BEACON ENVIRONMENTAL

GUIDING SOLUTIONS IN THE NATURAL ENVIRONMENT

Environmental Impact Study

Draft Plan of Subdivision

210 Quaker Road

Northwest Welland Secondary Plan Area

Prepared For:

Ashton Homes (Western) Limited

Prepared By:

Beacon Environmental Limited

Date:	*Project:*
August 2024	**221055**

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Appendices

1. Introduction

Beacon Environmental Limited (Beacon) was retained by Ashton Homes (Western) Limited to undertake an Environmental Impact Study (EIS) in support of a proposed draft plan of subdivision to be located on lands identifies as 210 Quaker Road, in the City of Welland (**Figure 1**), the subject lands. The lands lie north of Quaker Road, east of First Avenue, and west of Niagara Street within the City of Welland Northwest Secondary Plan Area (NWSPA), City of Welland Official Plan Amendment 29 (OPA 29, 2021).

This EIS has been prepared following the requirements of the Environmental Impact Guidelines of the Niagara Region (2018) and the Niagara Peninsula Conservation Authority (NPCA 2022). A term of reference for conducting the EIS was provided to the Niagara Region and Niagara Peninsula Conservation Authority (NPCA) for review and approval was provided on June 15, 2021 (**Appendix A**). For the subject lands, and adjacent lands, a background review, field investigations, and assessment of natural heritage features and functions were undertaken by Beacon in 2021 and 2022.

1.1 Overview of Study Area

The Towpath Drain flows west to east towards Niagara Street via a culvert crossing at First Avenue and crosses the subject lands. As can been seen on **Figure 1**, the only natural feature within the subject lands that will be developed is a 30 m wide vegetated corridor that is associated with the Towpath Drian (**Photographs 1 & 2**). The remainder of the property supports active farm field (**Photographs 3, 4, & 5**). A woodlot is found along a portion of the northern boundary adjacent to the farm field (**Photograph 6**).

Photograph 1. 30 Meter Vegetated Corridor Along the Towpath Drian. Looking West from the East Boundary of the Subject Lands, April 2021

Photograph 2. 30 Meter Vegetated Corridor Along the Towpath Drian, left, and Adjacent Farm Field Looking East to Niagara Street, June 2021

Photograph 3. Farm Field- Looking North Along the West Boundary of the Subject Lands, April 2021

Photograph 4. Farm Field - Looking Southeast to Quaker Road, May 2022

Photograph 5. Farm Field - Looking Northeast to Niagara Street

Photograph 6. Woodlot Adjacent to Farm Field Along a Portion of the North Boundary of the Subject Lands, May 2022

Site Location	Figure 1
Environmental Impact Study (EIS) Proposed Plan Subdivision, 210 Quaker Road City of Welland	
BEACON ENVIRONMENTAL	Project: 221055 Last Revised: November 2023
Client: Ashton Homes	Prepared by: BD Checked by: RH
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The subject lands are within the NWSPA and for the development of the secondary plan an assessment of the natural heritage features and functions within the plan area was undertaken by Aquafor Beech Limit (2019) and detailed in **Appendix F** in a report titled Rationale for Urban Growth in Northwest Welland (SGL 2019). The Aquafor Beech report identifies significant natural heritage features within the plan area as Environmental Protection Area (EPA), Environmental Conservation Area (ECA) and wildlife corridor (see report Figure 7.4 in **Appendix B**). The subject lands are located within Area C of the Aquafor Beech NWSPA study area. Based on the Aquafor Beech study, Schedule G Land Use Structure of OPA No 29 identifies the natural heritage features within the plan area (**Appendix B).** No EPA was identified to be associated with the subject lands. The 30 m wide vegetated corridor associated with the Towpath Drain corridor that runs through the subject lands is identified as ECA. Schedule G and the Aquafor Beech report also identifies an area designated at ECA that lies adjacent to, and extends south of the ECA corridor, however, that area currently supports active farm field.

2. Realignment of the Towpath Drain

Following the completion of the NWSPA study, a landowner group retained Upper Canada Consultants (UCC) to undertake design for stormwater control within the NWSPA. The UCC study identified that the realignment of the Towpath Drain was required to facilitate stormwater control for future residential subdivision development. The section of the drain to be realigned is located north of Quaker Road, from the Niagara Street crossing, upstream (west) to Montgomery Road, a straight-line distance of 2 km. The drain and associated headwater drainage features are regulated by the NPCA pursuant to Ontario Regulation 155/06 under the provisions of Section 28 (1) of the *Conservation Authorities Act***,** and therefor a permit from the NPCA was required to conduct the realignment works. A design for the drain realignment was developed by UCC and was submitted to the NPCA as part of the permit application (NPCA file No. 202201368). The permit application was approved by the NPCA April 15, 2024.

2.1 Towpath Drain Realignment EIS

In support of the NPCA permit application for the realignment of the Towpath Drain, UCC retained Beacon to undertake an EIS. As required by the NPCA, Beacon provided a Terms of Reference, dated April 26, 2023, to undertake the EIS. The Towpath Drain Realignment EIS (Beacon 2023) assessed the natural heritage features and functions associated with the drain corridor based on field investigations undertaken for the landowners in 2021, 2022 and 2023.

As the only natural features within the subject lands are associated with the drain corridor, the EIS completed by Beacon for the realignment of the drain provides the details regarding the field surveys completed and description of the existing natural heritage features and functions associated with the drain corridor. ***The Beacon EIS for the realignment of the Towpath Drain is provided as separate documentation and must be reviewed as part of this EIS.***

The following sections provides a summary of the Beacon 2023 EIS findings for the subject lands.

3. Summary of Natural Heritage for the Subject Lands

3.1 Headwater Drainage Features

Three headwater drainage features are associated with the subject lands that direct flows to the drain. They are identified as H6, H7 and H8 in the Beacon 2023 EIS and following the headwater assessment protocol (TRCA and CVC 2014) they are assessed to support ephemeral flows with limited contributing functions. Following the protocols assessment for required management, they are assessed as no management required.

3.2 Fish Habitat

Sampling of the drain by Aquafor Beech Limited for the NWSPA study did not identify fish to be present. Field survey by Beacon over a two-year period has established that no permanent standing water is associated with these sections of the drain and therefore permanent fish habitat is not present. There is the potential for seasonal fish habit during high flow condition with fish migrating from downstream, upstream into these sections of the drain. However, 92 m piped section of the drain at the Niagara Street crossing represent a significant barrier to seasonal upstream fish migration. Therefor the drain is not considered to support annual seasonal fish habitat. The drain is assessed to provide indirect fish habitat through contribution of water flows and allochthonous material and nutrients to downstream to aquatic habitats associated with the Towpath Drain east of the Niagara Street crossing.

3.3 Vegetation Communities Within the Subject Lands Drain Corridor

The Beacon 2023 Towpath Drain Realignment EIS details the ELC vegetation communities that were identified for the section of the drain within the subject lands and is presented on **Figure 2**. The communities that were identified within the subject lands included narrow linear pockets of shallow marsh (MAS2), a small 0.13 ha of forb meadow marsh (MAM2-10), a band of thicket swamp (SWT2) and cultural thicket (CUT1). **Appendix C** provides a photographic record of these communities.

