



CULTURAL HERITAGE IMPACT ASSESSMENT REPORT



PREPARED FOR:

**Guelph Innovation District
Lands**
Fusion Homes
328 Victoria Street South, Guelph

File no. 1405G

**March 2025 (updated
December 2025, June 2026)**

Your Vision

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MHBC - MacNaughton Hermesen Britton Clarkson Planning Limited
200-540 Bingemans Centre Drive Kitchener, ON N2B 3X9

T: 519 576 3650

F: 519 576 0121

www.mhbcplan.com



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Project Personnel

Dan Currie, MA, MCIP, RPP, CAHP	<i>Managing Director of Cultural Heritage</i>	Senior Review
Vanessa Hicks, MA, CAHP	<i>Senior Heritage Planner</i>	Project Manager, Field Investigations, Author
Sam Phat	<i>Technician</i>	Maps & GIS

Glossary of Abbreviations

CHL	Cultural Heritage Landscape
CHRER	Cultural Heritage Resource Evaluation Report
CHVI	Cultural Heritage Value or Interest
HIA	Heritage Impact Assessment
HCD	Heritage Conservation District
MHBC	MacNaughton Hermsen Britton Clarkson Planning Limited
MCM	Ministry of Citizenship and Multiculturalism (formerly the Ministry of Heritage, Sport, Tourism and Culture Industries)
OHA	Ontario Heritage Act, R.S.O. 1990, c. O. 18
PPS 2024	Provincial Planning Statement (2024)
Toolkit	Ontario Heritage Toolkit

Executive Summary

MHBC was retained by Fusion Homes to undertake a Heritage Impact Assessment (HIA) for the proposed draft plan of subdivision for part of Block Plan Areas 1 and 2 of the Guelph Innovation District.

GID Block Plan Area 1 was identified by the City of Guelph in the GID Secondary Plan as including potential Cultural Heritage Resources. MHBC completed a Cultural Heritage Resource Evaluation Report (CHRR) in order to provide further input into the planning policy framework. The CHRR determined that the property located at 328 Victoria Road South on part of Blocks 1 and 2 demonstrates Cultural Heritage Value or Interest and therefore requires further study by way of a Heritage Impact Assessment.

It is important to note that at the time of drafting the Cultural Heritage Resource Evaluation Report, the property at 328 Victoria Road South was listed (non-designated) on the City's Heritage Register. Since this time, the property was designated under Part IV of the *Ontario Heritage Act* by the City of Guelph in December 2025. The designation By-law identifies that the only heritage attribute of the property is the G.M. Frost building. Therefore, this updated HIA reflects the identified Cultural Heritage Value or Interest of the property and its designated heritage attributes.

The purpose of this HIA is to determine whether or not any adverse impacts on cultural heritage resources are anticipated as a result of the proposed development. This report also identifies whether or not the proposed development is anticipated to result in adverse impacts to cultural heritage resources located within the vicinity of the subject lands. The subject lands are not located adjacent to any cultural heritage resources as per the definition of "adjacent" provided in the City of Guelph Official Plan. This report also provides alternative development options and mitigation and conservation measures, where necessary.

A draft plan of subdivision is proposed for part of Block Plan Areas 1 and 2. The proposal includes the retention of the G.M. Frost building on Block 38 (0.328 ha.) which provides the opportunity for its adaptive re-use in-situ.

Summary of Impact Analysis:

This report has identified the following impacts associated with the proposed development on identified cultural heritage resources:

- All heritage attributes which have been identified by the City of Guelph as per the designation By-law for the property at 328 Victoria Road South would be retained in-situ on Block 38 of the draft plan of subdivision and be integrated into the development proposal. As a result, no adverse impacts related to destruction are anticipated as a result of the proposed draft plan of subdivision. Further, no adverse impacts related to alteration, obstruction, isolation, shadows, or land disturbances are anticipated;
- The proposed draft plan of subdivision is not anticipated to result in impacts to views. Views of Downtown Guelph from the G.M. Frost building will not be obstructed. Further, the proposed draft plan allows for views of the building from within the neighbourhood (surrounding Block 38) to maintain its prominence and visibility;
- No adverse impacts on cultural heritage resources located within the vicinity of GID Block Plan Areas 1 and 2 are anticipated.

Summary of Mitigation Recommendations:

- Once the Plan of Subdivision is registered, the City should update the designation By-law no. (2025)-21178 to reflect the legal description specific to Block 38 which includes the G.M. Frost building; and
- Completion of a Heritage Impact Assessment and/or Conservation Plan in the future to address any changes to the G.M. Frost building which may be proposed in the future, including any proposed alterations, additions, or demolitions. An Interpretation Strategy should also be completed when more information is available on changes to the building.

1.0 Introduction

1.1 Project Background

A Cultural Heritage Resource Evaluation Report (CHREER) was conducted by MHBC and updated in 2024. The scope of the CHREER included the entirety of GID Block Plan Areas 1, 2, and 3 of the Guelph Innovation District lands. The CHREER demonstrated that part of GID Block Plan Areas 1 and 2 meets 3 criteria under *Ontario Regulation 9/06* as these areas include the property at 328 Victoria Road South. Following the submission of the updated CHREER, the property at 328 Victoria Road South was designated under Part IV of the *Ontario Heritage Act* by the City of Guelph in December 2025. This HIA has been updated to reflect comments received by City staff as well as the designation of the property at 328 Victoria Road South.

1.2 Location of Subject Property (Part of GID Block Plan Area 1)

The GID lands are separated into four distinct areas, known as Block Plan Areas 1, 2, 3, and 4 (see **Figure 1** below). The property located at 328 Victoria Road South is located on part of Block Plan Areas 1 and 2. Direction on the future development of these four areas are outlined in the Guelph Innovation District Secondary Plan.



Figure 1: Aerial image of the GID lands noted with a red dashed line. Block Plan Areas are displayed within the GID boundary. Block Plan Areas 1 and 2 are indicated in green and blue. (MHBC, 2022)

The GID Secondary Plan requires the submission of a Heritage Impact Assessment to provide input into the planning process and development concept. Therefore, this HIA has been prepared to determine whether or not adverse impacts to cultural heritage resources are anticipated as a result of the proposed draft plan of subdivision. As noted in this report, Block Plan Areas 1 and 2 include a portion of the property at 328 Victoria Road South which has been designated under Part IV of the *Ontario Heritage Act*.

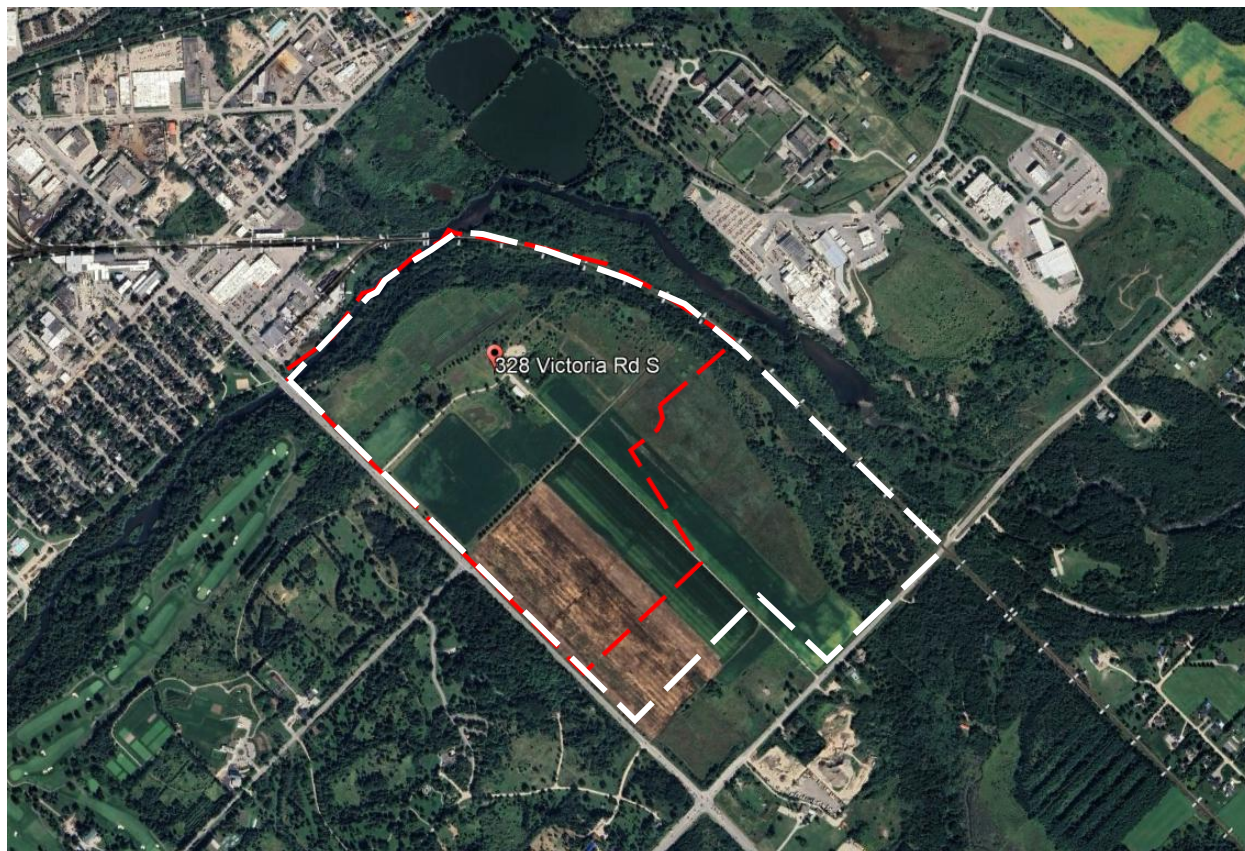


Figure 2: Satellite photograph showing the portion of Block Plan Area 1 which is proposed for development (outlined in red) and the property at 328 Victoria Road South (outlined in white dashed line). Note that the property at 328 Victoria Road South is located on part of Block Plan Areas 1 and 2. (Source: Google Earth Pro, 2024)

GID Block Plan Areas 1 and 2 are currently proposed to be developed as part of a master planned community which includes (but is not limited to) employment lands as well as commercial and residential uses with a range of housing types.

1.3 Heritage Status

The property at 328 Victoria Road South was designated under Part IV of the *Ontario Heritage Act* by the City of Guelph as per By-law no. (2025)-21178 in December 2025. The By-law identifies that the property demonstrates design/physical, historical/associative, and contextual values. The only attributes identified in the By-law are related to the G.M. Frost building. A copy of the designation By-law is provided in **Appendix C**.

1.4 Adjacent Lands

Section 12 of the Guelph Official Plan provides a definition of adjacent in terms of cultural heritage resources as follows:

Adjacent Lands means: For the purpose of designated property or protected heritage property, any parcel of land that:

- i) shares a boundary with a parcel containing a designated property or protected heritage property;*
- ii) is separated from a designated property or protected heritage property by a right-of-way (e.g., road) and within the span of the extended lot lines of the parcel containing a designated property or protected heritage property or is located at a corner opposite a corner property that is a designated heritage property or protected heritage property;*
- iii) is within 30 metres of a designated heritage property or protected heritage property in instances where a designated heritage property or protected heritage property is within a right-of-way (e.g. bridge) or located on a parcel 2.5 hectares in area or greater.*

Given the definition of adjacent provided in the City of Guelph Official Plan, the subject property is not located adjacent to any cultural heritage resources.

However, the subject property is located within the vicinity of the a) the Ontario Reformatory Heritage Conservation District at 785 York Road, which has been designated under Part V of the *Ontario Heritage Act* (on part of Block 4) and b) the property at 728 Victoria Road South which is listed on the City's Heritage Register (on part of Block 3).

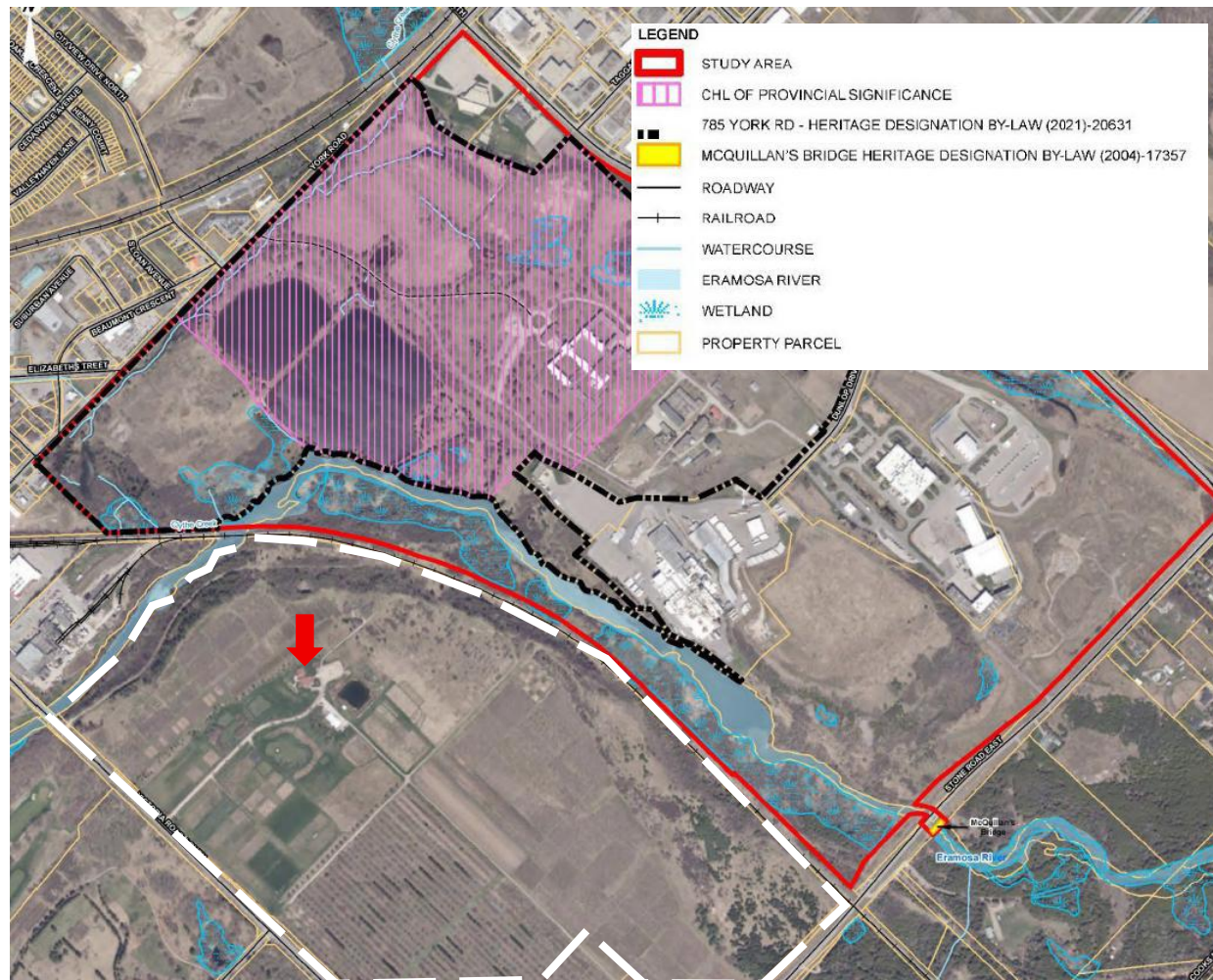


Figure 3: Map of the Ontario Reformatory Heritage Conservation District (outlined in black dashed line), the HCD study area (outlined in red), and the property at 328 Victoria Road South (outlined with white dashed line). The location of the G.M. Frost building noted with red arrow. (Source: City of Guelph, 2024)

2.0 Policy Context

2.1 Provincial Planning Statement 2024

The Province has refined policy guidance for land use planning and development matters in the *Provincial Planning Statement, 2024* (PPS). When addressing cultural heritage planning, the PPS provides for the following:

4.6 Cultural Heritage and Archaeology

- 1. Protected heritage property, which may contain built heritage resources or cultural heritage landscapes, shall be conserved.*
- 2. Planning authorities shall not permit development and site alteration on lands containing archaeological resources or areas of archaeological potential unless the significant archaeological resources have been conserved.*
- 3. Planning authorities shall not permit development and site alteration on adjacent lands to protected heritage property unless the heritage attributes of the protected heritage property will be conserved.*
- 4. Planning authorities are encouraged to develop and implement:*
 - a) archaeological management plans for conserving archaeological resources; and*
 - b) proactive strategies for conserving significant built heritage resources and cultural heritage landscapes.*
- 5. Planning authorities shall engage early with Indigenous communities and ensure their interests are considered when identifying, protecting and managing archaeological resources, built heritage resources and cultural heritage landscapes.*

2.2 The Planning Act

The *Planning Act* makes a number of provisions regarding cultural heritage, either directly in Section 2 of the Act or Section 3 respecting policy statements and provincial

plans. In Section 2, the *Planning Act* outlines 18 spheres of provincial interest that must be considered by appropriate authorities in the planning process. One of the intentions of *The Planning Act* is to “encourage the co-operation and co-ordination among the various interests”. Regarding cultural heritage, Subsection 2(d) of the Act provides that:

The Minister, the council of a municipality, a local board, a planning board and the Municipal Board, in carrying out their responsibilities under this Act, shall have regard to, among other matters, matters of provincial interest such as...

(d) the conservation of features of significant architectural, cultural, historical, archaeological or scientific interest;

The *Planning Act* therefore provides for the overall broad consideration of cultural heritage resources through the land use planning process.

2.3 Ontario Heritage Act

The *Ontario Heritage Act, R.S.O., 1990, c.0.18* remains the guiding legislation for the conservation of significant cultural heritage resources in Ontario. This HIA has been guided by the criteria provided with *Ontario Regulation 9/06* of the *Ontario Heritage Act*, as Amended in 2022 as per Bill 23 (Schedule 6). *Ontario Regulation 9/06* outlines the mechanism for determining cultural heritage value or interest. Here, a property must meet at least 2 of 9 criteria to be considered for designation under Part IV of the *Ontario Heritage Act*.

2.4 Guelph Official Plan

Section 4.8 of the City of Guelph Official Plan provides policies regarding the management of cultural heritage resources. This includes the following, which is related to the scope of this HIA:

4.8.1 Policies

1. Cultural heritage resources shall be conserved in accordance with this Plan and all other relevant legislation.

2. Built heritage resources and cultural heritage landscapes may be designated and/or listed on the Municipal Register of Cultural Heritage Properties.

5. Guidelines for Cultural Heritage Resource Impact Assessments, Cultural Heritage Conservation Plans and Cultural Heritage Reviews may be established by the City. Cultural Heritage Resource Impact Assessments and Cultural Heritage Conservation Plans will be used when evaluating development and redevelopment in association with designated and non-designated properties in the Municipal Register of Cultural Heritage Properties. Cultural Heritage Reviews will be used to assess non-designated properties listed on the Municipal Register of Cultural Heritage Properties.

6. Built heritage resources and cultural heritage landscapes are required to be maintained with appropriate care and maintenance that conserves their heritage attributes in accordance with: i) the City's Property Standards By-law, the Tree By-law and the Site Alteration By-law; and ii) prescribed federal and provincial standards and guidelines.

7. The ongoing maintenance and care of individual built heritage resources and cultural heritage landscapes and the properties on which they are situated together with associated features and structures is required in accordance with City standards and bylaws and, where appropriate, the City will provide guidance on sound conservation practices.

12. The City will ensure the conservation and protection of cultural heritage resources in all planning and development matters including site alteration, transportation, servicing and infrastructure projects.

13. The City may require, as a condition of approval of a development proposal within which a cultural heritage resource is situated or which is adjacent to a protected heritage property, the provision of one or more performance assurances, performance security, property insurance and/or maintenance agreements, in a form acceptable to the City, in order to conserve the cultural heritage resource.

14. It is preferred that cultural heritage resources be conserved in situ and that they not be relocated unless there is no other means to retain them. Where a cultural heritage resource cannot be conserved in situ or through relocation and approval for demolition or removal is granted, the City in consultation with Heritage Guelph will require the proponent to provide full documentation of the cultural heritage resource for archival

purposes, consisting of a history, photographic record and measured drawings, in a format acceptable to the City.

15. The proponent shall provide and deliver to the City all or any part of the demolished cultural heritage resource that the City, in consultation with Heritage Guelph, considers appropriate for reuse, archival, display, or commemorative purposes, at no cost to the City. The City may use or dispose of these artifacts as it deems appropriate in accordance with the Ontario Heritage Act and any applicable regulations or guidelines.

18. The predominant built heritage resources in the periphery of the city are the farmsteads. While there have historically been strong cultural, economic, social and political links between the City of Guelph and its rural neighbours, it is the farming history which sets this area apart from the more heavily urbanized parts of the city. In many cases, the farmsteads are linked to pioneer settlers and other important persons, technologies, architectural styles and developments, or represent the historical development of Guelph and Wellington County. Many are intact examples of early settlement patterns in Wellington County, which survive as a testament to the prosperity and history of this area. These built heritage resources are most deserving of preservation and careful incorporation into developments in accordance with the provisions of this Plan.

4.8.2 Heritage Designation

1. Council, in consultation with Heritage Guelph, may designate by by-law, properties of cultural heritage value or interest in accordance with Part IV of the Ontario Heritage Act. Properties of cultural heritage value or interest must, in Council's opinion, meet one of the prescribed criteria as established by regulation under the Ontario Heritage Act. Such properties shall be listed as designated properties in the Municipal Register of Cultural Heritage Properties.

2. Development, redevelopment, and site alteration affecting a designated property or other protected heritage property, where the works are likely to affect the property's heritage attributes, shall not be permitted unless written consent is received from the City.

3. Applications for any alteration affecting or likely to affect the heritage attributes of a designated property or other protected heritage property

shall be required to demonstrate, to the satisfaction of the City, in consultation with Heritage Guelph, through a Cultural Heritage Resource Impact Assessment and/or a Cultural Heritage Conservation Plan how the heritage attributes will be conserved, protected and integrated, where appropriate, into the development plans.

4. Development, redevelopment and site alteration of designated properties or other protected heritage property shall be designed to integrate the property's heritage attributes into the proposed design and ensure compatibility with the heritage attributes and values through such measures as:

- i) maintaining the original location and orientation to the street and lot pattern;*
- ii) conserving the cultural heritage landscape or setting;*
- iii) ensuring the height, bulk, form, massing, materials, fenestration and/or facade treatments do not detract from the heritage attributes; and*
- iv) maintaining the general scale and pattern of the streetscape.*

5. Development, redevelopment and site alteration of designated properties or other protected heritage property shall ensure that the proposed development, redevelopment or site alteration conserves or enhances the context in which the cultural heritage resource is situated.

6. Heritage attributes shall be conserved, unless it has been demonstrated to the satisfaction of the City, in consultation with Heritage Guelph, that the heritage attributes or the designation of the property no longer meet the criteria for determining cultural heritage value or interest established by provincial regulation. The repeal of a heritage designation will be undertaken in accordance with the Ontario Heritage Act and its regulations or guidelines.

4.8.4 Development and Site Alteration Adjacent to Protected Heritage Property

1. Development and site alteration may be permitted on adjacent lands to protected heritage property where the proposed development and site alteration has been evaluated and it has been demonstrated, to the satisfaction of the City, in consultation with Heritage Guelph, that the

heritage attributes of the protected heritage property will be conserved. Mitigation or avoidance measures may be required to conserve the heritage attributes of the protected heritage property affected by the adjacent development or site alteration.

2. Development or site alteration on adjacent lands to a protected heritage property shall require a Scoped Cultural Heritage Resource Impact Assessment to evaluate and demonstrate, to the satisfaction of the City in consultation with Heritage Guelph, that the heritage attributes of the designated heritage property will be conserved.

3. Development and site alteration on adjacent lands to protected heritage property shall be designed to avoid or mitigate impact on the identified heritage attributes of the protected heritage property, and should be designed to be compatible with the immediate context on the street.

4. Adjacent lands guidelines may be developed by the City to guide the consideration of development adjacent to designated heritage properties or other protected heritage property and to set out the detailed requirements for a Scoped Cultural Heritage Resource Impact Assessment.

5. Architectural design guidelines may be developed by the City to guide development and site alteration adjacent to designated heritage properties or other protected heritage property.

4.8.5 Heritage Register

4. Non-designated built heritage resources or cultural heritage landscapes listed in the Heritage Register shall not be demolished or removed without the owner providing at least 60 days notice in writing to the City of the intent to demolish in conjunction with an application for a demolition permit. Council, in consultation with Heritage Guelph, will assess requests for demolition to determine the significance of the built heritage resources and cultural heritage landscapes affected. Council may refuse to issue the demolition permit and determine that the property is of sufficient cultural heritage value or interest that it should be designated under the Ontario Heritage Act.

- 5. Council, in consultation with Heritage Guelph, may determine that a property listed in the Heritage Register has no cultural heritage value or interest, and in such instances, demolition may be permitted.*
- 6. Built heritage resources and cultural heritage landscapes that have been listed in the Heritage Register shall be considered for conservation in development applications initiated under the Planning Act, unless the applicant demonstrates to Council in consultation with Heritage Guelph, through a Cultural Heritage Resource Impact Assessment, Scoped Cultural Heritage Resource Impact Assessment or Cultural Heritage Review, that the built heritage resource or cultural heritage landscape is not of cultural heritage value or interest and, therefore, does not meet the criteria for designation under the Ontario Heritage Act.*
- 7. Where a non-designated built heritage resource or cultural heritage landscape is listed in the Heritage Register, the City may require, as a condition of approval of a development application under the Planning Act, a building permit, a partial demolition or change of use, that the proponent enter into agreements to conserve and/or permit to be designated, by the City, in consultation with Heritage Guelph, the built heritage resource or cultural heritage landscape.*
- 8. The City may require the proponent to prepare a Cultural Heritage Conservation Plan as a condition of approval for a development application, a building permit, including partial demolition, and/or a change of use that has the potential to impact a non-designated built heritage resource or a cultural heritage landscape listed in the Heritage Register.*

2.5 Guelph Innovation District Secondary Plan

Section 11.2 of the Guelph Official Plan provides policies as it relates to the Guelph Innovation District Secondary Plan. This includes policies for the wise management of cultural heritage resources.

11.2.1.2 Principles and Objectives

Principle 1: Protect what is Valuable Creating a place that respects the Natural Heritage System and cultural heritage resources, making citizens stewards of the resources for current and future generations.

Objectives

- a) Preserve and enhance the extensive Natural Heritage System, including the Eramosa River Valley which is designated as a Canadian Heritage River.*
- b) Respect the existing topography and sightlines, including public views and public vistas of the Eramosa River, Downtown and the historic Reformatory Complex.*
- c) Ensure compatible public access opportunities to the Natural Heritage System and cultural heritage resources and promote their celebration, especially river vistas and edges, the Provincially Significant Earth Science Area of Natural and Scientific Interest (ANSI), and the historic Reformatory Complex.*
- d) Connect surrounding land uses with the Natural Heritage System and cultural heritage resources and provide opportunities for compatible research, educational, recreational and urban agricultural uses.*
- e) Ensure that significant built heritage resources and significant cultural heritage landscapes are conserved.*

Principle 4: Create an Attractive and Memorable Place Creating meaningful places to bring people, activities, environment(s) and ideas together, creating a sense of arrival and inclusion.

Objectives

- f) Create an accessible network of public facilities, parks, and open spaces which serves the new community and surrounding neighbourhoods, and is integrated with the Natural Heritage System and cultural heritage resources.*
- j) Respect (and emulate where appropriate) the Beaux-Arts design of the cultural heritage landscape component of the historic Reformatory Complex.*

Principle 6: Grow Innovative Employment Opportunities Grow innovative employment opportunities that support the knowledge-based innovation sector, within a compact, mixed-use community.

Objectives

e) Encourage employment uses within the historic Reformatory Complex that can showcase the site's cultural heritage resources

11.2.2 Natural and Cultural Heritage

The natural and cultural heritage policies shape and regulate the conservation, protection and enhancement of the Natural Heritage System and cultural heritage resources found within the Guelph Innovation District (GID). The policies below are informed by the Vision and supporting Principles which seek to reflect Guelph's history and celebrate the rich heritage resources of the district, including the Eramosa River Valley, dramatic topography and views, and historic Reformatory Complex.

11.2.2.2 Cultural Heritage

1. Appendix A shows cultural heritage resources for illustrative purposes only, along with the Natural Heritage System as designated in the Official Plan to highlight the interconnections between the Natural Heritage System, cultural heritage resources and public views referred to in the Secondary Plan policies. Appendix A does not constitute part of the Secondary Plan policies.

2. As identified on Schedule B, the eastern portion of the GID is predominantly designated as Adaptive Re-use within a cultural heritage landscape with built heritage resources in the historic Reformatory Complex. Land uses within the cultural heritage landscape boundary are subject to the provisions of the Cultural Heritage Resource policies of the Official Plan. Policies related to the Adaptive Re-use land use designation can be found in Section 11.2.6.3 of this Secondary Plan.

3. Development within the GID, on lands designated as Adaptive Re-use and/or adjacent to cultural heritage resources, should adopt an architectural vocabulary and design elements that are compatible with and respectful of the cultural heritage value and heritage attributes of the cultural heritage resources on site.

- 4. Cultural heritage resources including all features identified as provincially significant shall be conserved through long term protection mechanisms (e.g. heritage conservation easements).*
- 5. A Cultural Heritage Resource Impact Assessment and/or Conservation Plan will be required as part of a complete application to ensure that the cultural heritage resources within the site will be conserved.*
- 6. All land uses within the GID are subject to the provisions of the Cultural Heritage Resource policies of the Official Plan.*
- 7. It is the intent of this Secondary Plan to conserve cultural heritage landscapes, such as the area delineated as the historic Reformatory Complex on Appendix A that have been modified by human activities and are valued by the community.*
- 8. Cultural heritage landscapes and visual relationships to built heritage resources shall be conserved and monitored to allow for meaningful interpretation.*
- 9. Development will respect the existing cultural heritage resources and important public views and public vistas in site design.*
- 10. The retention and integration of the Turfgrass Institute Building (former G.M. Frost Centre) into the GID community is encouraged.*

2.6 Guiding Documents & Terms of Reference

Guidelines for undertaking the assessment of cultural heritage resources are provided by various government ministries, including the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI), which administers the *Ontario Heritage Act*, and is ultimately responsible for the conservation, protection, and preservation of cultural heritage, and the Ministry of Transportation (MTO).

The MHSTCI has issued guidelines to assist in the identification and assessment of cultural heritage resources as part of the environmental assessment process. These guidelines include the Ontario Heritage Tool Kit.

3.0 Background Research and Historical Context

3.1 Indigenous Communities & Pre-European Contact Settlement

The area surrounding Guelph was primarily unoccupied by First Nations and was considered a 'neutral zone'. Hurons settled the north and the Petun and Neutrals to the west. The Iroquois settled to the south-east across Lake Ontario and were rivals of the Hurons (Guelph Historical Society, 1977). By the late 1500s to 1600s, the Iroquoian speaking peoples were settled along the Grand River, with the Algonquian speaking peoples further west towards Lake Huron (Munson and Jamieson, 2013). The late pre-historic period Iroquoians were self-reliant and resided in tribal clusters and villages. Interactions between the first Europeans and the First Nations in Ontario (including both the English and the French) during the 16th and 17th centuries were centered around the trading of goods, such as furs, beads, brass kettles, cloth, and tools (Sturtevant and Trigger, 1978). As European explorations expanded, so did their trade with First Nations. Tensions grew between the French and the Iroquois, leading to the Iroquois Wars of the 17th century and the Haudenosaunee Confederacy, also known as the Five Nations, which eventually became the Confederacy of the Six Nations. The Six Nations Confederacy included the Mohawk, Cayuga, Onondaga, Oneida, Seneca and Tuscarora peoples (Munson and Jamieson, 2013). Peoples of the Six Nations came to reside on a tract of land within the Haldimand Tract.

3.2 Wellington County, Guelph & Puslinch Townships

As a result of the American Revolutionary War, British Loyalists and Iroquois (allied with the British) were driven into Canada. The Iroquois were granted land on both sides of the Grand River for their loyalty to the British.

Lands which are part of the former Guelph Township were surrendered by the Mississaugas to the British in 1792. The British also negotiated this treaty with the Mississaugas for a tract of land from Burlington Bay to the headwaters of the Grand and south-west to Port Burwell on Lake Erie (including present-day Guelph), who granted the land to the Iroquois. Portions of Guelph Township were set aside for Clergy reserves and Crown reserves.

In 1784 (following the American Revolution) a tract of land along the Grand River was purchased from the Mississaugas, known as the 'Haldimand Tract'. Governor Haldimand granted this land to the Six Nations for their alliance with the British (Canadian Encyclopedia.ca) A portion of the Haldimand Tract is located within what is now the City of Guelph. The lands were granted to the Six Nations for the purpose of settlement upon the banks of the river. The settlement of these lands is related to 'Treaty 3', also known as the 'Between the Lakes Purchase' of 1792 where Six Nations led by Mohawk Chief Joseph Brant selected the Grand River Valley as an area for settlement. Guelph was one of the major population centres within the land of the 'Between the Lakes Purchase'.

In order to make up for a lack of reserves in Lincoln County, the entire Township of Guelph was set aside as a Crown Reserve. The Township was therefore closed to settlement. It wasn't until 1827 that Guelph Township was made available for settlement.

The 1840s and 1850s saw settlement of the northern area of Guelph Township and increased agricultural production. Large scale immigration occurred after 1847, bringing labourers east of the Speed River. The act of putting 300 lots for sale in Guelph under Francis Kerr became the 'first extension of Guelph since 1827'. Another 40 Town Lots fronting Woolwich and Strange Streets were put up for sale as per the survey made by Kerr. Guelph Council began discussions to support railroad development through Guelph in 1850 & 1851, and construction began in the spring of 1853. The Galt & Guelph Railroad opened in 1857. The coming of the railroad brought increased opportunities for industry, trade and settlement. Guelph was incorporated as a Town on January 1, 1856, and became a City in 1879 (Johnson, 1977).

According to the 1867 Gazetteer and Directory of Wellington County, the first lot sold in Puslinch Township was a Clergy Reserve lot sold in 1829. The first Euro-Canadian settlers of the Township included Lowarch, O'Neil, Foster, Dunn, O'Sullivan, Kidd, McFarlane, Black, Crooks, and McBeth. The population of the Township in the 1860s was approximately 6,000 people. The Township is noted for its good quality land for cultivation, as well as cattle and sheep (Irwin & Burnham, 1867). By the end of the 1870s, the population had declined to 4,600 people (Armstrong & Delion, 1879).

3.3 Brief History of GID Block Plan Areas 1 and 2

The following sub-sections of this report provide a summary of the evolution of Block Plan Areas 1 and 2 over time. This summary is based on primary sources, including

maps, census records, and aerial photographs.¹ This summary includes both Block Plan Areas 1 and 2 given the historical interrelationship between land use and ownership.

Division G of Guelph Township included lands in the 1st, 2nd, 3rd, 4th, and 5th concessions. Block Plan Area 1 is located within Concession 2. Block Plan Area 1 includes land located within the following lots and concessions:

Wellington County, Guelph Township:

- Lot 13, Division G;
- Lot 10, Division G; and
- Lot 11, Division G.

According to the 1861 Wheelock & Leslie Map of Guelph Township, Block Plan Area 1 originally included the Henry J. Sanders farm on part of Concession 2, Lot 13 (Division G), portions of the J. McCullen (also spelled McQuillan) farm on part of Concession 2, Lot 10 (Division G), as well as a portion of lands owned by William Allan on part of Concession 2, Lot 11 (Division G). The 1861 Wheelock & Leslie map indicates that Henry Sanders owned lands south and west of the river on part of Lot 13.

¹ It should be noted that that while land registry records were consulted, they are largely unavailable due to improper copying methods, resulting in illegible entries.

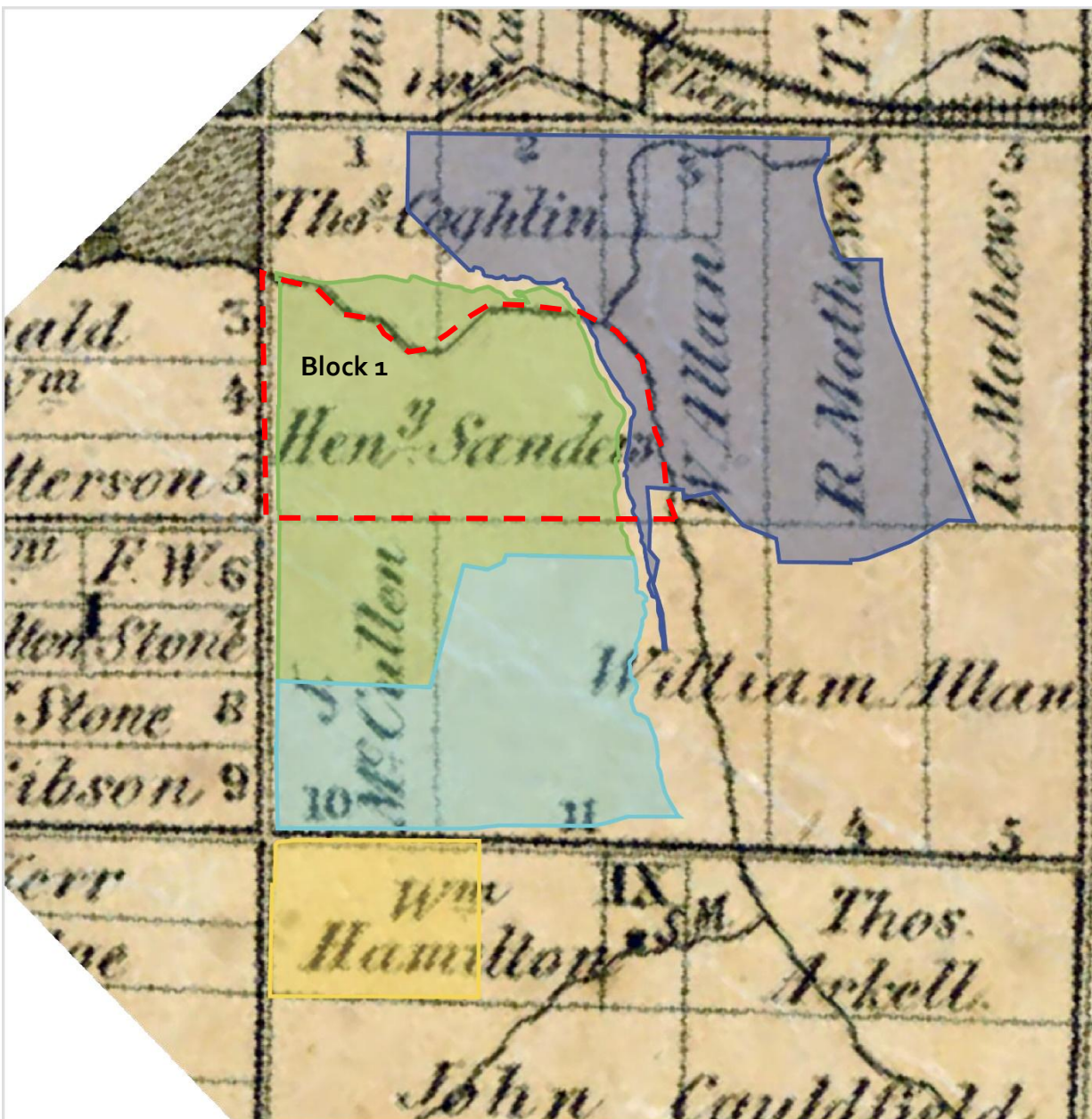


Figure 4: Excerpt of the 1861 Wheelock & Leslie Map of Guelph Township, Wellington County, noting the location of the Block lands. Block Plan Area 1 is shaded in green. Lands owned by Henry Sanders are outlined in a red dashed line. (Source: University of Toronto Map Library)

According to land registry records, Henry John Sanders was born in Somerset, England in 1817. He immigrated to Canada with his parents in the 1830s and later married Charlotte Maria (nee Jones). Together they had 10 children.

31	Henry Sanders	Agent	England	b. of England	43	1	1	1	1
32	Wm. Sanders		"	"	42	1	1	1	1
33	Wm. Sanders		"	"	16	1	1	1	1
34	G. H. Sanders		"	"	14	1	1	1	1
35	G. H. Sanders		"	"	12	1	1	1	1
36	G. H. Sanders		"	"	11	1	1	1	1
37	J. E. Sanders		"	"	9	1	1	1	1
38	A. H. Sanders		"	"	7	1	1	1	1
39	Louisa Sanders		"	"	5	1	1	1	1
40	M. J. Sanders		"	"	3	1	1	1	1
41	J. J. Sanders		"	"	1	1	1	1	1

Figure 5: Excerpt of the 1861 census of Guelph Township, noting Henry Sanders (agent), age 43 (Source: Ancestry.ca)

According to the 1867 Gazetteer and Directory for Wellington County, Henry J. Sanders is listed as residing on part of Concession 1 (Division G), Lot 12.²

According to the 1881 census of Guelph Township, Sanders continued to reside on the subject lands and is noted as a farmer of English descent. Members of his family are noted as a store clerk, farmer, and music teacher by occupation. Henry J. Sanders died in 1882.

8	8	Sanders Henry J.	M	63	-	England	New Jersey	English	Farmer	M	Y	-	-	-
		Sanders Charlotte M.	F	163	-	"	U.S.	"	Farmer	M	Y	-	-	-
		Sanders Anna H.	M	26	-	O.	"	"	Farmer	-	-	-	-	-
		Sanders Laura S.	F	25	-	O.	"	"	-	-	-	-	-	-
		Sanders Mabel J.	F	23	-	O.	"	"	-	-	-	-	-	-
		Sanders Walter J.	M	21	-	O.	"	"	Store Clerk	-	-	-	-	-
		Sanders May	F	18	-	O.	"	"	Musical Teacher	-	-	-	-	-

Figure 6: Excerpt of the 1881 census of Guelph Township, noting Henry Sanders (agent), age 63 (Source: Ancestry.ca)

According to the 1877 map of Guelph Township, a portion of Lot 13 was sold to P. McQuillan. The portion of Lot 13 which was retained by Henry J. Sanders included the farm dwelling, which is noted on the 1877 map.

² This is likely in error, given that historical maps confirm that the Sanders farm was located within Concession II, not Concession I.

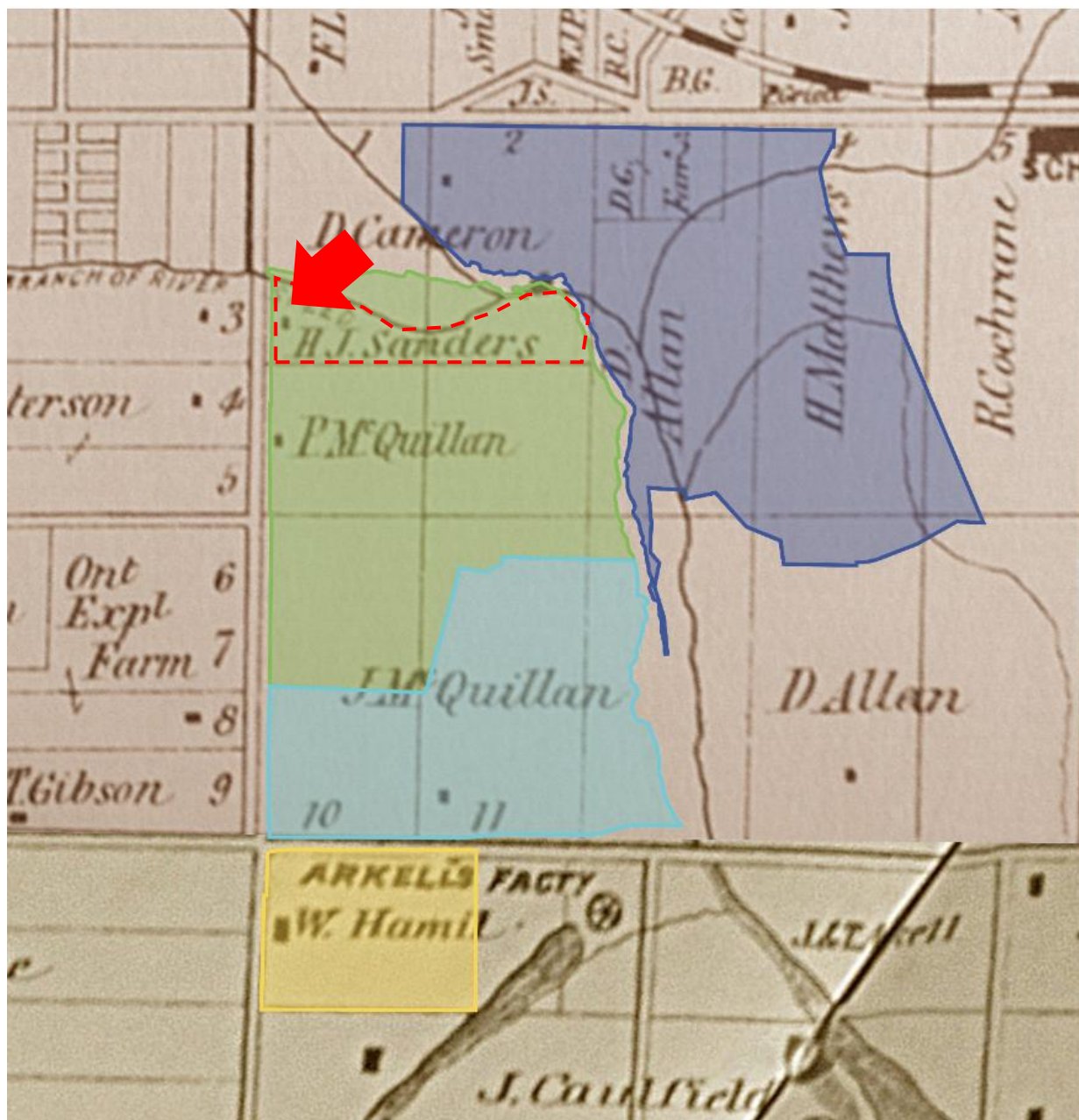


Figure 7: Excerpt of the 1877 Historical Atlas of the County of Wellington, Map of Guelph Township, Wellington County noting GID Block lands. Block Plan Area 1 is shaded in green. Lands formerly owned by Henry Sanders outlined in red. Location of Sanders dwelling noted with red arrow. (Source: McGill University)

Block Plan Area 1 also includes a portion of Concession 1, Lots 10 & 11, Division G. The portion of the lands located on Lot 10 was part of the J. McQuillan farm (also spelled McCullen).

According to the 1861 map, the McQuillan farm was located on all of Lot 10, Concession 2. The north half of these lands are included in Block Plan Area 1. No buildings or features are indicated on the map under the ownership of McQuillan.



Figure 8: Excerpt of the 1861 Wheelock and Leslie Map of Guelph Township, Wellington County noting Block lands. Block Plan Area 1 is shaded in green. Lands formerly owned by J. McQuillan outlined in red. (Source: University of Toronto Map Library)

According to the 1861 census of Guelph Township, James McQuillan (b. 1804) was a farmer of Irish descent. He is noted as residing in Guelph with his wife Mary, and their 8 children.

