Komoka Road that will supply Delaware from the Kilworth-Komoka distribution sub-system which is still fed from the Lake Huron Water Supply System.

Existing watermains are present in Delaware and on Longwoods Road as far east as the intersection of Longwoods Road and Martin Road and on Springer Road as far south as the intersection of Springer Road and Towerline Street.

5.2 DESIGN FLOW

The Middlesex Centre design standards regarding flows from employment lands indicate that the determination of flows should be based on specific uses as the demands can vary greatly based on the use. In the absence of more detailed information the design standard makes reference to the MECP Design Guidelines which recommends an average daily demand of 35 m^3/ha/day for light industrial although the standard acknowledges significant variability in actual water demand based on the proposed use.

In determining the design flow for the purposes of this study, this report compares the above standard to the sanitary flow calculation in the previous section with the assumption that water and wastewater demand for industrial uses should generally align. The average day demand using 35 m^3/ha/day gives a value of 5,145 m^3/day for the entire employment lands whereas the sanitary flow is calculated at 2,938 m^3/day (population-based flow only, not considering infiltration). It is worth noting that even the sanitary flow value equates to approximately 8,400 people (using the municipal standard of 350 l/cap/day) which is much greater than the current population of Delaware at approximately 1,590 residents and greater than the projections advanced by Watson at 10 jobs/ha. Given that the employment lands are being studied at a high level and the information required to evaluate the appropriateness of a lower standard is not available, this report uses the Municipal standard. With regards to water supply, however, we feel it is appropriate to use the sanitary flow calculations to determine water supply demands.

5.3 PROPOSED SERVICING STRATEGY

In order to service the proposed employment lands, several works would need to be completed as follows.

The existing watermain feed along Gideon Drive is currently reaching its maximum capacity under current demands. A Class EA was previously completed to enable the required interconnection with the Kilworth-

Komoka system and to address other required upgrades to suit growth, specifically the need to replace the small diameter incoming watermain in the near-term. Expanding the flow demands to the degree noted above will cause an immediate requirement to replace this watermain.

To service the employment lands, new watermains will need to be constructed as shown on Figure 4. The existing watermain on Springer Road is undersized for the proposed demands and will need to be replaced up to Longwoods Road. In addition, a new watermain will need to be constructed along Longwoods Road to Carriage Road and then along Carriage Road through the employment lands. The watermains on Springer Road and Carriage Road should be connected or 'looped' to provide redundancy to the distribution network. This connection is shown on Figure 4 across undeveloped lands, but should be aligned to any internal road network proposed for the employment lands.

System storage to address peak hour demands and also for fire flow and emergency supply will need to be considered. The existing standpipe was recently replaced and was sized to accommodate existing residential and some planned growth within the OP limits per the approved Class EA, however, the addition of the employment lands would far exceed what the standpipe would provide. For this development only, the Municipality may need to consider additional system storage which could be accommodated on the employment lands or an alternate site. The additional storage required is estimated at 4,000m³.

A new booster pumping station may also be required to boost pressure to the employment lands given the elevation in this area. The station is estimated to require a firm capacity of approximately 97 L/s subject to confirming average flows and appropriate peaking factors. The booster pumping station would need to be located near the new storage facility and ideally within the employment lands. With the introduction of a booster pumping station and potential differing pressures than the existing Delaware water system, the addition of pressure reducing valves will be necessary where the watermains connect back into the existing system thereby creating a separate pressure zone.

Further review of the Komoka Booster Pumping Station and the new Booster Pumping station on Komoka Road that services Delaware should also be undertaken to ensure that both stations have capacity to service the employment lands. Review of the system can be considered through the Master Plan which will also consider new growth needs for the Delaware settlement area.

5.4 PHASING

Per the attached figure, this report proposes the booster pumping station and storage be located on Carriage Road central to the Employment Lands. This would allow an initial phase of development to occur along Carriage Road. This would require the construction of a new watermain on Longwoods Road and an extension on Carriage Road to the Booster station, however, the extension of watermains down Carriage Road to the south limit of the Employment lands along with the extension down Springer Road as well as the proposed loop between Carriage and Springer could be deferred to later development phases.

