Hamilton

COMMITTEE OF ADJUSTMENT

City Hall, 5th floor, 71 Main Street West, Hamilton, ON L8P 4Y5

Telephone (905) 546-2424, ext. 4221

E-mail: cofa@hamilton.ca

NOTICE OF PUBLIC HEARING
Minor Variance

You are receiving this notice because you are either:

- Assessed owner of a property located within 60 metres of the subject property
- Applicant/agent on file, or
- Person likely to be interested in this application

APPLICATION NO.:	**A-24:93**	**SUBJECT PROPERTY:**	14 Belvidere Avenue, Hamilton
ZONE:	"C & R1" (Urban Protected Residential and Low Density Residential Zone)	**ZONING BY-LAW:**	Zoning By-law former City of Hamilton 6593, and Zoning By-law City of Hamilton 05-200 as Amended

APPLICANTS: Owner: Beni, Angelina, Adam & Lucas Colalillo
Agent: A.J. Clarke & Associates Ltd. – Franz Kloibhofer

The following variances are requested:

Former Hamilton Zoning By-law 6593

1. A minimum front yard depth of at least 1.2 metres for Lot 2 (Part 2) shall be permitted instead of the minimum required front yard depth of 6.0 metres.

2. A minimum lot width of 6.0 metres for Lot 3 (Part 3) shall be permitted instead of the minimum required lot width of 12.0 metres.

3. A minimum lot width of 9.0 metres for Lot 4 (Part 4) shall be permitted instead of the minimum required lot width of 12.0 metres.

Hamilton Zoning By-law 05-200

1. A minimum lot width of 6.0 metres shall be permitted for Lot 3 (Part 3) instead of the minimum required lot width of 12.0 metres.

2. A minimum lot width of 9.0 metres shall be permitted for Lot 4 (Part 4) instead of the minimum required lot width of 12.0 metres.

PURPOSE & EFFECT: To facilitate the severance of four residential lots each with a a Single Detached Dwelling.

A-24:93

Notes:

Former Hamilton Zoning By-law 6593

1. Please be advised variance #1, #2 and #3 have been written as requested. Insufficient information was provided to determine full zoning conformity. All future development shall conform to the Former Hamilton Zoning By-law 6593 and additional variances may be required if zoning conformity cannot be achieved.

Hamilton Zoning By-law 05-200

2. This property is now also subject to the R1 Low Density Residential Zone under Hamilton Zoning By-law 05-200, which is not yet final and binding. Please be advised that the application has been reviewed under Hamilton Zoning By-law 05-200 and it has been determined that insufficient information was provided to determine full zoning conformity. Additional variances may be required if conformity cannot be achieved.

This Notice must be posted by the owner of any land which contains seven or more residential units so that it is visible to all residents.

This application will be heard by the Committee as shown below:

DATE:	**Tuesday, June 11, 2024**
TIME:	**2:25 p.m.**
PLACE:	**Via video link or call in (see attached sheet for details)**
	City Hall Council Chambers (71 Main St. W., Hamilton)
	To be streamed (viewing only) at www.hamilton.ca/committeeofadjustment

For more information on this matter, including access to drawings illustrating this request and other information submitted:

- Visit www.hamilton.ca/committeeofadjustment
- Visit Committee of Adjustment staff at 5th floor City Hall, 71 Main St. W., Hamilton
- Call 905-546-CITY (2489) or 905-546-2424 extension 4221

PUBLIC INPUT

Written: If you would like to submit written comments to the Committee of Adjustment you may do so via email or hardcopy. Please see attached page for complete instructions, written comments must be received no later than noon June 7, 2024

Orally: If you would like to speak to this item at the hearing you may do so via video link, calling in, or attending in person. Please see attached page for complete instructions, registration to participate virtually must be received no later than noon June 10, 2024

FURTHER NOTIFICATION

If you wish to be notified of future Public Hearings, if applicable, regarding A-24:93, you must submit a written request to cofa@hamilton.ca or by mailing the Committee of Adjustment, City of Hamilton, 71 Main Street West, 5th Floor, Hamilton, Ontario, L8P 4Y5**.**

If you wish to be provided a Notice of Decision, you must attend the Public Hearing and file a written request with the Secretary-Treasurer by emailing cofa@hamilton.ca or by mailing the Committee of Adjustment, City of Hamilton, 71 Main Street West, 5th Floor, Hamilton, Ontario, L8P 4Y5.

Subject Lands

DATED: May 23, 2024

_____

Jamila Sheffield,
Secretary-Treasurer
Committee of Adjustment

Information respecting this application is being collected under the authority of the Planning Act, R.S.O., 1990, c. P. 13. All comments and opinions submitted to the City of Hamilton on this matter, including the name, address, and contact information of persons submitting comments and/or opinions, will become part of the public record and will be made available to the Applicant and the general public, and may include posting electronic versions.

COMMITTEE OF ADJUSTMENT

City Hall, 5th floor, 71 Main Street West, Hamilton, ON L8P 4Y5

Telephone (905) 546-2424, ext. 4221

E-mail: cofa@hamilton.ca

PARTICIPATION PROCEDURES

Written Submissions

Members of the public who would like to participate in a Committee of Adjustment meeting are able to provide comments in writing advance of the meeting. Comments can be submitted by emailing cofa@hamilton.ca or by mailing the Committee of Adjustment, City of Hamilton, 71 Main Street West, 5th Floor, Hamilton, Ontario, L8P 4Y5. **Comments must be received by noon on the date listed on the Notice of Public Hearing.**

Comments are available the Friday prior to the Hearing and are available on our website: **www.hamilton.ca/committeeofadjustment**

Oral Submissions

Members of the public are also able to provide oral comments regarding Committee of Adjustment Hearing items by participating Virtually through Webex via computer or phone or by attending the Hearing In-person. Participation Virtually requires pre-registration in advance. Please contact staff for instructions if you wish to make a presentation containing visual materials.

1. Virtual Oral Submissions

Interested members of the public, agents, and owners **must register by noon on the day listed on the Notice of Public Hearing to** participate Virtually.

To register to participate Virtually by Webex either via computer or phone, please contact Committee of Adjustment staff by email cofa@hamilton.ca. The following information is required to register: Committee of Adjustment file number, hearing date, name and mailing address of each person wishing to speak, if participation will be by phone or video, and if applicable the phone number they will be using to call in.

A separate registration for each person wishing to speak is required. Upon registering for a meeting, members of the public will be emailed a link for the Webex meeting one business day before the Hearing. Only those registered will be called upon to speak.

2. In person Oral Submissions

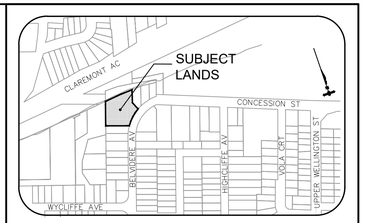
Interested members of the public, agents, and owners who wish to participate in person may attend Council Chambers on the date and time listed on the Notice of Public Hearing. Please note, you will be required to provide your name and address for the record. It is advised that you arrive **no less than 10 minutes** before the time of the Public Hearing as noted on the Notice of Public Hearing.

We hope this is of assistance and if you need clarification or have any questions, please email cofa@hamilton.ca or by phone at 905-977-1654.

Please note: Webex (video) participation requires either a compatible computer or smartphone and an application (app/program) must be downloaded by the interested party in order to participate. It is the interested party's responsibility to ensure that their device is compatible and operating correctly prior to the Hearing.

14 BELVIDERE AVENUE

NOTE:
SURVEY INFORMATION SHOWN ON THIS SKETCH ARE BASED ON A SURVEYOR'S REAL PROPERTY REPORT BY A.T. McLAREN LTD. DATED SEPT. 5, 2022 (DWG.No. 37224–REV1)



KEYPLAN (N.T.S.)

SKETCH FOR CONSENT TO SEVER

14 BELVIDERE AVENUE
CITY OF HAMILTON

THE ABOVE NOTED LANDS ARE LEGALLY DESCRIBED AS:
PART OF LOTS 3 & 4
REGISTERED PLAN No. 457

METRIC:
DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

NOTE:
THE BOUNDARIES AND MEASUREMENTS SHOWN ON THIS SKETCH ARE BASED ON SURVEYOR'S REAL PROPERTY REPORT 37224–REV1, PREPARED BY A.T. MCLAREN LTD., DATED SEPT 5, 2023

THIS SKETCH IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY OR CERTIFIED DIGITAL COPY ISSUED BY THE SURVEYOR

THIS SKETCH IS PREPARED TO ACCOMPANY AN APPLICATION TO THE LAND DIVISION COMMITTEE REQUESTING A GRANT OF SEVERANCE AND IS NOT INTENDED FOR REGISTRATION.

CONSENT SCHEDULE:

PART 1 (LANDS TO BE RETAINED)	AREA=1,079.67m²
PART 2 (LANDS TO BE SEVERED)	AREA=816.45m²
PARTS 3 & 5 (LANDS TO BE SEVERED)	AREA=949.05m²
PART 4 (LANDS TO BE RETAINED)	AREA=432.05m²

CAUTION:
THIS IS NOT A PLAN OF SUBDIVISION AND SHALL NOT BE USED FOR TRANSACTION OR MORTGAGE PURPOSES.

APRIL 5, 2024
DATE

PROJECT OWNER:
Beni, Angelina, Adam and Lucas Colalillo

MUNICIPLITY
CITY OF HAMILTON

PROJECT NAME:
14 BELVIDERE AVENUE

A. J. Clarke and Associates Ltd.
SURVEYORS • PLANNERS • ENGINEERS
25 MAIN STREET WEST, SUITE 300
HAMILTON, ONTARIO L8P 1H1
Tel: 905 528-8761 Fax: 905 528-2289
email: ajc@ajclarke.com

TITLE:
SKETCH FOR CONSENT TO SEVER

SCALE: 1:200	DATE: MARCH 2024
DESIGN:	DRAWN: L.H.
DWG: 228208	SHT: SV SKETCH

14 BELVIDERE AVENUE

SURVEYOR'S REAL PROPERTY REPORT

PART 1, PLAN OF PART OF

LOTS 3 & 4
REGISTERED PLAN 457

IN THE

CITY OF HAMILTON

SCALE 1:150 METRIC

3 1.5 0 3 6 9 metres

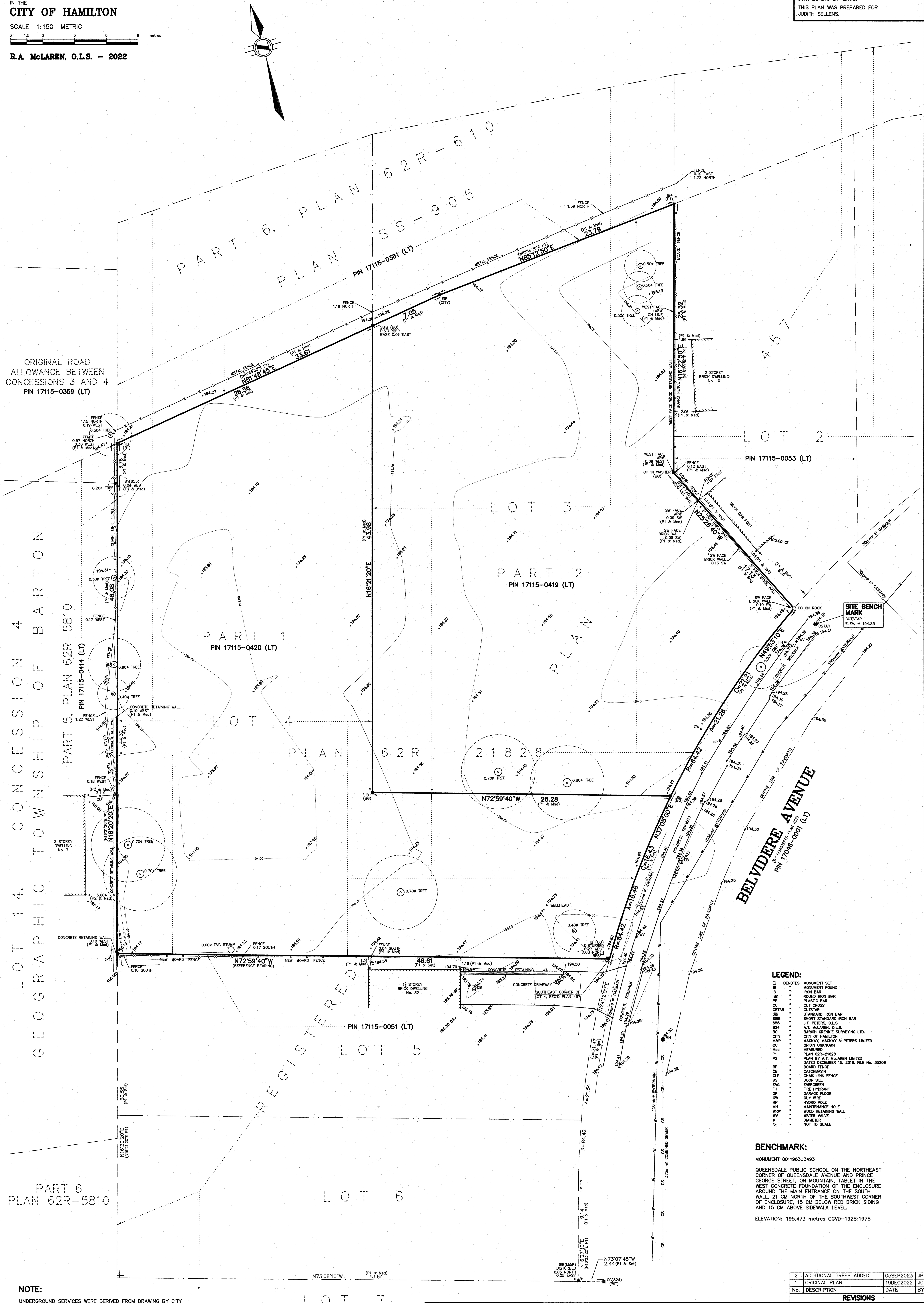
R.A. McLAREN, O.L.S. – 2022

SURVEYOR'S REAL PROPERTY REPORT (PART 2)

PART OF LOTS 3 & 4, REGISTERED PLAN 457, IS NOT SUBJECT TO ANY EASEMENTS.

THIS PLAN DOES NOT CERTIFY COMPLIANCE WITH ZONING BY-LAWS.

THIS PLAN WAS PREPARED FOR JUDITH SELLENS.



LEGEND:

□	DENOTES	MONUMENT SET
■	"	MONUMENT FOUND
IB	"	IRON BAR
IBø	"	ROUND IRON BAR
PB	"	PLASTIC BAR
CC	"	CUT CROSS
CSTAR	"	CUTSTAR
SIB	"	STANDARD IRON BAR
SSIB	"	SHORT STANDARD IRON BAR
655	"	J.T. PETERS, O.L.S.
824	"	A.T. McLAREN, O.L.S.
BG	"	BARICH GRENKIE SURVEYING LTD.
CITY	"	CITY OF HAMILTON
M&P	"	MACKAY, MACKAY & PETERS LIMITED
OU	"	ORIGIN UNKNOWN
Msd	"	MEASURED
P1	"	PLAN 62R-21828
P2	"	PLAN BY A.T. McLAREN LIMITED DATED DECEMBER 15, 2016, FILE No. 35206
BF	"	BOARD FENCE
CB	"	CATCHBASIN
CLF	"	CHAIN LINK FENCE
DS	"	DOOR SILL
EVG	"	EVERGREEN
FH	"	FIRE HYDRANT
GF	"	GARAGE FLOOR
GW	"	GUY WIRE
HP	"	HYDRO POLE
MH	"	MAINTENANCE HOLE
WRW	"	WOOD RETAINING WALL
WV	"	WATER VALVE
ø	"	DIAMETER
//	"	NOT TO SCALE

BENCHMARK:

MONUMENT 0011963U3493

QUEENSDALE PUBLIC SCHOOL ON THE NORTHEAST CORNER OF QUEENSDALE AVENUE AND PRINCE GEORGE STREET, ON MOUNTAIN, TABLET IN THE WEST CONCRETE FOUNDATION OF THE ENCLOSURE AROUND THE MAIN ENTRANCE ON THE SOUTH WALL, 21 CM NORTH OF THE SOUTHWEST CORNER OF ENCLOSURE, 15 CM BELOW RED BRICK SIDING AND 15 CM ABOVE SIDEWALK LEVEL.

ELEVATION: 195.473 metres CGVD–1928:1978

NOTE:

UNDERGROUND SERVICES WERE DERIVED FROM DRAWING BY CITY OF HAMILTON, DATED JUNE 2011 (DRAWING No. 11–H–09, SHEET 1 OF 4) AND DRAWING BY CITY OF HAMILTON, DATED JANUARY 13, 1984 (DRAWING No. 82–H–99, SHEET 1 OF 2).

UNDERGROUND SERVICE AND UTILITY LOCATIONS MUST BE VERIFIED PRIOR TO CONSTRUCTION

INVERTS MUST BE VERIFIED PRIOR TO CONSTRUCTION

METRIC NOTE:

DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

BEARING NOTE:

BEARINGS ARE GRID AND ARE REFERRED TO THE SOUTHERLY LIMIT OF PART 1, PLAN 62R–21828 AS SHOWN BEING N72°59'40"W

SURVEYOR'S CERTIFICATE

I CERTIFY THAT:
1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON THE 19th DAY OF DECEMEBER, 2022

19DEC2022
DATE

ROB A. McLAREN, O.L.S.

THIS PLAN OF SURVEY RELATES TO AOLS PLAN SUBMISSION FORM NUMBER 38000

No.	DESCRIPTION	DATE	BY
2	ADDITIONAL TREES ADDED	05SEP2023	JP
1	ORIGINAL PLAN	19DEC2022	JC

REVISIONS

A.T. McLaren
LEGAL AND ENGINEERING SURVEYS
69 JOHN STREET SOUTH, SUITE 230
HAMILTON, ONTARIO, L8N 2B9
PHONE (905) 527–8559 FAX (905) 527–0032

Drawn	Checked	Crew Chief	Scale	
JC	RBM	ZA	1:150	Dwg.No. 37224–Rev1

A. J. Clarke and Associates Ltd.
SURVEYORS • PLANNERS • ENGINEERS

City of Hamilton
Committee of Adjustment
71 Main Street West, 5th Floor
Hamilton, ON L8P 4Y5

April 9, 2024

Attn: Ms. Jamila Sheffield
Secretary Treasurer, Committee of Adjustment (email: Jamila.Sheffield@hamilton.ca)

Re: 14 Belvidere Avenue, Hamilton
Severance Application Recirculation (HM/B-22:133) and joint Minor Variance Application

Dear Ms. Sheffield:

A.J. Clarke and Associates Ltd. has been retained by Beni, Angelina, Adam, and Lucas Colalillo (owners) for the purposes of submitting the enclosed Severance (Consent) Application recirculation and joint Minor Variance Application for the subject lands, municipally known as 14 Belvidere Avenue, in the City of Hamilton. Below is a summary of the materials submitted to your attention:

- One (1) digital copy of a cheque in the amount of $225.00 representing the required recirculation application fee;
- One (1) digital copy of a cheque in the amount of $3900.00 representing the required Minor Variance Application fee;
- One (1) digital copy of the executed Minor Variance application;
- One (1) digital copy of the Survey, prepared by A.T. McLaren, dated September 5, 2023;
- One (1) digital copy of the Sketch for Consent to Sever, prepared by A.J Clarke & Associates Ltd., dated March 2024.
- One (1) digital copy of the Geotechnical Considerations, prepared by Soil-mat Engineers and Consultants Ltd., dated July 2023.
- One (1) digital copy of the Environmental Impact Statement, prepared by GeoProcess Research Associates Inc, dated March 2024.
- One (1) digital copy of the Tree Preservation Plan, prepared by GeoProcess Research Associates Inc, dated March 2024.

This analysis is in support of the proposed Severance (Consent) Application for the subject lands and is to facilitate the future construction of a single-detached dwelling on each new lot. An access and drainage easement is proposed over Part 3 in favour of Part 2.

The subject lands are currently vacant and are located on the north side of Belvidere Avenue, directly south, and adjacent to the brow of the Niagara Escarpment above the Claremont Access. The subject lands are designated “Neighbourhoods” as per Schedule E-1 of the Urban Hamilton Official Plan and are zoned C/S-1822 in the Former City of Hamilton Zoning By-law 6593. A rezoning of these lands has also recently been proposed by the City of Hamilton to Low Density Residential (R1) Zone, as per Schedule A75 of A157 of Appendix "B" to Report PED22154(a) heard at Planning Committee on February 23, 2024.

The surrounding area is predominately low-density residential, consisting mainly of single detached dwellings on lots of various widths and sizes. The subject lands are approximately ±770 metres west of the Concession Street shopping area, and approximately ±450 metres northwest of the Upper Wellington shopping area located at the intersection of Upper Wellington and Queensdale Ave East.

The subject lands are in close proximity to Queensdale Elementary School, numerous city parks, the closest of which is Sam Lawrence Park to the east and are close to multiple trails and access points to the Niagara Escarpment trail system. HSR Bus routes 22 through 27 have stops for both directions located approximately ±350-370 metres from the subject lands at the intersection of Upper Wellington and Concession Street.

This application was previously submitted and issued City File No: HM/B-22:133. City of Hamilton Planning Staff noted in their comments:

> *"Having regard for the matters under subsection 51(24) of the Planning Act, staff is satisfied that the proposed lots are suitable for the use, the proper and orderly development of the land. However, since an EIS has not been prepared and it the limits of the Core Areas have not been clearly delineated, it is recommended that this application be tabled (Please see attached staff report in Appendix for further details)."*

Upon receipt of comments from City of Hamilton planning staff, the Niagara Escarpment Commission (NEC), Ward 8 Councillor John-Paul Danko, and neighbouring residents this application was tabled until further information could be obtained – notably an Environmental Impact Assessment, Tree Management/ Protection Plans, and Slope Stability Assessment.

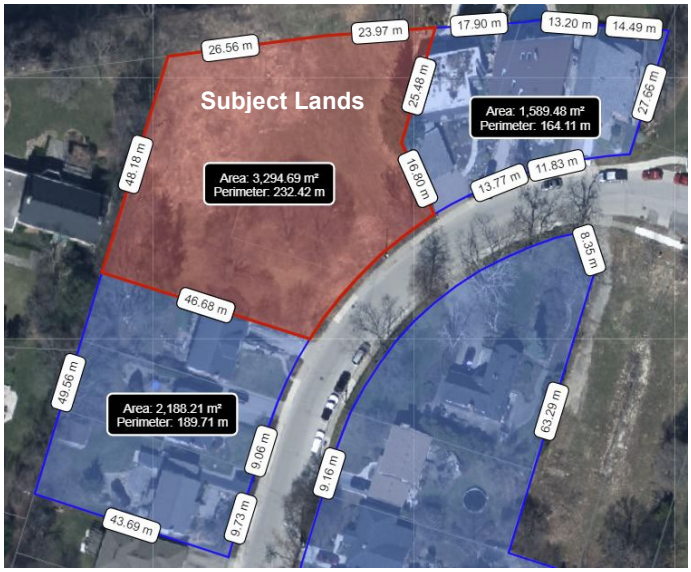
Enclosed with this recirculation of application HM/B-22:133 are the requested Slope Stability Assessment (with Geotechnical Investigation of the lands included) prepared by Soil-Mat Engineers and Consultants Ltd along with an Environmental Impact Statement and Tree Protection Plan prepared by GeoProcess Research Associates Ltd. A revised Concept Plan/Severance Sketch has also been provided.

Further, A.J. Clarke & Associates Ltd. met with interested parties on April 17th, 2023, to obtain comments, listen to concerns, and illustrate the desired outcome of the proposed severance. During this meeting it was reiterated that several studies were underway to ensure the development will proceed in a safe and appropriate manner. Concerns raised at the neighbourhood meeting included issues regarding height, density, parking, and access. In response to these concerns, the proposed severance and lot patterns have been adjusted and the following points are provided in response to the concerns:

- The height of the future dwellings are intended to be in keeping with the zoning by-law.
- The proposed density is 12.2 units per hectare (UPH); which is below the 60 UPH permitted in land designated low-density residential and is below the existing 15.97 UPH net residential density of Belvidere Avenue. The creation of two additional lots, as proposed, would create a total density of 16.68 UPH along Belvidere Avenue. The lands to the east have a density of 18.88 UPH, while the lands to the south have a density of 13.71 UPH (as shown in the figures below).
- The revised plans facilitate a shared easement driveway, in favour of Part 2 over Part 3, to reduce the number of driveways originally proposed, thereby adding one additional road access to the

existing condition. The intent of the proposed shared easement is similar to the function of Bulls Lane and Harbourview Lane to the west of the subject lands.

- Parking will be provided for each new lot in keeping with By-law requirements.



Left: total calculated area of all parcels adjacent to Belvidere Avenue shown to be ±2.817 ha with 45 single-detached dwellings. This equals a net residential density of 15.97 UPH (45/ 2.8167 ha).

Above: calculated areas of the three adjacent parcels to the east and south, providing the immediate densities of 18.88 UPH (east) and 13.71 UPH (south).
(mapping data provided by Government of Ontario GIS – larger imagery provided in Appendix.)

Planning Policy Overview

Planning Act

The proposed severance and associated minor variances will not result in any unreasonable impact to the surrounding neighbourhood and conforms to the Planning Act. The proposed development has sufficient regard for the matters of provincial interest outlined in subsection 2 of the Planning Act, particularly subsections (a), (b), (f), (h), (j), (l), (m), (n), (p), (q), and (r).

The proposed development is an example of gentle intensification that will sever the two existing lots into four lots that will facilitate the infill development of four single-detached dwellings (one per lot). This infill development is an efficient use of land in the built-up urban area and will utilize existing infrastructure, that continues the orderly development of a safe and healthy community, while providing additional housing. The development is in a pedestrian-friendly neighbourhood with access to numerous transit

stops nearby. Providing infill development within the built-up area is a mitigative method to reduce pressure on the extending urban boundary. The proposed development will maintain the character of the streetscape with consistent height, form, and lot size. Further, the application has included an Environmental Impact Study and Tree Protection Plan ensuring that adjacent core natural areas are protected and enhanced; these studies were prepared in coordination with City of Hamilton Natural Heritage Planning. Following the response from the initial submission of the Consent Application, A.J Clarke and Associates met with interested parties to discuss the implications of the proposed development.

Provincial Policy Statement (PPS), 2020

The proposed consent and development of the lands is consistent with the Provincial Policy Statement (PPS) through numerous applicable policies.

Policy 1.1.1 outlines how healthy, liveable and safe communities are sustained. The proposed development is specifically consistent with 1.1.1. a), b), c), d), e), and h). The proposed consent and development are an efficient use of land that contributes to the housing stock while satisfying the growth management projections for the area through gentle intensification that is transit-supportive and economically efficient by utilizing existing infrastructure. The development provides sufficient setbacks from natural heritage core areas, ensuring their protection and enhancement. The provided Slope Stability and Geotechnical Assessments provide evidence that the development can proceed safely. Policy 1.1.3.1 further details that settlement areas shall be the focus of growth and development. As discussed, the proposed development is within the built-up, urban boundary of the City of Hamilton. It is further exemplary in its consistency with policy 1.1.3.2 in that it efficiently uses the existing land, resources, infrastructure, and public service facilities while supporting active transportation in a transit-supportive neighbourhood.

Policy 1.1.3.3 states that planning authorities shall identify appropriate locations and opportunities for transit-supportive development, accommodating a significant supply and range of housing options through intensification where feasible. Policy 1.1.3.4 states that *"development standards should be promoted which facilitate intensification, redevelopment and compact form, while avoiding or mitigating risks to public health and safety."* As previously mentioned, the Geotechnical reports provide evidence that the development can proceed safely in proximity to the escarpment edge.

Section 1.4 regards policy affecting housing and once again reiterates the importance of providing a sufficient supply of housing while promoting intensification, wise use of resources and infrastructure, and transit-supportive development.

Section 1.6 of the PPS relates to infrastructure and public service facilities. Policy 1.6.3 states that prior to developing new infrastructure and public service facilities, the existing ones should be optimized. The proposed development will utilize the public infrastructure and service facilities that surround it including the water and wastewater systems, roads, parks, and schools.

In accordance with the criteria described above, the proposed development is consistent with the policies of the Provincial Policy Statement, 2020.

A Place to Grow: Growth Plan for the Greater Golden Horseshoe (P2G), 2020

The P2G Plan continues to direct planning, keeping in line with the PPS. Of significance to the proposed development is Section 2: Where and How to Grow; this section directs planning policy in the same manner as the PPS as to where development shall occur.
Policy 2.2.1.2.a) states that *the "majority of growth will be directed in settlement areas that have a delineated built boundary, have existing or planned municipal water and wastewater systems and can support the achievement of complete communities."* As previously described, the proposed development is fully in line with this policy; the development exists within the built-up, urban boundary with existing infrastructure and will add to the complete community goals and objectives.

Policy 2.2.6.1.a) states that municipalities will support housing choice through achievement of minimum intensification and density targets by identifying a diverse range and mix of housing options and densities to meet projected needs. The proposed development is consistent with this policy as it creates additional housing through gentle intensification that falls well within the densities permitted in the Official Plan. Greater detail of the existing and proposed densities has been described above.

The proposed development is consistent with the policies set forth in the Growth Plan for the Greater Golden Horseshoe, 2020.

Urban Hamilton Official Plan, 2022

The subject lands are designated 'Neighbourhoods' on Schedule E-1 – Urban Land Use Designations in the Urban Hamilton Official Plan (UHOP). The 'Neighbourhoods' designation permits many different uses and built forms including those proposed by this application.

Policy B.2.4.1.3.c) states that *"30% of the residential intensification target is anticipated to occur within the Neighbourhoods as illustrated on Schedule E – Urban Structure. The City will review and update its Zoning By-law to facilitate the planned housing units to be developed within the Neighbourhoods through intensification."*

Policy E.2.2.6 also states that *"Intensification, redevelopment and compact form will be encouraged generally throughout the built-up area in accordance with appropriate development standards."*

Policies B.2.4.1.4 and B.2.4.2.2 of the Official Plan list numerous criteria with which residential intensification developments within the built-up area shall be evaluated. The proposed development is in conformity with these policies as described in the paragraphs below.

The proposed severance and construction of four single-detached dwellings will result in a density of 12.2 units per hectare (UPH); this is well below the 60 UPH maximum for low-density residential areas and as previously noted, is lower that the neighbourhood average of 15.97 UPH.

Lot widths along Belvidere Avenue vary greatly in size, including 16 (of 45) lots below the zoning required 12-metre lot width. Additionally, all proposed lots meet the requirements for lot area. The proposed lot pattern and area are consistent within the existing neighbourhood.

The lot fabric, building height and massing will be consistent with the neighbourhood. The parcels will be served by municipal water, wastewater, and transportation systems. The lands are in proximity to existing mass transit lines and cycling network. As described above, the lands are in proximity to multiple public community facilities and services. No impacts from shadowing, overlook, noise, lighting, traffic, or other nuisances are expected.

Upon review of the applicable policies, the proposed development conforms to and maintains the intent of the Urban Hamilton Official Plan.

City of Hamilton Zoning By-law 05-200

The subject lands are currently zoned C/S-1822 (Urban Protected Residential, Etc) District in the Former City of Hamilton Zoning By-law 6593. The lands have been proposed by the City to be rezoned 'Low Density Residential (R1) Zone' as per Schedule A75 of A157 of Appendix "B" to Report PED22154(a) heard at Planning Committee on February 23, 2024. This matter is scheduled to be decided April 10th, 2024.