Figure 9: Excerpt of the 1861 census of Guelph Township, noting Henry Sanders (agent), age 43 (Source: Ancestry.ca)

McQuillan, Arthur	1	g	10 f
McQuillan, Patrick	1	g	10 f
McQuillan, Frank	1	g	10 f
McQuillan, James	1	g	10 f
McQuillan, John	1	g	10 f

Figure 10: Excerpt of the 1867 Gazetteer & Directory of Wellington County (Guelph Township) noting members of the McQuillan family (Concession 1, Lot 10, Division G) (Source: Library and Archives Canada)

March 2025 (updated December 2025, June 2026)

25	25	McQuillan, James M. 44.	Ireland	Catholic	Farmer	M
		" Mary 34.	"	"	"	"
		" Mary Ann 35.	"	"	"	"
		" Bernard 33.	"	"	"	"
		" Francis 31.	"	"	"	"
		" Patrick 29.	"	"	"	"
		" Arthur 24.	"	"	"	"
		" Margaret 19.	"	"	"	"
		" Morgan Mary 21.	"	"	"	"

Figure 11: Excerpt of the 1871 census of Guelph Township, noting James Sanders, age 43 (Source: Ancestry.ca)

According to the 1877 Historical Atlas of the County of Wellington (Guelph Township), James McQuillan purchased additional lands, including portions of Concession 2, Lot 11 and Concession 2, Lot 13 (formerly part of the Sanders land holdings). The lands located south of the Sanders farm are owned by P. McQuillan, likely Patrick McQuillan (son of James McQuillan). The Patrick McQuillan farmstead is noted on the east side of Victoria Road South (noted with red arrow on Figure 12). The James McQuillan farmstead is noted north of Stone Road East.



Figure 12: Excerpt of the 1877 Historical Atlas of the County of Wellington, Map of Guelph Township, Wellington County noting Block lands. Block Plan Area 1 is shaded in green Lands formerly owned by McQuillan outlined in red. Approximate location of the McQuillan farmsteads noted with red arrows. (Source: McGill University)

According to the 1906 map of Guelph Township, the southern portion of Lot 13, Concession 2 which was formerly owned by Sanders and McQuillan came under the ownership of Michael Walsh. A farm or dwelling is indicated on the 1906 map. This is likely the farmhouse which remained on the property until it was removed in the late 20th century. The 1906 map also indicates a structure on lands owned by Arnold

Sanders to the east, within proximity of the railway and Eramosa River. The map is likely indicating a former dwelling or farm complex given that Charlotte Sanders (widow) is noted as a farmer in Guelph Township in 1891. Arnold Sanders is also listed as a farmer.

The Guelph Junction Railway was constructed in the 1880s and is also indicated on the 1906 map below (see **Figure 16**).

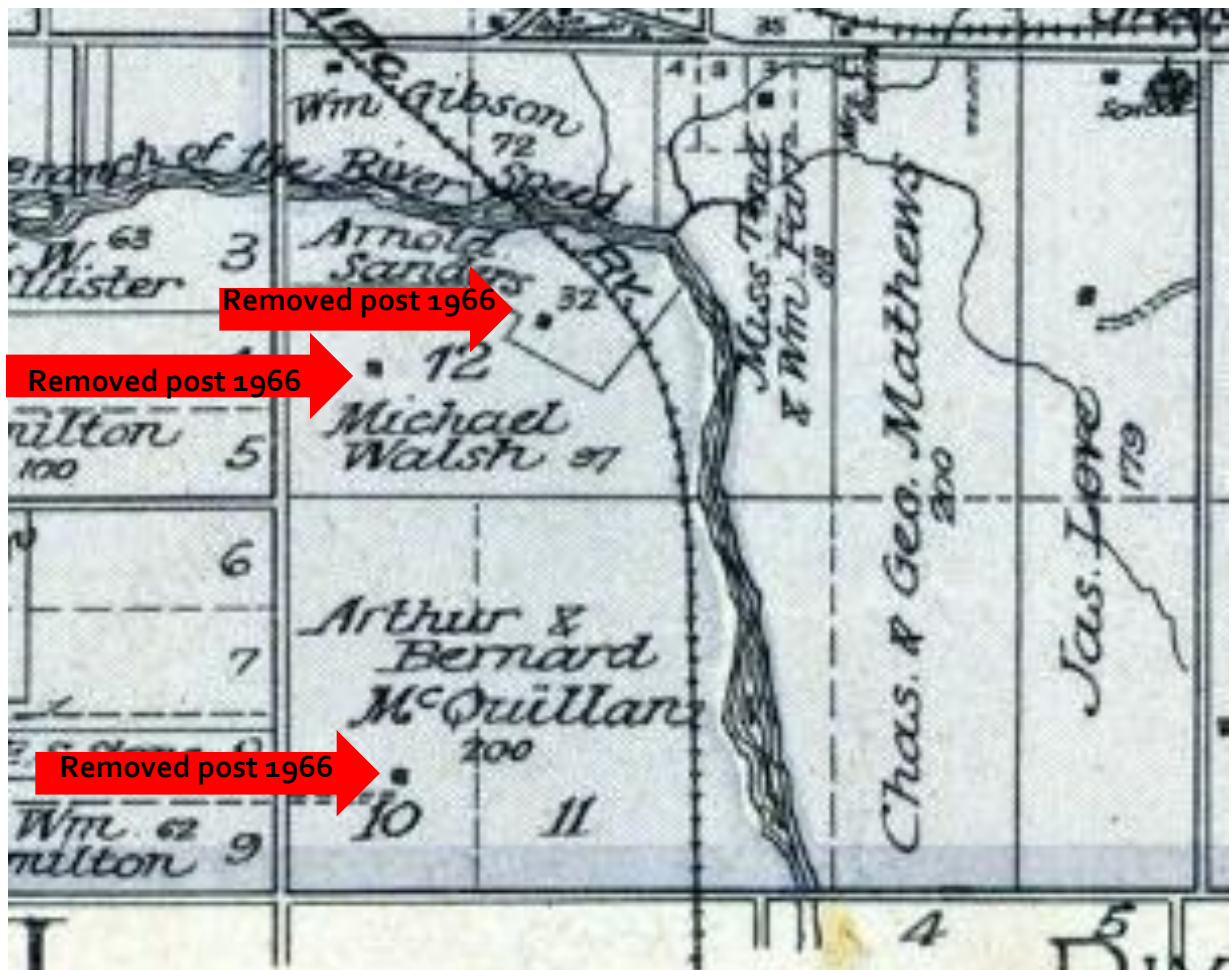


Figure 13: Excerpt of the 1906 map of Guelph Township noting lands owned by Sanders, McQuillan and Walsh on Block Plan Area 1. Red arrows note structures which have since been removed. (Source: Guelph Museums)

The 1901 census indicates that the head of the Sanders family is Maria Sanders (daughter of Charlotte and Henry J.) who resides on the property with her brother Arnold and sister Laura.

24	24	Sanders, Maria, F	W	Head	S	25 July 1846	55	Ont. 2	-
		" " Arnold M	W	Brother	S	21 Aug 1855	45	Ont. 2	-
		" " Laura S, F	W	Sister	S	11 Sep. 1856	44	Ont. 2	-

Figure 14: Excerpt of the 1901 census of Guelph Township noting Maria, Arnold, and Laura Sanders as farmers. (Source: Ancestry.ca)

The 1906 map also indicates the Arthur & Bernard McQuillan farm on Lot 10, Concession 2 on Block Plan Area 2. Components of the McQuillan farm on Lot 10 were removed by 1966, as per a review of available aerial photographs.

By the early 20th century, the P. McQuillan lands were owned by members of the Walsh family, noted as a farmer in the Wellington South voters lists.

233	Tilton, Lorne, farmer, R.R. 3, Guelph.
234	Walsh, Thomas, farmer, R.R. 3, Guelph.
235	Walsh, Mrs. Thomas (W), married woman, R.R. 3, Guelph.
236	Walsh, Michael J., farmer, R.R. 3, Guelph.
237	Walsh, Miss Alice (W), spinster, R.R. 3, Guelph.
238	Walsh, Miss Ellen (W), spinster, R.R. 3, Guelph.
239	Walsh, Miss Mary (W), spinster, R.R. 3, Guelph.

Figure 15: Excerpt of the 1930 Voters List of Wellington South noting members of the Walsh family as farmers on Regional Road 3, Guelph (Source: Ancestry.ca)

The features of Block Plan Area 1 are clearly visible in aerial photographs available between the 1930s and 1960s. According to available aerial photographs, the Walsh farmhouse and barn are noted on part of Block Plan Area 1, east of Victoria Road South.

The only 19th century features which remain are those related to the Patrick McQuillan farmstead. Members of the Walsh family continued to reside on lands part of Block Plan Area 1 until the mid. 20th century.

According to the 1930 aerial photograph, the Patrick McQuillan farm dwelling was located north of a driveway/laneway. The barn was located south of this laneway. The property included cultivated fields and an orchard, all of which were separated by clearly distinguishable trails and pathways. These trails and pathways continued towards the eastern edge of the site along the railway. A pathway within Block Plan Area 1 leads to a bridge over the river and provides access to the Ontario Reformatory lands on a portion of Block 4. A second bridge is located to the south, and did not provide direct access to the subject lands based on a review of available aerial
March 2025 (updated December 2025, June 2026)

photographs. This bridge appears to have been a rail bridge connected to a rail network.

The individual features of the 1930s aerial photograph are difficult to determine. However, the map clearly indicates the orchards which were accessed by a circulation system via bridge across the Eramosa River.

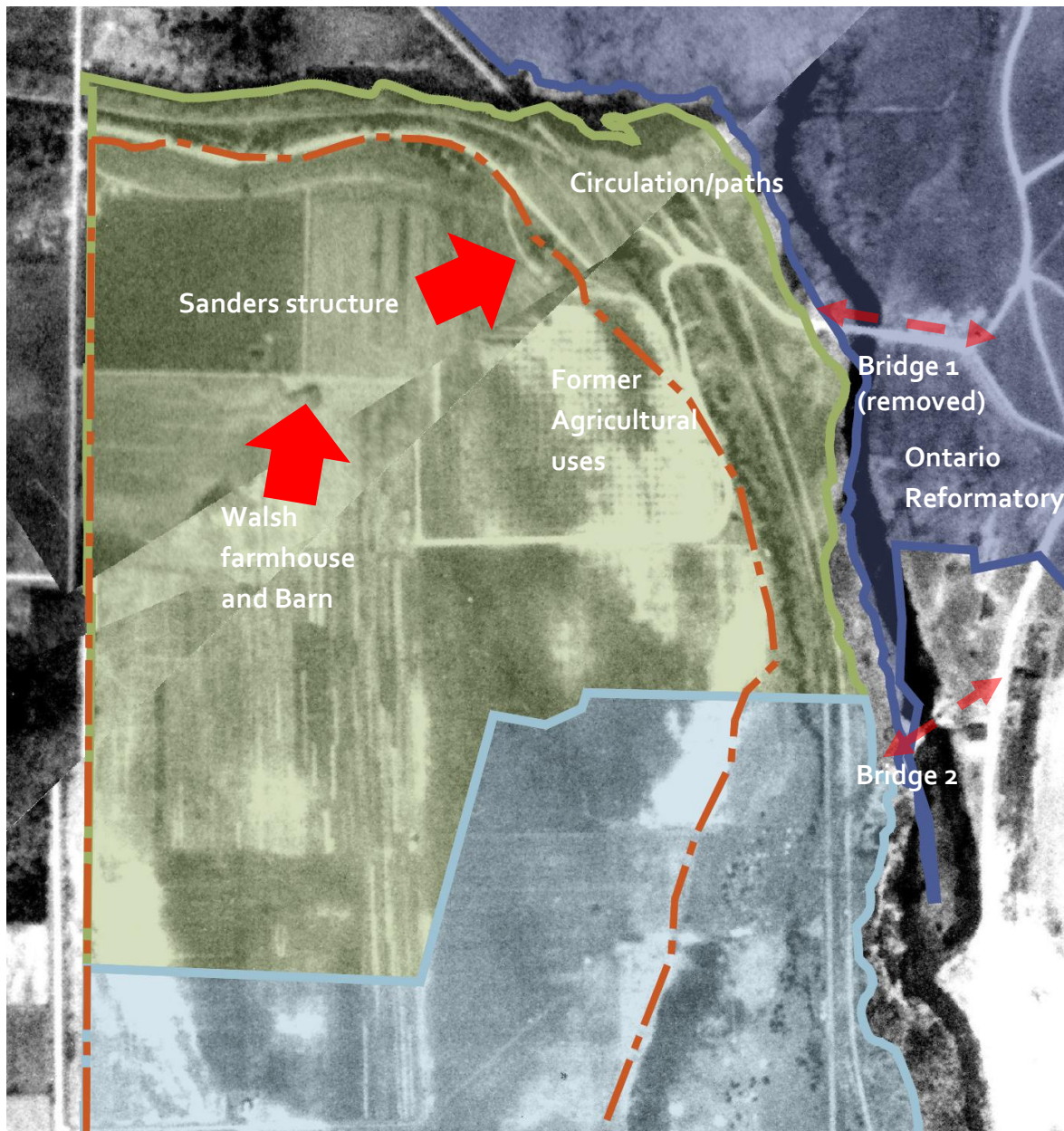


Figure 16: 1930 aerial noting Block Plan area 1 (in green), and the location of the former Sanders farm complex (house and barn) as well as circulation systems, trails, and access to the Ontario Reformatory lands. (Source: University of Waterloo)

According to the 1954 aerial photograph, the features noted on the 1930s aerial photo remain.

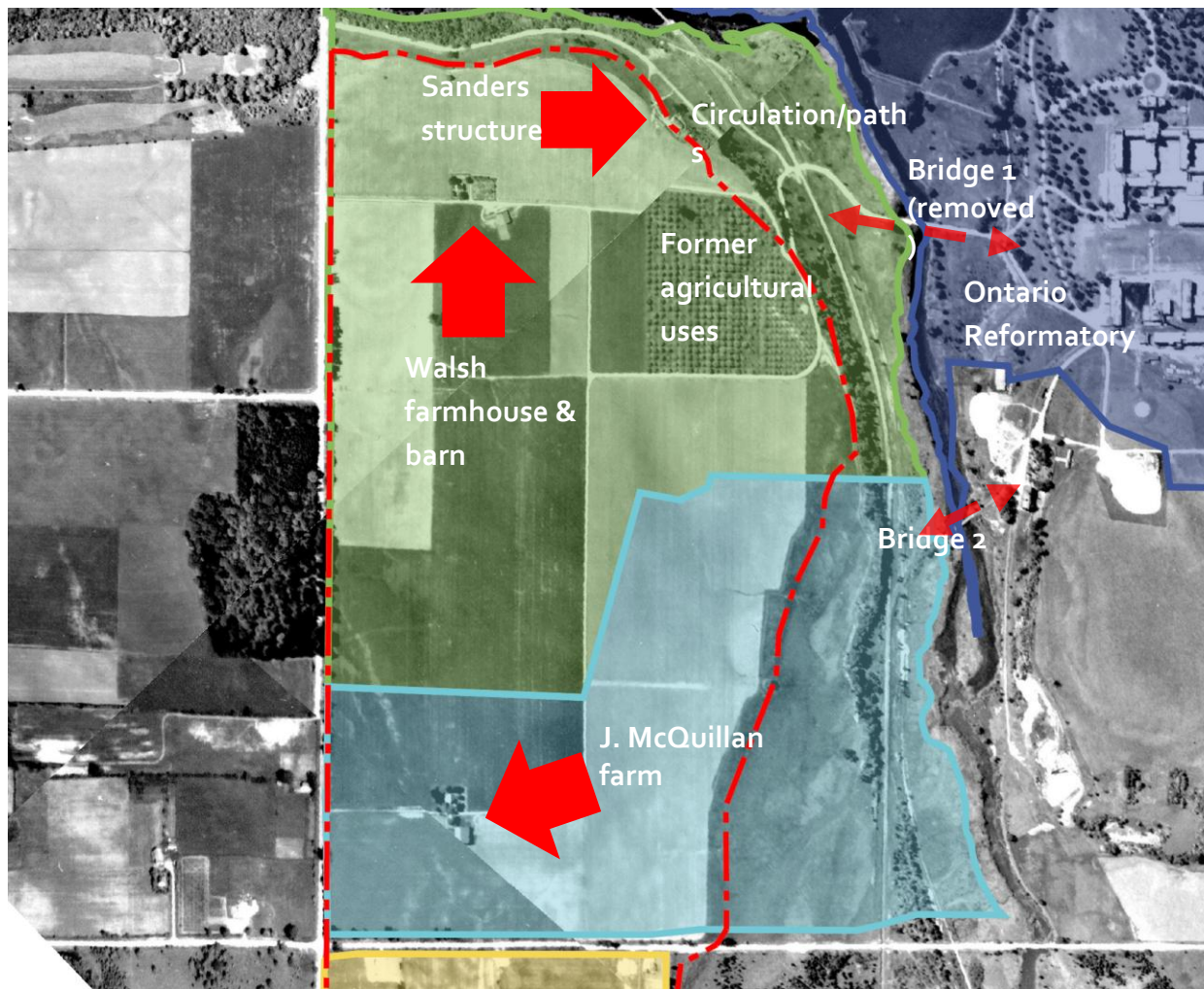


Figure 17: 1955 aerial noting Block Plan Area 1 (in green), and the location of the former Sanders farm complex (house and barn) as well as circulation systems, trails, and access to the Ontario Reformatory lands. (Source: University of Waterloo)

A detail of the 1955 aerial photograph indicates that the lands owned by Sanders likely included a long rectangular-shaped barn. The location of a dwelling is difficult to confirm given the quality of the image.



Figure 18: Detail of the 1955 aerial noting structures owned by members of the Sanders family. (Source: University of Waterloo)

According to the 1966 aerial photograph, the dwelling, barn, orchard, trails and circulation routes, and access to the Ontario Reformatory lands via a bridge remains. The aerial photographs available between the 1930s and 1960s demonstrate that the property changed very little during this time.

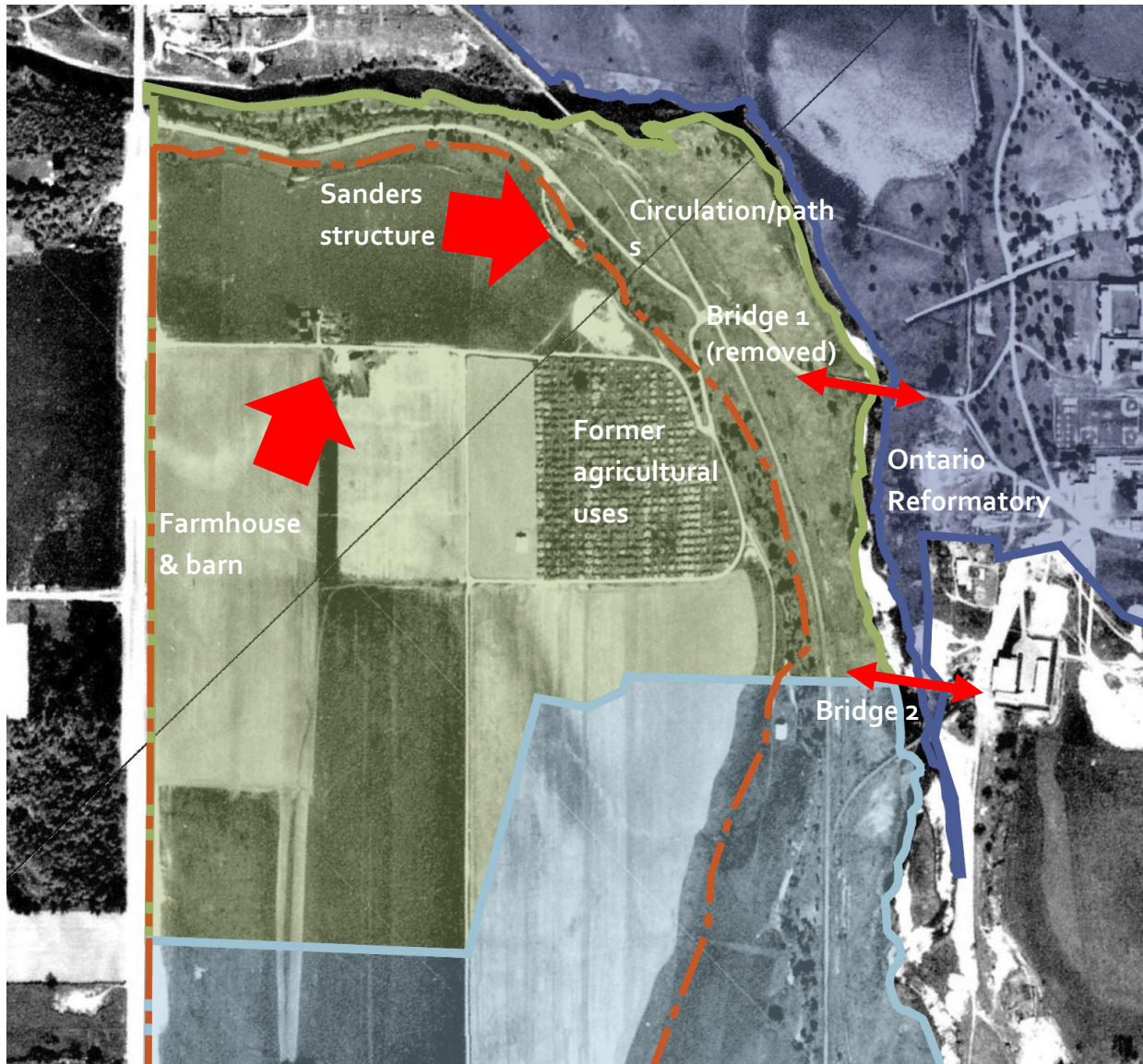


Figure 19: 1966 aerial noting Plan Area Block 1 (in green), and the location of the former Sanders farm complex (house and barn) as well as circulation systems, trails, and access to the Ontario Reformatory lands. (Source: University of Waterloo)

It should be noted that the 1966 aerial image shows a group of buildings on part of Lot 11, Concession 2 on the north side of Stone Road East on part of the Block Plan Area 2 lands. This is likely the former Guelph Hillcrest Training School for boys (Guelph Archives, accessed 2023). According to the Ontario Schools Advisory Board (n.d.), the property included a maximum security school with accommodation for 48 boys aged 14 to 16 years. The school was decommissioned in the early 21st century and all features of the property have been removed.

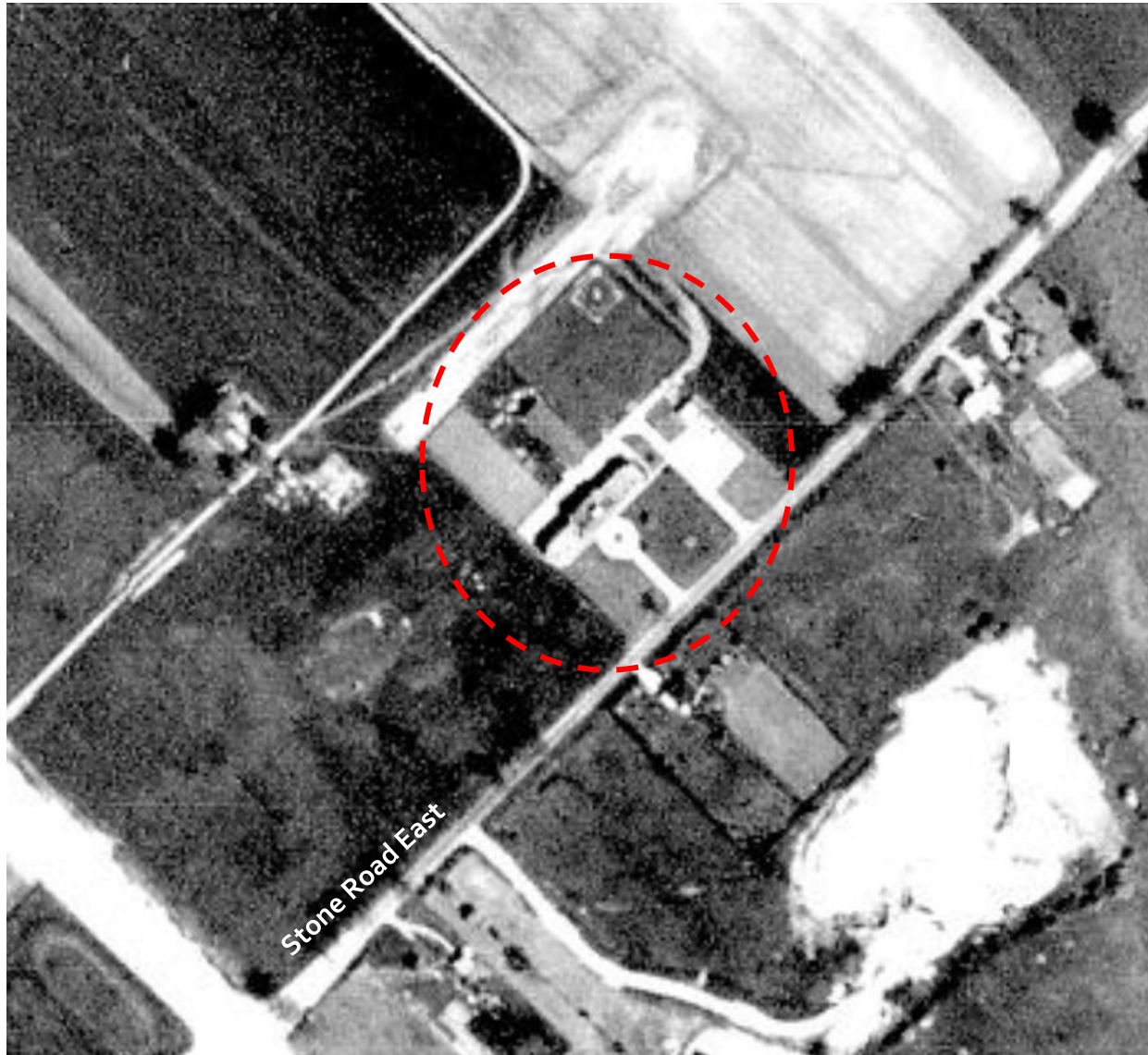


Figure 20: 1966 aerial, Block Plan Area 2 lands (Lot 11, Concession 2) noting the former location of the Hillcrest Training School. (Source: University of Waterloo)

A photograph of the Ontario Training School is available on the Guelph Museum website. The photograph includes a circular garden feature at the front façade which corresponds with the 1966 aerial photo.

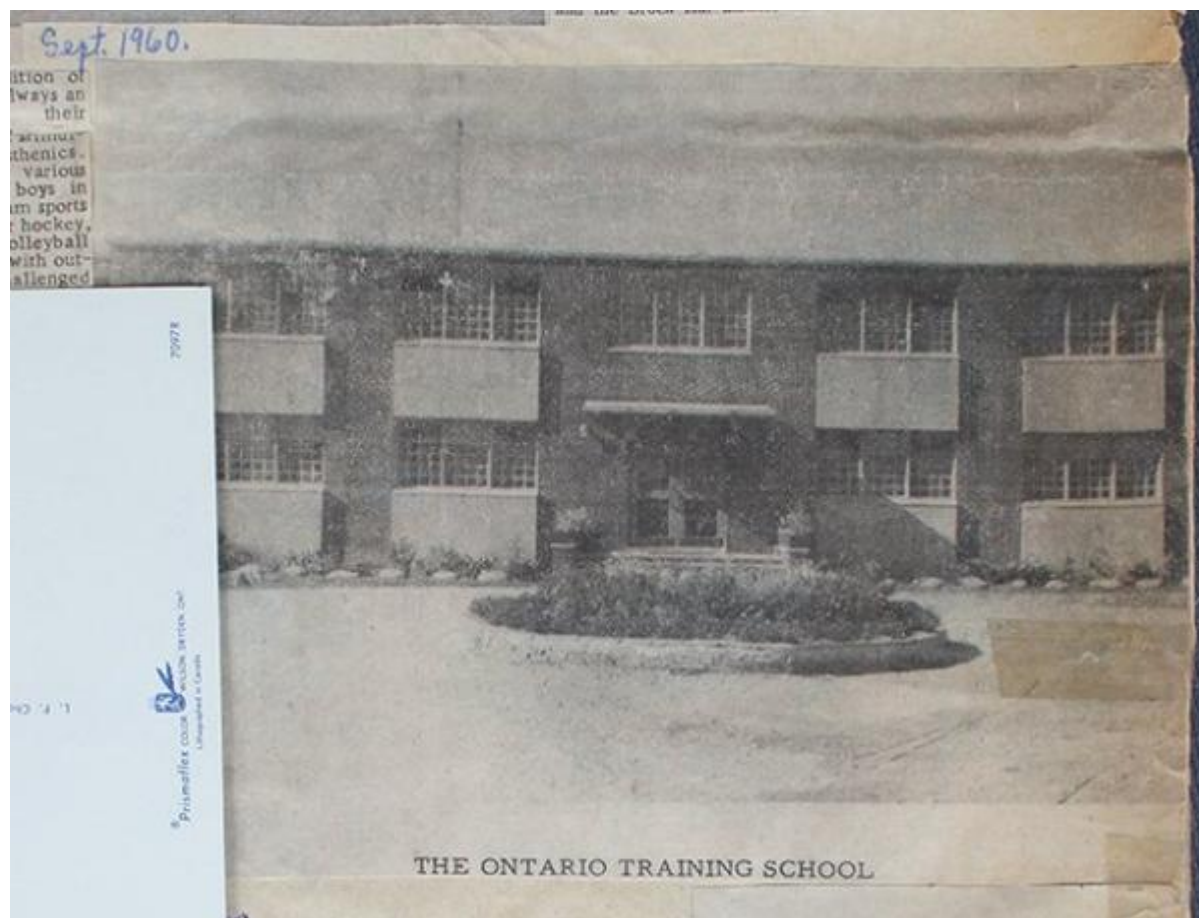


Figure 21: Partial photograph of the Ontario Training School formerly located on part of the GID Block 3 lands north of Stone Road East, 1966 (Source: Guelph Museum Digital Library, accessed 2023)

According to the 1975 topographic map, the barn located at the south side of the driveway/laneway of the Sanders farm has been removed. The dwelling, orchard, circulation routes and pathways, and access to the Ontario Reformatory lands remains.

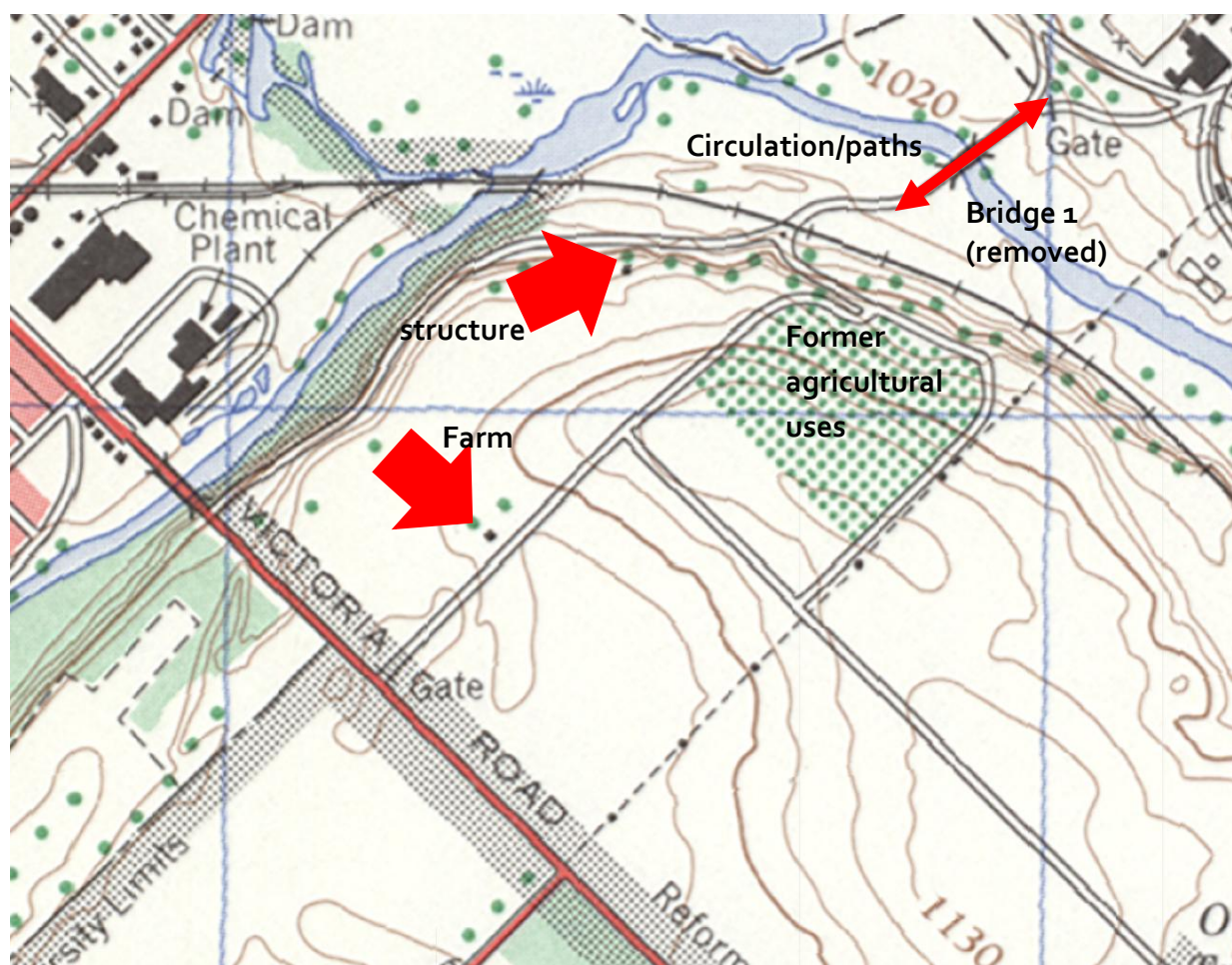


Figure 22: 1975 topographic map the Block 1 lands noting the location of the former Sanders dwelling (barn removed between 1966 and 1975) and circulation systems, trails, and access to the Ontario Reformatory lands. (Source: Ontario Council of University Libraries)

Part of Block Plan Area 1 was used by the University of Guelph and the Guelph Turfgrass Institute (TGI) by 1987. The purpose of the TGI was to conduct research on turfgrass production.³ According to information available on the Guelph TGI institute website, the existing building located on Block 1 was constructed in 1992 (<https://www.guelph turfgrass.ca/our-history>).

Current aerial photographs demonstrate the existing features of the subject lands within Block Plan Area 1. All 19th century features have been removed with the exception of pathways, trail networks, access to the Ontario Reformatory lands, and the former agricultural lands which are overgrown and have not been maintained.

³ Turfgrasses are grass species which can tolerate traffic and low mowing heights. (<https://www.guelph turfgrass.ca/Turf-Facts>)

The property includes the abandoned TGI Institute (a.k.a. the former G.M. Frost) building, a water reservoir, outbuildings, and agricultural fields and gardens formerly utilized by the University of Guelph. Part of Block Plan Area 1 was also formerly utilized by the Ontario Golf Superintendents Association, the Canadian Youth Football Academy, the University of Guelph Agro-Forestry Research and Trial Gardens, and Police Officer Training location.

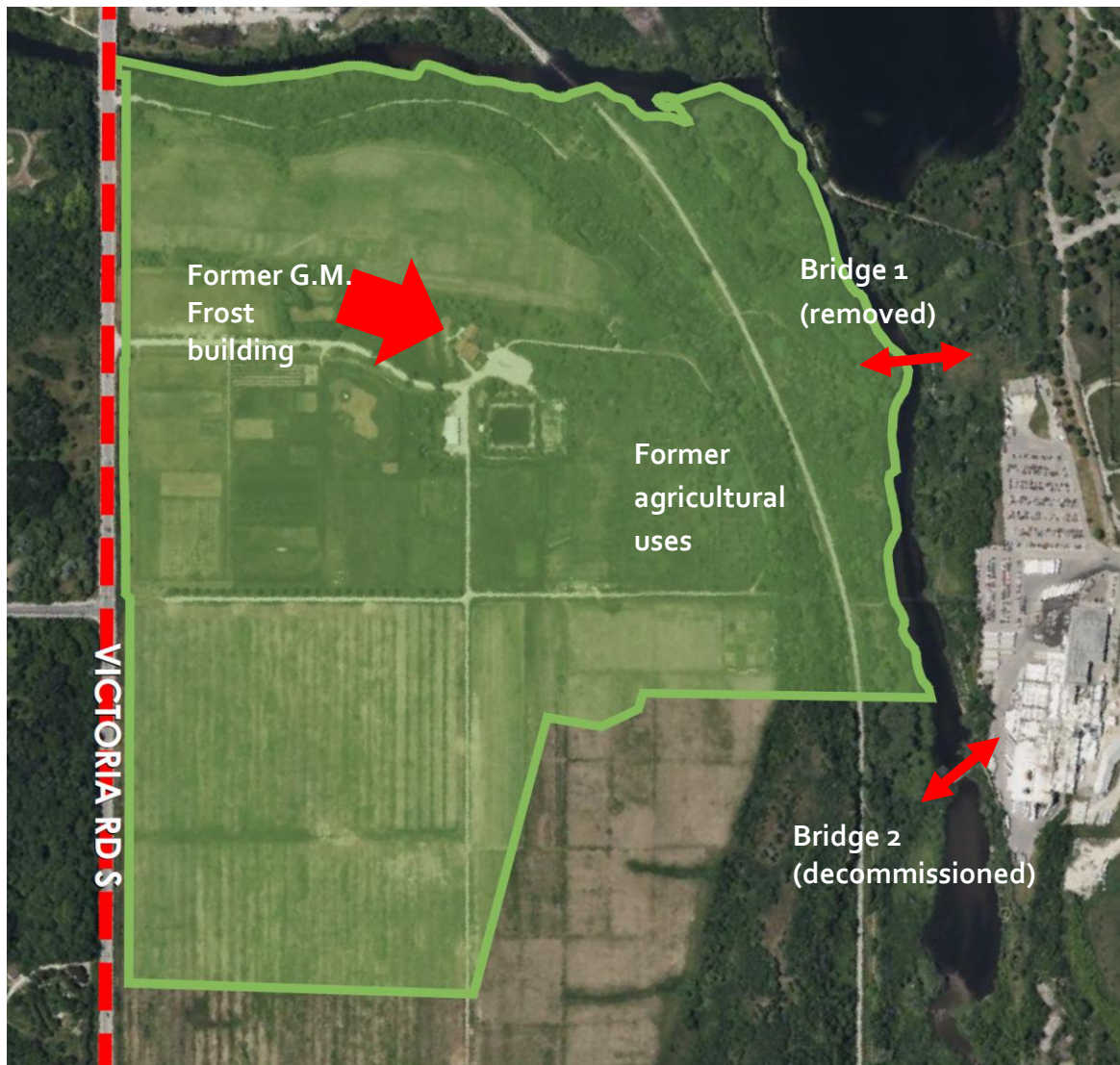


Figure 23: Aerial noting Block Plan Area 1 in green with the subject property noted with a white dashed line. The location of the former Sanders farm complex (house and barn) as well as circulation systems, trails, and access to the Ontario Reformatory lands can be seen. (Source: University of Waterloo)



Figure 24: View of Guelph Turfgrass Institute former G.M. Frost building (south and west elevations). (Source: MHBC, 2022)

4.0 Description of 328 Victoria Road South

4.1 328 Victoria Road South

328 Victoria Road South is located on a portion of both Block Plan Areas 1 and 2. Block Plan Area 1 formerly included land within the following lots and concessions as described in Section 3.0 of this report:

Wellington County, Guelph Township:

- Lot 13, Division G;
- Lot 10, Division G; and
- Lot 11, Division G.

The following provides a description of the features which are subject to designation By-law (2025)-21178 for the property located at 728 Victoria Road South.

4.1.1 Former G.M. Frost Building

The designation By-law identifies that the only feature of the property at 728 Victoria Road South is the former G.M. Frost building. The former G.M. Frost Research and Information Centre main building (also known locally as the Turfgrass Institute) is located at the north side of the driveway. The building was designed by Guelph architect Karl Briestensky in a contemporary/postmodern architectural style.

The former G.M. Frost building is a single storey building and is constructed with several different components. The building was constructed with a combination of contemporary materials, including vinyl, steel, and glass. The main portion of the building includes a shallow-pitched side-gabled roofline and incorporates several additional gables at the east and west elevations. The front elevation includes gables comprised of both steel framing and glazing. The east (rear) elevation gables are visible when looking west from the surface parking area. The central portion of the building incorporates a front-end gable with glazing, creating a hallway through the centre of the building. The building includes several entrances, including a main entrance at the east elevation adjacent to surface parking. The building also includes two separate entrances at the front (west) elevation.



Figures 25 & 26: (left) View of TGI building (rear/east elevation), (right) View of TGI building (north elevation) (Source: MHBC, 2022)



Figures 27 & 28: (left) View of TGI building (south elevation) (right) View of TGI building (front/west elevation) (Source: MHBC, 2022)

The building is noted by Stelter (2005) as including features which are reminiscent of a barn and was intentionally oriented towards downtown Guelph and the Basilica of Our Lady Immaculate at 28 Norfolk Street (Stelter, 2005).

According to City staff, the intent of this identified view is to provide views towards the Basilica of Our Lady Immaculate from an interior hallway of the building. This view is identified on Appendix A of the GID Secondary Plan.



Figure 29: View of Guelph from View 1 vantage point, looking north-west (Source: Guelph Secondary Plan, 2018; MHBC, 2024)

While the building may have been oriented to provide views towards the Basilica of Our Lady Immaculate at 28 Norfolk Street, this view has since been obstructed by a new building. A view of the Basilica provided by City staff as it appeared in 2013 is noted in **Figure 30**. Here, the two towers of the Basilica are visible in the distance (approximately 3 kilometres away).

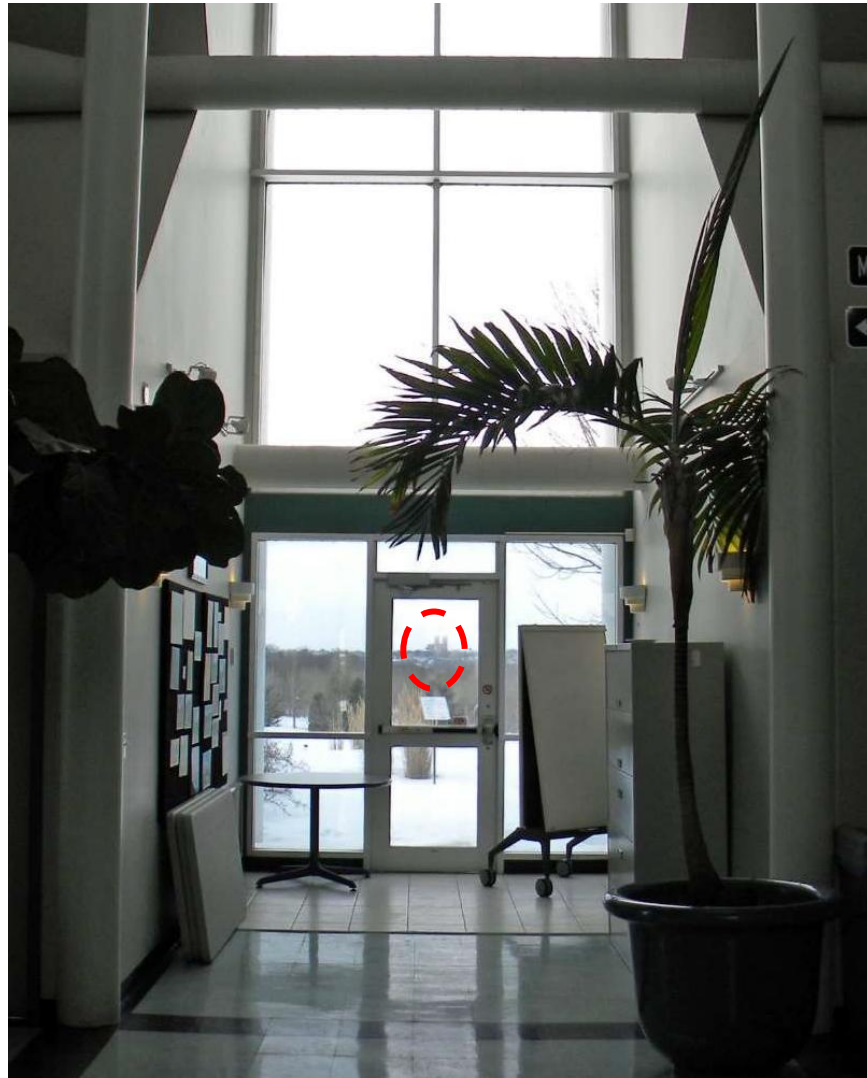


Figure 30: Outdated view of Guelph and the Basilica of our Lady Immaculate looking south-west from the interior of the former G.M. Frost building as it appeared in leaf-off conditions in 2013, (Source: City of Guelph, 2013) Note that the vantage point of this view is noted on **Figure 32** of this report.

This view of the Basilica of Our Lady Immaculate building at 28 Norfolk Street is currently obstructed given existing vegetation during leaf-on conditions and new development (see **Figures 31 & 33**).



Figure 31: Available naked eye view of Guelph and the Basilica of Our Lady Immaculate (noted in red) looking north-east from the north elevation of the former G.M. Frost building and GID Block Plan Area 1. It is important to note that this view is taken directly in front of the vantage point as provided in the 2013 photograph provided by the City of Guelph and therefore provides the same view. (See **Figure 37**) (MHBC, 2024)



Figure 32: Aerial photograph of the former G.M. Frost building noting “A” the location of the photograph taken by City staff in 2013 (provided in **Figure 30**), and “B)” the location of the photograph taken by MHBC staff in 2024 (provided in **Figure 31**).

The view when using a camera lens from vantage point “B” taken in 2024 demonstrates that a new building is currently being constructed which obstructs the view of the Basilica (see **Figure 33**). As a result of this obstruction, the terminus of the view (i.e. the Basilica of Our Lady Immaculate) is indiscernible within its context.



Figure 33: Zoomed view of the Basilica of Our Lady Immaculate from vantage point “B”, demonstrating that the view is obstructed by a new mid-rise building which is currently under construction (outlined in red). Small portions of the two towers of the Basilica are visible behind the new construction. (MHBC, 2024)

4.1.2 Landscape Features

The subject property includes landscape features which are historically related to the Ontario Reformatory located on Block 4. This includes a) the remains of the former agricultural lands which were formerly utilized by the Guelph Reformatory and circulation/paths, b) a set of iron stairs which provided access to the Guelph Reformatory, and c) a vista of the Ontario Reformatory lands (Block Plan Area 4) from Block Plan Area 1 which is identified in the GID Secondary Plan.

The remnants of the former agricultural lands (i.e. trees) have not been maintained. Few trees of the original orchard have survived given that agricultural uses were discontinued towards the mid. 20th century. They are not considered heritage attributes of the property.

March 2025 (updated December 2025, June 2026)



Figures 34 & 35: (left) View of overgrown path on Block 3 lands noting former orchard and fruit trees, (right) Detail view of fruit trees within former orchard area, (Source: MHBC, 2022)

The property also includes a rise of land surrounded by mature trees and vegetation which formerly included the former Walsh farmhouse. No buildings, foundations, or remnants of the former farmhouse remain.

Block Plan area 1 include a set of iron stairs which formerly provided a link between the Ontario Reformatory lands on Block Plan Area 4 and the agricultural fields and orchards on part of Block Plan Area 1. The stairs are located on Block 55 of the draft plan of subdivision.



Figure 36: Photographs of iron stairs which were identified by the Heritage Guelph Designation Working Group. (Source: Heritage Guelph, n.d.)

The stairs are constructed of metal (likely iron) with lattice risers and metal balusters and handrail. A set of concrete wingwalls or abutments are located at the top of the low escarpment wall. The stairs are in very poor condition and entire sections of stairs are missing or damaged (see **Figures 37 & 38**).

