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Our Project No.: AA22-163A
Sent by Email: CPellizzari@centrewellington.ca

Chantalle Pellizzari
Supervisor of Development- Administration
Township of Centre Wellington
1 MacDonald Square
Elora, ON N0B 1S0

Re: 73-79 Sideroad 19, Fergus (WrightHaven)
Environmental Impact Study Comment Response - NRSI & GRCA

Dear Ms. Pellizzari:

This letter is submitted in response to comments provided by Natural Resource Solutions Inc. (NRSI) (dated: January 29, 2025) and the GRCA (dated: January 28, 2025) as they relate to the Scoped Environmental Impact Study (EIS) completed by Aboud & Associates Inc. (AA), (dated: October 17, 2024) for the proposed development at 73 and 79 Sideroad 19, Centre Wellington, ON.

A site walkthrough and discussion of the comments was completed on July 28, 2025, with Shannon Davison (AA), Jack Richards (NRSI) & Sydney Gilmour (NRSI) in attendance, to discuss the content of the Peer Review. Responses to comments (as outlined in Appendix 1. Comment Matrix) have been provided below, including consideration of the onsite discussion between AA and NRSI staff.

In preparing this response letter, the following documents were reviewed and should be read in conjunction with this report.

- Zoning By-law Amendment Application 73 & 79 Sideroad 19, Township of Centre Wellington Wrighthaven Homes (c/o GSP Group)., dated January 28, 2025
- Final Design Brief- Proposed Residential Development 73/79 Sideroad 19 Township of Centre Wellington. GEI Consultants. July 2025.
- Stormwater Management Design Report- Proposed Residential Development 73/79 Sideroad 19 Township of Centre Wellington. GEI Consultants. July 2025.
- Hydrogeological Study Report- Proposed Residential Development 73/79 Sideroad 19 Township of Centre Wellington. GEI Consultants. July 2025.
- Landscape Plan Wrighthaven Homes 79 Sideroad 19 Fergus. Hill Design Studio Inc. September 2025.

Proposed Development

Per the Design Brief (GEI Consultants, 2025a), the proposed development will include a private access road, ten single-detached dwellings, eight bungalow units, and their associated driveways fronting the private access road. One additional single-detached dwelling fronting onto Sideroad 19 is also proposed. The private access road will include parking spaces and a turnaround area at the end. Servicing and stormwater management infrastructure including a stormwater management facility have also been proposed. The proposed Site Plan is described in detail in the Design Brief (GEI Consultants, 2025a) and details pertaining to the stormwater management (SWM) facility are provided in the Stormwater Management Design Report (GEI Consultants, 2025b).

NRSI Comment Response

1.0 Policies & Regulations

Comment 1.1

AA acknowledges that based on the presence of the lands zoned as Environmental Protection within the subject lands and the presence of an unevaluated wetland feature, that Core Greenlands per the definition provided in the County of Wellington Official Plan (May 2025 consolidation) are present.

2.0 Field Surveys

Comment 2.1

AA completed a spring botanical inventory of the study area, where access was permitted, on May 13, 2025. Vascular plant species identified were compared to provincial and federal SAR lists (COSSARO, SARA), provincial ranks (NHIC 2024), global ranks, and the Wellington County Significant Plant List (Dougan & Associates, 2009).

A total of 42 vascular plant species were identified during the spring botanical, with 12 previously unobserved. and are provided in *Appendix 2.* Through consultation with the Wellington County Significant Plan List (Dougan & Associates, 2009), none of the species identified during the spring botanical inventory are considered significant in Wellington County. Additionally, nationally or provincially rare, threatened, or endangered species were not observed. A comprehensive vascular plant list for the study area, where access was permitted, is provided in *Appendix 2*.

Comment 2.2

An assessment for Eastern Screech Owl was completed for the study area in response to comments from neighboring property owners provided to the proponent. While the OBBA identifies the presence of Eastern Screech-Owl within the survey square, the 10km x 10km area is primarily of rural and natural landscapes. Per iNaturalist and eBird, the nearest observations of Eastern Screech-Owl are 3.5km southwest and 800m east of the subject property, respectively. Eastern Screech-Owls are adapted to both urban and rural settings, favouring wooded areas where tree cavities or nest boxes are present (Cornell Lab of Ornithology, 2025). Targeted field investigations to identify the presence/absence of Eastern Screech Owl were not

completed or included in the approved scope of work for the site as Eastern Screech owl, cavities are not identified as protected or significant wildlife habitat, and they are not a species of conservation concern. However, cavity searches were completed during leaf-off to determine if suitable cavities for Eastern Screech Owl were present within the study area, where access was permitted to ensure public concerns were addressed. During this investigation new suitable cavities for Eastern Screech Owl were identified.

Comment 2.3
Targeted insect surveys were not completed as part of the field investigations as the forb meadow identified through the EIS was largely culturally influenced and the result of overgrowth of a previously manicured lawn. The area is also considered unsuitable due to its small size (0.19ha), and isolated location within a rural residential area. During the site walk with NRSI in July 2025, it was evident that continued disturbance is ongoing as a pathway had been mown through the majority of the feature, and NRSI staff agreed that the community was anthropogenic and did not provide optimal habitat for any rare insect species or those listed under the *Endangered Species Act* (2007).