The C/S-1822 Zone permits single-detached, semi-detached, and street townhouse dwellings, along with several institutional and public uses. The zoning provisions within Section Nine currently apply to the subject lands; should the lands be rezoned by the city during this process, they will be subject to Section 15.1, both are described in the chart below:

Regulation	Section 9 of Zoning By-law No 6593 C/S-1822 Requirement (Single-detached)	Section 15.1 of Zoning By-law 05-200 R1 Requirements (Single-detached)
Min Lot Width	12 metres	12 metres
Min Lot Area	360 m²	360m²
Min Front Yard	6 metres	6 metres
Min Side Yard	1.2 metres	1.2 metres
Min Rear Yard	7.5 metres	7.5 metres
Max Building Height	11 metres	10.5 metres

The below table details the various lot frontages, depths, and areas, following the proposed severance.

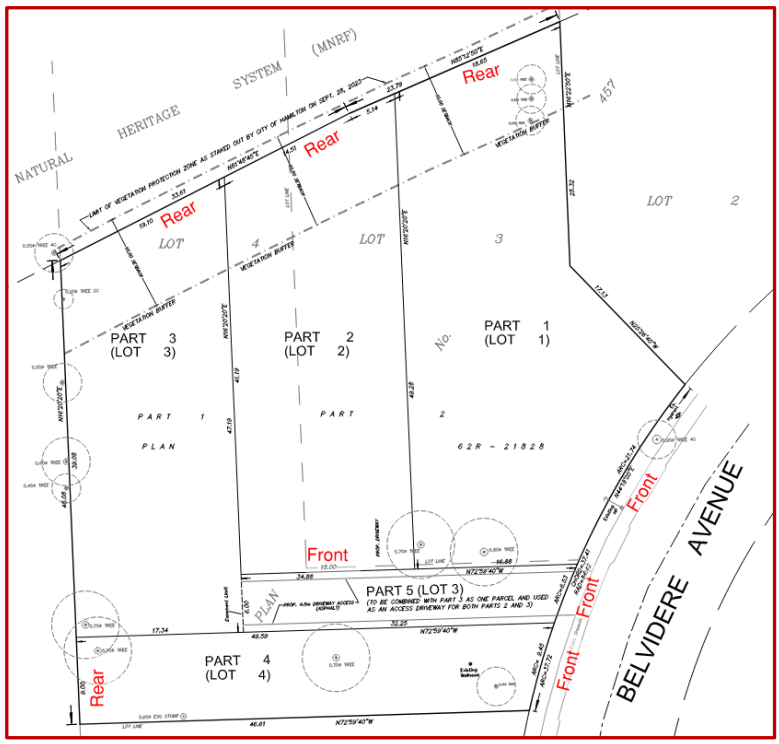
	PART 1 (Lot 1)	PART 2 (Lot 2)	PART 3 together with Part 5 (Lot 3)	PART 4 (Lot 4)
Lot Width	Arc = ±21.74m Defined: ±28.88m	N/A: 18.0m fronting onto Part 3 easement.	Arc = ±6.53m (easement) **ZBL 6593 Defined: ±6.5m**	Arc = ±9.43 m **ZBL 6593 Defined: ±9.45m**
Lot Area	±1,079.67m²	±816.45m²	±949.05m²	±432.05m²

Minor Variances
Variances are required to facilitate the proposed lots. The variances are as follows:

First, to define the proposed lot lines for all proposed lots:

1. Notwithstanding any definitions of Former City of Hamilton Zoning By-law 6593 or City of Hamilton Zoning By-law 05-200, to the contrary, the proposed lot lines shall be as described below:
    - Lot 1 (Part 1): The rear lot line shall be the northernmost lot line adjacent to the Niagara Escarpment.
    - Lot 2 (Part 2): The front lot line shall be the southernmost lot line abutting Part 5. The rear lot line shall be the northernmost lot line adjacent to the Niagara Escarpment.
    - Lot 3 (Parts 3 and 5): The front lot line shall be the lot line abutting the Belvidere Avenue shared access easement. The rear lot line shall be the northernmost lot line adjacent to the Niagara Escarpment.

    The image below provides further clarification:



Variance Required for Lot 2 (Part 2 on Sketch)

2. To permit a front yard setback of 1.2 metres, whereas 6 metres is required.

Variance required for Lot 3 (Parts 3 and 5 on Sketch)

3. To permit a Minimum Lot Width of 6 metres (as per Zoning By-law 6593 definition), to facilitate a shared access driveway whereas 12 metres is required for a single-detached lot.

Variance required for Lot 4 (Part 4 on Sketch)

4. To permit a Minimum Lot Width of 9 metres, whereas 12 metres is required.

This Minor Variance application is made under the authority of Section 45(1) of the Planning Act. Accordingly, a Minor Variance must meet the requisite four tests as described in Section 45 (1) of the Planning Act. An analysis of these tests, and our professional planning opinion is provided below:

1. Do the proposed variances maintain the intent and purpose of the Urban Hamilton Official Plan?

As discussed in greater detail above, the proposed lot severances and residential land use maintains the intent and purpose of the Urban Hamilton Official Plan. The application is an excellent example of infill development within the built-up urban area of Hamilton in a built form compatible with the existing neighbourhood and provides a density that is in keeping, or lower than, the surrounding neighbourhood density. The aesthetic character of the street will be preserved, as the development will have two single-detached dwellings facing out to Belvidere Avenue. Parts 2 and 3 will be set back from the street and therefore will not have any negative impact to the existing streetscape.

Further, the proposed development will protect and enhance the natural heritage features adjacent to the subject lands through the provision of a 10-metre vegetative buffer to the Niagara Escarpment Core Area.

It is my professional opinion that the proposed variances maintain the intent and purpose of the Urban Hamilton Official Plan.

2. Do the proposed variances maintain the intent and purpose of the City of Hamilton Zoning By-law 05-200?

The required variances to the City of Hamilton Zoning By-law are intended to facilitate a desirable built form which is compatible with the existing neighbourhood.

The variance to address the defined lot lines will ensure appropriate development setbacks are compatible to the surrounding neighbourhood.

Lot 3 requires a variance to permit a 6-metre-wide lot width. This variance is technical in nature, as this area is intended to act as a driveway providing vehicular and pedestrian access to Part 3, and Part 2 via easement. The intent of performance standards regarding lot widths are to ensure there is appropriate space on a lot for a structure while still providing sufficient setbacks from neighbouring lots. The building envelope for Part 3 will be located west of the access easement limit and will be provided sufficient area and width for a single-detached dwelling, while maintaining required setbacks.

Part 4 requires a variance to permit a lot width of 9 metres. This will facilitate the development of a single-detached house. Additionally, the lot area exceeds the by-law requirements. Further to this, the adjacent easement access will also ensure that no buildings will be located within 7.2 metres north of the future dwelling on Part 4, reducing the impact on the proposed residential lots to the north.

The intent of a front yard setback is to ensure that low-density residential streetscapes are not overwhelmed by encroaching residential structures. This creates softer, open, streetscapes with

greenspace. As Part 2 is located almost 17 metres from the streetscape, the front yard setback will have no negative impact on the street or neighbourhood and provide an appropriate building envelope.

As noted above, the proposed variances are consistent with the established character of the neighbourhood, and it is my professional opinion that the requested variances maintain the intent and purpose of the Former City of Hamilton Zoning By-law 6593 and City of Hamilton Zoning By-law 05-200.

3. Are the proposed variances appropriate for the development of the subject lands?

As noted above, the variances are intended to facilitate a desirable built form within an urban neighbourhood, on full municipal services. Proposed is a built form and use that is consistent with the Planning Act, Provincial Policy Statement, and Growth Plan and conforms to the UHOP and general intent of the zoning by-law. It facilitates gentle intensification in a residential neighbourhood in an attractive form. As noted above, the proposed variances are consistent with the established character of the neighbourhood and are therefore appropriate for the development of the subject lands.

4. Are the proposed variances minor in nature?

In accordance with the above criteria, variances to define lot lines, and to permit reduced lot widths and a front yard setback, will be required to facilitate the creation of the lots and the desired and compatible built form. The proposed minor variances will provide relief from these zoning deficiencies and requirements, which are minor in nature.

The proposed plans have been adapted following neighbourhood concerns regarding safety and the number of driveway accesses. As noted, the proposed density is below the neighbourhood average and adjoining lots. An EIS has provided a 10-metre buffer from the adjacent core area. A Slope Stability and Geotechnical Assessment has further provided support for the proposed development.

It is the intent that any future dwellings be designed to meet the requirements of the zoning by-law. The applications before Committee will facilitate the creation of two additional lots. As such, the subject land is appropriate for the proposed development, has sufficient regard for the matters listed under Section 51 (24) of the *Planning Act*, represents good planning, and should be approved.

I trust that you will find the enclosed satisfactory for your purposes. Please confirm receipt of this submission and we look forward to being scheduled for the next available hearing date. If you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,

Franz Kloibhofer, BES (Hons.), MCIP, RPP

Principal Planner

A. J. Clarke and Associates Ltd.

Encl.

Copy via email: Adam Colalillo
Lucas Colalillo
Beni Colalillo

Appendix A

Original Submission Staff Comments

February 16th, 2023

HM/B-22:133 – 14 Belvidere Avenue, Hamilton

Consolidation Report

The attached comments have been reviewed with regard to the above noted Committee of Adjustment application and the following comments are submitted:

Should the Committee grant the severance, an approval should be subject to the following condition(s):

1. The owner shall submit a deposited Ontario Land Surveyor's Reference Plan to the Committee of Adjustment Office, unless exempted by the Land Registrar. The reference plan must be submitted in pdf and also submitted in CAD format, drawn at true scale and location and tied to the City corporate coordinate system. (Committee of Adjustment Section)

2. The owner shall pay any outstanding realty taxes and/or all other charges owing to the City Treasurer. (Committee of Adjustment Section)

3. The owner submits to the Committee of Adjustment office an administration fee, payable to the City of Hamilton, to cover the costs of setting up a new tax account for each newly created lot. (Committee of Adjustment Section)

4. An assessment of the information provided shows that there are potential conflicts with existing public trees or trees that will become publicly owned trees through right of way widening. (To the Forestry and Horticulture Section c/o the Urban Forestry Health Technician.)

    - A **Permit** to injure or remove municipal trees is a requirement of this application. Therefore, a **Tree Management Plan** must be submitted to the Forestry and Horticulture Section c/o the Urban Forestry Health Technician, to address potential conflicts with publicly owned trees. (To the Forestry and Horticulture Section c/o the Urban Forestry Health Technician.)

    - **A permit will be issued upon approval of the Tree Management Plan and applicable fees.** (To the Forestry and Horticulture Section c/o the Urban Forestry Health Technician.)

5. The Owner must enter into with the City of Hamilton and register on title, a combined External Works and Consent Agreement, having an administrative fee to address issues including but not limited to: lot grading and drainage to a suitable outlet on the conveyed and retained parcels (detailed grading plan required), erosion and sediment control measures (to be included on the grading plan); cash payment requirements for items such as any outstanding servicing cost for the

existing municipal services adjacent to the property, street trees (City policy requires one (1) street tree/lot, inspection of grading, stormwater management infrastructure and securities for items that may include: lot grading ($10,000.00 grading security), driveway approaches, relocation of any existing infrastructure and any damage during construction (unknown costs at this time), to the satisfaction of the Director of Development Engineering. Cash payments mentioned above are subject to change.

6. The Owner / Applicant shall extend the combined sanitary and storm sewer to the full frontage of the property limits and provide detailed design plans, cost estimate with sufficient security deposit, insurance certificates and obtain ECA Approval from the Ministry of the Environment, Conservation and Parks (MECP), all to the Satisfaction of the Director of Development Engineering.

7. The applicant shall provide a Stormwater Management Brief in accordance with the City Comprehensive Development Guidelines (2020) and to the satisfaction of the Manager of Development Engineering Approvals.

8. The owner shall receive final approval of any necessary variances from the requirements of the Zoning By-law as determined necessary by the Planning and Economic Development Department (Planning Division – Zoning Examination Section).

9. That the owner submits and received approval of an Environmental Impact Statement, to the satisfaction of the Manager of Heritage and Urban Design.

10. That the owner submits and receive approval of a Tree Protection Plan, including the review fee as per the Schedule of Rates and Fees, prepared by a qualified tree management professional (i.e., certified arborist, registered professional forester, or landscape architect) to the satisfaction of the Manager of Heritage and Urban Design.

11. That the owner submits and received approval of a Landscape Plan, prepared by a landscape architect, to the satisfaction of the Manager of Heritage and Urban Design.

12. That the Applicant (or their Agent) apply for and receive approval of a Minor Variance to rectify all zoning deficiencies prior to the issuance of the Final Certificate, to the satisfaction of the Manger of Development Planning.

13. That the owner repeals the Heritage Designation By-law prior to receiving the Final Certificate, to the satisfaction of the Manager of Heritage and Urban Design.

Acknowledgement Note: The subject property has been determined to be an area of archaeological potential. It is reasonable to expect that archaeological resources may be encountered during any demolition, grading, construction activities, landscaping, staging, stockpiling or other soil disturbances. If archeological resources are encountered, the proponent may be required to conduct an archaeological assessment prior to further impact in order to address these concerns and mitigate, through preservation or resource removal and documentation, adverse impacts to any significant archaeological resources found. Mitigation, by an Ontario-licensed archaeologist, may include the monitoring of any mechanical excavation arising from this project. If archaeological resources are identified on-site, further Stage 3 Site-specific Assessment and Stage 4 Mitigation of Development Impacts may be required as determined by the Ontario Ministry of Citizenship and Multiculturalism (MCM). All archaeological reports shall be submitted to the City of Hamilton for approval concurrent with their submission to the MCM.

Should deeply buried archaeological materials be found on the property during any of the above development activities the MCM should be notified immediately (416-212-8886). In the event that human remains are encountered during construction, the proponent should immediately contact both MCM and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Government and Consumer Services (416-212-7499)."

Note: Based on this application being approved and all conditions being met, the owner / applicant should be made aware that The lands to be retained (Part 2) will remain as **14 Belvidere Avenue (Hamilton)** and the lands to be conveyed (Part 1) will be assigned the address of **12 Belvidere Avenue (Hamilton)** and the lands to be conveyed (Part 3) will be assigned the address of **16 Belvidere Avenue (Hamilton)** and the lands to be conveyed (Part 4) will be assigned the address of **18 Belvidere Avenue (Hamilton).**

We ask that the following be noted to the applicants:

That the Owner agrees to physically affix the municipal numbers or full addresses to either the buildings or on signs in accordance with the City's Sign By-law, in a manner that is clearly visible from the road.

HM/B-22:133 – 14 Belvidere Avenue, Hamilton

PLANNING and ECONOMIC DEVELOPMENT DEPARTMENT

Development Planning – Suburban

The purpose of this application is to permit the conveyance of two parcels of land for future residential development and to retain two parcels of land for future residential development.

	Frontage	**Depth**	**Area**
SEVERED LANDS: (Part 1)	9.43 m±	irregular	883 m^{2} ±
SEVERED LANDS: (Part 3)	9.43 m±	irregular	1044 m^{2} ±
RETAINED LANDS: (Part 2)	9.43 m±	irregular	917 m^{2}±
RETAINED LANDS: (Part 4)	9.43 m±	irregular	431 m^{2} ±

Archaeology

The subject property meets two of the ten criteria used by the City of Hamilton and Ministry of Citizenship and Multiculturalism for determining archaeological potential:

1) In the vicinity of distinctive or unusual landforms; and,
2) Within a property designated under the *Ontario Heritage Act*.

These criteria define the property as having archaeological potential. Accordingly, Section 2 (d) of the *Planning Act* and Section 2.6.2 of the *Provincial Policy Statement* apply to the subject application. Staff note that the former heritage building on designated property was demolished circa 2000 and that the City is in the process of addressing a request to repeal the designation by-law.

If this consent is granted, the City does not require an archaeological assessment, but the proponent must be advised in writing by the Committee of Adjustment as follows:

"**Acknowledgement Note:** The subject property has been determined to be an area of archaeological potential. It is reasonable to expect that archaeological resources may be encountered during any demolition, grading, construction activities, landscaping, staging, stockpiling or other soil disturbances. If archeological resources are encountered, the proponent may be required to conduct an archaeological assessment prior to further impact in order to address these concerns and mitigate, through preservation or resource

removal and documentation, adverse impacts to any significant archaeological resources found. Mitigation, by an Ontario-licensed archaeologist, may include the monitoring of any mechanical excavation arising from this project. If archaeological resources are identified on-site, further Stage 3 Site-specific Assessment and Stage 4 Mitigation of Development Impacts may be required as determined by the Ontario Ministry of Citizenship and Multiculturalism (MCM). All archaeological reports shall be submitted to the City of Hamilton for approval concurrent with their submission to the MCM.

Should deeply buried archaeological materials be found on the property during any of the above development activities the MCM should be notified immediately (416-212-8886). In the event that human remains are encountered during construction, the proponent should immediately contact both MCM and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Government and Consumer Services (416-212-7499)."

Urban Hamilton Official Plan

The subject lands are identified as "Neighbourhoods" in Schedule E – Urban Structure, and designated "Neighbourhoods" in Schedule E-1 – Urban Land Use Designations in Volume 1 of the Urban Hamilton Official Plan (UHOP) policy E.3.4.3 applies and permits single detached dwellings and accessory structures.

The proposed severance is being evaluated as Residential Intensification based on the policies of Sections B.2.4.1.4 and B.2.4.2.2 (Volume 1). The proposed severance will create parcels that will be comparable with the lot size and frontage that front on Belvidere Avenue. The proposed development is compatible with the surrounding area which has single detached dwellings. The proposed lots will integrate well with the lot pattern of the neighbourhood and will be of adequate size to support the intended use. Staff supports this severance as the creation of these lots conform with the UHOP.

"F.1.14.3.1 Consents for new lot creation, for both the severed and retained lands, for residential uses in the Neighbourhoods designation shown on Map E-1 – Urban Land Use Designation, shall be permitted provided the following conditions are met:

a) The lots comply with the policies of this Plan, including secondary plans, where one exists;

b) The lots are in conformity with the Zoning By-law or a minor variance is approved;

c) The lots reflect the general scale and character of the established development pattern in the surrounding area by taking into consideration lot frontages and areas, building height, coverage, mass, setbacks, privacy and overview;

d) The lots are fully serviced by municipal water and wastewater systems; and,

e) The lots have frontage on a public road."

Lot creation for 'Residential Intensification' in the "Neighbourhoods" designation is permitted if the lots meet the criteria of F.1.14.3.1 (UHOP Volume 1). Staff supports the proposed severance as it reflects the general scale and character of the established development pattern. It is the opinion of staff that the proposed development is compatible with the surrounding area in terms of use and scale. The proposed lots will integrate well with the lot pattern of the neighbourhood and are of adequate size to support a building footprint for the intended use.

Cultural Heritage

The subject property comprised Bellevue, a property designated under Part IV of the *Ontario Heritage Act* and a "protected heritage property" under the *Provincial Policy Statement*.

The original building on the property, constructed in 1848 (Bellevue), was demolished circa 2000. Therefore, there are no extant heritage resources on the property and no Cultural Heritage concerns with the proposed land severance.

Staff note the City is in the process of addressing a request to repeal the designation by-law.

Natural Heritage

1. Natural Heritage: The subject property is located within the boundaries of the Urban Hamilton Official Plan (UHOP). Based on Schedule B (Natural Heritage System) of the UHOP, Core Areas have been identified within and adjacent to the subject property. It is important to note that the boundaries of these features are general in nature. In this case, the Core Areas have been identified as the Hamilton Escarpment Environmentally Significant Area (ESA) and Significant Woodland. Any development or site alteration within or adjacent to Core Areas shall not negatively impact their natural features or their ecological functions (policy C.2.3). Development, as defined within the UHOP, includes the creation of a new lot.

   When development has the potential to negatively impact a Core Area's natural features or their ecological functions, an Environmental Impact Statement (ES) is to be prepared (policy C.2.5.8, F.3.2.1.2). The EIS:

- Inventories and describes the existing Core Areas and ecological functions of the site
- Assesses the potential for negative impacts
- Provides recommendations on natural area boundaries, mitigation measures and design measures to accommodate or enhance existing natural features or functions.

The EIS is to be prepared in accordance with the City's Council adopted EIS Guidelines (revised March 2015).

Since an EIS has not been prepared and it the limits of the Core Areas have not been clearly delineated, it is recommended that this application be tabled.

2. Tree Resources: Through aerial photograph interpretation, trees have been identified within the subject property. Existing mature trees provide many benefits (i.e., canopy cover, energy conservation, mental health benefits, wildlife habitat) to the larger community. The City recognizes the importance of trees and woodlands to the health and quality of life in the community and encourages the protection of trees and forests (policy C.2.11.1). Based on the proposal, there may be impacts to trees. The decision to retain trees is to be based on vigour, condition, age, and species. A Tree Protection Plan (identifying the species, condition, number of trees removed as well as any tree protection measures have not been provided with this application. It is recommended that a Tree Protection Plan (TPP) be prepared by a recognized tree management professional (i.e., certified arborist, registered professional forester, or landscape architect) in accordance with the City's Council adopted Tree Protection Guidelines (revised October 2010).

   Condition 1: That the owner submits and receive approval of a Tree Protection Plan, including the review fee as per the Schedule of Rates and Fees, prepared by a qualified tree management professional (i.e., certified arborist, registered professional forester, or landscape architect) to the satisfaction of the Manager of Heritage and Urban Design.

3. Landscape Plan: To ensure that existing cover is maintained, the City requires 1 for 1 compensation for any tree (10 cm DBH or greater) that is proposed to be removed. Typically, compensation is provided on a Landscape Plan.

   Condition 2: That the owner submits and received approval of a Landscape Plan, prepared by a landscape architect, to the satisfaction of the Manager of Heritage and Urban Design.

Hamilton Zoning By-law No. 6593

The subject lands are zoned Urban Protected Residential "C/S-1822" District which permits the use of single detached dwellings and structures accessory thereto, in accordance with the applicable provisions. A minimum width of 12.0 metres and a minimum area of 360 square metres is required, as per the applicable "C" District. The applicant must receive approval of a Minor Variance to rectify all zoning deficiencies prior to the issuance of the Final Certificate.

Recommendation

Having regard for the matters under subsection *51(24) of the Planning Act,* staff is satisfied that the proposed lots are suitable for the use, the proper and orderly development of the land. However, since an EIS has not been prepared and it the limits of the Core Areas have not been clearly delineated, it is recommended that this application be **tabled.**

If application is **Approved**, please add the following conditions:

1. That the owner submits and received approval of an Environmental Impact Statement, to the satisfaction of the Manager of Heritage and Urban Design.
2. That the owner submits and receive approval of a Tree Protection Plan, including the review fee as per the Schedule of Rates and Fees, prepared by a qualified tree management professional (i.e., certified arborist, registered professional forester, or landscape architect) to the satisfaction of the Manager of Heritage and Urban Design.
3. That the owner submits and received approval of a Landscape Plan, prepared by a landscape architect, to the satisfaction of the Manager of Heritage and Urban Design.
4. That the Applicant (or their Agent) apply for and receive approval of a Minor Variance to rectify all zoning deficiencies prior to the issuance of the Final Certificate, to the satisfaction of the Manger of Development Planning.
5. That the owner repeals the Heritage Designation By-law prior to receiving the Final Certificate, to the satisfaction of the Manager of Heritage and Urban Design.

"**Acknowledgement Note:** The subject property has been determined to be an area of archaeological potential. It is reasonable to expect that archaeological resources may be encountered during any demolition, grading, construction activities, landscaping, staging, stockpiling or other soil disturbances. If archeological resources are encountered, the proponent may be required to conduct an archaeological assessment prior to further impact in order to address these concerns and mitigate, through preservation or resource

removal and documentation, adverse impacts to any significant archaeological resources found. Mitigation, by an Ontario-licensed archaeologist, may include the monitoring of any mechanical excavation arising from this project. If archaeological resources are identified on-site, further Stage 3 Site-specific Assessment and Stage 4 Mitigation of Development Impacts may be required as determined by the Ontario Ministry of Citizenship and Multiculturalism (MCM). All archaeological reports shall be submitted to the City of Hamilton for approval concurrent with their submission to the MCM.

Should deeply buried archaeological materials be found on the property during any of the above development activities the MCM should be notified immediately (416-212-8886). In the event that human remains are encountered during construction, the proponent should immediately contact both MCM and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Government and Consumer Services (416-212-7499)."

Zoning:

1. The applicant should obtain an appropriate municipal address for the proposed parcel(s) from the Growth Planning Section of the Planning and Economic Development Department prior to the issuance of a building permit.

2. The current zoning designation permits each lot to provide a minimum lot width of 12.0m and a minimum lot area of 360 square metres. It appears that each proposed lot does not comply to the minimum lot width requirements.

   As such, variances for a reduced lot width will be required for zoning compliance of the lands to be conveyed/retained.

3. All future development shall conform to the requirements of the current C/S-1822 zone of Hamilton Zoning By-law 6593.

CONDITIONAL UPON:

The owner shall receive final approval of any necessary variances from the requirements of the Zoning By-law as determined necessary by the Planning and Economic Development Department (Planning Division – Zoning Examination Section).

Development Engineering:

Information:

1) According to our GIS records, the existing municipal infrastructure that fronts the subject property is described below:

Concession Street

- 150mmø Watermain
- No sewers front the subject property*

  *The Owner / Applicant will be required to extend the municipal sewer to the full frontage of the property limits.

2) Development Engineering defers to Transportation Planning for any road improvements requirements.

Recommended Conditions:

1) The Owner must enter into with the City of Hamilton and register on title, a combined External Works and Consent Agreement, having an administrative fee to address issues including but not limited to: lot grading and drainage to a suitable outlet on the conveyed and retained parcels (detailed grading plan required), erosion and sediment control measures (to be included on the grading plan); cash payment requirements for items such as any outstanding servicing cost for the existing municipal services adjacent to the property, street trees (City policy requires one (1) street tree/lot, inspection of grading, stormwater management infrastructure and securities for items that may include: lot grading ($10,000.00 grading security), driveway approaches, relocation of any existing infrastructure and any damage during construction (unknown costs at this time), to the satisfaction of the Director of Development Engineering. Cash payments mentioned above are subject to change.

2) The Owner / Applicant shall extend the combined sanitary and storm sewer to the full frontage of the property limits and provide detailed design plans, cost estimate with sufficient security deposit, insurance certificates and obtain ECA Approval from the Ministry of the Environment, Conservation and Parks (MECP), all to the Satisfaction of the Director of Development Engineering.

3) The applicant shall provide a Stormwater Management Brief in accordance with the City Comprehensive Development Guidelines (2020) and to the satisfaction of the Manager of Development Engineering Approvals.

Transportation Planning:

1. Transportation Planning has no objection to the land severance application.

Legislative Approvals:

Note: Based on this application being approved and all conditions being met, the owner / applicant should be made aware that The lands to be retained (Part 2) will remain as **14**

Belvidere Avenue (Hamilton) and the lands to be conveyed (Part 1) will be assigned the address of **12 Belvidere Avenue (Hamilton)** and the lands to be conveyed (Part 3) will be assigned the address of **16 Belvidere Avenue (Hamilton)** and the lands to be conveyed (Part 4) will be assigned the address of **18 Belvidere Avenue (Hamilton).**

We ask that the following be noted to the applicants:

That the Owner agrees to physically affix the municipal numbers or full addresses to either the buildings or on signs in accordance with the City's Sign By-law, in a manner that is clearly visible from the road.

See attached for additional comments.

Shannon Clarke, Urban Forest Health Technician
100 King Street West, 14th Floor
Hamilton, On L8P 1A2
urbanforest@hamilton.ca

Hamilton

Forestry & Horticulture Section
Environmental Services Division
Public Works Department

Date: February 7, 2023

To: Jamila Sheffield, Committee of Adjustment Secretary/Treasurer
Development Planning
City Hall – 71 Main Street West -5th Floor

From: Shannon Clarke, Urban Forest Health Technician

Subject: 14 Belvidere Avenue, Hamilton
File: HM/B-22:133

PREAMBLE

In response to your Agenda listing for the upcoming meeting on Thursday, February 16, 2023, regarding the above subject area under discussion, the Forestry & Horticulture Section has reviewed the submission associated with the Application for Consent/Land Severance for this site and provides the following opinion:

SCOPE

An assessment of the information provided shows that there are potential conflicts with publicly owned trees or trees that may become city assets through right of way widening. Where existing municipal trees are impacted by development work, are within proximity of the development work or access/egress to the development work, a Tree Management Plan must be submitted to the Forestry and Horticulture Section c/o the Urban Forestry Health Technician.

Where ownership of trees in proximity to the boundary between public and private land is un-certain, the subject trees must be surveyed by the applicant to confirm ownership. Ownership is as per By-law 15-125. Ownership must be clearly identified on the Tree Management Plan as either municipal or private.

A **Permit** to injure or remove municipal trees is a requirement of this application. Therefore, a **Tree Management Plan** must be submitted to the Forestry and Horticulture Section c/o the Urban Forestry Health Technician, to address potential conflicts with publicly owned trees.

Conditions of the Forestry and Horticulture Section will be cleared only after receipt of all applicable fees and payments.

TREE MANAGEMENT

Tree Protection is a measure of efforts to preserve existing trees during the Planning of New Developments, Infrastructure Enhancements, Utility Upgrades & Residential Improvements.

The Forestry & Horticulture Section requires that a Tree Management Plan be prepared by a MTCU Qualified Arborist, or ISA Certified Arborist, or a Registered Landscape Architect. All trees within this proposed development area must be surveyed, identified and accurately plotted on the plan to determine ownership, including intensions regarding retention or removal.

It is compulsory that all proposed surface treatment changes within individual tree driplines as well as property lines, building footprints, driveways, utility construction corridors and temporary access roads be accurately depicted on the submission.

The Tree Inventory Analysis Table on the Tree Management Plan shall not be considered complete without the following data and recommended action for each tree.

- Species by Botanical and common name
- Diameter at breast height in centimeters or millimeters
- Ownership {> 50% @ ground level = ownership}
- Biological health
- Structural condition
- Proposed grade changes within individual driplines {compulsory}
- Proposed utility construction within individual driplines {compulsory}
- Proposed removals or relocations
- Proposed trees to be protected

If it is determined and verified that existing trees can remain, a Tree Protection Zone Detail with notes showing Tree Preservation Techniques shall be included on the submission as per the **Public Tree Preservation and Sustainability Policy.**

The determination of ownership of all trees is the responsibility of the applicant and any civil issues which may exist or arise between property owners with respect to trees, must be resolved by the applicant. The ownership of each individual tree inventoried must be clearly stated as municipal or private.

All Healthy trees on municipal property which are found to be in conflict with this proposed development and do not meet our criteria for removal are subject to a replacement fee as outlined in the **Public Tree Preservation and Sustainability Policy** in conjunction with **By-Law 15-125**.

A permit will be issued upon approval of the Tree Management Plan and applicable fees.

LANDSCAPE PLAN

No new Landscape Strips are shown on the submission and none are requested by the Forestry and Horticulture Section.

SUMMARY OF FORESTRY CONDITIONS

- An assessment of the information provided shows that there are potential conflicts with existing public trees or trees that will become publicly owned trees through right of way widening.

- A **Permit** to injure or remove municipal trees is a requirement of this application. Therefore, a **Tree Management Plan** must be submitted to the Forestry and Horticulture Section c/o the Urban Forestry Health Technician, to address potential conflicts with publicly owned trees.

- **A permit will be issued upon approval of the Tree Management Plan and applicable fees.**

If you require clarification or technical assistance, please do not hesitate to contact me at (905) 546-2424 Ext. 4407.

Regards,

Shannon Clarke
Urban Forest Health Technician

From:	Laven, Amaraine (MNRF)
To:	Committee of adjustment
Cc:	Obradovic, Andrej (MNRF); Adair, Kendra (MNRF)
Subject:	NEC comments regarding HM/B-22:133 14 Belvidere Avenue, Hamilton
Date:	Thursday, February 9, 2023 1:24:53 PM

Dear Committee of Adjustment,

Thank you for including the Niagara Escarpment Commission (NEC) in the circulation of proposals to be considered at the Committee of Adjustment on February 16, 2023.

