

Issue Scoping Report

1.0 PLANNING SEQUENCE

This scoped Issues Summary Report (ISR) was prepared for Morgan Pavia (the proponent). To accompany a Draft Plan of Vacant Land Condominium to Elgin County, and a Zoning By-Law Amendment application to the Municipality of Central Elgin.

The contents of this report pertain to the legal parcel at 279 Hill Street, located in the Municipality Central Elgin. (See Figures 1 & 2).

This work program is triggered by municipal and provincial requirements related to the proposed development occurring on or within 120 m of lands designated "Natural Heritage" on the Municipality of Central Elgin Official Plan (OP) Schedule "G" the Community of Port Stanley Land Use Plan (Figure 3), and the Elgin County Official Plan Appendix #1 Natural Heritage Features and Areas.

We assume the Municipality and County will circulate it to the other parties, if any, involved for their review. This report follows the municipal and provincial guidelines for an ISR which is the initial phase of the required environmental impact studies.

Vroom + Leonard attended the site in May and June 2020, and again in July 2021 to review its attributes in relationship to the work program historically required by the regulatory groups based on our experience within this jurisdiction and others.

In addition to site attendance by Vroom + Leonard (VL), the recommendations of this report are based on the following components:

- Location map;
- Description of project with enough detail to accurately predict impacts;
- Description of the natural area potentially being affected;
- Background information of the site and adjacent lands;
- Relevant municipal or agency requirements;
- Identification of potential issues and ecological linkages, natural processes and study area boundaries;
- Potential cumulative effects of development;
- Determination of information needs and availability of information; and
- Determination of the nature and extent of additional information or studies that may be needed.

Based on these tasks, the ISR is to recommend one of the following options:

- A determination that no further work is required and that the proposed site alteration or development can proceed, or
- Proceed to a full or scoped EIS.

Our conclusion, with reference to the municipal guidelines specifying the purpose of an ISR, is that this proposal does not need to proceed to an EIS for the reasons stated in the following text.

2.0 PROPERTY DESCRIPTION & PROPOSED ALTERATION

The parcel is located in northeast Port Stanley, ON (Figure 1). More specifically the subject lands are located at 279 Hill St, Port Stanley, ON (Figure 2).

The subject lands have ± 35 m of frontage, are ± 226 m deep, and 0.79 ha in total size. The lands have been mostly cleared for residential use (Figure 7). A number of mature trees exist within the maintained lawn, and a 6-12 m wide treed patch straddles the west and north property boundary. Surrounding lands to the south, east and north are residential. To the west there are Natural Heritage and Natural Hazard lands. Immediately west of the driveway along Hill St is the beginning of a ravine with an intermittent watercourse at the base which drains northwest to the Kettle Creek (Figure 6).

According to the Central Elgin OP, the subject lands are designated Residential except for a small ($\pm 7\%$ / 0.06 ha) portion in the southwest corner between Hill St and the front of the house which is designated Natural Heritage (Figure 4). This small portion of land is, as noted above, the beginning of the ravine. The ravine is considered a municipal drain and stormwater is piped into this area from lands southeast.

According to the OP and Ontario AgMaps database the ravine ranges from >40 m to the west at the southern end of the property to >100 m to the west in the center of the property, and ± 15 m to the west at the northern end of the legal parcel (Figure 3).

Development involves removing the existing single-family home and constructing seven condo blocks (twenty-seven units) with five additional parking spaces and a common amenity area towards the northern end of the subject lands, and a landscaped area at the southern end (Figure 4 & 5). The paved road surface will be constructed on the east side of the parcel with the condos on the west and rear yards adjacent to the Natural Heritage feature.

CJDL Servicing Report describes how stormwater is proposed to be collected and held on-site in a 'StormTech SC-740 Chamber' for quality and quantity control in an underground storage system before out letting to the ravine at the south end of the subject lands. An outlet headwall structure and cable concrete matting is proposed to help alleviate existing erosion concerns along the ravine side slopes from current stormwater drainage. Discharge will be restricted to pre-development conditions.

The municipality has noted in a pre-consultation that a geotechnical study is required on the slope to the west. A Geotechnical and Slope Stability Assessment was completed in October 2020 by MTE Consultants.

Again, the legal parcel has been maintained as part of residential use for the single-family dwelling on-site and is primarily cleared of vegetation (Figure 7). There is a portion of "Natural Heritage" at the southwest corner that extends onto the legal parcel that collects stormwater from elsewhere and is the beginning of the ravine to the west (Figure 6). As noted, a few dozen mature trees exist within the maintained lawn, and a 6-12 m patch of trees to the west and north extend up to 5 m onto the subject lands. It is anticipated that all trees on-site will be removed for the proposed development.