Comment 2.4
Field assessments completed identified Fresh- Moist Deciduous Woodland and Swamp Maple Deciduous Swamp communities within the study area. The community description of the Deciduous Woodland was not adequately conveyed in the EIS to draw attention to the prevalence of invasive species, primarily Common Buckthorn (*Rhamnus cathartica*). While a canopy is present, the sub-canopy and understorey are dominated by Common Buckthorn suppressing the growth of native woody and herbaceous species. While removal of the Deciduous Woodland within the property limits is proposed, encroachment into the Swamp Maple Deciduous Swamp is not being proposed. As such, breeding bird surveys were not completed as it was the opinion of AA that the Deciduous Woodland did not provide suitable habitat for any avian species of conservation concern, and impacts to bird species identified in the background review would be mitigated through timing windows. Further, it is noted that the preservation of the Deciduous Swamp and associated buffer ensure any avian species utilizing that community would not be negatively impacted, provided timing windows are adhered to.

Comment 2.5
Completion of herpetofauna surveys, in the form of amphibian call surveys, were not completed as part of the EIS as the Swamp Maple Deciduous Swamp community does not retain a sufficient amount of surface water throughout the spring to support amphibian breeding. This was confirmed through the site visit completed on May 13, 2025, when no standing water was observed within the Deciduous Swamp community. See *Photo 1* below.

Photo 1. Deciduous Swamp- May 13, 2025

3.0 Bats

Comment 3.1

AA acknowledges that FOC and SWC ELC Ecosite codes are not considered candidate Bat Maternity Habitat SWH. Suitable bat maternity habitat trees were identified within the Deciduous Woodland, Single Family Residential and Fencerow ELC communities, none of these communities meet the ELC ecosite requirements to be considered bat maternity SWH.

Comment 3.2

Per the Treed Habitats – Maternity Roost Survey protocol (MECP 2022), criteria (in order of importance) include:

- Tallest snag/cavity tree
- Exhibits cavities or crevices most often originating as cracks, scars, knot holes or woodpecker cavities
- Has the largest diameter breast height (>25cm diameter at breast height)
- Is within the highest density of snags/cavity trees (e.g., cluster of snags)
- Has a large amount of loose, peeling bark
- Cavity or crevice is high in snag/cavity tree (>10m)
- Has leaf clusters
- Tree species that provide good cavity habitat (e.g., white pine, maple, aspen, ash, oak)
- Canopy is more open (to determine canopy cover, determine the percentage of the ground covered by a vertical projection of the outermost perimeter of the natural spread of the foliage of trees); and
- Exhibits early stages of decay (decay Class 1-3; refer to Watt and Caceres 1999).

Given the general development of woody vegetation, trees with a DBH of less than 10cm would not meet many, if any, of the criteria listed above in a deciduous or mixed treed community. During the field assessment the entirety of the subject property was reviewed to identify candidate bat maternity habitat trees that met any of the above criteria, this would include trees less than 10cm DBH, and isolated trees, if they occurred. To display the ELC communities within which the suitable bat maternity habitat trees were shown, the suitable bat maternity trees have been overlain onto the Ecological Land Classification mapping within the appended *Figure 1*. Per *Figure 1*, suitable bat maternity habitat trees were identified within the Deciduous Woodland, Single Family Residential and Fencerow ELC communities. However, upon further review of the field investigation data, we identified that Tree #2 was geolocated incorrectly and was within the Deciduous Swamp.

Comments 3.2, 3.3, 3.4, 3.5, 3.6

The appended *Figure 1* displays the limits of the ELC communities as well as the locations of the suitable bat maternity habitat trees. The appended *Figure 2* shows the proposed site plan and the locations of the identified potentially suitable bat maternity habitat trees. Per *Figure 2*, all suitable maternity habitat trees within the property limits, apart from Tree #2, are to be removed to accommodate the development.

As noted in Section 3.1, potentially suitable roost trees are proposed for removal; however, Per the MECP guidance document for Treed Habitats, the vegetation community types are unsuitable for SAR Bat Maternity habitat. Further, the criteria noted as present in Table 5 of the Scoped EIS is marginal with most trees only exhibiting one characteristic and all cavities being at heights lower than 10m. Additionally, high quality maternity habitat is identified as habitat with >10 snags per hectare. The total snags per hectare for the Woodland and Swamp communities were 1.75 and 8.8, respectively. Based on these results, bat maternity habitat is highly unlikely to be present within the subject lands and removal of the marginally suitable trees will not impair or eliminate any functional habitat that supports bat life processes and will not fragment any linkages or habitat, as the features are isolated within a rural residential area. As a precaution we are recommending marginally suitable trees within the Deciduous Woodland and Fencerow be removed within appropriate timing windows.

As noted above, Tree #2 was geolocated incorrectly and was within the Deciduous Swamp. However, the development will not remove trees within the wetland feature and therefore this tree will not be negatively impacted.