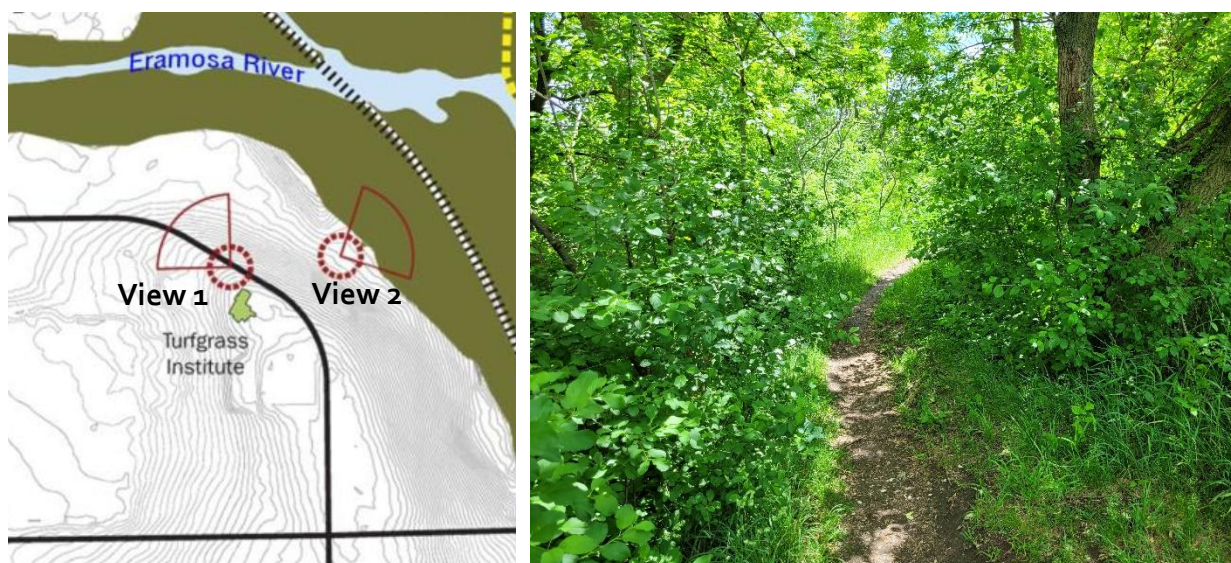


Figures 37 & 38: (left) Photographs of stairs located on Block Plan Area 1. (MHBC, 2024)

The Guelph Innovation District Secondary Plan map (**Appendix E**) indicates three views located on Block Plan Areas 1 and 2. View 1 is the view of Downtown Guelph looking north-west from the G.M. Frost building (as detailed in Section 4.1.1 of this report).

The Secondary Plan also indicates two views of the Ontario Reformatory, and are referred to in this report as “View 2” and “View 3”, respectively. The GID Secondary Plan does not provide a detailed description of these views/vistas. For example, the map does not provide detailed information as it relates to their vantage points (i.e. point of origin), terminus, or intended viewscape/vista (i.e. span of the view).

The Secondary Plan map identifies that the vantage point of View 2 is located east of the former G.M. Frost building, and appears to be located within, or along existing paths. The illustration of the view provided in the Secondary Plan indicates that the view is oriented east towards the Ontario Reformatory site on Block 4. Two site visits were undertaken in both leaf-off and leaf-on conditions along the eastern edge of Block Plan Area 1. These site visits demonstrate that in all seasons (leaf-on and leaf-off conditions), views of the Ontario Reformatory buildings are unavailable from this area due to the density of vegetation (See **Figures 39 & 40**).



Figures 39 & 40: (left) Excerpt of Appendix A of the GID Secondary Plan noting View 2, (right) Photograph of area surrounding the vantage point of View 2, looking north-east adjacent to pedestrian trail towards Block 4 (Source: Guelph Secondary Plan, 2018; MHBC, 2023)

The vantage point of View 3 as per Appendix A of the Guelph Secondary Plan is located on part of Block Plan Area 2, looking east towards the southern portion of the Ontario Reformatory site on Block 4. Views of the Guelph Reformatory lands are available from multiple vantage points within Block Plan Areas 1 and 2 but are more accessible from Block Plan Area 2 in the area noted with a red arrow on **Figure 41** (below). This view/vista offers limited visibility of the Ontario Reformatory, and there is no specific vantage point. However, portions of buildings in the distance are available during leaf-on conditions.



Figures 41 & 42: (left) Excerpt of Appendix A of the GID Secondary Plan noting public view (identified as “view 3”) in this report, (right) View of Guelph Reformatory lands looking north-east from area noted with red arrow on Figure 41, (Source: Guelph Secondary Plan, 2018; MHBC, 2023)

4.1.3 Accessory Building & Reservoir

The property also includes a single storey contemporary steel accessory building and other features which were utilized as part of the Turf Grass Institute, including areas designated for soils, compost, etc. This building is not of Cultural Heritage Value or Interest.



Figures 43 & 44: (left) View of contemporary steel accessory structure, (right) View of compost and soil sorting area, (MHBC, 2022)

The property also includes a gated water reservoir which was not visible or accessible during the site visit conducted in 2022. The reservoir is not of Cultural Heritage Value or Interest.



Figure 45: View of gated water reservoir and surrounding vegetation (Source: MHBC, 2022)

5.0 Review of Cultural Heritage Value or Interest

5.1 Designation By-law – 328 Victoria Road South

The following provides a summary of the Cultural Heritage Value or Interest of the property at 328 Victoria Road South which has been designated under Part IV of the *Ontario Heritage Act* and identifies the reasons for which the property is of CHVI and provides a list of heritage attributes. A copy of the designation By-law is provided in **Appendix C**.

Statement of Significance:

The Frost Building at 328 Victoria Road South has design/physical value, historical/associative and contextual value and thus meets five of the nine criteria for determining cultural heritage value or interest under Ontario Regulation 9/06.

Design and Physical Value

The building has physical/design value as it meets Criteria 1 being a good representative example of a late-20th century Post-Modernist building designed by Guelph architect Karl Briestensky.

Historical Associative Value

The building has historical/associative value as it meets Criteria 4 in that it has direct associations with the theme of Guelph's historically close connection with a progressive and advanced form of agriculture.

The building has historical value or associative value as it meets Criteria 5 in that it demonstrates the work of an architect who is significant to the Guelph community and the city's later 20th century architectural history.

Contextual Value

The building has contextual value as it meets Criteria 8 being visually linked to its surroundings-its location on a knoll overlooking the city, at some distance from Victoria

Road was intentionally oriented so that the building's central hall looks toward the city's major landmark, the Basilica of Our Lady.

The building has contextual value as it meets Criteria 9 as it has become a landmark that is seen from Victoria Road South and from the Ontario Reformatory property to the east.

Heritage Attributes:

The following elements of the Frost Building at 328 Victoria Road South should be considered as heritage attributes in a designation under Part IV, Section 29 of the Ontario Heritage Act:

- *Original building form and massing including the large, steep-sloped main gable roof with similar smaller transverse gables;*
- *Walls of glass facing the downtown of the City;*
- *Gable roof lantern at the centre of the main roof ridge;*
- *Tubular steel exterior structural supports.*

It is intended that non-original features may be returned to the documented earlier designs or to their documented original without requiring City Council permission for an alteration to the design.

6.0 Description of Proposed Development

The proposed draft plan of subdivision requires an Official Plan Amendment and Zoning By-law Amendment. The Official Plan Amendment and Zoning By-law Amendment will implement the approved Block Plan. The Zoning By-law Amendment seeks to establish a zoning framework to implement the street network and identifying blocks for residential, employment, parks, open spaces and stormwater management facilities. Further details of development for blocks within the draft plan of subdivision will be subject to Part Lot Control, Site Plan Control and Plan of Condominium application(s). These applications would be submitted following approval of the draft plan of subdivision.

The proposed draft plan of subdivision includes a mix of high, medium and low-density residential blocks for apartments, stacked townhouses, on-street townhouses and single detached. Open spaces are provided throughout. This includes various parks, as well as three stormwater management ponds. The site is divided into a regular grid of blocks with a hierarchy of road types. Three access points are provided at Victoria Road South and one at Stone Road East. Block 55 of the draft plan of subdivision includes a significant natural area (24.916 ha.) and is proposed to be conveyed to the City of Guelph.

The draft plan of subdivision includes the G.M. Frost building situated on Block 38 with opportunities for future adaptive re-use. Block 38 includes site specific zoning, that being RM.6-XX2 to permit all the residential uses of the RM.6 zone. This will allow for maximum flexibility in selecting an appropriate adaptive new use in the future for the G.M. Frost building which includes (but is not limited to) various forms of residential as well as supportive housing, long term care, retirement residential facility, and community uses including Convenience store, Live-work unit, Day Care Centre, Art gallery, Community Centre, Museum, Place of Worship, Public hall, Recreation facility and School.

The proposal provides the opportunity to maintain views of Downtown Guelph from the G.M. Frost building looking north-west since the proposed land uses on Blocks 53, 56, and 57 include parks and a storm water management pond.

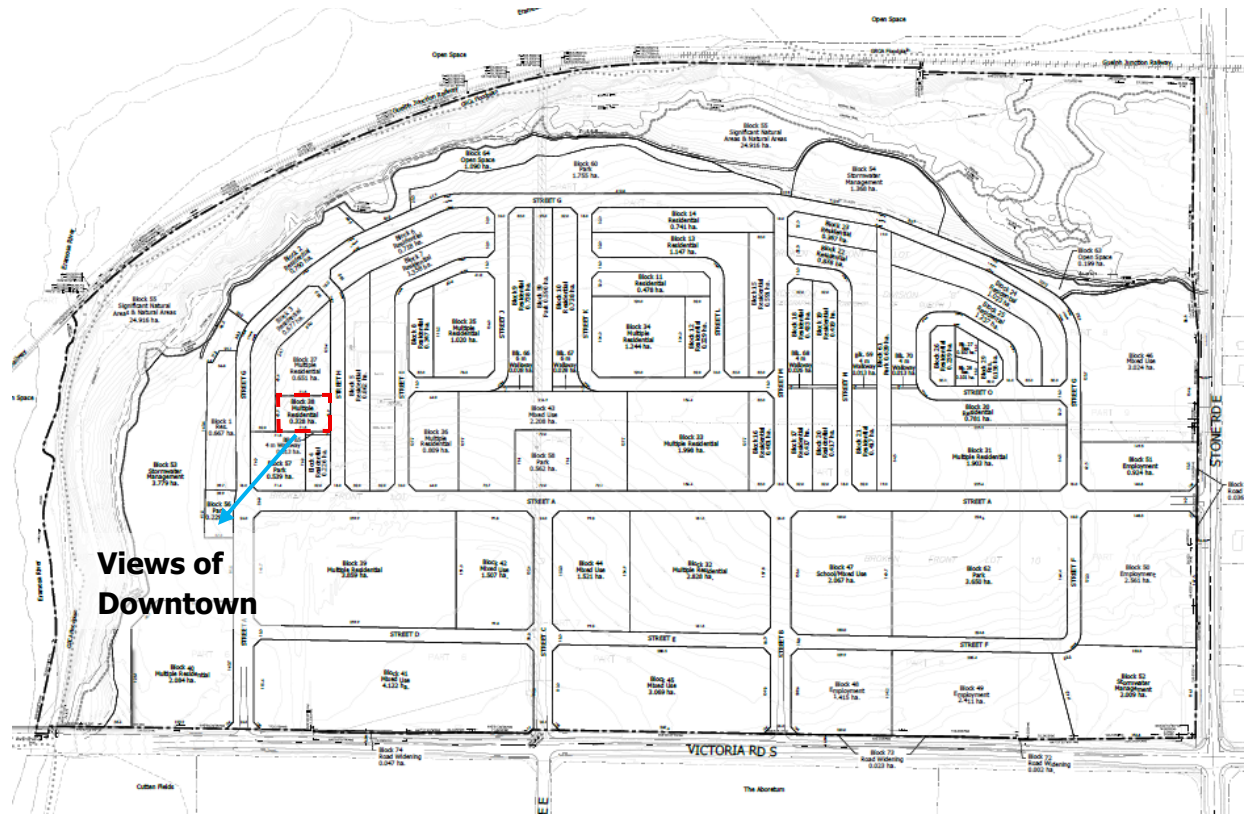


Figure 46: Draft plan of subdivision noting location of former G.M. Frost building (on proposed Block 38), and view of Downtown Guelph (Source: MHBC, 2025)

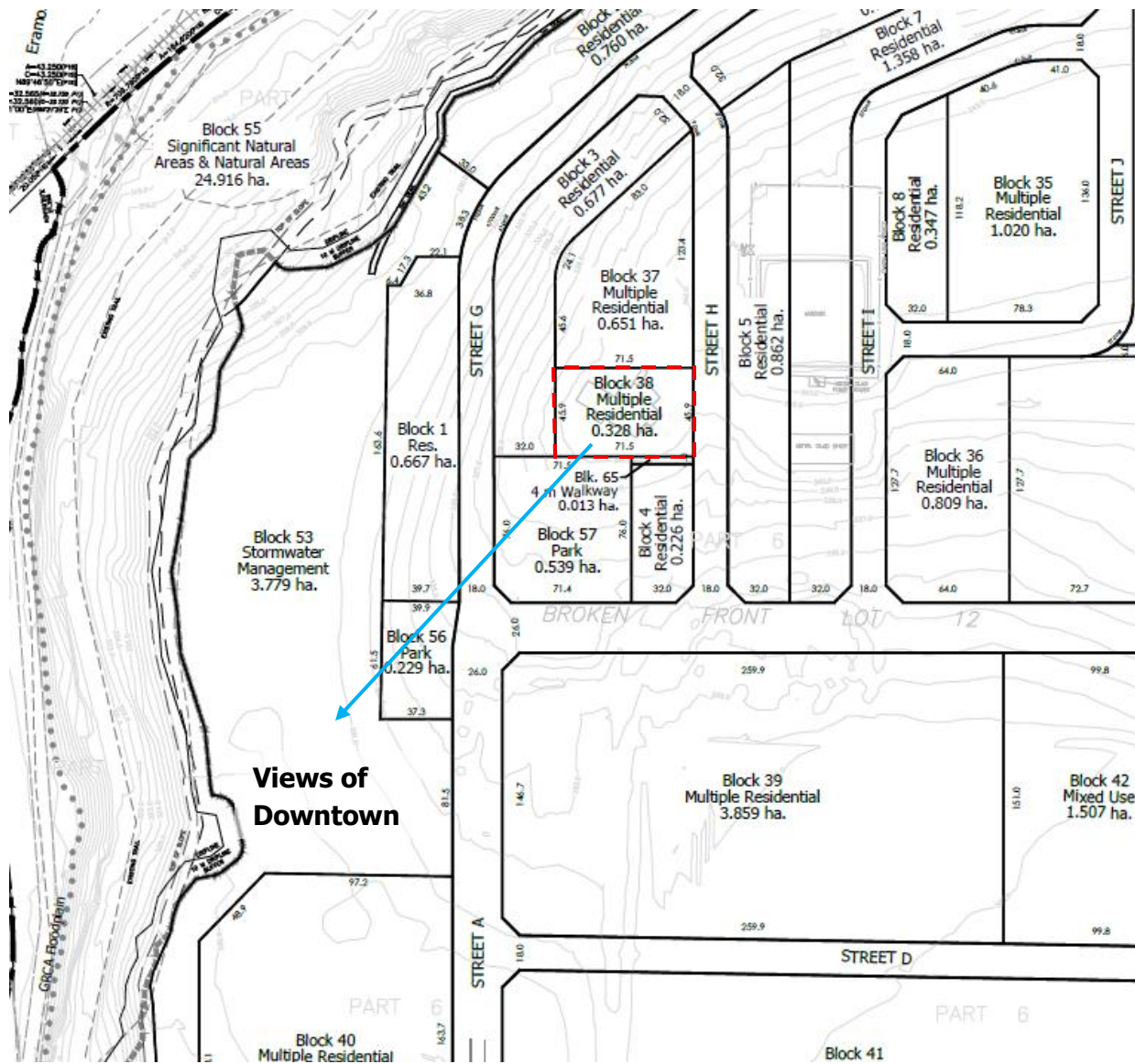


Figure 47: Detail of Proposed draft plan of subdivision (noting Block 38) and view of Downtown Guelph (Source: MHBC, 2025)

7.0 Impact Analysis

7.1 Introduction

This section of the report will review impacts to cultural heritage resources which may occur as a result of the proposed development located on part of Block Plan Area 1.

The analysis of impacts of the proposed development is based on the following, which is accepted as the standard potential sources of impacts that may occur as a result of a proposed development:

- **Destruction:** of any, or part of any *significant heritage attributes* or features;
- **Alteration:** that is not sympathetic, or is incompatible, with the historic fabric and appearance;
- **Shadows:** created that alter the appearance of a *heritage attribute* or change the viability of a natural feature or plantings, such as a garden;
- **Isolation:** of a *heritage attribute* from its surrounding environment, context or a significant relationship;
- **Direct or Indirect Obstruction:** of significant views or vistas within, from, or of built and natural features;
- **A change in land use:** such as rezoning a battlefield from open space to residential use, allowing new development or site alteration to fill in the formerly open spaces;
- **Land disturbances:** such as a change in grade that alters soils, and drainage patterns that adversely affect an archaeological resource.

7.2 Impact Analysis (Subject Property)

7.2.1 Former G.M. Frost Building & Features Identified by the City of Guelph

The former G.M. Frost Research and Information Centre building is the only protected heritage attribute of the property. The City has also identified that views of the building are important. The draft plan of subdivision allows for the G.M. Frost building to be retained in-situ on Block 38.

The City has also identified other features located on part of Block Plan Areas 1 and 2, including a) iron stairs located on Block 55, and b) A view of the Ontario Reformatory on part of Block Plan Area 2 which is identified as "View 3" in this report.

Potential Impacts to former G.M. Frost Building (Designated Part IV) and Cultural Heritage Features identified by the City of Guelph	
Potential Impacts	Impact Analysis
Destruction of any, or part of any significant heritage attributes or features	<i>None. The draft plan provides the opportunity for the entirety of the G.M. Frost building to be retained in-situ on Block 38.</i>
Alteration that is not sympathetic, or is incompatible, with the historic fabric and appearance	<i>None. No alterations to the building are currently proposed.</i>
Shadows created that alter the appearance of a heritage attribute or change the viability of a natural feature or plantings, such as a garden	<i>None. No impacts from shadows are anticipated since the surrounding area is proposed to be primarily low to medium density residential use (between 3 and 6 storeys in height). Further, the portion of Block Plan Area 1 being developed does not include natural features which are significant cultural heritage attributes which may be altered by the availability of sunlight.</i>
Isolation of a heritage attribute from its surrounding environment, context or a significant relationship	<i>None. The lands are no longer used for agricultural purposes and the identified heritage value of the property is limited to the G.M. Frost building. The proposed development of lands surrounding Block 38 as per the draft plan of subdivision will not result in the isolation of the building since a) the proposed land uses surrounding Block 38 are primarily low to medium density residential and parkland, and b) the prominence and visibility of the G.M. Frost building will be maintained within the neighbourhood.</i> <i>While not identified on the GID Secondary Plan, the City has identified the location of early 20th century iron stairs on part of Block 55 (see Figure 37 & 38). These stairs are not related to the G.M. Frost building. Block 55 is identified as a natural area and is not proposed for development. Since the stairs are not proposed for removal and Block 55 will be conveyed to the City of Guelph, the City will be able to determine a plan for the conservation of the iron stairs, if desired.</i>

Obstruction of significant views or vistas within, from, or of built and natural features	<i>None. No impacts related to obstruction of views are anticipated since the proposed plan of subdivision has been designed to maintain views identified by the City of Guelph. This includes views of Downtown Guelph from the G.M. Frost building (identified as "View 1" on Figure 39). The line of sight will traverse open space, parks, and a storm water management pond rather than lands intended for development. Therefore, this view will be maintained without obstruction from the proposed draft plan.</i> <i>While not included in the GID Secondary Plan, the City has also identified that the G.M. Frost building is currently visible from Victoria Road South. It should be noted that the City's direction in the approved policy framework of the Guelph Innovation Secondary Plan (i.e. the City of Guelph OP Schedule B (Modified) Guelph Innovation District Secondary Plan – Land Use) directs that development along Victoria Road South would include higher density development. Therefore, the approved and intended planning direction in the approved GID planning policy framework does not facilitate maintaining this view, as existing. that this view would be maintained as existing. However, the building will remain prominently visible within the neighbourhood since proposed land uses surrounding Block 38 of the proposed draft plan includes primarily low to medium density residential use.</i> <i>The City has identified two other views in the Guelph Innovation District Secondary Plan, those being "View 2", and "View 3". This report has demonstrated that "View 2" does not exist, and views of the Ontario Reformatory from this general location/vantage point are not available. However, views of the Ontario Reformatory are available from a range of areas on part of Block Plan Area 2 (i.e. "View 3" as noted on Figure 41 of this report). Since the proposed draft plan of subdivision includes a park, natural areas, and a storm water management pond on Blocks 54, 55, and 60, views looking north-east towards the Ontario Reformatory will be maintained.</i>
Change in Land Use such as rezoning a battlefield from open space to residential use, allowing new development or site alteration to fill in the formerly open spaces	<i>None. No impacts from a change in land use are anticipated. This HIA and the designation By-law demonstrates that the heritage value of the G.M. Frost building is not related to any former agricultural land uses of or any agricultural landscape features. Since all the heritage attributes identified in the designation By-law for the property at 328 Victoria Road South can be retained in-situ on Block 38, no adverse impacts are anticipated as a result of change in land use. Further, the draft plan of</i>

	<i>subdivision proposes that the G.M. Frost building would be surrounded with low to medium density residential development and a park, which is compatible with the existing building. The adaptive re-use of the G.M. Frost building is proposed for site specific zoning to allow for maximum flexibility in terms of use.</i>
Land Disturbances such as a change in grade that alters soils, and drainage patterns that adversely affect an archaeological resource	<i>None. Impacts from land disturbances are not anticipated as a result of the proposed development.</i>

7.3 Impact Analysis (Adjacent Lands)

7.3.1 Ontario Reformatory Heritage Conservation District (Block Plan Area 4)

The Ontario Reformatory lands which have been designated under Part V of the *Ontario Heritage Act* are not located adjacent to the proposed development on part of Block Plan Areas 1 and 2. A map noting the location of the Ontario Reformatory lands which are designated under Part V is provided in **Figure 3**. No development or construction activities are proposed on Block Plan Area 4 as a result of the proposed development.

Potential Impacts to Ontario Reformatory HCD (Block 4)	
Potential Impacts	Impact Analysis
Destruction of any, or part of any significant heritage attributes or features	<i>None. The proposed development is limited to lands associated with the draft plan of subdivision. No destruction of features is proposed for any feature located on part of Block Plan Area 4, or within the Ontario Reformatory Heritage Conservation District.</i>
Alteration that is not sympathetic, or is incompatible, with the historic fabric and appearance	<i>None. No features located on Block Plan Area 4 within the Ontario Reformatory HCD are proposed to be altered as a result of the proposed draft plan of subdivision.</i>
Shadows created that alter the appearance of a heritage attribute or change the viability of a	<i>None. The proposal does not include the construction of structures within proximity to Block Plan Area 4 such that impacts</i>

natural feature or plantings, such as a garden	<i>from shadows are likely to result. Therefore, no adverse impacts are anticipated as it relates to shadows.</i>
Isolation of a heritage attribute from its surrounding environment, context or a significant relationship	<i>None. The proposed development will not result in the removal of any protected heritage features on Block Plan Area 1 which have been identified by the City as having an important relationship with the Ontario Reformatory. Therefore, no adverse impacts related to isolation are anticipated.</i>
Obstruction of significant views or vistas within, from, or of built and natural features	<i>None. The City has identified in the GID Secondary Plan that views of the Ontario Reformatory are available from lands within the draft plan of subdivision. Since the proposed draft plan of subdivision includes a park, natural areas, and a storm water management pond on Blocks 54, 55, and 60, views looking north-east towards the Ontario Reformatory can be maintained.</i>
Change in Land Use such as rezoning a battlefield from open space to residential use, allowing new development or site alteration to fill in the formerly open spaces	<i>None. No change in land use is proposed for the Ontario Reformatory lands.</i>
Land Disturbances such as a change in grade that alters soils, and drainage patterns that adversely affect an archaeological resource	<i>None. No grading or construction activities are proposed to take place on, or within close proximity of heritage features on Block Plan Area 4 as a result of the proposed development. Therefore, no impacts related to land disturbances are anticipated.</i>

7.3.2 728 Victoria Road South

As described in this report, Block Plan Area 1 is not located within 30 metres of any protected heritage properties. This includes the property at 728 Victoria Road South, which is listed (non-designated) on the City's Heritage Register. The proposed draft plan of subdivision will not result in adverse impacts to the property at 728 Victoria Road South.

Potential Impacts to Stone Dwelling (728 Victoria Road South)	
Potential Impacts	Impact Analysis
Destruction of any, or part of any significant heritage attributes or features	<i>None. No part of the property at 728 Victoria Road South on part of Block Plan Area 3 is included in the draft plan of subdivision for Block Plan Areas 1 and 2. The proposed development will not result in the removal of any existing features on Block Plan Area 3. A Separate report will be submitted to the City as it relates to any proposed development on Block Plan area 3.</i>
Alteration that is not sympathetic, or is incompatible, with the historic fabric and appearance	<i>None. No feature of the property at 728 Victoria Road South is proposed to be altered as part of the proposed draft plan of subdivision.</i>
Shadows created that alter the appearance of a heritage attribute or change the viability of a natural feature or plantings, such as a garden	<i>None. Any new construction proposed in the future on Block Plan Areas 1 and 2 would be situated away from Block 3, across Stone Road East. Given the proximity between Blocks 2 and 3, and that no natural features of cultural heritage value or interest have been identified on Block 3, no adverse impacts as a result of shadows are anticipated.</i>
Isolation of a heritage attribute from its surrounding environment, context or a significant relationship	<i>None. No significant relationship has been identified between Block Plan Area 3 and Block Plan Areas 1 and 2. Therefore, the proposed draft plan is not anticipated to result in adverse impacts on Block 3.</i>
Obstruction of significant views or vistas within, from, or of built and natural features	<i>None. No significant views and vistas have been identified on Block 3. The proposed development is not anticipated to result in any impacts related to obstruction.</i>
Change in Land Use such as rezoning a battlefield from open space to residential use, allowing new development or site alteration to fill in the formerly open spaces	<i>None. No change in land use is proposed for the property located at 728 Victoria Road South.</i>
Land Disturbances such as a change in grade that alters soils, and drainage patterns that adversely affect an archaeological resource	<i>None. No grading or construction activities are proposed to take place on, or within close proximity to Block 3 as a result of any future construction on Block Plan Areas 1 and 2. Therefore, no impacts related to land disturbances are anticipated.</i>

In conclusion, no adverse impacts are anticipated as a result of the proposed development on identified cultural resources located in the vicinity of the area, including the Ontario Reformatory Heritage Conservation District (Block Plan Area 4) or the features identified as being of cultural heritage value or interest by the City of Guelph at 728 Victoria Road South (Block Plan area 3).

8.0 Review of GID Secondary Plan Policies

The following provides a review of applicable policies of the GID Secondary Plan and responses as it relates to identified cultural heritage resources located within the proposed draft plan of subdivision.

2. As identified on Schedule B, the eastern portion of the GID is predominantly designated as Adaptive Re-use within a cultural heritage landscape with built heritage resources in the historic Reformatory Complex. Land uses within the cultural heritage landscape boundary are subject to the provisions of the Cultural Heritage Resource policies of the Official Plan. Policies related to the Adaptive Re-use land use designation can be found in Section 11.2.6.3 of this Secondary Plan.

Response/comment: This report is specifically related to impacts to protected cultural heritage resources as a result of the proposed development. The identified cultural heritage landscape on Block Plan Area 4 has been designated under Part V of the *Ontario Heritage Act* as the Ontario Reformatory Heritage Conservation District. The proposed draft plan of subdivision will not result in any adverse impacts to the Ontario Reformatory HCD.

3. Development within the GID, on lands designated as Adaptive Re-use and/or adjacent to cultural heritage resources, should adopt an architectural vocabulary and design elements that are compatible with and respectful of the cultural heritage value and heritage attributes of the cultural heritage resources on site.

Response/comment: The purpose of this report is to identify whether or not the proposed development results in adverse impacts to cultural heritage resources, including the protected property located at 328 Victoria Road South. Design elements related to the development of the site will be considered through the planning process. The proposed land uses in the immediate vicinity of the G.M. Frost building on proposed Blocks 1, 3, 4, 5, 37 are low to medium density residential and are compatible with the existing building. Block 38 is also located

adjacent to Block 37, which is proposed to include a park and is also compatible with the building.

4. Cultural heritage resources including all features identified as provincially significant shall be conserved through long term protection mechanisms (e.g. heritage conservation easements).

Response/comment: No Provincially significant cultural heritage resources have been identified within the proposed draft plan of subdivision.

5. A Cultural Heritage Resource Impact Assessment and/or Conservation Plan will be required as part of a complete application to ensure that the cultural heritage resources within the site will be conserved.

Response/comment: This Heritage Impact Assessment has been completed for the proposed draft plan of subdivision on GID Block Plan Areas 1 and 2. This report recommends that a Conservation Plan and/or Heritage Impact Assessment be completed at the appropriate time in the future to address any proposed alterations to the G.M. Frost building.

6. All land uses within the GID are subject to the provisions of the Cultural Heritage Resource policies of the Official Plan.

Response/comment: Noted.

7. It is the intent of this Secondary Plan to conserve cultural heritage landscapes, such as the area delineated as the historic Reformatory Complex on Appendix A that have been modified by human activities and are valued by the community.

Response/comment: The Ontario Reformatory on Block Plan Area 4 has been designated under Part V of the *Ontario Heritage Act*. The Ontario Reformatory HCD Plan provides policies and guidelines for any proposed development within the boundary of the HCD. The proposed draft plan of subdivision on Block Plan Areas 1 and 2 will have no impact on the Ontario Reformatory HCD.

8. Cultural heritage landscapes and visual relationships to built heritage resources shall be conserved and monitored to allow for meaningful interpretation.

Response/comment: The proposed draft plan of subdivision allows for the identified visual relationship between the G.M. Frost building and Downtown Guelph to be maintained. The building will remain a prominent feature within the neighbourhood surrounding Block 38. Further, views of the Ontario Reformatory from within the draft plan of subdivision will be maintained.

9. Development will respect the existing cultural heritage resources and important public views and public vistas in site design.

Response/comment: The City has designated the G.M. Frost building under Part IV of the *Ontario Heritage Act*. The building is proposed to remain in-situ on Block 38. The draft plan provides the opportunity for the building to be adaptively re-used and re-zoned to allow for maximum flexibility for a compatible new use.

10. The retention and integration of the Turfgrass Institute Building (G.M. Frost Centre) into the GID community is encouraged.

Response/comment: Noted. The proposed draft plan of subdivision allows the former G.M. Frost building to be retained in-situ on Block 38 surrounded by complementary land uses.

11.2.2.3 Topography

1. The topography associated with the Eramosa River Valley within the GID offers appealing vistas towards the historic Reformatory Complex as well as the Downtown, providing a distinctive character to the area. Future development shall take advantage of favourable topography and public views and public vistas and minimize the need for re-grading on site, where possible.

Response/comment: Noted. Existing topography will be taken into consideration through the planning process in terms of site design.

11.2.2.4 Urban Forest

1. The GID includes hedgerows, smaller wooded areas and individual trees that are part of the City's urban forest. Development and site alteration will identify opportunities for: a) Protection, enhancement, compensation and/or restoration of the urban forest; and b) Contributing to maintaining and increasing canopy cover in a manner that respects the cultural heritage landscape and associated public views and public vistas.

Response/comment: Noted. The subject property does not include any natural features which have been identified by the City as having important cultural heritage value or interest and were not included as heritage attributes in the designation By-law for the property at 328 Victoria Road South. However, trees and vegetation which are located within natural areas will remain.

9.0 Development Alternatives, Mitigation Measures and Conservation Recommendations

9.1 Alternative Development Options

The following provides a range of development alternatives. This includes alternatives which result in less impacts to cultural heritage resources.

9.1.1 Do Nothing

This alternative option would result in retaining all existing buildings and natural features in their existing locations in-situ. Since all identified cultural heritage attributes of the designation By-law for the property at 328 Victoria Road South will remain in-situ as a result of the proposed draft plan of subdivision, this option does not result in fewer impacts to protected cultural heritage resources. This option would prevent the development of the site, which is inconsistent with direction provided in the Guelph Innovation District Secondary Plan. This option is not recommended.

9.1.2 Develop the site while retaining portions of the former G.M. Frost building in-situ

This option would result in retaining select portions of the former G.M. Frost building in-situ. This option may be a viable alternative given the size of the building and its design, which includes various component parts. Portions of the building could be considered for a suitable adaptive reuse or for use as a commemorative feature(s).

Retaining portions of the building would result in more impacts to cultural heritage resources. Further information would be required in order to determine whether or not the building is a suitable candidate for retaining in part. Should this option be selected, an addendum to this HIA and/or a Conservation Plan may be required.

9.1.3 Develop the site while retaining all, or portions of the former G.M. Frost building at an Alternative Location within the Guelph Innovation District

This option would result in re-locating all, or portions of the former G.M. Frost building to an alternative location within the GID lands. The option to re-locate the entire building may not be a viable alternative given its size and the associated feasibility of re-location. However, it may be feasible to retain and re-locate portions of the building

within the development site (i.e. GID Block Plan Area 1). Given the purpose-built nature of the building, the structure is not well suited for residential use. Further information would be required in order to determine whether or not the building is a suitable candidate for the physical act of re-location (in whole and/or in part). Should this option be selected, an addendum to this HIA and/or a Conservation Plan may be required.

9.2 Mitigation Recommendations

No adverse impacts are anticipated as it relates to the proposed draft plan of subdivision. The G.M. Frost building is the only protected heritage attribute of the site and the proposal provides the opportunity for its adaptive re-use. The following mitigation measures are proposed:

- Once the Plan of Subdivision is registered, the City should update the designation By-law no. (2025)-21178 to reflect the legal description specific to Block 38 which includes the G.M. Frost building; and
- Completion of a Heritage Impact Assessment and/or Conservation Plan in the future to address any changes to the G.M. Frost building which may be proposed in the future, including any proposed alterations, additions, or demolitions. An Interpretation Strategy should also be completed when more information is available on changes to the building.

10.0 Conclusions & Recommendations

This report concludes that the draft plan of subdivision includes the property at 328 Victoria Road South, which is of Cultural Heritage Value or Interest and has been designated under Part IV of the *Ontario Heritage Act* by the City of Guelph. The proposed draft plan of subdivision will provide the opportunity to retain all of the attributes of the By-law which have been identified by the City of Guelph. The proposed draft plan allows the G.M. Frost building to be retained in-situ on Block 38. This report has demonstrated that views associated with the G.M. Frost building will also be maintained. Other features of the site which have been identified by the City as being of cultural heritage value or interest (i.e. views of the Ontario Reformatory and a set of iron stairs) will not be impacted as a result of the proposed plan of subdivision. No impacts on identified cultural heritage resources located in the vicinity of the draft plan of subdivision on Block Plan Areas 1 and 2 are anticipated.

Summary of Cultural Heritage Value or Interest:

The property at 328 Victoria Road South meets criteria under *Ontario Regulation 9/06* for its design/physical, historical/associative, and contextual values and was designated under Part IV of the *Ontario Heritage Act* by the City of Guelph in December 2025. The only heritage attribute of the property is the G.M. Frost building, as described in this report.

Summary of Mitigation Recommendations:

- Once the Plan of Subdivision is registered, the City should update the designation By-law no. (2025)-21178 to reflect the legal description specific to Block 38 which includes the G.M. Frost building; and
- Completion of a Heritage Impact Assessment and/or Conservation Plan in the future to address any changes to the G.M. Frost building which may be proposed in the future, including any proposed alterations, additions, or demolitions. An Interpretation Strategy should also be completed when more information is available on changes to the building.

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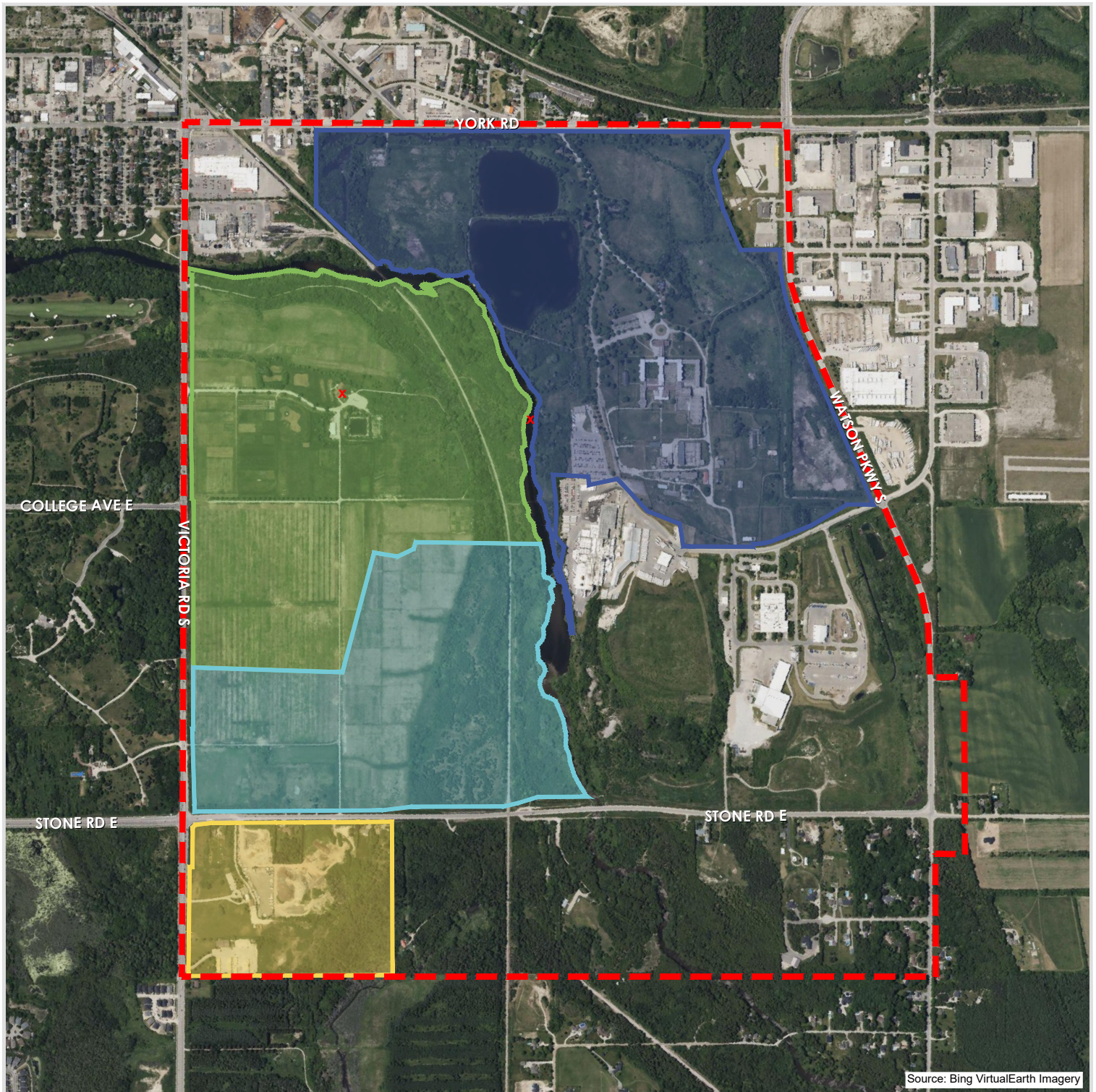
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Appendix **A** – GID Block Lands & Location Map



Guelph Innovation District Block Plan Areas

LEGEND

-  Secondary Plan Boundary
-  Block Plan Area 1
-  Block Plan Area 2
-  Block Plan Area 3
-  Block Plan Area 4

DATE: September 2022

SCALE: 1:15,000

FILE: 1405A

DRAWN: LC



K:1405A - GUELPH SECONDARY PLAN/RPT/STUDY AREA.DWG

Appendix **B** – Draft Plan of Subdivision

DRAFT PLAN OF SUBDIVISION

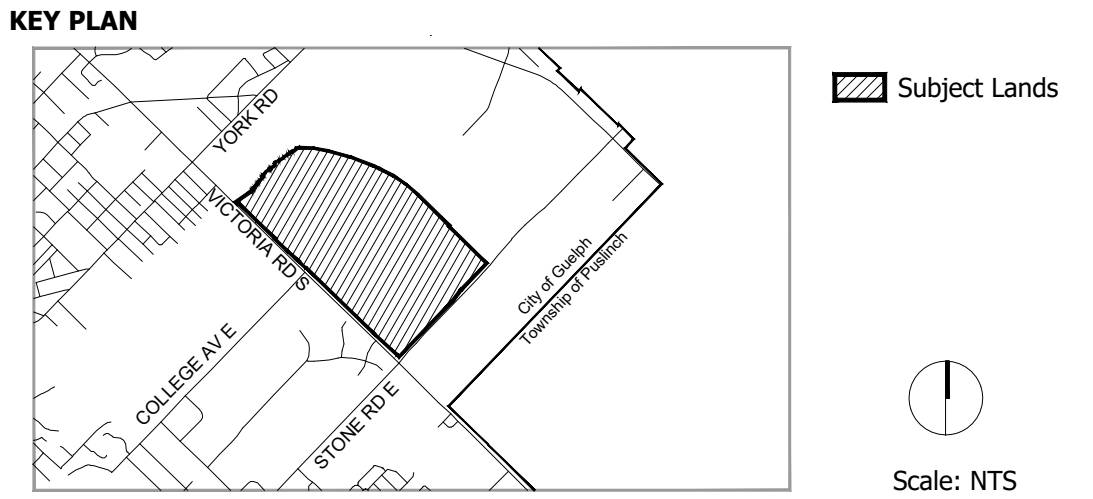
LEGAL DESCRIPTION
PART OF BROKEN FRONT LOTS 10, 11 & 12
CONCESSION 1, DIVISION 'G'
GEOGRAPHIC TOWNSHIP OF GUELPH
IN THE CITY OF GUELPH, COUNTY OF WELLINGTON

OWNER'S CERTIFICATE
I HEREBY AUTHORIZE MACNAUGHTON HERMSEN BRITTON CLARKSON PLANNING LIMITED
TO SUBMIT THIS PLAN FOR APPROVAL.

Date: Client Name
Company Name

SURVEYOR'S CERTIFICATE
I HEREBY CERTIFY THAT THE BOUNDARIES OF THE LAND TO BE SUBDIVIDED ON THIS
PLAN AND THEIR RELATIONSHIP TO THE ADJACENT LANDS ARE ACCURATELY AND
CORRECTLY SHOWN.

Date: J. Andrew Smith, Surveyor, O.L.S.
Callon Dietz Incorporated



ADDITIONAL INFORMATION
Required Under Section 51 (17) of the Planning Act, R.S.O., 1990, c.P.13 as Amended

(a) As Shown (e) As Shown (h) Municipal Water Supply
(b) As Shown (f) As Shown (i) Loam / Sandy Loam
(c) As Shown (g) As Shown (j) As Shown
(d) Residential, Multiple Residential, Mixed Use, School, (k) All Services As Required
Employment, Open Space, Park, Stormwater Management (l) As Shown

AREA SCHEDULE			
DESCRIPTION	LOTS/BLOCKS	UNITS	AREA
Residential	1-30	457	17.725 ha
Multiple Residential	31-40	861	16.724 ha
Mixed Use	41-46	3,722	15.451 ha
School/Mixed Use	47		2.067 ha
Employment	48-51		7.311 ha
Stormwater Management	52-54		7.156 ha
Significant Natural Area & Natural Areas	55		24.916 ha
Park	56-62		7.964 ha
Open Space	63,64		1.289 ha
Walkway	65-70		0.121 ha
Road Widening	71-74		0.108 ha
Roads			15.764 ha
Total	74	5,040	116.596 ha

- NOTES
- All dimensions are in metres unless otherwise shown.
 - Survey information provided by Callon Dietz Land Surveying Ontario, Nov. 2016.
 - Topographic information provided by MTE.
 - Wetland, dipline, and buffers provided by NSRI INC, Oct. 2022.
 - Contains information made available under Grand River Conservation Authority's Open Data Licence v1.0.
 - Contains information licensed under the Open Government Licence - City of Guelph.
 - Daylight triangle 9m x 9m.
 - Conceptual 3 meter trail location.

Revision No.	Date	Issued / Revision	By
1.	Nov. 11, 2025	Preliminary Draft Plan;	SP

Stamp	Date
	May 28, 2026
File No.	1405G
Plan Scale	1:2,500 (Arch D)
Drawn By	S.P./J.B
Checked By	D.A.

Project GUELPH INNOVATION DISTRICT
BLOCK 1 & 2
Fusion Homes
Guelph,
Ontario.

File Name DRAFT PLAN OF SUBDIVISION Dwg No. 1 of 1

Scale Bar

K:\1405G - GID Block 1 and 2\2025\1405G_Draft Plan of Subdivision_28May2026.dwg

Appendix C – Designation By-law (328 Victoria Road South)

The Corporation of the City of Guelph

By-law Number (2025) – 21178

A by-law to designate portions of the buildings and property known municipally as 328 Victoria Road South and described legally as PART BROKEN FRONT LOTS 10, 11 AND 12 CONCESSION 1 DIVISION G GUELPH TOWNSHIP, PARTS 1 TO 13 AND 16 TO 19 INCLUSIVE 61R10430, SAVE AND EXCEPT PARTS 1, 2, 4 AND 7 61R11036 AND PARTS 1, 2 AND 3 61R21861 TOGETHER WITH AN EASEMENT AS IN ROS651254 SUBJECT TO AN EASEMENT OVER PARTS 3 AND 4 61R10430 AS IN ROS390891 SUBJECT TO AN EASEMENT OVER PARTS 9, 10 AND 11 61R10430 AS IN WC166385 TOGETHER WITH AN EASEMENT OVER PART 20 61R10430 AS IN WC166386 SUBJECT TO AN EASEMENT IN GROSS OVER PART 4 61R5069, PART 2 61R5070 AND PARTS 1 AND 2 61R5071 AS IN WC641535; CITY OF GUELPH; PIN71236-0133 as being a property of cultural heritage value or interest.

Whereas the Ontario Heritage Act, R.S.O. 1990, Chapter 0.18, authorizes the Council of a municipality to enact by-laws to designate real property, including all the buildings and structures thereon, or portions thereon, to be of cultural heritage value or interest;

And whereas on September 18, 2025 the Council of the Corporation of the City of Guelph has caused to be served upon the owners of the lands and premises known municipally as 328 Victoria Road South and legally as PART BROKEN FRONT LOTS 10, 11 AND 12 CONCESSION 1 DIVISION G GUELPH TOWNSHIP, PARTS 1 TO 13 AND 16 TO 19 INCLUSIVE 61R10430, SAVE AND EXCEPT PARTS 1, 2, 4 AND 7 61R11036 AND PARTS 1, 2 AND 3 61R21861 TOGETHER WITH AN EASEMENT AS IN ROS651254 SUBJECT TO AN EASEMENT OVER PARTS 3 AND 4 61R10430 AS IN ROS390891 SUBJECT TO AN EASEMENT OVER PARTS 9, 10 AND 11 61R10430 AS IN WC166385 TOGETHER WITH AN EASEMENT OVER PART 20 61R10430 AS IN WC166386 SUBJECT TO AN EASEMENT IN GROSS OVER PART 4 61R5069, PART 2 61R5070 AND PARTS 1 AND 2 61R5071 AS IN WC641535; CITY OF GUELPH; PIN71236-0133 and upon the Ontario Heritage Trust, notice of intention to designate portions of the aforesaid real property and has caused such notice of intention to be published in a newspaper having general circulation in the municipality;

And whereas the address of 328 Victoria Road South currently identifies a large property bounded by the northeast side of Victoria Road South, the Eramosa River, the west side of the Guelph Junction Railway tracks and Stone Road East. The Frost Building is in the northern section of the property and is accessed by a long driveway from Victoria Road South roughly halfway between College Avenue East and the Eramosa River.

And whereas the cultural heritage value or interest of the property is set out in Schedule 1 hereto;

And whereas no notice of objection to the said property designation was served upon the clerk of the municipality;

The Council of the Corporation of the City of Guelph enacts as follows:

1. Portions of the buildings and property known as 328 Victoria Road South, as described in Schedule 2 to this by-law, are designated as being of cultural

heritage value or interest under Part IV, Sec. 29 of the Ontario Heritage Act, R.S.O. 1990, Chapter 0.18.