Stantec

Legend

Approximate Study Area

0 250 500 metres

1:22,500 (At original document size of 11x17)

Notes

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Project Location
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165630207 REVB
Prepared by KDB on 2022-01-27

Client/Project
MIDDLESEX CENTRE FDI
PROPOSED EMPLOYMENT AREA

Figure No.
4

Title
Proposed Water Servicing

Additionally, the proposed storage could be implemented in phases as the employment lands develop and demands increase. This would allow the storage to be 'right-sized' to meet actual water demands.

The majority of the station would need to be constructed with the initial phase of development, however, the ultimate supply capacity could be implemented in phases with pumps sized according to actual demands.

5.5 OPINION OF PROBABLE CONSTRUCTION COST

The following are a high-level Opinion of Probable Construction Cost provided in 2021 dollars and based on historic construction costs of similar works:

Gideon Road Watermain Replacement	$ 1.8 M
Water Storage (4,000 m^3)	$ 3.8 M
New Booster Pumping Station (~97 L/s)	$ 2.8 M (incl. pressure reducing valves)
New Watermains (Springer Road and Carriage Road only)	$ 1.5 M

For the above noted works, cost sharing with new growth should be considered for the Gideon Road Watermain Replacement. This project services the larger area and would be to the benefit of future growth.

6.0 CONCLUSIONS AND RECOMMENDATIONS

This report provides a high-level analysis of the feasibility and probable construction costs of major infrastructure works to service the proposed Delaware Employment Lands. Key findings of this report are as follows:

- Analysis of Longwoods Road and Carriage Road indicate that through lanes of these two roads are capable to service the proposed employment lands and road widening will not be required. As traffic volumes were not available to assess turning movements at the intersections in the area, no conclusions were made on whether intersection upgrades would be required.
- Stormwater management is considered feasible subject to further study on the watercourse that traverses the site. A combination of at-source controls, low impact measures and end of pipe facilities are recommended for consideration.
- Sanitary servicing is feasible but will require the construction of a new pumping station and forcemain to collect and convey flows to the Komoka Wastewater Treatment Plant.
- Water servicing is feasible with upgrades to the watermain feed from Komoka, construction of a new booster pumping station and storage facility and new watermains in the study area.

The results of the servicing analysis indicate a total cost of $46.5 million to develop these Employment Lands on the basis of full servicing. It is noted that a more detailed servicing analysis should be provided which would further consider local infrastructure requirements. Additionally, further study should be advanced to develop the stormwater management strategy for the employment lands.

The proposed employment lands will bring a significant amount of new development area and opportunity to the Municipality of Middlesex Centre. The Municipality is concurrently completing their new Official Plan which considers growth in the Delaware area for planning horizon. The servicing strategy for the employment lands should be studied in the context of planned growth in the Delaware settlement area as well as the servicing needs of the existing community. A holistic view of servicing needs is recommended through an update to the Municipality's Water and Wastewater Master Plan. Through this plan, servicing needs for the community as a whole can be considered and costs distributed appropriately between existing needs, the requirements of the employment lands and new growth.

Appendix B
Middlesex Centre Foreign Direct Investment Strategy Presentation

Watson & Associates ECONOMISTS LTD.