Please be advised of the following comments regarding two properties that are within the Niagara Escarpment Plan (NEP) area and designated as Urban Area:

- **HM/B-22:133 14 Belvidere Avenue, Hamilton**
  - The subject property is within the NEP area and is designated as Urban Area.
  - The subject property is outside of NEC development control and therefore no permit is required from the NEC for the creation of lots or any subsequent development.
  - In the NEP area, local plans are required to not conflict with the NEP and the policies of the NEP apply:
    - The objective of Part 2.5 of the NEP is to ensure that development affecting steep slopes (e.g., Escarpment slopes, rock faces, talus slopes) is compatible with the Escarpment environment and does not result in unsafe conditions.
    - Part 2.5.1-4 outline development criteria requiring that the accurate location of the top of slope and an appropriate development setback are established. Further, no development is permitted on slopes in excess of 25% (1:4 slope) unless an engineering report has been prepared by the applicant that demonstrates the future stability of the slope would not be affected.
    - Part 2.5.5 of the NEP states that during development a screen of appropriate fencing material should be established approximately 3 metres from the crest of the slope to prevent any dumping.
  - The property backs onto a steep Escarpment slope and contains several mature trees.
  - NEC advises that prior to a decision regarding the proposed additional lots, the proponent provide a geotechnical assessment that assesses the slope along this reach, locates the accurate location of the top of slope, provides a recommended development setback and that the lots to be created should be outside of that development setback. A preliminary development concept should also be provided to demonstrate that the proposed development (the creation of 4 residential lots where there are currently 2 lots) is possible. NEC staff advise that this process may be determinative in terms of the

number of lots possible.

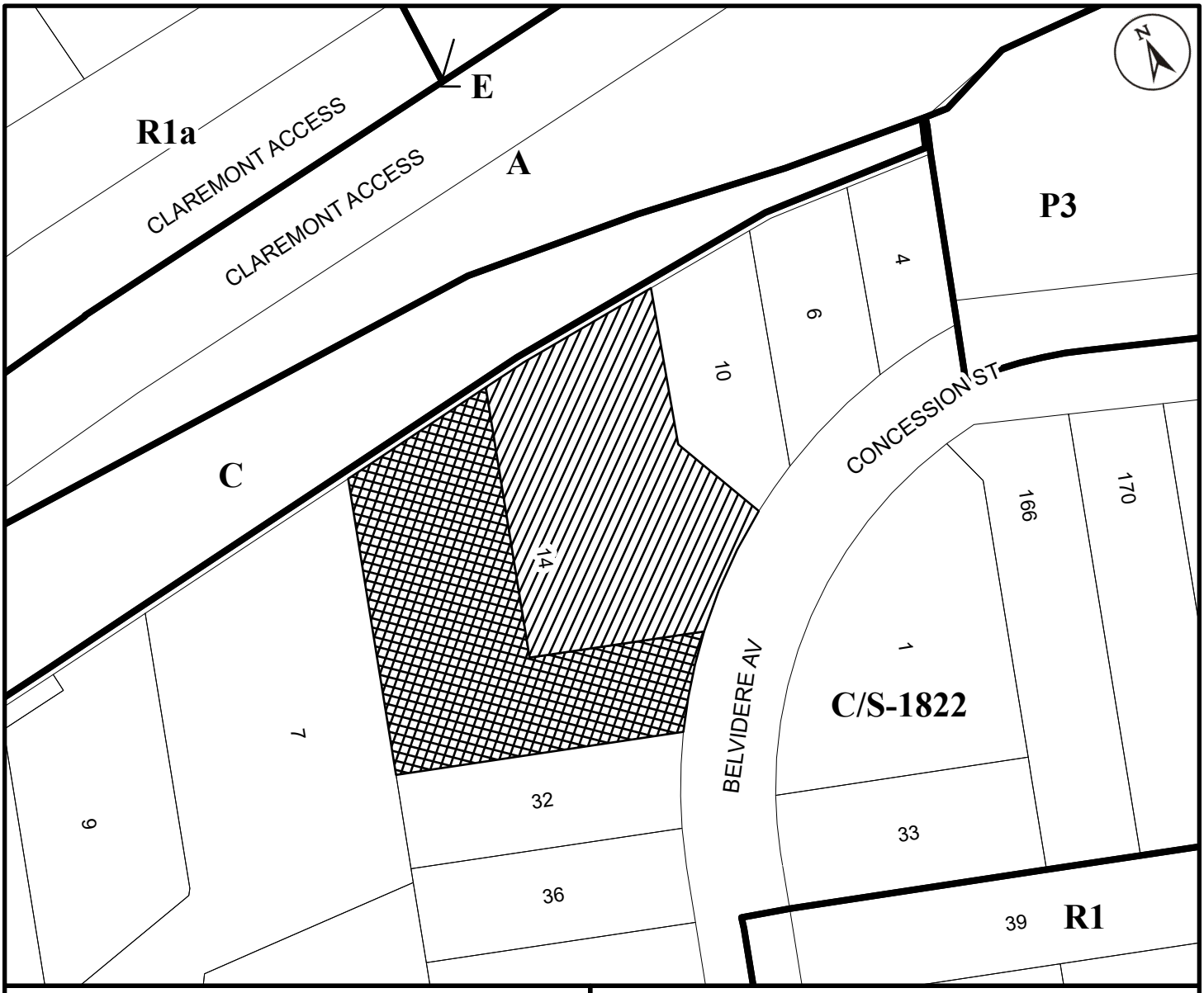
- The NEC also advises that there may be visual impact concerns pending the proposed location and height of dwellings in relation to the top of slope as well as if vegetation removal is proposed. Staff therefore request a preliminary vegetation protection plan that aligns with the preliminary development concept. Upon receipt of this information along with a development concept, NEC staff will be able to further advise whether the proposal conflicts with any policies under Part 2.13 of the NEP.
- In summary, the NEC requests the following information prior to a decision on the application:
    - A concept plan that includes a residential development concept (dwelling footprint, height, accessory structures, amenity area, limit of development, etc.)
    - A geotechnical assessment/slope stability assessment that assesses the slope as well as the concept plan, provides a development setback (beyond which no development is to occur)
    - A preliminary vegetation protection plan that identifies (size and species) all vegetation that is to be removed and retained, as well as protective measures for vegetation that is to be retained including the wooded area backing onto the property.
    - Please be advised that if upon receipt of more detailed plans that an impact to the wooded area or scenic resources is anticipated, additional information may be required.

- **FL/A-23:08 138 McMonies Drive, Flamborough**
    - The subject property is within the NEP area and is designated as Urban Area.
    - The subject property is outside of NEC development control and therefore no permit is required from the NEC for development.
    - The NEC has no concerns with the proposal for a new deck.

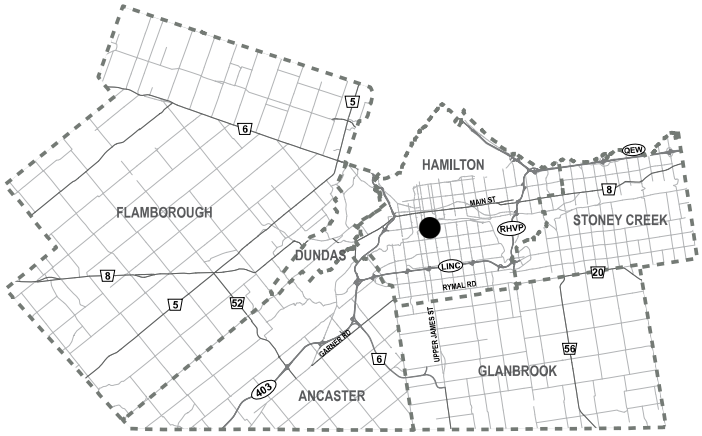
I hope this information is helpful. Please let us know if you have any questions.

Sincerely,

Amaraine Laven (she, her)**,** MCIP, RPP
Senior Strategic Advisor | Niagara Escarpment Commission
232 Guelph Street, Georgetown, Ontario, L7G 4B1
905-703-6097 | www.escarpment.org



● **Site Location**



City of Hamilton

Committee of Adjustment

Subject Property

14 Belvidere Avenue, Hamilton (Ward 8)

Lands to be Retained

Lands to be Severed

File Name/Number:
HM/B-22:133

Date:
February 1, 2023

Technician:
VS

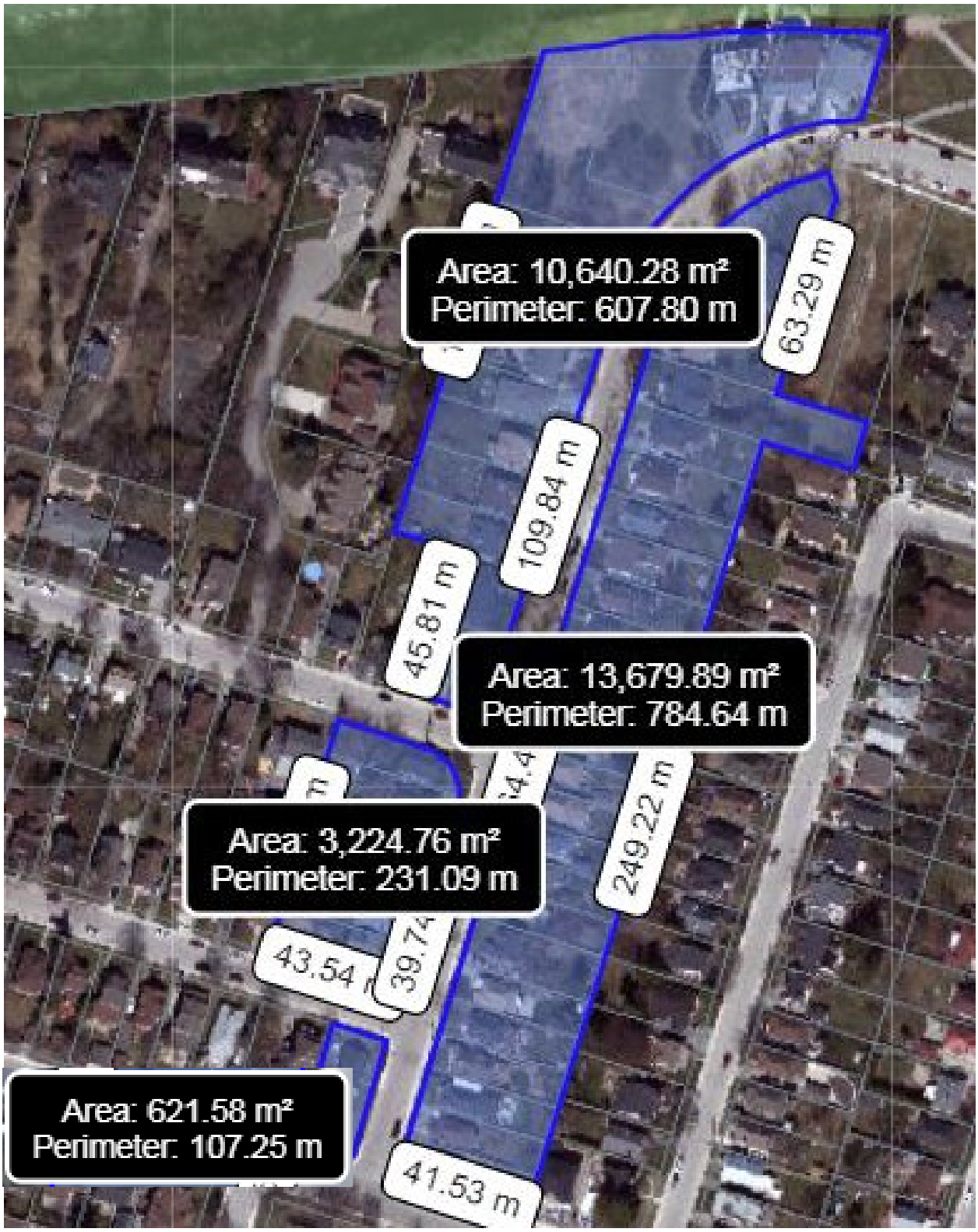
Map Not To Scale

Appendix "A"

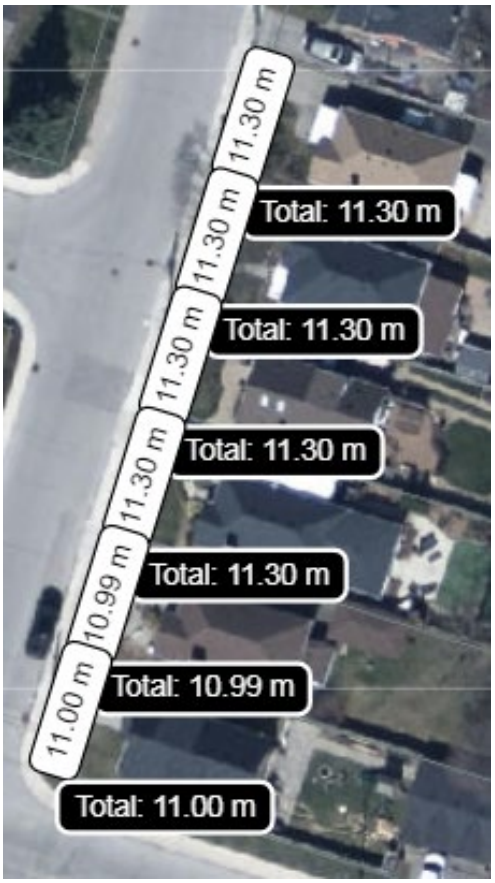
Hamilton

PLANNING AND ECONOMIC DEVELOPMENT DEPARTMENT

Appendix B
Neighbourhood Area Mapping


Area: 10,640.28 m²
Perimeter: 607.80 m
63.29 m
109.84 m
45.81 m
Area: 13,679.89 m²
Perimeter: 784.64 m
249.22 m
Area: 3,224.76 m²
Perimeter: 231.09 m
43.54
39.74
Area: 621.58 m²
Perimeter: 107.25 m
41.53 m


26.56 m
23.97 m
17.90 m
13.20 m
14.49 m
25.48 m
27.66 m
Area: 1,589.48 m²
Perimeter: 164.11 m
48.18 m
Area: 3,294.69 m²
Perimeter: 232.42 m
16.80 m
13.77 m
11.83 m
8.35 m
46.68 m
49.56 m
Area: 2,188.21 m²
Perimeter: 189.71 m
63.29 m
9.06 m
9.16 m
9.73 m
43.69 m



Province of Ontario GIS Mapping: Dimensions of 17 parcels along Belvidere Avenue with widths less than the zoning required 12 metres.

Top Left: 51 & 59 Belvidere Avenue

Top Right: 84, 67, 71, 75, 79, 81, 85, 89, and 93 Belvidere Ave

Bottom Left: 101, 105, 109, 113, 115, 121 Belvidere Ave

Tree Preservation Plan

14 Belvidere Avenue, Hamilton

Prepared for

Beni, Angelina, Adam, Lucas Colalillo

73 Mountain Park Ave

March 5, 2024
Project No. P2023-730

Prepared by

GeoProcess Research Associates Inc.
133 King Street West
PO Box 65506 DUNDAS
Dundas, ON L9H 6Y6

GeoProcess RESEARCH ASSOCIATES

Table of Contents

Tables

Figures

1. Introduction

GeoProcess Research Associates Inc. (GeoProcess) has been retained by Beni, Angelina, Adam, Lucas Colalillo to complete a Tree Preservation Plan (TPP) for a severance at 14 Belvidere Avenue in Hamilton, Ontario. This is herein referred to as the "subject property". It is GeoProcess' understanding that the subject property is the proposed site for a severance of two lots into four lots to facilitate the construction of four single-family detached homes.

The subject property exists as two vacant lots situated within existing residential development on the brown of the Niagara Escarpment in Hamilton, Ontario. The subject property is bounded by the Niagara Escarpment, located approximately 20 m above the Claremont Access, to the north and by Belvidere Avenue to the south (Map 1). The subject property is comprised of manicured lawn and a few scattered trees comprised predominantly Norway maple (*Acer platinoides*) and black locust (*Robinia pseudoacacia*).

A TPP was completed to assess and evaluate existing tree resources within the subject property (i.e., developable lands). This report was prepared under the following applicable policies:

- Forestry Act, R.S.O. c. F.26 (1990)
- City of Hamilton Tree Protection Guidelines (2010)
- City of Hamilton By-Law NO. 15-125 (2015)

2. Methods

GeoProcess conducted a field investigation on April 12, 2023, to inventory and assess existing trees within the subject property (Map 1). An assessment was completed for all individual trees 10 cm in diameter at breast height (DBH) or greater. Tree location coordinates were obtained through the survey conducted by A.J. Clark and Associates.

Trees were assessed for their overall condition based on the following parameters:

- **Tree #** - numbers assigned to trees that correspond to their surveyed/mapped location;
- **Species** - common and botanical names provided in the inventory table;
- **DBH** - diameter (centimetres) at breast height, measured at 1.4 m above the ground;
- **Condition** - condition of trees was assessed as follows:
    - **Trunk integrity (TI)**: conditions of trunk that may affect the likelihood of failure, including co-dominant stems, cracks, decay, poor taper, lean, response growth, abnormal or missing/dead bark, etc.
    - **Crown Structure (CS)**: condition of crown structure that may affect the likelihood of failure, including live crown ratio, presence of defects (including bark, weak attachments, cracks, decay, cavities), crown density, etc.
    - **Crown Vigor (CV)**: an assessment of overall tree health classified as weak/under stress (*poor*), average vigor for its species and site condition with some signs of stress (*fair*), growing well, and appears to be free of significant health stress factors (*good*).

- **Comments** - additional relevant detail.

For this report, tree ownership is defined as:

- "Private Property Tree": Trees with stem(s) on the subject property.
- "Neighboring Tree": Trees with stem(s) on adjacent private property.
- "Boundary Tree": Trees with stem(s) from the ground level to the first branch straddles a property line of a lot.
- "Public Tree": Trees with stem(s) situated on City-owned land adjacent to the subject property.

3. Inventory Results

The results of the tree inventory included four tree species (Table 1) with DBH ranging from 15 cm to 84 cm (Table A1), three of which are considered non-native to Hamilton.

Table 1. Tree Inventory Results

Common Name	Scientific Name	S-Rank[1]	Inventory Count
Black Locust	*Robinia pseudocacia*	SNA	8
Norway Maple	*Acer platanoides*	S5	6
Silver Maple	*Acer saccharinum*	S5	1
White Mulberry	*Morus alba*	SNA	1
		Total	**16**

[1] The NHIC assigns subnational ranks (S-Ranks) for species and plant communities in Ontario using the most up-to-date information and considering factors such as abundance, distribution, population trends, and threats.

The majority of trees were identified as being in "*Good*" overall health apart from one declining white mulberry and one black locust. The dominant trees assessed within the subject property were black locust and Norway maple. Most trees were situated along the subject property boundary lines. Tree #233 was identified as a public tree. Five of the trees (N1-N5) inventoried were situated within a neighbouring property to the west, in close proximity to the property limit.

4. Proposed Development and Impacts

The subject property is the proposed site for a severance of the existing two lots into four to facilitate the construction of four single-family detached homes. Stormwater, sewer and water servicing is proposed to tie into existing municipal services located in Belvidere Avenue.

4.1. Trees Recommended for Removal

Trees recommended for removal were assessed using one or more of the following criteria:

- Location conflicts with proposed works to a degree that would compromise the long-term structural and/or health integrity.
- Current health condition suggests tree is undergoing significant decline and/or death.
- Potential impacts from proposed works will cause the tree to become a hazard to person or property.
- General species intolerance of construction-related and other expected stressors.

Trees #225, 227, 228, 234, 235 are proposed for removal due to direct conflict with the proposed home locations. Tree protection zone encroachment is expected to cause irreversible and fatal damage, and therefore they are recommended for removal.

Table 2. Summary of Trees Recommended for Removal

Tree Ownership Category	Species	Count
Private (subject property)	Norway Maple (#225, #227, #234, #235)	4
Private (subject property)	Black Locust (#228)	1

4.1.1. Compensation

A 10 m Vegetated Protection Zone (VPZ) is proposed from the edge of the Core Area, the Niagara Escarpment, along the northern property boundary. Tree replacement plantings at a 1:1 ratio will be accommodated within the VPZ. In total, five compensation trees will be planted within the VPZ.

5. Tree Protection Plan Implementation and Mitigation Measures

The following section identifies the requirements of the TPP and the recommended mitigation measures to avoid and minimize the effects of the proposed development on the trees identified for preservation.

Once the City approves the TPP, the measures detailed within it can be implemented. This involves the presence of a certified tree management professional on-site at specific times during construction, oversight of protective fencing, and the use of reports and safeguards to ensure compliance with the agreed-upon work.

Prior to any rough grading on the site, commencement of servicing, or issuance of a building permit, the Verification of Tree Protection Letter must be submitted to the City. The grading consultant must confirm that the TPP aligns with the Lot Grading Control Plan before the Planning Division approves these Plans.

5.1. Trees Recommended for Protection

Trees #224, #229, #230 to #233 have been identified for retention. Tree protection fencing is to be installed around #224, and #230-#233 as shown in Map 3, prior to construction under the supervision of an ISA Certified Arborist. Trees #229 and N5 are identified for retention but are located within the VPZ and, therefore, do not require tree protection fencing, as sediment and erosion control fencing will be installed along the limit of the VPZ. Tree protection fencing is not shown for the neighbouring trees, N1 to N4, as an agreement with the neighbour is being sought.

5.2. Tree Protection Fencing

Impacts to trees from the construction activities can be severe and are often latent. Mechanical damage to tree structures (i.e., trunk, roots, and branches) as well as soil compaction from equipment, staging, material storage, and altered drainage patterns can cause potentially fatal impacts that may not become apparent until long-after construction is complete.

Tree protection measures prevent injuries from construction activity by keeping equipment and materials away from the tree. The following section provides appropriate guidelines for minimizing harm to trees while construction work is being conducted on-site.

- Tree protection barriers are to be erected prior to the commencement of any construction or grading activities . They are to remain in place throughout the duration of the project. Hoarding will protect individual trees, groups of trees, and woodland edges to be retained. It should be placed a minimum of one metre from the drip line (Figure 1) of the tree. Paige wire farm fencing and signage shall be the standard form; snow fencing is not acceptable. Signage identifies the purpose for the fencing and provides a contact telephone number if problems arise.
- To avoid damage to trees and soil compaction, access routes should be established away from tree protection zones. Areas protected by temporary fencing will remain undisturbed and will

not be used for temporary storage, placement, or excavation of fill, topsoil, construction materials or equipment, or debris.

- Construction contaminants (fuels, oils) must be kept clear of tree protection zones. The existing grades within the tree protection areas must not be disturbed.
- Wherever possible, avoid cutting the surface roots of trees to be retained. During excavation, if root cutting is necessary, it should be done quickly, making smooth, flush cuts supervised by a tree management professional. Then the roots should be backfilled and watered before they have a chance to dry out.For the best results, developers must ensure their builders and subcontractors are educated about the TPP and its requirements before starting their work. All subcontractors must be supplied with a copy of the approved TPP.

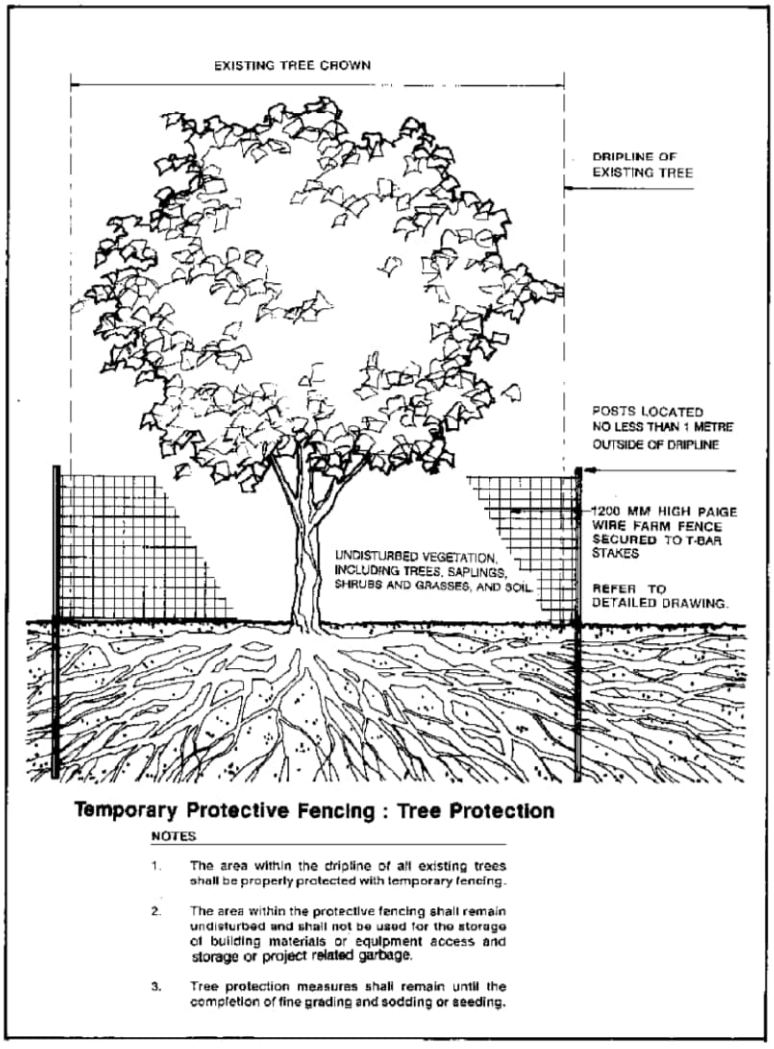


Figure 1. Diagram showing the proper way of measuring protection zone

5.3. Protected Species

The Migratory Birds Convention Act (1994) protects the nests of migratory birds. Trees to be removed from the site should be removed outside of the migratory bird-nesting window, the timing of which

differs regionally across Canada as determined by Environment Canada. Following Environment Canada's guidelines, the window for the subject property is from April 1 to August 31. Trees may be removed during this restricted period only after trees are inspected for nests of protected bird species by a qualified avian biologist immediately prior to removal.

No protected tree species listed under the Endangered Species Act (2007) were found at this site.

6. Conclusions

A total of 4 species and 16 trees were inventoried and assessed for possible preservation in the context of the proposed works. Trees #224, 229, 230-233 and N5 have been identified for retention. Tree protection fencing should be installed around all trees, with the exception of #229 and N5 as they are well within the VPZ and will be protected by the ESC fencing to be placed along the limit of the VPZ. Protection requirements for trees located on the neighbouring property (N1 to N4) will be determined through an agreement with the neighbour.

If you have any questions regarding this submission, do not hesitate to contact us.

Respectfully submitted,
GeoProcess Research Associates Inc.

Scott Dowle, B.Sc., EM
Wildlife Ecologist, ISA Certified Arborist #ON-2994A

Reviewed by:

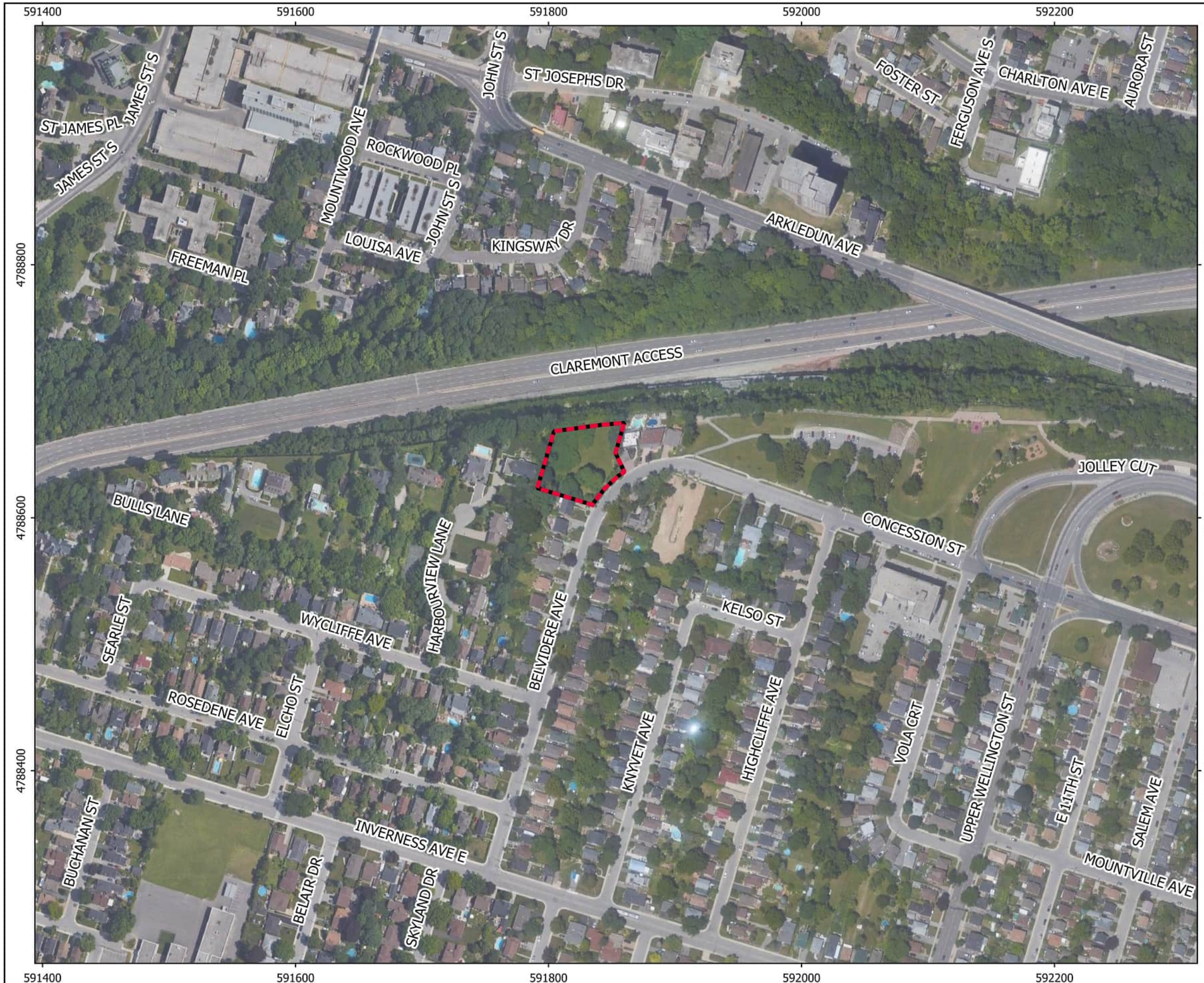
Ken Glasbergen, MSc., ERPG
Senior Ecologist, Principal

Appendix A: Tree Protection Plan

Table A 1. Tree Protection Plan Summary

Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	Dripline Radius (m)	Ownership	Comments	Retain or Remove	Proposed Action
224	Norway Maple	*Acer platinoides*	15, 20	G	G	G	4.5	Private	Multistemmed	**Retain**	Tree protection fencing will be installed
225	Norway Maple	*Acer platinoides*	44, 55	G	G	G	7	Private	Codominant	**Remove**	This tree will be removed
227	Norway Maple	*Acer platinoides*	70	G	G	G	8	Private	Climbing Poison Ivy	**Remove**	This tree will be removed
228	Black Locust	*Robinia pseudoacacia*	60	G	G	G	6	Private	Climbing Poison Ivy	**Remove**	This tree will be removed
229	White Mulberry	*Morus alba*	15	G	P	P	2.5	Private	Epicormick shoots, vines	**Retain**	No action required
230	Black Locust	*Robinia pseudoacacia*	45	G	G	G	7	Private		**Retain**	Tree protection fencing will be installed
231	Black Locust	*Robinia pseudoacacia*	41	G	G	G	5	Private		**Retain**	Tree protection fencing will be installed
232	Black Locust	*Robinia pseudoacacia*	41	G	G	G	5	Private		**Retain**	Tree protection fencing will be installed
233	Silver Maple	*Acer saccharinum*	84	G	G	G	6	Public	Codominant	**Retain**	Tree protection fencing will be installed
234	Norway Maple	*Acer platinoides*	68	G	G	G	7	Private		**Remove**	This tree will be removed
235	Norway maple	*Acer platinoides*	52, 55	G	G	G	7	Private	Codominant	**Remove**	This tree will be removed
N1	Black Locust	*Robinia pseudoacacia*	40	P	P	P	5	Neighbouring	Along fenceline	**Retain**	No action required
N2	Black Locust	*Robinia pseudoacacia*	57	G	G	G	10	Neighbouring	Codominant, along fenc line, lean (L)	**Retain**	No action required
N3	Norway Maple	*Acer platinoides*	60	G	G	G	6	Neighbouring	Along fenceline	**Retain**	No action required
N4	Black Locust	*Robinia pseudoacacia*	58	G	P	P	5	Neighbouring	main litre has been naturally topped	**Retain**	No action required
N5	Black Locust	*Robinia pseudoacacia*	35, 37, 40	F	G	G	7	Neighbouring	Growing in fence	**Retain**	No action required

Maps



Legend

Subject Property

N

0 20 40 60 80 100 m

Prepared using QGIS and Google Satellite Imagery

GeoProcess RESEARCH ASSOCIATES

CREATED BY:	DH	PROJECT NO.:	P2023-730
CHECKED BY:	KG	DATE:	Jan 08, 2024

Map 1.