The adjacent tablelands to the west designated Natural Heritage on the OP have been highly disturbed. West of the 6-12 m wide treed patch is a large clearing with mowed lawn (Figure 8).

3.0 BACKGROUND INFORMATION: THE SITE AND ADJACENT LANDS

3.1 Abiotic

The following information and analysis are based on site visits during Spring 2020 and Summer 2021 by the authors and a literature review.

Our site investigations discovered that the soils consist of topsoil over loam on the subject lands, and a thin layer of topsoil over moist clay along the slope of the ravine. MTE test pits discovered topsoil underlain by sandy silt and clayey silt.

The subject lands consist of tablelands that are generally flat. To the west tablelands extend for ± 60 m where there is a gradual slope for 10-15 m followed by a steep sided slope of 45° that is ± 20 m in height. Slope stability analysis by MTE Consultants state that there are no signs of slope instability for the overall slope to the west.

Surface drainage on-site generally drains to the west and south towards the valley slope then flows along the Siebenmorgen Municipal Drain to the Kettle Creek. According to the OMAFRA AgMAP database the tablelands are considered significant groundwater recharge areas. MTE did not record any free water in test pits within the tablelands on-site 2.6 to 2.8 m in depth, and the silty clay til soils, discovered by the geotechnical investigation, has relatively low permeability.

3.2 Biotic

Aquatic Attributes

Adjacent to the south end of the property there is an intermittent watercourse that flows northeast to the Kettle Creek. There is currently a SWM outlet into the ravine.

According to the current DFO aquatic SAR mapping the drain does not contain "any critical habitat of aquatic SAR, However, Silver Chub [END] have been found/are likely to be found".

The Silver Chub is known to live in Lake Erie and historically were known to migrate upstream to clear sand and gravel substrates to spawn in June-July. They are sensitive to low dissolved oxygen and fluctuating water temperatures.

The intermittent watercourse small with < 1 m in width and 10-50 mm in depth. The substrate is silt and clay, and downed debris and leaf litter creates many barriers. Based on the shallow depth and intermittent flow of the watercourse at the base of the ravine, it is highly unlikely to provide fish habitat.

Terrestrial Attributes

There are no Provincially Significant Wetlands (PSW) or Areas of Natural Scientific Interest (ANSI) within 120 m of the subject lands. The Port Stanley Till Earth Science Area of Natural and Scientific Interest (ANSI) is > 200 m northwest of the subject lands.

As noted, in the Municipality of Central Elgin Official Plan, Schedule G there are "Natural Heritage" lands directly abutting the legal parcel that extend onto the subject lands in the southwest corner. Additionally, there are "Natural Hazard" lands 15-115 m west of the subject lands.

A review of the 1993 Significant Natural Areas of Elgin County Report demonstrates that the lands are not part of any of the Significant Natural Areas noted in the report.

The lands are a part of the Lower Kettle Creek Watershed. The Kettle Creek 2018 Watershed Report Card has determined that this watershed has poor surface water quality, fair forest conditions, and very poor wetland cover.

Pre-screening of the Natural Heritage Information Centre (NHIC) database discovered thirteen species (including a restricted species) that have been identified within 1 km of the subject lands. Those species are discussed below.

Vegetation and ELC Classification

As previously noted, the tablelands consist of mature trees among a maintained lawn on the subject lands. On the west and north border of the property is a 6-12 m wide treed patch of FODM2 Dry – Fresh Oak – Maple – Hickory Deciduous Forest Ecosite that continues along the slope to the northwest. The canopy is dominated by Red Oak with Shagbark Hickory, Black Cherry, Sugar Maple, and a dozen dead Ash trees. The subcanopy contains many Shagbark Hickory and Sugar Maple saplings. The groundlayer is becoming dominated by the spread of the invasive Garlic Mustard while including Jack-in-the Pulpit, Trilliums, Virginia Creeper, and Solomon Seal. A private trail with evidence of spraying runs through this community on the tablelands to the west clearing. The large clearing contains widely spaced Black Walnut trees with a maintained/mowed groundlayer.

The ravine southwest of the subject lands contains FODM5-3 Dry – Fresh Sugar Maple – Oak Deciduous Forest Type and is dominated by Sugar Maple on the steep slopes. The base of the ravine is narrow with the small intermitted watercourse noted above.