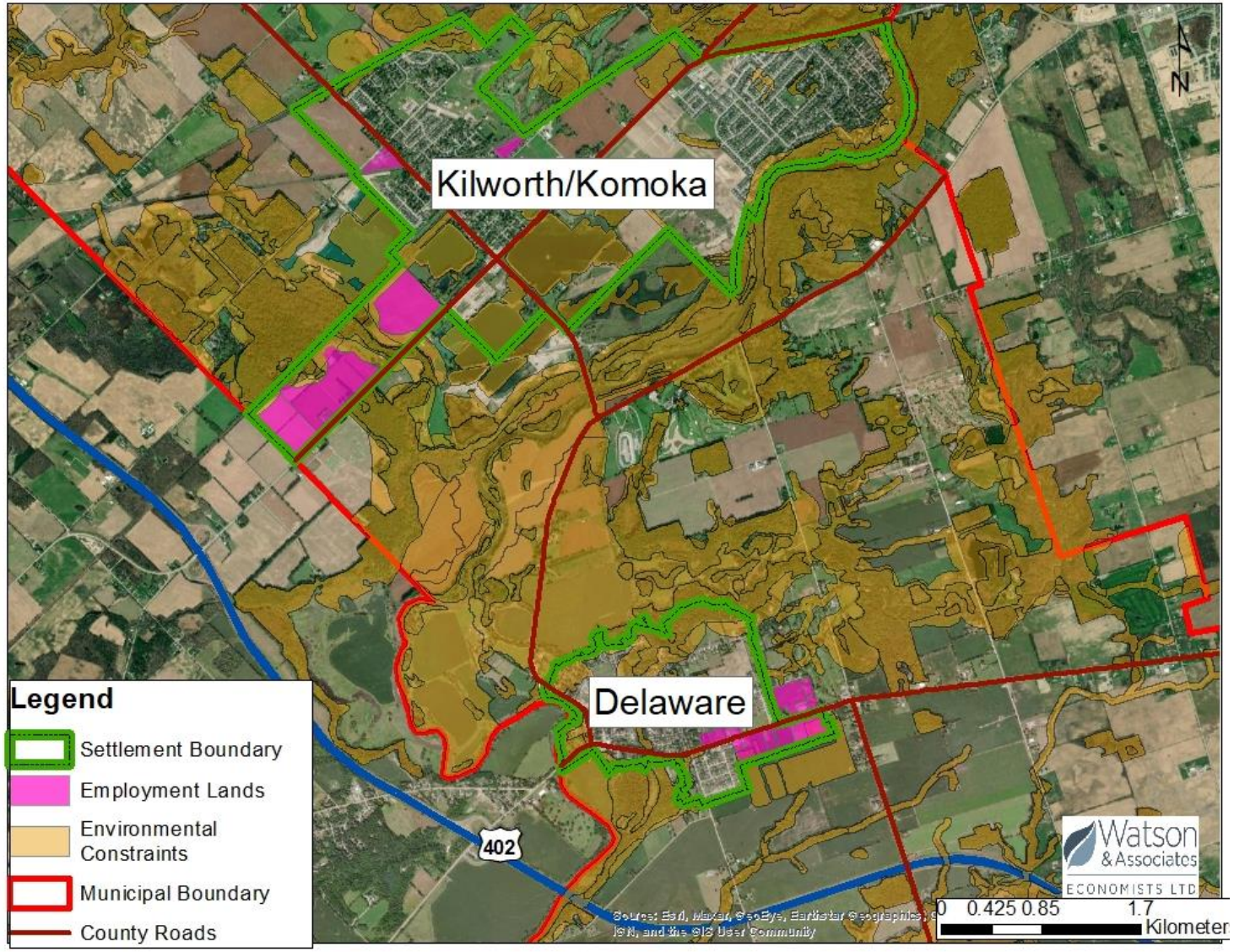
Middlesex Centre Foreign Direct Investment Strategy