Key Map

14 Belvidere Avenue
Hamilton

Beni Colalillo

G:\Shared drives\Projects-2023\P2023-730 14 Belvidere Avenue EIS\GIS\Project\Basemap.qgz

591800

591800

Legend

- Subject Property
- Site Plan
- Core Area Limit - Staked with City of Hamilton September 28, 2023
- Core Area 10 m VPZ Limit

N

0 5 10 15 20 m

Prepared using QGIS and Google Satellite Imagery

GeoProcess RESEARCH ASSOCIATES

CREATED BY:	SG	PROJECT NO.:	P2023-730
CHECKED BY:	KG	DATE:	Mar 13, 2024

Map 2

Site Plan

14 Belvidere Avenue
Hamilton
Beni Colalillo

G:\Shared drives\Projects-2023\P2023-730 14 Belvidere Avenue EIS\GIS\Project\Basemap.qgz

591800

591800

Legend

- Subject Property
- Tree Protection Fencing
- Trees for Removal
- Trees for Retention

Tree Dripline

- Site Plan
- Core Area Staked Limit
- 10m Core Area VPZ

N

0 5 10 15 20 m

Prepared using QGIS and Google Satellite Imagery

GeoProcess RESEARCH ASSOCIATES

CREATED BY:	SG	PROJECT NO.:	P2023-730
CHECKED BY:	KG	DATE:	Feb 22, 2024

Map 3

Tree Inventory

14 Belvidere Avenue
Hamilton
Beni Colalillo

G:\Shared drives\Projects-2023\P2023-730 14 Belvidere Avenue EIS\GIS\Project\Basemap.qgz

Environmental Impact Statement

14 Belvidere Avenue, Hamilton ON

Prepared for

Beni, Angelina, Adam, Lucas Colalillo

73 Mountain Park Ave

March 5, 2024

Project No. P2023-730

Prepared by

GeoProcess Research Associates Inc.
133 King Street West
PO Box 65506 DUNDAS
Dundas, ON L9H 6Y6

Table of Contents

List of Tables

List of Maps

1. Introduction

GeoProcess Research Associates Inc. (GeoProcess) been retained by Beni, Angelina, Adam, Lucas Colalillo, to complete an Environmental Impact Statement (EIS) for a lot severance located at 14 Belvidere Avenue in Hamilton, Ontario. This is herein referred to as the "subject property". It is GeoProcess' understanding that the subject property is the proposed site for a severance of two lots into four lots to facilitate the construction of four single-family detached homes. Due to the site being located adjacent to a Core Area, as per the Urban Hamilton Official Plan (UHOP), the proposed severance has triggered the requirement for an Environmental Impact Statement (EIS). The "study area" consists of the subject property plus 120 m of adjacent accessible lands. Refer to Map 1 for the subject property location.

This EIS adheres to the approved Terms of Reference (ToR) and the Environmental Impact Study Guidelines established by the City of Hamilton (revised March 2015). It relies on up-to-date environmental policies, comprehensive background data, and field investigations focusing on the natural heritage features. Following a thorough analysis of gathered information and considering the ecological features within the subject property, appropriate development limits have been established. Additionally, mitigation and management strategies have been provided with the objective of protecting the ecological features and functions the adjacent Core Area. Refer to Appendix A for the ToR.

1.1. Site Description

The subject property exists as two vacant lot situated within a residential neighbourhood located along the Niagara Escarpment brow. The northern boundary of the subject property is located approximately 20 m above the Claremont Access. The lots consist of manicured lawn and several trees comprised predominantly of Norway maple (*Acer platinoides*) and black locust (*Robinia pseudoacacia*) situated along the periphery of the lots. The subject property is accessed from Belvidere Avenue.

2. Policy Context

The following provides a summary of provincial and municipal policy framework related to the natural environment applicable to this severance application.

2.1. Provincial Policy Statement

The Provincial Policy Statement (PPS), 2020 is administered under Section 3 of the *Planning Act*. It became effective May 1, 2020 and replaces the 2014 PPS. The PPS applies to planning decisions made on or after that date. It provides policy direction for land use and development within the Province of Ontario and provides for appropriate development while protecting resources of provincial interest, public health and safety, and the quality of the natural and built environment. The policies of the PPS may be complemented by provincial and municipal plans and policies.

The PPS defines eight natural heritage features and provides planning polices for each, listed below. The function of Natural Heritage Features and Areas is further clarified by the definition of a Natural Heritage System, which is *"a system made up of natural heritage features and areas, and linkages intended to provide*

connectivity (at the regional or site level) and support natural processes which are necessary to maintain biological and geological diversity, natural functions, viable populations of indigenous species, and ecosystems."

1. Significant wetlands
2. Coastal wetlands
3. Fish habitat
4. Significant woodlands
5. Significant valleylands
6. Habitat of endangered species and threatened species
7. Significant Wildlife Habitat
8. Significant Areas of Natural and Scientific Interest (ANSIs)

Section 2.0 and 3.0 of the PPS deal with development and site alteration, and where these activities shall not be permitted. Section 2.0 policies surround the conservation of biodiversity, and protection of the health of the Great Lakes, natural heritage, water, agricultural, mineral and cultural heritage and archaeological resources for their economic, environmental and social benefits. Section 3.0 directs development away from areas of natural or human-made hazards to mitigate risks to public health or safety, and property damage from natural hazards, including the risks that may be associated with the impacts of a changing climate.

Policies in Section 2.1 are particularly relevant as they summarize development and site alteration in and adjacent to *natural heritage features*. These policies and select others are outlined below, in Table 1.

Table 1. Applicable Policies of the Provincial Policy Statement

Policy Number	Policy
(2.1 - Natural Heritage) 2.1.2	The diversity and connectivity of natural features in an area and the long-term *ecological functi*on and biodiversity of *natural heritage systems*, should be maintained, restored or where possible, improved, recognizing linkages between and among *natural heritage features and areas*, *surface water features* and *ground water features*.
2.1.3	*Natural heritage systems* shall be identified in Ecoregions 6E & 7E, recognizing that *natural heritage systems* will vary in size and form in *settlement areas, rural areas*, and *prime agricultural areas*.
2.1.4	*Development* and site alteration shall not be permitted in: a) *significant wetlands* in Ecoregions 5E, 6E and 7E; and, b) *significant coastal wetlands*.
2.1.5	Development and site alteration shall not be permitted in: a) *significant wetlands* in the Canadian Shield north of Ecoregions 5E, 6E and 7E; b) *significant woodlan*ds in Ecoregions 6E and 7E (excluding islands in Lake Huron and St. Marys River); c) *significant valleylands* in Ecoregions 6E and 7E (excluding islands in Lake Huron and St. Marys River); d) *significant wildlife habitat*; e) *significant areas of natural and scientific interest*; and f) *coastal wetlands* in Ecoregions 5E, 6E and 7E that are not subject to policy 2.1.4(b) unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

Policy Number	Policy
2.1.6	*Development* and *site alteration* shall not be permitted in *fish habitat* except in accordance with *provincial and federal requirements*.
2.1.7	*Development and site alteration* shall not be permitted in *habitat of endangered species and threatened species*, except in accordance with *provincial and federal requirements*.
2.1.8	*Development* and *site alteration* shall not be permitted on *adjacent lands* to the *natural heritage features and areas* identified in policies 2.1.4, 2.1.5 and 2.1.6 unless the *ecological function* of the *adjacent lands* has been evaluated and it has been demonstrated that there will be no *negative impacts* on the natural features or on their *ecological functions*.
(2.2 - Water) 2.2.2	*Development* and *site alteration* shall be restricted in or near *sensitive surface water features* and *sensitive ground water features* such that these features and their related *hydrologic functions* will be protected, improved or restored. Mitigative measures and/or alternative development approaches may be required in order to protect, improve or restore *sensitive surface water features*, *sensitive ground water features*, and their *hydrologic functions*.
(3.1 - Natural Hazards) 3.1.1	Development shall generally be directed, in accordance with guidance developed by the Province (as amended from time to time), to areas outside of: a) *hazardous lands* adjacent to the shorelines of the *Great Lakes - St. Lawrence River System* and *large inland lakes* which are impacted by *flooding hazards, erosion hazards* and/or *dynamic beach hazards*; b) *hazardous lands* adjacent to *river, stream* and *small inland lake systems* which are impacted by *flooding hazards* and/or *erosion hazards*; and c) *hazardous sites.*
3.1.3	Planning authorities shall prepare for the impacts of a changing climate that may increase the risk associated with natural hazards

2.2. Endangered Species Act (2007)

The Endangered Species Act (ESA) (2007) provides protection to species designated as Threatened or Endangered on the Species at Risk in Ontario list (MECP 2019). The habitat of select species at risk is also protected under the ESA. Protected habitat is habitat identified as essential for life processes including breeding, rearing, feeding, hibernation and migration.

The ESA (Subsection 9(1)) states that:

"No person shall,

(a) kill, harm, harass, capture or take a living member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species;

(b) possess, transport, collect, buy, sell, lease, trade or offer to buy, sell, lease or trade,

(i) a living or dead member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species,

(ii) any part of a living or dead member of a species referred to in subclause (i),

(iii) anything derived from a living or dead member of a species referred to in subclause (i); or

(c) sell, lease, trade or offer to sell, lease or trade anything that the person represents to be a thing described in subclause (b) (i), (ii) or (iii)."

Clause 10 (1)(a) of the ESA also states that:

"No person shall damage or destroy the habitat of a species that is listed on the Species at Risk in Ontario list as an endangered or threatened species."

An authorization or permit between the proponent and the MECP is required to authorize activities that would otherwise be prohibited by subsection 9(1) and 10(1) of the ESA.

There are three applicable regulations under the ESA, 2007; O. Reg. 230/08 - the Species at Risk in Ontario (SARO) List, O. Reg. 242/08 (General), and O. Reg 830/21 (Exemptions – Barn Swallow, Bobolink, Eastern Meadowlark and Butternut). These regulations serve to identify which species and habitats receive protection and provide direction on the current implementation of the ESA.

2.3. Urban Hamilton Official Plan

The Urban Hamilton Official Plan 2013 (UHOP) provides planning policies that help to guide development within the city's urban boundaries. These include policies concerning the City's Natural Heritage Systems (NHS), which contains locally and provincially significant natural areas, including the Niagara Escarpment Plan Area, Core Areas, and Linkages. Core Areas encompass key natural heritage features, key hydrological features, and provincially significant and local natural areas. Core Area policies within the Urban Hamilton OP apply to the preservation and enhancement of Core Area features. This includes ensuring that development or site alteration in or adjacent to Core Areas does not negatively impact their natural features or ecological functions.

Based on *Schedule B (Natural Heritage System, January 2022)* of the UHOP, Core Areas have been identified within the Study Area. The northern portion of the Subject Property is within Niagara Escarpment Lands, Core Area and Parks & General Open Space.

Section C2.0 of the UHOP outlines policies pertaining to Natural Heritage Systems. It should be noted that as per Section 2.5.8, n*ew development or site alteration subject to Policies C.2.5.3 to C.2.5.7 requires, prior to approval, the submission and approval of an Environmental Impact Statement which demonstrates to the satisfaction of the City and the relevant Conservation Authority that:*

a) There shall be no negative impacts on the Core Area's natural features or their ecological functions;

b) Connectivity between Core Areas shall be maintained, or where possible, enhanced for the movement of surface and ground water, plants and wildlife across the landscape; and

c) The removal of other natural features shall be avoided or minimized by the planning and design of the proposed use or site alteration wherever possible.

2.4. Niagara Escarpment Plan

The Niagara Escarpment Plan (NEP) (1985, last amended May 29, 2019) was Canada's first large-scale environmental land use plan. Its main objectives include protecting the unique and historical areas of the Escarpment, maintaining, and enhancing the quality and character of natural heritage features, and supporting municipalities within the NEP. The *Niagara Escarpment Planning and Development Act (NEPDA) (1990)* gives the legal basis for the Niagara Escarpment Plan. The purpose of the NEPDA is to *provide for the maintenance of the Niagara Escarpment and land in its vicinity substantially as a continuous natural environment and to ensure only such development occurs as is compatible with that natural environment*. As per *Map 2: Niagara Escarpment Plan* the northern portion of the study area falls within the Niagara Escarpment Plan Area and is designated as Escarpment Natural Area and Niagara Escarpment Parks and Open Space System.

Section 1.6.5 Permitted Uses for Escarpment Natural Areas of the NEP states that *Subject to Part 2, the Development Criteria,* the range of permitted uses in Escarpment Natural Areas are … *Infrastructure,* in addition to *Uses permitted in the Parks and Open Space System Master/Management Plans that are not in conflict with the Niagara Escarpment Plan*.

2.5. Hamilton Conservation Authority

Pursuant to *Ontario Regulation 161/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses, May 2006)*, prior permission is required from the HCA for any development within a floodplain, valleyland, wetland, or other hazardous land. Permission is also required from the HCA for any alteration to a river, creek, stream or watercourse or any interference with the hydrological function of a wetland. The decision-making policies for such Permits are contained within the Planning and Regulation Policies and Guidelines (HCA, October 2011). There are no HCA regulated lands within the study area.

3. Methodology

A combination of background data and the results of a field program was used to identify the natural features and functions the subject property.

3.1. Background Studies

The following background documentation and related information sources were reviewed to identify natural heritage features in the study area:

- Ministry of Natural Resources and Forestry (MNRF) Land Information Ontario (LIO) digital mapping of natural heritage features (MNRF 2022)
- Satellite imagery (Google Earth Pro 2022)
- A list of species at risk (SAR) and species of conservation concern (SOCC) with potential to occur in the Study Area was prepared by reviewing the following sources:
- Natural Heritage Information Centre (NHIC) Database, 1 km x 1 km square 17NH9188;
- Atlas of the Breeding Birds of Ontario (2022)

- Hamilton Nature Counts (2014)
- Ontario Reptile and Amphibian Atlas (2022)
- Ontario Butterfly and Moth Atlas (2022)
- i-Naturalist- NHIC Rare Species of Ontario
- eBird hotspots
- Ontario Regulation 230/08 Species at Risk in Ontario List
- Provincial and federal assessments, recovery strategies, and management plans

3.2. Field Work

GeoProcess Research Associates conducted field studies to characterize and inventory the natural heritage features and wildlife activity of the subject property and surrounding landscape. A summary of the field work details is provided below in Table 2.

Table 2. Completed Field Work

Activity	Timing	Date	Staff
ELC & Drone Flight	Spring 2023 Summer 2023 Winter 2023*	May 31, 2023 June 26, 2023 November 23, 2023	Scott Dowle Scott Dowle Alex Meeker
Snag Survey	Spring 2023	April 12, 2023	Scott Dowle
Tree Inventory	Spring 2023	April 12, 2023	Scott Dowle
Breeding Bird Surveys	Spring 2023	May 31, 2023 June 16, 2023	Don Graham
Staking of Core Area	Fall 2023	September 28, 2023	Ken Glasbergen Melissa Kiddie – City of Hamilton

* Drone flight

3.2.1. Floristic Studies

A late spring and early summer inventory of all floristic species within the subject property was completed on May 31 and June 26th, 2023. Due to safe access concerns, the wooded community located on the escarpment cliff face was not directly characterized following the full ELC methodology. The cliff community was observed from above and by employing the use of a drone. Species nomenclature and ranking was determined provincially by the Ministry of Natural Resources Natural Heritage Information Database (S_Ranks).

Vegetation communities were mapped and described according to the Ecological Land Classification (ELC) system for Southern Ontario (Lee et al., 2008). Vegetation community boundaries were determined using desktop analysis and further refined in the field.

3.2.2. Tree Inventory

GeoProcess conducted field studies on April 12, 2023, to identify and assess the tree resources within the subject property. An assessment of individual trees included all trees 10 cm Diameter at Breast Height (DBH) or greater for the subject property. Typically, all trees within 6 m of the property limits would also be included in the tree inventory but this was not completed in this case do to access constraints on adjacent private properties and a escarpment safety concerns.

Trees were assessed for condition utilizing the following parameters:

- Tree # - numbers assigned to tree that corresponds to their surveyed/mapped location.
- Species - common and botanical names provided in the inventory table.
- DBH - diameter (centimeters) at breast height, measured at 1.4 m above the ground.
- Condition - condition of trees were assessed as follows:
    - Trunk integrity (TI): conditions on trunk that might affect likelihood of failure based on factors including co-dominant stems, cracks, decay, poor taper, lean, response growth, abnormal or missing/dead bark, etc.
    - Crown Structure (CS): condition on crown structure that might affect likelihood of failure including live crown ratio, presence of defects (including bark, weak attachments, cracks, decay, cavities), crown density.
    - Crown Vigor (CV): an assessment of overall tree health classified as weak/under stress (poor), average vigor for its species and site condition with some signs of stress (fair), growing well and appears to be free of significant health stress factors (good).
    - Canopy Dieback (CDB): extent dead branching and canopy cover loss measured as a percentage of the entire crown.

Tree location coordinates were obtained through the survey provided by A.J. Clark and Associates. Species nomenclature and ranking is based on the Ministry of Natural Resources and Forestry Natural Heritage Information Centre species list.

3.2.3. Breeding Bird Surveys

Breeding bird surveys were completed by a breeding bird expert under appropriate weather conditions on two separate dates (May 31, 2023, & June 16, 2023). Point count methodology was based on protocols set by the Ontario Breeding Bird Atlas (OBBA, 2001, 2021). Bird species were observed for five minutes at each breeding bird plot following a five-minute period of silence upon arriving at the plot. The locations of breeding bird plot was selected based on subject property size, being a 100 m radius from plot centre, and capturing the appropriate range of habitat characteristics. Due to the subject property size, only one plot was established. Only species observed within the 100 m radius were recorded. Flyovers did not count

towards the total but were noted for reference. Additional incidental observations were also noted. The level of breeding evidence (using *Ontario Breeding Bird Atlas* [OBBA] protocols) was determined following completion of both surveys.

3.2.1. Bat Maternity Roost Surveys

A snag survey was completed on April 12th, 2023, following the MNRF Survey Protocol for Species at Risk Bats within Treed Habitats: Little Brown Myotis, Northern Myotis & Tri-Colored Bat (April 2017). An inventory of all trees with a DBH of ≥10cm was completed to assess the presence of potential SAR bat habitats within the subject property. Information recorded for identified roost trees included tree species, DBH, decay class, and the number, height, and type (e.g., cavity, crevice, sloughing bark, etc.) of potentially suitable roost sites.

3.2.2. Incidental Wildlife Surveys

Formal surveys for mammals, reptiles, and insects were not completed, but incidental observations were completed during other survey times.

3.2.3. Species at Risk Screening and Assessment

An assessment and screening of potential Species at Risk was conducted for the Subject Property based on Federal and Provincial status. Following the MECP (2019) Client's Guide to Preliminary SAR Screening, this screening was based on a review of the Natural Heritage Information Centre, the regional species list, atlases (breeding bird, butterfly and moth) citizen science databases (i.e. iNaturalist), and any additional lists provided by the MECP. The Species at Risk assessment results are found in Section 5. The results of the preliminary screening are found in Appendix C.

For the purpose of the screening, SAR are defined as:

- Endangered and Threatened species that are on the Species at Risk in Ontario (SARO) list and protected by the provincial Endangered Species Act, 2007 (ESA)
- Endangered and Threatened aquatic species that are listed on Schedule 1 of the federal Species at Risk Act, 2002 (SARA) and protected by the SARA

Species of Conservation Concern (SOCC) are defined as:

- Special Concern species on the SARO list
- Endangered, Threatened and Special Concern terrestrial species listed on Schedule 1 of SARA, but not protected by the ESA.
- Species with provincial ranks of S1 to S3. Provincial ranks (S ranks) are used by the NHIC to set protection priorities for rare species and vegetation communities. They are based on the number of occurrences in Ontario and are not legal designations. Provincial S ranks are defined as follows:

  S1: Critically imperiled; usually fewer than 5 occurrences
  S2: Imperiled; usually fewer than 20 occurrences
  S3: Vulnerable; usually fewer than 100 occurrences

S4: Apparently secure; uncommon but not rare, usually more than 100 occurrences
S5: Secure, common, widespread and abundant
? S-rank followed by a "?" indicates the rank is uncertain

3.2.4. Significant Wildlife Habitat Screening and Assessment

A screening for Significant Wildlife Habitat following the Ministry of Natural Resources and Forestry Significant Wildlife Habitat Technical Guide (2023) and Significant Wildlife Habitat Criteria Schedule for Ecoregion 7E (January 2015) was conducted for the Subject Property. Potential SWH identified was assessed during the complementary field studies. The results of this assessment are found in Section 6.

4. Existing Conditions

The existing conditions of the study area are informed by a background review, general landscape position, physiography and geology, vegetation communities, watercourse characterization, tree inventory, breeding bird surveys, amphibian surveys, and incidental wildlife documentation.

Photo 1 Subject Property looking towards Belvidere Avenue

4.1. General Landscape Position

The subject property is situated within the *Urban Area Designation* of the NEP and borders the Escarpment Natural Area Zone. It is located within the Red Hill Creek Watershed and within the most northwestern extent of the Greenhill Creek Subwatershed. The Red Hill Creek Watershed covers approximately 3,700 hectares and serves as an important ecological corridor. The Greenhill Creek subwatershed lies to the north of the Lincoln M. Alexander Parkway and to the west of the Red Hill Valley Parkway, situated above the Niagara Escarpment. The Niagara Escarpment Natural Area provides a linkage corridor through the City of Hamilton between the Redhill Creek Valley and the Dundas Valley.

4.2. Physiography and Geology

The Niagara Escarpment is the most prominent geological feature within the City of Hamilton and was formed during the last Ice Age, around 10,000 to 12,000 years ago (Mikulic *et al* 2010). Glacial activity, specifically the advance and retreat of the Wisconsin Glacier, played a significant role in shaping this feature. As the glacier advanced, it scraped and eroded the land, creating a steep cliff-like structure, while its melting waters helped carve out the Great Lakes. The escarpment is primarily composed of sedimentary rock formations, including dolostone, limestone, and shale, which were formed over millions of years during the Silurian and Devonian periods (Mikulic *et al* 2010).

Soil-Mat Engineers & Consultants LTD conducted a four-sample subsurface soil analysis for the subject property. Their findings concluded that a 250 mm layer of topsoil was present followed by weathered/fractured material overlying sound bedrock.

4.3. Natural Heritage Systems

The key natural heritage system feature within the study area is the Niagara Escarpment Natural Area, which serves as a wildlife linkage between the Redhill Valley and the Dundas Valley. The Niagara Escarpment Natural Area is fragmented by road-networks that connect the upper and lower portions of the City. The Claremont Access falls within the study area, immediately north of the subject property.

Drone imagery (Photo 2) shows there is only a narrow band of trees located between the escarpment brow and the Claremont Access adjacent to the subject property. Recent road improvement works on Claremont Access resulted in the removal of trees and surficial material, reducing the size of the woodland community and the corridor function of the feature immediately adjacent to the subject property. The remaining wooded area is a double row of trees on a ledge, which does not meet the width criteria of greater than 20 m for it to be designated as a woodland.

Photo 2. Aerial Imagery of the Escarpment face between the Claremont Access and 14 Belvidere Avenue

4.4. Vegetation Communities

GeoProcess conducted a two-season flora assessment following the guidelines outlined by the Ecological Land Classification system on the following dates: May 31, and June 26th, 2023. An aerial assessment of the extent of vegetation removal resulting from the Claremont Access construction works adjacent to the subject property was conducted on November 23, 2023. Two vegetation community types were identified within the study area. The locations of these communities are shown on Map 3 and the results are described below.

Table 3. Ecological land classification communities

ELC Code and Classification	Vegetation
Cultural / Residential	The ground cover of the subject property consists of Kentucky Blue Grass (*Poa pratensis*), Common Dandelion (*Taraxecum officinale*), Common Mullein (*Verbascum Thapsus*) and Black Medic (*Medicago lupulina).* Within the sub-canopy and canopy, Norway Maple (*Acer platinoides)* was the most dominant species of tree. There was also one large Silver Maple (*Acer saccharinum*) and several Black Locust (Robinia pseudocacia) individuals within the subject property. Most of the trees on-site were located near the property's boundary line.

ELC Code and Classification	Vegetation
Carbonate Treed Cliff Ecosite – CLT1	The vegetated portion of the cliff face is limited to the immediate brow, which is dominated by European buckthorn (*Rhamnus cathartica*) with a few small Manitoba maples (*Acer negundo*). Approximately 4 m down the cliff face there is a small ledge that is supporting the growth of larger trees comprised primarily of black locust and Norway maple. Due to access issues, the groundcover could not be characterized. The treed community is narrow, at one to two trees wide, and functions as a hedgerow and does not meet the criteria for a woodland.

4.5. Tree Inventory

GeoProcess conducted a tree inventory on January 13, 2023, to assess existing trees within the developable area of the subject property. An assessment was completed for all individual trees 10 cm in diameter at breast height (DBH) or greater following the protocols set forth by the City of Hamilton's Tree Protection Guidelines (2010).

Table 4.Tree Inventory Results

Common Name	Scientific Name	S-Rank[1]	Inventory Count
Black Locust	*Robinia pseudocacia*	SNA	8
Norway Maple	*Acer platanoides*	S5	6
Silver Maple	*Acer saccharinum*	S5	1
White Mulberry	*Morus alba*	SNA	1
		Total	16

[1] The NHIC assigns subnational ranks (S-Ranks) for species and plant communities in Ontario using the most up-to-date information and considering factors such as abundance, distribution, population trends, and threats.

The tree inventory documented a total of 16 trees, including 10 within the subject property limits, 1 public and 5 situated within a neighbouring property. The majority of trees were identified as being in "*Good*" overall health apart from one declining white mulberry and one black locust.

Five trees are proposed for removal due to direct conflict with the proposed works. Trees #225, #227, #228, #234 and #235 have been identified for removal do to conflict with the future homes (Map 5).

4.6. Breeding Bird Surveys

Of the 15 summer resident bird species (11 with some breeding evidence), one species of conservation concern, chimney swift (Threatened) was observed flying over the site, but its habitat is not present on the site.

The subject property is very small and composed of an undeveloped residential property with lawn, shrubs and trees. As result, the subject property was not partitioned into Wildlife Survey Quadrants and simply considered *Residential*. The area surveyed was thoroughly covered by walking randomly throughout the site and recording presence, abundance and level of breeding evidence (using Ontario Breeding Bird Atlas [OBBA] protocols). Because of the small size of the area, additional time was spent stationary watching and listening for new bird species to move onto and use the site.

Table 5 Breeding Bird Survey Conditions

Visit Date	Visit Time	Temp. Range [C]	Cloud Cover [%]	Wind Speed [Beaufort scale]
May 31	7:50 – 8:30	20 – 22	30 – 30	2 – 2
June 15	8:25 – 9:00	17 – 25	90 – 90	1 -1

The breeding bird survey only found confirmed evidence of breeding activity for two urban common species, the American robin and European starling. In general, the small size of the site, lack of vegetation diversity and the surrounding urban development limit the breeding activity to species tolerant of urban settings.

Table 6: Breeding Bird Survey Results.

Common Name	Latin Name	Quantity	OBBA Code	SRank	COSEWIC	SARA
Rock Pigeon	*Columbia livia*	10	Flyover	SNA		
Chimney Swift	***Chaetura pelagica***	**1**	**Flyover**	**S4B, S4N**	**THR**	**THR**
Ring-billed Gull	*Larus delawarensis*	2	Flyover	S5B		
Red-tailed Hawk	*Buteo jamaicensis*	2	Flyover	S5B		
Eastern Kingbird	*Tyrannus tyrannus*	1	H	S5B		
House Wren	*Troglodytes aedon*	1	T	S5B		
American Robin	*Turdus migratorius*	3	FY	S5B		
Gray Catbird	*Dumetella carolinensis*	1	S	S5B		
European Starling	*Sturnus vulgaris*	4	FY	SE		
House Sparrow	*Passer domesticus*	3	H	SE		
American Goldfinch	*Spinus tristis*	2	P	S5B		
House Finch	*Haemorhous mexicanus*	2	T	SE		
Song Sparrow	*Melospiza melodia*	2	T	S5B		
Northern Cardinal	*Cardinalis cardinalis*	2	T	S5		
Common Grackle	*Quiscalus quiscalus*	2	H	S5B		

Table 7: Species Ranking Systems

Rank System	Code	Meaning
OBBA Breeding Level		
Possible	**H**	Species observed in breeding season in suitable nesting habitat.
	S	Singing male present or breeding calls heard in breeding season in suitable habitat.
	P	Pair observed in their breeding season in suitable habitat.
	T	Permanent territory presumed through registration of territorial song or presence of adult bird in breeding habitat on at least 2 days, one week or more apart at the same place.
Probable	**D**	Courtship or display between a male and female, or two males including courtship feeding and copulation.
	V	Visiting probable nest site.
	A	Agitated behavior or anxiety calls of adults.
	B	Brood patch on adult female or cloacal protuberance on adult male.
	N	Nest building or excavation of nest hole.
Confirmed	**DD**	Distraction display or injury feigning.
	NU	Used nest or eggshell found (occupied/laid during atlas period).
	FY	Recently fledged young or downy young.
	AE	Adults leaving or entering nest site in circumstances indicating occupied nest.
	FS	Adult carrying faecal sac.

Rank System	Code	Meaning
	CF	Adult carrying food for young.
	NE	Nest containing eggs.
	NY	Nest with young seen or heard.
NHIC S-Rank		
SH		Possibly Extirpated (Historical); species occurred historically and there is some possibility that it may be rediscovered. Its presence may not have been verified in the past 20-40 years.
S1		Critically Imperiled. Extremely rare in Ontario; usually 5 or fewer occurrences in the province.
S2		Imperiled. Very rare in Ontario; usually between 6 and 20 occurrences in the province.
S3		Vulnerable. Rare to uncommon in Ontario; usually between 21 and 60 occurrences in the province; may have fewer occurrences, but with some extensive examples remaining.
S4		Apparently secure. Considered to be common in Ontario. It denotes a species that is apparently secure, with over 80 occurrences in the province.
S5		Secure. Indicates that a species is widespread in Ontario. It is demonstrably secure in the province.
?		Indicates some uncertainty with the classification due to insufficient information.
SNR		Not Ranked.
SNA		Not Applicable, a conservation status rank is not applicable because the species is not a suitable target for conservation activities.
SARO/ESA & SARA Rankings		
SC		Special Concern.
END		Endangered.
THR		Threatened.
EX		Extirpated.