4.0 Insect SAR

Comment 4.1

The EIS (AA, 2024) identified Gypsy Cuckoo Bumble Bee, Nine-spotted Lady Beetle and Rusty-patched Bumble Bee as habitat generalists, identifying that the meadow community may include habitat for these species. Upon further reflection, and in discussion during the site walk, NRSI and AA were in agreeance that the Forb Meadow identified as part of the Ecological Land Classification had been, and is currently being, culturally impacted, and as such does not provide optimal habitat for any of these species. Based on a thorough review of available background documents and known habitat characteristics for these species, the meadow is no

longer considered as candidate habitat for any of these species, justification in regard to the lack of targeted insect surveys has been provided below.

Gypsy Cuckoo Bumble Bee
Per the Recovery Strategy for the Gypsy Cuckoo Bumble Bee (Colla, 2017), the species requires nesting, foraging and overwintering habitats. The report identifies that there is a lack of knowledge regarding nesting and overwintering habitats. In regard to suitable foraging habitat, the report notes preference for native species including *Allium, Aralia, Cephalanthus, Eupatorium, Penstemon, Rubus, Solidago canadensis, Symphyotrichum novae-angliae and Vaccinium*. Further, it was identified that while southern Ontario has been extensively searched, only a single specimen has been observed in the past 10 years (prior to 2014), which was identified at Pinery Provincial Park. With the lack of preferred foraging vegetation identified in the Forb Meadow community, and the rarity of this species in the province, it is the opinion of AA that the Forb Meadow does not provide suitable habitat for Gypsy Cuckoo Bumble Bee.

Nine-spotted Lady Beetle
Per the Recovery Strategy for the Nine-spotted Lady Beetle (Linton and McCorquodale, 2018) it is most often associated with areas of shrubs or small trees interspersed with open grassy areas but not continuous closed canopy. It has been observed in vegetation species including Birch, Pine, Spruce, Maple, Mountain Ash, Poplar, Willow, Sage, Cherry, Alder and Thistles; however, the Recovery Strategy also notes that there have been no records of this species in Ontario since 1987. Since the vegetative species within the vegetation communities in the study area do not include the majority of the species listed above, and the lack of observation of this species within the province in almost 40 years, it is the opinion of AA that the study area does not provide suitable habitat for Nine-spotted Lady Beetle.

Rusty-patched Bumble Bee
Per the Recovery Strategy for the Rusty-patched Bumble Bee (Colla and Taylor-Pindar, 2011), optimal nesting and foraging conditions include Oak Savanna which is characterized by a moderately open tree canopy, well-drained sandy soils and an understorey containing a diversity of flora. The Recovery Strategy identifies that, despite thorough survey work performed throughout Ontario, the only occurrence of the Rusty-patched Bumble Bee in Canada between 2002 and 2010 was at the Pinery Provincial Park. As Oak Savanna was not identified during the Ecological Land Classification, it is the opinion of AA that the study area does not contain suitable habitat for Rusty-patched Bumble Bee.

5.0 Species of Conservation Concern

Comment 5.1
The EIS identified through *Appendix 7*, that no habitat for Western Chorus Frog was identified as being present within the study area. However, the comments provided by NRSI note that the Deciduous Swamp community present within the study area did not appear to be considered within the screening assessment. The Deciduous Swamp community within the study area was considered within this assessment, and it was deemed unsuitable due to the lack of standing water observed at all site visits, which is required to support the aquatic life processes of

Western Chorus Frog. It is acknowledged that information pertaining to the lack of standing water was not adequately conveyed within the EIS report. As noted in Section 3.5 and during the site visit completed by AA and NRSI, NRSI staff were able to observe the community, and note that it is unsuitable for Western Chorus Frog.

Comment 5.2
The comments provided by NRSI identified an inconsistency regarding suitable habitat for Eastern Wood-pewee within the scoped EIS. As Breeding Bird surveys were not completed as part of the field investigations for the scoped EIS, suitable habitat for Species of Conservation Concern was identified through the completion of Ecological Land Classification and vegetation surveys. *Appendix 7* of the scoped EIS identifies that Eastern Wood-pewee prefers mid-aged mixed and deciduous forest stands, with these stands often dominated by Maple, Elm or Oak. Two deciduous treed communities, the Fresh-Moist Deciduous Woodland and the Swamp (Freeman's) Maple Mineral Deciduous Swamp were identified within the study area.

The ELC for the Fresh-Moist Deciduous Woodland identified that the canopy was dominated by Trembling Aspen (*Populus tremuloides*), Manitoba Maple (*Acer negundo*) and White Elm (*Ulmus americana*), while the subcanopy was dominated by Common Buckthorn, with Common Elderberry (*Sambucus canadensis*), Mountain-ash (*Sorbus aucuparia*) and Sweet Cherry (*Prunus avium*). While classified as a Deciduous Woodland, the species assemblage noted does not contain preferred species for Eastern Wood-pewee, and as such was not considered suitable habitat within the habitat assessment (*Appendix 7*) of the scoped EIS.