2. The City Solicitor is hereby authorized to cause a copy of this by-law to be registered against the property described in Schedule 3 to this By-law in the proper Land Registry Office.
3. The City Clerk is hereby authorized to cause a copy of this by-law to be served upon the owners of the aforesaid property and upon the Ontario Heritage Trust and to cause notice of this by-law to be published in a newspaper having general circulation in the City of Guelph.

Passed this ninth day of December, 2025.

Schedules:

Schedule 1: Statement of Cultural Heritage Value or Interest – 328 Victoria Road South

Schedule 2: Description of Heritage Attributes – 328 Victoria Road South

Schedule 3: Legal Description – 328 Victoria Road South

Cam Guthrie, Mayor

Dylan McMahon, City Clerk

By-law Number (2025)-21178

Schedule 1: Statement of Cultural Heritage Value or Interest: 328 Victoria Road South

Statement of Significance

The Frost Building at 328 Victoria Road South has design/physical value, historical/associative and contextual value and thus meets five of the nine criteria for determining cultural heritage value or interest under Ontario Regulation 9/06.

Design and Physical Value

The building has physical/design value as it meets Criteria 1 being a good representative example of a late-20th century Post-Modernist building designed by Guelph architect Karl Briestensky.

Historical Associative Value

The building has historical/associative value as it meets Criteria 4 in that it has direct associations with the theme of Guelph's historically close connection with a progressive and advanced form of agriculture.

The building has historical value or associative value as it meets Criteria 5 in that it demonstrates the work of an architect who is significant to the Guelph community and the city's later 20th century architectural history.

Contextual Value

The building has contextual value as it meets Criteria 8 being visually linked to its surroundings - its location on a knoll overlooking the city, at some distance from Victoria Road was intentionally oriented so that the building's central hall looks toward the city's major landmark, the Basilica of Our Lady.

The building has contextual value as it meets Criteria 9 as it has become a landmark that is seen from Victoria Road South and from the Ontario Reformatory property to east.

By-law Number (2025)-21178

Schedule 2: Description of Heritage Attributes: 328 Victoria Road South

The following elements of the Frost Building at 328 Victoria Road South should be considered as heritage attributes in a designation under Part IV, Section 29 of the Ontario Heritage Act:

- original building form and massing including the large, steep-sloped main gable roof with similar smaller transverse gables
- walls of glass facing the downtown of the city
- gable roof lantern at the centre of the main roof ridge
- tubular steel exterior structural supports

It is intended that non-original features may be returned to the documented earlier designs or to their documented original without requiring City Council permission for an alteration to the design.

By-law Number (2025)-21178

Schedule 3: Legal Description: 328 Victoria Road South

The property known as 328 Victoria Road South is legally described as PART BROKEN FRONT LOTS 10, 11 AND 12 CONCESSION 1 DIVISION G GUELPH TOWNSHIP, PARTS 1 TO 13 AND 16 TO 19 INCLUSIVE 61R10430, SAVE AND EXCEPT PARTS 1, 2, 4 AND 7 61R11036 AND PARTS 1, 2 AND 3 61R21861 TOGETHER WITH AN EASEMENT AS IN ROS651254 SUBJECT TO AN EASEMENT OVER PARTS 3 AND 4 61R10430 AS IN ROS390891 SUBJECT TO AN EASEMENT OVER PARTS 9, 10 AND 11 61R10430 AS IN WC166385 TOGETHER WITH AN EASEMENT OVER PART 20 61R10430 AS IN WC166386 SUBJECT TO AN EASEMENT IN GROSS OVER PART 4 61R5069, PART 2 61R5070 AND PARTS 1 AND 2 61R5071 AS IN WC641535; CITY OF GUELPH; PIN71236-0133

Appendix **D** – Terms of Reference

TERMS OF REFERENCE

Guelph Innovation District, Blocks 1 and 2

March 2024

OVERVIEW

The Guelph Innovation District (GID) is identified as a key new growth area in the City of Guelph Official Plan. The GID is made up of various Blocks that are intended to be planned comprehensively. Blocks 1 and 2 of the Guelph Innovation District (GID) are bound by Victoria Road South to the west, Stone Road East to the south, and the Eramosa River to the north and east. Blocks 1 and 2 have a combined area of approximately 131 hectares. **Appendix A** to these TOR illustrates the extent of the Block Plan 1 and 2 Area.

These Terms of Reference (“TOR”) have been prepared to establish the general direction and process associated with the completion of studies, submission of applications and planning approvals to facilitate development of the lands within the Study Area in support of housing and employment in the City of Guelph. In general, the Terms of Reference proposes a sequence of completion of studies and application process for that is guided by the City’s application process to address complete application requirements and in support of the City Housing Pledge and provincial timelines for approvals. Block Areas 1 and 2 are held for the majority under one (1) ownership (116 hectares) and there is a benefit to a comprehensive approach for study completion and the design of the physical form of development. The remaining area (15 hectares) of the lands are designated Significant Natural Areas and Natural Areas and are not proposed for development.

Applications necessary to establish approvals for new housing units include, Block Plan, Official Plan Amendment, Zoning By-law Amendment, Draft Plan of Subdivision and Site Plans. A coordinated approach to obtain approvals provides opportunity to efficiently process required approvals and most effectively address timing objectives and City resources. The Terms of Reference establishes a coordinated approach with concurrent applications and approvals where possible. The Block Plan will be endorsed in coordination with the Official Plan Amendment, Zoning By-law Amendment and Draft Plan of Subdivision, which will address Secondary Plan policy.

KEY PRINCIPLES OF THE PROCESS

The GID provides an opportunity for new housing units to support the City’s housing objectives. The Secondary Plan establishes general policies and land uses to support new housing and jobs in GID. Modifications to the policies may be required to implement the land use designations. A comprehensive, master plan approach for the community (Block Plan areas) is envisioned by the City and the landowner.

The Study Process will demonstrate conformity with the policies and schedules of the GID Secondary Plan and specifically address the following:

- a. Land Uses:
 - i. Residential - housing types and densities
 - ii. Parks and Recreation – location of parks and trails
 - iii. Employment uses – employment types and densities

- iv. Mixed-use – retail, services, housing, employment
- b. Infrastructure and Municipal Servicing Plan –Stormwater Management, Water and Wastewater Servicing
- c. Roads and Active Transportation links
- d. Public views and vistas

OVERVIEW OF PROCESS

The City has established guidelines for completion of a Block Plan and has a process for approval of planning applications. The process for GID integrates the Block Plan and planning applications for a coordinated and comprehensive approach.

The following provides a general overview of the process:



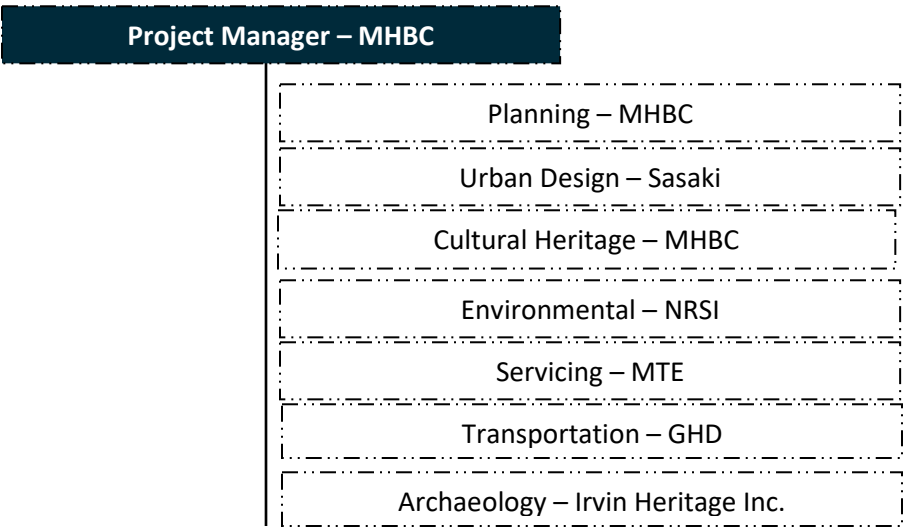
The Study Process is to be completed in coordination with the City of Guelph, GRCA and other external stakeholders, including the public. Public consultation is required and identified throughout the process.

A Study Process Flowchart will be developed for coordination with City staff on the general process established by the Terms of Reference.

Public consultation has occurred through the completion of the Secondary Plan and OPA 54. An initial Neighbourhood Meeting has been undertaken for Blocks 1 and 2. The public consultation process has been outlined in this TOR to occur in accordance with the requirements of the City of Guelph’s Community Engagement Framework and the Planning Act.

PROJECT TEAM

The Terms of Reference will be implemented by the landowner project team. The following project team includes qualified professionals that have been retained to lead the process on behalf of the landowners:



The Project Team has prepared this TOR for review and acceptance to establish and confirm the scope of work associated with the various studies, including identified field work associated with the TOR. Additional qualified professional consultants will be retained on an as-needed basis as specific needs/studies are identified.

The Project Manager for the landowner would liaise directly with the identified Project Leader for the City throughout the process. The Project Manager will manage the key deliverables and milestones.

A Technical Review Committee will be established to support an efficient review process and include key representatives from Planning, Engineering, Parks, Economic Development, and Natural Heritage from the landowner Project Team, City and GRCA.

BREAKDOWN OF STUDY PROCESS / STAGES – KEY ACTIONS AND DELIVERABLES

1/ Study Initiation and Pre-application

The intent of this stage is to establish the process and complete the Pre-application requirements. In this stage, a Concept/Block Plan will be submitted to provide a conceptual framework for the area and will provide the basis for consideration of future *Planning Act* applications in later stages. The following will be included in this stage:

- Submission of Terms of Reference and Work Plan Confirmation
 - There are Terms of Reference for specific studies and direction for completion of the studies is outlined in the Secondary Plan and associated guiding documents. Refer to Appendices C-H.
- Establishment of Technical Review Committee (TRC) and first TRC meeting to review Work Plan, Deliverables and Timelines
- Existing Conditions Summary and Vision Development
 - Existing Conditions Overview
 - i. Provide an initial description of the existing conditions (physical, social and regulatory) of the area and surrounding lands.
 - The overall Vision for the Block Plan will be established.
- The second TRC Meeting will include direction on the following:
 - Existing conditions
 - Consultation plan
 - Vision presentation

2/ Completion of Studies & Pre-Consultation

This stage will build on the information from the previous stage and develop the detailed information in support of the planning applications to facilitate the development. The following will occur in this stage:

- The technical studies and draft block plan will be prepared.
- The Block Plan will be developed as the basis for the planning applications for pre-consultation.
 - Concept / Block Plan with Planning and Architectural Design Control Urban Design Guidelines Overview
 - i. The Vision and Principles of development and the concept plan. The description will include mapping and design principles and detailed considerations (where applicable) associated with the natural heritage system, road pattern; active transportation network and links; layout of development blocks and types/densities of residential and employment uses; stormwater management facilities; parks / open space; location of cultural heritage resources; and public views and vistas.
 - ii. Parks identified within the Block Plan Area shall have a corresponding Facility Fit Plan to demonstrate how the required park amenities will be successfully accommodated in the proposed park blocks. The specific amenities to be provided through the parks (ie. cricket pitch, tennis courts, washroom and/or changeroom facilities, playgrounds, picnic shelters, open space, parking, and pathways) will be refined through the Block Plan process through consultation with Park and Trail development staff.
 - iii. This information will form the basis for the Planning Justification Report and Urban Design Guidelines at the time of submission with the detailed planning applications. Refer to Appendix B.
 - Environmental Impact Statement (EIS);

- iv. This assessment will be prepared to satisfy the City's Official Plan policies which relate to Natural Heritage Systems, as well as GRCA policy. An additional EIS may be required for Draft Plan of Subdivision approval. Refer to Appendix C.
- Cultural Heritage Resource Evaluation Report. Refer to Appendix D.
- Master Servicing Plan - Servicing and Stormwater management Assessment
 - v. The Master Servicing Plan will identify the servicing needs of the proposed development and will follow the Municipal Class Environmental Assessment planning process and the guidelines provided in section 5.3 of the GID Guidance for Preparation of Block Plans 2019 document. The Master Plan will inform the functional studies and preliminary plans at the time of submission with the detailed planning applications. Noise study requirements are addressed. Refer to Appendix E.
- Transportation Study
 - vi. To inform the design of the road and active transportation framework. The TIS will follow the guidance of section 5.4 of the GID Guidance for Preparation of Block Plans 2019 document. This will be updated with details the time of submission with the detailed planning applications. Refer to Appendix F.
- Sustainability Strategy Overview
 - vii. The sustainability objectives of the Guelph Innovation District will be identified to form the basis of the Sustainability Strategy. Refer to Appendix G.
- The Pre-Consultation Package will be submitted to the City
- Project Manager and City Project Lead will coordinate City and Agency Review
- The City will provide a complete package of comments on the submission
- A third TRC Meeting will address the Development Review Committee requirements
- The City Staff will provide endorsement of the Block Plan
- The second PIC meeting will be held
- City Council will provide endorsement of the Block Plan

3/ Pre-Submission

This stage will cover the completion of the requirements for determination of a complete application for the formal review process to begin once pre-approvals are granted and will include:

- Project Team will revise technical studies and Planning Instruments in accordance with city and agency comments.
- Project Team will submit the first pre-submission package with the updated required studies/reports to support the OPA, ZBA, Draft Plan of Subdivision
- Project Manager and City Project Lead will coordinate City and Agency Review
- The City will provide a complete package of comments on the Submission
- The fourth TRC meeting will be held to review City Comments and needed revisions to the submission materials
- Final Revisions will be made to the Technical Studies and Planning Instruments to reflect City Comments and TRC meeting discussions
- Project Team will submit the second pre-submission package with the updated required studies/reports to support the OPA, ZBA, Draft Plan of Subdivision

- Project Manager and City Project Lead will coordinate City and Agency Review of the second pre-submission package
- The fifth TRC meeting will be held to provide endorsement of the study package or to identify what revisions are required prior to endorsement.
- Additional submissions will be provided if required.

4/ Complete Application & Council Approval

- Project Team will submit the 'Complete' Application with technical studies and Block Plan, OPA, ZBA, and Draft Plan of Subdivision.
- The City will provide confirmation of a 'Complete' Application and issue the Notice of Complete Application
- The applications and studies will be circulated for City and Agency Review
- A Public Meeting will be coordinated to receive input
- A Public Meeting will be held to receive input
- The City will provide a complete package of comments on the submission
- Project Team will complete any modifications for final reports for approval
- A Notice of Completion of the studies will be provided to the public, which will include the notice of Council consideration
- City Staff will prepare the Recommendation Report to Council, as assisted by the Project Team, where required
- City Committee Meeting
- City Council Meeting

KEY STUDY ELEMENTS AND PLANNING POLICY CONSIDERATION

The Study Process will deliver studies, reports and plans to demonstrate the implementation of the Official Plan policies for the Guelph Innovation District (GID) Secondary Plan. The Official Plan included policies (Policies 11.2.7.3.1 through 11.2.7.3.11) to specifically implement the policies of the Guelph Innovation District Secondary Plan (OP Section 11.2) that will be addressed.

CONSULTATION PLAN

The goal of the Consultation Plan is to provide the public and stakeholders with information and opportunity to review and provide comment to the Block Plan. The intent is to receive feedback on the proposed Block Plan. The public consultation program will be documented with the information to be available for consideration by Committee and Council at the time of consideration of the Block Plan for adoption. The public consultation program will be led by Project Team, with the Project Manager as the key point of contact.

The Consultation Plan proposes to include the following:

- a. All adjacent land owners (within 120 metres of the boundary of the Block Plan area) will be sent a notice of the initiation of the Block Plan through standard mail service.
- b. Stakeholder Groups will be sent a notice of the initiation of the Block Plan through standard mail service. The stakeholder groups will be confirmed with City staff, but we expect the circulation will include groups associated with trails/hiking, public arts, environmental and housing.

- a. Anticipated stakeholder groups include the Guelph Hiking Trail Club, Rare, Habitat for Humanity, Guelph Coalition for Active Transportation, University of Guelph Arboretum and the University of Guelph.
- b. Stakeholder groups will provide a variety of perspectives on the proposed development for the GID lands and can identify opportunities for partnerships to expand the scope of uses on the GID lands.
- c. External agencies will be sent a notice of the submission of the initiation of the study through standard mail service or email. These agencies may include the following, but the list will be confirmed with City staff prior to providing notice:
 - a. Grand River Conservation Authority;
 - b. Ministry of the Environment, Conservation and Parks;
 - c. Ministry of Natural Resources and Forestry;
 - d. Township of Guelph Eramosa;
 - e. CP Rail;
 - f. Guelph Junction Railway;
 - g. Ministry of Transportation;
 - h. Upper Grand District School Board; and,
 - i. Wellington Catholic District School Board.
- d. Indigenous Groups consultation has been initiated and will continue throughout the process
- e. The public through notice on the City's website

The approach to public consultation will include:

- a. Notice of the initiation of the Block Plan will be posted on the City website on a project specific website associated with the GID Secondary Plan, and on the "current development applications" page if required by City Staff;
- b. Notice of the initiation of the Block Plan will be sent by standard mail to adjacent land owners and external agencies.
- c. Consultation will take place in a variety of ways, but could include the following:
 - a. Community information meetings (in person and/or virtual);
 - b. Online and print surveys;
 - c. Stakeholder sessions (in person and/or virtual).
- d. Information will be recorded through online tools including online survey platforms and written meeting minutes. All comments will be consolidated into a comment matrix.
- e. Information gathered through the consultation process will be applied in the development of the Block Plan by helping to inform the design of the Block Plan and Block Plan policy. Specific topics which are anticipated to be major focuses of the strategy may include:
 - a. Land use types and location;
 - b. Density and built form;
 - c. Carbon reduction strategies;
 - d. Approaches to alternative transportation; and,
 - e. Accessibility.

Any individuals who would like to receive project updates will be given the option to sign up to an email list to receive updates related to the project and webpage updates. The project webpage will be updated regularly as project updates occur and consultation events are scheduled.

The TRC will confirm the Consultation Strategy at the initial meeting.

MAPPING, STATISTICAL INFORMATION REQUIREMENTS AND SCHEDULES

Mapping and schedules in support of the planning applications will be prepared in accordance with City standards (scale of 1:3000). The following statistical information will be provided separately:

- a. Existing and proposed land use areas by designation type showing gross and net development area;
- b. Anticipated building GFA for non-residential uses;
- c. Anticipated employment;
- d. Anticipated parking spaces;
- e. Total number of residential units by type; and,
- f. Anticipated population.

DEVELOPMENT APPLICATIONS AND IMPLEMENTATION

The following planning applications will implement the objectives of the Secondary Plan:

- Official Plan Amendment (OPA) – An OPA will be submitted for any amendment to the Official Plan (which includes the GID Secondary Plan) will require justification that would be established through the process.
- Zoning By-law Amendment – this will establish the details of the land uses, including the permitted uses and regulations and will provide the direction necessary for detailed implementation of the land uses.
- Draft Plan of Subdivision – this will establish the lots/blocks for development, public roads and other blocks that may be conveyed to a public agency (i.e., SWM, open space, parks).

Further details of development for lots/blocks within the Draft Plan of Subdivision may be subject to Site Plan Control and Plan of Condominium application(s). The timing and type of development applications/ planning approvals required for development will be addressed through the study requirements, including:

- a. Any matters associated with the phasing of development; and,
- b. Scope of any further required studies or assessments that may be required for specific development approvals (i.e., site plan approval) or phases of development.

APPENDIX A



Appendix A

Guelph Innovation District Block Plan Area 1 and 2 Land Ownership

LEGEND

- Lands owned by Fusion Homes (± 116.596 ha)
- Additional Lands owned by Fusion Homes (± 14.735 ha)

--- Secondary Plan Boundary

Block Plan Areas

- Block Plan Area 1
- Block Plan Area 2
- Block Plan Area 3
- Block Plan Area 4

DATE: December 13, 2023

SCALE: 1:12,000

FILE: 1405G

DRAWN: JB



K:1405G - GID BLOCK 1 AND 2\IRPTGID LAND OWNERSHIP_OP SCHED D.DWG

APPENDIX B

TERMS OF REFERENCE

Planning and Urban Design Guidelines / Architectural Design Control Guelph Innovation District, Blocks 1 and 2

December 2023

ELEMENTS OF THE PLANNING AND URBAN DESIGN COMPONENTS

The following provides a general overview of the elements of the Planning and Urban Design components of the work plan:

1) BACKGROUND REVIEW

a) Site Context

The purpose of this section is to define the intent of the Block Plan and to provide an initial description of the existing conditions (physical, social and regulatory) of the Block Plan Area and surrounding lands. This information provides a context for the Block Plan and background for the anticipated targets and guidelines required for areas that may be suitable for development.

Tasks include:

- a. Review existing/available background information and documents.
- b. Review/summarize existing policies that are applicable to the Block Plan Area
- c. Prepare base plans (topographic mapping) and aerial photographs of the Study Area for use throughout the study. Current aerial photography available from the City and GRCA will be reviewed as well as topographic data from MTE Consultants Inc. Detailed topographical survey information may be used to establish critical key locations such as intersections, existing pipe or culvert inlets, watercourse elevations, etc.
- d. Provide an overview of the findings of the geotechnical investigation, slope stabilization and hydrogeological investigation.

b) Planning Context

The intent of this Section is to outline the planning context for development in the Block Plan Area including an overview of relevant Official Plan Policies, with emphasis on section 11.2 of the Official Plan which governs the Guelph Innovation District Secondary Plan area. The development's character will be defined and the Block Plan will be reviewed in contrast of the vision, goals and objectives of the GID Secondary Plan. Specifically, the proposed block plan will be assessed for consistency with the population, employment, residential density and employment density targets of section 11.2.7.3 and Table 2 of the City's Official Plan. Sections 11.2.6.3.2 – 11.2.6.3.7 will also be reviewed for land use policy permissions and requirements. Built form and site development will be assessed against section 11.2.6 of the Official Plan.

c) Description of Proposed Development and Concept

This Section will describe the Vision and Principles of development and the concept plan. The description will include mapping and design principles and detailed considerations (where applicable) associated with the natural heritage system, road pattern; active transportation network and links; layout of development blocks and types/densities of residential and employment uses; stormwater management facilities; parks / open space; location of cultural heritage resources; and public views and vistas.

2) DESCRIPTION OF PROPOSED DEVELOPMENT AND BLOCK PLAN

The Block Plan will include mapping, schedules and text showing the following:

- road pattern;
- active transportation network and links;
- layout of development blocks and stormwater management facilities;
- parks, open space and urban squares;
- trail network;
- residential density and affordable housing distribution;
- location of cultural heritage resources;
- natural heritage system; and,
- public views and vistas.

The Block Plan will describe the proposed development and identify how the policies of Section 11.2 of the Official Plan are being met.

3) ARCHITECTURAL CONTROL/ URBAN DESIGN GUIDELINES

Urban design principles will be developed for the initial plans associated with the concept plan. The Architectural Control Urban Design Guidelines will be developed for submission with the plan of subdivision to establish the areas design requirements for built form and streetscape. The guidelines will be developed based on the built form and carbon neutrality policies of section 11.2 of the Official Plan and the Urban Design policies of the Official Plan. The City's Urban Design Manual and Built Form Standards for Mid-Rise buildings and townhouses will also be reviewed to inform the guidelines. The guidelines will be prepared by a qualified professional, such as an Urban Designer or Architect.

4) OPEN SPACE SYSTEM: TRAILS AND PARKS PLANNING

The Block Plan will identify the location, size and configuration of parks and urban squares. The Official Plan Policies related to the Open Space System and the GID Secondary Plan will be reviewed and incorporated into the Block Plan design. Identification of trails, active transportation links, and stormwater management facilities will also be incorporated into the Block Plan and a park facility-fit plan will be submitted to demonstrate the appropriateness of the proposed park sizes and configuration. The Trail network will be developed in accordance with the City's Trail Master Plan and will include further refinement of the trail network beyond the information in the master plan, including identification of trail classification and space requirements for proposed trail segments. The trail network will incorporate wherever possible, connections to schools, community destinations and active transportation links, and be designed in accordance with the City's Facility Accessibility Design Manual (FADM). Details associated with parks and trail blocks

will be established and illustrated on the proposed plan of subdivision and will be designated and zoned accordingly through the planning applications.

APPENDIX C

December 13, 2023

Jason Elliott, Environmental Planner
Planning and Building Services
City of Guelph

Attention Jason Elliott:

**Re: Guelph Innovation District Lands (Blocks 1 & 2)
Environmental Impact Study - Terms of Reference (Revised)**

Natural Resource Solutions Inc. (NRSI) has been retained by Fusion Homes to prepare a Terms of Reference (TOR) for the completion of an Environmental Impact Study (EIS) for the Guelph Innovation District (GID) lands, in the City of Guelph (see Map 1). The proposed undertaking is for GID Blocks 1 and 2, although it is anticipated that these Blocks will be assessed and presented as a single unit within the EIS and supporting reports. After completion of detailed engineering and planning studies, the complete EIS report will be provided in support of the Block Plan/Draft Plan process(es).

The subject property contains Natural Heritage System (NHS) as per the Guelph Official Plan (2022) including Significant Valleyland, Cultural and Significant Woodland, wetlands, and Fish Habitat (associated with the Eramosa River). The Eramosa River forms the eastern boundary to the subject property, the floodplain of which is regulated by the Grand River Conservation Authority (GRCA).

The field surveys for 2022/2023 detailed within this TOR (most of which have already been completed) have been completed with the goal of characterizing existing natural features in order to determine significance and necessary buffers.

This TOR has been prepared in accordance with the *Guidelines for the Preparation of Environmental Impact Studies* (City of Guelph 2020) as well as the *Guelph Innovation District Guidance for Preparation of Block Plans* (2019). This TOR has also been updated based on comments on previous versions, by City of Guelph and GRCA staff, as well as following the Technical Review Committee (TRC) meeting with City staff on December 13, 2023.

Sincerely,
Natural Resource Solutions Inc.



Nathan Miller, M.Sc., P.Biol.
Senior Biologist

**Guelph Innovation District Lands (Blocks 1 & 2), City of Guelph
Environmental Impact Study - Terms of Reference
December 2023**

Introduction

The proposed Block Plan areas are approximately 115ha in size and are situated north of the intersection of Victoria Road South and Stone Road East, constituting Lots 10, 11, and 12, Division G, City of Guelph (henceforth referred to as 'the subject property').

The majority of the subject property is comprised of former agroforestry and turfgrass test plots utilized by the University of Guelph. Preliminary field surveys conducted by NRSI biologists identified cultural thickets, cultural meadows, small meadow marshes, cultural woodlands, and mixed forests on the subject property. Previous plantations and test plots of trees as part of the University of Guelph studies have since been removed. These trees (mostly hybrid poplars) have since begun to regenerate across the site, requiring ongoing maintenance and mowing to prevent re-establishment of these treed areas.

Surrounding lands include a naturalized area surrounding a stretch of the Eramosa River, found along the north and eastern edge of the subject property, associated with the City NHS. Unevaluated wetlands are found within the subject property. Southeast of Stone Road East, the Eramosa River Blue Spring Creek Wetland Complex and Torrence Creek Swamp occur. These aquatic features and floodplains are regulated by the Grand River Conservation Authority (GRCA). Other Valleylands, Cultural and Significant Woodland, and Fish Habitat (associated with the Eramosa River) are also present in these areas. An Environmental Impact Study (EIS) is required to ensure that no negative impacts will occur to the form and function of NHS components.

Characterization

Collection and Review of Background Information

Background information has been collected for the study area that includes the subject property as well as nearby contiguous natural features that may be influenced by the proposed development.

The following background information sources have already been reviewed in the preparation of the EIS:

- Grand River Conservation Authority (GRCA) mapping;
- Natural Heritage Information Centre (NHIC) database (Ontario Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNRF), 2022);
- Government of Canada SARA Registry (Government of Canada 2021);
- Ontario Breeding Bird Atlas (OBBA) (BSC et al. 2006);
- eBird database (2022);
- Ontario Reptile and Amphibian Atlas (ORAA) (Ontario Nature 2019);
- Ontario Odonata Atlas Database (OOAD; 2022);
- Atlas of the Mammals of Ontario (Dobbyn, 1994);
- iNaturalist database (2022); and
- Ontario Butterfly Atlas (Macnaughton et al., 2022).

Screening for Species at Risk/Significant Wildlife Habitat

A screening for potential Species at Risk (SAR) and Species of Conservation (SCC) that may be present on-site has been undertaken using available background information, in addition to field surveys already carried out on this property in 2019 and 2020. SAR with occurrence records in the vicinity were screened based on comparing their habitat preferences against habitat conditions reported from the subject property. Results of this preliminary screening are provided in Appendix I. In addition, a preliminary screening for potential Significant Wildlife Habitat (SWH) that may be present within the study area was also completed, and is provided in Appendix II.

The results of these screenings have been utilized to inform the proposed field program described below.

Field Surveys

Field surveys were undertaken within the subject property, predominantly within the area south and west of the active rail line although where needed, surveys were also carried out beyond this area to the edge of the Eramosa River (e.g. aquatic habitat assessments, ELC, winter wildlife, etc.). A study area of 240m surrounding the subject was established to assess potential impacts as a result of the proposed undertaking. In these areas, roadside or aerial imagery was used to assess ELC and potentially significant natural heritage features (Map 1).

A map showing specific survey locations has been attached to this report (Map 2). The majority of survey effort was focused on lands to the west of the existing rail line, and as such, a conservative approach to assessing habitats was undertaken to ensure that where targeted surveys were not undertaken, habitats are assumed to be present and addressed accordingly throughout the EIS. The following is a description of the surveys that have been conducted by NRSI in 2022/2023 based on identified background information:

Initial Site Visit and SAR/SWH Assessment

A site visit to the Block Plan areas was completed at the initiation of the project to assess baseline conditions within Blocks 1 and 2. Potential SAR and SCC habitats as well as candidate SWH were assessed to determine if additional surveys are required. Based on these field surveys, no additional surveys are deemed to be necessary to characterize the natural features within the study area, beyond what is proposed within this TOR. Where field surveys to confirm significance were not undertaken, a conservative approach to protection was taken and the habitat assumed to be present.

Bat Habitat Assessment

An inspection of trees and buildings within the subject property has been completed to determine the likelihood of suitable roosting habitat for bats. Cavity tree assessments and searching for leaf roosts have followed guidelines provided by the Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNRF) in the Survey Protocol for Species at Risk Bats in Treed Habitats (NDMNRF 2017). The bat habitat assessments were focused within the development portions of the Block Plan Areas where potential impacts to these species could occur. However, candidate bat habitat within the woodlands of the NHS will be considered in necessary buffer widths (i.e. Significant Woodlands). All suitable buildings were also assessed for bat habitat in order to determine the potential for use and necessary mitigation measures.

Ecological Land Classification and Three-season Vegetation Inventories

Vegetation communities have been delineated and mapped in accordance with the ELC system for southern Ontario (Lee et al. 1998). Vegetation communities were mapped within the 240m study area around the subject property, although in areas where access was not feasible, roadside or aerial imagery was used to provide coarse level ELC. Vegetation inventories were conducted in conjunction with the delineation of ELC communities, during the spring, summer and fall to ensure a comprehensive list of vascular plant species for the subject property is collected. The subject property was systematically searched for plant species and any rare species will be documented and georeferenced, as access allows. Any rare species or vegetation communities identified and their location(s) were recorded with a handheld GPS unit.

Woodland Dripline Delineation

The driplines of woodlands within the subject property were delineated and recorded using a sub-metre accuracy GPS unit. Site visits were undertaken with City of Guelph staff to confirm the woodland boundaries. The confirmed woodland boundary will be shown on future maps and will assist in informing development constraints.

Wetland Boundary Delineation

Wetland boundaries were delineated in accordance with the Ontario Wetland Evaluation System (OWES) for southern Ontario by OWES-certified NRSI biologists. The boundaries of wetlands within the subject property were flagged and confirmed in the field with the GRCA and City of Guelph staff. The confirmed wetland boundary will be shown on future maps and will assist in informing development constraints. All wetlands within the subject property will be evaluated as per the 4th edition of the OWES manual (2022). In the event that a wetland evaluation is deemed unnecessary, rationale will be provided within the EIS, and a conservative approach to protection provided.

Breeding Bird Surveys

NRSI biologists carried out two early morning breeding bird surveys at various locations within the Block Plan areas. Surveys included the entire subject property, with a focus on the areas south and west of the existing rail line, although point counts were stationed in areas where auditory and visual data could be collected for areas between the rail line and the Eramosa River. The survey methods primarily follow the Ontario Breeding Bird Atlas protocol (OBBA 2001), with modifications from the Forest Birds Monitoring Program (Cadman et al., 1998), to document all bird species and breeding evidence. The breeding bird surveys were completed a minimum of 10 days apart between May 24th and July 10th.

Anuran Call Surveys

Three anuran call surveys were completed at suitable wetland and pond locations within the study area. These surveys were completed in accordance with the Marsh Monitoring Program for Amphibians survey protocol (Bird Studies Canada (BSC), 2009) once in each of April, May and June.

Turtle Basking Surveys

Basking turtle surveys were completed on five separate visits between April and May. These surveys focused on suitable habitats for turtles within the subject property. Surveys were not completed on the Eramosa River as this is known to be turtle habitat.

Surveys were conducted in accordance with the MNRF Survey Protocol for Blanding's Turtle (MNRF 2015).

Turtle Nesting Surveys

Turtle nesting surveys were completed on five evenings between late-May and early-July (contingent on nesting phenology in a given year). Potentially suitable nesting locations were identified within the subject property based on a preliminary review of aerial imagery. These surveys were conducted in accordance with the Blanding's Turtle Nest and Nesting Survey Guidelines developed by the MNRF Guelph District (2016).

Snake Surveys

Visual encounter surveys for snakes were undertaken during all other field surveys when weather conditions permitted. Visual encounter surveys were conducted in high quality microhabitats or microhabitat features. Where high quality microhabitats are clustered, surveys were focused on wooded edges, within vegetation patches, near rock piles, dead stumps, or other notable microhabitat features.

A number of potential snake hibernaculae were identified during field surveys in 2022 and these features were surveyed for significance in the spring of 2023.

Insect Surveys

Three area searches were completed for insect species within the Block Plan areas during June, July and August. A particular focus will be placed on surveying for SCC species such as Monarch (*Danaus plexippus*), Yellow-banded Bumble Bee (*Bombus terricola*) and American Bumble Bee (*Bombus pensylvanicus*) that have been reported from the vicinity of the site.

Winter Wildlife and Raptors

Three targeted area searches have been conducted between December 2022 and March 2023 to identify the presence of wintering raptors and mammal movement within the Block Plan areas.

Headwater Drainage Feature Assessments

Headwater drainage features (HDFs) are known from the subject property based on NRSI's previous project experience in this area. Two HDF assessments were completed, one each in April and June. Based on the results of these surveys, it was deemed that an additional survey in August was unnecessary. Surveys were completed in accordance with the Evaluation, Classification and Management of Headwater Drainage Features Guidelines (Toronto and Region Conservation Authority (TRCA) & Credit Valley Conservation (CVC), 2014) and the Ontario Stream Assessment Protocol (OSAP) Headwater Sampling Protocol (Gorenc & Stanfield, 2017). Each HDF will be assessed to evaluate and classify its functional importance and to identify management recommendations. Fish habitat is not present in the HDFs on the subject property, and as such, electrofishing was not undertaken.

Aquatic Habitat Assessment

An aquatic habitat assessment was completed for the Eramosa River as well as any tributaries that occur within the subject property. The aquatic habitat assessment was completed during the summer and will be conducted in accordance with the Ontario Stream Assessment Protocol (Module S4.M11, Gorenc and Stanfield 2017).

Incidental Wildlife

In addition to the targeted surveys noted above, NRSI biologists will make note of all incidental wildlife observations during all site visits. Observations of lepidoptera, odonata, herpetofauna, bumblebees, mammals, and all other wildlife will be recorded while on-site. This includes direct observations, as well as signs such as dens, tracks, scats, etc.

Tree Inventory

All trees ≥ 10 cm Diameter at Breast Height (DBH) within and immediately adjacent to the conceptual development area will be tagged and assessed by a Certified Arborist/Registered Professional Forester. Information on DBH, crown radius, health, and potential for structural failure will be collected. Tree locations will be recorded with a GPS unit to sub-metre accuracy and plotted on a map and incorporated into a Tree Inventory and Preservation Plan (TIPP) report.

Reporting

Following the completion of detailed engineering plans in 2023, a formal EIS report will be prepared that will assess potential impacts and necessary mitigation measures in light of this information. This will include the integration of reports pertaining to slope stability, stormwater management, servicing, hydrogeology, grading, among others.

The EIS report will be prepared in support of the Block Plan and Draft Plan for this project, and depending on the level of detail provided for the EIS in support of the Block Plan, an additional EIS for the Draft Plan may not be required – this will be determined by the City following their review of Block Plan materials. In general, the materials included within the EIS will follow Section 4 of the *Guidelines for the Preparation of Environmental Impact Studies* (City of Guelph 2020):

1. **Introduction** – details on the subject property and surrounding lands (study area) will be provided in addition to information on the proposed undertaking including proposed trail layouts;
2. **Background Information and Project Scoping** – information collected during the background review process will be provided including all pertinent details related to significant species, habitats and features. Screening exercises for Significant Wildlife Habitat (SWH) and Species at Risk (SAR) will also be included as part of this report component.
3. **Characterization of Natural Features** - using data collected during the completion of field studies and the background information review, sensitive biological features within the Block Plan areas will be identified along with appropriate buffers. This characterization will include a description of natural features associated with the Significant Natural Areas and Natural Areas located along the Eramosa River within each of the Block Plan areas in addition to any other features that require consideration (e.g. surface or groundwater hydrological features, natural hazards, etc.). As part of the characterization process, NRSI will also assess wildlife habitat connectivity across the study area including for any linkages between significant habitats.
4. **Significance and Sensitivity Analysis** – an evaluation of significance for the natural heritage features identified on the subject property and broader study

area will be undertaken in the context of relevant natural heritage policies (municipal, provincial, federal). Mapping will be prepared that identifies these sensitive features and necessary buffers and/or enhancements.

5. **Impact Analysis and Mitigation/Enhancement Measures** - an assessment of impacts associated with the development of the Block Plan areas will be provided that describes recommendations for development as well as mitigation, enhancement and restoration measures to ensure no negative impacts occur to natural features and areas adjacent to the proposed development areas. The details of the proposed development, and construction/disturbance limits will be reviewed and compared to the existing natural features and identified habitats in the study area.

Management goals and recommendations provided in the Eramosa River Blue Springs Creek Watershed Study (Beak et al. 1999) will be integrated in the EIS where possible. NRSI will incorporate the findings of the project team reports including hydrogeological studies, geotechnical studies, stormwater management reports, and carbon sequestration assessments to ensure that all potential impacts are appropriately assessed and mitigated.

Anticipated impacts and associated mitigation measures will be discussed where there are any areas of conflict between significant features or ecological functions and the proposed development. The analysis of impacts will be divided into:

- a. **Direct impacts** associated with disruption or displacement caused by the actual proposed 'footprint' of the proposed development, direct impacts to vegetation, wildlife and/or their habitats. A TIPP report will be prepared as a stand-alone report that will also address direct impacts of tree removal. A summary of this report will be included in the EIS report.
- b. **Indirect impacts** associated with changes in site conditions such as alterations to groundwater in terms of quantity and quality. This will include an analysis of potential impacts of salt use; a salt management plan will be prepared as part of the EIS. In addition, a monthly water balance analysis will be provided for each feature (e.g. discreet wetlands or watercourses) in order to ensure no negative impacts as a result of changes to hydrology. Infiltration targets are to be provided as part of this analysis. An erosion and sediment control plan will be provided across the site that will ensure the prevention of sediment laden runoff to receivers. This section will also include potential disturbances to vegetation and wildlife arising from the proposed development such as noise, vibration, and dust. Recommendations for restoration and enhancement will include areas of surfacewater and fish habitat within riparian areas.
- c. **Induced impacts** associated with increased use of, or pressure on the natural heritage features will be assessed as well as necessary mitigation measures (education, signage, fencing, etc.).
- d. **Cumulative impacts** will also be assessed in terms of the overall pressure on the natural heritage features from incremental development within adjacent lands;

6. **Policy Analysis** – an analysis will be undertaken within the EIS to review the proposed proposal and how it conforms with GRCA, City, provincial, and federal policies.
7. **Trail and Active Transportation** – the EIS will provide a detailed analysis of proposed refinements to the trail network and any active transportation within the subject property. This will include an analysis and demonstration of the feasibility of accommodating an active transportation link across the Eramosa River between GID Blocks 1 and 4, as per Schedule A of the GID Secondary Plan. The assessment of the trail network will require an assessment of how this can be accomplished in accordance with City policies pertaining to the NHS. Where refinements require engineering input in terms of grading, tree removal, etc., this will be incorporated into the impact analysis of the EIS. A map will be provided that will detail the locations of trails and ad hoc trails on the subject property.
8. **Evaluation of Alternative Options** – where necessary, alternative options for certain aspects of the development will be explored in order to determine the best options for development and protection of natural heritage features.
9. **Recommendations & Monitoring** – recommendations will be made to avoid, minimize or mitigate any potential impacts on the significant natural features. A summary table will be provided at the end of the EIS report listing all recommendations that are to be integrated at future project stages. Measures for avoidance and mitigation of construction, and all identified impacts will be provided along with details of timing, duration, and location. Management objectives for the NHS and urban forest will be provided within the EIS and will include items such as plantable spaces, meadow habitat, pollinator habitat, invasive species removal and management, etc.

A detailed monitoring plan will be provided as part of the EIS depending on the types of natural heritage features identified during the characterization of the subject property. This will include information related to during and post-construction (mitigation effectiveness) monitoring. Details on objectives, methodology/timing, locations, monitoring parameters, analysis, thresholds, and contingency measures will be provided as part of this plan. The details provided in the EIS will form the basis for the monitoring program recommendations to be implemented at the Environmental Implementation Report (EIR) stage of development.

Groundwater monitoring will be conducted at the subject property to assess hydrogeological conditions; including, shallow groundwater flow direction, seasonal high groundwater levels, and groundwater and surface water interactions. A groundwater monitoring program has been initiated at the subject property by MTE and includes the following tasks:

- One-time development and single-well response testing of approx. 13 monitoring wells;
- Collection of one groundwater sample from select monitoring wells to obtain background general groundwater chemistry;
- Installation of dedicated pressure transducers (data loggers) to collect groundwater levels on a continuous basis in select monitoring; and,
- Collection of stabilized groundwater levels from the monitoring wells on a quarterly basis.

Additional monitoring stations installed at the subject property to address data gaps and support engineering decisions would be included in the on-going monitoring program. Monitoring is expected to occur for a minimum of 2 years. The following will be included in the hydrogeological investigation report:

- Two local scale geological cross-sections of the subject property;
- Hydrographs illustrating groundwater elevations for both manually collected groundwater elevations and groundwater elevations as collected by the pressure transducers;
- A groundwater table flow map to assess groundwater separation distances;
- Assessment of groundwater levels, flow direction, and chemistry;
- Assessment of potential impacts of the development on groundwater resources; and,
- Assessment of construction and permanent dewatering volumes (if required).

Additional monitoring may be required if any dewatering occurs during the development/construction phase of the project.

10. Conclusions – a brief summary will be provided that will include a list of all steps to completed as part of the mitigation, enhancement, and monitoring plan, including materials to be provided in the EIR.

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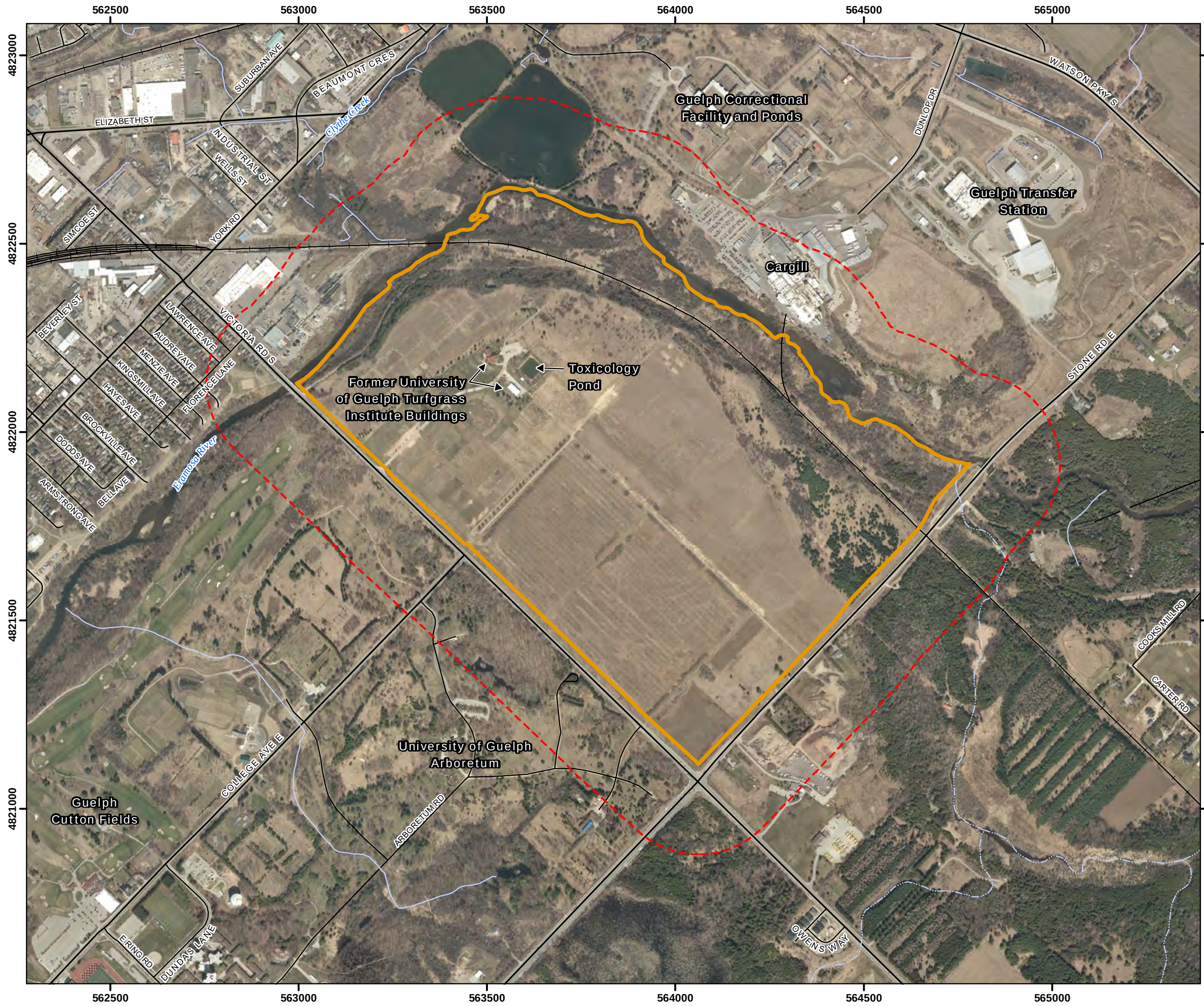
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MAPS



Map 1

Guelph Innovation District
(Blocks 1 and 2)

Study Area

An inset map showing the location of the study area (highlighted in red) within the Township of Guelph/Eramosa and Township of Puslinch. The map shows the Eramosa River and surrounding roads.