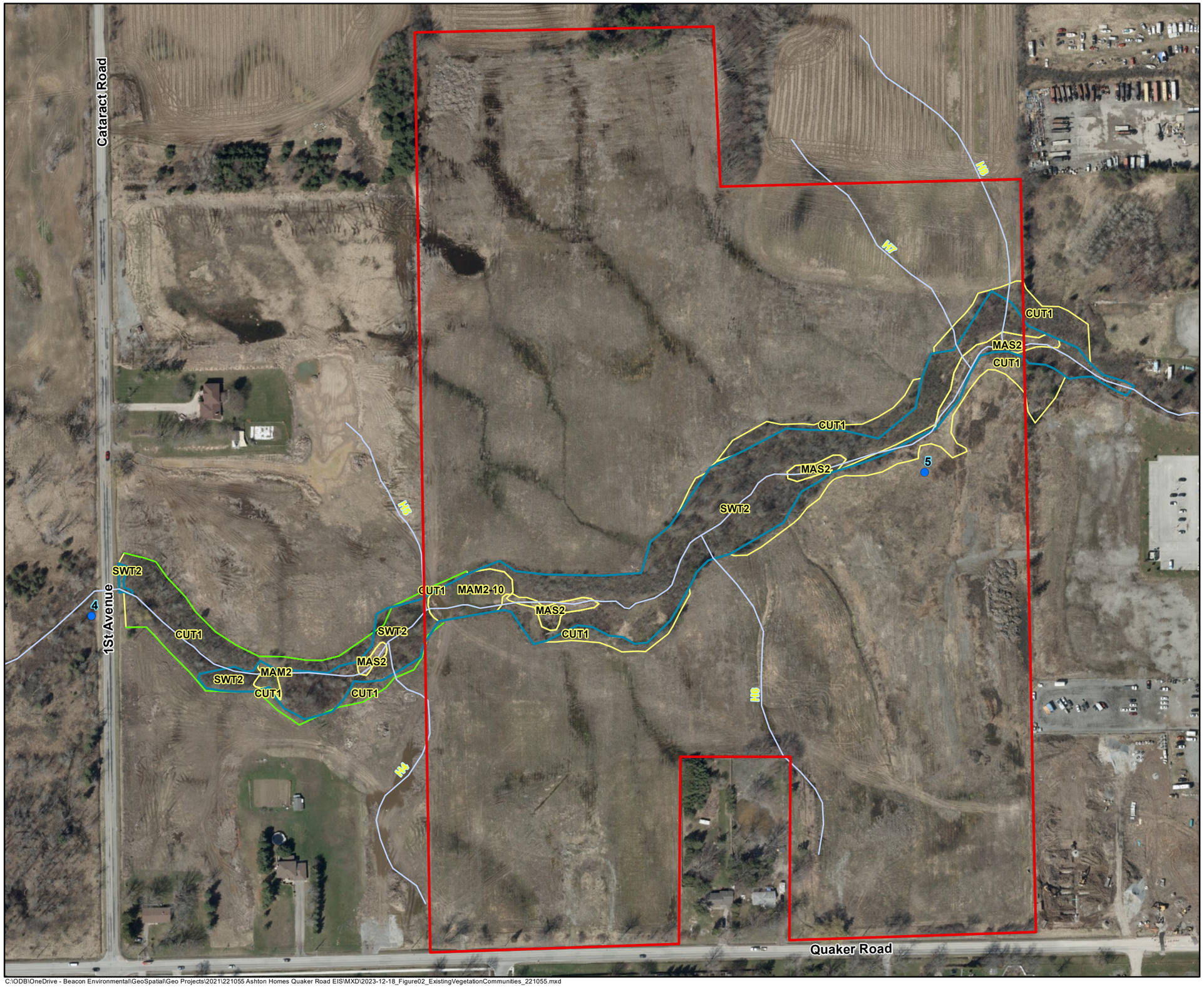
No rare vegetation communities, provincial S-rank of S1, S2, or S3, are found within the drain corridor.

3.4 Species at Risk (SARs)

No species of flora or fauna that are listed by the *Endangered Species Act* (ESA) as endangered, threatened, or special concern occur or are expected to occur within the habitats that are found in the drain corridor within the subject lands.

3.5 Provincially Significant Wetlands (PSW)

There is no Provincially Significant Wetland (PSW) identified within or adjacent to the subject lands.



Existing Vegetation Communities

Figure 2

Environmental Impact Study (EIS)
Proposed Plan Subdivision, 210 Quaker Road
City of Welland

Legend

- Subject Property
- Wetland Limit
- Dripline
- Headwater Watercourse
- Ecological Communities
- Amphibian Survey Stations

Code	Wetland Communities
MAS2	Mineral Shallow Marsh
MAM2	Mineral Meadow Marsh
MAM2-10	Forb Mineral Meadow Marsh
SWT2	Mineral Thicket Swamp
	Cultural Communities
CUT1	Mineral Cultural Thicket

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Checked by: LW

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3.6 Areas of Natural and Scientific Interest (ANSI)

There are no Provincial or Regional ANSIs identified within or adjacent to the subject lands.

3.7 City of Welland NWSPA EPA and ECA

No areas are identified that supports an EPA designation within or adjacent to the subject Lands. The vegetated corridor associated with the Towpath Drian is designated ECA.

3.8 Significant Valleylands

There are no valleylands within or adjacent to the subject lands.

3.9 Significant Wildlife Habitat

According to the Significant Wildlife Habitat Technical Guidelines (MNR 2000), there are four main categories of Significant Wildlife Habitat (SWH):

- Seasonal Concentration Areas of Animals;
- Rare Vegetation Communities or Specialized Habitat for Wildlife;
- Habitat for Species of Special Concern; and
- Animal Movement Corridors.

Within each of these categories, there are multiple types of SWH, each intended to capture a specialized type of habitat that may or may not be captured by other existing feature-based categories (e.g., significant wetlands, significant woodlands). For the Towpath Drian Realignment EIS the Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E (MNRF 2015) were used as a screening for SWH within the drain corridor.

3.9.1 Seasonal Concentration Areas

No areas or habitats are found within the subject lands that supports seasonal concentrations of animals.

3.9.2 Rare Vegetation or Specialized Habitat for Wildlife

No rare or specialized vegetations communities are found within, or adjacent to, the subject lands. The NWSPA study identified a potential snake hibernaculum in Area 3 west of First Avenue, however, no features or structures that could potentially support a snake hibernaculum were found to occur within the subject lands.

At the local level, the small wetland pockets within the drain through the subject lands can be considered to provide low quality specialized breeding habitat for frogs and toads.

No habitat for rare species of flora or fauna was found to occur.

3.9.3 Habitat for Species of Special Concern

No species of special concern was found to occur in the drain corridor associated with the subject lands.

The NWSPA study identifies that there is the potential for Milksnake (*Lampropeltis triangulum*) and Eastern Ribbonsnake (*Thamnophis sauritus*). Though the drain corridor can be considered to support general habitat for these two species, for the local population the habitats associated with the large area of PSW directly west of First Avenue can be considered to be the core habitat.

The NWSPA study also identified specialized habitat for the special concern Monarch Butterfly (*Danaus plexippus*) to be associated with open meadows or similar habitats containing milkweeds and other wildflowers. The subject lands do not support open meadow habitat with and abundance of milkweeds or wildflowers.

3.9.4 Animal Movement Corridors

The primary ecological function of the drain corridor through the subject lands is to provide a local east-west terrestrial and aquatic movement corridor within a landscape that is dominated by agricultural fields.

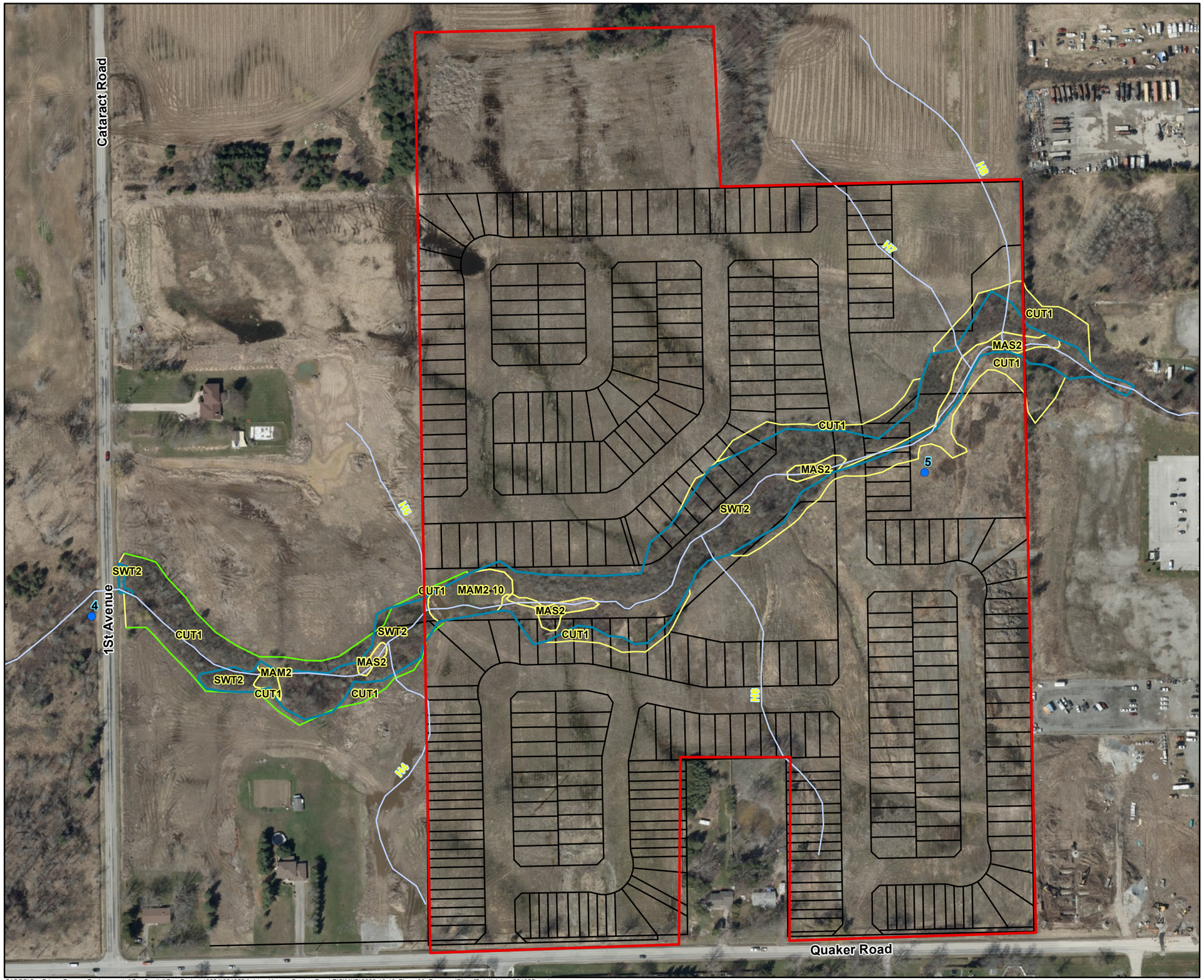
3.10 Significant Woodlands

Based the findings of the NWSPA study, no significant woodland is associated with the subject lands or adjacent lands.