The Swamp (Freeman's) Maple Mineral Deciduous Swamp does consist primarily of Freeman's Maple, a preferred woody species of Eastern Wood-pewee; however, per the COSEWIC Status and Assessment Report for Eastern Wood-pewee (COSEWIC, 2012), Eastern Wood-pewee is known to occur less frequently in woodlots with surrounding residential development than in those without houses. Without completing surveys to determine presence/absence, suitable habitat for Eastern Wood-pewee has been assumed within the Swamp (Freeman's) Maple Mineral Deciduous Swamp out of an abundance of caution; however, as the Deciduous Swamp will not be directly or indirectly impacted by the proposed development, the species and their habitat will not be negatively impacted.

Comment 5.3
Monarch
Through the Ecological Land Classification and subsequent botanical inventories, the presence of Common Milkweed (*Asclepias syriaca*) was noted within the Forb Meadow community with the abundance identified as Occasional. While the composition of surrounding vegetation communities cannot be confirmed due to access restrictions, the Assessment and Status Report on the Monarch (COSEWIC, 2010) notes that due to the increase in abandoned farmland and the popularity of including Milkweeds in residential and butterfly gardens due to availability in nurseries, there may be more Monarch habitat now than there was prior.

While Milkweed species provide breeding habitat, the Monarch is also a migratory species, which seeks overwintering habitat south of the Canadian border. With removal of the Forb

Meadow being proposed to accommodate the development, it is recommended that removal occur during the Monarch overwintering period, which per the COSEWIC Status Report (COSEWIC, 2010) is identified as October to late-March. Removal during the overwintering period will not negatively impact the species. Following development, it has been recommended that the 10m buffer from the wetland and the area adjacent to the SWM facility be planted with native forb species, including Milkweed, which are suitable to the existing soil and moisture conditions, to provide compensation for the feeding and larval habitat that would be removed to accommodate the development. Per the Landscape Plan (Aaron Hill Design Inc., 2025), Common Milkweed will be incorporated into the 10m buffer to the wetland. Seven nodes throughout the 10m buffer, containing a total of 98 one-gallon pots are included. The inclusion of Common Milkweed as well as a variety of native forbs within the specified seed mix to be hydroseeded will provide Monarch with suitable breeding and foraging habitat post-development.

Yellow-Banded Bumble Bee
As noted in the EIS, Yellow-Banded Bumble Bee is known to be a habitat generalist within forest, meadows, grasslands and open roadsides (COSEWIC, 2015). It is noted that only habitats supporting rich plant communities provide nutrition to support colonies due to the need for pollen and nectar resource availability to remain high throughout the active period of the colony (COSEWIC, 2015). Based on the Ecological Land Classification and subsequent botanical inventories, the Forb Meadow is dominated by Wild Carrot (*Daucus carota*), Common Plantain (*Plantago major*), Red Clover (*Trifolium pratense*) and Garden Bird's-foot Trefoil (*Lotus corniculatus*), which are not recognized as primary contributors to rich plant communities. As such, it is the opinion of Aboud & Associates that the Forb Meadow does not provide adequate habitat for Yellow-Banded Bumble Bee; however, similar to Section 5.1.2, following construction, the 10m buffer to the wetland and the area adjacent to the SWM facility is to be planted with native species suitable to the existing soil and moisture conditions to help increase diversity of nectar and pollen sources.

Comment 5.4
The above sections provide a more detailed impact assessment pertaining to the existing ecological conditions of the subject property. Mitigation measures specific to maintaining the existing wetland feature have been provided within this Response as well as the Hydrogeological Study Report (GEI, 2025c) and SWM Design Report (GEI, 2025b). A summary of mitigation and offsetting measures has been provided within the conclusion section of this Memo.

6.0 Bat Maternity Colonies

Comment 6.1
The NRSI comments note that the SWH criteria for Bat Maternity Colonies is based on the 1998 ELC codes, and that the Deciduous Woodland community (WODM5) classification was based on the 2008 ELC codes. Per the ELC card completed for the Deciduous Woodland community, included within *Appendix 4* of the EIS tree species are present within the canopy, with the cover being between 25-60%. While the subcanopy layer is identified as having greater than 60%

coverage throughout the community, it is dominated by Common Buckthorn (*Rhamnus cathartica*). Per the Vascular Plant Species List provided by the Natural Heritage Information Centre (March 2025), Common Buckthorn is identified as a widespread and locally dominant invasive shrub of fields, roadsides and woodlands throughout much of southern and central Ontario. As the treed canopy cover of the community is greater than 35% but less than 60%, and a large proportion of non-native plant species, mainly Common Buckthorn, is present, it meets the criteria for the 1998 ELC Code of Mineral Cultural Woodland Ecosite (CUW).

As the community does not meet the criteria for a forested community within the 1998 ELC codes, it does not meet criteria to be considered SWH in the form of Bat Maternity Colonies.

7.0 Amphibian Breeding Habitat (Wetlands)

Comment 7.1
A site visit between Shannon Davison, AA and Richard Baxter, GRCA, was completed on May 13, 2025, to verify the limits of the entirety of the wetland feature within the study area. Based on the survey of the verified limits, the wetland feature is 0.11ha or 1100m^2, in area and is greater than the 500m^2 requirement for candidate habitat. However, as noted in the response to Comment 3.5, the feature does not maintain standing water, and is unsuitable for amphibian breeding SWH and therefore, does not require amphibian surveys.