4.7. Snag Survey

There were no snags or trees that presented suitable SAR bat habitat within the subject property. As a result of these findings, it is highly unlikely that SAR bats roost within the subject property.

4.8. Incidental Wildlife

Incidental wildlife observations were recorded during all site investigations, with the results provided in Table 8. The Incidental wildlife recorded during the field investigations was comprised of species common to urban sites and tolerant of anthropogenic disturbances.

Table 8. Incidental Wildlife Summary

Common Name	Scientific Name	Date	Evidence	Abundance
American Robin	*Turdus migratorius*	2023/05/26 2023/06/26	Visual Visual	2 1
Gray Catbird	*Dumetella carolinensis*	2023/05/26	Visual	1
Northern Cardinal	*Cardinalis cardinalis*	2023/05/26	Auditory	2
Common Grackle	*Quiscalus quiscalus*	2023/05/26	Visual	1

Common Name	Scientific Name	Date	Evidence	Abundance
		2023/06/26	Visual	1
Eastern Gray Squirrel	*Sciurus carolinensis*	2023/06/26	Visual	1

5. Species at Risk Screening

A list of SAR and SOCC with the potential to occur in the study area (Table 9) was prepared by reviewing the following sources:

- MNRF Land Information Ontario (LIO) digital mapping of natural heritage features
- Natural Heritage Information Centre (NHIC) database (Atlas ID: 17NH9188)
- Species at Risk in Ontario (SARO) List Schedule 2 & 3
- Species at Risk Act (SARA), Schedule 1
- Ontario Breeding Bird, Butterfly, Moth, Reptile and Amphibian Atlases (Atlas Square: 17NH78)
- eBird
- iNaturalist and eBird (citizen science databases)

The desktop background review identified 20 SAR that have been previously documented as occurring in the atlas square or citizen science database (listed below) associated with the study area (Table 9). Observations of SAR within these squares do not necessarily represent observations within the boundaries of the study area.

[1] NHIC Database
[2] OBBA
[3] Ontario Reptile and Amphibian Atlas
[4] eBird Database
[5] Ontario Butterfly Atlas
[6] DFO Aquatic SAR Map
[7] iNaturalist

Table 9. Species at Risk NHIC Screening Results

Species		Status		
Common Name	**Scientific Name**	**S_Rank**	**SARO**	**SARA**
		Birds		
Northern Bobwhite	*Colinus virginianus*	S1?	END	END
Chimney Swift	*Chaetura pelagica*	S3B	THR	THR
Common Nighthawk	*Chordeiles minor*	S4B	SC	SC
Peregrine Falcon	*Falco peregrinus*	S4	SC	NAR

Species		Status		
Common Name	**Scientific Name**	**S_Rank**	**SARO**	**SARA**
Eastern Wood-pewee	*Contopus virens*	S4B	SC	SC
Barn Swallow	*Hirundo rustica*	S4B	SC	THR
Wood Thrush	*Hylocichla mustelina*	S4B	SC	THR
Bobolink	*Dolichonyx oryzivorus*	S4B	THR	THR
Eastern Meadowlark	*Sturnella magna*	S4B	THR	THR
Golden Eagle	*Aquila chrysaetos*	S1B, S4N	END	NAR
Bald Eagle	*Haliaeetus leucocephalus*	S1	SC	NAR
Bank Swallow	*Riparia riparia*	S4B	THR	THR
Amphibians and Reptiles				
Blanding's Turtle	*Emydoidea blandingii*	S3	THR	END
Jefferson Salamander	*Ambystoma jeffersonianum*	S2	END	END
Northern Map Turtle	*Graptemys geographica*	S3	SC	SC
Insects				
Black Purseweb Tarantula	*Sphodros niger*	S3	-	-
American Burying Beetle	*Nicrophorus americanus*	SH	EXP	EXP
West Virginia White	*Pieris virginiensis*	S3	SC	-
Mottled Duskywing	*Erynnis martialis*	S2	END	-
Plants				
Perfoliate Bellwort	*Uvularia perfoliata*	S1S2	-	-

5.1. Assessment

Based on the SAR screening, in combination with vegetation communities and other environmental features assessed during the field program, there were no species identified for further assessment.

Chimney swift was recorded during the breeding bird survey as a fly over. Habitat for chimney swift are large cavities in trees, chimneys, or other structures such as bell towers. There are no appropriate habitat structures or tree cavities within the study area to support this species.

6. Significant Wildlife Habitat Screening

Significant Wildlife Habitat (SWH) is considered natural heritage and is protected as per Section 2.1 of the Provincial Policy Statement. The Significant Wildlife Habitat Technical Guide (OMNRF, 2023) aids in land use planning by providing the identification, description, and prioritisation of significant wildlife habitat in Ontario. The associated Ecoregion Criteria Schedules are used to further provide detailed criteria for assessing and confirming SWH within Ontario. This section will provide a screening in the form of a summary table followed and an assessment of the potentially or confirmed occurring SWH.

6.1. Screening

Significant (and/or sensitive) Wildlife Habitat features and functions as described within the OMNRF Significant Wildlife Habitat Ecoregion Criteria Schedule for Region 7E (OMNRF, 2015) were reviewed and evaluated for the Study Area. The documented groups wildlife habitat into five main categories:

- Seasonal concentration areas of animals
- Rare vegetation communities or specialized habitats for wildlife
- Specialized Habitat for Wildlife
- Habitat for species of conservation concern
- Animal movement corridors

The full screening found in Appendix D consisted of a review of the ELC codes and habitat criteria for candidate SWH. Any SWH on the subject property or adjacent lands was noted in Column 4 and a rationale was provided in Column 5. In the case of potential SWH, Confirmed Defining Criteria Studies were reviewed, and applicable mitigation measures (in summary form) were also provided in Column 5.

No SWH was identified on or adjacent to the subject property.

7. Proposed Development

The subject property is the proposed site for a severance of the existing two lots into four, to facilitate the construction of four single-family detached homes (Map 4)

7.1. Natural Heritage System Buffers

A Core Area, Niagara Escarpment Natural Area, feature has been identified immediately north of the subject property. The UHOP requires that a VPZ is established between a Core Area and a proposed development. A 10 m VPZ has been proposed to protect the Core Area's ecological functions. The limits of the Core Area were established with City of Hamilton Natural Heritage Planner (Melissa Kiddie) on September 28, 2023. The limits of the Core Area limit were identified to be coincident with the existing fencing located at the escarpment brow. The VPZ is established as a 10 m setback into the subject property from the staked Core Area limit. While the UHOP recommends a 15 m VPZ, a 10 m VPZ was determined to be appropriate for this development because:

- Vegetation within the Core Area adjacent to the site is dominated by non-native and/or tolerant species such as European buckthorn, black locust and Manitoba maple.
- No significant wildlife or SAR was found in the Core Area adjacent to the subject property.
- The width of vegetation adjacent to the subject property is narrow at approximately one to two rows of trees, and functions as a hedgerow and not a woodland
- Recent road improvement works on the Claremont Access removed a large portion of the vegetation adjacent to the subject property, reducing ecological value and function of the Core Area.
- The intensity of the proposed development is low and is in keeping with the existing development adjacent to the Core Area, which generally provides no setback to the Core Area.

The current vegetation present within the VPZ is will be retained but will not be maintained in the future.

7.2. Stormwater Management, Grading and Servicing Requirements

Due to the small size of the development, specific stormwater controls are not required. Surface flow will sheet flow either towards the escarpment or Belvidere Road, where it will be captured in the existing storm sewers in Belvidere Avenue. Servicing infrastructure (sewer and water) will tie into the Municipal servicing located within Belvidere Avenue. Grading will be minor, limited to blend grading around the homes and no bulk earthworks or changing of surface water drainage is proposed. Further, no grading or work zones are proposed within the VPZ.

8. Environmental Impact Assessment

Potential direct and indirect impacts of the proposed development on the natural heritage system have been identified and discussed in the following sections.

8.1. Direct Impact Assessment

Direct Impacts are those impacts that can be directly attributed to the proposed development. Direct impacts can be assessed as either a short-term impact (generally associated construction works) or long-term impacts (related to the development over-time). Table 10 presents the natural heritage components which were considered in this assessment, the proposed activity associated with each component, potential short-term and long-term impacts, recommended mitigation measures, and potential residual effects.

Table 10. Impact Assessment Table

Activity	Potential Impact	Mitigation Measures	Residual Effects
Short-term Impacts			
Noise from construction activity	Excessive noise could displace breeding birds within the study area. Noise may result in the avoidance of the adjacent areas during construction.	Since construction noise is very difficult to mitigate, the most effective measure is to limit construction activities during the breeding bird season during the time periods that birds are most active, at sunrise and sunset (April to August).	Noise impacts to wildlife may occur when construction is active. Field surveys conducted for this EIS found that wildlife currently utilizing the property are limited to urban tolerant species, with overall low wildlife usage. As a result, there are few animals that would be impacted by construction noise, and those present in the area are tolerant to disturbances and are anticipated to return to the area once construction activities end. No residual effects expected.
Dust from construction activity	Dust from construction activities could drift into the Escarpment and neighboring properties.	Water suppression of dust should occur for all construction activities during site grading when conditions are dry or strong winds are anticipated.	Residual effects are anticipated to be minor and short termed given appropriate mitigation measures are incorporated to reduce levels of dust due to construction.
Grading	Grading will be limited to the areas surrounding the houses after excavation is completed. No bulk earthworks are proposed. No changes to surface water drainage is anticipated.	Not applicable.	Because the grades, slopes and drainage will be maintained similar to existing conditions, no impacts to the adjacent Core Area are expected. It is not anticipated that the minor blend grading proposed around the house will have any impact on water contributions to the trees located on the cliff face.
Site clearing/tree removal	Vegetation removal is limited to five trees. These trees are stand alone and are not apart of the larger natural heritage feature.	Vegetation clearing should not occur between April 1st and August 31st as per the Migratory Birds	Belvidere Avenue is situated in a well-developed residential area. Therefore, the trees present on site are not likely to be

Activity	Potential Impact	Mitigation Measures	Residual Effects
		Convention Act (MBCA, 1994). If clearing is to occur during this time, a nest survey must be completed by a qualified avian biologist to identify any nests that are not to be disturbed until the young have fledged.	suitable for sensitive nesting birds. Implementation of applicable mitigation measures is expected to reduce or eliminate direct impacts to migratory and nesting birds during the construction phase. Five trees can be planted in the VPZ to off-set the removals.
Building Construction	Water contamination by oils, gasoline, grease and other materials	Control water contamination through good housekeeping practices such as safely storing all chemicals and fuels, having spill kits on-site, do not clean equipment near natural areas.	If mitigation measures are followed, no residual impacts are anticipated.
Long-term Impacts			
Residential Uses	Potential for contaminated runoff (i.e. automotive chemicals, chlorides, fertilizers) to enter the adjacent natural area and negatively impact the Escarpment.	Impermeable surfaces, namely driveways, will drain towards Belvidere Avenue and will be captured within the City's stormwater system. The VPZ will provide a buffer to uptake fertilizers used in the rear-yards before they can reach the escarpment.	Gook housing keeping practices can greatly reduce the release of contaminants from the properties. Education of the new home owners around dumping unwanted chemicals in storm drains is recommened. No residual impacts are anticipated.
Residential development	Noise and light pollution from buildings can negatively affect wildlife behavior within natural features.	Lights directed downward and away from the Escarpment will reduce the amount of ambient light emitting from the proposed development. Outdoor lighting should be avoided/minimized in areas facing the VPZ. Provide educational pamphlet to owners backing onto	Due to the disruptive effect lighting can have on wildlife (including insects), it is important to make efforts to reduce its impacts. The shielding and downward casting lights and closing window coverings at night are good steps to reducing impacts. This combined with an educational component should help

Activity	Potential Impact	Mitigation Measures	Residual Effects
		the natural heritage system which outlines the importance of reducing outdoor lighting adjacent to the natural area. The VPZ should also help to reduce light impacts to the Escarpment, particularly as the trees and shrubs mature and grow in height, helping to block light generated from the development.	address the concern. It is likely there will be some impact due to night-time lighting as all outdoor lighting will not be completely eliminated all the time.
Residential development	Dumping or disposal of trash or yard waste into natural features.	Rear yard fencing will help to discourage the dumping of waste in the VPZ or over escarpment brow. Provide owners a manual to promote stewardship.	Fencing combined with the 10 m wide VPZ should help to reduce dumping into the Escarpment Natural Area.
Residential development	Disturbance to Species at Risk and Significant Wildlife Habitat	The installation of the VPZ should provide a suitable buffer to mitigate the effects of residential dwellings to any wildlife utilizing the Escarpment. Provide owners a manual to promote stewardship and describe the impacts of human disturbance on local wildlife.	Based on the residential setting and the limited natural habitat along the escarpment, it is unlikely the subject property or the adjacent escarpment will provide habitat for species at risk. As a result, the mitigation measure, particularly providing a 10 m VPZ will adequately provide any species at risk in the local area.

8.2. Indirect Impact Assessment

Indirect impacts stem from activities that have secondary consequences rather than direct outcomes. They often arise from factors such as an increase in population, development density, and modifications to transportation networks. Indirect impacts can still have a significant affect on the surrounding wildlife and environment.

The proposed development will have limited indirect impacts on the adjacent Core Area due to the low sensitivity of the Core Area and the overall limited ecological services that it is currently providing. However, there are still factors that need to be considered given the landscape position of the development, namely being located at the escarpment brow. As the escarpment is a naturalized corridor and large topographic feature cutting through the City, it is known as a corridor for migrating birds in both the spring and fall. As such, exterior lighting has the potential to disrupt nighttime navigation of birds during their migratory period. This has the potential to lead to bird strikes. It is recommended that all exterior lighting is shield from outward casting light and is directed downward. It is also recommended that residents close window coverings at night to prevent the projection of light from the homes at night.

8.3. Cumulative Impacts

Cumulative impacts refer to alterations in the environment resulting from historical, current, and expected future activities. The subject property is a vacant lot situated within a residential area. The section of the Escarpment that borders the subject property is confined between the aforementioned residential area and the Claremont Access. The local area surrounding the subject property has been part of the urban fabric for many years, which has influenced the established dominant ecological services that the area currently provides. The inclusion of four additional homes into this larger urban landscape will have no measurable influence or impact on the current form and function of the local Core Area's ecological processes. Further, the recent construction works completed on Claremont Access, which removed vegetation from the Core Area feature adjacent to the subject property, will have had a much greater impact on the function of the Core Area, outweighing any influence the proposed development would have. As a result, there are no anticipated cumulative impacts to the adjacent Core Area from the proposed development.

9. Mitigation Measures

The proposed mitigation measures aim to prevent and lessen potential impacts, focusing on two primary goals: reducing the effect of the development on the Core Area and minimizing the impacts caused by construction activities.

9.1. Natural Heritage System Measures

The two key measures to protect the Core Area adjacent to the subject property are the implementation of a 10 m VPZ. In addition, educational pamphlets informing new residents on the significance of the Escarpment and how to protect this Natural Heritage Features should be included in the home sale package.

9.1.1. Tree Preservation Measures

Trees #224, 229, 230-233 and N5 have been identified for retention. Tree protection fencing should be installed around all trees, with the exception of #229 and N5 as they are well within the VPZ and will be protected by the ESC fencing to be placed along the limit of the VPZ. Tree Protection Fencing should be inspected prior to construction by an ISA Certified Arborist. This preventive measure aims to shield these trees from potential damage caused by construction equipment and soil compaction throughout the construction phase. The outcome for retention or removal of neighboring trees labeled N1-N4 will be handled privately with the adjoining neighbour.

Mitigation measures provided below are intended to prevent and reduce the impact of the proposed development on trees designated for retention. These tree protection measures follow the City of Hamilton Tree Protection Guidelines (2010).

- Clearing of vegetation within the subject property as part of site preparation should be conducted in the late summer or winter months outside of the breeding bird season (April 1st to August 31st). If clearing is to proceed within the breeding bird window, the subject property should be screened by a qualified bird biologist to determine if any migratory birds are nesting within the work zone.
- No machinery or disturbance of any type is permitted within the tree protection fence.
- A construction work plan should designate specific locations for stockpiling of soils and other material to reduce disturbance to existing trees being maintained on site.
- Tree protection measures must be implemented prior to the commencement of construction (earthworks) to ensure trees identified for preservation are not impacted by the proposed development.
- Tree protection fencing should be comprised of paige wire fencing supported on metal T-bars at 3 m centres. Fences should be erected at the dripline plus 1 metre of trees identified for preservation.
- All tree protection measures should follow the guidelines as set out in the City of Hamilton's Tree Protection Guidelines (2010). Tree protection barriers need to be inspected on a regular basis to ensure they meet the design requirements detailed by the City of Hamilton.
- Inspection by a qualified person(s) is required, including regular monitoring to ensure all tree protection and mitigation measures are implemented as intended.

10. Policy Conformity

An outline of the applicable policies, including federal, provincial, and municipal protection and planning policies and regulations, relative to the study area was provided in Section 2 of this report. This EIS has demonstrated that the development will not result in negative impacts to the Core Areas and a VPZ has been proposed as per the policies of the UHOP.

11. Summary and Recommendations

The two existing vacant lots at 14 Belvidere Avenue, Hamilton, are proposed to be severed into four separate lots, with the intent to construct a residential unit for each lot. The proximity to a Core Area, immediately north of the subject property, triggered the need for an EIS to accompany the lot severance as per the City of Hamilton's Official Plan. This EIS has delineated the Natural Heritage boundaries and has considered potential impacts to Natural Heritage features within the study area. In addition, this EIS has provided suitable mitigation measures to limit potential disturbances to the Core Area during the home building process. In conclusion, the proposed severance is not anticipated to have a negative impact on the adjacent Core Area.

12. References

Alan Macnaughton, Ross Layberry, Rick Cavasin, Bev Edwards and Colin Jones. Ontario Butterfly Atlas Accessed February 2020.

Cadman, M.D., D.A. Sutherland, G.G. Beck, D. Lepage, and A.R. Couturier (eds). 2007. Atlas of the Breeding Birds of Ontario 2001- 2005. Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources, and Ontario Nature, Toronto. 706 pp.

David Kaposi, Alan Macnaughton and Bev Edwards. Ontario Moth Atlas Accessed December 2020.

Fisheries and Oceans Canada. Available from https://www.dfo-mpo.gc.ca/species-especes/sara-lep/map-carte/index-eng.html. Accessed December 2020.

iNaturalist. Available from https://www.inaturalist.org. Accessed December 2020.

Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig and S. McMurray. 1998. Ecological land classification for Southwestern Ontario: first approximation and its application. Ontario Ministry of Natural Resources, South Central Region, Science Development and Transfer Branch. Technical Manual ELC-005.

Mikulic, D.G., Kluessendorf, J., McLaughlin, P.I., and Luczaj, J.A., 2010, Bedrock geology of the Niagara Escarpment on the Door Peninsula, in Joint Meeting of the Great Lakes Section Society for Sedimentary Geology (SEPM) Fall Field Conference and the 65th Annual Tri-State Geological Field Conference, Field Guide, 79 p.

MNRF. (2010). Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement. Second Edition. Toronto: Queen's Printer for Ontario. 248 pp

OMNRF. January 2009. Working Draft. Significant Wildlife Habitat Ecoregion 7E Criterion Schedule. Addendum to Significant Wildlife Habitat Technical Guide.

OMNRF. 2013. Southern Ontario Vascular Plant Species List 3rd Edition. Southern Science & Information Section.

Ontario Breeding Bird Atlas. 2001. Guide for Participants. Bird Studies Canada.

Ontario Ministry of Natural Resources. 2000. Significant Wildlife Habitat Technical Guide. Fish and Wildlife Branch, Wildlife Section. Science Development and Transfer Branch, Southcentral Sciences Section.

Ontario Ministry of Natural Resources. 2009a. Draft Significant Wildlife Habitat Ecoregion Criteria Schedules. Addendum to Significant Wildlife Habitat Technical Guide.

Ontario, Ministry of Municipal Affairs. (2014). Provincial Policy Statement (Toronto: Ministry of Municipal Affairs, 2014).

14 Belvidere Avenue EIS

Prepared for A.J. Clarke and Associates Limited

March 5, 2024

Prepared by:

Scott Dowle, B.Sc., EM
Wildlife Ecologist, ISA Certified Arborist #ON-2994A

Devin Hock, B.Sc., M.Eng
Ecologist

Reviewed by:

Ken Glasbergen, M.Sc.
Senior Ecologist

Disclaimer

We certify that the services performed by GeoProcess Research Associates were conducted in a manner consistent with the level of care, skill and diligence to be reasonably exercised by members of the engineering and science professions.

Information obtained during the site investigations or received from third parties does not exhaustively cover all possible environmental conditions or circumstances that may exist in the study area. If a service is not expressly indicated, it should not be assumed that it was provided. Any discussion of the environmental conditions is based upon information provided and available at the time the conclusions were formulated.

This report was prepared exclusively for A.J. Clarke and Associates Limited by GeoProcess Research Associates. The report may not be relied upon by any other person or entity without our written consent and that of A.J. Clarke and Associates Limited Any uses of this report or its contents by a third party, or any reliance on decisions made based on it, are the sole responsibility of that party. GeoProcess Research Associates accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions taken based on this report.

Project Number P2023-730

GeoProcess RESEARCH ASSOCIATES

Knowledge
Research
Consulting

EIS Terms of Reference

January 8, 2024

Melissa Kiddie
Natural Heritage Planner
melissa.kiddie@hamilton.ca

Re: Environmental Impact Statement Terms of Reference
14 Belvidere Avenue, Hamilton ON

GeoProcess Research Associates Inc. (GeoProcess) has been retained by Beni Colalillo to complete an Environmental Impact Statement (EIS) and Tree Protection Plan (TPP) for a proposed development at 14 Belvidere Avenue in Hamilton ON (Map 1). This is herein referred to as the "Subject Property." It is our understanding the proposal is for a severance of two lots into four to facilitate the construction of four single-family detached homes.

The Subject Property is approximately 0.32 hectares (ha) in size. Per Schedule B of the Urban Hamilton Official Plan (UHOP), the northern portion of the Subject Property is within Niagara Escarpment lands, Core Area and Parks & General Open Space. Furthermore, the Subject Property includes Significant Woodlands (Schedule B-2) and a Hamilton Escarpment Environmentally Significant Area (ESA) designation. The ESA is located within and adjacent to the Subject Property and can be found in Schedule B-6 of the UHOP.

The EIS will identify the environmental features on the Subject Property, establish a developable limit and recommend mitigation measures to avoid impacting natural heritage features and their functions.

**It is important to note that data gaps may exist within some of the Core Areas (i.e., significant habitat of threatened and endangered species, significant wildlife habitat and significant valleylands), as they have not been mapped within the Schedules of the UHOP.*

1. EIS Study Elements

The following provides the proposed study elements required to complete the EIS. The EIS will define the boundaries of the local natural heritage features, and the extent and treatment of the required buffers. This will determine an appropriate development limit and recommended mitigation measures to reduce/eliminate predicted impacts to the natural heritage system. Overall, the EIS is intended to demonstrate that the proposed development will not result in any negative impacts to the previously outlined features.

PO Box 65506 Dundas
DUNDAS, ON, L9H 6Y6
905.466.6721
www.geoprocessresearch.com

1.1. Background Review

A review of the existing background information will be completed. This will include a review of relevant Federal, Provincial and Municipal Act, Policies and Regulations (i.e., Provincial Policy Statement, Urban Hamilton Official Plan, HRCA Regulations, etc.) and existing reports associated with the Subject Property or adjacent lands, if accessible. Existing ecological databases such as the Ontario Breeding Bird Atlas, iNaturalist, and Ontario Ministry of Natural Resources Natural Heritage Information Centre (NHIC) will be reviewed. A desktop Species at Risk (SAR) and Significant Wildlife Habitat (SWH) screening will be completed using available background documents, including information acquired from the Ministry of Environment, Conservation and Parks (MECP). Species identified through the field inventories will be ranked using federal, provincial and local rankings. A review of the Hamilton Escarpment ESA that has been evaluated through the City's Natural Areas Inventory will be included. Furthermore, Hamilton Conservation Authority (HCA) is the depository for the Hamilton Natural Heritage Database. HCA will be contacted to obtain any relevant information from this database pertaining to the site.

1.2. Ecological Studies

All species identified during fieldwork inventories will include federal, provincial, and local status rankings. The local status rankings will be based on the Hamilton Natural Areas Inventory Project 3rd Edition (2014) Species Checklist. Characterization of the Natural Heritage features and functions of the Study Area will include:

Floristic Studies: Vegetation characterization of the vegetation within and 120 m from the proposed development will be completed following the Ontario Ministry of Natural Resources Ecological Land Classification (ELC) protocol. The characterization will include a two-season inventory, which will be completed spring (May to Early June 2023), and fall (September to October 2023). A full botanical species list, and where applicable, a map showing rare or uncommon vegetation communities or species will be provided.

Tree Preservation Plan: An assessment of trees with a diameter at breast height of 10 cm or greater will be completed for the Subject Property and will extend 6 m from the property boundary (where property access permits). The TPP will include a tree protection/preservation plan that will be prepared in accordance with the City of Hamilton guidelines. A figure depicting trees proposed to be removed and retained, and the methods to be used to ensure preservation and protection of trees to be retained will be provided.

**A separate review fee is to be provided upon submission of this information. The 2023 review fee is $685.00.*

Species at Risk Screening: An assessment and screening of potential Species at Risk will be conducted for the Property based on Federal and Provincial status. Following the MECP (2019) *Client's Guide to Preliminary SAR Screening,* this screening will be based on a review of the Natural Heritage Information Center Database information (current), Ontario Breeding Bird Atlas (current), Ontario Butterfly Atlas (current), Ontario Moth Atlas (current), DFO Aquatic Species at Risk Distribution Mapping and iNaturalist (current), including Ontario Nature's "Herps of Ontario" project for Herpetofauna and any additional lists provided by the MECP. When the preliminary screening is prepared, it will be submitted as a memo to sar@ontario.ca for assignment to a management biologist for review.

Significant Wildlife Habitat Assessment: A desktop analysis of Significant Wildlife Habitat following the Ministry of Natural Resources and Forestry Significant Wildlife Habitat Technical Guide (2000) and significant Wildlife Habitat Criteria Schedule for Ecoregion 7E (January 2015) will be conducted for the Study Area. Potential SWH will be assessed during field studies.

Snag Surveys: Snag surveys will be conducted during leaf off following the Ministry of Natural Resources and Forestry current bat habitat survey protocol for Species at Risk Bats within Treed Habitats (MNRF 2017). Surveys include an assessment of all trees with a diameter at breast height (dbh) of 10 cm or greater, live or dead, with loose or naturally exfoliating bar, cavities, hollows or cracks. Completed data forms and locational mapping will be provided for any identified snags.

Breeding Bird Surveys: The breeding bird survey will follow the Ontario Breeding Bird Atlas (OBBA 2001) protocol. The first survey will be completed between May 24th and June 15th and the second survey will be completed June 15th and July 10th. Visits will occur a minimum of seven days apart. All visits will occur between sunrise and 10 am in appropriate weather conditions (light winds, no heavy rain, good visibility).

Butternut Health Assessment: An assessment and examination of specific characteristics of any Butternut (*Juglans cinerea*) identified on the Study Area will be conducted if butternuts are found within the Subject Property. Assessment criteria will follow the Ministry of Natural Heritage and Forestry (MNRF) *Butternut Assessment Guidelines: Assessment of Butternut Tree Health for the Purposes of the Endangered Species Act, 2007 (May 2011, amended December 2014 v2)* guidelines and protocol. All work is required to be completed by a certified Butternut Health Assessor designated by the Minister and utilize tree data forms and tree analysis files provided by the MNRF. The results of the BHA will determine whether the tree is retainable, non-retainable or archivable and will further inform whether proposed activities will require issuance of a permit for removal or harm of Butternut trees identified for the Subject Property.

Feature Staking: The limit of the ESA/Significant Woodland located within the Subject Property is currently undefined. A site visit with the Natural Heritage Planning staff will be commissioned to delineate the Natural Heritage features associated with this site.

The Butternut Health Assessment conducted for each individual will include the following:

- Individual assessment of each tree including assessment of root flare, trunk and crown to determine health, size and presence/absence of Butternut Canker (*Opbiognomonia clavigignenti-juglandacearum*);
- GPS location of Butternut tree(s);
- Determination of Butternut Category based on MNRF criteria and analysis of data using MNRF's BHA Tree Analysis file;
- Completion of MNRF's Butternut Data forms Form 1: General Butternut Location Data and Form 2: Retainable Tree Assessment Data;
- Completion of a BHA Report and cover letter using templates created by MNRF for the property owner (or client) for submission to MNRF;

Incidental Wildlife Surveys: Formal surveys for mammals, reptiles and insects are not proposed but incidental observations of these species will be recorded.

Non-Ecological Studies: In addition to the ecological characterization of the site, the EIS will include a discussion regarding stormwater management, servicing, and site grading plans.

2. Proposed EIS Structure

The EIS report will have the following proposed structure:

1. Introduction
   - 1.1. Study area
2. Policy Context
   - 2.1. Provincial Policy Statement
   - 2.2. Endangered Species Act
   - 2.3. Urban Hamilton Official Plan
   - 2.4. Niagara Escarpment Plan
3. Methodology
   - 3.1. Background Studies
   - 3.2. Field Work
4. Existing Conditions
   - 4.1. Physiography and Geology
   - 4.2. Natural Heritage Systems
   - 4.3. Vegetation
     - 4.3.1. Botanical Inventory
     - 4.3.2. Ecological Land Classification
     - 4.3.3. Tree Inventory
     - 4.3.4. Butternut Health Assessment
   - 4.4. Snag Survey
   - 4.5. Breeding Bird Surveys
   - 4.6. Incidental Wildlife
5. Species at Risk Screening
6. Significant Wildlife Habitat Screening
7. Proposed Development
   - 7.1. Natural Heritage System Buffers
   - 7.2. Stormwater Management
   - 7.3. Grading and Servicing Requirements
8. Environmental Impact Assessment
   - 8.1. Impact Summary Table
   - 8.2. Direct Impact Assessment
   - 8.3. Indirect Impact Assessment
   - 8.4. Cumulative Impact Assessment
9. Mitigation Measures
   - 9.1. Natural Heritage System Measures
   - 9.2. Construction Measures
10. Policy Conformity
11. Recommendations
12. References
13. Maps

14. Appendices

3. Closing

The proposed EIS will characterize and assess the natural heritage features, and their functions, located on and adjacent to the Subject Property. Further, the EIS is intended to demonstrate that the proposed development will not result in negative impacts to the Natural Heritage Features that occur on and adjacent to the site. An assessment of the impacts and recommended mitigation measures will be provided within the context of the proposed development at 14 Belvidere Avenue in Hamilton ON. The EIS will provide an analysis of the required buffers and the developable limit of the Subject Property. Detailed mapping of the study area and results of the ecological assessments will also be included. This Terms of Reference provides the approach and study elements which will be followed throughout the study process.