Legend

Study Area (120m)

Subject Property (GID Blocks 1 and 2)

Railway

Primary Road

Secondary Road

Permanent Watercourse

Intermittent Watercourse

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

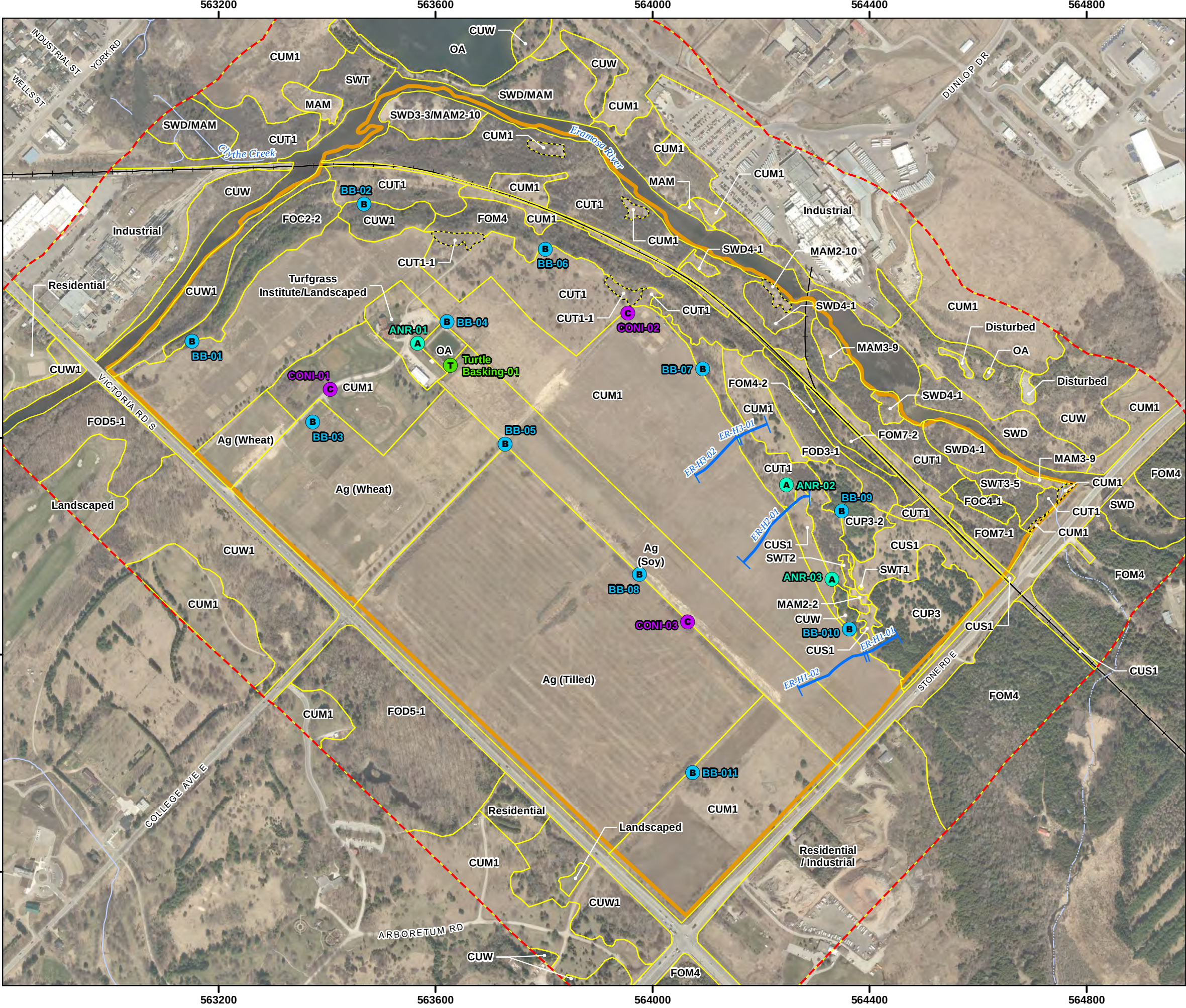
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Project: 2851
Date: December 12, 2022

NAD83 - UTM Zone 17
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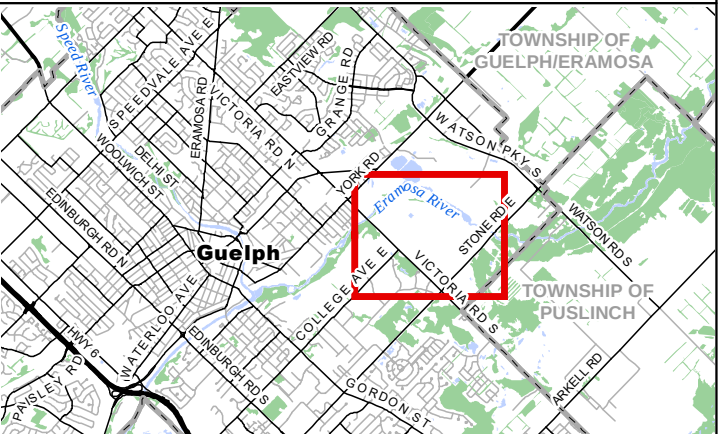
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Map 3

Guelph Innovation District (Blocks 1 and 2)

Monitoring Stations



- Legend**
- [Red dashed line] Study Area (240m)
 - [Orange outline] Subject Property (GID Blocks 1 and 2)
 - [Green circle with A] Anuran Call Station (ANR)
 - [Blue circle with B] Breeding Bird Survey (BB)
 - [Purple circle with C] Nocturnal Bird Monitoring Station (CONI)
 - [Green circle with T] Turtle Basking
 - [Black line] Railway
 - [Blue line] Permanent Watercourse
 - [Blue dashed line] Intermittent Watercourse
 - [Blue line with T] Headwater Feature
 - [Yellow outline] Ecological Land Classification (ELC)
 - [Dashed yellow outline] Inclusion
- NOTE: In addition to the point count locations shown here, general area searches for wildlife and plants was undertaken widely throughout the subject property up to the rail line, and additional field surveys for aquatic habitat were also completed along the edge of the Eramosa River.*

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Project: 2851 Date: December 13, 2022	NAD83 - UTM Zone 17 Size: 11x17" 1:7,000
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APPENDIX I

Species At Risk / Species of Conservation Concern Screening

Species at Risk/Species of Conservation Concern Screening

Scientific Name	Common Name	S-RANK ¹	SARO ¹	COSEWIC ²	SARA ²	SARA Schedule ²	Record Source	Habitat Requirements	Suitable Habitats within Subject Property	Rationale
Birds										
<i>Ammodramus savannarum</i>	Grasshopper Sparrow	S4B	SC	SC	SC	Schedule 1	OBBA (BSC et al. 2006)	Well-drained grassland or prairie with low cover of grasses, taller weeds or sandy soil; hayfields or weedy fallow fields; uplands with ground vegetation of various densities. Requires perches for singing and tracts of grassland generally >5ha. ^{3,4}	Yes	The open upland cultural meadow provide suitable habitat for this species and it was observed in these areas during breeding bird surveys.
<i>Chaetura pelagica</i>	Chimney Swift	S3B	THR	T	T	Schedule 1	OBBA (BSC et al. 2006)	Commonly found in urban areas near buildings; nests in chimneys, hollow trees, and crevices of rock cliffs. Feeds over open water. ^{3,4}	No	Suitable nesting habitat is not present within the subject property for this species.
<i>Contopus virens</i>	Eastern Wood-pewee	S4B	SC	SC	SC	Schedule 1	OBBA (BSC et al. 2006)	Mid-canopy layer of forest clearings and edges of deciduous and mixed forest. Abundant in intermediate-age mature forest stands with little understory vegetation. ^{3,4}	Yes	Suitable edge habitat is present within the deciduous woodlands on the subject property. This species was observed during breeding bird surveys.
<i>Dolichonyx oryzivorus</i>	Bobolink	S4B	THR	T	T	Schedule 1	OBBA (BSC et al. 2006; eBird 2022)	Large (>10 ha), open expansive grasslands, pastures, hayfields, meadows or fallow fields with dense ground cover. Occasionally nest in large (>50 ha) fields of winter wheat and rye in southwestern Ontario. ^{3,4}	Yes	Suitable large open cultural meadow areas are present within the subject property and this species was observed during field surveys.
<i>Hirundo rustica</i>	Barn Swallow	S4B	THR	SC	T	Schedule 1	OBBA (BSC et al. 2006; eBird 2022)	Farmlands, rural areas and other open or semi-open areas near body of water. Nests almost exclusively on human-made structures such as open barns, buildings, bridges and culverts. ^{3,4}	Candidate	The subject property contains open areas adjacent to the Eramosa River, which may provide suitable foraging habitat for this species. No nesting was observed, although this species was observed to be widely foraging through the subject property during surveys.
<i>Hylocichla mustelina</i>	Wood Thrush	S4B	SC	T	T	Schedule 1	OBBA (BSC et al. 2006)	Carolinian and Great Lakes-St. Lawrence forest zones. Undisturbed moist mature deciduous or mixed forest with deciduous sapling growth. Near pond or swamp. Must have some trees higher than 12 m. ^{3,4}	No	Deciduous woodlands are of insufficient size and composition to support this species.
<i>Ixobrychus exilis</i>	Least Bittern	S4B	THR	T	T	Schedule 1	OBBA (BSC et al. 2006)	Strongly prefers cattail marshes with a mix of open pools and channels. Also found in swamps and bogs and marshy borders of lakes, ponds, streams and ditches with dense emergent vegetation of cattail, bulrush and sedge. Nests in cattails. Intolerant of loss of habitat and human disturbance. ^{3,4}	No	Suitable wetland and aquatic habitat is not present on the subject property.

Scientific Name	Common Name	S-RANK ¹	SARO ¹	COSEWIC ²	SARA ²	SARA Schedule ²	Record Source	Habitat Requirements	Suitable Habitats within Subject Property	Rationale
<i>Melanerpes erythrocephalus</i>	Red-headed Woodpecker	S3	END	E	E	Schedule 1	OBBA (BSC et al. 2006)	Open, deciduous forest with little understory; fields, parks or pasture lands with scattered large trees; wooded swamps; orchards, small woodlots or forest edges; groves of dead or dying trees. Requires cavity trees with at least 40 cm dbh. ^{3,4}	Candidate	Open cultural fields, suitable cavity trees, and forest edge habitat are present in the subject property.
<i>Riparia riparia</i>	Bank Swallow	S4B	THR	T	T	Schedule 1	OBBA (BSC et al. 2006; eBird 2022)	Nests in burrows in natural and human-made settings with vertical faces in silt and sand deposits. Usually on banks of river and lakes, but also found in sand and gravel pits. ^{3,4}	Candidate	Cliffs found around the subject property may support this species.
<i>Sturnella magna</i>	Eastern Meadowlark	S4B, S3N	THR	T	T	Schedule 1	OBBA (BSC et al. 2006); eBird 2022	Open pastures, hayfields, grasslands or grassy meadows with elevated singing perches (small trees, shrubs or fence posts). Also weedy borders of croplands, roadsides, orchards, airports, shrubby overgrown fields or other open areas. Generally prefers larger tracts of habitat >10 ha, but will sometimes use smaller tracts. ^{3,4}	Yes	Suitable large open cultural meadow areas are present within the subject property and this species was observed during field surveys.
Herpetofauna										
Turtles										
<i>Chelydra serpentina</i>	Snapping Turtle	S4	SC	SC	SC	Schedule 1	Ontario Nature 2019; iNaturalist 2022; NDMNRF 2022)	Slow-flowing rivers and streams, lakes, and permanent or semi-permanent wetlands with soft substrates and vegetation. Key habitat requirements: open areas with structures for basking, open sand or gravel areas for nesting, shallow areas with soft substrates to bury in, soft banks or substrates for hibernation. ³	Candidate	The Eramosa River may provide suitable wintering habitat for this species. No nesting or wintering of this species was observed within the small wetlands or ponds internal to the subject property.
<i>Chrysemys picta marginata</i>	Midland Painted Turtle	S4		SC	SC	Schedule 1	Ontario Nature 2019; iNaturalist 2022; NDMNRF 2022)	Ponds, marshes, slow-moving streams and creeks with soft substrates, abundant basking opportunities (logs, stumps, hammocks, shorelines, rocks). Sandy or gravelly soils required for nesting.	Candidate	The pond on the subject property may provide marginal habitat for this species. The Eramosa River may have suitable emergent vegetation, substrates suitable for overwintering and nesting, and basking opportunities. This species was observed during turtle surveys but was not found to be nesting.
<i>Emydoidea blandingii</i>	Blanding's Turtle (Great Lakes / St. Lawrence population)	S3	THR	E	T	Schedule 1	Ontario Nature 2019	Eutrophic, shallow wetlands such as marshes, ponds, swamps, bogs, fens, or coastal wetlands, with soft, muddy substrates, abundant aquatic vegetation, and basking structures (logs, stumps, hummocks). Large overland movements occur between aquatic habitats and to open sandy or gravelly areas for nesting. Forest habitat is important for upland movements. Overwintering typically occurs in permanent wetlands. ⁵	No	Wetlands and watercourses are of insufficient composition to support this species.

Scientific Name	Common Name	S-RANK ¹	SARO ¹	COSEWIC ²	SARA ²	SARA Schedule ²	Record Source	Habitat Requirements	Suitable Habitats within Subject Property	Rationale
<i>Graptemys geographica</i>	Northern Map Turtle	S3	SC	SC	SC	Schedule 1	Ontario Nature 2019; iNaturalist 2022; NDMNRF 2022)	Large bodies of water such as rivers and lakes with soft bottoms, aquatic vegetation, abundant mollusc prey, and basking structures such as logs or rocks. Nesting occurs in open areas with soft substrates such as sand or gravel. Hibernate on the bottom of deep areas of lakes or deep, slow-moving sections of rivers. ³	No	Suitable aquatic habitat is not present on the subject property. This species is not known from the Eramosa River.
Snakes										
<i>Lampropeltis triangulum</i>	Milksnake	S4	NAR	SC	SC	Schedule 1	Ontario Nature 2019; NDMNRF 2022)	Farmlands, meadows, hardwood or aspen stands; pine forest with brushy or woody cover; river bottoms or bog woods; hides under logs, stones, or boards or in outbuildings; often uses communal nest sites.	Candidate	The subject property contains suitable open upland and forest edge habitat favoured by this species.
<i>Thamnophis sauritus septentrionalis</i>	Northern Ribbonsnake	S4	SC	SC	SC	Schedule 1	Ontario Nature 2019	Sunny grassy areas with low dense vegetation near bodies of shallow permanent quiet water; wet meadows, marshes, borders of ponds, lakes or streams. ³	Candidate	Suitable habitat is present within the subject property at grassy areas near wetlands.
Frogs and Toads										
<i>Pseudacris triseriata</i> pop.1	Western Chorus Frog (Great Lakes - St. Lawrence Canadian Shield population)	S4	NAR	T	T	Schedule 1	Ontario Nature 2019; NDMNRF 2022)	Moist forest, prairie, meadows, cultural meadows, or marshes. Breeds in shallow, temporary, fishless wetlands, including flooded ditches, marshes, flooded fields, pastures, temporary ponds, pools, and swamps. Hibernates in terrestrial habitats under rocks, logs, leaf litter, loose soil, or in animal burrows. ⁹	No	This species was not observed during anuran call surveys and suitable habitat is not generally present for this species.
Mammals										
<i>Microtus pinetorum</i>	Woodland Vole	S3?	SC	SC	SC	Schedule 1	Dobbyn 1994	Mature deciduous forest in the Carolinian region where there is a deep litter layer that allows it to burrow. ^{3,4}	No	Suitable mature forest habitat is not present within the study area.
<i>Myotis leibii</i>	Eastern Small-footed Myotis	S2S3	END				Dobbyn 1994	Roosts in caves, mine shafts, crevices or buildings that are in or near woodland. Hibernates in cold dry caves or mines. Maternity colonies in caves or buildings. Hunts in forests. ^{3,4}	Yes	The treed features within the subject property may act as suitable foraging habitat for this species.
<i>Myotis lucifungus</i>	Little Brown Myotis	S3	END	E	E	Schedule 1	Dobbyn 1994	Uses caves, quarries, tunnels, hollow trees or buildings for roosting. Winters in humid caves. Maternity sites in dark warm areas such as attics and barns. Feeds primarily in wetlands and forest edges. ^{3,4}	Yes	Suitable treed habitat for foraging is present within the subject property, and potential bat cavity trees have been identified.
<i>Myotis septentrionalis</i>	Northern Myotis	S3	END	E	E	Schedule 1	Dobbyn 1994	Roosts in houses and man-made structures but prefers hollow trees or under loose bark. Hibernates in mines or caves. Hunts within forest, below the canopy. ^{3,4}	Yes	Suitable treed habitat for foraging is present within the subject property, and potential bat cavity trees have been identified.
<i>Perimyotis subflavus</i>	Tri-colored Bat	S3?	END	E	E	Schedule 1	Dobbyn 1994	Roosts and maternity colonies in older forests and occasionally in barns or other structures. Forage over water and along streams in the forest. Hibernate in caves. ^{3,4}	Yes	Suitable treed and aquatic habitat for foraging is present within the subject property, and potential bat cavity trees have been identified.

Scientific Name	Common Name	S-RANK ¹	SARO ¹	COSEWIC ²	SARA ²	SARA Schedule ²	Record Source	Habitat Requirements	Suitable Habitats within Subject Property	Rationale
<i>Taxidea taxus jacksoni</i>	American Badger (Southwestern Ontario population)	S2	END	E	E	Schedule 1	Dobbyn 1994	Open grasslands, oak savannahs, sand barrens and farmland. ^{3,4}	No	Dens or other evidence of badger nesting were not observed during field surveys. This species would be considered very rare in this part of Ontario.
Butterflies										
<i>Asterocampa clyton</i>	Tawny Emperor	S2S3					Macnaughton et al. 2022	Forests and hedgerows with abundant Common Hackberry (<i>Celtis occidentalis</i>). ¹¹	Candidate	Treed areas within the subject property may contain the host plant.
<i>Danaus plexippus</i>	Monarch	S2N, S4B	SC	END	SC	Schedule 1	Macnaughton et al. 2022; inaturalist 2022)	Adults found in a diversity of habitats with a variety of wildflowers. Caterpillars are confined to meadows and open areas where milkweeds grow (larval food plants). ³	Yes	Milkweed is present throughout the subject property and this species was observed during field surveys.
<i>Pieris virginiensis</i>	West Virginia White	S3	SC				Macnaughton et al. 2022	Rich, moist, deciduous woods with populations of Two-leaved Toothwort (<i>Cardimine diphylla</i> ; larval food plant). ³	No	Suitable mature deciduous forest is not present on the subject property.
Odonates										
<i>Libellula semifasciata</i>	Painted Skimmer	S3					NDMNRF 2022	Shallow, vegetated ponds and pools. ²⁹	No	This species is a migrant in this part of Ontario and is not known to breed.
<i>Epiaeschna heros</i>	Swamp Darner	S3S4					NDMNRF2022	Swamps, wooded ponds. ²⁹	Yes	This species was observed during field surveys foraging within upland habitats. Suitable habitat for this species may occur within the wetlands near the Eramosa River.
Plants and Lichens										
<i>Gymnocladus dioicus</i>	Kentucky Coffee-tree	S2	THR	T	T	Schedule 1	NRSI 2022	Rich mesic and floodplain forests. ²³	No	A planted tree is present on the subject property but is not considered to be native.
<i>Juglans cinerea</i>	Butternut	S2?	END	E	E	Schedule 1	NRSI 2022	Stream banks and swamps, as well as upland beech-maple, oak-hickory, and mixed hardwood stands. ¹⁰	Yes	A single Butternut is present within the subject property.
<i>Ptelea trifoliata ssp. trifoliata</i>	Common Hop-tree	S3	SC	SC	SC	Schedule 1	NDMNRF 2022	Forested to open dunes, sandy fields and knolls, fencerows and dry bluffs or banks. Rarely in moister sites along rivers and edges of floodplain forests. ²³	Yes	Suitable habitat is present, however, this species has not been observed despite extensive vegetation inventories on the subject property.
<i>Psora dicipians</i>	Blushing Scale Lichen	S3					NDMNRF 2022	Dry upland areas, fully exposed to the sun.	Yes	Suitable habitat may be present for this species within the study area, although it was not observed during field surveys.

Scientific Name	Common Name	S-RANK ¹	SARO ¹	COSEWIC ²	SARA ²	SARA Schedule ²	Record Source	Habitat Requirements	Suitable Habitats within Subject Property	Rationale
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⁴ Ontario Ministry of Natural Resources (OMNR). 2000. Significant Wildlife Habitat Technical Guide. Appendix G: Wildlife Habitat Matrices and Habitat Descriptions for Rare Vascular Plants. October 2000.

⁵ Ministry of the Environment, Conservation and Parks. 2019. Recovery Strategy for the Blanding’s Turtle (*Emydoidea blandingii*) in Ontario. Ontario Recovery Strategy Series. Prepared by the Ministry of the Environment, Conservation and Parks, Peterborough, Ontario. iv + 6 pp. + Appendix.

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⁹ Seburn, D.C. 2010. Recovery strategy for the Common Five-lined Skink (*Plestiodon fasciatus*) – Carolinian and Southern Shield populations in Ontario. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources, Peterborough, Ontario. vi + 22 pp. <https://www.ontario.ca/page/common-five-lined-skink-recovery-strategy>

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¹¹ Kraus, T. 2011. Recovery Strategy for the Eastern Hog–nosed Snake (*Heterodon platirhinos*) in Ontario. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources, Peterborough, Ontario. i + 6 pp + Appendix vi + 24 pp. Adoption of the Recovery Strategy for the Eastern Hog–nosed Snake

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¹⁸ Hossie, Thomas, J. 2018. Recovery Strategy for Small-mouthed Salamander (*Ambystoma texanum*) and Unisexual *Ambystoma* Small-mouthed Salamander dependent population (*Ambystoma laterale* - *texanum*) in Ontario. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources and Forestry

¹⁹ Markle, T.M., A.R. Yagi and D.M. Green. 2013. Recovery Strategy for the Allegheny Mountain Dusky Salamander (*Desmognathus ochrophaeus*) and the Northern Dusky Salamander (*Desmognathus fuscus*) in Ontario. Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources and Forestry

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⁹ COSEWIC. 2008. COSEWIC Assessment and Update Status Report on the Western Chorus Frog *Pseudacris triseriata* Carolinian population and Great Lakes/St. Lawrence - Canadian Shield Population in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 47 pp.

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²⁷ Ministry of Natural Resources and Forestry. 2018a. Waterloo SAR List.

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²⁹ Paulson. 2011. Dragonflies and Damselflies of the East . Princeton Field Guides, New Jersey. 535pp.

APPENDIX II

Significant Wildlife Habitat Screening

Significant Wildlife Habitat Type	Presence Within Study Area	Presence Within Subject Property	Assessment Details
Seasonal Concentration Areas			
Waterfowl Stopover and Staging Areas (Terrestrial)	Not Present	Not Present	Spring sheet flooding is not known to occur within the subject property. Within the study area, meltwater and run-off are expected to drain into the Eramosa River.
Waterfowl Stopover and Staging Areas (Aquatic)	Candidate	Not Present	The subject property does not contain suitable aquatic features to support migrating waterfowl. The Eramosa River immediately adjacent to the subject property provides candidate SWH as it is a large body of water.
Shorebird Migratory Stopover Area	Not Present	Not Present	Shorebird stopover habitat is largely associated with large wetlands or the shoreline areas of the Great Lakes. The Eramosa River and associated wetlands are heavily vegetated and do not provide suitable mudflats, bars, or banks to support such concentrations of shorebirds.
Raptor Wintering Area	Not Present	Not Present	The woodlands in the study area are generally of insufficient size to be considered candidate SWH for wintering raptors. Winter wildlife surveys are to be conducted in 2022 and will document potential for winter raptor presence.
Bat Hibernacula	Not Present	Not Present	Caves, mine shafts, underground foundations, and karsts are not present in the subject property or study area.
Bat Maternity Colonies	Candidate	Candidate	The woodlands in the subject property may provide suitable bat maternity colony habitat. Snag counts are not to be undertaken in woodlands that are part of the NHS, and as such the woodlands will be assumed to be candidate SWH.
Turtle Wintering Area	Candidate	Not Present	The Eramosa River provides candidate Turtle Wintering Habitat, although none of the wetlands on the subject property were found to provide suitable habitat as they do not provide open water. The human constructed pond near the existing Agriscience building was also not found to be utilized by turtles and would not be considered SWH.
Reptile Hibernaculum	Possible	Candidate	Candidate snake hibernacula have been identified at two locations within the subject property. Surveys would be required to confirm significance.
Colonially - Nesting Bird Breeding Habitat (Bank and Cliff)	Not Present	Not Present	No suitable banks are present that would provide suitable breeding habitat for these species, including along the Eramosa River. The cliffs on the subject property within the woodlands are heavily treed and are also not suitable nesting locations.
Colonially - Nesting Bird Breeding Habitat (Tree/Shrubs)	Possible	Not Present	No large stick nests were identified within the subject property, although it is possible that some colonies are present within the study area along the Eramosa River.
Colonially - Nesting Bird Breeding Habitat (Ground)	Not Present	Not Present	Rocky islands and peninsulas are not present within the subject property or study area.
Migratory Butterfly Stopover Areas	Not Present	Not Present	The study area does not occur within 5km of Lake Ontario.
Landbird Migratory Stopover Areas	Not Present	Not Present	The study area does not occur within 5km of Lake Ontario.
Deer Yarding Areas	Not Present	Not Present	This habitat has not been identified to occur within the subject property or study area by the NDMNRF.
Deer Winter Congregation Areas	Not Present	Not Present	This habitat has not been identified to occur within the subject property or study area by the NDMNRF. Treed features within the study area are not greater than 100ha.
Rare Vegetation Communities			
Cliff and Talus Slopes	Confirmed	Confirmed	(CLT1-1) White Cedar Treed Carbonate Cliff Type has been documented to occur along the north and northeastern perimeters of the subject property.
Sand Barrens	Not Present	Not Present	The identified ELC communities do not occur within the study area.
Alvar	Not Present	Not Present	The identified ELC communities do not occur within the study area.
Old Growth Forest	Not Present	Not Present	The treed features within the subject property and study area are not of suitable maturity to be considered old growth forest.
Savannah	Not Present	Not Present	The identified ELC communities do not occur within the study area.
Tallgrass Prairie	Not Present	Not Present	The identified ELC communities do not occur within the study area.
Other Rare Vegetation Communities	Not Present	Not Present	No other provincially rare vegetation communities occur within the subject property or study area.
Specialized Wildlife Habitat			
Waterfowl Nesting Area	Candidate	Not Present	The Eramosa River and nearby ponds of the Correctional Facility and adjacent upland areas may provide suitable habitat for these species. The isolated wetlands away from the river do not provide suitable breeding habitat for these species (no open water).
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Possible	Not Present	Treed areas adjacent to the Eramosa River shoreline may provide nesting habitat for these species in the study area. No large stick nests or nesting platforms are present in the subject property based on field surveys.
Woodland Raptor Nesting Habitat	Not Present	Not Present	=Table 3 - Specialized Wildlife'1F11
Turtle Nesting Areas	Possible	Not Present	Nesting surveys were undertaken within the subject property and did not document turtle nesting. It is possible that turtle nesting occurs elsewhere in the study area near the Eramosa River and associated wetlands, but no specific candidate areas have been identified.
Seeps and Springs	Possible	Not Present	No seeps were identified during field surveys, although it is possible some are present more widely throughout the study area.
Amphibian Breeding Habitat (Woodland)	Not Present	Not Present	No SWH for amphibian breeding was found in the subject property based on anuran call surveys. The Eramosa River generally has significant flow and would not be considered suitable amphibian breeding.
Amphibian Breeding Habitat (Wetland)	Not Present	Not Present	Isolated wetlands are not present in the study area.
Woodland Area-Sensitive Bird Breeding Habitat	Not Present	Not Present	Woodlands of suitable size with sufficient interior habitat are not present in the subject property or study area.
Habitat for Species of Conservation Concern			
Marsh Bird Breeding Habitat	Not Present	Not Present	Suitable marsh breeding habitat of sufficient size and composition to support the indicator species is not present. Wetlands do not generally have open water and emergent vegetation that would support these species.
Open Country Bird Breeding Habitat	Not Present	Not Present	Open grassland habitat does not reach the 30ha size requirement for significance.
Shrub/Early Successional Bird Breeding Habitat	Candidate	Candidate	Potentially suitable shrub and thicket habitat is present within the study area and will be assessed through the EIS, including breeding bird surveys.
Terrestrial Crayfish	Possible	Not Present	No crayfish chimneys were identified despite extensive field surveys on the subject property. It is possible suitable habitat is present more widely throughout the study area.
Special Concern and Rare Wildlife Species	Confirmed	Confirmed	Habitat for a number of Species of Conservation Concern is present within the study area and the subject property.
Animal Movement Corridors			
Amphibian Movement Corridors	Not Present	Not Present	Only considered when SWH is confirmed for Amphibian Breeding (Wetland).
Deer Movement Corridors	Not Present	Not Present	Deer Wintering Habitat has not been identified to occur in the study area by the NDMNRF.
Exceptions			
EcoDistrict 6E-14 Mast Producing Areas	Not Present	Not Present	The subject property and study area are not in Ecodistrict 6E-14.
EcoDistrict 6E-17 Lek	Not Present	Not Present	The subject property and study area are not in Ecodistrict 6E-17.

APPENDIX D

TERMS OF REFERENCE

Cultural Heritage Evaluation Report (CHREER) and Archaeological Assessment Guelph Innovation District, Blocks 1 and 2

February 2024

CULTURAL HERITAGE RESOURCE EVALUATION REPORT

The following guidance for the completion of a Cultural Heritage Resource Evaluation Report for the Guelph Innovation District lands in the City of Guelph has been drafted based on the following guidance:

- A general Terms of Reference which was provided to MHBC City of Guelph Heritage Planning staff via email on August 17, 2022;
- The Guelph Innovation District Guidance for Preparation of Block Plans, Section 5.2 Cultural heritage Resource Evaluation and Methods of Conservation (City of Guelph, 2019); and
- The Ontario Heritage Toolkit (Heritage Property Evaluation, 2005).

Section 5.2 of the GID Guidance document identifies that Block Plan Areas 1, 3, and 4 require the submission of a CHREER to identify potential heritage resources located on-site and adjacent. The CHREER will provide a map identifying cultural heritage resources, and will use the City's existing database of known cultural heritage resources as a starting-point.

This includes the cultural heritage landscape attributes shown on Appendix A (GID Secondary Plan). The CHREER for Block Plan 4 will be prepared by City heritage planning staff. CHREER reports for Block Plan Area 1, 2 and 3 are required and are the responsibility of the respective landowner(s). Subsequent development applications will require the submission of a Cultural Heritage Resource Impact Assessment (CHRIA).

CHER Table of Contents:

- Executive Summary;
 - Providing a summary of the intent of the report, the proposed development, the identified cultural heritage resources, impact statements, and alternative development options and/or mitigation recommendations.
- Glossary;
 - Glossary of common terms referenced in the report.
- Table of Contents/List of Figures;
- Introduction/Project Overview;
 - Overview of the purpose of the report and an introduction to the subject lands;
 - Provide date(s) of site visit(s).
- Legislation and Policy Context;
 - Provide a summary of applicable policy framework, including (but not limited to) PPS 2020, the Planning Act, the Ontario Heritage Act, the City of Guelph Official Plan & relevant Secondary Plans.
- Approach to CHER Reports;
 - Provide an outline of the guidance for best practice, including this Terms of Reference as well as guidance provided by the Province of Ontario.
- Agency Consultation and Review;
 - Provide information related to any agency consultation/engagement or relevant stakeholders.
- Description of Property/Historical Summary;
 - Describe the heritage status of the subject lands and adjacent properties;
 - Provide a detailed description of the context of the site, as well as the subject property/properties which make-up the subject lands; and
 - Provide a description of the existing conditions of the site and its identified heritage features (supplemented with photographs).
- Historical Summary/Research;
 - Provide a general history of the immediate context of the site and land use history of the property with reference to primary and secondary sources, aerial photos, historic maps, etc.
- Identification of Cultural Heritage Resources and Evaluation of Cultural Heritage Value or Interest;
 - Identify cultural heritage resources located on-site and adjacent, and identify those features which are not of potential CHVI;
 - Evaluate properties as per Ontario Regulation 9/06 and/or Ontario Regulation 10/06:
 - Physical and Design Value;

- Historical and Associative Value;
 - Contextual Value;
 - List of Heritage Resources/Attributes.
- Provide an evaluation of the subject lands as a potential Cultural Heritage Landscape as defined by PPS 2020.
- Conclusions and Next Steps;
 - Provide a summary of findings and identification of cultural heritage resources (including identification of any resources of CHVI on a map, for reference).
- List of Resources Consulted/Bibliography;
- Appendices;
 - Map of the Subject Lands in reference to the Block Plan(s);
 - Map of existing (previously identified) Cultural Heritage Resources;
 - Map noting the location of both previously identified Cultural Heritage Resources as well as newly identified resources identified through the CHRER exercise; and
 - Project Personnel.

ARCHAEOLOGICAL ASSESSMENT

- A Stage 1 and Stage 2 Archaeological Assessment will be prepared to identify any areas of archaeological potential and archaeological resources; the assessments will provide recommendations for any conservation and/or preservation measures; and will be prepared in accordance with the Standards and Guidelines for Consultant Archaeologists, as amended, of the Ontario Heritage Act and its regulations.
- A copy of the Stage 1 and Stage 2 reports will be provided to the City for information. Any recommendations for additional analysis would be implemented through future conditions of approval.

APPENDIX E

TERMS OF REFERENCE

Engineering Master Servicing Plan Guelph Innovation District, Blocks 1 and 2

December 2023

Introduction

MTE Consultants Inc. (MTE) was retained by Fusion Homes to provide Engineering Services to support the development of the Guelph Innovation District (GID) Lands in Guelph. This Site is currently grassed / open-space, and is bounded by Stone Road East to the south, Victoria Road South to the west, and the Eramosa River to the north and east. A University of Guelph research building is located on-site. The GID Lands are part of a *Secondary Plan* (OPA 54), as identified in the *City of Guelph's Official Plan* (March 2018 Consolidation). The blocks owned by Fusion Homes and part of this development project are Block Plan Area 1 and 2, as shown on *Map Schedule D* (City of Guelph Official Plan, 2014) in Appendix A.

The objective of the *Engineering Master Servicing Plan* (MSP) will be to guide the development of GID Lands, with focus on the development of the lands that have been identified and designated for development (i.e., Fusion Homes owned lands in Blocks 1 and 2). The development goal for these Blocks is to establish a community with residential, mixed-use, commercial, and employment blocks, as well as park space and trails.

The MSP will inform the Block Plan process through:

- 1) review relevant background policies and documents to incorporate objectives and recommendations into the site servicing and grading design.
- 2) identify and assess the relevant environmental, servicing and engineering design considerations and recommendations for design of a preferred development plan.
- 3) provide a frame-work to be followed by subsequent submissions, including the Draft Plan of Subdivision Application and the Final Engineering Submissions.

The MSP is to be completed by the project team in coordination with the City of Guelph, Grand River Conservation Authority, Ministry of Environment, Conservation and Parks (MECP) and Ministry of Natural Resources if / as required. This Plan will follow the Municipal Class Environmental Assessment Planning process and may be an integrated approach.

MSP Terms of Reference

The following outlines the key components of the Guelph Innovation District Blocks 1 and 2 *Engineering Master Servicing Plan*.

1/ Background Review

This step will provide for the review of background documents, refinement of issues and problem statements and prioritization of goals and objectives for the MSP. The purpose

of this process is to define the project objectives considering all regulatory guidelines and to provide an initial description of the existing conditions (environmental, hydrogeological / geotechnical and regulatory) in the Study Area. Tasks as part of this process will include:

- Review of background documents and policies to understand site conditions, constraints and guiding policies. Reviewed topics include the following:
 - **Topographic Survey and Base Plan Review:** The on-site topographic survey data (to be completed by MTE), will be reviewed to determine drainage patterns, on-site environmental features and external servicing features.
 - **Geotechnical Review:** Review of a *Geotechnical Report* (to be completed by MTE) to understand site soil and groundwater conditions. The *Geotechnical Report* will summarize the completed field-work program, including borehole drilling and monitoring well installations. Recommendations from the *Geotechnical Report* will help to inform site civil design. Upon review, recommendations for further geotechnical work will be provided. The preliminary geotechnical work will also include a slope stability analysis, to provide a top of slope and regulatory buffer along the Site's north-east limit with the Eramosa River and to guide establishment of the Site's development limit.
 - **Hydrogeology Review:** Review of available site hydrogeological background information, including the following: topographic, physiographic and geological mapping, official plans and current aerial photos, watershed studies, drinking source water protection plans, MECP water well records, Permit to Take Water records, *Environmental Constraints Evaluation* or *Natural Heritage Assessments*. This review will provide understanding of on-site groundwater characteristics. Review of the completed hydrogeological field-work program will be summarized in a *Hydrogeological Assessment Report* (to be completed by MTE), such that groundwater elevation levels, groundwater quality, hydraulic conductivity and groundwater receptors are understood. This *Hydrogeological Assessment Report* will also provide characterization of regional topography, surficial geology, existing natural heritage features, site stratigraphy and recommendations for additional work, monitoring or groundwater mitigation efforts, as required.
 - **Natural Heritage Systems Review:** Review of available background environmental information, including environmental constraints. This review will provide understanding of on-site natural environmental features. Any recommendations for water balance, infiltration targets, or protection of surface water features, will be understood. Any recommendations for monitoring of the natural heritage systems, including surface and groundwater features will be identified. Preliminary work will also include survey of any on-site dripline and wetlands, to guide establishment of the Site's development limit.
 - **Civil Engineering Review:** Review of relevant documents to understand site servicing, grading and stormwater management requirements specific to the Site. This review will involve assessment of external infrastructure, including storm sewers along Victoria Road South and Stone Road to investigate site drainage outlet options. The *City of Guelph Engineering Design Manual* (City of Guelph, 2023) will be reviewed to understand

specific design criteria, including site servicing and stormwater management criteria. The *Guelph Innovation District, Water and Wastewater Study* (AMEC Environmental & Infrastructure, January 2015), *GID External Servicing Enabling Works* document and the *City of Guelph Water and Wastewater Master Plan* (2023) will be reviewed to identify municipal water and wastewater servicing objectives and constraints specific to the Site.

- **Hydraulic / Stormwater Management Review:** Review of relevant documents to establish design criteria for the GID Lands (Blocks 1 and 2) Stormwater Management (SWM) strategy. Documents to review include the *Grand River Conservation Authority (GRCA) Policies for the Administration of the Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation* (GRCA, 2008) to understand guiding criteria for floodplain enhancement and stormwater management design in the vicinity of the Site. Relevant watershed studies, including the *Eramosa-Blue Springs Watershed Interim Report Draft* (Beak International Incorporated and Aquafor Beech Limited, 1999) will be reviewed to understand relevant surface / groundwater information and policies specific to the Site, including surface water community characterization, identified subwatershed channel / erosion issues and any special area designation. Reviewed documents will include the *Guelph Stormwater Management Master Plan* (2023) to identify strategies and approaches to guide safe and effective management of stormwater runoff from urban areas within the City of Guelph. The 2023 *City of Guelph Stormwater Management Master Plan* will be reviewed. The *Guelph Innovation District, Stormwater Management Study* (Amec Foster Wheeler, September 2014) will also be reviewed to understand any established preliminary stormwater management strategy and /or guiding principles for the overall GID Lands (Blocks 1 and 2), as part of the Secondary Plan Area. The *GID Stormwater Management Study* (2020), will be reviewed to further refine all project stormwater management objectives and constraints. Overall, this Hydraulic and Stormwater Management review will provide understanding of surface water quality, water balance, chloride mitigation and erosion and sediment control objectives and monitoring program requirements for the Site's development.
- **Environmental Site Assessment Review:** Review of relevant Environmental Site Assessment reports, and the *Site Monitoring Well Inventory and Condition Assessment* (to be completed by MTE). This review will help to understand any risks to the Site from past / current site activities and activities from adjacent lands. Review will help to characterize the soil and groundwater quality of the GID Lands (Blocks 1 and 2). This process will help to identify any contaminated material on-site and will provide input to the future stage of the ESA Phase I and II.
- **Recommendations from Background Review:** Recommendation will be provided on the completion of pre-development monitoring to establish base-line conditions. Identification of data gaps and recommendations as to how detailed studies may be revised to address any gaps as part of future detailed submissions for a plan of subdivision.

- **Development of an *Existing Conditions Plans*:** The plans will show the findings of the review, including existing infrastructure and surrounding environmental features in the vicinity of the Site.
- **Completion of a *Stormwater Management Criteria and Preliminary Design Strategy Memo*:** The memo will utilize the information from the background review and existing conditions to characterize the surface water conditions on-site and establish objectives / constraints for subsequent stormwater management assessment and design.

2/ Detailed Study / Assessment for Development of Block Plans 1 and 2

The intent of the MSP is to commence detailed study, inventory and analysis addressing hydrology, surface water quality, flooding, erosion, site grading, servicing and stormwater management components of the proposed development. Through this process more detailed design considerations will be evaluated, and feasible design alternatives will be assessed. The topics to be evaluated and tasks to be undertaken include:

1. Functional Servicing Assessment

- Identification of potential municipal water servicing system locations on-site to optimize the development plan considering environmental features, existing infrastructure and feasible outlets. Confirmation of capacity of servicing system outlets.
- Completion of water demand, including fire flow, calculations based on the conceptual plan and City of Guelph design criteria.
- Completion of hydrant testing / pressure monitoring as required to support the design.
- Design of watermains to meet demand projections and mitigate surcharging. Confirmation that appropriate cover is provided to the preliminary site grades.
- Review of existing sanitary wastewater connection points, and ability of these systems to accommodate the development, including identification and recommendation for updates to downstream infrastructure, if required. Design and updates to sanitary sewer infrastructure downstream of GID Lands (Blocks 1 and 2) is outside this scope of work.
- Completion of sanitary flow calculations based on the conceptual plan and City of Guelph criteria.
- Design of sanitary sewers to meet demand projections and mitigate surcharging. Confirmation that appropriate cover is provided to the preliminary site grades. Establishment of sanitary sewer drainage areas and development of sanitary sewer design sheets.
- Review of existing and/or planned utility infrastructure surrounding the Site and identification of preliminary utility servicing requirements.
- Identification of servicing capacity constraints (sanitary or water) and servicing plans impacting development timing / phasing. May include a hydraulic grade line analysis of existing or proposed servicing systems, to be confirmed during consultation with the City.
- Consideration of the preliminary site servicing and stormwater management strategy in the grading design.
- Optimization of the servicing strategy with the overall site grading design and stormwater management strategy.

2. Stormwater Management Assessment

- Preliminary design of a stormwater management strategy to meet water quantity and quality control criteria. Meeting and discussions with the City and / or GRCA to understand and establish the criteria.
- Reference of previous reports and studies to establish the stormwater management strategy and ideal locations of stormwater management infrastructure.
- Consideration of different stormwater management alternatives to optimize the developable land and meet constraints. Identification of appropriate stormwater management features (including LID, lot level, conveyance and / or end of pipe systems) and potential locations based on the proposed conditions drainage plan and optimization of outlets.
- Identification of major flow conveyance locations and completion of site grading and / or swale design as necessary.
- Design of storm sewers to convey minor storm events and mitigate any surcharge. Identification of storm sewer drainage areas and development of storm sewer design sheet. Identification of a preferred alignment of storm sewers based on the conceptual plan. Confirmation that appropriate cover is provided to the preliminary site grades. Identification and recommendation for updates to downstream storm sewer infrastructure to accommodate the development. Design and updates to storm sewer infrastructure downstream of GID Lands (Blocks 1 and 2) is outside this scope of work.
- Preliminary design of stormwater management facilities, including establishment of stage/storage/discharge relationships, outlet control locations and capacity, forebay design, access routes and overland flow routes. Completion of length/width ratio calculations and volumetric sizing.
- Completion of a Site Water Balance assessment to confirm existing and proposed conditions hydrologic cycle values.
- If deemed desirable, preliminary design of low impact development (LIDs), with consideration of any water balance strategy and chloride mitigation. Any LID requirement will be confirmed with the City during consultation.
- Identification of erosion and sediment control measures to be implemented such that downstream receiving systems are protected and slope stability is maintained through the development process.
- Optimization of the stormwater management infrastructure design with the overall site grading design and servicing strategy.
- Identification of site water quality objectives based on review of background documents and consultation with the GRCA and City as necessary.
- Outline of surface water monitoring techniques and protocols to assess the surface water quality and mitigate adverse impacts to surface water quality through the development process.

3. Conceptual Grading Assessment

- Development of a conceptual grading design following City criteria with the aim of optimizing the development plan, including consideration of ideal transportation networks and park-space.
- Plan and profile drawings of all road geometrics.

- Identification of any proposed grading in vegetation protection zones, recognizing objectives to meet established buffers.
 - Optimization of cut/fill operations on-site.
 - Review of any slope stability analysis as part of potential grading work.
 - Consideration of the preliminary site servicing and stormwater management strategy in the grading design.
4. **Floodplain Hydraulic Assessment and Design.**
- Evaluation of floodplain water level to understand potential impacts (if any) to GID Lands (Blocks 1 and 2), if deemed necessary through consultation with the GRCA.
5. **Noise Impact (Road and Stationary) Assessment**
- Completion of a noise impact analysis to ensure that noise sensitive lands are located away from noise sources. The Feasibility Noise Study will follow the Guelph Noise Control Guidelines, and will include prior consultation with city staff, including a Feasibility Noise Study TOR.
 - Following the completion of a Feasibility Noise Study, sufficient information will be available to determine the acoustic environment of the proposed development. If the development is determined not to require noise control measures then a Detailed Noise Study may not be necessary, if noise control measures or additional design considerations are found to be necessary to meet Provincial or Municipal guidelines then a Detailed Noise Study will be required as a condition of planning approval.
6. **Phase I/One Environmental Site Assessment and Subsequent Studies**
- A *Phase I/One Environmental Site Assessment (ESA)* and subsequent study reports (i.e., *Phase II/Two ESA*, remediation/risk assessment report), if required, will be prepared for the Site in accordance with the City of Guelph's document *Guidelines for Development of Contaminated or Potentially Contaminated Site* (City of Guelph Engineering and Capital Infrastructure Services, 2016)
 - A *Phase One/Two ESA* will be completed for lands where the proposed future use is going from less sensitive (e.g., Community land-use) to more sensitive (e.g., Residential or Parkland use) and filing a Record of Site Condition (RSC) in accordance with Ontario Regulation 153/04 is required. A *Phase I/II ESA* will be completed per CSA Standards Z768-01/ Z769-00, respectively, for lands where the proposed future use will remain a similar sensitivity to the current use (e.g., Agricultural and Residential use) or will be less sensitive (i.e., Commercial use) and where an RSC is not required.
 - A *Phase I/One ESA* will be prepared to identify potential environmental contaminant risks to the Subject Lands from past/current activities within the Subject Lands and the Study Area. A *Phase II/Two ESA* will be conducted to assess soil and groundwater quality in areas of concern identified in the *Phase I/One ESA*. Remediation or Risk Assessment (RA) may be required in portions of the Subject Lands for the purposes of filing an RSC or for due diligence purposes.
 - Subsequent studies such as the *Phase II/Two ESA* and Risk Assessment, as well as environmental remediation works and/or filing one or more RSCs, would be completed in conjunction with the construction phase of the project.

7. High Level Construction Cost Estimate

- As the project evolves, cost estimates of different design scenarios will be completed to assist in concept assessment.
- The cost assessment of construction may help to guide subsequent Tendering processes.

3/ Final Report and Detailed Design Recommendations

- The MSP process will be a component of determining the preferred development and design strategy to meet the development objectives of the Block Plan. Preliminary site grading, site servicing design and stormwater management design will be completed through the MSP process.
- Final design recommendations will be made, to guide the subsequent Draft Plan of Subdivision submission process. Subsequent reports following the MSP may be developed and submitted in support of necessary *Official Plan Amendments*, *Plan of Subdivision* and any *Zoning By-Law Amendments*. It is expected the GID Lands (Blocks 1 and 2) will ultimately under-go a detailed design process.