Significant Species

A NHIC 1km² grid data search determined the following SAR and S Rank species have been observed within 1 km of the subject lands:

| <u>SPECIES:</u> | <u>HABITAT:</u> |
|------------------------------------|---|
| _Eastern Prickly Pear Cactus [END] | Dry sandy areas that are relatively open and sunny. It cannot grow in complete shade and are found on sandy opening on dry, sometime forested, hillside and in sand dunes near beaches. |
| _False Rue Anemone [THR] | Rich, moist soils often in valleys, floodplains and ravine bottoms. Frequently found closest to watercourses within mature forests with lots of Maple and Beech trees. |

| | |
|--------------------------------------|---|
| _Broad Beech Fern [SC] | Rich soils in deciduous forests. Requires full shade and often grows in areas dominated by Maple and Beech trees. |
| _Stiff Gentian [S2] | Hills, prairies, thinly wooded slopes, rocky meadows, banks of streams in wooded areas, and edges of cliffs. |
| _Eastern Stiff-leaved Goldenrod (S3) | Open fields. |
| _Erect Knotweed (SH) | Bottomland forests and riparian areas. |

Aside from the Eastern Stiff-leaved Goldenrod (S3), based on the preferred habitats of the noted species if present, they would be associated with the slopes and not the subject lands. With respect to the Eastern Stiff-leaved Goldenrod (S3), there are no open fields to provide suitable habitat.

| | |
|-------------------------------|---|
| _Spiny Softshell Turtle [END] | Aquatic |
| _Yellow-Breasted Chat [END] | Thickets and scrub |
| _Northern Bobwhite [END] | Savannahs and grasslands |
| _Barn Swallow [THR] | Open structures including barns, culverts, and bridges. |
| _Snapping Turtle [SC] | Aquatic |
| _White-eyed Vireo (SB2) | Thickets and scrub |

There is no open water on or adjacent to the subject lands to support turtles. There are no dense or overgrown shrub thickets that would provide habitat for the White-eyed Vireo or Yellow-breasted Chat. No open barns or bridges for Barn Swallows, and although to the west given its been cleared into a cultural savannah type, it is actively mowed making it unsuitable for the Northern Bobwhite.

Additionally, a Restricted species record was identified in the NHIC 1 km² screening. The NHIC has informed us that the Restricted Species is American Ginseng (*Panax quinquefolius*). This particular record of American Ginseng is based on a vague historical record from 1889, with the location simply as "Port Stanley". However, this species usually grows in deep, nutrient rich soil over limestone or marble bedrock that are moist, but well-drained in relatively mature, deciduous woods.

Significant Wildlife Habitat

Based on the Significant Wildlife Habitat (SWH) Guideline for Region 7E, the subject lands are not likely to contain any SWH.

Based on the vegetation communities, the forested slopes to the west may support candidate SWH for Special Concern or Rare Species, Bat Maternity Colonies, and Landbird Migratory Stopover.

Diversity

The legal parcel is highly maintained for residential use, additionally the tablelands to the west are also highly maintained. Diversity is low to typical within the natural communities on the tablelands with invasive species present (Garlic Mustard). The wooded slopes beyond the tablelands are historically known to be significantly diverse.

Landforms and Soils

The steep ravine in the southeast and slope in the north east are typical of both the Kettle Creek subwatershed and the regional physiography.

Naturalness and Disturbance

With respect to the naturalness and disturbance, the tablelands were mostly cleared decades ago for residential use. The adjacent tablelands have also experience high disturbance levels including logging, mowing, and spraying. Again, Garlic Mustard is prevalent throughout the FODM2 community abutting the subject lands.

Linkage and Size

As noted above, the adjacent Natural Heritage feature is part of a much larger continuum along the steep slope running north-south. The continuum connects the Lake Erie shoreline with lands 6+ km north.

No interior habitat exists to provide habitat for area sensitive species, but the corridor is significant for wildlife movement given the length and location as noted.

Representativeness

Previous studies along the same valleylands to both the north and south of the subject lands, discovered that the corridor exhibits flora and fauna typical of the local and regional landscape, with exception of the hybrid Butternut trees which require no protection under the Endangered Species Act (2007).

Vroom + Leonard have attended the property and are of the opinion that their related floral and faunal subconsultants do not need to attend the site.

3.0 DEVELOPMENT EFFECTS AND RELATED INFORMATION**Potential Direct and Adverse Impacts**

As previously noted, this Issue Scoping Report is triggered by municipal requirements related to the proposed residential construction occurring on or adjacent to Natural Heritage Features.

Vegetation Removal:

_Direct impact on the designated Natural Heritage feature will include the removal of the small (± 0.06 ha) extension of "Significant Woodland" at the southwest corner of the legal parcel which is highly anthropogenic and does not match the wooded ravine in structure of composition of flora and faunal habitat.

_The FODM2 patch on the west and north edge appears to extend onto the subject lands 1-5 m. It is anticipated that vegetation clearing will likely extend to the property boundaries. Additionally, a number of large trees within the maintained lawn will be removed for the proposed development.