4. Proposed Development

The general elements of the proposed draft plan of subdivision are provided on **Figure 3**. A detailed plan is provided in **Appendix D** and should be reviewed in conjunction with the following text.

The plan includes 264 Single Family homes (Lots 1-264) and 76 Street Towns (Blocks 265-278). The subdivision will be accessed via two streets that will have an intersection with Quaker Road. The realigned Towpath drain corridor will be located in Blocks 290 and 291 representing a total area of 1.88 ha. There will be one street crossing of the drain corridor, “Street C’, located between Blocks 290 and 291.



Proposed Plan of Subdivision	Figure 3

Environmental Impact Study (EIS)
Proposed Plan Subdivision, 210 Quaker Road
City of Welland

Legend

- Subject Property
- Wetland Limit
- Dripline
- Headwater Watercourse
- Ecological Communities
- Amphibian Survey Stations
- Proposed Development

Code	Wetland Communities
MAS2	Mineral Shallow Marsh
MAM2	Mineral Meadow Marsh
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CUT1	Mineral Cultural Thicket

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Strom water will be collected through a curb and gutter system and will be treated in two storm water management facilities located along the east boundary in Blocks 292 and 293. Water and wastewater will be serviced through a street network and connect to a system within the Quaker Road right-of-way.

The construction will be phased, with realignment of the Towpath Drain being constructed in phase 1. The street network is expected to be completed in one year, with the construction of homes occurring over a number of years.

5. Impact Assessment and Mitigation

The realignment of the Towpath Drain corridor is the only impact of the draft plan on natural heritage. The vegetation corridor associated the drain is identified as ECA within the NWSPA and the realignment works will result in its removal. No significant natural heritage features and functions were identified that would result in a significant negative impact by the realignment of the drain (Beacon 2023).

To address the impact of the realignment to obtain NPCA approval and work permit, the UCC developed a design for the new alignment that incorporated a number of features to maintain and enhance the natural features and function of the drain corridor. A summary is provided below.

5.1 Design Mitigation for the New Drain Corridor

The following details design mitigation measures that will off set the impacts of the removal/alteration of the exiting drain corridor. The general design of the proposed drain corridor east of First Avenue, which includes the subject lands, is presented in **Appendix E**.

5.1.1 Design of New Corridor

To mitigate the loss/alteration of the existing drain corridor, the design for the new drain will include a 30 m wide naturalized corridor, including wetland areas within the watercourse flow channel. The drain corridor will have total length of 1.77 km. The total area of the new drain corridor will be 5.07 ha, representing a 0.86 ha increase.

For the exiting drain, two sections of the drain are enclosed. At the western limit west of Rice Road a 170 m section of the drain is piped through a culvert under soccer fields. At the eastern limit at Niagara Street the drain follows through a 92 m long piped section under the paved parking lot of Toronto Autoparts. For the new corridor these piped sections of the drain will be day lighted, resulting in a continuous corridor. The opening of these sections of the drain will greatly enhance the aquatic and terrestrial corridor function of the drain.

5.1.2 Naturalization of the New Corridor

For the mitigation and enhancement of the ecological function of the new drain, the follow features have been included in the design:

- A corridor width of 30 m;
- Flow channel meanders;
- Diversify in flow channel substrate (gravel/cobble pockets);
- Creation of wetland areas for compensation for wetland loss at a minimum ratio of 1:1;
- Wetland function enhancement through the creation of shallow and deep-water wetland pockets; and
- Plantings to create a naturalized corridor.

The entire 30 m wide corridor will be planted with shrubs and trees. In addition, the proposed design includes a number of wetland areas located throughout the corridor representing a total area of 3.89 ha, a 1.24 ha increase, consisting of shrub thicket wetland and deep aquatic pools. The combined area of the deep-water pools that will be located throughout the drain corridor is 1.66 ha, representing 43% of the total wetland areas that will be created. The absence of prolonged standing water within the existing drain is a limiting factor for the existing wetland functions, and the proposed design represents a significant enhance for wetland functions. In addition, the existing flow channel in drain only supports a clay substate and the design for the new watercourse will include riffels with cobble gravel substrate that will be located throughout the drain corridor which will increase the diversity of habitats.

Details regarding the planting plans and enhanced ecological conditions for the corridor are provided in a design brief that has been prepared by and Ecological & Environmental Solutions (“EES”) and will be provided to the Region under a separate cover.

5.1.3 Buffers

The new drain corridor will have a minimum width of 30 m. No buffer lands to this corridor are proposed. However, as part of the corridor design to address post development impacts on the new corridor, post construction a chain link fence will be located along the perimeter of the corridor. Also, a no-gate by-law is recommended to reduce human encroachment and limit the movement of pets into the adjacent natural corridor.

For intermittent or ephemeral watercourses that do not support fish habitat and non PSW wetlands NPCA development policy is to provide a 15 metre buffer. The new drain watercourse will be located centrally within the 30 m wide naturalized corridor, which will provide a 15 m buffer to each side of most of the watercourse. It is noted that the design includes meanders in the watercourse so that at some locations the outer side of the meander will have a reduced buffer by 2 to 5 m. The reconstructed watercourse has varying setbacks from the newly constructed wetland of 6-9 metres average with additional width in various locations. With the naturalization of the buffer lands and the fencing along the perimeter of the corridor, localized reductions in the 15 m buffer to wetland areas and the watercourse is not considered significant with respect to protecting the ecological function of the watercourse and wetlands within the new drain corridor.

5.2 Street Crossings

A primary function of the drain corridor will be to provide a terrestrial and aquatic movement corridor. The proposed draft plan has been designed to have only one street crossing. The design for the culvert at the crossing is to ensure that an aquatic corridor and movement corridor for small mammals is maintained. The NPCA is to be consulted with respect to design requirements to ensure that a movement corridor is maintained, and the final design is to be approved by the NPCA.

5.3 Construction Mitigation

The construction works will be undertaken in two stages, east and west. The east stage includes the section between Niagara Street and First Avenue and includes the subject lands. The west stage includes the section east and west of Rice Road. The downstream east stage will be constructed first. During construction flows will be maintained by temporary swales. Once a section is completed flow will be directed to the new channel and the temporary swales will be removed. Detailed information on the staging of the works has been provided to the NPCA by UCC.

During the construction the following general construction mitigation measures are recommended for the construction works.

- Soil erosion from construction sites can result in adverse environmental impacts if sediment-laden stormwater runoff reaches the drain. Therefore, an erosion and sediment control plan should be implemented prior to any site alteration or construction. This plan is to be is to be approved by the NPCA;
- All construction and development related activities should be confined to the established limit of development, except for those areas subject to naturalization where landscaping works are permitted;
- To avoid impacts on breeding birds and other wildlife, removal of vegetation should be conducted between October 1 and March 31;
- Though the drain is assessed to not support fish habitat, nevertheless, prior to works a fish salvage plan should be undertaken under MNRF; and
- Storage of equipment and materials and the fueling of equipment should not permitted within 30 m of a watercourse or PSW boundary. Ontario Provincial Standard Specification 180 is to be followed for the management of excess materials.

6. Cumulative Impacts

The cumulative impact of development on the natural heritage within the City of Welland is beyond the scope of this EIS. At the local level the subject lands lie within the NWSPA, and development of the surrounding lands will occur in the future. The secondary plan has identified EPA and ECA and development polices for their protection, therefor potential cumulative impacts within the secondary plan area has been addressed.

7. Policy conformity

The following is a summary the proposed subdivision development conformity with relevant environmental development policies.