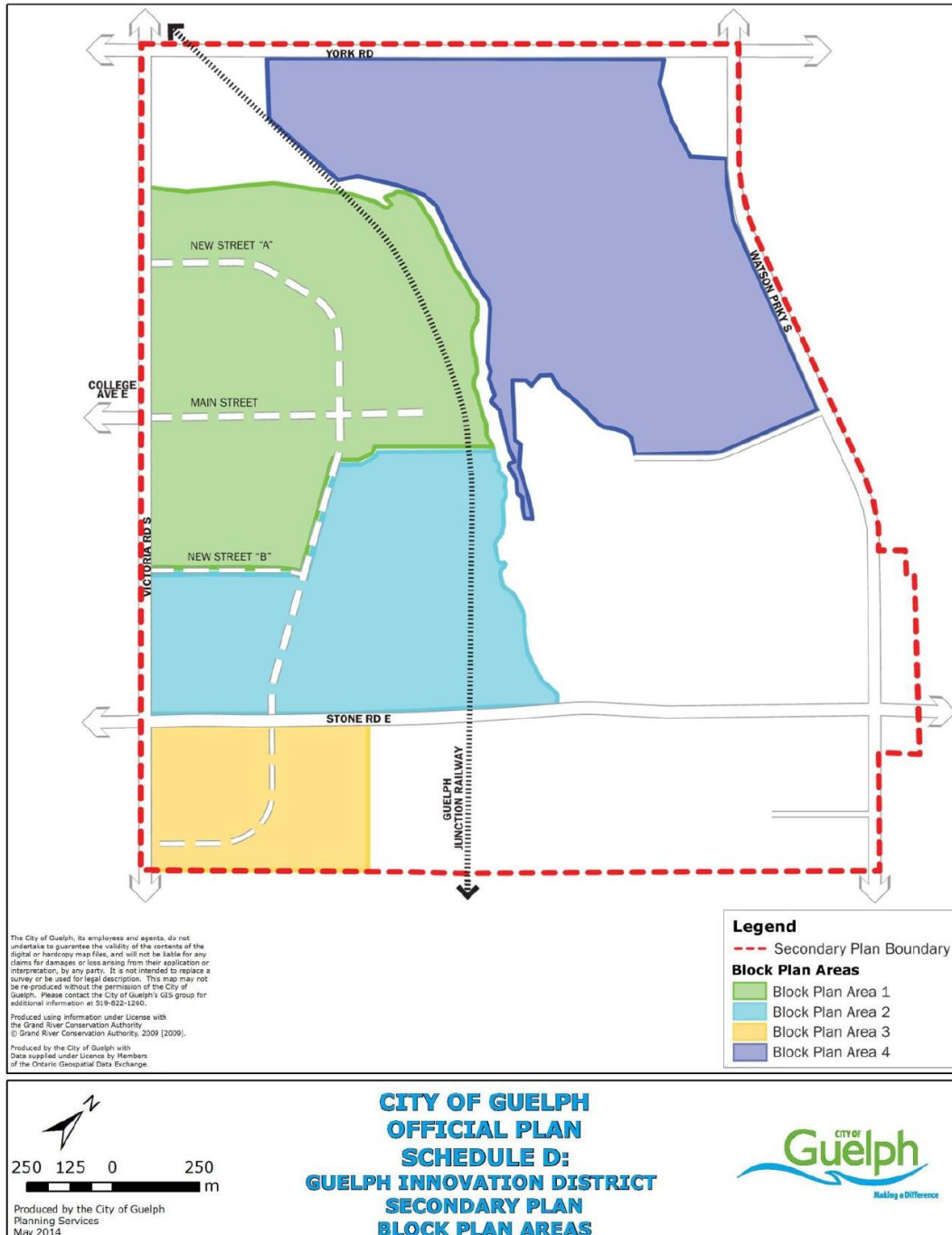
APPENDIX F

GID BLOCK PLAN AREA 1 AND 2 TOR – APPENDIX F

Terms of Reference

Introduction

GHD Limited has been retained to prepare a Transportation Impact Study (TIS) for the proposed Block Plan Areas 1 and 2 within the Guelph Innovation District (GID). The subject area is shown in figure below, and includes area bounded by Victoria Road South to the west, Stone Road to the south and Eramosa River to the northeast. In order to properly scope this project we have asked the City of Guelph to provide comments on the following work plan, and updated the following Terms of Reference (TOR) accordingly:



As recommended by the city, traffic assessment years (horizon years) of existing 2023, full build-out year of 2031, and five and ten year after the full build-out of 2036 and 2041 were chosen for the study.

The following will be addressed in the study:

- Establish existing and future operating conditions for the study intersections, including anticipated corridor growth, future development of Block Plan Areas 1 and 2 of GID and any other background developments
- Forecast trip generation and distribution of Block Plan Areas 1 and 2 and determine its impact to the study intersections and surrounding traffic
- Review the proposed road network within the Block Plans for conformance to the Guelph Innovation District Secondary Plan
- Prepare a Parking Study if the proposed number of parking spaces do not satisfy the relevant By-law requirements
- Prepare Transportation Demand Management (TDM) recommendations suggesting reduced parking standards and TDM measures for the Block Plans
- Review the active transportation network within the Block Plans for conformance/integration to the Transportation Master Plan, Cycling Master Plan, Guelph Active Transportation Network Study and Guelph Innovation District Secondary Plan

The following documents have been reviewed in preparation of this Terms of Reference and will be used for the TIS:

- City of Guelph Transportation Master Plan (January 2022)
- City of Guelph Cycling Master Plan (February 2012)
- City of Guelph Traffic Impact Study Guidelines (October 2023)
- Guelph Active Transportation Network Study (June 2017)
- Guelph Innovation District Secondary Plan (August 2017)
- Guelph Innovation District: Guidance for Preparation of Block Plans (2019)

Existing Conditions

The following existing study intersections have been identified:

- Victoria Road South at York Road
- Victoria Road South at College Avenue East
- Victoria Road South at Stone Road East
- Watson Parkway at York Road
- Watson Parkway at Dunlop Drive/Watson Road
- Watson Parkway at Stone Road

The current traffic movement counts for the study intersections have been ordered.

The following historical counts were also recommended to be acquired from the City:

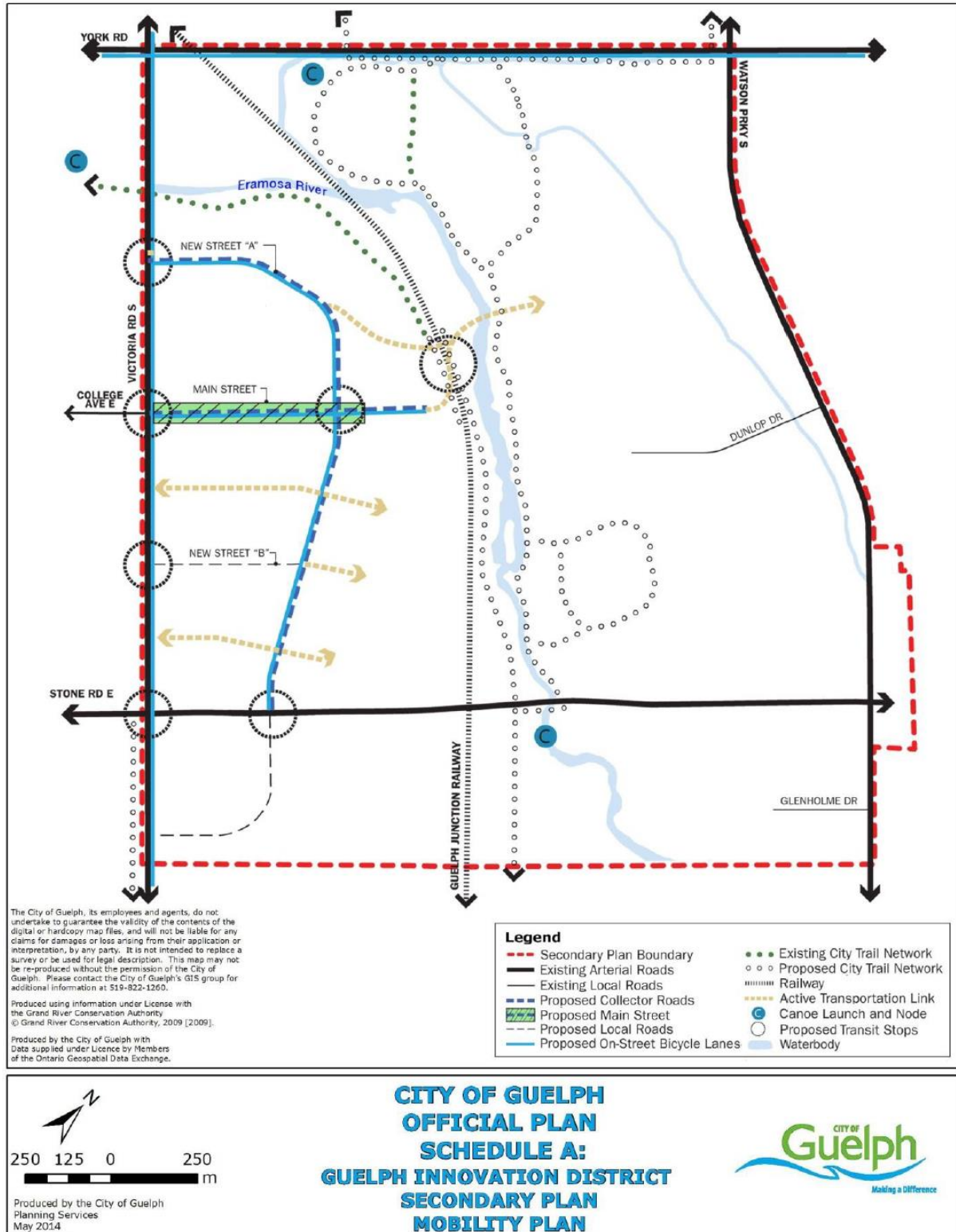
- Victoria Road South at York Road – May 2019
- Victoria Road South at College Avenue East – March 2019
- Victoria Road South at Stone Road East – November 2022
- Watson Parkway at York Road – November 2022
- Watson Parkway at Dunlop Drive/Watson Road – No counts available from the city
- Watson Parkway at Stone Road – November 2022

These historical counts will be compared to the Existing 2022 counts that were ordered and the set of counts with higher traffic volumes will be selected as the baseline.

In addition to the existing study intersections above, the following proposed intersections have also been identified based on the Mobility Plan for GID, taken from Schedule A of Guelph Innovation District Secondary Plan (August 2017):

The proposed study intersection identified in the mobility plan are as follows:

- Victoria Road South at New Street 'A'
- Victoria Road South at New Street 'B'
- New Street 'A' at Main Street
- New Street 'A' at Stone Road East
- New Street 'A' at Street 'B'



Existing traffic data will be undertaken for the existing study intersections for the weekday AM and PM peak hours. Existing signal timings for the existing study intersections will be obtained from the city.

The study will include transportation analysis of existing conditions using Trafficware's Synchro 11 software.

Future Background Conditions

The following roadway improvement is identified for the study area:

- York Road Reconstruction Phase 4 – 2024 to Summer 2026
 - Improvements include widening to add multi-use pathways from Victoria Road to the City's east limit.
 - No further roadway widening is currently planned.
 - The relevant information documents have been provided by the city.
 - Recently to December 2023, an exclusive northbound right-turn lane has been installed for the intersection of York Road at Victoria Road.
 - Any further intersection improvements will consider existing physical constraints, including railway crossings at the north and east approaches.
- Victoria Road Widening
 - Improvements include widening of Victoria Road to four lanes from Eramosa River to Stone Road, with intersection improvements for intersection of Victoria Road at York Road
 - The relevant information documents have been provided by the city.
 - Design to be completed in 2026, construction to start in 2029.
 - Assumed to be completed by the first horizon year of 2031.
- Stone Road Widening
 - Improvements include widening of Stone Road to four lanes from Victoria Road to Watson Parkway, with intersection improvements for intersection of Stone Road at Watson Parkway.
 - Assumed to be completed by the first horizon year of 2031.
 - The intersection of Stone Road at Watson Parkway will be analyzed as a signalized intersection from existing conditions to all future conditions, as requested by the city.
 - There is a potential for the intersection at Watson Parkway to be improved to a roundabout for the horizon year 2041, which will be considered as an alternative solution.

Future background traffic volume for the study intersections will consider corridor growth along existing roadway and any relevant future developments. The city has recommended a 2% annual growth for the study area.

The following potential background developments have been identified from the city:

- The rest of developments in Guelph Innovation District
- York Elizabeth Land Use Study
 - Estimated additional population of 150 and additional employment of 150.
- 115 Watson Parkway
 - 582 apartment units and 197 townhouse units.
- Guelph Operation Campus
 - Norwest corner of Stone Road at Watson Parkway.
 - Site generated employment and transit volumes provided by the city.
- 855 Victoria Road
 - TIS prepared by Paradigm dated June 2018
 - 333 apartment units and 108 townhouse units.

As requested from the city, all background developments will be considered to be built and fully occupied between 2036 and 2041, with the exception of the Guelph Innovation District Block 3.

Site Trip Generation

Trip Generation estimates will be prepared for the weekday AM and PM peak hours for the Block Plan Areas 1 and 2 using the Institute of Transportation Engineer's (ITE's) Trip Generation Manual, 11th edition.

Existing transportation modal split and any reduction in site trips will be clearly documented as per the Transportation Tomorrow Survey (TTS) 2016 data. The following City's transportation modal split goal from the TMP will be used as the future split:

- Walk – 10%
- Bike – 7%
- Transit Bus – 13%
- Auto – 70%

The distribution of traffic to and from the district will be based on review of TTS data, existing traffic patterns and consultations with the City. The site traffic will be assigned to the study area road network in accordance with our interpretation of this information. Trip distribution will be confirmed with the city prior to the completion of the analysis, as requested by the city.

Future Total Conditions

We will develop and analyze Future Background and Future Total traffic scenarios.

Impact of generated site traffic volumes on existing/future study intersections will be identified using Trafficware's Synchro software, in accordance with the TIS Guideline from the City – as well as review of expected performance of these study intersection under the Guideline's criteria.

The Block Plans for Area 1 and 2 and its road network will be reviewed with respect to criteria outlined in the City of Guelph Transportation Master Study, Schedule A of Guelph Innovation District Secondary Plan, Guelph Active Transportation Network Study and Geometric Design Guide for Canadian Road by Transportation Association of Canada.

Intersection Capacity Analysis

Intersection analyses for all study intersections will be conducted using Trafficware Synchro 11 software. The analyses will adhere to the criteria and assumptions within the City of Guelph Transportation Impact Study Guideline (October 2023).

Transportation Improvements

All recommended transportation improvements will be summarized including additional new roads and multimodal connections, physical intersection improvements, operational changes, signal timing changes, as well as identification of proposed changes to transit routes and/or stops through the study area.

The following transportation analyses for improvements will be completed:

- Traffic signal warrant for unsignalized intersections
- Intersection control recommendations for unsignalized intersections
- Turning lane warrants for all intersections
- Typical roadway cross-sections for streets within the GID, Victoria Road and Stone Road
- Identify appropriate cycling facilities for streets within GID, adhering to OTM Book 18, Mobility Plan of GID Secondary Plan and Cycling Spine Network identified in the TMP (2022).
- Sightline triangle analysis for intersections along Victoria Road and/or Stone Road, adjacent to Block Areas 1 and 2
 - Potential sightline obstructions due to vertical curvatures will be considered.

Parking and Transportation Demand Management

The City's planning staff will provide Terms of Reference if a parking study is required for a complete application (i.e. at the time of OPA/ZBA/Draft Plan submission).

Transportation Demand Management options will be recommended to support future transportation modal split and reduced parking standards that is consistent with the proposed active transportation network and connections to the City's existing/proposed network in accordance with the Guelph Active Transportation Network Study (June 2017) and the City of Guelph Transportation Master Plan (2022).

Future Focused Transportation Studies

It is noted that this Study represents the first of potentially several transportation studies to be completed in support the GID. The broad-based analyses conducted in the TIS will focus on operations at the proposed connections to the adjacent existing municipal streets. This study will combine the requirements for a Transportation Impact Study (TIS), Transportation Demand Management Strategy, and Transportation Operations Study, but also lays the ground work for future focused studies in support of the Draft Plan of Subdivision and individual Site Plan Applications in.

APPENDIX G

TERMS OF REFERENCE

Sustainability Strategy Guelph Innovation District, Blocks 1 and 2

November 2023

ELEMENTS OF THE SUSTAINABILITY STRATEGY

The following provides a general overview of the elements of the Sustainability Strategy:

1) BACKGROUND REVIEW

a) Site Context

The purpose of this section is to define the intent of the Sustainability Strategy and to provide an initial description of the existing conditions (physical, social and regulatory) of the Block Plan Area and surrounding lands. This information provides a context for the Block Plan and background for the anticipated targets and guidelines required for the areas sustainable development. The Sustainability Strategy is intended to address the requirements of the Carbon Neutral Energy Strategy, as identified in the secondary plan.

Tasks include:

- a. Review the Climate Change policies of the City of Guelph Official Plan.
- b. Review the City of Guelph Community Energy Plan and Community Energy Initiative Update.
- c. Review sustainable development best practices and case studies from the City of Guelph and other Ontario Cities.

b) Green Vision

This Section will describe the Vision and Principles of sustainable development for the block plan.

2) GREEN DEVELOPMENT STANDARDS (GDS)

a) GDS Themes

The GDS will utilize key themes to guide the development of the GID area to ensure that development is sustainable.

Themes include:

- a. Community Design
- b. Mobility

- c. Green Infrastructure
- d. Building Design
- e. Resource Conservation
- f. Waste Management

The City of Guelph Cultural Heritage Resource Impact Assessment Guidelines

Introduction

A *Cultural Heritage Resource Impact Assessment* is a process involving the investigation of possible impacts to known and potential cultural heritage resources caused by specific proposed development or site alteration. This assessment includes an inventory and evaluation of cultural heritage resources within a study area established by a Planning Application or a significant Building Permit Application. The term “cultural heritage resource” is defined in the City of Guelph *Official Plan* and includes buildings, structures, landscapes, monuments, or visible remains of same which meet the designation criteria adopted by Heritage Guelph, the City’s Municipal Heritage Committee – specifically *Ontario Regulation 9/06 – Criteria for Determining Cultural Heritage Value or Interest*.

A *Cultural Heritage Resource Impact Assessment* report outlines the significance of the identified resources and makes recommendations regarding mitigating measures that would minimize adverse or negative impacts to the cultural heritage resource. A *Cultural Heritage Resource Impact Assessment* is intended to establish an overall approach to the conservation of a heritage property and identify practical options in sufficient detail to inform decisions and directions for the development of a *Conservation Plan*. A *Conservation Plan* may be supplemental to a *Cultural Heritage Resource Impact Assessment* but it is typically a separate document.

All buildings, structures, landscapes, monuments or visible remains constructed prior to 1930 are considered to be built heritage resources until considered otherwise by Heritage Guelph. In compliance with the City of Guelph’s *Official Plan*, development or site alteration proposals which may affect a cultural heritage resource, listed or not listed on the City’s Municipal Register of Cultural Heritage Properties, are subject to the provision of *Cultural Heritage Resource Impact Assessment*.

* For archaeological assessments, fieldwork must be undertaken by licensed professional archaeologists in accordance with the Ontario Heritage Act and its regulations.

For further information or assistance in the preparation of a Cultural Heritage Resource Impact Assessment, please contact the Senior Heritage Planner, Community Design and Development Services, City Hall, 1 Carden Street, Guelph, Ontario, N1H 3A1, Telephone: (519) 837-5616, extension 2496, Fax: (519) 837-5640.

City Hall
1 Carden St
Guelph, ON
Canada
N1H 3A1

T 519-822-1260
TTY 519-826-9771

guelph.ca

Requirements

The authority to request a *Cultural Heritage Resource Impact Assessment* arises from the Ontario Heritage Act, Section 2(d) of the Planning Act, and Sections 3.5.12-3.5.14 of the City of Guelph Official Plan.

The requirement of a *Cultural Heritage Resource Impact Assessment* shall be triggered by a development or site alteration proposal which requires any of the following applications:

- Official Plan Amendment
- Zoning By-law Amendment
- Plan of Subdivision
- Site Plan Control
- Consent and/or Minor Variance Application

The requirement of a *Cultural Heritage Resource Impact Assessment* may also be triggered by a significant Building Permit Application including, but not limited to, a Demolition Permit.

The requirement of a *Cultural Heritage Resource Impact Assessment* may be triggered by the proposed development or site alteration of lands adjacent to a *protected heritage property*. According to the Provincial Policy Statement 2005, *protected heritage property* means real property designated under Parts IV, V, or VI of the Ontario Heritage Act; heritage conservation easement property under Parts II or IV of the Ontario Heritage Act; and property that is the subject of a covenant or agreement between the owner of the property and a conservation body or level of government, registered on title and executed with primary purpose of preserving, conserving and maintaining a cultural heritage feature or resource, or preventing its destruction, demolition or loss.

The proponent shall undertake to ascertain, from the City of Guelph's *Municipal Register of Cultural Heritage Properties*, the presence of cultural heritage resources on the subject property. Notwithstanding any lack of evidence contained in the *Municipal Register of Cultural Heritage Properties*, cultural heritage resources may exist on a given property. In such instances, the property owner and/or his representative will be notified by the City as early as possible in the development review or site alteration review process.

In the instance of a Plan of Subdivision or Site Plan Application, notice of the requirement for a *Cultural Heritage Resource Impact Assessment* shall typically be made at a pre-consultation meeting, to be followed by formal written notification.

Generally, written notification will identify the cultural heritage resource(s) of interest and the extent of lands on which the *Cultural Heritage Resource Impact Assessment* should be focused. In addition, a description of the requirements of the *Cultural Heritage Resource Impact Assessment*, specific to the subject property and applications, shall also be provided in the written notification.

Where the proponent can indicate to the satisfaction of the City that the proposed development or site alteration should not require a full heritage assessment, a *Scoped Cultural Heritage Resource Impact Assessment* may be provided. A *Scoped Cultural Heritage Resource Impact Assessment* is a reduced scope of study conducted prior to development or site alteration to investigate the potential impact of

development or site alteration on cultural heritage resources and it shall address items and requirements as agreed upon between the proponent and the City after prior consultation with Heritage Guelph.

Content

InfoSheet #5 of “Heritage Resources in the Land Use Planning Process” contained in the Ontario Ministry of Culture’s *Ontario Heritage Toolkit* describes the typical content of a *Heritage Impact Assessment* and a *Conservation Plan*. The minimum required components of a *Cultural Heritage Resource Impact Assessment* in the City of Guelph are as follows:

- Identification and evaluation* (with elaboration on the City’s Heritage Register where necessary) of the significance of all cultural heritage resources within the established study boundary including the completion of a detailed occupational and/or site biography.
- Documentation of the cultural heritage resources by way of photographs and/or measured drawings, and by mapping the context and setting of the cultural heritage resources identified.
- An outline of the context of the development or site alteration proposal as submitted, including identification of the potential impact the proposal would have on the cultural heritage resources identified.
- Identification of several **conservation options** (for conservation options refer to Attachment 2). Conservation options should be based on the determination of the significance of the cultural heritage resource(s) in the area, its/their importance to the community, and should take into consideration existing Federal, Provincial and Municipal policies and standards as appropriate. The ‘pros’ and ‘cons’ of each conservation option **in favour of preserving the integrity and value of the resource** and **integrating the cultural heritage resource into the proposed development** shall be clearly identified and a preferred option recommended. Examples of conservation options are discussed below.

A *Cultural Heritage Resource Impact Assessment* or *Conservation Plan* should include appropriate conservation principles presented in the following:

- Ontario Ministry of Culture’s *Eight Guiding Principles in the Conservation of Historic Properties* (1997)
- Parks Canada’s *Standards and Guidelines for the Conservation of Historic Places in Canada* (October 2004)

Cultural Heritage Resource Impact Assessments and *Scoped Cultural Heritage Resource Impact Assessments* shall be completed by individuals who are qualified to comment on the various issues to be addressed in the assessment. Some of the information to be included in the assessment may be available from the City’s Community Design and Development Services, the Senior Heritage Planner and Heritage Guelph. Aspects of the assessment may require the services of a member of the Canadian

* For evaluation criteria refer to Attachment 1.

Association of Heritage Professionals (CAHP).

Review Process

Five copies of the *Cultural Heritage Resource Impact Assessment* or *Scoped Cultural Heritage Resource Impact Assessment* shall be submitted to the Senior Heritage Planner at Community Design and Development Services. The report will be reviewed by City Staff and Heritage Guelph to determine whether the requirements of the assessment have been met and to evaluate the identified preferred conservation options. Recommendations shall be made by Heritage Guelph to City Council and should the owner/applicant disagree with the Heritage Guelph recommendation(s), the proponent may address City Council on the issue.

The recommendations of the approved *Cultural Heritage Resource Impact Assessment* or *Scoped Cultural Heritage Resource Impact Assessment* will serve to guide the further processing of the application respecting the cultural heritage resource. Where an assessment recommends the retention of all or part of the cultural heritage resource, consideration may also be given to formal designation the cultural heritage resource under the provisions of the *Ontario Heritage Act*.

For further information or assistance in the preparation of a Cultural Heritage Resource Impact Assessment, please contact the Senior Heritage Planner, Community Design and Development Services, City Hall, 1 Carden Street, Guelph, Ontario, N1H 3A1, Telephone: (519) 837-5616, extension 2496, Fax: (519) 837-5640.

Primary Evaluation Criteria

(Based on the Ontario Regulation 9/06 - *Criteria for Determining Cultural Heritage Value or Interest* made under the Ontario Heritage Act)

A property is considered to be of cultural heritage value or interest if it meets one or more of the following criteria:

1. The property has **design value or physical value** because it,
 - i. is a rare, unique, representative or early example of a style, type, expression, material or construction method,
 - ii. displays a high degree of craftsmanship or artistic merit, or
 - iii. demonstrates a high degree of technical or scientific achievement.
2. The property has **historical value or associative value** because it,
 - i. has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community,
 - ii. yields, or has the potential to yield, information that contributes to an understanding of a community or culture, or
 - iii. demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community.
3. The property has **contextual value** because it,
 - i. is important in defining, maintaining or supporting the character of an area,
 - ii. is physically, functionally, visually or historically linked to its surroundings, or
 - iii. is a landmark.

Conservation Options

Avoidance Mitigation	The avoidance mitigation process may allow development or site alteration to proceed while retaining cultural heritage resources and serving to preserve the resources intact. Avoidance strategies for cultural heritage resources typically would require provisions for maintaining the integrity of the cultural heritage resource, to ensure it does not become structurally unsound or otherwise compromised, and ensure that it is integrated with the proposed development or site alteration. Avoidance mitigation strategies for cultural heritage resources listed in order of preference include: • preservation/conservation - referring to the maintenance of the cultural heritage resource without altering it or its setting with whatever degree of restoration and/or rehabilitation work as may be required to properly preserve the resource; • adaptive re-use - used when a cultural heritage resource can be rehabilitated, often for a new function with possible restoration and with consideration being given to whether the new use of the cultural heritage resource renders its significance invalid; • alteration - an adaptive re-use strategy that typically requires significant alteration such as an addition that may be incorporated into the cultural heritage resource to provide more living space or accommodate a new function; or the built heritage resource may itself be incorporated into a much larger building, leaving all or part of the original exterior and interior. Where any of the above strategies are considered, development or site alteration occurring around the cultural heritage resource should be done in a fashion that creates a sympathetic context for the cultural heritage resource.
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Salvage Mitigation	Where it is not possible to retain the cultural heritage resource intact, other less preferable options may be considered such as salvage mitigation, recognizing however, that such options should be regarded as “last resorts”, acceptable only after all other options have been considered and demonstrated not to be viable. These include: • relocation - includes relocating a built heritage resource within or away from the development or site alteration to another setting with consideration being given to whether the new location of the resource renders its significance invalid; • “ruinification” - allows the exterior of a built heritage resource to stand as a monument; • symbolic conservation - includes recovering unique or important components of a cultural heritage resource and incorporating those components into the construction of new buildings, or copying distinctive elements of the lost resource into the subsequent development.
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For cultural heritage resources where impacts cannot be avoided or otherwise mitigated, demolition may be considered. A detailed explanation why the application of conservation options is not possible **must** be provided.

Supporting Documentation

- **Photographs** – archival and current.
- **Architectural drawings** – archival and current, and may include floor plans, elevations, details, etc.
- **Key Plan** – current.
- **Maps / Aerial Photos** – archival, where available.
- **Deeds and Title Searches** – land registry, municipal records, building department records.
- **Other** - newspaper articles, institutional records, mortgage papers, bills of sale, credible anecdotal information.

	Small Report (10 to 15 pages)	Intermediate Report (15 to 25 pages)	Comprehensive Report (25 to 40 pages)
Design or Physical Value			
Aesthetic Design	√	√	√
Functional Design			√
Craftmanship and Material		√	√
Designer	√	√	√
Historical or Associative Value			
Thematic		√	√
Person/Event			√
Local Development	√	√	√
Contextual Value			
Site	√	√	√
Setting		√	√
Landmark			√
Supporting Documentation			
Photographs	√	√	√
Architectural Drawings		√	√
Key Plan	√	√	√
Maps / Aerial Photos			√
Deeds / Title Searches	√	√	√
Other			√

Prepared by Guelph LACAC, June 1999.
Updated: September 2004
Updated November 2004 LH
Updated: January 2010

P:\Planning&DevelopmentServices\Planning\HERITAGE\GENERAL FILES\Heritage Resource\Cultural Heritage Resource Impact Assessment\CHRIA Guidelines - updated Jan 2010.docx

TERMS OF REFERENCE

Guelph Innovation District, Blocks 1 and 2

March 2024

OVERVIEW

The Guelph Innovation District (GID) is identified as a key new growth area in the City of Guelph Official Plan. The GID is made up of various Blocks that are intended to be planned comprehensively. Blocks 1 and 2 of the Guelph Innovation District (GID) are bound by Victoria Road South to the west, Stone Road East to the south, and the Eramosa River to the north and east. Blocks 1 and 2 have a combined area of approximately 131 hectares. **Appendix A** to these TOR illustrates the extent of the Block Plan 1 and 2 Area.

These Terms of Reference (“TOR”) have been prepared to establish the general direction and process associated with the completion of studies, submission of applications and planning approvals to facilitate development of the lands within the Study Area in support of housing and employment in the City of Guelph. In general, the Terms of Reference proposes a sequence of completion of studies and application process for that is guided by the City’s application process to address complete application requirements and in support of the City Housing Pledge and provincial timelines for approvals. Block Areas 1 and 2 are held for the majority under one (1) ownership (116 hectares) and there is a benefit to a comprehensive approach for study completion and the design of the physical form of development. The remaining area (15 hectares) of the lands are designated Significant Natural Areas and Natural Areas and are not proposed for development.

Applications necessary to establish approvals for new housing units include, Block Plan, Official Plan Amendment, Zoning By-law Amendment, Draft Plan of Subdivision and Site Plans. A coordinated approach to obtain approvals provides opportunity to efficiently process required approvals and most effectively address timing objectives and City resources. The Terms of Reference establishes a coordinated approach with concurrent applications and approvals where possible. The Block Plan will be endorsed in coordination with the Official Plan Amendment, Zoning By-law Amendment and Draft Plan of Subdivision, which will address Secondary Plan policy.

KEY PRINCIPLES OF THE PROCESS

The GID provides an opportunity for new housing units to support the City’s housing objectives. The Secondary Plan establishes general policies and land uses to support new housing and jobs in GID. Modifications to the policies may be required to implement the land use designations. A comprehensive, master plan approach for the community (Block Plan areas) is envisioned by the City and the landowner.

The Study Process will demonstrate conformity with the policies and schedules of the GID Secondary Plan and specifically address the following:

- a. Land Uses:
 - i. Residential - housing types and densities
 - ii. Parks and Recreation – location of parks and trails
 - iii. Employment uses – employment types and densities

- iv. Mixed-use – retail, services, housing, employment
- b. Infrastructure and Municipal Servicing Plan –Stormwater Management, Water and Wastewater Servicing
- c. Roads and Active Transportation links
- d. Public views and vistas

OVERVIEW OF PROCESS

The City has established guidelines for completion of a Block Plan and has a process for approval of planning applications. The process for GID integrates the Block Plan and planning applications for a coordinated and comprehensive approach.

The following provides a general overview of the process:



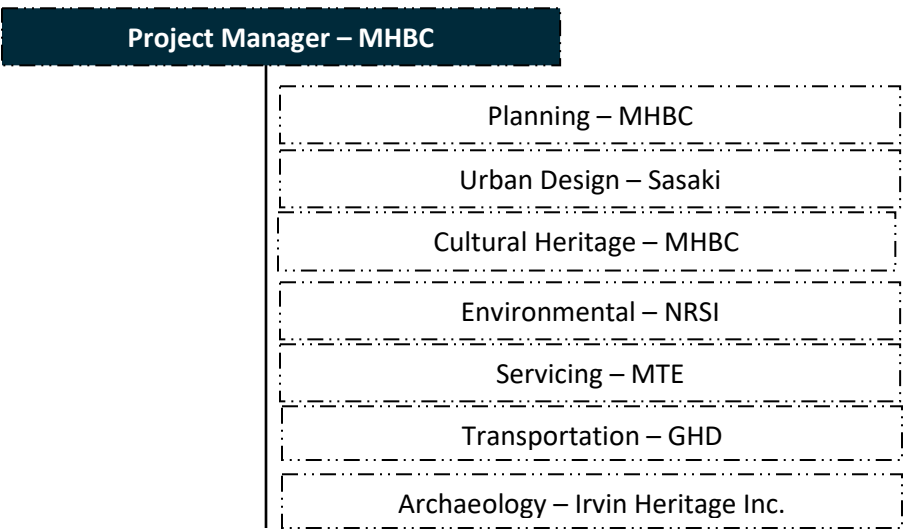
The Study Process is to be completed in coordination with the City of Guelph, GRCA and other external stakeholders, including the public. Public consultation is required and identified throughout the process.

A Study Process Flowchart will be developed for coordination with City staff on the general process established by the Terms of Reference.

Public consultation has occurred through the completion of the Secondary Plan and OPA 54. An initial Neighbourhood Meeting has been undertaken for Blocks 1 and 2. The public consultation process has been outlined in this TOR to occur in accordance with the requirements of the City of Guelph’s Community Engagement Framework and the Planning Act.

PROJECT TEAM

The Terms of Reference will be implemented by the landowner project team. The following project team includes qualified professionals that have been retained to lead the process on behalf of the landowners:



The Project Team has prepared this TOR for review and acceptance to establish and confirm the scope of work associated with the various studies, including identified field work associated with the TOR. Additional qualified professional consultants will be retained on an as-needed basis as specific needs/studies are identified.

The Project Manager for the landowner would liaise directly with the identified Project Leader for the City throughout the process. The Project Manager will manage the key deliverables and milestones.

A Technical Review Committee will be established to support an efficient review process and include key representatives from Planning, Engineering, Parks, Economic Development, and Natural Heritage from the landowner Project Team, City and GRCA.

BREAKDOWN OF STUDY PROCESS / STAGES – KEY ACTIONS AND DELIVERABLES

1/ Study Initiation and Pre-application

The intent of this stage is to establish the process and complete the Pre-application requirements. In this stage, a Concept/Block Plan will be submitted to provide a conceptual framework for the area and will provide the basis for consideration of future *Planning Act* applications in later stages. The following will be included in this stage:

- Submission of Terms of Reference and Work Plan Confirmation
 - There are Terms of Reference for specific studies and direction for completion of the studies is outlined in the Secondary Plan and associated guiding documents. Refer to Appendices C-H.
- Establishment of Technical Review Committee (TRC) and first TRC meeting to review Work Plan, Deliverables and Timelines
- Existing Conditions Summary and Vision Development
 - Existing Conditions Overview
 - i. Provide an initial description of the existing conditions (physical, social and regulatory) of the area and surrounding lands.
 - The overall Vision for the Block Plan will be established.
- The second TRC Meeting will include direction on the following:
 - Existing conditions
 - Consultation plan
 - Vision presentation

2/ Completion of Studies & Pre-Consultation

This stage will build on the information from the previous stage and develop the detailed information in support of the planning applications to facilitate the development. The following will occur in this stage:

- The technical studies and draft block plan will be prepared.
- The Block Plan will be developed as the basis for the planning applications for pre-consultation.
 - Concept / Block Plan with Planning and Architectural Design Control Urban Design Guidelines Overview
 - i. The Vision and Principles of development and the concept plan. The description will include mapping and design principles and detailed considerations (where applicable) associated with the natural heritage system, road pattern; active transportation network and links; layout of development blocks and types/densities of residential and employment uses; stormwater management facilities; parks / open space; location of cultural heritage resources; and public views and vistas.
 - ii. Parks identified within the Block Plan Area shall have a corresponding Facility Fit Plan to demonstrate how the required park amenities will be successfully accommodated in the proposed park blocks. The specific amenities to be provided through the parks (ie. cricket pitch, tennis courts, washroom and/or changeroom facilities, playgrounds, picnic shelters, open space, parking, and pathways) will be refined through the Block Plan process through consultation with Park and Trail development staff.
 - iii. This information will form the basis for the Planning Justification Report and Urban Design Guidelines at the time of submission with the detailed planning applications. Refer to Appendix B.
 - Environmental Impact Statement (EIS);

- iv. This assessment will be prepared to satisfy the City's Official Plan policies which relate to Natural Heritage Systems, as well as GRCA policy. An additional EIS may be required for Draft Plan of Subdivision approval. Refer to Appendix C.
- Cultural Heritage Resource Evaluation Report. Refer to Appendix D.
- Master Servicing Plan - Servicing and Stormwater management Assessment
 - v. The Master Servicing Plan will identify the servicing needs of the proposed development and will follow the Municipal Class Environmental Assessment planning process and the guidelines provided in section 5.3 of the GID Guidance for Preparation of Block Plans 2019 document. The Master Plan will inform the functional studies and preliminary plans at the time of submission with the detailed planning applications. Noise study requirements are addressed. Refer to Appendix E.
- Transportation Study
 - vi. To inform the design of the road and active transportation framework. The TIS will follow the guidance of section 5.4 of the GID Guidance for Preparation of Block Plans 2019 document. This will be updated with details the time of submission with the detailed planning applications. Refer to Appendix F.
- Sustainability Strategy Overview
 - vii. The sustainability objectives of the Guelph Innovation District will be identified to form the basis of the Sustainability Strategy. Refer to Appendix G.
- The Pre-Consultation Package will be submitted to the City
- Project Manager and City Project Lead will coordinate City and Agency Review
- The City will provide a complete package of comments on the submission
- A third TRC Meeting will address the Development Review Committee requirements
- The City Staff will provide endorsement of the Block Plan
- The second PIC meeting will be held
- City Council will provide endorsement of the Block Plan

3/ Pre-Submission

This stage will cover the completion of the requirements for determination of a complete application for the formal review process to begin once pre-approvals are granted and will include:

- Project Team will revise technical studies and Planning Instruments in accordance with city and agency comments.
- Project Team will submit the first pre-submission package with the updated required studies/reports to support the OPA, ZBA, Draft Plan of Subdivision
- Project Manager and City Project Lead will coordinate City and Agency Review
- The City will provide a complete package of comments on the Submission
- The fourth TRC meeting will be held to review City Comments and needed revisions to the submission materials
- Final Revisions will be made to the Technical Studies and Planning Instruments to reflect City Comments and TRC meeting discussions
- Project Team will submit the second pre-submission package with the updated required studies/reports to support the OPA, ZBA, Draft Plan of Subdivision

- Project Manager and City Project Lead will coordinate City and Agency Review of the second pre-submission package
- The fifth TRC meeting will be held to provide endorsement of the study package or to identify what revisions are required prior to endorsement.
- Additional submissions will be provided if required.

4/ Complete Application & Council Approval

- Project Team will submit the 'Complete' Application with technical studies and Block Plan, OPA, ZBA, and Draft Plan of Subdivision.
- The City will provide confirmation of a 'Complete' Application and issue the Notice of Complete Application
- The applications and studies will be circulated for City and Agency Review
- A Public Meeting will be coordinated to receive input
- A Public Meeting will be held to receive input
- The City will provide a complete package of comments on the submission
- Project Team will complete any modifications for final reports for approval
- A Notice of Completion of the studies will be provided to the public, which will include the notice of Council consideration
- City Staff will prepare the Recommendation Report to Council, as assisted by the Project Team, where required
- City Committee Meeting
- City Council Meeting

KEY STUDY ELEMENTS AND PLANNING POLICY CONSIDERATION

The Study Process will deliver studies, reports and plans to demonstrate the implementation of the Official Plan policies for the Guelph Innovation District (GID) Secondary Plan. The Official Plan included policies (Policies 11.2.7.3.1 through 11.2.7.3.11) to specifically implement the policies of the Guelph Innovation District Secondary Plan (OP Section 11.2) that will be addressed.

CONSULTATION PLAN

The goal of the Consultation Plan is to provide the public and stakeholders with information and opportunity to review and provide comment to the Block Plan. The intent is to receive feedback on the proposed Block Plan. The public consultation program will be documented with the information to be available for consideration by Committee and Council at the time of consideration of the Block Plan for adoption. The public consultation program will be led by Project Team, with the Project Manager as the key point of contact.

The Consultation Plan proposes to include the following:

- a. All adjacent land owners (within 120 metres of the boundary of the Block Plan area) will be sent a notice of the initiation of the Block Plan through standard mail service.
- b. Stakeholder Groups will be sent a notice of the initiation of the Block Plan through standard mail service. The stakeholder groups will be confirmed with City staff, but we expect the circulation will include groups associated with trails/hiking, public arts, environmental and housing.

- a. Anticipated stakeholder groups include the Guelph Hiking Trail Club, Rare, Habitat for Humanity, Guelph Coalition for Active Transportation, University of Guelph Arboretum and the University of Guelph.
- b. Stakeholder groups will provide a variety of perspectives on the proposed development for the GID lands and can identify opportunities for partnerships to expand the scope of uses on the GID lands.
- c. External agencies will be sent a notice of the submission of the initiation of the study through standard mail service or email. These agencies may include the following, but the list will be confirmed with City staff prior to providing notice:
 - a. Grand River Conservation Authority;
 - b. Ministry of the Environment, Conservation and Parks;
 - c. Ministry of Natural Resources and Forestry;
 - d. Township of Guelph Eramosa;
 - e. CP Rail;
 - f. Guelph Junction Railway;
 - g. Ministry of Transportation;
 - h. Upper Grand District School Board; and,
 - i. Wellington Catholic District School Board.
- d. Indigenous Groups consultation has been initiated and will continue throughout the process
- e. The public through notice on the City's website

The approach to public consultation will include:

- a. Notice of the initiation of the Block Plan will be posted on the City website on a project specific website associated with the GID Secondary Plan, and on the "current development applications" page if required by City Staff;
- b. Notice of the initiation of the Block Plan will be sent by standard mail to adjacent land owners and external agencies.
- c. Consultation will take place in a variety of ways, but could include the following:
 - a. Community information meetings (in person and/or virtual);
 - b. Online and print surveys;
 - c. Stakeholder sessions (in person and/or virtual).
- d. Information will be recorded through online tools including online survey platforms and written meeting minutes. All comments will be consolidated into a comment matrix.
- e. Information gathered through the consultation process will be applied in the development of the Block Plan by helping to inform the design of the Block Plan and Block Plan policy. Specific topics which are anticipated to be major focuses of the strategy may include:
 - a. Land use types and location;
 - b. Density and built form;
 - c. Carbon reduction strategies;
 - d. Approaches to alternative transportation; and,
 - e. Accessibility.

Any individuals who would like to receive project updates will be given the option to sign up to an email list to receive updates related to the project and webpage updates. The project webpage will be updated regularly as project updates occur and consultation events are scheduled.

The TRC will confirm the Consultation Strategy at the initial meeting.

MAPPING, STATISTICAL INFORMATION REQUIREMENTS AND SCHEDULES

Mapping and schedules in support of the planning applications will be prepared in accordance with City standards (scale of 1:3000). The following statistical information will be provided separately:

- a. Existing and proposed land use areas by designation type showing gross and net development area;
- b. Anticipated building GFA for non-residential uses;
- c. Anticipated employment;
- d. Anticipated parking spaces;
- e. Total number of residential units by type; and,
- f. Anticipated population.

DEVELOPMENT APPLICATIONS AND IMPLEMENTATION

The following planning applications will implement the objectives of the Secondary Plan:

- Official Plan Amendment (OPA) – An OPA will be submitted for any amendment to the Official Plan (which includes the GID Secondary Plan) will require justification that would be established through the process.
- Zoning By-law Amendment – this will establish the details of the land uses, including the permitted uses and regulations and will provide the direction necessary for detailed implementation of the land uses.
- Draft Plan of Subdivision – this will establish the lots/blocks for development, public roads and other blocks that may be conveyed to a public agency (i.e., SWM, open space, parks).

Further details of development for lots/blocks within the Draft Plan of Subdivision may be subject to Site Plan Control and Plan of Condominium application(s). The timing and type of development applications/ planning approvals required for development will be addressed through the study requirements, including:

- a. Any matters associated with the phasing of development; and,
- b. Scope of any further required studies or assessments that may be required for specific development approvals (i.e., site plan approval) or phases of development.

APPENDIX A



Appendix A

Guelph Innovation District Block Plan Area 1 and 2 Land Ownership

LEGEND

- Lands owned by Fusion Homes (± 116.596 ha)
- Additional Lands owned by Fusion Homes (± 14.735 ha)

--- Secondary Plan Boundary

Block Plan Areas

- Block Plan Area 1
- Block Plan Area 2
- Block Plan Area 3
- Block Plan Area 4

DATE: December 13, 2023

SCALE: 1:12,000

FILE: 1405G

DRAWN: JB



K:1405G - GID BLOCK 1 AND 2\IRPTGID LAND OWNERSHIP_OP SCHED D.DWG

APPENDIX B

TERMS OF REFERENCE

Planning and Urban Design Guidelines / Architectural Design Control Guelph Innovation District, Blocks 1 and 2

December 2023

ELEMENTS OF THE PLANNING AND URBAN DESIGN COMPONENTS

The following provides a general overview of the elements of the Planning and Urban Design components of the work plan:

1) BACKGROUND REVIEW

a) Site Context

The purpose of this section is to define the intent of the Block Plan and to provide an initial description of the existing conditions (physical, social and regulatory) of the Block Plan Area and surrounding lands. This information provides a context for the Block Plan and background for the anticipated targets and guidelines required for areas that may be suitable for development.

Tasks include:

- a. Review existing/available background information and documents.
- b. Review/summarize existing policies that are applicable to the Block Plan Area
- c. Prepare base plans (topographic mapping) and aerial photographs of the Study Area for use throughout the study. Current aerial photography available from the City and GRCA will be reviewed as well as topographic data from MTE Consultants Inc. Detailed topographical survey information may be used to establish critical key locations such as intersections, existing pipe or culvert inlets, watercourse elevations, etc.
- d. Provide an overview of the findings of the geotechnical investigation, slope stabilization and hydrogeological investigation.

b) Planning Context

The intent of this Section is to outline the planning context for development in the Block Plan Area including an overview of relevant Official Plan Policies, with emphasis on section 11.2 of the Official Plan which governs the Guelph Innovation District Secondary Plan area. The development's character will be defined and the Block Plan will be reviewed in contrast of the vision, goals and objectives of the GID Secondary Plan. Specifically, the proposed block plan will be assessed for consistency with the population, employment, residential density and employment density targets of section 11.2.7.3 and Table 2 of the City's Official Plan. Sections 11.2.6.3.2 – 11.2.6.3.7 will also be reviewed for land use policy permissions and requirements. Built form and site development will be assessed against section 11.2.6 of the Official Plan.

c) Description of Proposed Development and Concept

This Section will describe the Vision and Principles of development and the concept plan. The description will include mapping and design principles and detailed considerations (where applicable) associated with the natural heritage system, road pattern; active transportation network and links; layout of development blocks and types/densities of residential and employment uses; stormwater management facilities; parks / open space; location of cultural heritage resources; and public views and vistas.