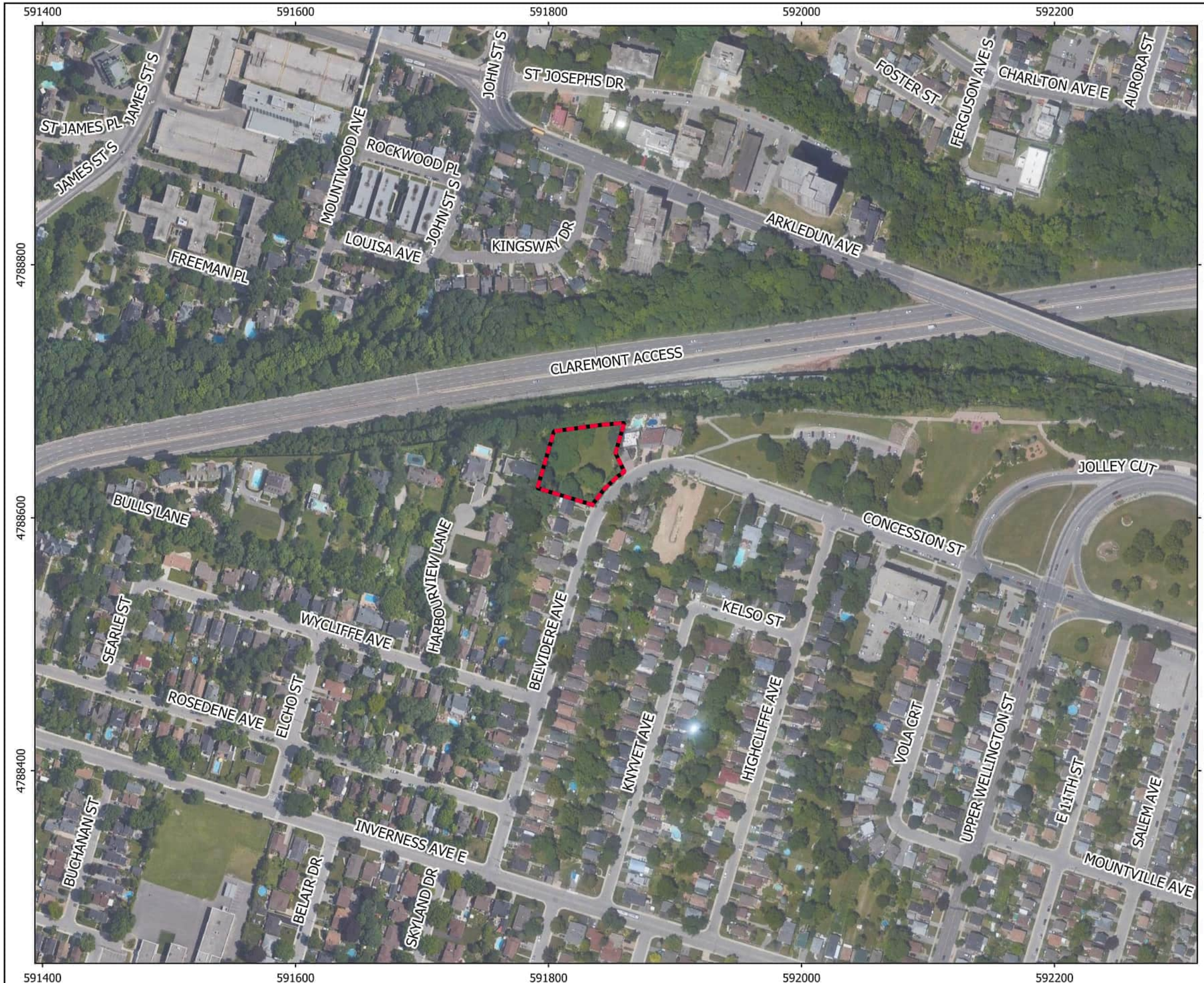
If you have any questions regarding this submission, please do not hesitate to contact us.

Regards,

GEOPROCESS RESEARCH ASSOCIATES INC

Ken Glasbergen, MSc., ERPG
Senior Ecologist, Principal

Maps



Legend

Subject Property

N

0 20 40 60 80 100 m

Prepared using QGIS and Google Satellite Imagery

GeoProcess RESEARCH ASSOCIATES

CREATED BY:	DH	PROJECT NO.:	P2023-730
CHECKED BY:	KG	DATE:	Jan 08, 2024

Map 1.

Key Map

14 Belvidere Avenue
Hamilton

Beni Colalillo

G:\Shared drives\Projects-2023\P2023-730 14 Belvidere Avenue EIS\GIS\Project\Basemap.qgz

591800

591800

Legend

- Subject Property
- Escarpment Natural Area - Niagara Escarpment Plan

UHOP Natural Heritage Designations

- Core Area
- Parks and General Open Space
- Core Area Staked Limit - Staked with City of Hamilton, September 28, 2023
- 10m Core Area VPZ

N

0 5 10 15 20 m

Prepared using QGIS and Google Satellite Imagery

GeoProcess RESEARCH ASSOCIATES

CREATED BY:	DH	PROJECT NO.:	P2023-730
CHECKED BY:	KG	DATE:	Jan 08, 2024

Map 2.

Natural Heritage Limits

14 Belvidere Avenue
Hamilton

Beni Colalillo

G:\Shared drives\Projects-2023\P2023-730 14 Belvidere Avenue EIS\GIS\Project\Basemap.qgz

Legend

- Subject Property
- ELC Polygon

Notes:

- CLT1: Carbonate Treed Cliff

N

0 5 10 15 20 m

Prepared using QGIS and Google Satellite Imagery

GeoProcess RESEARCH ASSOCIATES

CREATED BY:	DH	PROJECT NO.:	P2023-730
CHECKED BY:	KG	DATE:	Jan 08, 2024

Map 3.

Ecological Land Classification

14 Belvidere Avenue
Hamilton
Beni Colalillo

G:\Shared drives\Projects-2023\P2023-730 14 Belvidere Avenue EIS\GIS\Project\Basemap.qgz

591800

PROPOSED BUILDING ENVELOPE 2

PROPOSED BUILDING ENVELOPE 1

PROPOSED BUILDING ENVELOPE 3

PROP. DRIVEWAY

PROPOSED 6.0m WIDE ACCESS EASEMENT

PROPOSED BUILDING ENVELOPE 4

591800

Legend

- Subject Property
- Site Plan
- Core Area Limit - Staked with City of Hamilton September 28, 2023
- Core Area 10 m VPZ Limit

N

0 5 10 15 20 m

Prepared using QGIS and Google Satellite Imagery

GeoProcess RESEARCH ASSOCIATES

CREATED BY:	SG	PROJECT NO.:	P2023-730
CHECKED BY:	KG	DATE:	Mar 13, 2024

Map 4.

Site Plan

14 Belvidere Avenue
Hamilton
Beni Colalillo

G:\Shared drives\Projects-2023\P2023-730 14 Belvidere Avenue EIS\GIS\Project\Basemap.qgz

591800

591800

Legend

- Subject Property
- Tree Protection Fencing
- Trees for Removal
- Trees for Retention

Tree Dripline

- Site Plan
- Core Area Staked Limit
- 10m Core Area VPZ

N

0 5 10 15 20 m

Prepared using QGIS and Google Satellite Imagery

GeoProcess RESEARCH ASSOCIATES

CREATED BY:	SG	PROJECT NO.:	P2023-730
CHECKED BY:	KG	DATE:	Feb 22, 2024

Map 5.

Tree Inventory

14 Belvidere Avenue
Hamilton
Beni Colalillo

G:\Shared drives\Projects-2023\P2023-730 14 Belvidere Avenue EIS\GIS\Project\Basemap.qgz

Appendix F

Field Sheets

Breeding Bird Observations from the 14 Belvidere Ave. Hamilton, ON Study Area, 2023

Don Graham / Consulting Biologist

Dates of Field Investigations

May 31 – Breeding Bird Survey
June 16 – Breeding Bird Survey

Site Visit Weather Conditions

Visit Date	Visit Time	Temp. Range [C]	Cloud Cover [%]	Wind Speed [Beaufort scale]
May 31	7:50 – 8:30	20 – 22	30 – 30	2 – 2
June 16	8:25 – 9:00	17 – 25	90 – 90	1 -1

Birds - Methodology

Breeding bird surveys were undertaken on 2 separate dates by a breeding bird expert under appropriate weather conditions. Based on observations of vegetation during the breeding bird surveys, the study area is very small and composed of an undeveloped residential property with planted lawn, shrubs and trees. Hence the study area was not partitioned into Wildlife Survey Quadrants and simply considered Residential.

The area surveyed was thoroughly covered by walking randomly throughout the site and recording presence, abundance and level of breeding evidence (using Ontario Breeding Bird Atlas [OBBA] protocols). Because of the small size of the area, additional time was spent stationary watching and listening for new bird species to move onto and use the site.

OBBA Breeding Evidence Codes

POSSIBLE
H-species observed in breeding season in suitable nesting habitat
SM - singing male present or breeding calls heard in breeding season in suitable habitat

PROBABLE
P-pair observed in their breeding season in suitable habitat
T-permanent territory presumed through registration of territorial song or presence of adult bird in breeding habitat on at least 2 days, one week or more apart at the same place.
D-courtship or display between a male and female, or two males including courtship feeding and copulation.
V-visiting probable nest site.
A-agitated behavior or anxiety calls of adults
B-brood patch on adult female or cloacal protuberance on adult male
N-nest building or excavation of nest hole

CONFIRMED
DD-distraction display or injury feigning
NU-used nest or eggshell found [occupied/laid during atlas period]
FY-recently fledged young or downy young.
AE-adults leaving or entering nest site in circumstances indicating occupied nest
FS-adult carrying faecal sac
CF-adult carrying food for young
NE-nest containing eggs
NY-nest with young seen or heard

For each species seen or heard on the surveys, the highest level of breeding evidence and highest one-day-total in the Residential area was recorded. A species observed flying over the site, showing no breeding evidence or where no suitable habitat is present, is marked as “Flyover”. A species observed, showing no breeding evidence or where no suitable habitat is present, is marked ‘X’.

The table also lists the COSSARO [provincial] and COSEWIC [national] rank [if any], as well as the Natural Heritage Information Centre [NHIC, MNR] S rank. COSSARO is the Committee on the Status of Species at Risk in Ontario [MNR] and COSEWIC is the Committee on the Status of Endangered Wildlife in Canada.

Species of Conservation Concern

Species status [for all fauna] was evaluated using the following sources:

- The COSEWIC list for national status designations (current list at time of report preparation);

- The Species At Risk Act for federally listed species (current at time of report preparation);
- The COSSARO list for provincial status designations (current list at time of report preparation);
- The NHIC / Biodiversity Explorer website for provincial rarity ranks (i.e., S-Ranks);

Bird Species List for the 14 Belvidere Ave. Hamilton, ON site

SPECIES	Residential	Breeding Level	COSSARO/ COSEWIC	Comment
Rock Pigeon	10	Flyover		
Chimney Swift	3	Flyover	THR/THR	See SAR Discussion
Ring-billed Gull	2	Flyover		
Red-tailed Hawk	2	Flyover		
Eastern Kingbird	1	H		
House Wren	1	T		
American Robin	3	FY		
Gray Catbird	1	S		
European Starling	4	FY		
House Sparrow	3	H		
American Goldfinch	2	P		
House Finch	2	P		
Song Sparrow	2	T		
Northern Cardinal	2	T		
Common Grackle	2	H		

Of the 15 summer resident bird species [11 with some breeding evidence], one species of conservation concern [e.g., species that are “designated” by COSEWIC and/or listed under the Species at Risk Act [SARA]; species “designated” by COSSARO, including Endangered and Threatened and Special Concern species listed and regulated under Ontario's ESA; and provincially rare species [NHIC S-rank of S1 to S3] was observed during field surveys.

SAR Bird Discussion

The Chimney Swift is a provincially and federally Threatened species. Chimney Swift spends the majority of its life airborne preying mostly on flying insects, including beetles, true bugs, caddisflies, mayflies, crane flies, wasps, ants, and bees. Little information exists regarding the distance that swifts forage from the nest in Ontario, but in New York State some individuals foraged 3-6 km away (COSEWIC, 2018). Chimney Swifts nest in chimneys that are uncapped and have a diameter of greater than 28.5 cm (Bird Studies Canada, 2023).

The sighting of three Chimney Swifts flying over the subject property and surrounding properties means little in terms of the site providing breeding habitat. Chimney Swifts wander greatly while aerial foraging (COSEWIC, 2018) and would be seen over many properties in Hamilton. The site does not provide any chimneys for nesting. Nearby homes do not appear to provide suitable chimneys. Currently the species does not nest on the subject property and future occupancy is considered not possible.

No other SAR were observed on or in the vicinity of the subject property during the two breeding bird surveys.

Potential SAR Bird Species Based on Suitability of Habitat

No other avian SAR are expected as the site does not provide suitable habitat.

Cited Literature / References

Bird Studies Canada. 2023. Chimney Swift Fund - Birds Canada | Oiseaux Canada

COSEWIC. 2018. COSEWIC Assessment and Status Report on the Chimney Swift (*Chaetura pelagica*) in Canada 2018 Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Threatened 2018

COSEWIC. 2023. Species at risk public registry - Canada.ca

COSSARO. 2023. Species at risk in Ontario | ontario.ca

Natural Heritage Information Centre. 2023. Natural Heritage Information Centre | ontario.ca

Ontario Breeding Bird Atlas. 2001 - 2005. Ontario Breeding Bird Atlas (birdsontario.org). Chimney Swift

ELC COMMUNITY DESCRIPTION & CLASSIFICATION

SITE: 14 BELVEDERE | POLYGON: 1
SURVEYOR(S): SD | DATE: 23-05-31 | UTME
START: 1047 | END: 11:17 | UTMZ | UTMN

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☑ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☒ MINERAL SOIL ☐ PARENT MIN ☐ ACIDIC BEDRK ☐ BASIC BEDRK ☐ CARB. BEDRK	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☑ TABLELAND ☐ ROLL UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☐ NATURAL ☑ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD ☐ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION

SITE	COVER
☐ OPEN WATER ☐ SHALLOW WATER ☒ SURFICIAL DEP ☐ BEDROCK	☑ OPEN ☐ SHRUB ☐ TREED

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			see table at right
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

HT CODES: 1 = >25 m 2 = 10<HT≤25 m 3 = 2<HT≤10 m 4 = 1<HT≤2 m 5 = 0.5<HT≤1 m 6 = 0.2<HT≤0.5 m 7 = HT≤0.2 m
CVR CODES: 0 = NONE 1 = 0% < CVR ≤ 10% 2 = 10 < CVR ≤ 25% 3 = 25 < CVR ≤ 60% 4 = CVR > 80%

STAND COMPOSITION: | BA:

SIZE CLASS ANALYSIS:	N	< 10	O	10 - 24	O	25 - 50	R	> 50
STANDING SNAGS:	N	< 10	N	10 - 24	N	25 - 50	N	> 50
DEADFALL / LOGS:	N	< 10	N	10 - 24	N	25 - 50	N	> 50

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE: N		PIONEER		YOUNG		MID-AGE		MATURE		OLD GROWTH

SOIL ANALYSIS: HITTING A LAYER OF GRAVEL/ROCKS APPROX 10CM

TEXTURE:	DEPTH TO MOTTLES / GLEY	g = G=
MOISTURE:	DEPTH OF ORGANICS:	(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:	(cm)

COMMUNITY CLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
INCLUSION	CODE:
COMPLEX	CODE:

Notes:

ELC PLANT SPECIES LIST

SITE:
POLYGON:
DATE:
SURVEYOR(S):

LAYERS: 1 = CANOPY > 10m 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER
ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COLL.
ACER SAS	N	O	O	O	
ACER PLAT	O	O	O	O	
BLACK LOCUST	O	O	N	N	
ACER SILVER	O	R	N	N	
RHUS TYPH	N	N	R	R	
ACER NEGU	N	N	N	R	

SPECIES CODE	LAYER 1	2	3	4	COLL.
POA PRAT				D	
TAR OFFJ				O	
CHMP RAPU				A	
HESP MAT				R	
ARCT LAPPA				O	
ALLS PET				O	
CHEL MAJ				R	
MULL N				O	
MEDI LUN				R	
DACT GLOM				R	
ORNO UMB				R	

ELC COMMUNITY DESCRIPTION & CLASSIFICATION	SITE: 14 BELVIDERE		POLYGON:	
	SURVEYOR(S): SD	DATE: 23-06-26		UTME:
	START: 8:45	END: 10:30	UTMZ:	UTMN:

POLYGON DESCRIPTION

SYSTEM	SUBSTRATE	TOPOGRAPHIC FEATURE	HISTORY	PLANT FORM	COMMUNITY
☑ TERRESTRIAL ☐ WETLAND ☐ AQUATIC	☐ ORGANIC ☑ MINERAL SOIL ☐ PARENT MIN ☐ ACIDIC BEDRK ☐ BASIC BEDRK. ☐ CARB. BEDRK	☐ LACUSTRINE ☐ RIVERINE ☐ BOTTOMLAND ☐ TERRACE ☐ VALLEY SLOPE ☑ TABLELAND ☐ ROLL UPLAND ☐ CLIFF ☐ TALUS ☐ CREVICE / CAVE ☐ ALVAR ☐ ROCKLAND ☐ BEACH / BAR ☐ SAND DUNE ☐ BLUFF	☐ NATURAL ☑ CULTURAL	☐ PLANKTON ☐ SUBMERGED ☐ FLOATING-LVD ☑ GRAMINOID ☐ FORB ☐ LICHEN ☐ BRYOPHYTE ☐ DECIDUOUS ☐ CONIFEROUS ☐ MIXED	☐ LAKE ☐ POND ☐ RIVER ☐ STREAM ☐ MARSH ☐ SWAMP ☐ FEN ☐ BOG ☐ BARREN ☐ MEADOW ☐ PRAIRIE ☐ THICKET ☐ SAVANNAH ☐ WOODLAND ☐ FOREST ☐ PLANTATION
SITE ☐ OPEN WATER ☐ SHALLOW WATER ☑ SURFICIAL DEP. ☐ BEDROCK			**COVER** ☑ OPEN ☐ SHRUB ☐ TREED		

STAND DESCRIPTION:

	LAYER	HT	CVR	SPECIES IN ORDER OF DECREASING DOMINANCE (>> MUCH GREATER THAN; > GREATER THAN; = ABOUT EQUAL TO)
1	CANOPY			see table at right
2	SUB-CANOPY			
3	UNDERSTOREY			
4	GRD. LAYER			

HT CODES: 1 = >25 m 2 = 10<HT≤25 m 3 = 2<HT≤10 m 4 = 1<HT≤2 m 5 = 0.5<HT≤1 m 6 = 0.2<HT≤0.5 m 7 = HT≤0.2 m

CVR CODES: 0= NONE 1= 0% < CVR ≤ 10% 2= 10 < CVR ≤ 25% 3= 25 < CVR ≤ 60% 4= CVR > 60%

STAND COMPOSITION:					BA:
SIZE CLASS ANALYSIS:	M < 10	O 10 - 24	O 25 - 50	R > 50	
STANDING SNAGS:	N < 10	N 10 - 24	N 25 - 50	N > 50	
DEADFALL / LOGS:	N < 10	N 10 - 24	N 25 - 50	N > 50	

ABUNDANCE CODES: N = NONE R = RARE O = OCCASIONAL A = ABUNDANT

COMM. AGE: N	PIONEER	YOUNG	MID-AGE	MATURE	OLD GROWTH

SOIL ANALYSIS:

TEXTURE:	DEPTH TO MOTTLES / GLEY	g =	G=
MOISTURE:	DEPTH OF ORGANICS:		(cm)
HOMOGENEOUS / VARIABLE	DEPTH TO BEDROCK:		(cm)

COMMUNITYCLASSIFICATION:

COMMUNITY CLASS:	CODE:
COMMUNITY SERIES:	CODE:
ECOSITE:	CODE:
VEGETATION TYPE:	CODE:
INCLUSION	CODE:
COMPLEX	CODE:

Notes:

ELC PLANT SPECIES LIST	SITE:
	POLYGON:
	DATE:
	SURVEYOR(S):

LAYERS: 1 = CANOPY > 10m 2 = SUB-CANOPY 3 = UNDERSTOREY 4 = GROUND (GRD.) LAYER

ABUNDANCE CODES: R = RARE O = OCCASIONAL A = ABUNDANT D = DOMINANT

SPECIES CODE	LAYER 1	2	3	4	COLL.
ACER SAS	N	O	O	O	
ACER PLAT	O	O	O	O	
ACER SILVE	R	R	N	N	
BLACK LOCUST	R	R	N	N	
ACER NEGU	N	N	N	R	
RHUS TYPH	N	N	N	R	

SPECIES CODE	LAYER 1	2	3	4	COLL.
POA PRAT				D	
MULLEN				O	
CAMP RAPU				O	
HESP MAT				O	
TAR OFFI				O	
ARCT LAPPA				O	
ALLI PEI				O	
CHEL MAJU				R	
MEDI LUPU				O	
DACT GLOM				R	

Species Observed On site

Common Name	Scientific	Provincial Conservation Rank (Srank)	COSSARO Status	COSEWIC Status	Coefficient Conservation	Coefficient Wetness
Norway Maple	acer platanoides	SNA	n/a	n/a	n/a	5
Black Locust	Robinia pseudoacacia	SNA	n/a	n/a	n/a	3
Silver Maple	Acer saccharinum	S5	n/a	n/a	5	-3
Staghorn Sumac	Rhus typhina	S5	n/a	n/a	n/a	3
Kentucky Bluegrass	poa pratensis	S5	n/a	n/a	n/a	3
Common Dandelion	Taraxacum officinale	SNA	n/a	n/a	n/a	3
Dame's Rocket	Hesperis matronalis	SNA	n/a	n/a	n/a	3
Garlic Mustard	Alliaria petiolata	SNA	n/a	n/a	n/a	3
Greater Celandine	Chelidonium majus	SNA	n/a	n/a	n/a	3
Common Mullein	Verbascum thapsus	SNA	n/a	n/a	n/a	3
Black Medick	Medicago lupulina	SNA	n/a	n/a	n/a	3
Orchard Grass	dactylis glomerata	SNA	n/a	n/a	n/a	3
Common Star-of-Beth	Ornithogalum umbellatum	SNA	n/a	n/a	n/a	3

Common Name	Scientific Name	Taxa	Date	Notes
American Robin	Turdus migratorius	Bird	12-Apr-23	observed every site visit
Northern Cardinal	Cardinalis cardinalis	Bird	12-Apr-23	observed every site visit
Catbird	Dumetella carolinensis	Bird	12-Apr-23	
black-capped Chikade	Poecile atricapillus	bird	12-Apr-23	observed every site visit
Grey Squirrel	Sciurus carolinensis	Rodent	12-Apr-23	Observed on May 31/June 26

Appendix B

Tree Table

Table A 1. Tree Protection Plan Summary

Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	Dripline Radius (m)	Ownership	Comments	Retain or Remove	Proposed Action
224	Norway Maple	*Acer platinoides*	15, 20	G	G	G	4.5	Private	Multistemmed	**Retain**	Tree protection fencing will be installed
225	Norway Maple	*Acer platinoides*	44, 55	G	G	G	7	Private	Codominant	**Remove**	This tree will be removed
227	Norway Maple	*Acer platinoides*	70	G	G	G	8	Private	Climbing Poison Ivy	**Remove**	This tree will be removed
228	Black Locust	*Robinia pseudoacacia*	60	G	G	G	6	Private	Climbing Poison Ivy	**Remove**	This tree will be removed
229	White Mulberry	*Morus alba*	15	G	P	P	2.5	Private	Epicormick shoots, vines	**Retain**	No action required
230	Black Locust	*Robinia pseudoacacia*	45	G	G	G	7	Private		**Retain**	Tree protection fencing will be installed
231	Black Locust	*Robinia pseudoacacia*	41	G	G	G	5	Private		**Retain**	Tree protection fencing will be installed
232	Black Locust	*Robinia pseudoacacia*	41	G	G	G	5	Private		**Retain**	Tree protection fencing will be installed
233	Silver Maple	*Acer saccharinum*	84	G	G	G	6	Public	Codominant	**Retain**	Tree protection fencing will be installed
234	Norway Maple	*Acer platinoides*	68	G	G	G	7	Private		**Remove**	This tree will be removed
235	Norway maple	*Acer platinoides*	52, 55	G	G	G	7	Private	Codominant	**Remove**	This tree will be removed
N1	Black Locust	*Robinia pseudoacacia*	40	P	P	P	5	Neighbouring	Along fenceline	**Retain**	No action required
N2	Black Locust	*Robinia pseudoacacia*	57	G	G	G	10	Neighbouring	Codominant, along fenc line, lean (L)	**Retain**	No action required
N3	Norway Maple	*Acer platinoides*	60	G	G	G	6	Neighbouring	Along fenceline	**Retain**	No action required
N4	Black Locust	*Robinia pseudoacacia*	58	G	P	P	5	Neighbouring	main litre has been naturally topped	**Retain**	No action required
N5	Black Locust	*Robinia pseudoacacia*	35, 37, 40	F	G	G	7	Neighbouring	Growing in fence	**Retain**	No action required

Appendix C

Species at Risk Screening Resources

Table A 1. SAR screening resources

Screening Resource	Description
Natural Heritage Information Center (NHIC)	The Natural Heritage Information Center (NHIC), operated by the Ontario Ministry of Natural Resources and Forestry, collects, reviews, manages and distributes information on Ontario's biodiversity. Data distributed by the NHIC is used in conservation and natural resource management decision making and was a primary resource for this report. Through the NHIC Make-a-Map tool, data on species, plant communities, wildlife concentration areas and natural areas is made accessible to the public and professionals using generalized 1-kilometer grid units to protect sensitive information. The mapping interface provides current and historical occurrences of SAR within the specified grid unit. The database also identifies environmental designations which provide insight into habitat potential including wetland, areas of natural and scientific interests and woodlands.
Breeding Bird Atlas	The atlas divides the province into 10×10 km squares and then birders find as many breeding species as possible in each square. Atlassers who know birds well by song complete 5-minute "Point Counts", 25 of which are required to provide an index of the abundance of each species in a square. Data from every square are mapped to show the distribution of each species. Point count data from each square show how the relative abundance of each species varies across the province.
eBird	eBird data document bird distribution, abundance, habitat use, and trends through checklist data collected within a simple, scientific framework. Birders enter when, where, and how they went birding, and then fill out a checklist of all the birds seen and heard during the outing. eBird's free mobile app allows offline data collection anywhere in the world, and the website provides many ways to explore and summarize your data and other observations from the global eBird community. eBird hotspots that are within 1 km of the Study Area are selected for species review.
Ontario Moth Atlas	The Ontario Moth Atlas is a project of the Toronto Entomologists' Association. The atlas currently covers about 250 species from 7 of the best-known families. The atlas presently includes 62,000 records. The last update of the atlas was in April 2020. The atlas is updated at least every 3 months. Most atlas data come from iNaturalist records. However, there is some data from Chris Schmidt of Agriculture Canada, the BOLD (Barcode of Life Datasystems) project of the University of Guelph, and from other records submitted directly to the TEA. The atlas uses the same 10×10 km squares at the Breeding Bird Atlas.
Ontario Butterfly Atlas	The Ontario Butterfly Atlas is a project of the Toronto Entomologists' Association (TEA). The TEA has been accumulating records and publishing annual seasonal summaries (Ontario Lepidoptera) for 50 years, with the first edition appearing in 1969. Atlas data comes from eButterfly records, iNaturalist records, BAMONA records, and records submitted directly to the TEA. The atlas uses the same 10×10 km squares at the Breeding Bird Atlas.
i-Naturalist	i-Naturalist is a nature app that helps public identify plants and animals. Using algorithms as well as scientists and taxonomic experts' multiple observations can be identified at a research scale. This data generated by the iNat community can be used in science and conservation. The program actively distributes the data in venues where scientists and land managers can find it. I-Naturalist has a project group for (NHIC) Rare species of Ontario. GeoProcess only records observations with-in 1 km of the Study Area.
Fisheries and Ocean Aquatic Species at Risk Maps	The DFO has compiled critical habitat and distribution data for aquatic species listed under the Species at Risk Act (SARA). The interactive map is intended to provide an overview of the distribution of aquatic species at risk and the presence of their critical habitat within Canadian waters. The official source of information is the Species at Risk Public Registry. Using this map, a 1 km radius circle is outlined around aquatic features located within the Study Area.

SAR Screening

GeoProcess RESEARCH ASSOCIATES
Knowledge Research Consulting

1. Information Sources

The information listed below was acquired from the listed data source on April 10, 2023.

Natural Heritage Information Centre (NHIC)

The following results were obtained from the NHIC report for the one, 1 km^2 grid square that cover the Study Area (17NH7989).

Table 1. NHIC Screening

OGF ID	Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	ATLAS NAD83 IDENT
996852	WILDLIFE CONCENTRATION AREA	Colonial Waterbird Nesting Area	-	SNR	-	-	17NH9188
996852	SPECIES	Northern Bobwhite	Colinus virginianus	S1?B	END	END	17NH9188
996852	SPECIES	Black Purseweb Tarantula	Sphodros niger	S3	-	-	17NH9188
996852	SPECIES	Perfoliate Bellwort	Uvularia perfoliata	S1, S2	-	-	17NH9188
996852	SPECIES	Spotted Wintergreen	Chimaphila maculata	S2	THR	THR	17NH9188
996852	WILDLIFE CONCENTRATION AREA	Mixed Wader Nesting Colony	-	SNR	-	-	17NH9188
996852	SPECIES	American Burying Beetle	Nicrophorus americanus	SH	EXP	EXP	17NH9188

PO Box 65506 Dundas
DUNDAS, ON, L9H 6Y6
905.466.6721
www.geoprocessresearch.com

Ontario Breeding Bird Atlas

The following SAR were found within the Ontario Breeding Bird Atlas report for the 10 km^2 grid square that overlaps the Study Area (17NH78).

Table 2. Breeding Bird Atlas SAR Summary

Species	Max BE	Categ	#Sq	Atlasser Name	#PC	%PC	Abun	#Sq	S RANK	SARO Status	SARA Status
Chimney Swift	AE	CONF	1	Bob Curry	5	19.23	0.3077	1	S3B	THR	THR
Peregrine Falcon	NY	CONF	1	Ted Armstrong					S4	SC	NAR
Common Nighthawk	FY	CONF	1	Ken Mr. Ken Williams Williams					S4B	SC	SC
Eastern Wood-Pewee	T	PROB	1						S4B	SC	SC
Barn Swallow	FY	CONF	1	H. Michael Street	1	3.85	0.1154	1	S4B	SC	SC
Wood Thrush	CF	CONF	1						S4B	SC	THR
Bobolink	A	PROB	1						S4B	THR	THR
Eastern Meadowlark	A	PROB	1						S4B, S3N	THR	THR

eBird

No eBird Hotspots occur on site. However, one Hotspot occurs at the Sam Lawrence Park Hotspot, which is within 2 km of the Study Area. The following SAR were listed within this hot spot in the last 10 years:

Table 3. eBird SAR Summary

Common Name	S RANK	SARO Status	SARA Status
Golden Eagle	S1B, S4N	END	NAR
Chimney Swift	S3B	THR	THR
Peregrine Falcon	S4	SC	NAR
Bald Eagle	S4	SC	NAR
Barn Swallow	S4B	THR	THR
Bank Swallow	S4B	THR	THR

Common Name	S RANK	SARO Status	SARA Status
Eastern Wood-Pewee	S4B	SC	SC

iNaturalist

** iNaturalist now includes the Ontario Herps Project (Formerly Ontario Reptile and Amphibian Atlas)*

The following SAR species were recorded within 10 km^2 within the Study Area.

Table 4. iNaturalist Summary

Common Name	S RANK	SARO Status	SARA Status
Blanding's Turtle	S3	THR	END
Jefferson Salamander	S2	END	END

Ontario Moth Atlas

No SAR were recorded for the 10 km^2 grid square that overlaps the Study Area ((17NH78)

Ontario Butterfly Atlas

The following SAR were recorded for the 10 km^2 grid square that overlaps the Study Area ((17NH78).

Table 5. Ontario Butterfly Atlas Summary

Common Name	Scientific Name	# of Records	Earliest in Yr (adults)	Latest in Yr (adults)	Earliest Yr	Latest Yr	S RANK	SARO Status	COSEWIC Status
West Virginia White	Pieris virginiensis	2	12-May	14-May	1881	1881	S3	SC	-
Mottled Duskywing	Erynnis martialis	1	19-May	19-May	1979	1979	S2	END	END

Ontario Reptile and Amphibian Atlas

The following SAR were recorded for the 10 km^2 grid square that overlaps the Study Area ((17NH78).