_ Direct impact expected on the remaining adjacent vegetation rooting zone from grading and construction activities could include the removal of fibrous root tissue and the compaction of soils in residual rooting zones.

Habitat Loss: Vegetation removal can result in loss of habitat such as breeding, foraging, or travel corridors. It is highly unlikely that any SAR would rely on the small extension of the ravine or within the FODM2 edges proposed to be altered due to edge effects and disturbances previously noted.

Disruption to Active Wildlife: Vegetation removal can disrupt faunal species in during their active season of foraging, migrating, or nesting. Timing of vegetation removal is required and discussed in the mitigation section below.

Valleyland Removal:

The proposed development involves marginal removal and alteration of the beginning of the ravine adjacent to Hill St. Valleylands are important to convey surface flow, may be a site of groundwater release, connect natural heritage systems, and provide an array of microclimatic conditions for flora and fauna.

The area proposed to be altered for developmental use is highly disturbed, no seepage is anticipated given the lack of biotic indicators along the slopes or base of this area. The area to be removed are small in size relative to the larger valleyland and given it's on the periphery, the connective function will remain intact. Additionally, the SWM design will ensure that the post-development flow into the Significant Valleyland matches pre-development flow in regards to both quality and quantity. No further mitigation is required.

Hydrology:

The land use change and site alteration can result in direct impact on groundwater recharge, surface water conveyance quality, quantity, and location as development includes impervious surfaces and controlled surface flows on-site.

Although the subject lands are considered a significant groundwater recharge area, results from the geotechnical study discovered soils with low permeability. Infiltration was not incorporated into the SWM design; however, the storage chamber does have an open bottom set on a stone base which will allow infiltration if possible. As provincially regulated, the SWM design must match pre-development surface flow conditions, feeding the ravine system to the south.

Potential Indirect or Secondary Impacts to be Addressed

Given the current anthropogenic nature of the tablelands all floral and faunal species are expected to be disturbance tolerant species. It is our opinion that no rare species would be discovered if detailed

life science surveys were to be completed on the tablelands. Additionally, given the minimal vegetation removal within already disturbed areas, it is our opinion that there will be no long-term indirect or adverse impacts on the Natural Heritage system as a whole.

Construction impacts:

Construction impacts can include sedimentation and erosion from disturbed soils, fuel or chemical spills, improper waste disposal, tree and root disturbance. Construction impact mitigations are given in the following section.

Corridor Size and Connectivity: The proposed development will have no impact on the size of the Natural heritage feature to the west as a whole given the minimal vegetation removal requirement on the very edge of the community. Additionally, the proposed development will not result in any disconnect of habitat.

Tree and root disturbance during construction:

The indirect impact of soil compaction from the grading within the rooting zone and attendant sedimentation could cause damage to adjacent trees in the FODM2 patch abutting the west and north by reduction of soil oxygen levels.

In our experience and based on arboricultural literature reviews, when roots have the opportunity, they will graft onto the roots of other members of the ELC community, regardless of species. Intergrafting of roots with surrounding trees provides even more resilience to the impacts of the proposed adjacent development.

Setbacks in regards to natural heritage protection are generally considered for the following purposes:

- _Water quantity
 - attenuation of stormwater flows
- _Water quality
 - sediment, nutrient, and/or toxin attenuation and water temperature moderation
- _Hazard mitigation zone
 - streambank/slope stabilization, mitigate consequences of large branch or tree falls
- _Core habitat protection
 - maintaining microclimate conditions, nutrient and woody debris contributions, cover, and biotic integrity (limiting invasive species spread, providing tree root protection)
- _Screening of human disturbance/Land use change
 - wind and noise attenuation, light dampening, screening from physical disturbance

Water Quality and Quantity:

Again, modifying surface drainage and increasing impervious surfaces could affect the distribution and abundance of vegetation found within the adjacent Natural Heritage areas. They are generally a function of surface runoff and groundwater's soils and moisture regimes.

As with any development, a Stormwater Management Plan (SWMP) will be required to demonstrate that water quality and quantity leaving the development envelope meets pre-development conditions. No setbacks are required for water quality and quantity management for these reasons.

Hazard Mitigation Zone:

A geotechnical study has been completed and recommends a stable slope setback for the limit of the proposed development. No structures or grade alterations are to occur beyond the stable slope setback.

Screening of human disturbance:

With the change in land use to residential, there is potential for the following impacts to occur:

- Dumping of vegetative waste and/or garbage into adjacent Natural Heritage features
- Reclamation of land or expansion of lot size by placing fill or buildings at rear yard limits
- Introduction of plant species for landscape purposes that pose a risk of invasive potential into Natural Heritage areas
- Vegetation and tree removal
- Creation of trails within adjacent Natural Heritage areas that destroy vegetation, compact soils, and increase the risk of erosion and sedimentation.
- Alteration to natural light regimes resulting from the residential attendant lighting.