8.0 Wetlands

Comment 8.1
Per the Hydrogeological Study Report (GEI, 2025c), the site is generally flat throughout with a gentle slope to the Deciduous Woodland and Deciduous Swamp communities. Local surface drainage is generally southerly toward the wetland feature, which drains west through culverts and streams toward a larger wetland area, approximately 180m east-southeast of the site. Based on the description provided within the Hydrogeological Study Report (GEI, 2025c), the wetland feature is sourced through overland flow and is hydrologically connected to the adjacent provincially significant Irvine Creek Wetland Complex. The Hydrogeological Study Report (GEI, 2025c) identifies that groundwater data was collected through the installation of on-site monitoring wells from Spring 2023 through to May 2025. Generally, it was noted that groundwater levels fluctuated seasonally, with the range of fluctuation being between 0.8 to 1.4 m at all wells, with the groundwater elevations reaching 417.35 masl during late winter into spring. Further details pertaining to the locations of monitoring wells and groundwater elevations can be found in the Hydrogeological Study Report (GEI, 2025c).

Per the updates made to the Ontario Wetland Evaluation System in 2022 to support Bill 23, the rule allowing the complexing of smaller wetland units within a larger PSW due to proximity was removed. As such, the wetland feature within the subject property and study area cannot be considered part of the Irvine Creek PSW.

Comment 8.2
The subject property and study area, where access was permitted, was investigated for the presence of seepage areas through the completion of Ecological Land Classification and subsequent botanical inventories. The ELC Cards within *Appendix 4* of the EIS identify that no seeps were observed within any of the ELC communities.

Per Section 3.2 of the Hydrogeological Study Report (GEI, 2025c), no apparent seepage features were identified during the site reconnaissance. However, groundwater levels at nearby monitoring wells (i.e., MW4, MW5) indicate groundwater levels that are occasionally higher than the ground elevation at the invert of the ditch. Based on the pattern of groundwater levels on-site, as well as the sand soils, the wetland appears to be a flow-through wetland, with groundwater discharging to the wetland at its upgradient side (i.e., north) and surface water from the wetland infiltrates into the ground at its downgradient side (i.e., south) (GEI, 2025).

Comment 8.3
Section 5.0 of the Hydrogeological Study Report (GEI, 2025c) provides a construction dewatering assessment. Due to the occurrence of groundwater on-site within the range of proposed excavations for servicing and construction of the SWM facility, dewatering will be necessary to facilitate construction.

Per the Hydrogeological Study Report (GEI, 2025c), the zones of influence of dewatering are estimated to be those areas within 114m of the sanitary sewer, 57m of the SWM facility, and 2m of the basements. It should be noted that these zones are maximum estimates, if dewatering occurs when groundwater levels are at their seasonal lows (summer and fall), the zone of influence would be expected to be smaller. Dewatering quantities are provided and discussed in Section 5.1 of the Hydrogeological Report (GEI, 2025c).

Section 6.3.1 of the report (GEI, 2025c) states that construction dewatering is not expected to impact the wetland areas as the most intensive dewatering activities will occur at the north end of the site, indicating that the drawdown influence at the wetland will be minor to negligible. While the wetland is located within the potential zone of influence, the estimated water taking rates and drawdowns are relatively low, and based on the response in Comment 8.4 below, it is anticipated that the wetland community will be tolerant of the fluctuation in groundwater level. Furthermore, where applicable, dewatering impacts can be further attenuated by releasing the discharge water back into the wetland catchment following appropriate erosion and sediment control. Details pertaining to the construction dewatering monitoring and mitigation will be provided in a water-taking and discharge report as is required to be prepared and implemented for construction dewatering activities.

Comment 8.4
Hydrology
The Hydrogeological Study Report (GEI, 2025c) identifies the existing wetland as an ecological receptor whose water quality or water quantity may be impacted due to the proposed development through construction dewatering or potential reduction of recharge to an aquifer.

The Stormwater Management Design Report (GEI, 2025b) identifies that under post-development conditions runoff will be increased and recharge decreased due to the increase in impervious areas. Monthly water balances for existing and post-development conditions are provided in Tables 4-1 through 4-6 of the Stormwater Management Design Report (GEI, 2025b).

Based on the design approach, grassed swales have been incorporated along the eastern and western limits as a conveyance control with the SWM facility being located at the southern end of the property. The report notes that an investigation of low-impact development features was completed to mitigate the change in groundwater recharge; however, it was identified that infiltration systems were not feasible due to not being able to meet the 1m separation requirement. Therefore, infiltration systems were not proposed as part of the design. The SWM facility has been designed to function as a constructed wetland pond. The dimensions of the facility and storage volumes are detailed within Section 3.2 of the Stormwater Management Design Report (GEI, 2025b). Under post-development conditions, the wetland will receive discharge from the SWM facility which has been pre-treated by an oil-girt separator located at the end of the access road. The SWM facility has been designed to mitigate peak flows to ensure that excessive flooding will not occur in the receiving wetland feature.