7.1 Federal *Fisheries Act*

Development and site alteration are not permitted in fish habitat except in accordance with federal requirements pursuant to the *Fisheries Ac (1984).* No fish habitat is associated with the drain and construction mitigation measures have been identified to protect fish via preconstruction fish salvage and sediment control measures to prevent downstream impacts; therefore, the draft plan is in conformity with the regulations of the *Fisheries Act*.

7.2 Ontario *Endangered Species Act* (ESA)

The *Endangered Species Act* (ESA, 2007) does not permit development or site alteration in habitat for threatened and endangered species except in accordance with provincial requirements detailed in the Act's regulations. No habitat for endangered threatened species is found within or adjacent to the subject lands; therefore, the draft plan is in conformity with the regulations of the ESA.

7.3 Niagara Peninsula Conservation Authority

The NPCA regulates wetlands and watercourses pursuant to Ontario Regulation 155/06 under the provisions of Section 28 (1) of the *Conservation Authorities Act*, and therefor a permit from the NPCA is required for the realignment of the Towpath Drain within the subject lands. For the permit application the NPCA required that an EIS be undertaken. An EIS was completed in 2023 in support to of a work permit application and the NPCA has approved the proposed design, therefor the works are in conformity with their environmental development policies of the NPCA (NPCA 2022).

7.4 Provincial Policy Statement

The development policies of the current Official Plans of the Niagara Region and City of Welland are in conformity with Section 2.1 Natural Heritage of the Provincial Policy Statement (PPS, 2020), which is directed at a province wide protection and management of natural heritage resources. Therefore, conformity with the Official Plans ensures conformity with the PPS.

7.5 Niagara Region and City of Welland

7.5.1 Niagara Region

Section 3.1.30.4.1 of the Niagara Region Official Plan (2022) states that where a secondary plan has been approved after July 1, 2012, those portions that are not subject to a draft approved plan of subdivision or plan of condominium shall be approved in accordance with the approved mapping and policies of the secondary plan. The subject lands lie within the City of Welland Northwest Secondary Plan Area, Official Plan Amendment No. 29, which was approved by the Niagara Region, on July 14, 2021. Therefore, conformity with the Secondary Plan is required by the Region.

Schedule G of the Northwest Welland Secondary Plan designates the Towpath Drain and 30 m wide vegetated buffer as Environmental Conservation Area (ECA). There is also an area that extends south from this feature that the Plan designates as ECA. However, this area that extends south currently supports active farm field and does not have any natural heritage features. There are no Environmental Protection Areas (EPA) designated on the subject property.

Under the Northwest Welland Secondary Plan, lands designated Environmental Conservation Area are subject to the policies of Section 6.1 of the Welland Official Plan. Under Section 6.1.2.3.C, where it is demonstrated that all, or a portion of, an Environmental Conservation Area does not meet the criteria for designation under this Plan, then the restrictions on development and site alteration set out under Section 6.1 do not apply. As demonstrated in this EIS, the only natural area within the subject lands that will be impacted by development is a 30m wide vegetated corridor that is associated with the Towpath Drain. The re-alignment and restoration of this feature has been authorized through a permit with the NPCA. The other southern area identified as ECA therefore may be developed, pursuant to Section 3.1.30.4.1 of the Niagara Region Official Plan.

7.5.2 City of Welland

Environmental development polices for the NWSPA are detailed in Section 7.3.1.6 Land Use Structure of the OPA No. 29 and natural heritage features are identified on Schedule G. Section 7.3.1.6 identifies that lands designated Environmental Protection Area (EPA) or Environmental Conservation Area (ECA) on Schedule G shall be subject to the polices of Section 6.1 Environment of City's Official Plan (OP 2019).

No EPA is identified to occur within the subject lands. The drain corridor is identified as ECA. Section 6.1.2.3.C states development and site alteration may be permitted without an amendment to th**e** Plan in ECA, Natural Heritage Corridors, and on all adjacent lands if it has been demonstrated that there will be no negative impact on the natural features or their ecological functions. The proponent shall be required to prepare an Environmental Impact Study (EIS) in accordance with the Policies of this Plan. Schedule G shows that the vegetated corridor associated with the Towpath Drain through the subject lands is designated as ECA. The 2023 EIS completed by Beacon for NPCA approval for the realignment of the Towpath Drain assessed the corridor and found that there were no significant features and functions that would result in a significant negative impact and that naturalization of a 30m corridor identified for the realignment would maintain and/or enhance existing natural features and functions of the ECA associated with the drain; therefore the draft plan is in conformity with ECA development policies.

With respect to drainage features Section 7.3.1.6 of the OPA states that a headwater drainage feature assessment shall be required to the satisfaction of the City and the Conservation Authority prior to approval of development adjacent to those drainage features. The assessment shall evaluate and classify the drainage feature status based on criteria established by the Conservation Authority and shall determine if the drainage features are to be maintained in-situ, can be relocated or can be removed. The EIS completed by Beacon for the NPCA approval for the realignment of the Towpath Drain undertook the required headwater drainage feature assessment following the required protocol (TRCA/CVC 2014). Three headwater features were identified, and their assessment determined that their removal did not require mitigation. In addition, the OPA states that where drainage features are to be maintained or moved, applications for development shall use natural channel design techniques to maintain or enhance the overall productivity of the reach. The design for the realignment of the drain incorporates natural channel design and a naturalized 30 m corridor which will enhance the overall ecological function of the drain. Therefore, the draft plan is in conformity with drainage features development policies.

With respect to wetland areas within the drain, Section 7.3.1.6 of the OPA states that for several small wetlands less than 0.5 hectares that prior to development, evaluation of these wetlands should be undertaken to determine if they are significant and warrant protection. The EIS completed by Beacon for the NPCA approval for the realignment of the Towpath Drain undertook an assessment of the functions associated with the wetland pockets within the drain and identified that they are not PSW. To mitigate the removal of the wetland pockets, the design for the realignment of the drain has incorporated the creation of wetland pockets that will increase the total wetland area within the drain; therefore, the draft plan is in conformity with wetland development policies.

The Beacon EIS identified that the drain corridor supports a local wildlife movement corridor. Section 7.3.1.6 of the OPA states that development can be located, designed, and constructed to maintain and, where possible, enhance the ecological functions of the natural heritage corridor in linking the natural heritage system or where an alternative corridor can be accommodated. In addition, stormwater management facilities are permitted within a corridor. Also, street crossings are permitted if they are designed with to facilitate safe movement of wildlife through the linkage. The naturalized corridor design for the drain realignment will maintain wildlife movement function and the draft will not require street crossings of the new drain. Based on the design of the drain realignment the draft plan is in conformity with respect to maintaining a wildlife movement corridor.

8. Conclusion

This EIS has been prepared in support of a proposed plan of subdivision to be located at 210 Quaker Road on lands that are located within the City of Welland Northwest Secondary Plan Area (NWSPA). This EIS detailed and evaluated the natural heritage features associated with the subject lands and assessed the potential impacts of the proposed development on ecological features and functions. This EIS concludes that with the implementation of the recommended design and construction mitigation measures, the proposed plan of subdivision is supported with respect to maintaining the natural heritage system of the City of Welland, Niagara Region and the Province.

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Reviewed by:
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Senior Ecologist

9. References

Aquafor Beech Limited. 2019.
Natural Heritage and Natural Hazards Existing Conditions, in Appendix F, Rationale for Urban Growth in Northwest Welland, SGL Planning & Design Inc. (2019). Prepared for the City of Welland.

Beacon Environmental. 2023.
Letter to the NPCA: EIS Terms of Reference (ToR), Proposed Design for the Re-alignment of Sections of the Towpath Drain, City of Welland Northwest Secondary Plan, NPCA File No. 202201368.

Beacon Environmental. 2023.
Environmental Impact Study, Towpath Drian Realignment, Northwest Welland Secondary Plan Area. Prepared for Upper Canada Consultants Inc.

City of Welland 2010.
City of Welland Official Plan. Revised: November 4, 2019, adopted by Welland City Council on May 4, 2010, by By-law 2010-55, and approved, in part, with modifications and deferrals by Niagara Regional Council on September 15, 2011.

City of Welland. 2021.
Northwest Secondary Plan, Amendment NO. 29 to the Official Plan of the Corporation of the City of Welland.

Federal Government of Canada. 1984.
Fisheries Act R.S.C., 1985, c. F-14

Government of Ontario. 2007.
Endangered Species Act. Available online at: https://www.ontario.ca/laws/statute/07e06.

Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig and S. McMurray. 1998. *Ecological Land Classification for Southern Ontario: First Approximation and Its Application*. Ontario Ministry of Natural Resources. SCSS Field Guide FG-02. 225 pp.

Ministry of Natural Resources and Forestry. 2020.
Significant Wildlife Habitat: Technical Guide. Fish and Wildlife Branch Wildlife Section Science Development and Transfer Branch Southcentral Sciences Section.