Proposed Employment Areas

July 12, 2021

Middlesex Centre Employment Land Needs, 2046

Gross Land Area Deficit of 152 Hectares



Planning for the New Middlesex Centre Employment Area

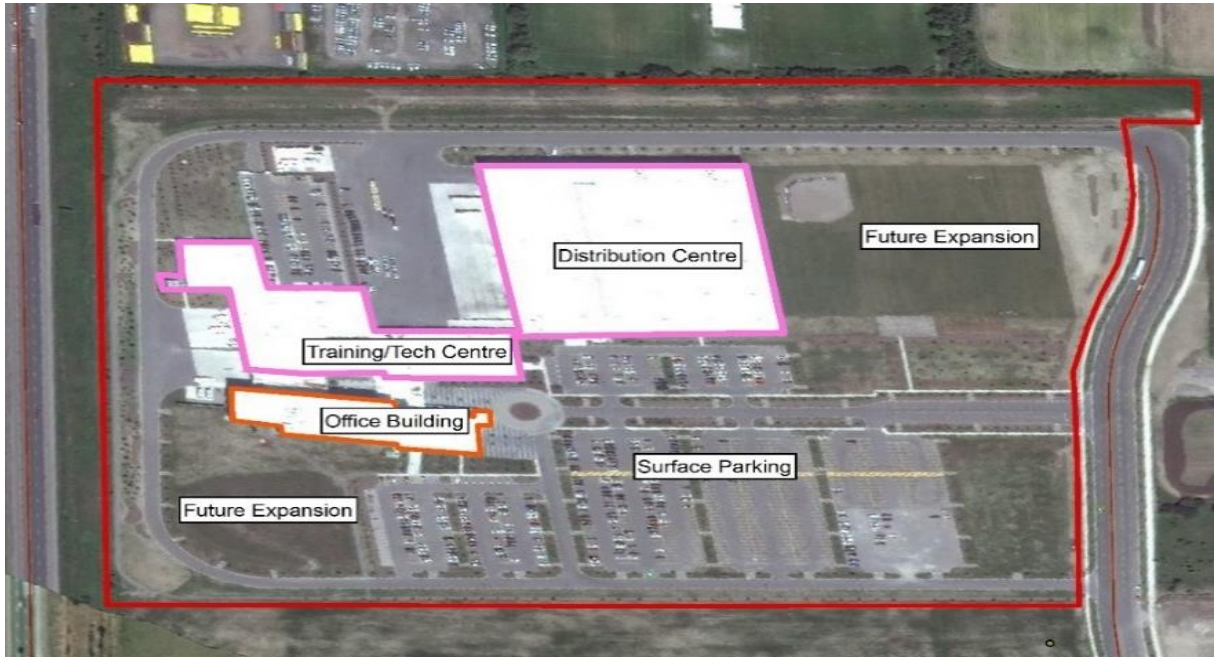
Planning for the Future

Key Themes for Employment Areas

- Consolidation and Blurring of Uses: Integrated Use Campuses and Buildings

Planning Implications:

- Need for development options which provide for large prestige employment sites with future expansion potential
- Demand for office space within industrial buildings increase employment density
- Accessory commercial uses



Honda Canada, Markham Ontario

Blum Canada, Mississauga
Supplier of furniture hinges, runners and lift systems.
Retail showroom to demonstrate products.
Office, warehouse (high ceilings, 80 ft'), retail showroom

Planning for the Future

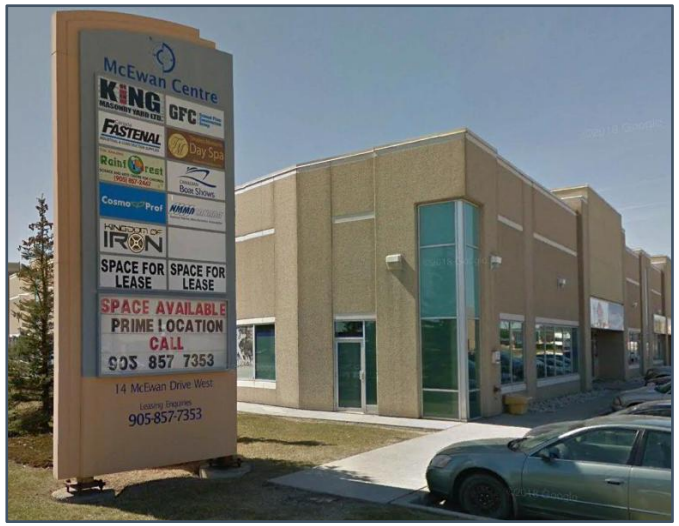
Key Themes for Employment Areas

- Market Choice and Opportunities for Employment Supportive Uses

Planning Implications:

- Adaptive planning and design which support a diversity of small, medium and large-scale business growth, including flex-space and multi-tenant industrial uses
- Unencumbered access to all sites, highway visibility primarily for office uses
- Need to identify the right balance of permitted commercial uses, particularly non-retail, non-commercial uses.
- Restriction of major retail uses
- Employment Area supportive uses typically located at gateway locations and along arterial roads

Flex-Office/Industrial, Hanlon Creek, Guelph



Multi-Tenant McEwan Centre, Bolton

Planning for the Future

Key Themes for Employment Areas

- Attracting Innovation and Creative Industries

Planning Implications:

- Building a theme around an established cluster, existing or potential anchor
- Competitive industrial real-estate market requires coordination with County to enhance the regional profile of the broader area
- Employment supportive uses which limit trips by automobile and improve pedestrian accessibility
- Incubator facilities
- Synergies with research facilities and post-secondary institutions
- Linking labour force attraction with housing affordability

Bromont Science Park, Bromont, QC
Microelectronics, Aerospace and Advanced Manufacturing

Oro-Station Innovation Automotive Park, Oro-Medonte (Simcoe County)
Automotive engineering, field testing, education, and manufacturing businesses

Planning for the Future

Key Themes for Employment Areas

- Best Practices Towards "Greener" Employment

Planning Implications:

- "Green standards" and/or policies which sustainably integrate business park design and site planning with the natural environment
- Development standards which require adaptive development practices which target environmental monitoring to pre-construction conditions
- Supporting and incentivising infrastructure development practices that minimize resource use and support conservation as well as renewable energy sources
- Explore and support green building design principles and energy efficiency

Walmart Fresh Food Distribution Centre, Calgary, AB

60% more energy-efficient than the company's traditional refrigerated centres

Hanlon Creek Business Park, Guelph

Environmental reserve,
9% of land area used for Innovative stormwater management design and environmental monitoring.

Planning for the Future

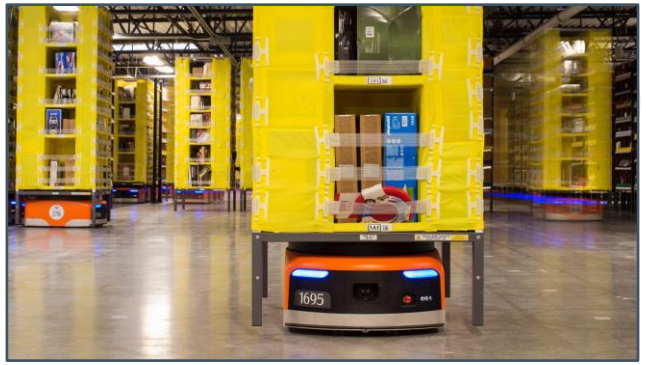
Key Themes for Employment Areas

- Evolving Goods Movement Sector

Planning Implications:

- Reduced demand for retail square footage, in particular retail space for goods-based retailers, increased demand for fulfillment centres
- Office uses add increase employment density and add prestige image
- Automated warehouse reduce employment opportunity
- Last mile delivery may involve drawing customer traffic to area

Automated Warehouses



NTN Head Office and Warehouse, Mississauga

Ikea Customer Pick-up Warehouse, Toronto

Reduces cost of last mile delivery.

Middlesex Centre Proposed Employment Area Target Sectors

Target Sector Requirements

Employment Sector/Land Use	Location	Parcel Sizes	Transportation	Labour Force	Surrounding Context	Development Characteristics
Manufacturing / Advanced Manufacturing	General or prestige setting	1 to 4 ha and greater	• Access to 400 series/controlled access highways • Proximity to markets and related industries	Access to skilled and unskilled labour	• Expansion potential • Buffers from surrounding non-industrial uses. • Emphasis on integrated operations (logistics and office), landscaping and enclosed storage	• Low to high design quality • 10,000 to 250,000 sq.ft. • High building coverage and on-site employment density • Range of building types, including small, large single-tenant and multi-tenant buildings • Loading/unloading areas
Distribution and Logistics	General or prestige setting	5 to 20 ha Flexibility in parcel configuration to accommodate large-scale users	• Access to 400 series/ controlled access Hwy • Excellent access/traffic circulation for heavy truck traffic ; Truck access, loading/ unloading requirements • Proximity to markets, customer base and related industries	Mobile labour force	• Need for open storage or enclosed vertical storage • Compatible surrounding land uses/ buffers from surrounding non-industrial uses • Access to on-site and proximity to off-site services • Expansion potential	• Low to moderate design quality • 10,000-1,000,000 sq. ft. • Ceiling height - 30 ft.+ • Large parcels with flat topography • Low to high building coverage and low on-site employment density • Loading/unloading areas