Per Section 6.1.1 of the Hydrogeological Study Report (GEI, 2025c) it is noted that the change in recharge will not have a significant impact on groundwater levels or on overall recharge to municipal groundwater resources. This is because the recharge that occurs on site is constrained from influencing the municipal source aquifer. Much of the recharge on-site remains in the surficial aquifer, flowing through toward the rear of the site. Additionally, it was identified that the groundwater levels remain very high at the site despite the extensive development elsewhere in the catchment. Section 6.3.1 also noted that because the wetland feature and adjacent wetland areas form a local drainage route for stormwater, the hydroperiod of the wetland will not be substantially affected by the change in recharge since surface water and runoff contributions will continue to maintain moisture conditions in these wetland areas. As such, negative impacts to the water balance of the wetland feature are not anticipated as result of the proposed development.

The Stormwater Management Design Report (GEI, 2025b) provides a wetland analysis that was completed to investigate the impact of the proposed development and SWM facility on the water level in the wetland and peak flow rate from the wetland. This investigation determined that post-development peak flow rates from the wetland/ low-lying surrounding area and the water levels (storage elevations) in the wetland/low-lying surrounding area are less than existing conditions. Section 3.6 and Appendix D of the Stormwater Management Design Report (GEI, 2025b) provide further details.

Based on the identification of separation of the surface aquifer from the surficial glaciofluvial aquifer and the minimal difference in post-development peak flow rates and water levels, it is the opinion of Aboud & Associates Inc. that the proposed development will not negatively impact the hydrological function of the wetland feature.

Ecology
The Coefficients of Conservatism (CC) for the vegetation within the wetland feature were reviewed. Per the Ecological Land Classification (AA, 2024) and the appended comprehensive Vascular Plant List, the CC for the identified vegetation ranges from * (non-native) to 6 (Freeman's (Swamp) Maple).

The ranking system to determine CC is described within *Using Coefficients of Conservatism and the Floristic Quality Index to Assess the Potential for Serious and Irreversible Damage to Plant Communities (Catling, 2013)*. Within the report (Catling, 2013), it is identified that plants found in a wide variety of plant communities, including disturbed sites, were assigned ranks 0 to 3, while taxa that typically are associated with a specific plant community, but tolerate moderate disturbance, were assigned ranks 4-6. With 6 being the highest rank assigned to a vegetative species within the wetland feature, all species identified are known to be able to tolerate moderate disturbance. As previously noted, the wetland feature was identified as being unsuitable to support amphibian breeding; however, has been assumed SWH to support Eastern Wood-pewee, and contains one tree exhibiting characteristics of suitable bat maternity habitat. As noted above and within the Hydrogeological Study Report (GEI, 2025c) and SWM Design Report (GEI, 2025b), the proposed development will not alter the hydrological function of the wetland feature, nor is any encroachment into the wetland feature being proposed. As such, the existing vegetative conditions, wildlife habitat and ecological functions will not be negatively impacted by the proposed development.

Comment 8.5
The Stormwater Management Design Report (GEI, 2025b) and Hydrogeological Study Report (GEI, 2025c), both provide mitigation measures to ensure the wetland feature is not negatively impacted throughout all stages of development. These mitigation measures include an ESC Plan and Maintenance Plan detailed within the Stormwater Management Design Report (GEI, 2025b). Both reports identify that the hydrology of the wetland will not be negatively impacted by the proposed development. A summary of mitigation measures pertaining to the SWM facility and construction dewatering has been provided in the conclusions of this Memo, with further details being provided in the SWM Design Report (GEI, 2025b) and Hydrogeological Study Report (GEI, 2025c).

Per the Site Plan a 10m buffer has been applied to the wetland feature to ensure no negative impact to its ecological functions. The 10m buffer was identified as the required distance from the wetland feature where development cannot occur; however, it should be noted that excluding the SWM facility, the proposed development is approximately 15m from the edge of the wetland feature. Furthermore, the area between the established 10m buffer and the edge of pavement where visitor parking is proposed will also be restored through seeding and appropriate plantings.

It is acknowledged that within urban areas, natural features have the potential to be negatively impacted by human interference, including but not limited to noise, artificial light, introduction of

invasive species and tramping. The Landscape Plan (Aaron Hill Design Inc., 2025) incorporates a nodal planting approach for the 10m buffer which includes native woody trees and shrubs as well as a seed mix. The installation of the identified woody species will provide a screening that will block artificial light while dampening increased noise. Furthermore, establishment of the installed species will also aid in dissipating any overland flow and nutrients prior to the flow entering the wetland feature. Black Raspberry (*Rubus occidentalis*) has been included within the Landscape Plan (Aaron Hill Design Inc., 2025) to deter encroachment of residents and limit disturbance to wildlife that may utilize the wetland community.

As was determined through the Scoped EIS (AA, 2024) and this response letter, the existing wetland community does not provide suitable habitat for area-sensitive wildlife. As the wetland feature has been isolated through residential development in the past, the flora and fauna residing within are tolerant of disturbance. With the design of the buffer and species selected for installation suitable specific to the site and the existing conditions, the implementation of the proposed reduced buffer will maintain the hydrologic functions and the ecosystem services currently being provided by the wetland feature

GRCA Comment Response

Comment 1
A site visit to confirm the limits of the entirety of the wetland feature within and adjacent to the subject property was completed by AA and Richard Baxter GRCA Ecologist, on May 13, 2025. The shapefile of the surveyed confirmed limits was submitted to Angela Wang, Resource Planner, via email on July 7, 2025.