Ministry of Natural Resources 2015.
Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E. Regional Operations Division: Southern Region Resources Section, Peterborough, Ontario.

Niagara Peninsula Conservation Authority. 2022.
Policies Document: Policies for Planning and Development in the Watersheds of the Niagara Peninsula Conservation Authority.

Oldham, M.J. March 2010.
Checklist of the Vascular Plant of the Niagara Regional Municipality, Ontario. Prepared for Niagara Peninsula Conservation Authority.

Ontario Ministry of Municipal Affairs and Housing (MMAH). 2020.
Provincial Policy Statement. Toronto, Ontario.

Regional Municipality of Niagara. 2022.
Niagara Region Official Plan. Section 3. Sustainable Region.

SGL Planning & Design Inc. 2019.
Rationale for Urban Growth in Northwest Welland. Prepared for the City of Welland.

TRCA (Toronto and Region Conservation Authority) and CVC (Credit Valley Conservation). 2014.
Evaluation, Classification and Management of Headwater Drainage Features Guideline. Toronto and Region Conservation Authority and Credit Valley Conservation, TRCA Approval July 2013 (Finalized January 2014).

Yagi A.R, A. Brant and R. Tervo. 2009.
Niagara Region Natural Areas Inventory Reptile and Amphibian Study 2006 to 2008. Ontario Ministry of Natural Resources and Land Care Niagara unpublished report for the Natural Areas Inventory prepared for the Niagara Peninsula Conservation Authority.

Appendix A

Agency Consultation

NIAGARA PENINSULA CONSERVATION AUTHORITY

250 Thorold Road West, 3rd Floor, Welland, Ontario L3C 3W2
Telephone 905.788.3135 | Facsimile 905.788.1121 | www.npca.ca

June 15, 2021

Our File No.: PLOTH202100463

BY E-MAIL ONLY

Beacon Environmental
80 Main St. N.
Markham, On. L3P 1X5

Attention: Ron Huizer B. Sc., Principal

Subject: Application for Other, (TOR Review)
Ashton Homes, Proposed Plan of Subdivision
210 Quaker Rd. Welland
ARN 271901000109600

The NPCA has reviewed the Terms of Reference for a Scoped Environmental Impact Study, prepared by Beacon Environmental (March 24, 2021) submitted for review to the NPCA in preparation for future Planning Act Applications. The NPCA offers the following comments.

NPCA Policies

The NPCA regulates watercourses, flood plains (up to the 100 year flood level), Great Lakes shorelines, hazardous land, valleylands, and wetlands under *Ontario Regulation 155/06* of the *Conservation Authorities Act*. The NPCA's *Policies, Procedures and Guidelines for the Administration of Ontario Regulation155/06 and Land Use Planning Policy Document* (NPCA policies) provides direction for managing NPCA regulated features.

There are several NPCA regulated features on the subject lands including: headwater drainage features, unevaluated wetlands, and a regulated watercourse.

1) NPCA staff note the presence of several headwater drainage features within the study area. Please revise the ToR to include assessment of all headwater features within the study area following protocols established in the *Evaluation, Classification and Management of Headwater Drainage Features Guidelines* (TRCA & CVC, 2014) http://www.trca.on.ca/dotAsset/180724.pdf.

2) A Water Balance Study is required to understand the hydrology and ecohydrology of the watercourse present within the study area. This is typically evaluated with three years of field work. Please note that the planning process may continue as relevant studies are ongoing and fulfill the requirement to characterize features. NPCA staff utilize the best available science to inform approaches for characterizing features and their functions present on the landscape. While the Water Balance Study should be scoped with input from NPCA staff the following document provides

guidance for developing study requirements: *Water Balance Guidelines for the Protection of Natural Features* (TRCA, 2012).

a. Should wetlands be identified within the study area a Water Balance Study will be required to understand the hydrology and ecohydrology of these features. This is typically evaluated with three years of field work. Please note that the planning process may continue as relevant studies are ongoing and fulfill the requirement to characterize features. NPCA staff utilize the best available science to inform approaches for characterizing features and their functions present on the landscape. While the Water Balance Study should be scoped with input from NPCA staff the following documents provide guidance for developing study requirements: *Wetland Water Balance Risk Evaluation* (TRCA, 2017), *Wetland Water Balance Monitoring Protocol* (TRCA, 2016) and *Water Balance Guidelines for the Protection of Natural Features* (TRCA, 2012). Links are provided below to these documents:

   i. Wetland Water Balance Risk Evaluation: https://trca.ca/app/uploads/2017/12/WetlandWaterBalanceRiskEvaluation_Nov2017.pdf

   ii. Wetland Water Balance Monitoring Protocol: https://sustainabletechnologies.ca/app/uploads/2017/02/TRCA-Wetland-Water-Balance-Monitoring-Protocol.pdf

   iii. Water Balance Guidelines for the Protection of Natural Features: https://sustainabletechnologies.ca/app/uploads/2013/04/SWM-Criteria-2012_Appendix-D.pdf

3) NPCA staff request that any unevaluated wetlands identified on be evaluated per the criteria in the Ontario Wetland Evaluation System (OWES) to determine their significance, to be reviewed and approved by the Ministry of Natural Resources and Forestry. Further, please demonstrate through correspondence with the MNRF whether wetlands on the subject lands will/will not be be complexed with the Provincially Significant Niagara Street Cataract Road Woodlot Wetland Complex which is located <750 m west and north of the study area.

4) NPCA staff note that the Terms of Reference has identified a single amphibian monitoring event to occur in April. Please revise the ToR to reference a specific protocol. NPCA staff note that a single monitoring event is not considered adequate to gather representative data and recommend that May and June surveys be included to be consistent with the Marsh Monitoring Protocol.

5) NPCA staff have identified that candidate salamander breeding habitat and/or movement corridors may be present within the study area. Salamander surveys may include: visual searches for egg masses in combination with dip netting, and/or pitfall traps can be utilized to detect the presence of vernal pool breeding salamanders. Please note that additional permits are required from the Ministry of Natural Resources and Forestry for survey methodologies that include egg collection, tail snip, toe clip and/or minor trapping. Please revise the Terms of Reference to include salamander surveys in addition to the proposed anuran calling surveys.

6) Please revise the Terms of Reference to identify what protocol will be followed when conducting Breeding Bird Surveys.

7) Please include call back surveys within the bird surveys as appropriate to increase potential detection of owls, raptors and other less conspicuous avian species specifically within the riparian corridor and within any wetlands identified within the study area.

8) Please include ELC data sheets as an Appendix to the EIS. Please ensure that representative soil samples are included for each ELC polygon.

9) Please revise the Terms of Reference to include bat maternity roosting habitat surveys within the riparian corridor and any swamp communities which are identified within the study area. Please identify the specific protocol(s) to be followed when conducting bat maternity roosting habitat surveys. Bat surveys typically require two surveys, one to determine the density of snags and cavities within a particular treed area and an acoustic survey or monitoring program to determine if bats are present in the area using acoustic bat detection equipment.

Please let me know if you have any questions and I would be happy to facilitate further discussion.