In our opinion, the surrounding communities will easily adapt to the post-development conditions given the historical disturbance levels and the post development setting of both the residential subdivisions to the north and the south on the same corridor. Mitigation for conservative buffering of the altered land use is discussed in the following section.

How will negative impacts be mitigated?

Timing:

_ The Migratory Bird Convention Act (MBCA 1994), protects 386 migratory bird species in Canada. It states that "No person shall disturb, destroy, or take a nest, egg,..." (SOR/80-577, s. 4.). Birds protected under the MBCA 1994 are present in the areas to be removed. Vegetation removal should occur outside of the nesting season for the region to avoid direct impacts to nests that may be present. The regional nesting period of migratory birds is March 31- August 25 (Government of Canada). Tree cutting should be done outside of that time frame to avoid harm to migratory breeding birds. If tree cutting should occur during the nesting period, then nest searches must be conducted by a specialist within 48 hrs prior to tree removal.

_ *SAR bat* roosting trees are present given the mature size and species present on and adjacent to the subject lands. Tree-cutting should not occur between March 31 and October 31 to minimize the risk of removing trees being used by roosting bats. If tree removal is set to occur during the active season, then further work involving acoustic monitoring and exit surveys will be required.

Hydrology:

The final SWM design should demonstrate that post-development discharge flows quantity and quality will match pre-development flows. Additionally, proper sediment and erosion control best practices should demonstrate that potential erosion susceptibility at the outlet location is not compromised by post-development flows.

Hazard Mitigation:

MTE's preliminary slope assessment recommends a setback allowance will consist of an access allowance setback of 6 m from the top of the slope. All drainage should be directed away from the top of the slope to suitable receptors at the roadway. No fill materials should be placed on the face or at the top of the slope during or after construction. Additionally, they provide instructions on the proposed infill location west of the current driveway.

Construction Practices

Mitigation of construction impacts include the following:

_Best practices set out by provincial and federal agencies, including silt fence barriers, sediment traps, and seeding and mulching, should be followed to ensure adjacent Natural Heritage areas are protected from sedimentation and erosion.

_All protective fencing should be maintained until the time of final seeding.

_The grading plan should be reviewed at the time of approval concerning Tree Preservation.

_If any roots are encountered or disturbed in excavation, they should be cut clean with hand tools prior to infilling.

_After all work is completed, but before protective fencing and other barriers are removed, the site should be examined to identify any trees adjacent to the development parcel that should be removed due to hazard tree status. These opinions on specific stems should be based on the International Society of Arboriculture's "Guide for Plant Appraisal, 10th edition" and included the following constraint descriptions: Crown condition, tree structure, canopy decline symptoms, and stem decline symptoms. Hazard tree assessment should also take into account the potential to support any rare or endangered faunal species such as SAR bats.

_Monitoring of tree health is recommended in the summer or fall season at least 9 months following the completion of construction to identify any problems that may surface following construction.

_All disturbed areas on-site should be re-vegetated with native grasses, shrubs, and trees.

Human Encroachment

Generally, a 1.2 m high chain link fence along rear lot lines adjacent to Natural Heritage areas is requested by municipalities to restrict potential human encroachment impacts identified in Section 4.0. An alternative, or supplementary, to a chain-link fence is an ecological buffer. Ecological shrub buffers

at proper density can mitigate the spread of invasive species, deter human access into the natural heritage area, and block residential attendant lighting.

Furthermore, if a property management company will be responsible for turf grass and vegetation management for the condo units, the property manager should be required to monitor the edges (up to 20 m) of the Natural Heritage area for dumping, invasive species spread, and trail creation into the Natural Heritage area. If these human encroachment factors are observed, the property management company should be required to mitigate these impacts.

The adjacent Natural Heritage feature currently exhibits recreational trails following the top of slope and descending the top of slope in some areas. There is already a level of human activity within this feature.

4.0 CONCLUSIONS

With respect to natural heritage considerations it is the opinion of the writers that, as long as the final development plans follow the recommended mitigation measures in this document the proposed development will be consistent with the Provincial Policy Statements 2020 as well as policies of the Municipality of Central Elgin and the County of Elgin.

For the reasons outlined in the data presented within this report and the resultant analysis it is our opinion there are no potential issues nor potential cumulative effects of the development proposed.

Consequently, there is no need for a full EIS nor further studies relating to the natural heritage component of this application under the Planning Act. It is our opinion that the development can proceed pending the approval of other documents required by the municipality.