Comment 2
The Stormwater Management Design Report (GEI, 2025b) and Hydrogeological Study Report (GEI, 2025c) were updated based on the most recent Site Plan (GSP, 2025), and the survey of the entirety of the wetland feature.

Section 3 of the Stormwater Management Design Report (GEI, 2025b) provides the design criteria and approach for the proposed SWM facility, while Section 4 provides a monthly water balance under pre- and post-development conditions.

Section 3.6 of the Stormwater Management Design Report (GEI, 2025b) provides a wetland analysis which investigates the impact of the proposed development and SWM facility on the water level in the wetland and the peak flow rate from the wetland. Table 3-9 provides a summary and comparison of peak flows from the wetland/surrounding low-lying area and the water level in the wetland/surrounding low-lying areas for each design storm event under existing conditions and post-development conditions. Based on Table 3-9, the post-development peak flow rates from the wetland/surrounding low-lying area and the water levels in the wetland/ surrounding low-lying areas are less than existing conditions. As such, there is no negative impact to the development on the downstream ponding.

The conclusions of the Stormwater Management Design Report (GEI, 2025b) note that quantity control has been provided by attenuating post-development peak flow rates to the wetland and from the Site during all storm events. Additionally, quality control has been provided by achieving enhanced level of treatment via a treatment trail approach including grassed swales and an oil-grit separator.

As noted in the Scoped EIS (AA, 2024), the previous water balance study identified the average annual recharge and runoff volumes post-development to be 1379m^3 and 4798m^3, respectively. Per the updated Site Plan (GSP, 2025) and SWM Design Report (GEI, 2025b) the current proposed average annual recharge and runoff volumes post-development are 1418m^3 and 4683m^3, respectively. Based on these results, the updated Site Plan has increased average annual recharge and decreased average annual runoff volume. It should be noted that the difference in volumes is attributed to the approach taken when estimating imperviousness. The previous calculations were derived using a more conservative approach at the preliminary design stage, while the current volumes were updated to reflect the latest Site Plan. The overall SWM strategy between the previous and current study has not changed.

As the proposed SWM facility meets the necessary quantity and quality criteria, the implementation of a 10m buffer from the limit of the wetland to ensure no negative impact to the wetland feature is sufficient.

Comment 3
It is acknowledged that clarification is required. Per Drawing SWM-1 (GEI, 2025d) an impermeable liner has been incorporated into the SWM facility design. Details pertaining to the impermeable liner are also provided on Drawing SWM-1.

Comment 4
The Hydrogeological Study Report (GEI, 2025c) and Stormwater Management Design Report (GEI, 2025b) provide information pertaining to the water balance assessment for the subject property. The responses provided to NRSI Comment 8.4 identify the pre- and post-development conditions and how they relate to the wetland feature. For additional information, please refer to the GEI report, provided under separate cover.

Comment 5
The pre- and post-development water balance based on the proposed Site Plan (GSP Group, 2025) as well as runoff volumes and flow rates are provided in the Hydrogeological Study Report (GEI, 2025c) and Stormwater Management Design Report (GEI, 2025b). Please refer to the documents provided under separate cover for details.

Comment 6
Section 6.3 of the Hydrogeological Study Report (GEI, 2025c) provides details pertaining to the potential impacts of the quality and quantity of discharge anticipated to enter the wetland from the SWM facility. Additionally, Section 3.6 of the Stormwater Management Design Report (GEI, 2025b) provides a wetland analysis that was completed based on hydrologic modelling to investigate the impact of the proposed development and SWM facility on the water level in the

wetland and peak flow rate from the wetland. The response provided to NRSI comment 8.4 provides information pertaining to the findings of the studies, please also refer to the GEI reports, provided under separate cover, for further details.

Comment 7
Based on the information provided in the comment responses above and the information provided in the Hydrogeological Study Report (GEI, 2025c) and the Stormwater Management Design Report (GEI, 2025b), the proposed development will not negatively impact the hydrological function of the wetland feature or the downstream area.

Summary and Conclusion

The above responses are intended to satisfy the comments provided by NRSI on behalf of the Township of Centre Wellington and the GRCA based on their review of the 73 and 79 Sideroad 19 Residential Development Scoped EIS completed by Aboud & Associates Inc. (dated: October 17, 2024). As previously identified below is a summary of the proposed mitigation measures.

Stormwater Management Facility Design Report (GEI, 2025b)

- Erosion and Sediment Control Plan
    - Inspection and maintenance of all silt fencing to begin after installation, inspections occurring on a weekly basis during active construction or after a rainfall event of 13mm or greater.
    - Necessary maintenance to be completed within 48 hours
    - All catch basins to be wrapped in filter cloth after installation, and maintained until all construction and landscaping has been completed.
    - Following grading, any area not subject to active construction within 30 days will be topsoiled and hydroseeded.
    - Silt fencing and accumulated sediment to be removed following substantial completion of the construction and landscaping.
- Maintenance Plan
    - Removal of leaves, debris and accumulated sediment in sumps in catch basins and manholes, and inspection and cleanout of inlets and outlets annually, or when needed.
    - Annual inspections of the stormwater management facility including considerations for the elevation of pond water, health and establishment of vegetation surrounding the pond, observation of water abnormalities (oil, discolouration), and sediment depth.