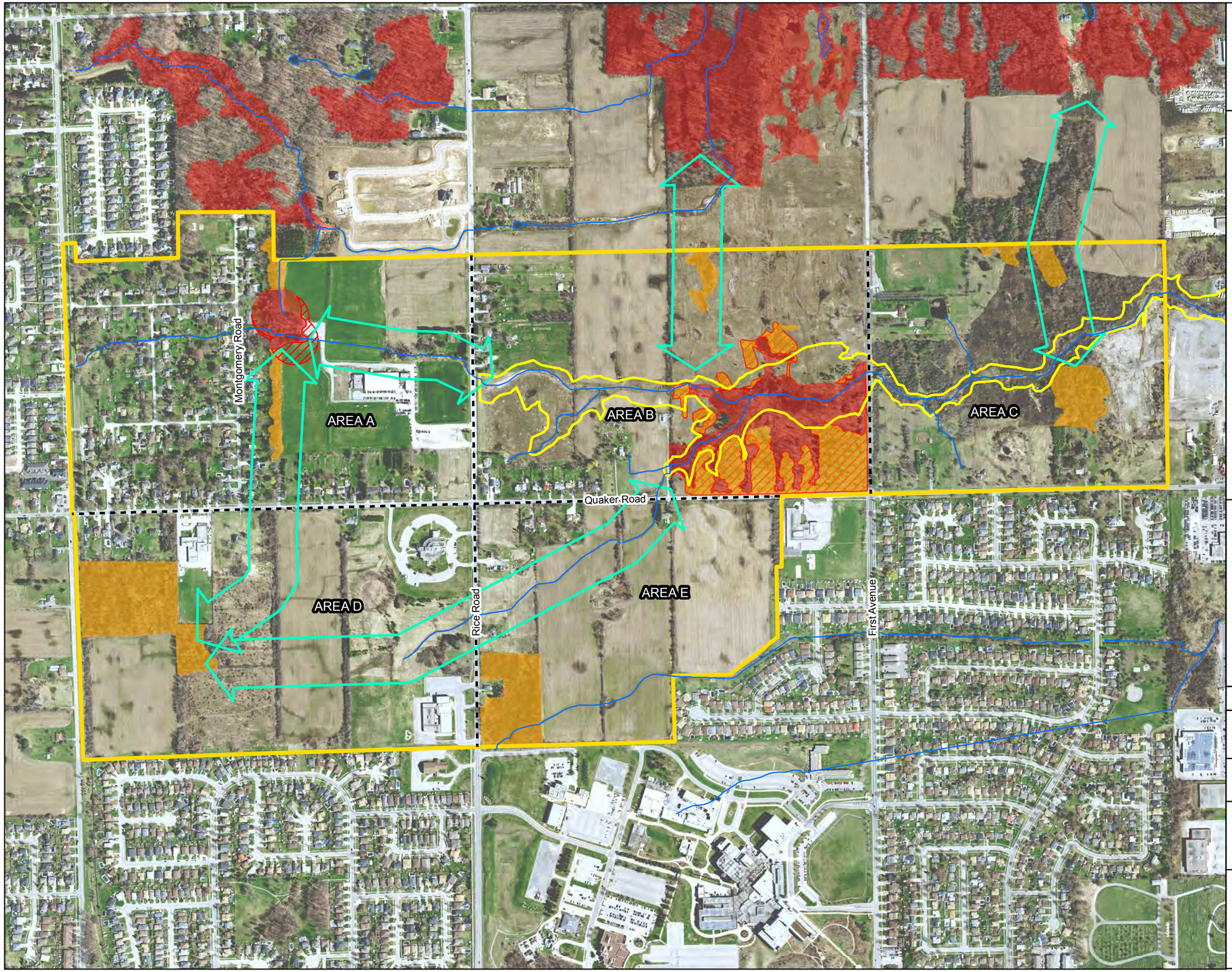
Sincerely,

Jessica Abrahamse M.E.S.,
Watershed Planner NPCA
(905) 788-3135, ext. 235

cc:

Appendix B

Natural Heritage of the NWSPA



Welland
ONTARIO · CANADA

Legend

- Watercourse (NPCA)
- Vegetation Survey Area Divisions
- Environmental Protection Area
- *Potential Environmental Protection Area
- Environmental Conservation Area
- Potential Corridor
- NPCA Advisory Floodplain
- Secondary Plan Boundary

(*) NOTE: Pending Further Assessment

N

1:290,000

Figure 7.4

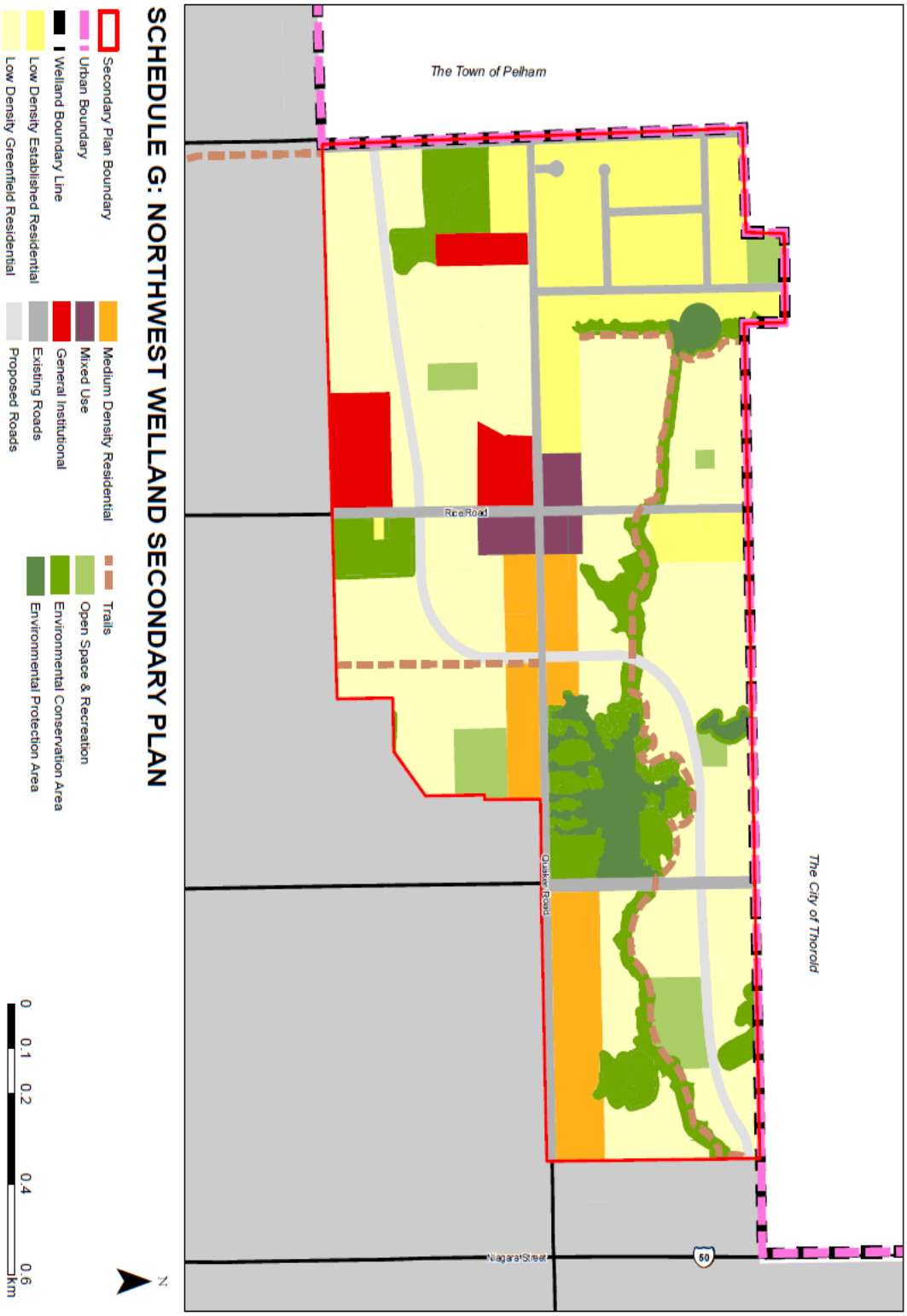
Potential Landscape Connections

Date: January 2019
Projection: NAD83_UTM_Zone_17N
Data Source: Niagara Peninsula Conservation Authority,
City of Welland

0 0.2 0.4
Kilometers

N

Aquafor Beech Limited



SCHEDULE G: NORTHWEST WELLAND SECONDARY PLAN

- Secondary Plan Boundary
- Urban Boundary
- Welland Boundary Line
- Low Density Established Residential
- Low Density Greenfield Residential
- Medium Density Residential
- Mixed Use
- General Institutional
- Existing Roads
- Proposed Roads
- Trails
- Open Space & Recreation
- Environmental Conservation Area
- Environmental Protection Area

Appendix C

ELC Photographic Record

Appendix C

Photographic Record

Photograph 1. Shallow Marsh (MAS2) in Drain Flow Channel Supporting Grasses and Large Bur-reed Looking East Downstream to Niagara Street

Photograph 2. Dry Channel with Forb Marsh Pocket (MAM2-10) at the Western Limit of the Subject lands Looking East

Photograph 3. Linear Thicket Swamp SWT2 within the Drain Corridor

Photograph 4. Buckthorn Cultural Thicket (CUT1) that Dominates the Drain Corridor, Looking East to Niagara Street