The conclusion of this report is that there are no negative, nor adverse, unalterable impacts on the natural heritage features of the subject lands and the natural heritage landscape identified in the Official Plan, as long as the mitigative measures noted in this report are followed.



Paige Vroom (M.Sc. Aquatic)
Mike Leonard O.A.L.A., C.S.L.A.

279 Hill St, Port Stanley ON
April 2022

Morgan Pavia **ISR**
Vroom + Leonard



VROOM + LEONARD

Biologists & Landscape Architects

Paige Vroom / MSc. Aquatic | 519-909-9872 / paigevroom@gmail.com
 Mike Leonard / OALA | 519-671-5267 / mlla@isp.ca

Figure 1: General Site Location

279 Hill St, Port Stanley ON
April 2022

Morgan Pavia **ISR**
 Vroom + Leonard



VROOM + LEONARD

Biologists & Landscape Architects

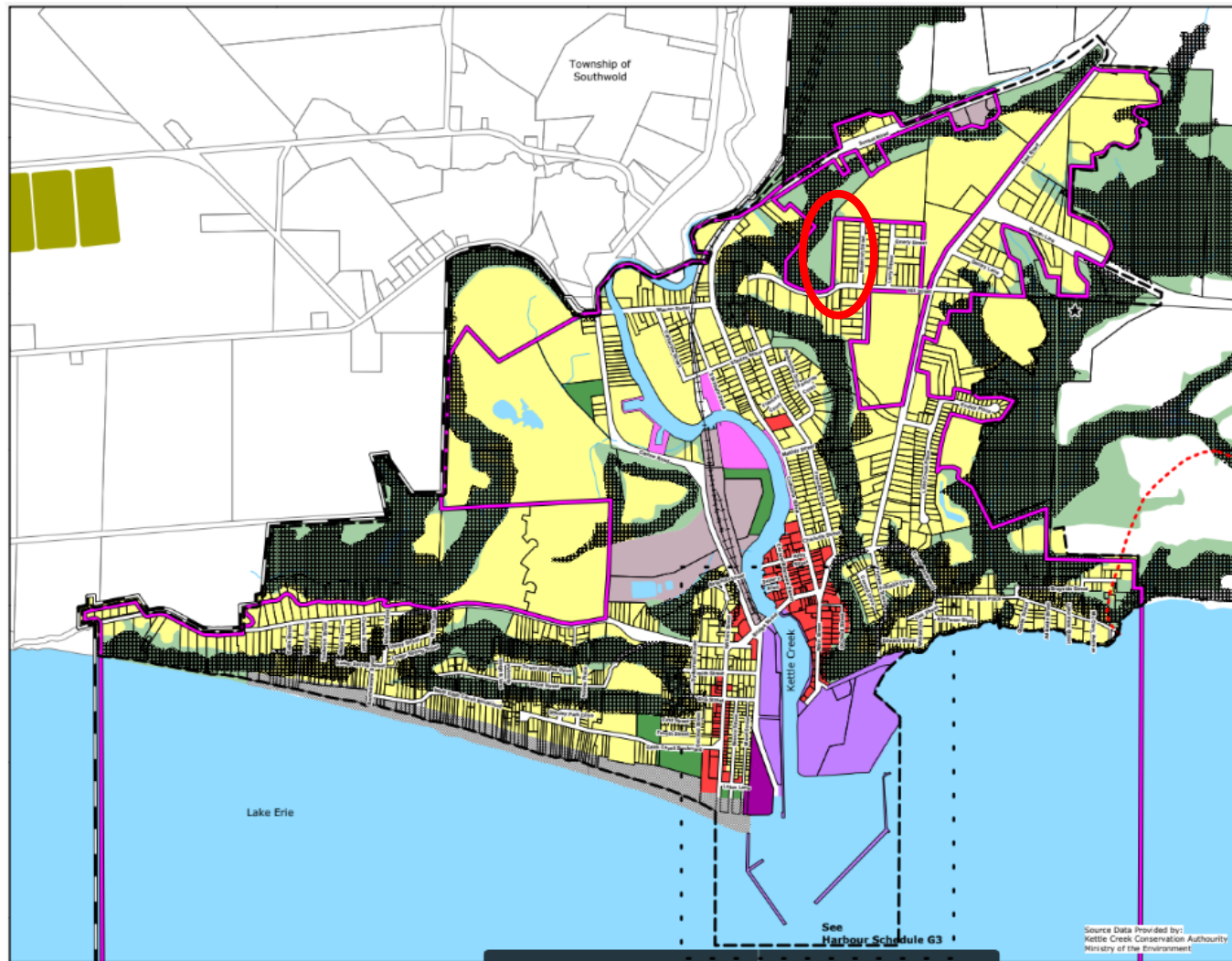
Paige Vroom / MSc. Aquatic
Mike Leonard / OALA