2) DESCRIPTION OF PROPOSED DEVELOPMENT AND BLOCK PLAN

The Block Plan will include mapping, schedules and text showing the following:

- road pattern;
- active transportation network and links;
- layout of development blocks and stormwater management facilities;
- parks, open space and urban squares;
- trail network;
- residential density and affordable housing distribution;
- location of cultural heritage resources;
- natural heritage system; and,
- public views and vistas.

The Block Plan will describe the proposed development and identify how the policies of Section 11.2 of the Official Plan are being met.

3) ARCHITECTURAL CONTROL/ URBAN DESIGN GUIDELINES

Urban design principles will be developed for the initial plans associated with the concept plan. The Architectural Control Urban Design Guidelines will be developed for submission with the plan of subdivision to establish the areas design requirements for built form and streetscape. The guidelines will be developed based on the built form and carbon neutrality policies of section 11.2 of the Official Plan and the Urban Design policies of the Official Plan. The City's Urban Design Manual and Built Form Standards for Mid-Rise buildings and townhouses will also be reviewed to inform the guidelines. The guidelines will be prepared by a qualified professional, such as an Urban Designer or Architect.

4) OPEN SPACE SYSTEM: TRAILS AND PARKS PLANNING

The Block Plan will identify the location, size and configuration of parks and urban squares. The Official Plan Policies related to the Open Space System and the GID Secondary Plan will be reviewed and incorporated into the Block Plan design. Identification of trails, active transportation links, and stormwater management facilities will also be incorporated into the Block Plan and a park facility-fit plan will be submitted to demonstrate the appropriateness of the proposed park sizes and configuration. The Trail network will be developed in accordance with the City's Trail Master Plan and will include further refinement of the trail network beyond the information in the master plan, including identification of trail classification and space requirements for proposed trail segments. The trail network will incorporate wherever possible, connections to schools, community destinations and active transportation links, and be designed in accordance with the City's Facility Accessibility Design Manual (FADM). Details associated with parks and trail blocks

will be established and illustrated on the proposed plan of subdivision and will be designated and zoned accordingly through the planning applications.

APPENDIX C

December 13, 2023

Jason Elliott, Environmental Planner
Planning and Building Services
City of Guelph

Attention Jason Elliott:

**Re: Guelph Innovation District Lands (Blocks 1 & 2)
Environmental Impact Study - Terms of Reference (Revised)**

Natural Resource Solutions Inc. (NRSI) has been retained by Fusion Homes to prepare a Terms of Reference (TOR) for the completion of an Environmental Impact Study (EIS) for the Guelph Innovation District (GID) lands, in the City of Guelph (see Map 1). The proposed undertaking is for GID Blocks 1 and 2, although it is anticipated that these Blocks will be assessed and presented as a single unit within the EIS and supporting reports. After completion of detailed engineering and planning studies, the complete EIS report will be provided in support of the Block Plan/Draft Plan process(es).

The subject property contains Natural Heritage System (NHS) as per the Guelph Official Plan (2022) including Significant Valleyland, Cultural and Significant Woodland, wetlands, and Fish Habitat (associated with the Eramosa River). The Eramosa River forms the eastern boundary to the subject property, the floodplain of which is regulated by the Grand River Conservation Authority (GRCA).

The field surveys for 2022/2023 detailed within this TOR (most of which have already been completed) have been completed with the goal of characterizing existing natural features in order to determine significance and necessary buffers.

This TOR has been prepared in accordance with the *Guidelines for the Preparation of Environmental Impact Studies* (City of Guelph 2020) as well as the *Guelph Innovation District Guidance for Preparation of Block Plans* (2019). This TOR has also been updated based on comments on previous versions, by City of Guelph and GRCA staff, as well as following the Technical Review Committee (TRC) meeting with City staff on December 13, 2023.

Sincerely,
Natural Resource Solutions Inc.



Nathan Miller, M.Sc., P.Biol.
Senior Biologist

**Guelph Innovation District Lands (Blocks 1 & 2), City of Guelph
Environmental Impact Study - Terms of Reference
December 2023**

Introduction

The proposed Block Plan areas are approximately 115ha in size and are situated north of the intersection of Victoria Road South and Stone Road East, constituting Lots 10, 11, and 12, Division G, City of Guelph (henceforth referred to as 'the subject property').

The majority of the subject property is comprised of former agroforestry and turfgrass test plots utilized by the University of Guelph. Preliminary field surveys conducted by NRSI biologists identified cultural thickets, cultural meadows, small meadow marshes, cultural woodlands, and mixed forests on the subject property. Previous plantations and test plots of trees as part of the University of Guelph studies have since been removed. These trees (mostly hybrid poplars) have since begun to regenerate across the site, requiring ongoing maintenance and mowing to prevent re-establishment of these treed areas.

Surrounding lands include a naturalized area surrounding a stretch of the Eramosa River, found along the north and eastern edge of the subject property, associated with the City NHS. Unevaluated wetlands are found within the subject property. Southeast of Stone Road East, the Eramosa River Blue Spring Creek Wetland Complex and Torrence Creek Swamp occur. These aquatic features and floodplains are regulated by the Grand River Conservation Authority (GRCA). Other Valleylands, Cultural and Significant Woodland, and Fish Habitat (associated with the Eramosa River) are also present in these areas. An Environmental Impact Study (EIS) is required to ensure that no negative impacts will occur to the form and function of NHS components.

Characterization

Collection and Review of Background Information

Background information has been collected for the study area that includes the subject property as well as nearby contiguous natural features that may be influenced by the proposed development.

The following background information sources have already been reviewed in the preparation of the EIS:

- Grand River Conservation Authority (GRCA) mapping;
- Natural Heritage Information Centre (NHIC) database (Ontario Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNRF), 2022);
- Government of Canada SARA Registry (Government of Canada 2021);
- Ontario Breeding Bird Atlas (OBBA) (BSC et al. 2006);
- eBird database (2022);
- Ontario Reptile and Amphibian Atlas (ORAA) (Ontario Nature 2019);
- Ontario Odonata Atlas Database (OOAD; 2022);
- Atlas of the Mammals of Ontario (Dobbyn, 1994);
- iNaturalist database (2022); and
- Ontario Butterfly Atlas (Macnaughton et al., 2022).

Screening for Species at Risk/Significant Wildlife Habitat

A screening for potential Species at Risk (SAR) and Species of Conservation (SCC) that may be present on-site has been undertaken using available background information, in addition to field surveys already carried out on this property in 2019 and 2020. SAR with occurrence records in the vicinity were screened based on comparing their habitat preferences against habitat conditions reported from the subject property. Results of this preliminary screening are provided in Appendix I. In addition, a preliminary screening for potential Significant Wildlife Habitat (SWH) that may be present within the study area was also completed, and is provided in Appendix II.

The results of these screenings have been utilized to inform the proposed field program described below.

Field Surveys

Field surveys were undertaken within the subject property, predominantly within the area south and west of the active rail line although where needed, surveys were also carried out beyond this area to the edge of the Eramosa River (e.g. aquatic habitat assessments, ELC, winter wildlife, etc.). A study area of 240m surrounding the subject was established to assess potential impacts as a result of the proposed undertaking. In these areas, roadside or aerial imagery was used to assess ELC and potentially significant natural heritage features (Map 1).

A map showing specific survey locations has been attached to this report (Map 2). The majority of survey effort was focused on lands to the west of the existing rail line, and as such, a conservative approach to assessing habitats was undertaken to ensure that where targeted surveys were not undertaken, habitats are assumed to be present and addressed accordingly throughout the EIS. The following is a description of the surveys that have been conducted by NRSI in 2022/2023 based on identified background information:

Initial Site Visit and SAR/SWH Assessment

A site visit to the Block Plan areas was completed at the initiation of the project to assess baseline conditions within Blocks 1 and 2. Potential SAR and SCC habitats as well as candidate SWH were assessed to determine if additional surveys are required. Based on these field surveys, no additional surveys are deemed to be necessary to characterize the natural features within the study area, beyond what is proposed within this TOR. Where field surveys to confirm significance were not undertaken, a conservative approach to protection was taken and the habitat assumed to be present.

Bat Habitat Assessment

An inspection of trees and buildings within the subject property has been completed to determine the likelihood of suitable roosting habitat for bats. Cavity tree assessments and searching for leaf roosts have followed guidelines provided by the Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNRF) in the Survey Protocol for Species at Risk Bats in Treed Habitats (NDMNRF 2017). The bat habitat assessments were focused within the development portions of the Block Plan Areas where potential impacts to these species could occur. However, candidate bat habitat within the woodlands of the NHS will be considered in necessary buffer widths (i.e. Significant Woodlands). All suitable buildings were also assessed for bat habitat in order to determine the potential for use and necessary mitigation measures.

Ecological Land Classification and Three-season Vegetation Inventories

Vegetation communities have been delineated and mapped in accordance with the ELC system for southern Ontario (Lee et al. 1998). Vegetation communities were mapped within the 240m study area around the subject property, although in areas where access was not feasible, roadside or aerial imagery was used to provide coarse level ELC. Vegetation inventories were conducted in conjunction with the delineation of ELC communities, during the spring, summer and fall to ensure a comprehensive list of vascular plant species for the subject property is collected. The subject property was systematically searched for plant species and any rare species will be documented and georeferenced, as access allows. Any rare species or vegetation communities identified and their location(s) were recorded with a handheld GPS unit.

Woodland Dripline Delineation

The driplines of woodlands within the subject property were delineated and recorded using a sub-metre accuracy GPS unit. Site visits were undertaken with City of Guelph staff to confirm the woodland boundaries. The confirmed woodland boundary will be shown on future maps and will assist in informing development constraints.

Wetland Boundary Delineation

Wetland boundaries were delineated in accordance with the Ontario Wetland Evaluation System (OWES) for southern Ontario by OWES-certified NRSI biologists. The boundaries of wetlands within the subject property were flagged and confirmed in the field with the GRCA and City of Guelph staff. The confirmed wetland boundary will be shown on future maps and will assist in informing development constraints. All wetlands within the subject property will be evaluated as per the 4th edition of the OWES manual (2022). In the event that a wetland evaluation is deemed unnecessary, rationale will be provided within the EIS, and a conservative approach to protection provided.

Breeding Bird Surveys

NRSI biologists carried out two early morning breeding bird surveys at various locations within the Block Plan areas. Surveys included the entire subject property, with a focus on the areas south and west of the existing rail line, although point counts were stationed in areas where auditory and visual data could be collected for areas between the rail line and the Eramosa River. The survey methods primarily follow the Ontario Breeding Bird Atlas protocol (OBBA 2001), with modifications from the Forest Birds Monitoring Program (Cadman et al., 1998), to document all bird species and breeding evidence. The breeding bird surveys were completed a minimum of 10 days apart between May 24th and July 10th.

Anuran Call Surveys

Three anuran call surveys were completed at suitable wetland and pond locations within the study area. These surveys were completed in accordance with the Marsh Monitoring Program for Amphibians survey protocol (Bird Studies Canada (BSC), 2009) once in each of April, May and June.

Turtle Basking Surveys

Basking turtle surveys were completed on five separate visits between April and May. These surveys focused on suitable habitats for turtles within the subject property. Surveys were not completed on the Eramosa River as this is known to be turtle habitat.

Surveys were conducted in accordance with the MNRF Survey Protocol for Blanding's Turtle (MNRF 2015).

Turtle Nesting Surveys

Turtle nesting surveys were completed on five evenings between late-May and early-July (contingent on nesting phenology in a given year). Potentially suitable nesting locations were identified within the subject property based on a preliminary review of aerial imagery. These surveys were conducted in accordance with the Blanding's Turtle Nest and Nesting Survey Guidelines developed by the MNRF Guelph District (2016).

Snake Surveys

Visual encounter surveys for snakes were undertaken during all other field surveys when weather conditions permitted. Visual encounter surveys were conducted in high quality microhabitats or microhabitat features. Where high quality microhabitats are clustered, surveys were focused on wooded edges, within vegetation patches, near rock piles, dead stumps, or other notable microhabitat features.

A number of potential snake hibernaculae were identified during field surveys in 2022 and these features were surveyed for significance in the spring of 2023.

Insect Surveys

Three area searches were completed for insect species within the Block Plan areas during June, July and August. A particular focus will be placed on surveying for SCC species such as Monarch (*Danaus plexippus*), Yellow-banded Bumble Bee (*Bombus terricola*) and American Bumble Bee (*Bombus pensylvanicus*) that have been reported from the vicinity of the site.

Winter Wildlife and Raptors

Three targeted area searches have been conducted between December 2022 and March 2023 to identify the presence of wintering raptors and mammal movement within the Block Plan areas.

Headwater Drainage Feature Assessments

Headwater drainage features (HDFs) are known from the subject property based on NRSI's previous project experience in this area. Two HDF assessments were completed, one each in April and June. Based on the results of these surveys, it was deemed that an additional survey in August was unnecessary. Surveys were completed in accordance with the Evaluation, Classification and Management of Headwater Drainage Features Guidelines (Toronto and Region Conservation Authority (TRCA) & Credit Valley Conservation (CVC), 2014) and the Ontario Stream Assessment Protocol (OSAP) Headwater Sampling Protocol (Gorenc & Stanfield, 2017). Each HDF will be assessed to evaluate and classify its functional importance and to identify management recommendations. Fish habitat is not present in the HDFs on the subject property, and as such, electrofishing was not undertaken.

Aquatic Habitat Assessment

An aquatic habitat assessment was completed for the Eramosa River as well as any tributaries that occur within the subject property. The aquatic habitat assessment was completed during the summer and will be conducted in accordance with the Ontario Stream Assessment Protocol (Module S4.M11, Gorenc and Stanfield 2017).

Incidental Wildlife

In addition to the targeted surveys noted above, NRSI biologists will make note of all incidental wildlife observations during all site visits. Observations of lepidoptera, odonata, herpetofauna, bumblebees, mammals, and all other wildlife will be recorded while on-site. This includes direct observations, as well as signs such as dens, tracks, scats, etc.

Tree Inventory

All trees ≥ 10 cm Diameter at Breast Height (DBH) within and immediately adjacent to the conceptual development area will be tagged and assessed by a Certified Arborist/Registered Professional Forester. Information on DBH, crown radius, health, and potential for structural failure will be collected. Tree locations will be recorded with a GPS unit to sub-metre accuracy and plotted on a map and incorporated into a Tree Inventory and Preservation Plan (TIPP) report.

Reporting

Following the completion of detailed engineering plans in 2023, a formal EIS report will be prepared that will assess potential impacts and necessary mitigation measures in light of this information. This will include the integration of reports pertaining to slope stability, stormwater management, servicing, hydrogeology, grading, among others.

The EIS report will be prepared in support of the Block Plan and Draft Plan for this project, and depending on the level of detail provided for the EIS in support of the Block Plan, an additional EIS for the Draft Plan may not be required – this will be determined by the City following their review of Block Plan materials. In general, the materials included within the EIS will follow Section 4 of the *Guidelines for the Preparation of Environmental Impact Studies* (City of Guelph 2020):

1. **Introduction** – details on the subject property and surrounding lands (study area) will be provided in addition to information on the proposed undertaking including proposed trail layouts;
2. **Background Information and Project Scoping** – information collected during the background review process will be provided including all pertinent details related to significant species, habitats and features. Screening exercises for Significant Wildlife Habitat (SWH) and Species at Risk (SAR) will also be included as part of this report component.
3. **Characterization of Natural Features** - using data collected during the completion of field studies and the background information review, sensitive biological features within the Block Plan areas will be identified along with appropriate buffers. This characterization will include a description of natural features associated with the Significant Natural Areas and Natural Areas located along the Eramosa River within each of the Block Plan areas in addition to any other features that require consideration (e.g. surface or groundwater hydrological features, natural hazards, etc.). As part of the characterization process, NRSI will also assess wildlife habitat connectivity across the study area including for any linkages between significant habitats.
4. **Significance and Sensitivity Analysis** – an evaluation of significance for the natural heritage features identified on the subject property and broader study

area will be undertaken in the context of relevant natural heritage policies (municipal, provincial, federal). Mapping will be prepared that identifies these sensitive features and necessary buffers and/or enhancements.

5. **Impact Analysis and Mitigation/Enhancement Measures** - an assessment of impacts associated with the development of the Block Plan areas will be provided that describes recommendations for development as well as mitigation, enhancement and restoration measures to ensure no negative impacts occur to natural features and areas adjacent to the proposed development areas. The details of the proposed development, and construction/disturbance limits will be reviewed and compared to the existing natural features and identified habitats in the study area.

Management goals and recommendations provided in the Eramosa River Blue Springs Creek Watershed Study (Beak et al. 1999) will be integrated in the EIS where possible. NRSI will incorporate the findings of the project team reports including hydrogeological studies, geotechnical studies, stormwater management reports, and carbon sequestration assessments to ensure that all potential impacts are appropriately assessed and mitigated.

Anticipated impacts and associated mitigation measures will be discussed where there are any areas of conflict between significant features or ecological functions and the proposed development. The analysis of impacts will be divided into:

- a. **Direct impacts** associated with disruption or displacement caused by the actual proposed 'footprint' of the proposed development, direct impacts to vegetation, wildlife and/or their habitats. A TIPP report will be prepared as a stand-alone report that will also address direct impacts of tree removal. A summary of this report will be included in the EIS report.
- b. **Indirect impacts** associated with changes in site conditions such as alterations to groundwater in terms of quantity and quality. This will include an analysis of potential impacts of salt use; a salt management plan will be prepared as part of the EIS. In addition, a monthly water balance analysis will be provided for each feature (e.g. discreet wetlands or watercourses) in order to ensure no negative impacts as a result of changes to hydrology. Infiltration targets are to be provided as part of this analysis. An erosion and sediment control plan will be provided across the site that will ensure the prevention of sediment laden runoff to receivers. This section will also include potential disturbances to vegetation and wildlife arising from the proposed development such as noise, vibration, and dust. Recommendations for restoration and enhancement will include areas of surfacewater and fish habitat within riparian areas.
- c. **Induced impacts** associated with increased use of, or pressure on the natural heritage features will be assessed as well as necessary mitigation measures (education, signage, fencing, etc.).
- d. **Cumulative impacts** will also be assessed in terms of the overall pressure on the natural heritage features from incremental development within adjacent lands;

6. **Policy Analysis** – an analysis will be undertaken within the EIS to review the proposed proposal and how it conforms with GRCA, City, provincial, and federal policies.
7. **Trail and Active Transportation** – the EIS will provide a detailed analysis of proposed refinements to the trail network and any active transportation within the subject property. This will include an analysis and demonstration of the feasibility of accommodating an active transportation link across the Eramosa River between GID Blocks 1 and 4, as per Schedule A of the GID Secondary Plan. The assessment of the trail network will require an assessment of how this can be accomplished in accordance with City policies pertaining to the NHS. Where refinements require engineering input in terms of grading, tree removal, etc., this will be incorporated into the impact analysis of the EIS. A map will be provided that will detail the locations of trails and ad hoc trails on the subject property.
8. **Evaluation of Alternative Options** – where necessary, alternative options for certain aspects of the development will be explored in order to determine the best options for development and protection of natural heritage features.
9. **Recommendations & Monitoring** – recommendations will be made to avoid, minimize or mitigate any potential impacts on the significant natural features. A summary table will be provided at the end of the EIS report listing all recommendations that are to be integrated at future project stages. Measures for avoidance and mitigation of construction, and all identified impacts will be provided along with details of timing, duration, and location. Management objectives for the NHS and urban forest will be provided within the EIS and will include items such as plantable spaces, meadow habitat, pollinator habitat, invasive species removal and management, etc.

A detailed monitoring plan will be provided as part of the EIS depending on the types of natural heritage features identified during the characterization of the subject property. This will include information related to during and post-construction (mitigation effectiveness) monitoring. Details on objectives, methodology/timing, locations, monitoring parameters, analysis, thresholds, and contingency measures will be provided as part of this plan. The details provided in the EIS will form the basis for the monitoring program recommendations to be implemented at the Environmental Implementation Report (EIR) stage of development.

Groundwater monitoring will be conducted at the subject property to assess hydrogeological conditions; including, shallow groundwater flow direction, seasonal high groundwater levels, and groundwater and surface water interactions. A groundwater monitoring program has been initiated at the subject property by MTE and includes the following tasks:

- One-time development and single-well response testing of approx. 13 monitoring wells;
- Collection of one groundwater sample from select monitoring wells to obtain background general groundwater chemistry;
- Installation of dedicated pressure transducers (data loggers) to collect groundwater levels on a continuous basis in select monitoring; and,
- Collection of stabilized groundwater levels from the monitoring wells on a quarterly basis.

Additional monitoring stations installed at the subject property to address data gaps and support engineering decisions would be included in the on-going monitoring program. Monitoring is expected to occur for a minimum of 2 years. The following will be included in the hydrogeological investigation report:

- Two local scale geological cross-sections of the subject property;
- Hydrographs illustrating groundwater elevations for both manually collected groundwater elevations and groundwater elevations as collected by the pressure transducers;
- A groundwater table flow map to assess groundwater separation distances;
- Assessment of groundwater levels, flow direction, and chemistry;
- Assessment of potential impacts of the development on groundwater resources; and,
- Assessment of construction and permanent dewatering volumes (if required).

Additional monitoring may be required if any dewatering occurs during the development/construction phase of the project.

10. Conclusions – a brief summary will be provided that will include a list of all steps to completed as part of the mitigation, enhancement, and monitoring plan, including materials to be provided in the EIR.

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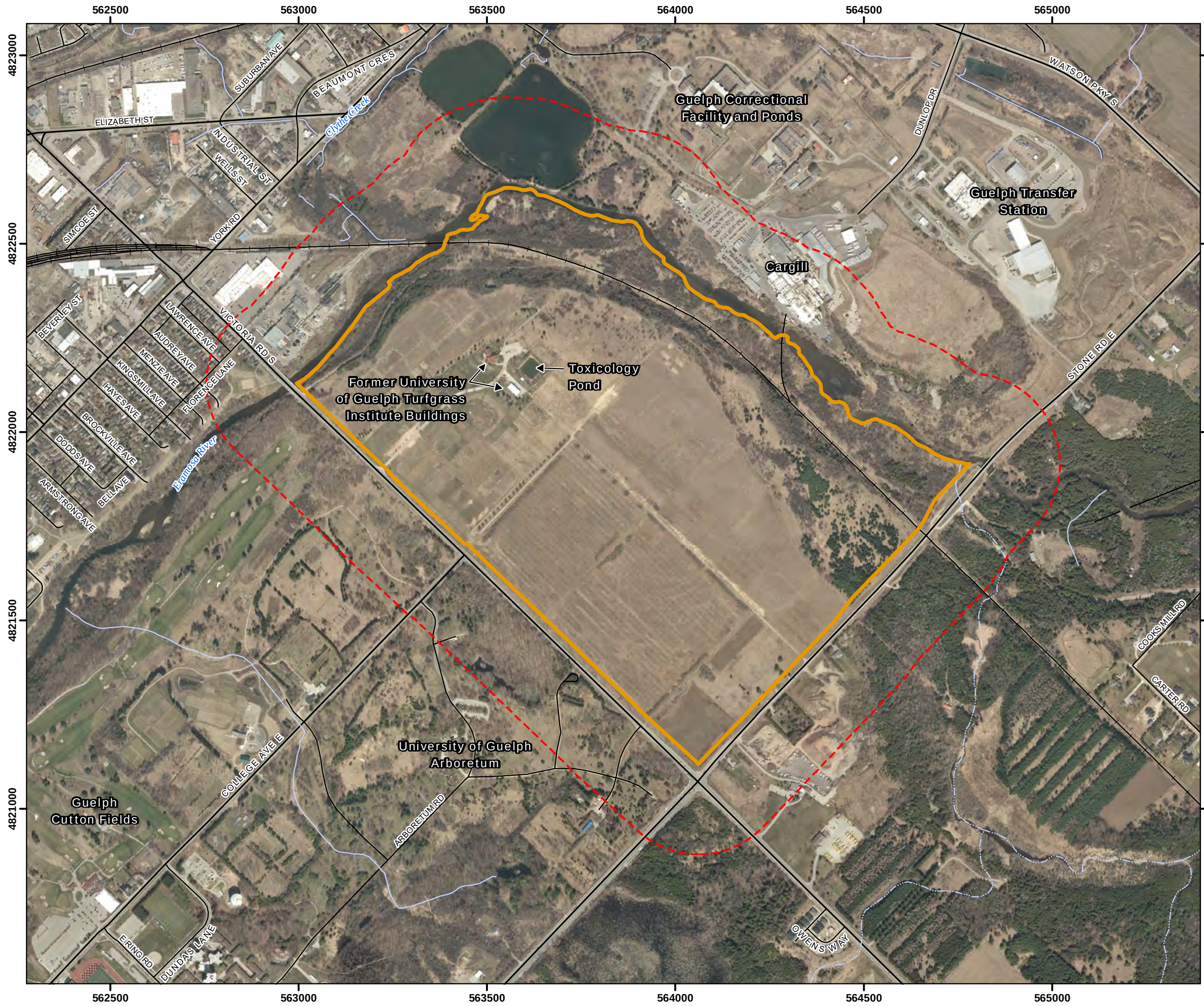
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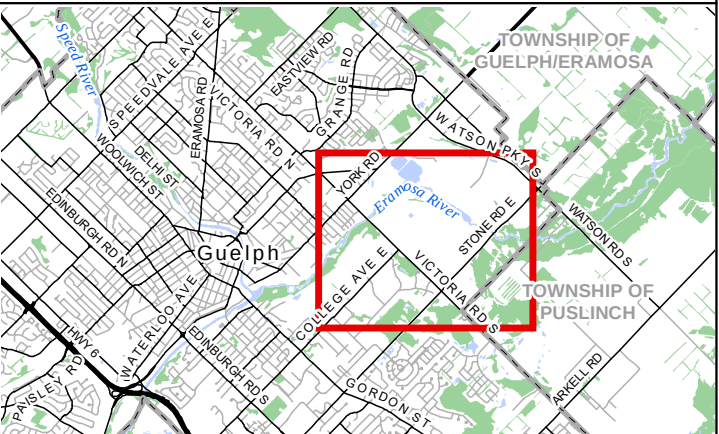
MAPS



Map 1

Guelph Innovation District (Blocks 1 and 2)

Study Area

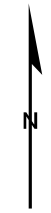
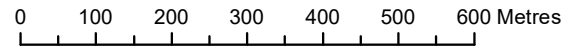


- Legend**
- Study Area (120m)
 - Subject Property (GID Blocks 1 and 2)
 - Railway
 - Primary Road
 - Secondary Road
 - Permanent Watercourse
 - Intermittent Watercourse

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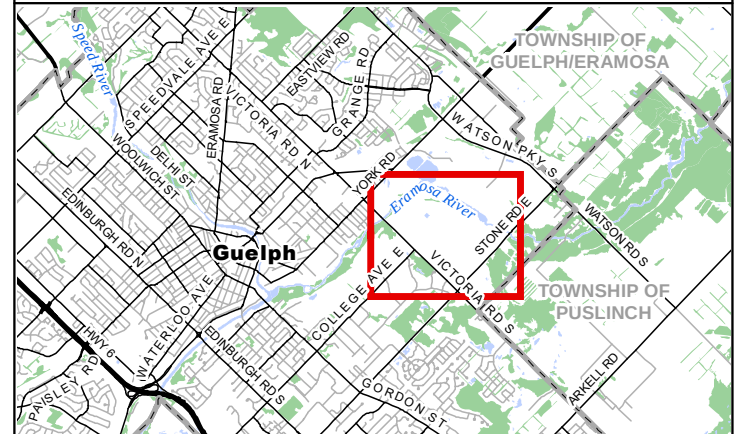
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Guelph Innovation District (Blocks 1 and 2)

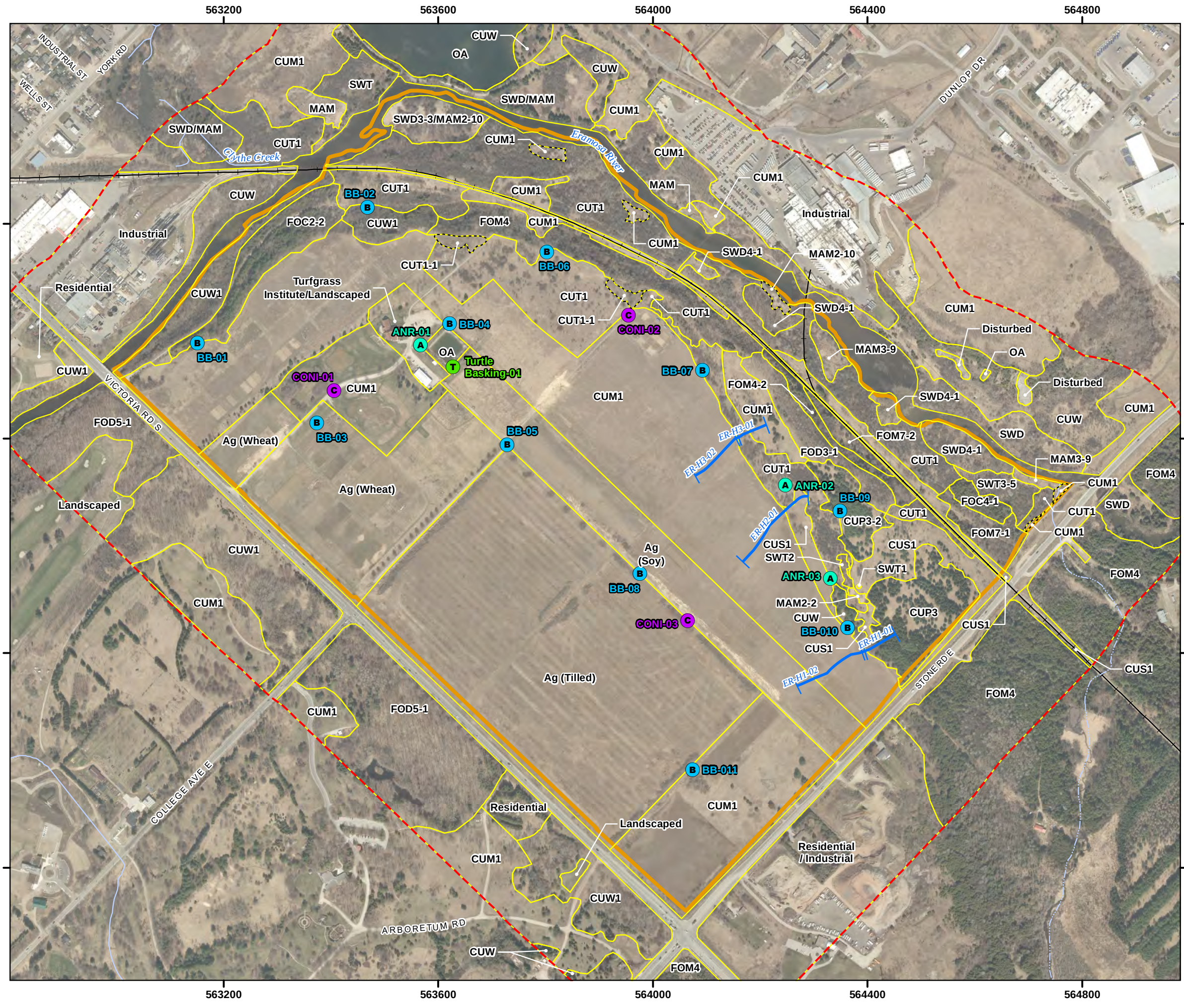
Monitoring Stations



- Legend**
- [Red dashed line] Study Area (240m)
 - [Orange outline] Subject Property (GID Blocks 1 and 2)
 - [Green circle with A] Anuran Call Station (ANR)
 - [Blue circle with B] Breeding Bird Survey (BB)
 - [Purple circle with C] Nocturnal Bird Monitoring Station (CONI)
 - [Green circle with T] Turtle Basking
 - [Black line] Railway
 - [Blue line] Permanent Watercourse
 - [Blue dashed line] Intermittent Watercourse
 - [Blue line with T] Headwater Feature
 - [Yellow outline] Ecological Land Classification (ELC)
 - [Dashed yellow outline] Inclusion
- NOTE: In addition to the point count locations shown here, general area searches for wildlife and plants was undertaken widely throughout the subject property up to the rail line, and additional field surveys for aquatic habitat were also completed along the edge of the Eramosa River.*

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APPENDIX I

Species At Risk / Species of Conservation Concern Screening

Species at Risk/Species of Conservation Concern Screening

Scientific Name	Common Name	S-RANK ¹	SARO ¹	COSEWIC ²	SARA ²	SARA Schedule ²	Record Source	Habitat Requirements	Suitable Habitats within Subject Property	Rationale
Birds										
<i>Ammodramus savannarum</i>	Grasshopper Sparrow	S4B	SC	SC	SC	Schedule 1	OBBA (BSC et al. 2006)	Well-drained grassland or prairie with low cover of grasses, taller weeds or sandy soil; hayfields or weedy fallow fields; uplands with ground vegetation of various densities. Requires perches for singing and tracts of grassland generally >5ha. ^{3,4}	Yes	The open upland cultural meadow provide suitable habitat for this species and it was observed in these areas during breeding bird surveys.
<i>Chaetura pelagica</i>	Chimney Swift	S3B	THR	T	T	Schedule 1	OBBA (BSC et al. 2006)	Commonly found in urban areas near buildings; nests in chimneys, hollow trees, and crevices of rock cliffs. Feeds over open water. ^{3,4}	No	Suitable nesting habitat is not present within the subject property for this species.
<i>Contopus virens</i>	Eastern Wood-pewee	S4B	SC	SC	SC	Schedule 1	OBBA (BSC et al. 2006)	Mid-canopy layer of forest clearings and edges of deciduous and mixed forest. Abundant in intermediate-age mature forest stands with little understory vegetation. ^{3,4}	Yes	Suitable edge habitat is present within the deciduous woodlands on the subject property. This species was observed during breeding bird surveys.
<i>Dolichonyx oryzivorus</i>	Bobolink	S4B	THR	T	T	Schedule 1	OBBA (BSC et al. 2006; eBird 2022)	Large (>10 ha), open expansive grasslands, pastures, hayfields, meadows or fallow fields with dense ground cover. Occasionally nest in large (>50 ha) fields of winter wheat and rye in southwestern Ontario. ^{3,4}	Yes	Suitable large open cultural meadow areas are present within the subject property and this species was observed during field surveys.
<i>Hirundo rustica</i>	Barn Swallow	S4B	THR	SC	T	Schedule 1	OBBA (BSC et al. 2006; eBird 2022)	Farmlands, rural areas and other open or semi-open areas near body of water. Nests almost exclusively on human-made structures such as open barns, buildings, bridges and culverts. ^{3,4}	Candidate	The subject property contains open areas adjacent to the Eramosa River, which may provide suitable foraging habitat for this species. No nesting was observed, although this species was observed to be widely foraging through the subject property during surveys.
<i>Hylocichla mustelina</i>	Wood Thrush	S4B	SC	T	T	Schedule 1	OBBA (BSC et al. 2006)	Carolinian and Great Lakes-St. Lawrence forest zones. Undisturbed moist mature deciduous or mixed forest with deciduous sapling growth. Near pond or swamp. Must have some trees higher than 12 m. ^{3,4}	No	Deciduous woodlands are of insufficient size and composition to support this species.
<i>Ixobrychus exilis</i>	Least Bittern	S4B	THR	T	T	Schedule 1	OBBA (BSC et al. 2006)	Strongly prefers cattail marshes with a mix of open pools and channels. Also found in swamps and bogs and marshy borders of lakes, ponds, streams and ditches with dense emergent vegetation of cattail, bulrush and sedge. Nests in cattails. Intolerant of loss of habitat and human disturbance. ^{3,4}	No	Suitable wetland and aquatic habitat is not present on the subject property.

Scientific Name	Common Name	S-RANK ¹	SARO ¹	COSEWIC ²	SARA ²	SARA Schedule ²	Record Source	Habitat Requirements	Suitable Habitats within Subject Property	Rationale
<i>Melanerpes erythrocephalus</i>	Red-headed Woodpecker	S3	END	E	E	Schedule 1	OBBA (BSC et al. 2006)	Open, deciduous forest with little understory; fields, parks or pasture lands with scattered large trees; wooded swamps; orchards, small woodlots or forest edges; groves of dead or dying trees. Requires cavity trees with at least 40 cm dbh. ^{3,4}	Candidate	Open cultural fields, suitable cavity trees, and forest edge habitat are present in the subject property.
<i>Riparia riparia</i>	Bank Swallow	S4B	THR	T	T	Schedule 1	OBBA (BSC et al. 2006; eBird 2022)	Nests in burrows in natural and human-made settings with vertical faces in silt and sand deposits. Usually on banks of river and lakes, but also found in sand and gravel pits. ^{3,4}	Candidate	Cliffs found around the subject property may support this species.
<i>Sturnella magna</i>	Eastern Meadowlark	S4B, S3N	THR	T	T	Schedule 1	OBBA (BSC et al. 2006); eBird 2022	Open pastures, hayfields, grasslands or grassy meadows with elevated singing perches (small trees, shrubs or fence posts). Also weedy borders of croplands, roadsides, orchards, airports, shrubby overgrown fields or other open areas. Generally prefers larger tracts of habitat >10 ha, but will sometimes use smaller tracts. ^{3,4}	Yes	Suitable large open cultural meadow areas are present within the subject property and this species was observed during field surveys.
Herpetofauna										
Turtles										
<i>Chelydra serpentina</i>	Snapping Turtle	S4	SC	SC	SC	Schedule 1	Ontario Nature 2019; iNaturalist 2022; NDMNRF 2022)	Slow-flowing rivers and streams, lakes, and permanent or semi-permanent wetlands with soft substrates and vegetation. Key habitat requirements: open areas with structures for basking, open sand or gravel areas for nesting, shallow areas with soft substrates to bury in, soft banks or substrates for hibernation. ³	Candidate	The Eramosa River may provide suitable wintering habitat for this species. No nesting or wintering of this species was observed within the small wetlands or ponds internal to the subject property.
<i>Chrysemys picta marginata</i>	Midland Painted Turtle	S4		SC	SC	Schedule 1	Ontario Nature 2019; iNaturalist 2022; NDMNRF 2022)	Ponds, marshes, slow-moving streams and creeks with soft substrates, abundant basking opportunities (logs, stumps, hammocks, shorelines, rocks). Sandy or gravelly soils required for nesting.	Candidate	The pond on the subject property may provide marginal habitat for this species. The Eramosa River may have suitable emergent vegetation, substrates suitable for overwintering and nesting, and basking opportunities. This species was observed during turtle surveys but was not found to be nesting.
<i>Emydoidea blandingii</i>	Blanding's Turtle (Great Lakes / St. Lawrence population)	S3	THR	E	T	Schedule 1	Ontario Nature 2019	Eutrophic, shallow wetlands such as marshes, ponds, swamps, bogs, fens, or coastal wetlands, with soft, muddy substrates, abundant aquatic vegetation, and basking structures (logs, stumps, hummocks). Large overland movements occur between aquatic habitats and to open sandy or gravelly areas for nesting. Forest habitat is important for upland movements. Overwintering typically occurs in permanent wetlands. ⁵	No	Wetlands and watercourses are of insufficient composition to support this species.

Scientific Name	Common Name	S-RANK ¹	SARO ¹	COSEWIC ²	SARA ²	SARA Schedule ²	Record Source	Habitat Requirements	Suitable Habitats within Subject Property	Rationale
<i>Graptemys geographica</i>	Northern Map Turtle	S3	SC	SC	SC	Schedule 1	Ontario Nature 2019; iNaturalist 2022; NDMNRF 2022)	Large bodies of water such as rivers and lakes with soft bottoms, aquatic vegetation, abundant mollusc prey, and basking structures such as logs or rocks. Nesting occurs in open areas with soft substrates such as sand or gravel. Hibernate on the bottom of deep areas of lakes or deep, slow-moving sections of rivers. ³	No	Suitable aquatic habitat is not present on the subject property. This species is not known from the Eramosa River.
Snakes										
<i>Lampropeltis triangulum</i>	Milksnake	S4	NAR	SC	SC	Schedule 1	Ontario Nature 2019; NDMNRF 2022)	Farmlands, meadows, hardwood or aspen stands; pine forest with brushy or woody cover; river bottoms or bog woods; hides under logs, stones, or boards or in outbuildings; often uses communal nest sites.	Candidate	The subject property contains suitable open upland and forest edge habitat favoured by this species.
<i>Thamnophis sauritus septentrionalis</i>	Northern Ribbonsnake	S4	SC	SC	SC	Schedule 1	Ontario Nature 2019	Sunny grassy areas with low dense vegetation near bodies of shallow permanent quiet water; wet meadows, marshes, borders of ponds, lakes or streams. ³	Candidate	Suitable habitat is present within the subject property at grassy areas near wetlands.
Frogs and Toads										
<i>Pseudacris triseriata</i> pop.1	Western Chorus Frog (Great Lakes - St. Lawrence Canadian Shield population)	S4	NAR	T	T	Schedule 1	Ontario Nature 2019; NDMNRF 2022)	Moist forest, prairie, meadows, cultural meadows, or marshes. Breeds in shallow, temporary, fishless wetlands, including flooded ditches, marshes, flooded fields, pastures, temporary ponds, pools, and swamps. Hibernates in terrestrial habitats under rocks, logs, leaf litter, loose soil, or in animal burrows. ⁹	No	This species was not observed during anuran call surveys and suitable habitat is not generally present for this species.
Mammals										
<i>Microtus pinetorum</i>	Woodland Vole	S3?	SC	SC	SC	Schedule 1	Dobbyn 1994	Mature deciduous forest in the Carolinian region where there is a deep litter layer that allows it to burrow. ^{3,4}	No	Suitable mature forest habitat is not present within the study area.
<i>Myotis leibii</i>	Eastern Small-footed Myotis	S2S3	END				Dobbyn 1994	Roosts in caves, mine shafts, crevices or buildings that are in or near woodland. Hibernates in cold dry caves or mines. Maternity colonies in caves or buildings. Hunts in forests. ^{3,4}	Yes	The treed features within the subject property may act as suitable foraging habitat for this species.
<i>Myotis lucifungus</i>	Little Brown Myotis	S3	END	E	E	Schedule 1	Dobbyn 1994	Uses caves, quarries, tunnels, hollow trees or buildings for roosting. Winters in humid caves. Maternity sites in dark warm areas such as attics and barns. Feeds primarily in wetlands and forest edges. ^{3,4}	Yes	Suitable treed habitat for foraging is present within the subject property, and potential bat cavity trees have been identified.
<i>Myotis septentrionalis</i>	Northern Myotis	S3	END	E	E	Schedule 1	Dobbyn 1994	Roosts in houses and man-made structures but prefers hollow trees or under loose bark. Hibernates in mines or caves. Hunts within forest, below the canopy. ^{3,4}	Yes	Suitable treed habitat for foraging is present within the subject property, and potential bat cavity trees have been identified.
<i>Perimyotis subflavus</i>	Tri-colored Bat	S3?	END	E	E	Schedule 1	Dobbyn 1994	Roosts and maternity colonies in older forests and occasionally in barns or other structures. Forage over water and along streams in the forest. Hibernate in caves. ^{3,4}	Yes	Suitable treed and aquatic habitat for foraging is present within the subject property, and potential bat cavity trees have been identified.

Scientific Name	Common Name	S-RANK ¹	SARO ¹	COSEWIC ²	SARA ²	SARA Schedule ²	Record Source	Habitat Requirements	Suitable Habitats within Subject Property	Rationale
<i>Taxidea taxus jacksoni</i>	American Badger (Southwestern Ontario population)	S2	END	E	E	Schedule 1	Dobbyn 1994	Open grasslands, oak savannahs, sand barrens and farmland. ^{3,4}	No	Dens or other evidence of badger nesting were not observed during field surveys. This species would be considered very rare in this part of Ontario.
Butterflies										
<i>Asterocampa clyton</i>	Tawny Emperor	S2S3					Macnaughton et al. 2022	Forests and hedgerows with abundant Common Hackberry (<i>Celtis occidentalis</i>). ¹¹	Candidate	Treed areas within the subject property may contain the host plant.
<i>Danaus plexippus</i>	Monarch	S2N, S4B	SC	END	SC	Schedule 1	Macnaughton et al. 2022; inaturalist 2022)	Adults found in a diversity of habitats with a variety of wildflowers. Caterpillars are confined to meadows and open areas where milkweeds grow (larval food plants). ³	Yes	Milkweed is present throughout the subject property and this species was observed during field surveys.
<i>Pieris virginiensis</i>	West Virginia White	S3	SC				Macnaughton et al. 2022	Rich, moist, deciduous woods with populations of Two-leaved Toothwort (<i>Cardimine diphylla</i> ; larval food plant). ³	No	Suitable mature deciduous forest is not present on the subject property.
Odonates										
<i>Libellula semifasciata</i>	Painted Skimmer	S3					NDMNRF 2022	Shallow, vegetated ponds and pools. ²⁹	No	This species is a migrant in this part of Ontario and is not known to breed.
<i>Epiaeschna heros</i>	Swamp Darner	S3S4					NDMNRF2022	Swamps, wooded ponds. ²⁹	Yes	This species was observed during field surveys foraging within upland habitats. Suitable habitat for this species may occur within the wetlands near the Eramosa River.
Plants and Lichens										
<i>Gymnocladus dioicus</i>	Kentucky Coffee-tree	S2	THR	T	T	Schedule 1	NRSI 2022	Rich mesic and floodplain forests. ²³	No	A planted tree is present on the subject property but is not considered to be native.
<i>Juglans cinerea</i>	Butternut	S2?	END	E	E	Schedule 1	NRSI 2022	Stream banks and swamps, as well as upland beech-maple, oak-hickory, and mixed hardwood stands. ¹⁰	Yes	A single Butternut is present within the subject property.
<i>Ptelea trifoliata</i> ssp. <i>trifoliata</i>	Common Hop-tree	S3	SC	SC	SC	Schedule 1	NDMNRF 2022	Forested to open dunes, sandy fields and knolls, fencerows and dry bluffs or banks. Rarely in moister sites along rivers and edges of floodplain forests. ²³	Yes	Suitable habitat is present, however, this species has not been observed despite extensive vegetation inventories on the subject property.
<i>Psora dicipians</i>	Blushing Scale Lichen	S3					NDMNRF 2022	Dry upland areas, fully exposed to the sun.	Yes	Suitable habitat may be present for this species within the study area, although it was not observed during field surveys.

Scientific Name	Common Name	S-RANK ¹	SARO ¹	COSEWIC ²	SARA ²	SARA Schedule ²	Record Source	Habitat Requirements	Suitable Habitats within Subject Property	Rationale
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⁴ Ontario Ministry of Natural Resources (OMNR). 2000. Significant Wildlife Habitat Technical Guide. Appendix G: Wildlife Habitat Matrices and Habitat Descriptions for Rare Vascular Plants. October 2000.

⁵ Ministry of the Environment, Conservation and Parks. 2019. Recovery Strategy for the Blanding’s Turtle (*Emydoidea blandingii*) in Ontario. Ontario Recovery Strategy Series. Prepared by the Ministry of the Environment, Conservation and Parks, Peterborough, Ontario. iv + 6 pp. + Appendix.