Appendix D

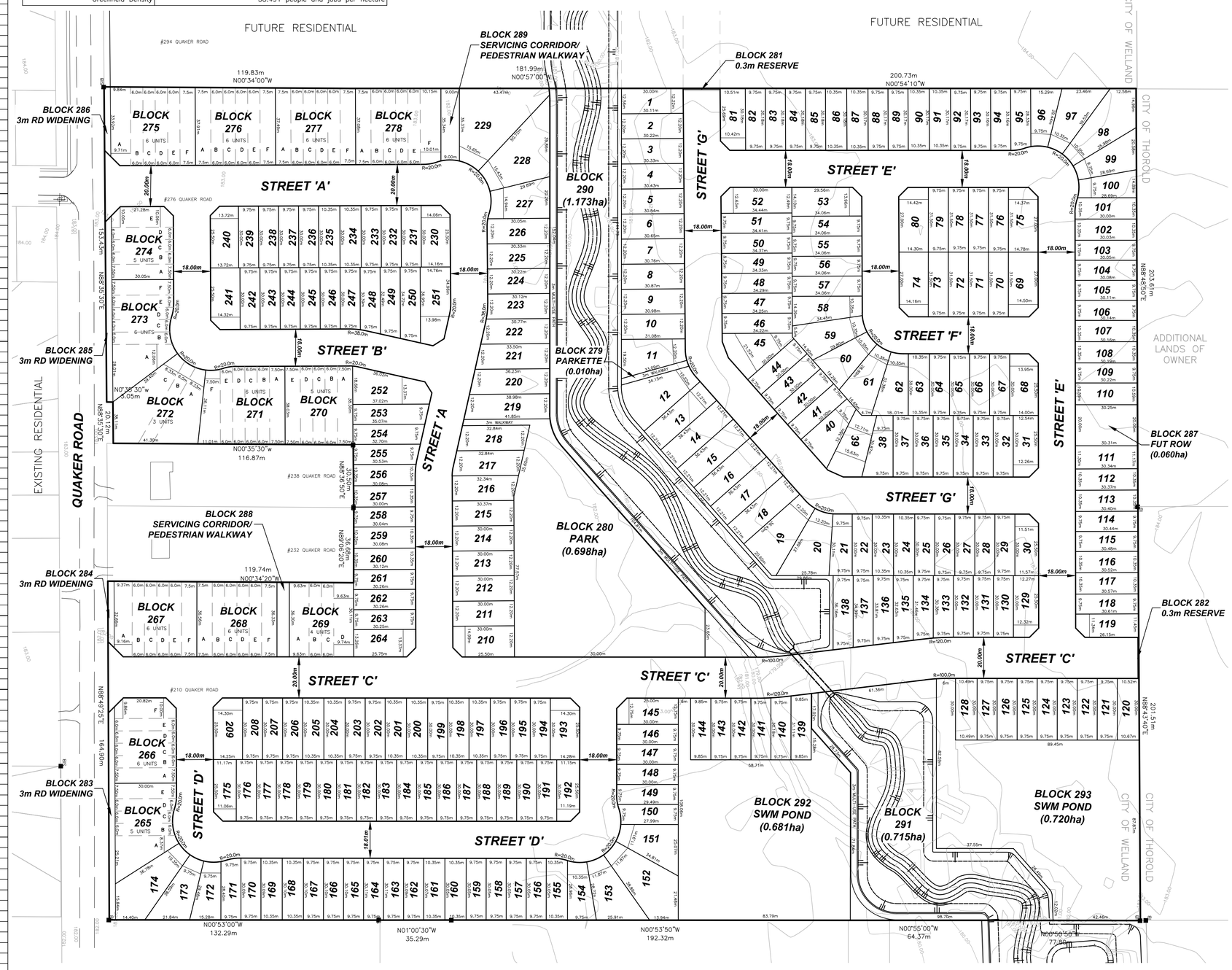
Subdivision Draft Plan

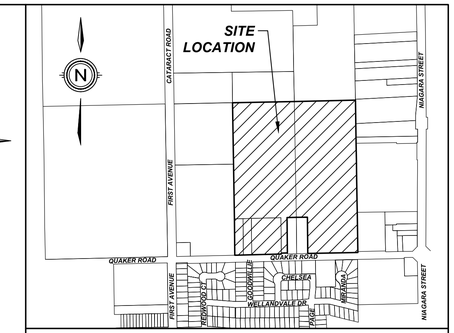
QUAKER ROAD
WELLAND

UNIT #	AREA m2	UNIT #	AREA m2	UNIT #	AREA m2
1	369.57	114	296.59	227	486.91
2	367.99	115	297.01	228	848.76
3	369.31	116	315.73	229	1094.75
4	370.63	117	316.19	230	412.75
5	371.95	118	298.29	231	292.50
6	373.28	119	338.49	232	292.50
7	374.60	120	318.39	233	292.50
8	375.92	121	292.48	234	310.51
9	377.24	122	292.49	235	310.51
10	378.56	123	292.49	236	292.51
11	464.64	124	292.50	237	292.51
12	630.17	125	292.51	238	292.51
13	444.82	126	292.51	239	292.51
14	444.82	127	292.52	240	401.62
15	444.82	128	315.09	241	419.59
16	444.82	129	359.08	242	292.49
17	444.82	130	292.5	243	292.49
18	444.82	131	292.49	244	292.49
19	598.76	132	292.49	245	292.50
20	552.31	133	293.69	246	292.50
21	310.35	134	301.11	247	293.20
22	292.51	135	310.68	248	306.03
23	308.89	136	323.90	249	327.64
24	310.50	137	335.38	250	349.38
25	292.50	138	346.85	251	518.52
26	292.50	139	312.44	252	546.53
27	292.50	140	298.21	253	352.79
28	292.50	141	292.87	254	331.05
29	292.50	142	292.45	255	307.92
30	335.86	143	292.43	256	312.05
31	357.32	144	295.56	257	310.73
32	292.52	145	369.99	258	292.69
33	292.51	146	292.48	259	311.15
34	292.51	147	292.47	260	311.61
35	292.51	148	292.45	261	294.31
36	292.51	149	291.72	262	295.04
37	292.51	150	277.04	263	294.99
38	347.20	151	493.70	264	393.08
39	449.71	152	760.01	265-A	419.88
40	383.84	153	532.74	265-B	170.77
41	292.50	154	330.32	265-C	169.14
42	292.50	155	308.64	265-D	176.64
43	292.50	156	292.96	265-E	224.98
44	292.50	157	292.96	266-A	225.01
45	468.08	158	292.96	266-B	180.00
46	333.79	159	292.95	266-C	180.00
47	334.17	160	311.00	266-D	180.00
48	334.54	161	311.16	266-E	180.00
49	334.91	162	293.30	266-F	279.52
50	335.28	163	293.48	267-A	312.05
51	335.65	164	293.57	267-B	220.39
52	423.41	165	293.55	267-C	220.18
53	467.25	166	293.52	267-D	219.97
54	332.08	167	293.49	267-E	219.75
55	332.08	168	311.52	267-F	274.39
56	332.08	169	311.48	268-A	274.06
57	332.08	170	293.39	268-B	219.01
58	406.76	171	287.62	268-C	218.80
59	452.08	172	335.00	268-D	218.59
60	387.55	173	450.46	268-E	218.37
61	440.81	174	683.04	268-F	272.67
62	401.80	175	322.94	269-A	349.30
63	310.51	176	292.50	269-B	217.34
64	292.49	177	292.51	269-C	217.12
65	292.49	178	292.51	269-D	349.88
66	292.49	179	292.51	270-A	287.38
67	292.49	180	292.51	270-B	229.53
68	408.78	181	292.52	270-C	229.17
69	446.08	182	292.52	270-D	228.80
70	307.23	183	292.52	270-E	285.49
71	307.22	184	292.53	271-A	284.92
72	307.21	185	292.53	271-B	227.52
73	307.19	186	292.53	271-C	227.16
74	437.62	187	292.54	271-D	226.76
75	443.83	188	292.54	271-E	222.82
76	307.21	189	292.54	271-F	323.98
77	307.20	190	292.55	272-A	504.16
78	307.19	191	292.55	272-B	265.20
79	307.19	192	325.52	272-C	697.25
80	442.72	193	419.06	273-A	510.09
81	359.24	194	292.45	273-B	170.75
82	294.28	195	292.45	273-C	168.69
83	294.27	196	292.46	273-D	176.11
84	294.25	197	310.46	273-E	179.99
85	294.24	198	310.46	273-F	225.25
86	312.32	199	292.47	274-A	225.48
87	312.31	200	310.47	274-B	180.55
88	294.20	201	310.47	274-C	180.69
89	294.18	202	292.48	274-D	180.84
90	312.27	203	292.48	274-E	283.62
91	312.25	204	310.48	275-A	364.34
92	294.14	205	310.48	275-B	229.35
93	294.12	206	292.49	275-C	228.95
94	294.11	207	292.49	275-D	228.56
95	287.37	208	292.49	275-E	228.17
96	332.24	209	417.75	275-F	284.66
97	484.95	210	442.21	276-A	284.04
98	678.70	211	366.00	276-B	226.79
99	419.65	212	366.00	276-C	226.40
100	313.91	213	366.00	276-D	226.00
101	307.18	214	366.00	276-E	225.61
102	310.62	215	366.00	276-F	281.46
103	292.89	216	378.06	277-A	280.85
104	293.15	217	399.95	277-B	224.24
105	293.42	218	400.66	277-C	223.85
106	293.68	219	492.26	277-D	223.46
107	312.05	220	458.74	277-E	223.07
108	312.35	221	425.35	277-F	278.32
109	294.52	222	391.97	278-A	278.02
110	320.20	223	368.70	278-B	222.26
111	340.69	224	368.04	2788-C	222.13
112	314.14	225	369.29	278-D	221.99
113	314.45	226	370.07	278-E	221.86
				278-F	367.09

GREENFIELD DENSITY CALCULATION

Structural Type	People: Unit Count	People: Persons Per Unit (P.P.U.)	People: Persons Total	Jobs: Units	Jobs: Ratio	Jobs: Total
SINGLE DETACHED & SEMI-DETACHED 264 Single Detached	264	2.929	773.256 people	264 Dwellings	5% "at home" employment	13.2 Jobs
MULTIPLES Street Towns	76	2.093	159.068 people	76 Dwellings	5% "at home" employment	3.8 Jobs
Subtotal	340		932.324	17.0 jobs		
Total	949.324 people and jobs					
Land Area	16.230 hectares					
Greenfield Density	58.491 people and jobs per hectare					





KEY PLAN
N.T.S.