Table 6. Reptile and Amphibian Atlas Summary

Common Name	# of Records	Earliest Yr	Latest Yr	S RANK	SARO Status	COSEWIC Status
Northern Map Turtle	1	2018	2018	S3	SC	SC

Appendix D

Significant Wildlife Habitat Screening

Ecoregion 7E

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
Seasonal Concentration Areas of Animal					
Waterfowl Stopover and Staging Areas (Terrestrial)	CUM, CUT1 - plus evidence of annual spring flooding within these ecosites *Fields with seasonal flooding and waste grains in certain areas are specific to Tundra Swan	Fields with sheet water during Spring (mid-March to May) •agricultural fields with waste grain are not SWH unless they have spring sheet water available.	No	No habitat features on site or species aggregation.	•Any mixed species aggregations of 100+ individuals • the flooded field plus 100-300m radius, dependant on localized site and adjacent land us • Annual Use of Habitat is documented from information sources or field studies •Specific evaluation methods required
Waterfowl Stopover and Staging Areas (Aquatic)	MAS1,MAS2,MAS3,SAS1,SAM1,SAF1,SWD1,SWD2,SWD3,SWD4,SWD5,SWD6,SWD7	Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration. • Sewage treatment ponds and storm water ponds do not qualify as a SWH, however a reservoir managed as a large wetland or pond/lake does qualify.	No	No habitat features on site.	•Aggregations of 100 + of species listred for 7 days, results in > 700 waterfowl use days. •Areas with annual staging for ruddyducks, canvasbacks and redheads. •The combined area of the ELC ecosites and a 100m radius area. •Wetland area and shorelines associated with sites identified within the SWHTG, Appendix K, are significant wildlife habitat.

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
					•Annual Use of Habitat is documented from information sources or field studies • Specific evaluation methods required
Shorebird Migratory Stopover Area	BBO1,BBO2,BBS1,BBS2,BBT1,BBT2,SDO1,SDS2,SDT1,MAM1,MAM2,MAM3,MAM4,MAM5	•Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. •Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores in May to mid-June and early July to October. • No sewage treatment or storm water management ponds.	No	No habitat features on site.	•Presence of 3 or more of listed species and > 1000 shorebird use days during spring or fall migration period. •Whimbrel stop briefly (<24hrs) during spring migration, any site with >100 Whimbrel used for 3 years or more is significant. •The area of significant shorebird habitat includes the mapped ELC shoreline ecosites plus a 100m radius area. •Annual Use of Habitat is documented from information sources or field studies • Specific evaluation methods required
Raptor Wintering Area	Combo of one of each Community Series from one of each: Forest (FOD,FOM,FOC) and Upland (CUM,CUT,CUS,CUW). Bald Eagle: Forest on shoreline area adjacent to large rivers and lakes.	A combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors. • Need to be > 20 ha. •Least disturbed sites, idle/fallow or lightly grazed field/meadow	No	No habitat features on site.	•One or more Short-eared Owls or; •One of more Bald Eagles or; • At least 10 individuals and two of the listed hawk/owl species. •To be significant a site must be used regularly (3 in 5 years)

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
		(>15ha) with adjacent woodlands. • Field area of the habitat is to be wind swept with limited snow depth or accumulation. • Eagle sites have open water and large trees and snags available for roosting .			for a minimum of 20 days by the above number of birds. •for an Eagle winter site is the shoreline forest ecosites directly adjacent to the prime hunting area. • Specific evaluation methods required
Bat Hibernacula	CCR1,CCR2,CCA1,CCA2. * buildings are not to be considered SWH	May be found in caves, mine shafts, underground foundations and Karsts. •Active mine sites are not considered SWH.	No	No habitat features on site.	•All sites with confirmed hibernating bats are SWH. • area includes 200m radius around the entrance of the hibernaculum for most development types and 1000m for wind farms. •Studies are to be conducted during the peak swarming period (Aug. – Sept.). • Specific survey methods required
Bat Maternity Colonies	All Ecosites in: FOD,FOM,SWD,SWM.	Maternity colonies can be found in tree cavities, vegetation and often in building. *Buildings are not considered SWH. • Not found in caves or mines in ON. •Located in Mature Deciduous or mixed forest	No	No habitat features on site.	•Confirmed use by: >10 Big Brown Bats >5 Adult female Silver Haired Bats. •The area of the habitat includes the entire woodland or a forest stand ELC Ecosite or an Ecoelement containing the maternity colonies.

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
		stands with >10/ha large diameter (>25cm dbh) wildlife trees. •Prefer snags in early stages of decay (class 1-3 or class 1 or class 2). •Silver-haired Bats prefer older mixed or deciduous forests with at least 21 snags/ha.			• Specific evaluation methods required
Turtle Wintering Areas	Snapping and Midland Painted: SW,MA,OA,SA and FEO/BOO Series. Northern Map: Open water areas such as deeper rivers or streams and lakes.	Wintering areas are in the same general area as their core habitat. Water has to be deep enough not to freeze and have soft mud substrates. •Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate Dissolved Oxygen. *Man-made ponds such as sewage lagoons or storm water ponds should not be considered SWH.	No	No habitat features on site.	•Presence of 5 over-wintering Midland Painted Turtles is significant •One or more Northern Map Turtle or Snapping Turtle over-wintering within a wetland is significant • The mapped ELC ecosite area with the over wintering turtles is the SWH. • If the hibernation site is within a stream or river, the deepwater pool where the turtles are over wintering is the SWH. • Search for congregations in Basking Areas in spring and fall.
Reptile Hibernaculum	Any ecosite other that very wet. •Talus, Rock Barren, Crevice, Cave, Alvar may be directly related.	Sites located below frost lines in burrows, rock crevices and other natural or naturalized locations.	No	No habitat features on site.	•Presence of snake hibernacula used by - a minimum of five individuals of a snake sp. or;

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
	•Observations of congregations in spring or fall is good indicator.	The existence of features that go below frost line; such as rock piles or slopes, old stone fences, and abandoned crumbling foundations assist in identifying candidate SWH. • Areas of broken and fissured rock are particularly valuable since they provide access to subterranean sites below the frost line. •Wetlands can also be important over-wintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover. •Five-lined skink prefer mixed forests with rock outcrop openings providing cover rock overlaying granite bedrock with fissures			- individuals of two or more snake spp.. •Congregations of -a minimum of five individuals of a snake sp. or; -individuals of two or more snake spp. near potential hibernacula (eg. foundation or rocky slope) on sunny warm days in Spring (Apr/May) and Fall (Sept/Oct). • If there are Special Concern Species present, then site is SWH. •The feature in which the hibernacula is located plus a 30 m radius area is the SWH. • Hibernacula are used annually, often by the same individuals (strong site fidelity) and other life processes often take place near by

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
Colonially-Nesting Bird Breeding Habitat (Bank and Cliff)	Eroding banks, sandy hills, borrow pits, steep slopes, and sand piles Cliff faces, bridge abutments, silos, barns. CUM1,CUS1,BLS1,CLO1,CLT1,CUT1,BLO1,BLT1,CLS1.	Any site or areas with exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area *does not include man-made structures, recently (2 years) disturbed soil areas or licenced Mineral Aggregate Operation.	No	No habitat features on site.	•Presence of 1 or more nesting sites with 8 or more cliff swallow pairs and/or rough-winged swallow pairs during the breeding season. • A colony identified as SWH will include a 50m radius habitat area from the peripheral nests. •Field surveys to observe and count swallow nests are to be completed during the breeding season. • Specific evaluation methods required
Colonially-Nesting Bird Breeding Habitat (Tree/Shrub)	SWM2,SWM3,SWM5,SWM6,SWD1,SWD2,SWD3,SWD4,SWD5,SWD6,SWD7,FET1	Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used. •Most nests in trees are 11 to 15 m from ground, near the top of the tree.	No	No habitat features on site.	•Presence of 5 or more active nests of Great Blue Heron or other listed species. •The habitat extends from the edge of the colony and a minimum 300m radius or extent of the Forest Ecosite containing the colony or any island <15.0ha with a colony is the SWH. •Confirmation of active heronries are to be achieved through site visits conducted during the nesting season (April to August) or by evidence such as the presence of fresh guano, dead young and/or eggshells.

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
Colonially-Nesting Bird Breeding Habitat (Ground)	Any rocky island or peninsula (natural or artificial) within a lake or large river (two-lined on a 1;50,000 NTS map). Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer's Blackbird) MAM1 – 6; MAS1 – 3; CUM,CUT,CUS	Nesting colonies on islands or peninsulas associated with open water or in marshy areas. • Brewers Blackbird colonies found loosely on the ground in or in low bushes in close proximity to streams and irrigation ditches within farmlands.	No	No habitat features on site.	•Presence of > 25 active nests for Herring Gulls or Ring-billed Gulls, >5 active nests for Common Tern or >2 active nests for Caspian Tern. •Presence of 5 or more pairs for Brewer's Blackbird. •Any active nesting colony of one or more Little Gull, and Great Black-backed Gull is significant. •The edge of the colony and a minimum 150m radius area of habitat, or the extent of the ELC ecosites containing the colony or any island <3.0ha with a colony is the SWH. •Studies would be done during May/June when actively nesting. • Specfic evaluation methods required
Migratory Butterfly Stopover Areas	Combo of one of each Field (CUM, CUT, CUS) and Forest (FOC, FOD,FOM,CUP).	Minimum 10 ha in size with combo of field and forest located within 5km of Lake Erie or Lake Ontario. •Should not be disturbed. • Field/meadows with an abundance of preferred nectar plants and	No	No habitat features on site.	•Presence of Monarch Use Days (MUD) during Fall migration (Aug/Oct) •Observational studies are to be completed and need to be done frequently during the migration period to estimate MUD.

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
		woodland edge providing shelter are requirements for this habitat. •Should provide protection from the elements, often spits of land or areas with the shortest distance to cross the Great Lakes.			•MUD of >5000 or >3000 with the presence of Painted Ladies or Red Admiral's is to be considered significant.
Landbird Migratory Stopover Areas	All Ecosites within: FOC,FOM,FOD,SWC,SWM,SWD	Woodlots >10ha in size and within 5km of Lake Erie and Lake Ontario. • If woodlands are rare in area, smaller size can be considered. • If multiple woodlands located along shore line, those <2km from shoreline are more significant. • Sites have a variety of habitats; forest, grassland and wetland complexes. •The largest sites are more significant. •Woodlots and forest fragments are important habitats to migrating birds, these features located along the shore and located within 5km of	No	No habitat features on site.	•Use of the habitat by >200 birds/day and with >35 spp with at least 10 bird spp. recorded on at least 5 different survey dates. •Studies should be completed during spring (Mar to May) and fall (Aug to Oct) migration using standardized assessment techniques. • Specific evaluation methods required

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
		Lake Erie and Lake Ontario are Candidate SWH.			
Deer Yarding Areas	Note: OMNRF to determine this habitat. ELC Community Series providing a thermal cover component for a deer yard would include; FOM, FOC, SWM and SWC. Or these ELC Ecosites; CUP2 CUP3 FOD3 CUT	Deer yarding areas or winter concentration areas (yards) are areas deer move to in response to the onset of winter snow and cold. This is a behavioural response and deer will establish traditional use areas. The yard is composed of two areas referred to as Stratum I and Stratum II. Stratum II covers the entire winter yard area and is usually a mixed or deciduous forest with plenty of browse available for food. Agricultural lands can also be included in this area. Deer move to these areas in early winter and generally, when snow depths reach 20 cm, most of the deer will have moved here. If the snow is light and fluffy, deer may continue to use this area until 30 cm snow depth.	No	Based on a review of Land Information Ontario (LIO) mapping, no Deer Yards exist on the Subject Property	No Studies Required: • Snow depth and temperature are the greatest influence on deer use of winter yards. Snow depths > 40cm for more than 60 days in a typically winter are minimum criteria for a deer yard to be considered as SWH. • Deer Yards are mapped by OMNRF District offices. Locations of Core or Stratum 1 and Stratum 2 Deer yards considered significant by OMNRF will be available at local MNRF offices or via LIO. • Field investigations that record deer tracks in winter are done to confirm use (best done from an aircraft). Preferably, this is done over a series of winters to establish the boundary of the Stratum I and Stratum II yard in an "average" winter. MNRF will complete these field investigations.

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
		In mild winters, deer may remain in the Stratum II area the entire winter. • The Core of a deer yard (Stratum I) is located within the Stratum II area and is critical for deer survival in areas where winters become severe. It is primarily composed of coniferous trees (pine, hemlock, cedar, spruce) with a canopy cover of more than 60%. • OMNRF determines deer yards following methods outlined in "Selected Wildlife and Habitat Features: Inventory Manual. •Woodlots with high densities of deer due to artificial feeding are not significant			• If a SWH is determined for Deer Wintering Area or if a proposed development is within Stratum II yarding area then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule.
Deer Winter Congregation Areas	All forested ecosites within: FOC,FOM,FOD,SWC,SWM,SWD + conifer plantations much smaller than 50 ha may be used.	Woodlots will typically be >100 ha in size. Woodlots <100ha may be considered as significant based on MNRF studies or assessment. • Deer movement during winter in the southern	No	No habitat features on site.	•Will be mapped by MNRF. • All woodlots exceeding the criteria are significant unless determined to be not by the MNRF. •Studies to be completed during winter when >20 cm of

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
		areas of Ecoregion 6E are not constrained by snow depth, however deer will annually congregate in large numbers in suitable woodlands • Large woodlots > 100ha and up to 1500 ha are known to be used annually by densities of deer that range from 0.1-1.5 deer/ha. *Woodlots with high densities of deer due to artificial feeding are not significant.			snow is on the ground, using aerial survey or pellet count.
Rare Vegetation Communities					
Cliffs and Talus Slopes	Any Ecosite within: TAO CLO TAS CLS TAT CLT	A Cliff is vertical to near vertical bedrock >3m in height. A Talus Slope is rock rubble at the base of a cliff made up of coarse rocky debris. Most cliff and talus slopes occur along the Niagara Escarpment.	No	No habitat features on site.	•Confirm any ELC Vegetation Type for Cliffs or Talus Slopes
Sand Barren	SBO1 SBS1 SBT1 Vegetation cover varies from patchy and barren to continuous meadow (SBO1), thicketlike (SBS1), or more closed and treed (SBT1).	A sand barren area >0.5ha in size. • Sand Barrens typically are exposed sand, generally sparsely	No	No habitat features on site.	•Confirm any ELC Vegetation Type for Sand Barrens. •Site must not be dominated by exotic or introduced

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm…
	ELC Ecosite Codes	ELC Ecosite Codes			
	Tree cover always < or equal to 60%	vegetated and caused by lack of moisture, periodic fires and erosion. Usually located within other types of natural habitat such as forest or savannah. • Vegetation can vary from patchy and barren to tree covered, but less than 60%.			species (<50% vegetative cover are exotic sp.
Alvar	ALO1 ALS1 ALT1 FOC1 FOC2 CUM2 CUS2 CUT2-1 CUW2, Five Alvar Indicator Species: 1) Carex crawei 2) Panicum philadelphicum 3) Eleocharis compressa 4) Scutellaria parvula 5) Trichostema brachiatum	An Alvar site > 0.5 ha in size, only known sites are found in the western islands of Lake Erie. • An alvar is typically a level, mostly unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil. The hydrology of alvars is complex, with alternating periods of inundation and drought. • Vegetation cover varies from sparse lichen-moss associations to grasslands and shrublands and comprising a number of characteristic or indicator plants. Undisturbed alvars can be phyto- and	No	No habitat features on site.	•Studies that identify four of the five Alvar Indicator Species at a Candidate Alvar site is Significant. • Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.). •The alvar must be in excellent condition and fit in with surrounding landscape with few conflicting land uses.

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm…
	ELC Ecosite Codes	ELC Ecosite Codes			
		zoogeographically diverse, supporting many uncommon or are relict plant and animals species. • Vegetation cover varies from patchy to barren with a less than 60% tree cover.			
Old Growth Forest	FOD FOC FOM SWD SWC SWM	Woodland areas 30 ha or greater in size or with at least 10 ha interior habitat assuming 100 m buffer at edge of forest. • Characterized by heavy mortality or turnover of overstorey trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris.	No	No habitat features on site.	•If dominant trees species of the area are >140 years old, then the area containing these trees is Significant Wildlife Habitat. • The forested area containing the old growth characteristics will have experienced no recognizable forestry activities • The area of forest ecosites combined or an eco-element within an ecosite that contain the old growth characteristics is the SWH. • Determine ELC vegetation types for the forest forest area containing the old growth characteristics
Savannah	TPS1 TPS2 TPW1 TPW2 CUS2	A Savannah is a tallgrass prairie habitat that has tree cover between 25 – 60%. • No minimum size to site. • Site must be restored or a natural site.	No	No habitat features on site.	•Field studies confirm one or more of the Savannah indicator species found in Appendix N, Ecoregion 6E of the SWHTG, OMNR (2000). •Entire area of the ELC Ecosite is SWH.

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm…
	ELC Ecosite Codes	ELC Ecosite Codes			
		*Remnant sites such as railway right of ways are not considered to be SWH.			•Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic species).
Tallgrass Prairie	TPO1 TPO2	A Tallgrass Prairie has ground cover dominated by prairie grasses. •An open Tallgrass Prairie habitat has < 25% tree cover. •No minimum size to site. •Site must be restored or a natural site. *Remnant sites such as railway right of ways are not considered to be SWH.	No	No habitat features on site.	•Field studies confirm one or more of the Prairie indicator species in Appendix N, Ecoregion 6E of The SWHTG, OMNR (2000). •Area of the ELC Ecosite is the SWH. •Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.)
Other Rare Vegetation Communities	See the Significant Wildlife Habitat Techinical Guide (OMNR, 200), Appendix M for Provincially Rare S1,S2 and S3 ELC Vegetation Types.	ELC Ecosite codes that have the potential to be a rare ELC Vegetation Type as outlined in Appendix M. •May include beaches, fens, forest, marsh, barrens, dunes and swamps. See OMNRF/NHIC for up to date list of rare vegetation communities.	No	No habitat features on site.	•Field studies should confirm if an ELC Vegetation Type is a rare vegetation community based on listing within Appendix M of SWHTG, OMNR (2000). •Area of the ELC Vegetation Type polygon is the SWH.
Specialized Habitat for Wildlife					

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm…
	ELC Ecosite Codes	ELC Ecosite Codes			
Waterfowl Nesting Area	All upland habitats located adjacent to these wetland ELC Ecosites are Candidate SWH: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SWT1 SWT2 SWD1 SWD2 SWD3 SWD4. * Note: includes adjacency to Provincially Significant Wetlands	A waterfowl nesting area extends 120 m from a wetland (> 0.5 ha) or a wetland (>0.5ha) and any small wetlands (0.5ha) within 120m or a cluster of 3 or more small (<0.5 ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur. •Wood Ducks and Hooded Mergansers utilize large diameter trees (>40cm dbh) in woodlands for cavity nest sites. • Upland areas should be at least 120 m wide so that predators such as racoons, skunks, and foxes have difficulty finding nests.	No	No habitat features on site.	•Presence of 3 or more nesting pairs for listed species excluding Mallards OR •Presence of 10 or more nesting pairs for listed species including Mallards. •Any active nesting site of an American Black Duck is considered significant. •Nesting studies should be completed during the spring breeding season (April - June). •Specific evaluation methods required •A field study confirming waterfowl nesting habitat will determine the boundary of the waterfowl nesting habitat for the SWH, this may be greater or less than 120 m from the wetland and will provide enough habitat for waterfowl to successfully nest.
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	ELC Forest Community Series: FOD, FOM, FOC, SWD, SWM and SWC directly adjacent to riparian areas – rivers, lakes, ponds and wetlands	Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water. *Nests located on man-made objects are not to be included as SWH.	No	No habitat features on site.	One or more active Osprey or Bald Eagle nests in an area. •Some species have more than one nest in a given area and priority is given to the primary nest with alternate nests included within the area of the SWH.

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm…
	ELC Ecosite Codes	ELC Ecosite Codes			
		•Osprey nests are usually at the top a tree whereas Bald Eagle nests are typically in super canopy trees in a notch within the tree's canopy.			•For an Osprey, the active nest and a 300 m radius around the nest or the contiguous woodland stand is the SWH. *with additional requirements •For a Bald Eagle the active nest and a 400-800 m radius around the nest is the SWH. * with additional requirements •To be significant a site must be used annually. •When found inactive, the site must be known to be inactive for > 3 years or suspected of not being used for >5 years before being considered not significant. •Observational studies to determine nest site use, perching sites and foraging areas need to be done from early March to mid August. • Specific evaluation methods required
Woodland Raptor Nesting Habitat	May be found in all forested ELC Ecosites. May also be found in SWC, SWM, SWD and CUP3.	All natural or conifer plantation woodland/forest stands >30ha with >10ha of interior habitat. • Interior habitat determined with a 200m buffer.	No	No habitat features on site.	Presence of 1 or more active nests from species list is considered significant. •Red-shouldered Hawk and Northern Goshawk – A 400m radius around the nest or 28 ha area of habitat is the SWH. (the 28 ha habitat area would

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
		•Stick nests found in a variety of intermediate-aged to mature conifer, deciduous or mixed forests within tops or crotches of trees. Species such as Coopers hawk nest along forest edges sometimes on peninsulas or small off-shore islands. • In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nest.			be applied where optimal habitat is irregularly shaped around the nest) •Barred Owl – A 200m radius around the nest is the SWH. •Broad-winged Hawk and Coopers Hawk,– A 100m radius around the nest is the SWH. •Sharp-Shinned Hawk – A 50m radius around the nest is the SWH. • Conduct field investigations from early March to end of May. The use of call broadcasts can help in locating territorial (courting/nesting) raptors and facilitate the discovery of nests by narrowing down the search area.
Turtle Nesting Areas	Exposed mineral soil (sand or gravel) areas adjacent (<100m) or within the following ELC Ecosites: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 BOO1 FEO1	Best nesting habitat for turtles are close to water and away from roads and sites less prone to loss of eggs by predation from skunks, raccoons or other animals. •For an area to function as a turtlenesting area, it must provide sand and gravel that turtles are able to dig in and are	No	No habitat features on site.	Presence of: - 5 or more nesting Midland Painted Turtles OR - One or more Northern Map Turtle or Snapping Turtle nesting is a SWH. •The area or collection of sites within an area of exposed mineral soils where the turtles nest, plus a radius of 30-100m around the nesting area

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm…
	ELC Ecosite Codes	ELC Ecosite Codes			
		located in open, sunny areas. *Nesting areas on the sides of municipal or provincial road embankments and shoulders are not SWH. • Sand and gravel beaches adjacent to undisturbed shallow weedy areas of marshes, lakes, and rivers are most frequently used.			dependant on slope, riparian vegetation and adjacent land use is the SWH. • Travel routes from wetland to nesting area are to be considered within the SWH as part of the 30-100m area of habitat. •Field investigations should be conducted in prime nesting season typically late spring to early summer. •Observational studies observing the turtles nesting is a recommended method.
Seeps and Springs	Where ground water comes to the surface. Often they are found within headwater areas within forested habitats. •Any forested Ecosite within the headwater areas of a stream could have seeps/springs.	Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream or river system.	No	No seep was found in the Study Area.	Presence of a site with 2 or more seeps/springs should be considered SWH. •The area of a ELC forest ecosite or an ecoelement within ecosite containing the seeps/springs is the SWH. •The protection of the recharge area considering the slope, vegetation, height of trees and groundwater condition need to be considered in delineation the habitat.

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
Amphibian Breeding Habitat (Woodland)	All Ecosites associated with these ELC Community Series: FOC FOM FOD SWC SWM SWD •Breeding pools within the woodland or the shortest distance from forest habitat are more significant because they are more likely to be used due to reduced risk to migrating amphibians.	Presence of a wetland, pond or woodland pool (including vernal pools) >500m2 (about 25m diameter) within or adjacent (within 120m) to a woodland (no minimum size). • Some small wetlands may not be mapped and may be important breeding pools for amphibians. •Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat.	No	No habitat features on site.	Presence of breeding population of: - 1 or more of the listed newt/salamander species or - 2 or more of the listed frog species with at least 20 individuals (adults or eggs masses) or - 2 or more of the listed frog species with Call Level Codes of 3. •A combo fo observational and call count surveys required during the spring (March-June) . •The habitat is the wetland area plus a 230m radius of woodland area. • If a wetland area is adjacent to a woodland, a travel corridor connecting the wetland to the woodland is to be included in the habitat.
Amphibian Beeding Habitat (Wetlands)	ELC Community Classes SW, MA, FE, BO, OA and SA. •Typically these wetland ecosites will be isolated (>120m) from woodland ecosites, however larger wetlands containing predominantly aquatic species (e.g. Bull Frog) may be adjacent to woodlands.	Wetlands >500m2 (about 25m diameter), supporting high species diversity are significant; •some small or ephemeral habitats may not be identified on MNRF mapping and could be	No	No habitat features on site.	Presence of breeding population of: -1 or more of the listed newt/salamander species or -2 or more of the listed frog/toad species with at least 20 individuals (adults or eggs masses) or

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
		important amphibian breeding habitats. •Presence of shrubs and logs increase significance of pond for some amphibian species because of available structure for calling, foraging, escape and concealment from predators. • Bullfrogs require permanent water bodies with abundant emergent vegetation.			-2 or more of the listed frog/toad species with Call Level Codes of 3. or; -Wetland with confirmed breeding Bullfrogs are significant. •The ELC ecosite wetland area and the shoreline are the SWH. •A combo of observational and call count surveys will be required during the spring (March-June). •If a SWH is determined for Amphibian Breeding Habitat (Wetlands) then Movement Corridors are to be considered.
Woodland Area-Sensitive Bird Breeding Habitat	All Ecosites withing: FOC FOM FOD SWC SWM SWD	Habitats where interior forest breeding birds are breeding, typically large mature (>60 yrs old) forest stands or woodlots >30 ha. •Interior forest habitat is at least 200 m from forest edge habitat.	No	No habitat features on site.	Presence of nesting or breeding pairs of 3 or more of the listed wildlife species. *any site with breeding Cerulean Warblers or Canada Warblers is to be considered SWH. • Conduct field investigations in spring and early summer. • Specific evaluation methods required
Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)					

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
Marsh Bird Breeding Habitat	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SAS1 SAM1 SAF1 FEO1 BOO1 For Green Heron: All SW, MA and CUM1 sites	Nesting occurs in wetlands. All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present. •For Green Heron, habitat is at the edge of water such as sluggish streams, ponds and marshes sheltered by shrubs and trees. Less frequently, it may be found in upland shrubs or forest a considerable distance from water..	No	No habitat features on site.	Presence of: - 5 or more nesting pairs of Sedge Wren or Marsh Wren or 1 pair of Sandhill Cranes or; -breeding by any combination of 5 or more of the listed species. •any wetland with breeding of 1 or more Black Terns, Trumpeter Swan, Green Heron or Yellow Rail is SWH. •Area of the ELC ecosite is the SWH. •Breeding surveys should be done in May/June. • Specific evaluation methods required
Open Country Bird Breeding Habitat	CUM1 CUM2	Large grassland areas (includes natural and cultural fields and meadows) >30 ha. •Grasslands not Class 1 or 2 agricultural lands, and not being actively used for farming (i.e. no row cropping or intensive hay or livestock pasturing in the last 5 years). •Grassland sites considered significant should have a history of longevity, either	No	No habitat features on site.	Presence of nesting or breeding of: -2 or more of the listed species. • A field with 1 or more breeding Short-eared Owls is to be considered SWH. •The area of SWH is the contiguous ELC ecosite field areas. •Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories.

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
		abandoned fields, mature hayfields and pasturelands that are at least 5 years or older. •The Indicator bird species are area sensitive requiring larger grassland areas than the common grassland species.			• Specific evaluation methods required.
Shrub/Early Successional Bird Breeding Habitat	CUT1 CUT2 CUS1 CUS2 CUW1 CUW2 •Patches of shrub ecosites can be complexed into a larger habitat for some bird species.	Large field areas succeeding to shrub and thicket habitats>10ha in size. •Shrub land or early successional fields, not class 1 or 2 agricultural lands, not being actively used for farming (i.e. no rowcropping, haying or livestock pasturing in the last 5 years). •Shrub thicket habitats (>10 ha) are most likely to support and sustain a diversity of these species. •Shrub and thicket habitat sites considered significant should have a history of longevity, either abandoned fields or pasturelands.	No	No habitat features on site.	Presence of nesting or breeding of - 1 of the indicator species and at least 2 of the common species. •A habitat with breeding Yellowbreasted Chat or Golden-winged Warbler is to be considered as SWH. •The area of the SWH is the contiguous ELC ecosite field/thicket area. •Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories. • Specific evaluation methods required

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
Terrestrial Crayfish	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 MAS1 MAS2 MAS3 SWD SWT SWM CUM1- with inclusions of above meadow marsh ecosites can be used by terrestrial crayfish.	Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish. •Usually the soil is not too moist so that the tunnel is well formed. •Can often be found far from water.	No	No habitat features on site.	Presence of 1 or more individuals of species listed or their chimneys (burrows) in suitable meadow marsh, swamp or moist terrestrial sites. • Area of ELC ecosite or an ecoelement area of meadow marsh or swamp within the larger ecosite area is the SWH. •Surveys should be done April to August in temporary or permanent water. • Note the presence of burrows or chimneys are often the only indicator of presence, observance or collection of individuals is very difficult.
Special Concern and Rare Wildlife Species	All plant and animal element occurrences (EO) within a 1 or 10km grid. All Special Concern and Provincially Rare plant and animal species.	identified within a 1 or 10 km grid for a Special Concern or provincially Rare species; linking candidate habitat on the site needs to be completed to ELC Ecosites	N/A	See SAR Screening Section	Assessment/inventory of the site for the identified special concern or rare species needs to be completed during the time of year when the species is present or easily identifiable. •The area of the habitat to the finest ELC scale that protects the habitat form and function is the SWH, this must be delineated through detailed field studies. The habitat needs be easily mapped and cover an important life stage

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm…
	ELC Ecosite Codes	ELC Ecosite Codes			
					component for a species e.g. specific nesting habitat or foraging habitat.
Animal Movement Corridors					
Amphibian Movement Corridors	Corridors may be found in all ecosites associated with water.	Corridors will be determined based on identifying the significant breeding habitat for these species. Movement corridors between breeding habitat and summer habitat. Movement corridors must be determined when Amphibian breeding habitat is confirmed as SWH from this Schedule.	No	No habitat features on site.	Field Studies must be conducted at the time of year when species are expected to be migrating or entering breeding sites. Corridors should consist of native vegetation, with several layers of vegetation. Corridors unbroken by roads, waterways or bodies, and undeveloped areas are most significant. Corridors should have at least 15m of vegetation on both sides of waterway or be up to 200m wide of woodland habitat and with gaps <20m. Shorter corridors are more significant than longer corridors, however amphibians must be able to get to and from their summer and breeding habitat.
Deer Movement Corridors	Corridors may be found in all forested ecosites. A Project Proposal in Stratum II Deer	Movement corridor must be determined when Deer Wintering Habitat is confirmed as SWH.	No	No habitat features on site.	• Studies must be conducted at the time of year when deer are migrating or moving to

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
	Wintering Area has potential to contain corridors.	A deer wintering habitat identified by the OMNRF as SWH will have corridors that the deer use during fall migration and spring dispersion •Corridors typically follow riparian areas, woodlots, areas of physical geography (ravines, or ridges).			and from winter concentration areas. • Corridors that lead to a deer wintering habitat should be unbroken by roads and residential areas. • Corridors should be at least 200m wide with gaps <20m and if following riparian area with at least 15m of vegetation on both sides of waterway •Shorter corridors are more significant than longer corridors.
Exceptions for EcoRegion 6E					
Mast Producing Areas (Black Bear) •EcoDistrict 6E-14	All Forested habitat represented by ELC Community Series: FOM FOD	Black bears require forested habitat that provides cover, winter hibernation sites, and mastproducing tree species. • Forested habitats need to be large enough to provide cover and protection for black bears Criteria •Woodland ecosites >30ha with mast-producing tree species,	No	Site not located within EcoDistrict 6E-14	•All woodlands >30 ha with a 50% composition of these ELC Vegetation Types are considered significant: FOM1-1 FOM2-1 FOM3-1 FOD1-1 FOD1-2 FOD2-1 FOD2-2 FOD2-3 FOD2-4 FOD4-1 FOD5-2 FOD5-3 FOD5-7 FOD6-5

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm…
	ELC Ecosite Codes	ELC Ecosite Codes			
		either soft (cherry) or hard (oak and beech)			
Lek (Sharp-tailed grouse) •EcoDistrict 6E-17	CUM CUS CUT	The lek or dancing ground consists of bare, grassy or sparse shrubland. There is often a hill or rise in topography. • Leks are typically a grassy field/meadow >15ha with adjacent shrublands and >30ha with adjacent deciduous woodland. Conifer trees within 500m are not tolerated. Criteria •Grasslands (field/meadow) are to be >15ha when adjacent to shrubland and >30ha when adjacent to deciduous woodland • Grasslands are to be undisturbed with low intensities of agriculture (light grazing or late haying) • Leks will be used annually if not destroyed by cultivation or invasion	No	Site not located within EcoDistrict 6E-17	Studies confirming lek habitat are to be completed from late March to June. • Any site confirmed with sharp-tailed grouse courtship activities is considered significant • The field/meadow ELC ecosites plus a 200 m radius area with shrub or deciduous woodland is the lek habitat.