⁶ Ontario Wood Turtle Recovery Team. 2010. Recovery strategy for the Wood Turtle (*Glyptemys insculpta*) in Ontario. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources. vi + 25 pp. <https://www.ontario.ca/page/wood-turtle-recovery-strategy>

⁷ Seburn, D.C. 2010. Recovery strategy for the Common Five-lined Skink (*Plestiodon fasciatus*) – Carolinian and Southern Shield populations in Ontario. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources, Peterborough, Ontario. vi + 22 pp. <https://www.ontario.ca/page/common-five-lined-skink-recovery-strategy>

⁸ Willson, R.J. and G.M. Cunnington. 2015. Recovery Strategy for the Blue Racer (*Coluber constrictor foxii*) in Ontario. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources and Forestry, Peterborough, Ontario. vi + 35 pp. <https://www.ontario.ca/page/blue-racer-recovery-strategy>

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²⁴ Canadian Biodiversity Information Facility. 2002. Updated: 2014-07-09. Available: <https://www.cbif.gc.ca/eng/species-bank/butterflies-of-canada/>

²⁵ Ministry of Natural Resources and Forestry. 2018a. Waterloo SAR List.

²⁶ Ministry of Natural Resources and Forestry. 2018b. Waterloo Region SAR List.

²⁷ Paulson. 2011. Dragonflies and Damselflies of the East . Princeton Field Guides, New Jersey. 535pp.

APPENDIX II

Significant Wildlife Habitat Screening

Significant Wildlife Habitat Type	Presence Within Study Area	Presence Within Subject Property	Assessment Details
Seasonal Concentration Areas			
Waterfowl Stopover and Staging Areas (Terrestrial)	Not Present	Not Present	Spring sheet flooding is not known to occur within the subject property. Within the study area, meltwater and run-off are expected to drain into the Eramosa River.
Waterfowl Stopover and Staging Areas (Aquatic)	Candidate	Not Present	The subject property does not contain suitable aquatic features to support migrating waterfowl. The Eramosa River immediately adjacent to the subject property provides candidate SWH as it is a large body of water.
Shorebird Migratory Stopover Area	Not Present	Not Present	Shorebird stopover habitat is largely associated with large wetlands or the shoreline areas of the Great Lakes. The Eramosa River and associated wetlands are heavily vegetated and do not provide suitable mudflats, bars, or banks to support such concentrations of shorebirds.
Raptor Wintering Area	Not Present	Not Present	The woodlands in the study area are generally of insufficient size to be considered candidate SWH for wintering raptors. Winter wildlife surveys are to be conducted in 2022 and will document potential for winter raptor presence.
Bat Hibernacula	Not Present	Not Present	Caves, mine shafts, underground foundations, and karsts are not present in the subject property or study area.
Bat Maternity Colonies	Candidate	Candidate	The woodlands in the subject property may provide suitable bat maternity colony habitat. Snag counts are not to be undertaken in woodlands that are part of the NHS, and as such the woodlands will be assumed to be candidate SWH.
Turtle Wintering Area	Candidate	Not Present	The Eramosa River provides candidate Turtle Wintering Habitat, although none of the wetlands on the subject property were found to provide suitable habitat as they do not provide open water. The human constructed pond near the existing Agriscience building was also not found to be utilized by turtles and would not be considered SWH.
Reptile Hibernaculum	Possible	Candidate	Candidate snake hibernacula have been identified at two locations within the subject property. Surveys would be required to confirm significance.
Colonially - Nesting Bird Breeding Habitat (Bank and Cliff)	Not Present	Not Present	No suitable banks are present that would provide suitable breeding habitat for these species, including along the Eramosa River. The cliffs on the subject property within the woodlands are heavily treed and are also not suitable nesting locations.
Colonially - Nesting Bird Breeding Habitat (Tree/Shrubs)	Possible	Not Present	No large stick nests were identified within the subject property, although it is possible that some colonies are present within the study area along the Eramosa River.
Colonially - Nesting Bird Breeding Habitat (Ground)	Not Present	Not Present	Rocky islands and peninsulas are not present within the subject property or study area.
Migratory Butterfly Stopover Areas	Not Present	Not Present	The study area does not occur within 5km of Lake Ontario.
Landbird Migratory Stopover Areas	Not Present	Not Present	The study area does not occur within 5km of Lake Ontario.
Deer Yarding Areas	Not Present	Not Present	This habitat has not been identified to occur within the subject property or study area by the NDMNRF.
Deer Winter Congregation Areas	Not Present	Not Present	This habitat has not been identified to occur within the subject property or study area by the NDMNRF. Treed features within the study area are not greater than 100ha.
Rare Vegetation Communities			
Cliff and Talus Slopes	Confirmed	Confirmed	(CLT1-1) White Cedar Treed Carbonate Cliff Type has been documented to occur along the north and northeastern perimeters of the subject property.
Sand Barrens	Not Present	Not Present	The identified ELC communities do not occur within the study area.
Alvar	Not Present	Not Present	The identified ELC communities do not occur within the study area.
Old Growth Forest	Not Present	Not Present	The treed features within the subject property and study area are not of suitable maturity to be considered old growth forest.
Savannah	Not Present	Not Present	The identified ELC communities do not occur within the study area.
Tallgrass Prairie	Not Present	Not Present	The identified ELC communities do not occur within the study area.
Other Rare Vegetation Communities	Not Present	Not Present	No other provincially rare vegetation communities occur within the subject property or study area.
Specialized Wildlife Habitat			
Waterfowl Nesting Area	Candidate	Not Present	The Eramosa River and nearby ponds of the Correctional Facility and adjacent upland areas may provide suitable habitat for these species. The isolated wetlands away from the river do not provide suitable breeding habitat for these species (no open water).
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Possible	Not Present	Treed areas adjacent to the Eramosa River shoreline may provide nesting habitat for these species in the study area. No large stick nests or nesting platforms are present in the subject property based on field surveys.
Woodland Raptor Nesting Habitat	Not Present	Not Present	=Table 3 - Specialized Wildlife'IF11
Turtle Nesting Areas	Possible	Not Present	Nesting surveys were undertaken within the subject property and did not document turtle nesting. It is possible that turtle nesting occurs elsewhere in the study area near the Eramosa River and associated wetlands, but no specific candidate areas have been identified.
Seeps and Springs	Possible	Not Present	No seeps were identified during field surveys, although it is possible some are present more widely throughout the study area.
Amphibian Breeding Habitat (Woodland)	Not Present	Not Present	No SWH for amphibian breeding was found in the subject property based on anuran call surveys. The Eramosa River generally has significant flow and would not be considered suitable amphibian breeding.
Amphibian Breeding Habitat (Wetland)	Not Present	Not Present	Isolated wetlands are not present in the study area.
Woodland Area-Sensitive Bird Breeding Habitat	Not Present	Not Present	Woodlands of suitable size with sufficient interior habitat are not present in the subject property or study area.
Habitat for Species of Conservation Concern			
Marsh Bird Breeding Habitat	Not Present	Not Present	Suitable marsh breeding habitat of sufficient size and composition to support the indicator species is not present. Wetlands do not generally have open water and emergent vegetation that would support these species.
Open Country Bird Breeding Habitat	Not Present	Not Present	Open grassland habitat does not reach the 30ha size requirement for significance.
Shrub/Early Successional Bird Breeding Habitat	Candidate	Candidate	Potentially suitable shrub and thicket habitat is present within the study area and will be assessed through the EIS, including breeding bird surveys.
Terrestrial Crayfish	Possible	Not Present	No crayfish chimneys were identified despite extensive field surveys on the subject property. It is possible suitable habitat is present more widely throughout the study area.
Special Concern and Rare Wildlife Species	Confirmed	Confirmed	Habitat for a number of Species of Conservation Concern is present within the study area and the subject property.
Animal Movement Corridors			
Amphibian Movement Corridors	Not Present	Not Present	Only considered when SWH is confirmed for Amphibian Breeding (Wetland).
Deer Movement Corridors	Not Present	Not Present	Deer Wintering Habitat has not been identified to occur in the study area by the NDMNRF.
Exceptions			
EcoDistrict 6E-14 Mast Producing Areas	Not Present	Not Present	The subject property and study area are not in Ecodistrict 6E-14.
EcoDistrict 6E-17 Lek	Not Present	Not Present	The subject property and study area are not in Ecodistrict 6E-17.

APPENDIX D

TERMS OF REFERENCE

Cultural Heritage Evaluation Report (CHREER) and Archaeological Assessment Guelph Innovation District, Blocks 1 and 2

February 2024

CULTURAL HERITAGE RESOURCE EVALUATION REPORT

The following guidance for the completion of a Cultural Heritage Resource Evaluation Report for the Guelph Innovation District lands in the City of Guelph has been drafted based on the following guidance:

- A general Terms of Reference which was provided to MHBC City of Guelph Heritage Planning staff via email on August 17, 2022;
- The Guelph Innovation District Guidance for Preparation of Block Plans, Section 5.2 Cultural heritage Resource Evaluation and Methods of Conservation (City of Guelph, 2019); and
- The Ontario Heritage Toolkit (Heritage Property Evaluation, 2005).

Section 5.2 of the GID Guidance document identifies that Block Plan Areas 1, 3, and 4 require the submission of a CHREER to identify potential heritage resources located on-site and adjacent. The CHREER will provide a map identifying cultural heritage resources, and will use the City's existing database of known cultural heritage resources as a starting-point.

This includes the cultural heritage landscape attributes shown on Appendix A (GID Secondary Plan). The CHREER for Block Plan 4 will be prepared by City heritage planning staff. CHREER reports for Block Plan Area 1, 2 and 3 are required and are the responsibility of the respective landowner(s). Subsequent development applications will require the submission of a Cultural Heritage Resource Impact Assessment (CHRIA).

CHER Table of Contents:

- Executive Summary;
 - Providing a summary of the intent of the report, the proposed development, the identified cultural heritage resources, impact statements, and alternative development options and/or mitigation recommendations.
- Glossary;
 - Glossary of common terms referenced in the report.
- Table of Contents/List of Figures;
- Introduction/Project Overview;
 - Overview of the purpose of the report and an introduction to the subject lands;
 - Provide date(s) of site visit(s).
- Legislation and Policy Context;
 - Provide a summary of applicable policy framework, including (but not limited to) PPS 2020, the Planning Act, the Ontario Heritage Act, the City of Guelph Official Plan & relevant Secondary Plans.
- Approach to CHER Reports;
 - Provide an outline of the guidance for best practice, including this Terms of Reference as well as guidance provided by the Province of Ontario.
- Agency Consultation and Review;
 - Provide information related to any agency consultation/engagement or relevant stakeholders.
- Description of Property/Historical Summary;
 - Describe the heritage status of the subject lands and adjacent properties;
 - Provide a detailed description of the context of the site, as well as the subject property/properties which make-up the subject lands; and
 - Provide a description of the existing conditions of the site and its identified heritage features (supplemented with photographs).
- Historical Summary/Research;
 - Provide a general history of the immediate context of the site and land use history of the property with reference to primary and secondary sources, aerial photos, historic maps, etc.
- Identification of Cultural Heritage Resources and Evaluation of Cultural Heritage Value or Interest;
 - Identify cultural heritage resources located on-site and adjacent, and identify those features which are not of potential CHVI;
 - Evaluate properties as per Ontario Regulation 9/06 and/or Ontario Regulation 10/06:
 - Physical and Design Value;

- Historical and Associative Value;
 - Contextual Value;
 - List of Heritage Resources/Attributes.
- Provide an evaluation of the subject lands as a potential Cultural Heritage Landscape as defined by PPS 2020.
- Conclusions and Next Steps;
 - Provide a summary of findings and identification of cultural heritage resources (including identification of any resources of CHVI on a map, for reference).
- List of Resources Consulted/Bibliography;
- Appendices;
 - Map of the Subject Lands in reference to the Block Plan(s);
 - Map of existing (previously identified) Cultural Heritage Resources;
 - Map noting the location of both previously identified Cultural Heritage Resources as well as newly identified resources identified through the CHRER exercise; and
 - Project Personnel.

ARCHAEOLOGICAL ASSESSMENT

- A Stage 1 and Stage 2 Archaeological Assessment will be prepared to identify any areas of archaeological potential and archaeological resources; the assessments will provide recommendations for any conservation and/or preservation measures; and will be prepared in accordance with the Standards and Guidelines for Consultant Archaeologists, as amended, of the Ontario Heritage Act and its regulations.
- A copy of the Stage 1 and Stage 2 reports will be provided to the City for information. Any recommendations for additional analysis would be implemented through future conditions of approval.

APPENDIX E

TERMS OF REFERENCE

Engineering Master Servicing Plan Guelph Innovation District, Blocks 1 and 2

December 2023

Introduction

MTE Consultants Inc. (MTE) was retained by Fusion Homes to provide Engineering Services to support the development of the Guelph Innovation District (GID) Lands in Guelph. This Site is currently grassed / open-space, and is bounded by Stone Road East to the south, Victoria Road South to the west, and the Eramosa River to the north and east. A University of Guelph research building is located on-site. The GID Lands are part of a *Secondary Plan* (OPA 54), as identified in the *City of Guelph's Official Plan* (March 2018 Consolidation). The blocks owned by Fusion Homes and part of this development project are Block Plan Area 1 and 2, as shown on *Map Schedule D* (City of Guelph Official Plan, 2014) in Appendix A.

The objective of the *Engineering Master Servicing Plan* (MSP) will be to guide the development of GID Lands, with focus on the development of the lands that have been identified and designated for development (i.e., Fusion Homes owned lands in Blocks 1 and 2). The development goal for these Blocks is to establish a community with residential, mixed-use, commercial, and employment blocks, as well as park space and trails.

The MSP will inform the Block Plan process through:

- 1) review relevant background policies and documents to incorporate objectives and recommendations into the site servicing and grading design.
- 2) identify and assess the relevant environmental, servicing and engineering design considerations and recommendations for design of a preferred development plan.
- 3) provide a frame-work to be followed by subsequent submissions, including the Draft Plan of Subdivision Application and the Final Engineering Submissions.

The MSP is to be completed by the project team in coordination with the City of Guelph, Grand River Conservation Authority, Ministry of Environment, Conservation and Parks (MECP) and Ministry of Natural Resources if / as required. This Plan will follow the Municipal Class Environmental Assessment Planning process and may be an integrated approach.

MSP Terms of Reference

The following outlines the key components of the Guelph Innovation District Blocks 1 and 2 *Engineering Master Servicing Plan*.

1/ Background Review

This step will provide for the review of background documents, refinement of issues and problem statements and prioritization of goals and objectives for the MSP. The purpose

of this process is to define the project objectives considering all regulatory guidelines and to provide an initial description of the existing conditions (environmental, hydrogeological / geotechnical and regulatory) in the Study Area. Tasks as part of this process will include:

- Review of background documents and policies to understand site conditions, constraints and guiding policies. Reviewed topics include the following:
 - **Topographic Survey and Base Plan Review:** The on-site topographic survey data (to be completed by MTE), will be reviewed to determine drainage patterns, on-site environmental features and external servicing features.
 - **Geotechnical Review:** Review of a *Geotechnical Report* (to be completed by MTE) to understand site soil and groundwater conditions. The *Geotechnical Report* will summarize the completed field-work program, including borehole drilling and monitoring well installations. Recommendations from the *Geotechnical Report* will help to inform site civil design. Upon review, recommendations for further geotechnical work will be provided. The preliminary geotechnical work will also include a slope stability analysis, to provide a top of slope and regulatory buffer along the Site's north-east limit with the Eramosa River and to guide establishment of the Site's development limit.
 - **Hydrogeology Review:** Review of available site hydrogeological background information, including the following: topographic, physiographic and geological mapping, official plans and current aerial photos, watershed studies, drinking source water protection plans, MECP water well records, Permit to Take Water records, *Environmental Constraints Evaluation* or *Natural Heritage Assessments*. This review will provide understanding of on-site groundwater characteristics. Review of the completed hydrogeological field-work program will be summarized in a *Hydrogeological Assessment Report* (to be completed by MTE), such that groundwater elevation levels, groundwater quality, hydraulic conductivity and groundwater receptors are understood. This *Hydrogeological Assessment Report* will also provide characterization of regional topography, surficial geology, existing natural heritage features, site stratigraphy and recommendations for additional work, monitoring or groundwater mitigation efforts, as required.
 - **Natural Heritage Systems Review:** Review of available background environmental information, including environmental constraints. This review will provide understanding of on-site natural environmental features. Any recommendations for water balance, infiltration targets, or protection of surface water features, will be understood. Any recommendations for monitoring of the natural heritage systems, including surface and groundwater features will be identified. Preliminary work will also include survey of any on-site dripline and wetlands, to guide establishment of the Site's development limit.
 - **Civil Engineering Review:** Review of relevant documents to understand site servicing, grading and stormwater management requirements specific to the Site. This review will involve assessment of external infrastructure, including storm sewers along Victoria Road South and Stone Road to investigate site drainage outlet options. The *City of Guelph Engineering Design Manual* (City of Guelph, 2023) will be reviewed to understand

specific design criteria, including site servicing and stormwater management criteria. The *Guelph Innovation District, Water and Wastewater Study* (AMEC Environmental & Infrastructure, January 2015), *GID External Servicing Enabling Works* document and the *City of Guelph Water and Wastewater Master Plan* (2023) will be reviewed to identify municipal water and wastewater servicing objectives and constraints specific to the Site.

- **Hydraulic / Stormwater Management Review:** Review of relevant documents to establish design criteria for the GID Lands (Blocks 1 and 2) Stormwater Management (SWM) strategy. Documents to review include the *Grand River Conservation Authority (GRCA) Policies for the Administration of the Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation* (GRCA, 2008) to understand guiding criteria for floodplain enhancement and stormwater management design in the vicinity of the Site. Relevant watershed studies, including the *Eramosa-Blue Springs Watershed Interim Report Draft* (Beak International Incorporated and Aquafor Beech Limited, 1999) will be reviewed to understand relevant surface / groundwater information and policies specific to the Site, including surface water community characterization, identified subwatershed channel / erosion issues and any special area designation. Reviewed documents will include the *Guelph Stormwater Management Master Plan* (2023) to identify strategies and approaches to guide safe and effective management of stormwater runoff from urban areas within the City of Guelph. The 2023 *City of Guelph Stormwater Management Master Plan* will be reviewed. The *Guelph Innovation District, Stormwater Management Study* (Amec Foster Wheeler, September 2014) will also be reviewed to understand any established preliminary stormwater management strategy and /or guiding principles for the overall GID Lands (Blocks 1 and 2), as part of the Secondary Plan Area. The *GID Stormwater Management Study* (2020), will be reviewed to further refine all project stormwater management objectives and constraints. Overall, this Hydraulic and Stormwater Management review will provide understanding of surface water quality, water balance, chloride mitigation and erosion and sediment control objectives and monitoring program requirements for the Site's development.
- **Environmental Site Assessment Review:** Review of relevant Environmental Site Assessment reports, and the *Site Monitoring Well Inventory and Condition Assessment* (to be completed by MTE). This review will help to understand any risks to the Site from past / current site activities and activities from adjacent lands. Review will help to characterize the soil and groundwater quality of the GID Lands (Blocks 1 and 2). This process will help to identify any contaminated material on-site and will provide input to the future stage of the ESA Phase I and II.
- **Recommendations from Background Review:** Recommendation will be provided on the completion of pre-development monitoring to establish base-line conditions. Identification of data gaps and recommendations as to how detailed studies may be revised to address any gaps as part of future detailed submissions for a plan of subdivision.

- **Development of an *Existing Conditions Plans*:** The plans will show the findings of the review, including existing infrastructure and surrounding environmental features in the vicinity of the Site.
- **Completion of a *Stormwater Management Criteria and Preliminary Design Strategy Memo*:** The memo will utilize the information from the background review and existing conditions to characterize the surface water conditions on-site and establish objectives / constraints for subsequent stormwater management assessment and design.

2/ Detailed Study / Assessment for Development of Block Plans 1 and 2

The intent of the MSP is to commence detailed study, inventory and analysis addressing hydrology, surface water quality, flooding, erosion, site grading, servicing and stormwater management components of the proposed development. Through this process more detailed design considerations will be evaluated, and feasible design alternatives will be assessed. The topics to be evaluated and tasks to be undertaken include:

1. Functional Servicing Assessment

- Identification of potential municipal water servicing system locations on-site to optimize the development plan considering environmental features, existing infrastructure and feasible outlets. Confirmation of capacity of servicing system outlets.
- Completion of water demand, including fire flow, calculations based on the conceptual plan and City of Guelph design criteria.
- Completion of hydrant testing / pressure monitoring as required to support the design.
- Design of watermains to meet demand projections and mitigate surcharging. Confirmation that appropriate cover is provided to the preliminary site grades.
- Review of existing sanitary wastewater connection points, and ability of these systems to accommodate the development, including identification and recommendation for updates to downstream infrastructure, if required. Design and updates to sanitary sewer infrastructure downstream of GID Lands (Blocks 1 and 2) is outside this scope of work.
- Completion of sanitary flow calculations based on the conceptual plan and City of Guelph criteria.
- Design of sanitary sewers to meet demand projections and mitigate surcharging. Confirmation that appropriate cover is provided to the preliminary site grades. Establishment of sanitary sewer drainage areas and development of sanitary sewer design sheets.
- Review of existing and/or planned utility infrastructure surrounding the Site and identification of preliminary utility servicing requirements.
- Identification of servicing capacity constraints (sanitary or water) and servicing plans impacting development timing / phasing. May include a hydraulic grade line analysis of existing or proposed servicing systems, to be confirmed during consultation with the City.
- Consideration of the preliminary site servicing and stormwater management strategy in the grading design.
- Optimization of the servicing strategy with the overall site grading design and stormwater management strategy.

2. Stormwater Management Assessment

- Preliminary design of a stormwater management strategy to meet water quantity and quality control criteria. Meeting and discussions with the City and / or GRCA to understand and establish the criteria.
- Reference of previous reports and studies to establish the stormwater management strategy and ideal locations of stormwater management infrastructure.
- Consideration of different stormwater management alternatives to optimize the developable land and meet constraints. Identification of appropriate stormwater management features (including LID, lot level, conveyance and / or end of pipe systems) and potential locations based on the proposed conditions drainage plan and optimization of outlets.
- Identification of major flow conveyance locations and completion of site grading and / or swale design as necessary.
- Design of storm sewers to convey minor storm events and mitigate any surcharge. Identification of storm sewer drainage areas and development of storm sewer design sheet. Identification of a preferred alignment of storm sewers based on the conceptual plan. Confirmation that appropriate cover is provided to the preliminary site grades. Identification and recommendation for updates to downstream storm sewer infrastructure to accommodate the development. Design and updates to storm sewer infrastructure downstream of GID Lands (Blocks 1 and 2) is outside this scope of work.
- Preliminary design of stormwater management facilities, including establishment of stage/storage/discharge relationships, outlet control locations and capacity, forebay design, access routes and overland flow routes. Completion of length/width ratio calculations and volumetric sizing.
- Completion of a Site Water Balance assessment to confirm existing and proposed conditions hydrologic cycle values.
- If deemed desirable, preliminary design of low impact development (LIDs), with consideration of any water balance strategy and chloride mitigation. Any LID requirement will be confirmed with the City during consultation.
- Identification of erosion and sediment control measures to be implemented such that downstream receiving systems are protected and slope stability is maintained through the development process.
- Optimization of the stormwater management infrastructure design with the overall site grading design and servicing strategy.
- Identification of site water quality objectives based on review of background documents and consultation with the GRCA and City as necessary.
- Outline of surface water monitoring techniques and protocols to assess the surface water quality and mitigate adverse impacts to surface water quality through the development process.

3. Conceptual Grading Assessment

- Development of a conceptual grading design following City criteria with the aim of optimizing the development plan, including consideration of ideal transportation networks and park-space.
- Plan and profile drawings of all road geometrics.

- Identification of any proposed grading in vegetation protection zones, recognizing objectives to meet established buffers.
 - Optimization of cut/fill operations on-site.
 - Review of any slope stability analysis as part of potential grading work.
 - Consideration of the preliminary site servicing and stormwater management strategy in the grading design.
4. **Floodplain Hydraulic Assessment and Design.**
- Evaluation of floodplain water level to understand potential impacts (if any) to GID Lands (Blocks 1 and 2), if deemed necessary through consultation with the GRCA.
5. **Noise Impact (Road and Stationary) Assessment**
- Completion of a noise impact analysis to ensure that noise sensitive lands are located away from noise sources. The Feasibility Noise Study will follow the Guelph Noise Control Guidelines, and will include prior consultation with city staff, including a Feasibility Noise Study TOR.
 - Following the completion of a Feasibility Noise Study, sufficient information will be available to determine the acoustic environment of the proposed development. If the development is determined not to require noise control measures then a Detailed Noise Study may not be necessary, if noise control measures or additional design considerations are found to be necessary to meet Provincial or Municipal guidelines then a Detailed Noise Study will be required as a condition of planning approval.
6. **Phase I/One Environmental Site Assessment and Subsequent Studies**
- A *Phase I/One Environmental Site Assessment (ESA)* and subsequent study reports (i.e., *Phase II/Two ESA*, remediation/risk assessment report), if required, will be prepared for the Site in accordance with the City of Guelph's document *Guidelines for Development of Contaminated or Potentially Contaminated Site* (City of Guelph Engineering and Capital Infrastructure Services, 2016)
 - A *Phase One/Two ESA* will be completed for lands where the proposed future use is going from less sensitive (e.g., Community land-use) to more sensitive (e.g., Residential or Parkland use) and filing a Record of Site Condition (RSC) in accordance with Ontario Regulation 153/04 is required. A *Phase I/II ESA* will be completed per CSA Standards Z768-01/ Z769-00, respectively, for lands where the proposed future use will remain a similar sensitivity to the current use (e.g., Agricultural and Residential use) or will be less sensitive (i.e., Commercial use) and where an RSC is not required.
 - A *Phase I/One ESA* will be prepared to identify potential environmental contaminant risks to the Subject Lands from past/current activities within the Subject Lands and the Study Area. A *Phase II/Two ESA* will be conducted to assess soil and groundwater quality in areas of concern identified in the *Phase I/One ESA*. Remediation or Risk Assessment (RA) may be required in portions of the Subject Lands for the purposes of filing an RSC or for due diligence purposes.
 - Subsequent studies such as the *Phase II/Two ESA* and Risk Assessment, as well as environmental remediation works and/or filing one or more RSCs, would be completed in conjunction with the construction phase of the project.

7. High Level Construction Cost Estimate

- As the project evolves, cost estimates of different design scenarios will be completed to assist in concept assessment.
- The cost assessment of construction may help to guide subsequent Tendering processes.

3/ Final Report and Detailed Design Recommendations

- The MSP process will be a component of determining the preferred development and design strategy to meet the development objectives of the Block Plan. Preliminary site grading, site servicing design and stormwater management design will be completed through the MSP process.
- Final design recommendations will be made, to guide the subsequent Draft Plan of Subdivision submission process. Subsequent reports following the MSP may be developed and submitted in support of necessary *Official Plan Amendments*, *Plan of Subdivision* and any *Zoning By-Law Amendments*. It is expected the GID Lands (Blocks 1 and 2) will ultimately under-go a detailed design process.

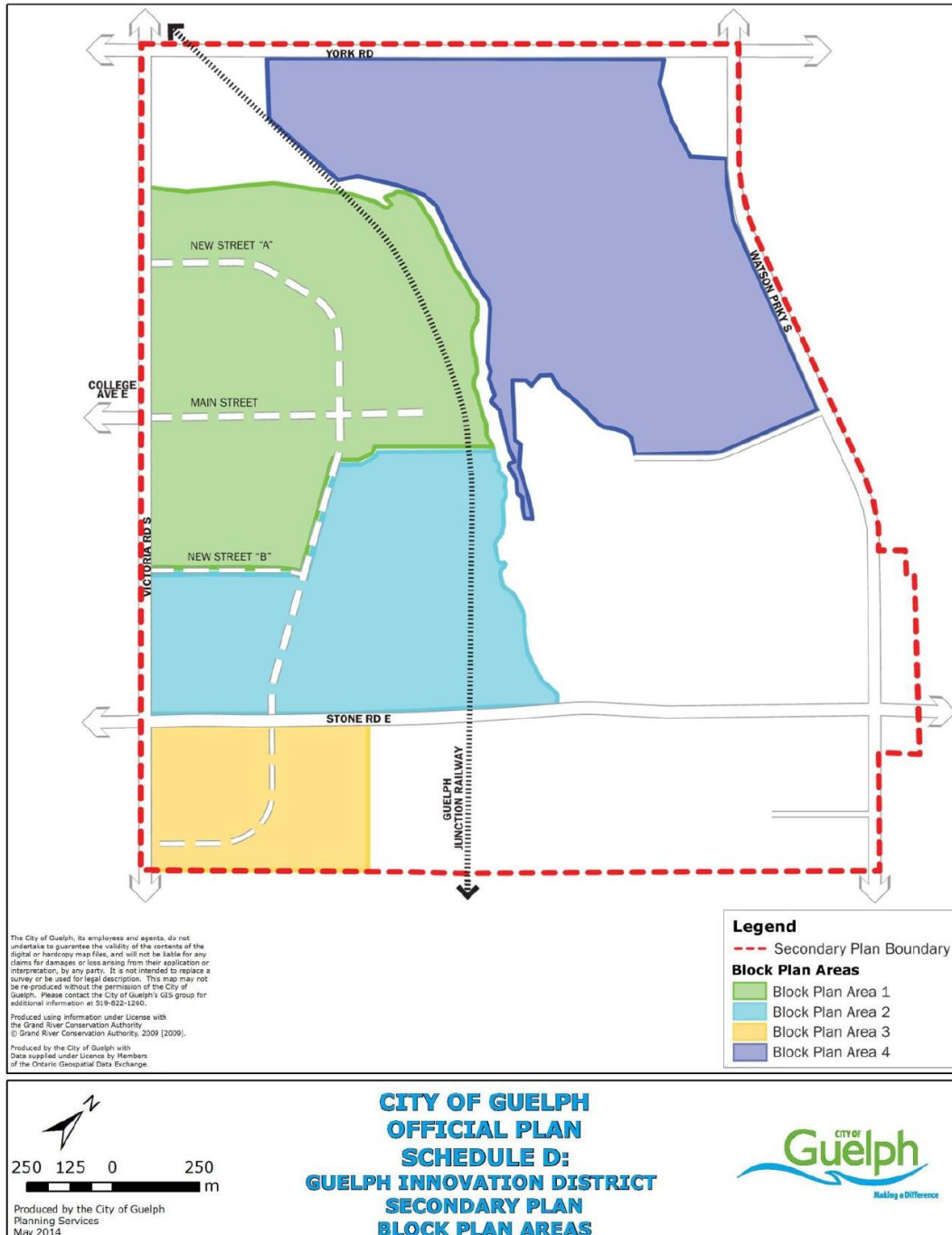
APPENDIX F

GID BLOCK PLAN AREA 1 AND 2 TOR – APPENDIX F

Terms of Reference

Introduction

GHD Limited has been retained to prepare a Transportation Impact Study (TIS) for the proposed Block Plan Areas 1 and 2 within the Guelph Innovation District (GID). The subject area is shown in figure below, and includes area bounded by Victoria Road South to the west, Stone Road to the south and Eramosa River to the northeast. In order to properly scope this project we have asked the City of Guelph to provide comments on the following work plan, and updated the following Terms of Reference (TOR) accordingly:



As recommended by the city, traffic assessment years (horizon years) of existing 2023, full build-out year of 2031, and five and ten year after the full build-out of 2036 and 2041 were chosen for the study.

The following will be addressed in the study:

- Establish existing and future operating conditions for the study intersections, including anticipated corridor growth, future development of Block Plan Areas 1 and 2 of GID and any other background developments
- Forecast trip generation and distribution of Block Plan Areas 1 and 2 and determine its impact to the study intersections and surrounding traffic
- Review the proposed road network within the Block Plans for conformance to the Guelph Innovation District Secondary Plan
- Prepare a Parking Study if the proposed number of parking spaces do not satisfy the relevant By-law requirements
- Prepare Transportation Demand Management (TDM) recommendations suggesting reduced parking standards and TDM measures for the Block Plans
- Review the active transportation network within the Block Plans for conformance/integration to the Transportation Master Plan, Cycling Master Plan, Guelph Active Transportation Network Study and Guelph Innovation District Secondary Plan

The following documents have been reviewed in preparation of this Terms of Reference and will be used for the TIS:

- City of Guelph Transportation Master Plan (January 2022)
- City of Guelph Cycling Master Plan (February 2012)
- City of Guelph Traffic Impact Study Guidelines (October 2023)
- Guelph Active Transportation Network Study (June 2017)
- Guelph Innovation District Secondary Plan (August 2017)
- Guelph Innovation District: Guidance for Preparation of Block Plans (2019)

Existing Conditions

The following existing study intersections have been identified:

- Victoria Road South at York Road
- Victoria Road South at College Avenue East
- Victoria Road South at Stone Road East
- Watson Parkway at York Road
- Watson Parkway at Dunlop Drive/Watson Road
- Watson Parkway at Stone Road

The current traffic movement counts for the study intersections have been ordered.

The following historical counts were also recommended to be acquired from the City:

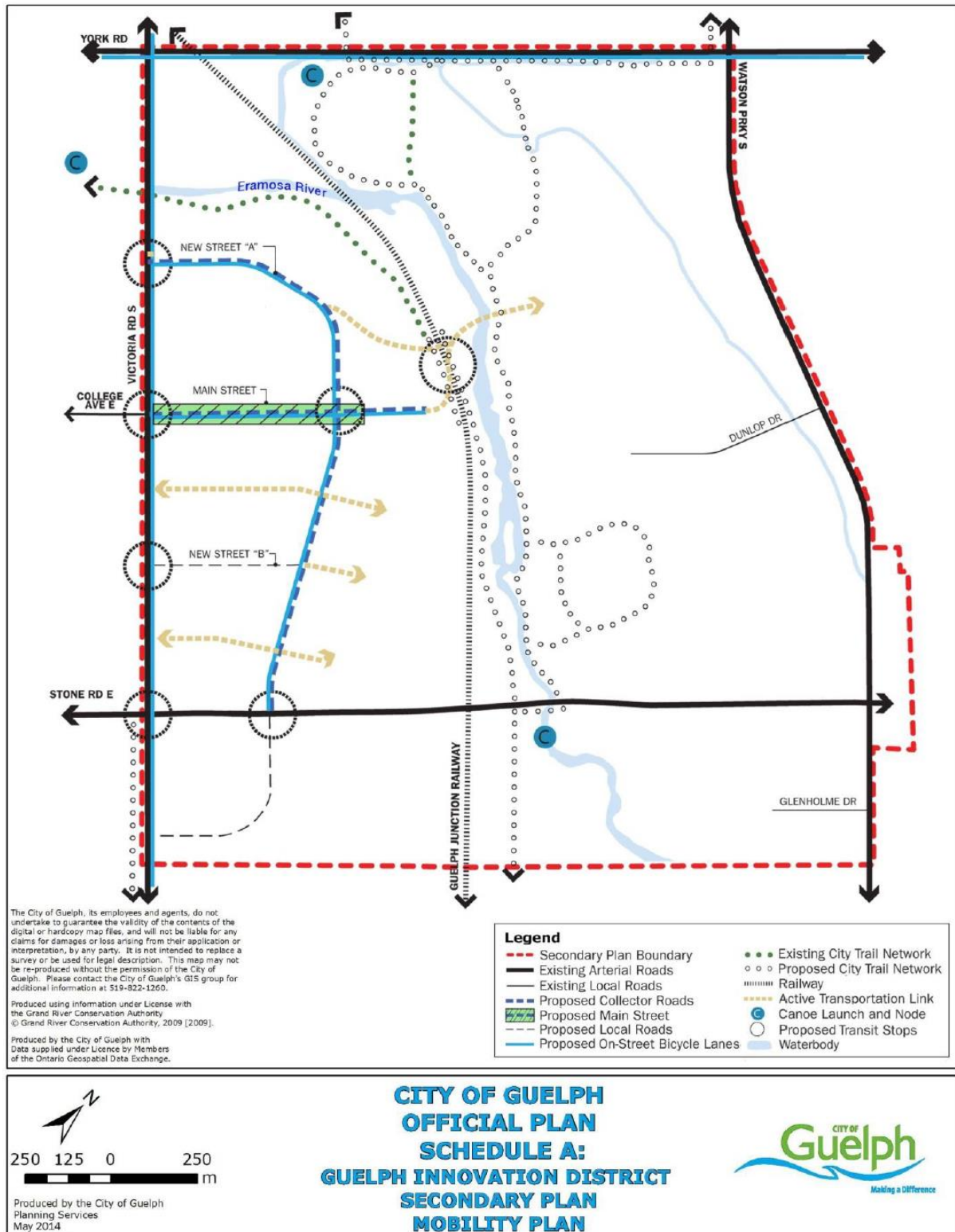
- Victoria Road South at York Road – May 2019
- Victoria Road South at College Avenue East – March 2019
- Victoria Road South at Stone Road East – November 2022
- Watson Parkway at York Road – November 2022
- Watson Parkway at Dunlop Drive/Watson Road – No counts available from the city
- Watson Parkway at Stone Road – November 2022

These historical counts will be compared to the Existing 2022 counts that were ordered and the set of counts with higher traffic volumes will be selected as the baseline.

In addition to the existing study intersections above, the following proposed intersections have also been identified based on the Mobility Plan for GID, taken from Schedule A of Guelph Innovation District Secondary Plan (August 2017):

The proposed study intersection identified in the mobility plan are as follows:

- Victoria Road South at New Street 'A'
- Victoria Road South at New Street 'B'
- New Street 'A' at Main Street
- New Street 'A' at Stone Road East
- New Street 'A' at Street 'B'



Existing traffic data will be undertaken for the existing study intersections for the weekday AM and PM peak hours. Existing signal timings for the existing study intersections will be obtained from the city.

The study will include transportation analysis of existing conditions using Trafficware's Synchro 11 software.

Future Background Conditions

The following roadway improvement is identified for the study area:

- York Road Reconstruction Phase 4 – 2024 to Summer 2026
 - Improvements include widening to add multi-use pathways from Victoria Road to the City's east limit.
 - No further roadway widening is currently planned.
 - The relevant information documents have been provided by the city.
 - Recently to December 2023, an exclusive northbound right-turn lane has been installed for the intersection of York Road at Victoria Road.
 - Any further intersection improvements will consider existing physical constraints, including railway crossings at the north and east approaches.
- Victoria Road Widening
 - Improvements include widening of Victoria Road to four lanes from Eramosa River to Stone Road, with intersection improvements for intersection of Victoria Road at York Road
 - The relevant information documents have been provided by the city.
 - Design to be completed in 2026, construction to start in 2029.
 - Assumed to be completed by the first horizon year of 2031.
- Stone Road Widening
 - Improvements include widening of Stone Road to four lanes from Victoria Road to Watson Parkway, with intersection improvements for intersection of Stone Road at Watson Parkway.
 - Assumed to be completed by the first horizon year of 2031.
 - The intersection of Stone Road at Watson Parkway will be analyzed as a signalized intersection from existing conditions to all future conditions, as requested by the city.
 - There is a potential for the intersection at Watson Parkway to be improved to a roundabout for the horizon year 2041, which will be considered as an alternative solution.

Future background traffic volume for the study intersections will consider corridor growth along existing roadway and any relevant future developments. The city has recommended a 2% annual growth for the study area.

The following potential background developments have been identified from the city:

- The rest of developments in Guelph Innovation District
- York Elizabeth Land Use Study
 - Estimated additional population of 150 and additional employment of 150.
- 115 Watson Parkway
 - 582 apartment units and 197 townhouse units.
- Guelph Operation Campus
 - Norwest corner of Stone Road at Watson Parkway.
 - Site generated employment and transit volumes provided by the city.
- 855 Victoria Road
 - TIS prepared by Paradigm dated June 2018
 - 333 apartment units and 108 townhouse units.

As requested from the city, all background developments will be considered to be built and fully occupied between 2036 and 2041, with the exception of the Guelph Innovation District Block 3.

Site Trip Generation

Trip Generation estimates will be prepared for the weekday AM and PM peak hours for the Block Plan Areas 1 and 2 using the Institute of Transportation Engineer's (ITE's) Trip Generation Manual, 11th edition.

Existing transportation modal split and any reduction in site trips will be clearly documented as per the Transportation Tomorrow Survey (TTS) 2016 data. The following City's transportation modal split goal from the TMP will be used as the future split:

- Walk – 10%
- Bike – 7%
- Transit Bus – 13%
- Auto – 70%

The distribution of traffic to and from the district will be based on review of TTS data, existing traffic patterns and consultations with the City. The site traffic will be assigned to the study area road network in accordance with our interpretation of this information. Trip distribution will be confirmed with the city prior to the completion of the analysis, as requested by the city.

Future Total Conditions

We will develop and analyze Future Background and Future Total traffic scenarios.

Impact of generated site traffic volumes on existing/future study intersections will be identified using Trafficware's Synchro software, in accordance with the TIS Guideline from the City – as well as review of expected performance of these study intersection under the Guideline's criteria.

The Block Plans for Area 1 and 2 and its road network will be reviewed with respect to criteria outlined in the City of Guelph Transportation Master Study, Schedule A of Guelph Innovation District Secondary Plan, Guelph Active Transportation Network Study and Geometric Design Guide for Canadian Road by Transportation Association of Canada.

Intersection Capacity Analysis

Intersection analyses for all study intersections will be conducted using Trafficware Synchro 11 software. The analyses will adhere to the criteria and assumptions within the City of Guelph Transportation Impact Study Guideline (October 2023).

Transportation Improvements

All recommended transportation improvements will be summarized including additional new roads and multimodal connections, physical intersection improvements, operational changes, signal timing changes, as well as identification of proposed changes to transit routes and/or stops through the study area.

The following transportation analyses for improvements will be completed:

- Traffic signal warrant for unsignalized intersections
- Intersection control recommendations for unsignalized intersections
- Turning lane warrants for all intersections
- Typical roadway cross-sections for streets within the GID, Victoria Road and Stone Road
- Identify appropriate cycling facilities for streets within GID, adhering to OTM Book 18, Mobility Plan of GID Secondary Plan and Cycling Spine Network identified in the TMP (2022).
- Sightline triangle analysis for intersections along Victoria Road and/or Stone Road, adjacent to Block Areas 1 and 2
 - Potential sightline obstructions due to vertical curvatures will be considered.

Parking and Transportation Demand Management

The City's planning staff will provide Terms of Reference if a parking study is required for a complete application (i.e. at the time of OPA/ZBA/Draft Plan submission).

Transportation Demand Management options will be recommended to support future transportation modal split and reduced parking standards that is consistent with the proposed active transportation network and connections to the City's existing/proposed network in accordance with the Guelph Active Transportation Network Study (June 2017) and the City of Guelph Transportation Master Plan (2022).

Future Focused Transportation Studies

It is noted that this Study represents the first of potentially several transportation studies to be completed in support the GID. The broad-based analyses conducted in the TIS will focus on operations at the proposed connections to the adjacent existing municipal streets. This study will combine the requirements for a Transportation Impact Study (TIS), Transportation Demand Management Strategy, and Transportation Operations Study, but also lays the ground work for future focused studies in support of the Draft Plan of Subdivision and individual Site Plan Applications in.

APPENDIX G

TERMS OF REFERENCE

Sustainability Strategy Guelph Innovation District, Blocks 1 and 2

November 2023

ELEMENTS OF THE SUSTAINABILITY STRATEGY

The following provides a general overview of the elements of the Sustainability Strategy:

1) BACKGROUND REVIEW

a) Site Context

The purpose of this section is to define the intent of the Sustainability Strategy and to provide an initial description of the existing conditions (physical, social and regulatory) of the Block Plan Area and surrounding lands. This information provides a context for the Block Plan and background for the anticipated targets and guidelines required for the areas sustainable development. The Sustainability Strategy is intended to address the requirements of the Carbon Neutral Energy Strategy, as identified in the secondary plan.

Tasks include:

- a. Review the Climate Change policies of the City of Guelph Official Plan.
- b. Review the City of Guelph Community Energy Plan and Community Energy Initiative Update.
- c. Review sustainable development best practices and case studies from the City of Guelph and other Ontario Cities.

b) Green Vision

This Section will describe the Vision and Principles of sustainable development for the block plan.

2) GREEN DEVELOPMENT STANDARDS (GDS)

a) GDS Themes

The GDS will utilize key themes to guide the development of the GID area to ensure that development is sustainable.

Themes include:

- a. Community Design
- b. Mobility

- c. Green Infrastructure
- d. Building Design
- e. Resource Conservation
- f. Waste Management

Appendix E – GID Secondary Plan Appendix A Map (Heritage)



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Legend		Cultural Heritage Resources (CHR)
---	Secondary Plan Boundary	■ Non-Listed CHR
—	Roads	■ Municipally Listed CHR
---	Railway	■ Provincially Listed CHR
—	Pedestrian Crossings	■ Designated CHR (Part IV O.H.A.)
■	Existing Built Form	--- Cultural Heritage Landscape
○	Public Views	
■	Waterbody	
■	Natural Heritage System	
---	Contours (0.5m intervals)	

Appendix **F** – Photo Reference Map

Photo Map A: Block 1 Lands



(above): 2022 Aerial photograph map noting location of photos taken on Block 1 lands (Source: MHBC, 2023)



Figures 1 & 2: (left) View of G.M. Frost building looking east from driveway near access at Victoria Road South, (right) View of Victoria Road South looking north from entrance to 328 Victoria Road South (former Turfgrass Institute site) (Source: MHBC 2022)



Figures 3 & 4: (left) View of, (right) View of former experimental gardens, looking south from driveway, (Source: MHBC 2023)



Figures 5 & 6: (left) View of former location of Walsh farm dwelling, (right) View of G.M. Frost building (west and south elevations) (Source: MHBC 2023)



Figures 7 & 8: (left) View of west (front) elevation of G.M. Frost building, (right) View of City of Guelph skyline, looking north from north elevation of G.M. Frost building (Source: MHBC 2023)



Figures 9 & 10: (left) View of G.M. Frost building (east/rear elevation), looking west, (right) View of contemporary steel ancillary building, looking south-west, (Source: MHBC 2023)



Figures 11 & 12: (left) View of trail through Block 2 lands, looking south towards Stone Road East, (right) View of Block 4 lands (across the Eramosa River) looking east along trail, (Source: MHBC 2023)



Figures 13 & 14: (left) View of fruit trees in un-maintained orchards, (right) (zoomed) View of buildings on part of Block 4, across the Eramosa River, (Source: MHBC 2023)



Figures 15 & 16: (left) View of vegetated footpath and trail, looking north, (right) View of vegetated path and trail, looking north (Source: MHBC 2023)



Figures 17 & 18: (left) View of Guelph, looking north from path behind G.M. Frost building, (right) View of G.M. Frost building (north and south elevations), looking south-east, (Source: MHBC 2023)



Figures 19 & 20: (left) View of entrance to public walking trail accessed at Victoria Road South, (right) View of Victoria Road South, looking south from trail parking access, (Source: MHBC 2023)

Appendix **G** – Staff Bios.

Dan Currie, B.A., B.E.S, M.A., M.C.I.P, R.P.P, C.A.H.P

Dan Currie, a Partner with MHBC, joined MHBC Planning in 2009, after having worked in various positions in the public sector since 1997 including the Director of Policy Planning for the City of Cambridge and Senior Policy Planner for the City of Waterloo.

Dan provides a variety of planning services for public and private sector clients including a wide range of policy and development work. Dan has experience in a number of areas including strategic planning, growth plan policy, secondary plans, watershed plans, housing studies and downtown revitalization plans. Dan specializes in long range planning and has experience in growth plans, settlement area expansions and urban growth studies. He has provided expert planning evidence to the Local Planning Appeals Tribunal and heritage planning evidence to the Conservation Review Board.

Vanessa Hicks, M.A, C.A.H.P

Vanessa Hicks is an Associate and Senior Heritage Planner with MHBC. Vanessa and joined the firm after having gained experience as a Manager of Heritage Planning in the public realm where she was responsible for working with Heritage Advisory Committees in managing heritage resources, Heritage Conservation Districts, designations, special events and heritage projects. Vanessa is a full member of the Canadian Association of Heritage Professionals (CAHP) and graduated from the University of Waterloo with a Masters Degree in Planning, specializing in heritage planning and conservation.



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