DRAFT PLAN OF SUBDIVISION

LEGAL DESCRIPTION

PART OF LOT 226, AND PART OF THE ROAD ALLOWANCE BETWEEN LOTS 225 AND 226, REGISTERED PLAN 59R-14904,

OWNER'S CERTIFICATE

BEING THE REGISTERED OWNER, I HEREBY AUTHORIZE UPPER CANADA CONSULTANTS TO PREPARE AND SUBMIT THIS DRAFT PLAN OF SUBDIVISION TO THE CITY OF WELLAND FOR APPROVAL.

MARCH 1, 2024
ASHTON HOMES (WESTERN) LIMITED — DATE

MARCH 1, 2024
1000074416 ONTARIO INC. — DATE

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED ARE CORRECTLY SHOWN.

OCTOBER 2, 2023
DONALD CHAMBERS, O.L.S. — DATE

REQUIREMENTS OF SECTION 51(17) OF THE PLANNING ACT

a) SEE PLAN	e) SEE PLAN	i) SILTY SAND
b) SEE PLAN	f) SEE PLAN	j) SEE PLAN
c) SEE PLAN	g) SEE PLAN	k) FULL SERVICE
d) SEE PLAN	h) MUNICIPAL WATER	l) SEE PLAN

LAND USE SCHEDULE

LAND USE	LOT/BLOCK	# OF UNITS	AREA(ha)	AREA(%)
SINGLE FAMILY RESIDENTIAL	LOT 1–264	264	9.100	56.07
STREET TOWN RESIDENTIAL	BLOCK 265–278	76	1.918	11.82
PARK/PARKETTE	BLOCK 279–280		0.708	4.36
0.3m RESERVE	BLOCK 281–282		0.007	0.04
ROAD WIDENING	BLOCK 283–286		0.078	0.48
FUTURE R.O.W BLOCK	BLOCK 287		0.060	0.37
SERVICING CORRIDOR/WALK	BLOCK 288–289		0.053	0.33
ROADWAY			4.306	26.53
NET DEVELOPABLE AREA		340	16.230	100.00 (83.15% of GROSS AREA)
WATERCOURSE	BLOCK 290–291		1.888	9.67
STORMWATER MGMT FACILITY	BLOCK 292–293		1.401	7.18
GROSS TOTAL AREA		340	19.519	100.00

NET DEVELOPABLE AREA = 16.230ha (EXCL. BLOCK 291–294)
DEVELOPABLE DENSITY = 20.95 units/ha

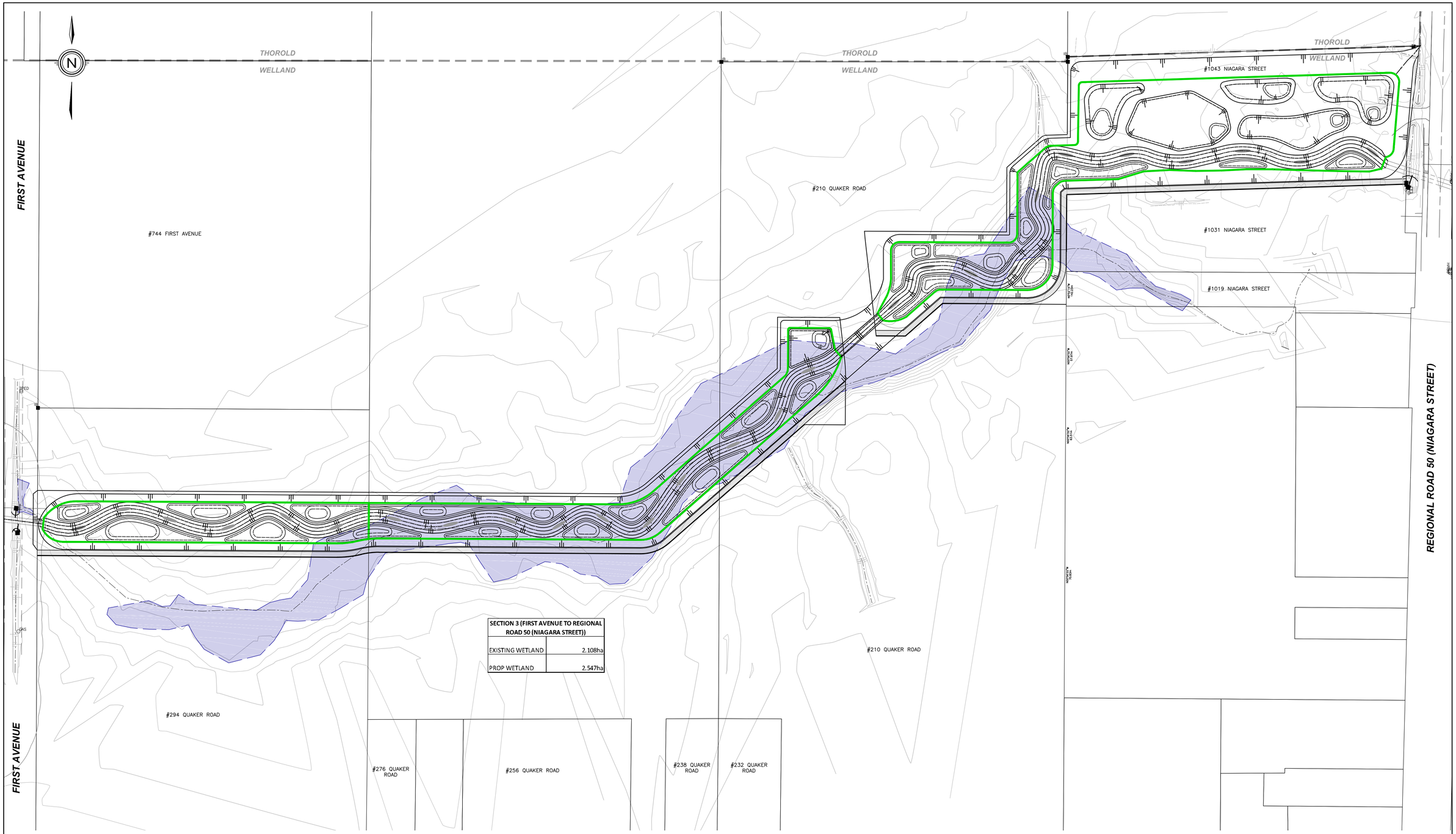
#	REVISION	DATE	INIT
.	.	.	.
.	.	.	.
0	ISSUED FOR APPROVAL	2024–06–21	TA

UPPER CANADA CONSULTANTS
ENGINEERS / PLANNERS

DRAWING TITLE		
DRAFT PLAN OF SUBDIVISION	DRAFTING TA	
	DATE JUNE 21, 2024	
	PRINTED JUNE 21, 2024	
	SCALE 1:1000	
	DWG No. 1601-DP	REV 0

Appendix E

Proposed Drain Realignment Design



SECTION 3 (FIRST AVENUE TO REGIONAL ROAD 50 (NIAGARA STREET))	
EXISTING WETLAND	2.108ha
PROP WETLAND	2.547ha

PROPOSED WETLAND AREA PROVIDED (TOTAL AREA = 3.885ha)

EXISTING WETLAND STAKED OUT JUNE 14 2023 (TOTAL AREA = 2.618ha)

UPPER CANADA CONSULTANTS
ENGINEERS / PLANNERS

CITY OF Welland

TOWPATH DRAIN RE-ALIGNMENT
WELLAND

WETLAND AREAS 2

CONSULTANT FILE No.	21243
DATE	2023–07–26
PRINTED	2023–07–27
SCALE	1:1000 m
REF No.	
DWG No.	21243-WETLAND2
REV	0