519-909-9872 / paigevroom@gmail.com
519-671-5267 / mlta@isp.ca

Figure 2: Specific Site Location

279 Hill St, Port Stanley ON
April 2022

Morgan Pavia **ISR**
Vroom + Leonard






Schedule "G"
 To The Official Plan of
 The Municipality of
 Central Elgin
**Community of
 Port Stanley
 LAND USE PLAN**

- Land Use Designation**
- Agricultural
 - Residential
 - Commercial
 - Local Commercial
 - Commercial - Industrial
 - Marina
 - Port Stanley Harbour
 - Adjacent Harbour Lands
 - Community Facility
 - Natural Heritage
 - Dynamic Beach

- Land Use Overlay**
- Natural Hazard
 - 100 Year Lake Erie Erosion Setback
 - ★ Former Waste Sites

NOTE: Modification No. 29 under Section 17(34) of the Planning Act

- Map Legend**
- Urban Settlement Area
 - Built Area Limits
 - Municipal Boundary
 - Railway
 - Watercourses
 - Waterbodies
 - Sewage Lagoons

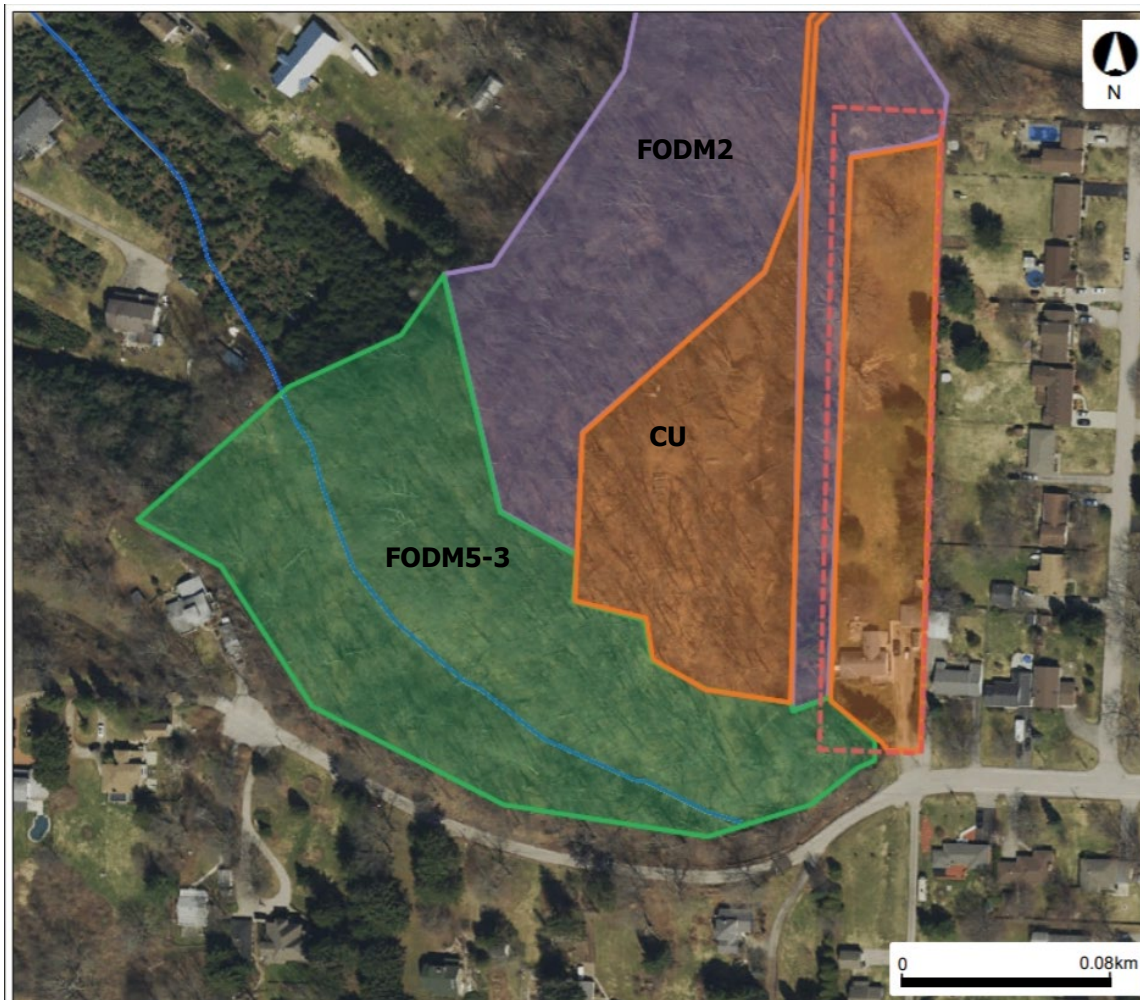



 Metres
Office Consolidation February 2013
 Adopted by Council February 21 2012
 Approved with Modifications February 8 2013