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
		by woody plants or tree planting			

SOIL-MAT ENGINEERS & CONSULTANTS LTD.

401 Grays Road · Hamilton, ON · L8E 2Z3

www.soil-mat.ca info@soil-mat.ca 905.318.7440 / 800.243.1922 (*toll free*) 905.318.7455

PROJECT NO.: SM 230137-G July 13, 2023

ADAM COLALILLO, ANGELINA COLALILLO, BENI COLALILLO, AND LUCAS COLALILLO
C/O A. J. CLARKE AND ASSOCIATES LTD
25 Main Street West, Suite 300
Hamilton, Ontario
L8P 1H1

Attention: James Thomas

GEOTECHNICAL CONSIDERATIONS
PROPOSED LOT SEVERANCES
14 BELVIDERE AVENUE
HAMILTON, ONTARIO

Dear Mr. Thomas,

Further to your authorisation, SOIL-MAT ENGINEERS & CONSULTANTS LTD. has completed the fieldwork, laboratory testing, and report preparation in connection with the above noted project. The scope of work was completed in general accordance with our proposal P230137-G, dated February 21, 2023. Our comments and recommendations based on our findings at the four [4] test pit locations are presented in the following paragraphs.

INTRODUCTION

We understand that it is proposed to sever the two existing lots which make up the property located at 14 Belvidere Avenue in Hamilton, Ontario, to construct up to four single family dwellings. As the property is located adjacent to the Niagara Escarpment, with the Claremont Access below, the site is understood to be subject to Niagara Escarpment Plan [NEP] policies. In order to confirm adherence to these policies, it will be necessary to conduct an evaluation of the slope in order to establish its stability. In addition, the purpose of this geotechnical investigation work was to assess the subsurface soil conditions and to provide comments and recommendations with respect to the design and construction of the proposed development, from a geotechnical point of view.

This report is based on the above summarised project, and on the assumption that the design and construction will be performed in accordance with applicable codes and standards. Any significant deviations from the proposed project design may void the recommendations given in this report. If significant changes are made to the proposed design, this office must be consulted to review the new design with respect to the results of this investigation. It is noted that this report is not intended to address the environmental aspects of the site.

SITE CONDITIONS

The subject property is currently vacant and is comprised of the parcels of land at 14 Belvidere Avenue in Hamilton, Ontario. The site is predominately grass covered with visible bedrock outcroppings and mature trees. Evidence of construction debris, assumed to be associated with the demolition of the previous dwellings on site are visible at ground surface. The site is bounded to the east and west by residential properties, to the south by Belvidere Avenue and to the north by the Niagara Escarpment with Claremont Access beyond. The grade of the site is relatively flat and generally even with the adjacent roadway.

The subsurface soils were investigated in four [4] test pits advanced to excavator refusal on sound limestone bedrock at depths of 0.45 to 0.6 metres below the existing ground surface, at the locations illustrated in the attached Drawing No. 1, Test Pit Location Plan. The test pits were located on site by a representative of SOIL-MAT ENGINEERS & CONSULTANTS LTD., based on clearance of existing underground services, and accessibility over the site. The ground surface elevation at the test pit locations was referenced to a site specific temporary benchmark, described as the top of the manhole cover located along Belvidere Avenue, as illustrated in the Test Pit Location Plan. This benchmark was assigned an elevation of 100.00 metres, for convenience. Where topographic survey information is provided our report can be updated to reflect geodetic elevations.

The subsurface soils observed at the test pit locations have been summarized as follows:

Test Pit No.	Ground Surface Elevation* (m)	Depth Below Existing Ground Surface (m)	Sound Bedrock Elevation* (m)	Material Encountered
1	99.53 m	0 to 0.25	99.03 m	**Topsoil** - Approximately 250 millimetres of topsoil, sand and silt mixture.
		0.25 to 0.5		**Bedrock –** Approximately 250 millimetres of weathered/fractured material overlying sound bedrock.
2	99.83 m	0 to 0.35	99.33 m	**Topsoil** – Approximately 350 millimetres of topsoil, sand and silt mixture.
		0.35 to 0.5		**Bedrock –** Approximately 150 millimetres of weathered/fractured material overlying sound bedrock.
3	99.97 m	0 to 0.25	99.37 m	**Topsoil** - Approximately 250 millimetres of topsoil, sand and silt mixture.
		0.25 to 0.6		**Bedrock –** Approximately 350 millimetres of weathered/fractured material overlying sound bedrock.
4	100.36 m	0 to 0.2	99.91 m	**Topsoil** - Approximately 250 millimetres of topsoil, sand and silt mixture with significant construction debris.
		0.2 to 0.45		**Bedrock –** Approximately 200 millimetres of weathered/fractured material overlying sound bedrock.

*Referenced to a temporary benchmark

In general, the subsurface conditions were consistent, and found to consist of a surficial layer of topsoil with sand and silt mixture, overlying severely fractured limestone bedrock at shallow depths. The surficial overburden soils were generally loose with significant construction debris and are likely comprised of native material, fill and reworked soils. The depth to sound bedrock varies across the site from approximately 0.45 to 0.6 metres. This variation is a function of both change in the surface grade as well as undulations in the bedrock surface, with relative sound bedrock elevations (referenced to the Temporary Benchmark) ranging from approximately 99.0 to 99.9 metres.

All of the test pits were noted to be generally ‘dry’ upon completion of excavation. Based on our observations at the test pit locations and review of available information for the area, the static groundwater level is expected to be at greater depth within the bedrock, below the anticipated depths of the proposed construction.

A review of available published information [Quaternary Geology of Ontario, Southern Sheet Map 2556] indicate the subsurface soils to consist of a thin drift of fine-textured glaciolacustrine deposits of silt and clay with minor sand and gravel, overlying shallow limestone and dolostone bedrock of the Lockport formation. The overburden soils encountered on site were comparatively sandier, which is common for surficial soils subject to weathering and in areas of extremely thin overburden.

SLOPE STABILITY CONSIDERATIONS

The subject site is understood to be within the jurisdiction of the Niagara Escarpment Plan, and therefor subject to NEP policies. The NEP policies do not indicate a minimum setback from the escarpment, instead relying on a stability analysis to provide a setback as necessary.

The Niagara Escarpment along the subject property line to the north consists of a steep, but not vertical slope face, with moderate vegetation, leading to Claremont Access at the toe. The toe of the slope is reinforced with sheet pile retaining walls, up to a height of approximately 5 to 6 metres, or greater. The Niagara Escarpment consists of various bedrock layers, including limestone, dolostone, sandstone, and shale, with the sounder limestone and dolostone layers overlying the comparatively weaker shale. Failures along the escarpment are typically the result of the erosion of the shale at the toe, removing the support of the limestone and dolostone layers and resulting in crest block failures and progressive dilation of joints through the escarpment face.

Based on the support conditions at the toe of the slope, moderate vegetation along the upper slope face, and non-vertical slopes at the physical crest, these block failures would be considered unlikely on the property. Conservatively, it is recommended any set backs be measured from a point 3 metres “uphill’, or south, of the physical crest of the escarpment. While not anticipated, mechanical rock breaking equipment should not be used in close proximity to the physical crest of the slope and construction vehicle traffic in the area should be avoided as well. Single family dwellings constructed uphill of this point would have no negative affect on the stability of the slope, and conversely natural erosion of the slope would not negatively impact the foundations of the proposed dwellings.

FOUNDATION CONSIDERATIONS

Considering the variation in existing grade, overburden soils, and bedrock depth across the site, it is recommended that proposed structures are best supported on the sound bedrock. This would result in founding depths of approximately 0.3 to 0.6 metres below the existing ground surface level, however we anticipate that the final grading of the site would result in a founding depth of approximately 1.2 metres below the exterior grade.

The proposed single family dwellings may be supported on conventional spread footings founded on the sound bedrock, below the loose overburden soils, severely fractured bedrock in the upper levels, and below any fill, organic, or otherwise unsuitable material. Spread footings founded on the bedrock may be designed on the basis of conservative values of 500 kPa [~10,000 psf] SLS and ULS. It is noted that higher bearing values are likely to be available within the bedrock, however they would need to be confirmed through coring of the bedrock. In any case, it is not anticipated that such higher bearing values would be required for the proposed dwellings.

It is noted that the SLS value represents the Serviceability Limit State, which is governed by the tolerable deflection [settlement] based on the proposed building type, using unfactored load combinations. The ULS value represents the Ultimate Limit State and is intended to reflect an upper limit of the available bearing capacity of the founding soils in terms of geotechnical design, using factored load combinations. There is no direct relationship between ULS and SLS; rather they are a function of the soil type and the tolerable deflections for serviceability, respectively. Evidently, the bearing capacity values would be lower for very settlement sensitive structures and larger for more flexible buildings. It is also noted that the SLS and ULS bearing capacities are equivalent for the limestone and dolostone bedrock, as in order for serviceability limits to be realized, ultimate failure of the bedrock would have to occur.

The support conditions afforded by the founding soils are usually not uniform across the site, neither are the loads on the various foundation elements. It is therefore recommended that the footings and foundation walls be structurally reinforced to account for potential variable support and loading conditions.

In areas where it will be necessary to provide adjacent footings at different founding elevations, the lower footing should be constructed before the higher footing is constructed, if possible, and the higher footing should be set below an imaginary line drawn up from the edge of the lower footing at 10 horizontal to 7 vertical. This practice will limit stress transfer from the higher footings to lower footings.

All footings exposed to the environment must be provided with a minimum of 1.2 metres of earth cover or equivalent insulation to protect against frost damage. This frost protection would also be required if construction were undertaken during the winter months. All footings and foundations should be designed and constructed in accordance with the current Ontario Building Code.

With foundations designed as outlined above and as required by the Building Code, and with careful attention paid to construction detail, total and differential settlements should be well within normally tolerated limits of 25 and 20 millimetres, respectively, for the type of building and occupancy expected.

EXCAVATIONS

Excavations for the installation of foundations are expected to extend to depths of up to perhaps 0.5 to 1 metre below the existing grade, depending on the depth to sound bedrock. Excavations through the overburden soils should be relatively straightforward, with the sides remaining stable for the short construction period at inclinations of up to 45 degrees to the horizontal. Where wet seams are encountered or during periods of extended precipitation, the excavation may have a tendency to 'slough in' to as flat as 3 horizontal to 1 vertical, or flatter. The use of mechanical 'rock splitting' and 'hoe-ram' equipment near the escarpment is not recommended, and this office should be consulted prior to the use of this equipment on the property. The test pits advanced on site were advanced to refusal using a mini-excavator and may be taken as the depth of excavation possible without rock splitting equipment.

All excavations must comply with the current Occupational Health and Safety Act and Regulations for Construction Projects. Excavation slopes steeper than those required in the Safety Act must be supported, and a senior geotechnical engineer from this office should monitor the work. With respect to the safety act, the overburden materials would be considered a Type 3 soil.

As noted above, the static groundwater level is expected to be at a depth within the bedrock and therefor below the depths of construction. Nevertheless, minor infiltration of perched water through permeable seams, as well as surface runoff into open excavations, should be anticipated, especially after heavy precipitation. It should be possible to adequately control perched water infiltration for the short construction period using conventional construction dewatering methods, such as pumping from sumps in the base of the excavation. More groundwater control should be anticipated when connections are made to existing services. Surface water should be directed away from the excavations.

BACKFILL CONSIDERATIONS

The excavated material will consist primarily of the topsoil with sand and silt mixture, and fractured bedrock encountered on site, as described above. These soils are generally not considered suitable for use as fill below settlement sensitive structures due to the presence of organics, large rock fragments, and other deleterious material. The use of this material as backfill should be limited to grass surfaced areas and where the soils will not be relied upon to support construction.

It is noted that the on-site soils encountered are not free draining and should not be used where this characteristic is necessary. It is also noted that these overburden soils will present difficulties in achieving effective compaction where access with compaction equipment is restricted. The overburden soils encountered are generally considered to be near to slightly 'dry' of its standard Proctor optimum moisture content. Some moisture conditioning may be required depending upon the weather conditions at the time of construction.

The use of free draining, well-graded granular material, such as an Ontario Provincial Standard Specification [OPSS] Granular 'B', Type II (crushed limestone bedrock), is recommended for backfill against foundation walls or to raise the interior grade to the design subgrade level. This material is more readily compacted in restricted access areas, and generally presents a more positive support condition for interior floor slabs.

We note that where backfill material is placed near or slightly above its optimum moisture content, the potential for long term settlements due to the ingress of groundwater and collapse of the fill structure is reduced. Correspondingly, the shear strength of the 'wet' backfill material is also lowered, thereby reducing its ability to support construction traffic and therefore impacting roadway construction. If the soil is well dry of its optimum value, it will appear to be very strong when compacted, but will tend to settle with time as the moisture content in the fill increases to equilibrium condition. The overburden and severely weathered bedrock soils may require high compaction energy to achieve acceptable densities if the moisture content is not close to its standard Proctor optimum value. It is therefore very important that the placement moisture content of the backfill soils be within 3 per cent of its standard Proctor optimum moisture content during placement and compaction to minimise long term subsidence [settlement] of the fill mass. Any imported fill required in service trenches or to raise the subgrade elevation should have its moisture content within 3 per cent of its optimum moisture content and meet the necessary environmental guidelines.

A representative of SOIL-MAT should be present on-site during the backfilling and compaction operations to confirm the uniform compaction of the backfill material to project specification requirements. Close supervision is prudent in areas that are not readily accessible to compaction equipment, for instance near the end of compaction

'runs'. All structural fill should be compacted to 100 per cent of its standard Proctor maximum dry density [SPMDD]. Backfill within service trenches, areas to be paved, etc., should be compacted to a minimum of 98 per cent of SPMDD. The appropriate compaction equipment should be employed based on soil type, i.e. pad-toe for cohesive soils and smooth drum/vibratory plate for granular soils. A method should be developed to assess compaction efficiency employing the on-site compaction equipment and backfill materials during construction.

GENERAL COMMENTS

The comments provided in this document are intended only for the guidance of the design team. The material in it reflects SOIL-MAT ENGINEERS' best judgment in light of the information available to it at the time of preparation. The information presented concerning subsurface soil and groundwater conditions are descriptive of conditions at the test pit locations only. There may be conditions in the study area which are not represented by these investigations. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. SOIL-MAT ENGINEERS accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

We trust that this geotechnical report is sufficient for your present requirements. Should you require any additional information or clarification as to the contents of this document, please do not hesitate to contact the undersigned.

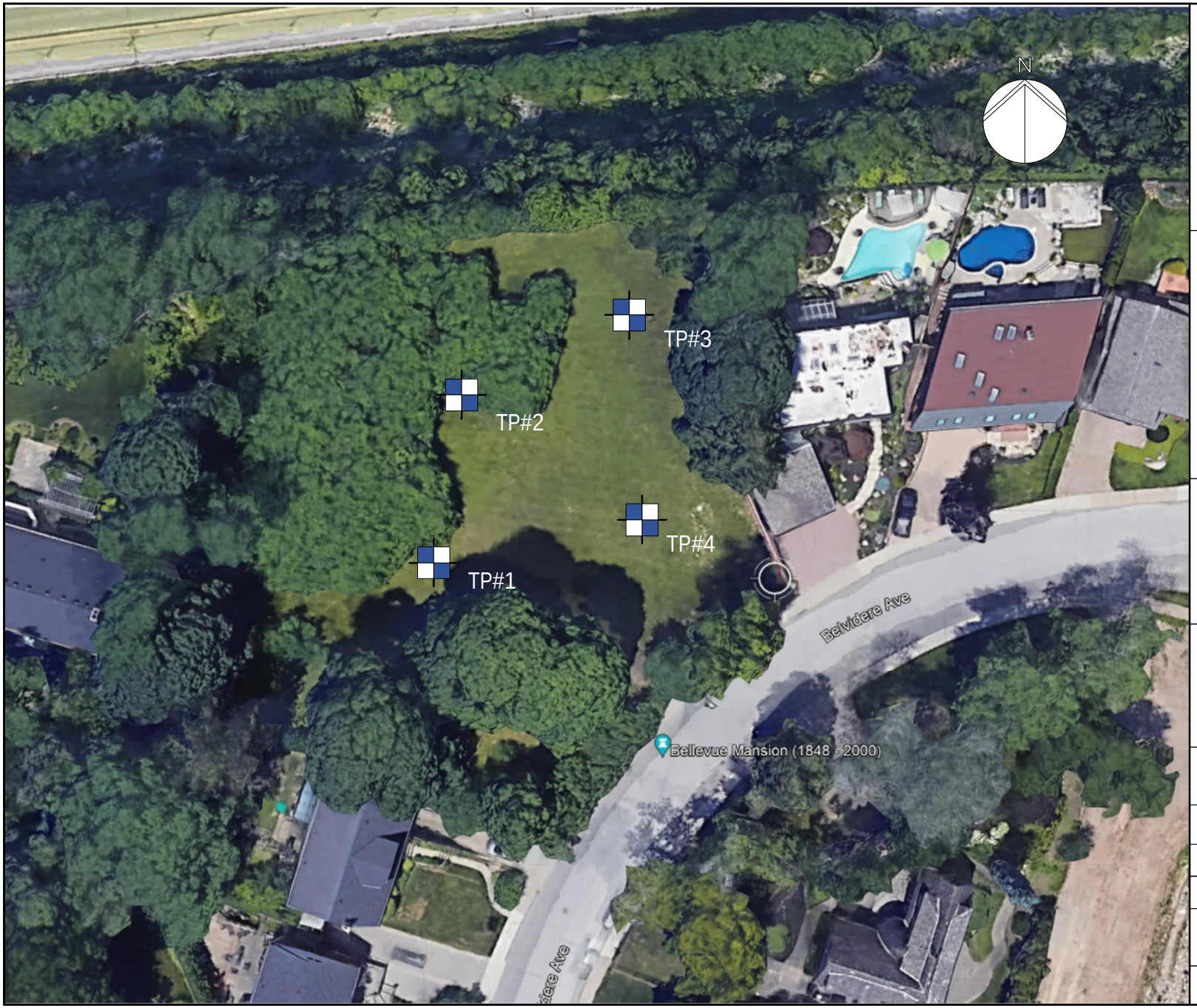
Yours very truly,
SOIL-MAT ENGINEERS & CONSULTANTS LTD.

Yaroslav Mormil, P. Eng.
Project Engineer

Stephen R. Sears, B. Eng. Mgmt., P. Eng., QP_{ESA}
Review Engineer

Enclosures: Drawing No.1, Test Pit Location Plan
Drawing No. 2: Typical Design Requirements – Drainage and Backfill for Basement Walls

Distribution: A.J. Clarke and Associates Ltd. [1, plus pdf]



LEGEND

TP# Test Pit Location

NOTES

1. This drawing should be read in conjunction with Soil-Mat Engineers & Consultants Ltd. Report No. SM 230137-G.

2. Borehole locations are approximate.

SOIL-MAT

ENGINEERS & CONSULTANTS LTD.

Proposed Residential Development
14 Belvidere Avenue
Hamilton, Ontario

Test Pit Location Plan

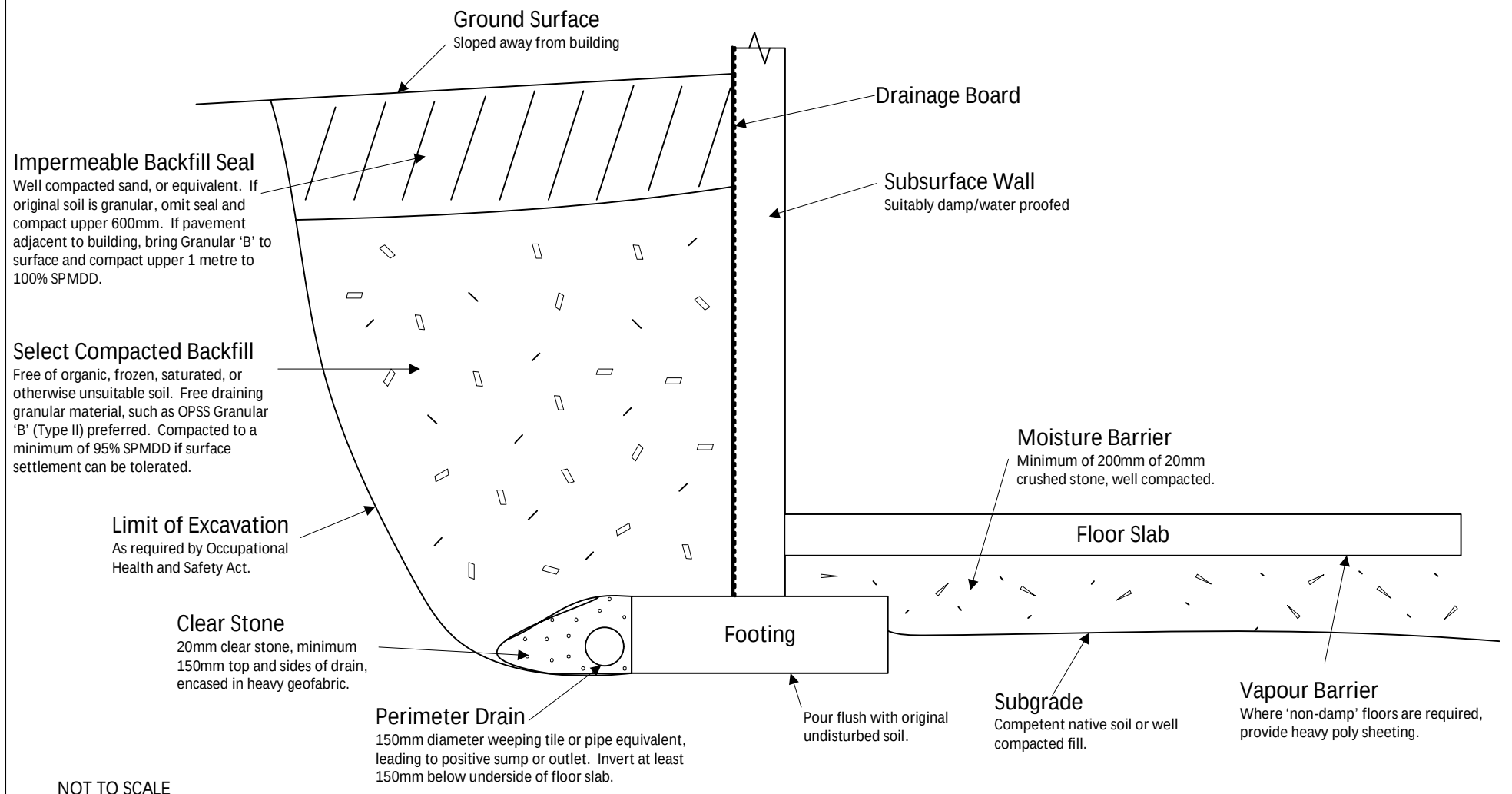
Project No. SM 230137-G

Date: June 2023

Drawn: YM	Checked:

SM 230137-G
Test Pit Location Plan

Drawing No. 1



NOT TO SCALE

Soil-Mat

Soil-Mat Engineers & Consultants Ltd.

Project No.:	SM 230137-G
Date:	July 2023

Typical Design Requirements
Drainage and Backfill for Basement Walls

Drawing No. 2

Hamilton

Committee of Adjustment
City Hall, 5th Floor,
71 Main St. W.,
Hamilton, ON L8P4Y5

Phone: (905) 546-2424 ext. 4221
Email: cofa@hamilton.ca

APPLICATION FOR A MINOR VARIANCE/PERMISSION
UNDER SECTION 45 OF THE *PLANNING ACT*

1. APPLICANT INFORMATION

	NAME
Registered Owners(s)	Beni, Angelina, Adam, and Lucas Colalillo
Applicant(s)	same as above
Agent or Solicitor	A.J. Clarke & Associates Ltd. c/o Franz Kloibhofer

[redacted]

1.2 Primary contact ☐ Applicant ☐ Owner ☑ Agent/Solicitor

1.3 Sign should be sent to ☐ Applicant ☐ Owner ☑ AgentSolicitor

1.4 Request for digital copy of sign ☐ Yes* ☑ No

If YES, provide email address where sign is to be sent _____

1.5 All correspondence may be sent by email ☑ Yes* ☐ No

If Yes, a valid email must be included for the registered owner(s) AND the Applicant/Agent (if applicable). Only one email address submitted will result in the voiding of this service. This request does not guarantee all correspondence will sent by email.

1.6 Payment type ☐ In person ☑ Cheque ☐ Credit over phone*

_____
*Must provide number above

2. LOCATION OF SUBJECT LAND

2.1 Complete the applicable sections:

Municipal Address	14 Belvidere Avenue		
Assessment Roll Number	08090408550		
Former Municipality	Hamilton (Barton)		
Lot	13	Concession	4
Registered Plan Number	PL 457	Lot(s)	3 AND 4
Reference Plan Number (s)	62R21828	Part(s)	1 AND 2

2.2 Are there any easements or restrictive covenants affecting the subject land?

☐ Yes ☑ No

If YES, describe the easement or covenant and its effect:

3. PURPOSE OF THE APPLICATION

Additional sheets can be submitted if there is not sufficient room to answer the following questions. Additional sheets must be clearly labelled

All dimensions in the application form are to be provided in metric units (millimetres, metres, hectares, etc.)

3.1 Nature and extent of relief applied for:

Please see attached justification cover letter.

☐ Second Dwelling Unit ☐ Reconstruction of Existing Dwelling

3.2 Why it is not possible to comply with the provisions of the By-law?

Please see attached justification cover letter.

3.3 Is this an application 45(2) of the Planning Act.

☐ Yes ☑ No

If yes, please provide an explanation:

4. DESCRIPTION OF SUBJECT LAND AND SERVICING INFORMATION

4.1 Dimensions of Subject Lands: FOR TOTALITY OF LANDS

Lot Frontage	Lot Depth	Lot Area	Width of Street
CHORD = 37.41m	irregular	±3,277.22m²	±15.5 metres

4.2 Location of all buildings and structures on or proposed for the subject lands: (Specify distance from side, rear and front lot lines)

Existing: N/A - no buildings on lands

Type of Structure	Front Yard Setback	Rear Yard Setback	Side Yard Setbacks	Date of Construction
NONE				

Proposed:

Type of Structure	Front Yard Setback	Rear Yard Setback	Side Yard Setbacks	Date of Construction
Lot 1: Single detached dwelling	to comply with ZBL	to comply with ZBL	to comply with ZBL	TBD
Lot 2: Single detached dwelling	1.2 metres	to comply with ZBL	to comply with ZBL	TBD
Lot 3: Single detached dwelling	to comply with ZBL	to comply with ZBL	to comply with ZBL	TBD
Lot 4: Single detached dwelling	to comply with ZBL	to comply with ZBL	to comply with ZBL	TBD

4.3. Particulars of all buildings and structures on or proposed for the subject lands (attach additional sheets if necessary):

Existing: N/A: vacant

Type of Structure	Ground Floor Area	Gross Floor Area	Number of Storeys	Height

Proposed:

Type of Structure	Ground Floor Area	Gross Floor Area	Number of Storeys	Height
Lot 1: Single detached dwelling	TBD	TBD	to comply with ZBL	to comply with ZBL
Lot 2: Single detached dwelling	TBD	TBD	to comply with ZBL	to comply with ZBL
Lot 3: Single detached dwelling	TBD	TBD	to comply with ZBL	to comply with ZBL
Lot 4: Single detached dwelling	TBD	TBD	to comply with ZBL	to comply with ZBL

4.4 Type of water supply: (check appropriate box)

☑ publicly owned and operated piped water system
☐ privately owned and operated individual well
☐ lake or other water body
☐ other means (specify)

_____

4.5 Type of storm drainage: (check appropriate boxes)

☑ publicly owned and operated storm sewers
☐ swales
☐ ditches
☐ other means (specify)

_____

4.6 Type of sewage disposal proposed: (check appropriate box)

☑ publicly owned and operated sanitary sewage
☐ system privately owned and operated individual
☐ septic system other means (specify) _____

4.7 Type of access: (check appropriate box)

☐ provincial highway
☐ municipal road, seasonally maintained
☑ municipal road, maintained all year
☐ right of way
☐ other public road

_____

4.8 Proposed use(s) of the subject property (single detached dwelling duplex, retail, factory etc.):

single-detached dwellings

4.9 Existing uses of abutting properties (single detached dwelling duplex, retail, factory etc.):

single-detached dwellings

7 HISTORY OF THE SUBJECT LAND

7.1 Date of acquisition of subject lands:

January 2023

7.2 Previous use(s) of the subject property: (single detached dwelling duplex, retail, factory etc)

single-detached (demolished in 2000)

7.3 Existing use(s) of the subject property: (single detached dwelling duplex, retail, factory etc)

vacant

7.4 Length of time the existing uses of the subject property have continued:

24 years

7.5 What is the existing official plan designation of the subject land?

Rural Hamilton Official Plan designation (if applicable): _____

Rural Settlement Area: _____

Urban Hamilton Official Plan designation (if applicable) Neighbourhoods

Please provide an explanation of how the application conforms with the Official Plan.

Please see attached justification cover letter.

7.6 What is the existing zoning of the subject land? C/S-1822

7.8 Has the owner previously applied for relief in respect of the subject property? (Zoning By-lawAmendment or Minor Variance)

☐ Yes ☑ No

If yes, please provide the file number: _____

7.9 Is the subject property the subject of a current application for consent under Section 53 of the *Planning Act*?

☑ Yes ☐ No

If yes, please provide the file number: HM/B-22:133

8 ADDITIONAL INFORMATION

8.1 Number of Dwelling Units Existing: none (two lots existing)

8.2 Number of Dwelling Units Proposed: four (one per lot)

8.3 Additional Information (please include separate sheet if needed):

Please see attached justification cover letter for greater details and discussion of four tests.

11 COMPLETE APPLICATION REQUIREMENTS

11.1 All Applications

- ☑ Application Fee
- ☑ Site Sketch
- ☑ Complete Application form
- ☑ Signatures Sheet

11.4 Other Information Deemed Necessary

- ☑ Cover Letter/Planning Justification Report
- ☐ Authorization from Council or Director of Planning and Chief Planner to submit application for Minor Variance
- ☐ Minimum Distance Separation Formulae (data sheet available upon request)
- ☐ Hydrogeological Assessment
- ☐ Septic Assessment
- ☐ Archeological Assessment
- ☐ Noise Study
- ☐ Parking Study

Environmental Impact Study and Tree Protection Plan

Slope Stability and Geotechnical Assessment