Target Sector Requirements

Employment Sector/Land Use	Location Criteria	Parcel Sizes	Transportation	Labour Force	Surrounding Context	Development Characteristics
Professional, Scientific, and Technical Services/Business Services	Prestige Industrial or Business Parks	Type of buildings: flexible leasing structures and market choice (multi-tenant vs. free standing office, Class A vs. B office space)	• Proximity to transit or within walkable environments	Access to skilled labour force	• Access to on-site amenities and proximity to off-site services • Prestige setting	• Low to high design quality • 2,000 to 10,000 sq.ft. • <1 to 2 ha lots • Storefront entrance for general public • High building coverage and on-site employment density • Small multi-tenant and flex office space • Street lighting
Research and Development/"Knowledge-based" Sectors	Prestige Industrial or Business Parks	1 to 2 ha For stand-alone building or facility	• Proximity to transit or within walkable environments	Access to skilled labour force	• Proximity to related industry cluster (companies and public institutions) • Prestige "campus-like" setting • Access to on-site amenities and proximity to off-site services	• Low to high design quality • 2,000 to 10,000 sq.ft. • 1-2 ha lots • High building coverage and on-site employment density • Space for manufacturing / research as well as multi-tenant or flex office space

Target Sector Requirements

Employment Sector/Land Use	Location Requirements	Parcel Sizes	Transportation	Labour Force	Surrounding Context	Development Characteristics
Agri- Business	General or Light Industrial Setting	1 to 4 ha and greater	• Access to highways and multi modal facilities • Access to warehousing, markets and distribution centers	Access to both skilled and semi-skilled labour force	• Access to upstream & downstream industries • Storage space for material and equipment • Loading / unloading requirements	• Low to high design quality • High building coverage and on-site employment density • Range of building types, including small, large single-tenant and multi-tenant buildings • Loading/unloading areas
Food and Accommodation Services / and other Employment Supportive Uses	Prestige Industrial or General Industrial	1 to 5 ha lots	• High traffic exposure from major road and surrounding employment and commercial uses	Access to skilled and semi-skilled labour force	• Prestige and general industrial setting • Surrounding a large employment base • Clustering of retail uses in a retail court or at high traffic areas (e.g. major intersections, gateway entrances to Employment Area)	• High design quality • 2,000 (fast food restaurant) to 50,000 sq.ft. (hotel/convention centre) • Commercial floor space per acre ratio of 200 to 400 sq.ft. of retail/service space per acre of developed Employment Area • High building coverage and on-site employment density • Street lighting

Select Employment Sector Opportunities for Middlesex Centre

Agricultural and food processing

- Access to agricultural land and market
- Proximity to storage / warehousing
- Access and transportation (Hwy 402 and 401)
- Proximity to other employment areas
- Proximity to downstream industries
- Competitive land prices

Manufacturing / Advanced Manufacturing

- Access to ample labour force
- Proximity to storage / warehousing
- Access and transportation (Hwy 402 and 401)
- Proximity to other employment areas
- Compatible land uses
- Competitive prices and availability of space

Logistics & Distribution

- Access to agricultural areas, manufacturing industrial base and market
- Access and potential for intermodal transportation
- Availability of land
- Varied / flexible parcel sizes
- Competitive prices
- Compatible surrounding uses

Tech and Light Industrial

- Access to skilled and unskilled labour force presence of post secondary institutions in surrounding areas
- Access and transportation
- Proximity to other employment areas
- Compatible land uses
- Competitive prices and availability of space

Conclusions

Conclusions

- The Municipality will require approximately 150 hectares of new employment land to accommodate forecast demand to 2046;
- Proposed Employment Area Site 1 is the preferred location to accommodate future employment growth in Middlesex Centre;
- A broad range of target sectors have been identified for the Municipality, with a focus on advanced manufacturing and distribution and logistics which can leverage the exposure and access to Highway 402; and
- The proposed Employment Configuration can accommodate a mix of larger parcel sizes which can accommodate business operations identified within the target sectors.