VROOM + LEONARD

Biologists & Landscape Architects

Paige Vroom / MSc. Aquatic | 519-909-9872 / paigevroom@gmail.com
 Mike Leonard / OALA | 519-671-5267 / mlla@isp.ca

Figure 3: Municipality of Central Elgin Official Plan Schedule G Community of Port Stanley Land Use Plan



VROOM + LEONARD

Biologists & Landscape Architects

Paige Vroom / MSc. Aquatic
Mike Leonard / OALA

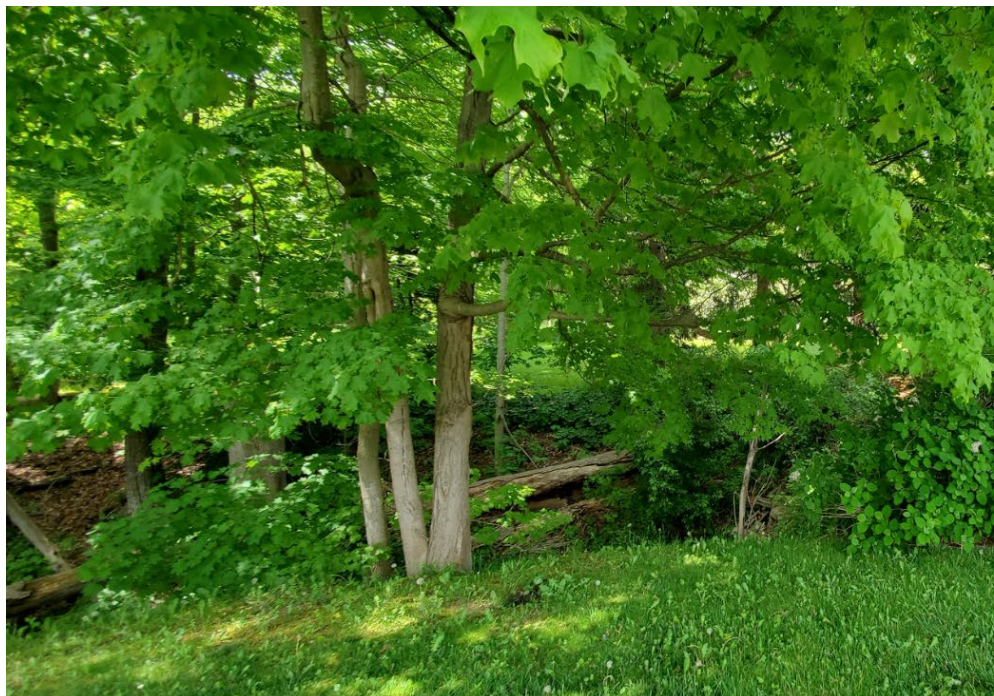
519-909-9872 / paigevroom@gmail.com
519-671-5267 / mlla@isp.ca

Figure 5: Vegetation Communities

FODM2 Dry – Fresh Oak – Maple – Hickory Deciduous Forest Ecosite

FODM5-3 Dry – Fresh Sugar Maple – Oak Deciduous Forest Type

CU Cultural



VROOM + LEONARD

Biologists & Landscape Architects

Paige Vroom / MSc. Aquatic
Mike Leonard / OALA

519-909-9872 / paigevroom@gmail.com
519-671-5267 / mlla@isp.ca

Figure 6: Site Photos

Facing north From Hill St.

Natural Heritage feature extension onto the subject lands (left) consisting of the beginning of the ravine with a SWM outlet in the left (right)



VROOM + LEONARD

Biologists & Landscape Architects

Paige Vroom / MSc. Aquatic
Mike Leonard / OALA

519-909-9872 / paigevroom@gmail.com
519-671-5267 / mlla@isp.ca

Figure 7: Site Photos Continued

Top left – subject lands facing north

Bottom left – subject lands facing south

Right – garlic mustard prevalent in western 6-12 m patch



VROOM + LEONARD

Biologists & Landscape Architects

Paige Vroom / MSc. Aquatic
Mike Leonard / OALA

519-909-9872 / paigevroom@gmail.com
519-671-5267 / mlla@isp.ca

Figure 8: Site Photos Continued

Left – western cleared lands
Middle – southeastern ravine
Right – intermittent watercourse at the base of the ravine