Hydrogeological Study Report (GEI, 2025c)

- Construction Dewatering
    - Done in accordance with Ontario Regulation 63/16.
    - Monitoring and mitigation plans to be specified in the water-taking and discharge report prepared according to Ontario Regulation 63/16.

- Discharge Management will include implementation of appropriate ESC measures such as filter bags, check-dam impoundments, with inspection of all components occurring daily.
- Discharge water to be tested daily due to proximity of the wetland, with a threshold of less than 8 NTU above the background turbidity of the receiver.

Environmental Impact Study (AA, 2024)

- Keep area of construction disturbance to a minimum.
- Control the access and movement of equipment and people'
  - Implement appropriate protocols outlined in the Clean Equipment Protocol for Industry (Halloran et al., 2013).
- Minimize the use of heavy equipment within close proximity to the wetland
  - Equipment to be limited to the construction allowance area and is not to encroach within the adjacent natural communities.
- Works and equipment storage to be located as far as possible from the existing natural features.
- Accumulated sediment and debris to be removed prior to the removal of the silt fence.
- All disturbed areas should be re-vegetated or restore with site appropriate indigenous plants.
  - Implementation of an appropriate planting plan within the buffer between the wetland and development. See Landscape Plan (September, 2025).
- Time activities to avoid wildlife disturbance during critical life stages:
  - Avoid removal of trees and vegetation during the generalized breeding bird nesting period from April 1 to August 31, and
  - Avoid removal of trees during the bat maternity period from April 1 to September 30.
  - If removal of vegetation is to occur during the general nesting period, a nest search completed by a skilled and experienced Biologist is to occur.
- Choose designs and materials that will minimize impacts.
- Establish educational signage pertaining to encroachment within the wetland
- Provie homeowners manual to promote stewardship, including but not limited to, native garden alternatives, avoiding use of pesticides/herbicides, and proper storage of waste so not to attract urban wildlife.
- Direct exterior lighting away from natural feature edges.

Prepared by:

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MNRF Certified Wetland Evaluation System

Attachments:

Figure 1. Existing Conditions
Figure 2. Site Plan and Suitable Bat Habitat Trees
Figure 3. Significant Features
Appendix 1. Scoped EIS Comment Matrix
Appendix 2. Comprehensive Vascular Plant List

References:
Aboud & Associates Inc. 2024. 73 and 79 Sideroad 19 Residential Development Township of Centre Wellington Scoped Environmental Impact Study. October 2024.

Catling, Paul M. 2013. Using Coefficients of Conservatism and the Floristic Quality Index to assess the potential for serious and irreversible damage to plant communities. Canadian Field-Naturalist 127(3): 285-288.

Colla, S R. and A. Taylor-Pindar. 2011. Recovery Strategy for the Rusty-patched Bumble Bee (*Bombus affinis*) in Ontario. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources, Peterborough, Ontario. vi + 21 pp.

Colla, Sheila R. 2017. Recovery Strategy for the Gypsy Cuckoo Bumble Bee (*Bombus bohemicus*) in Ontario. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources and Forestry, Peterborough, Ontario. v + 23 pp.

Cornell Lab of Ornithology. 2025. Eastern Screech Owl from https://www.allaboutbirds.org/guide/Eastern_Screech-Owl.

COSEWIC. 2010. COSEWIC assessment and update status report on the Monarch *Danaus Plexippus* in Canada. Committee on the Status of Endangered Wildlife Canada. Ottawa. vii + 43 pp.

COSEWIC. 2012. COSEWIC assessment and status report on the Eastern Wood-pewee *Contopus virens* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. X + 39 pp.

COSEWIC. 2015. COSEWIC assessment and status report on the Yellow-banded Bumble Bee *Bombus terricola* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 60 pp.

County of Wellington Official Plan. 2025. County of Wellington Official Plan. May 2025.

Dougan & Associates. 2009. Guelph Natural Heritage Strategy Phase 2: Terrestrial Inventory & Natural Heritage System Volume 1- Report. March 2009.

GEI Consultants. 2025a. Final Design Brief Proposed Residential Development 73/79 Sideroad 19 Township of Centre Wellington. August 5, 2025.

GEI Consultants. 2025b. Stormwater Management Design Report Proposed Residential Development 73/79 Sideroad 19 Township of Centre Wellington. August 5, 2025.

GEI Consultants. 2025c. Hydrogeological Study Report Proposed Residential Development 73/79 Sideroad 19 Township of Centre Wellington. July 2025.

GEI Consultants. 2025d. 73/79 Sideroad 19 Township of Centre Wellington Engineering Drawing Package. August 2025.

GSP Group. 2025. Site Plan 73 & 79 Sideroad 19, Fergus. May 2025.

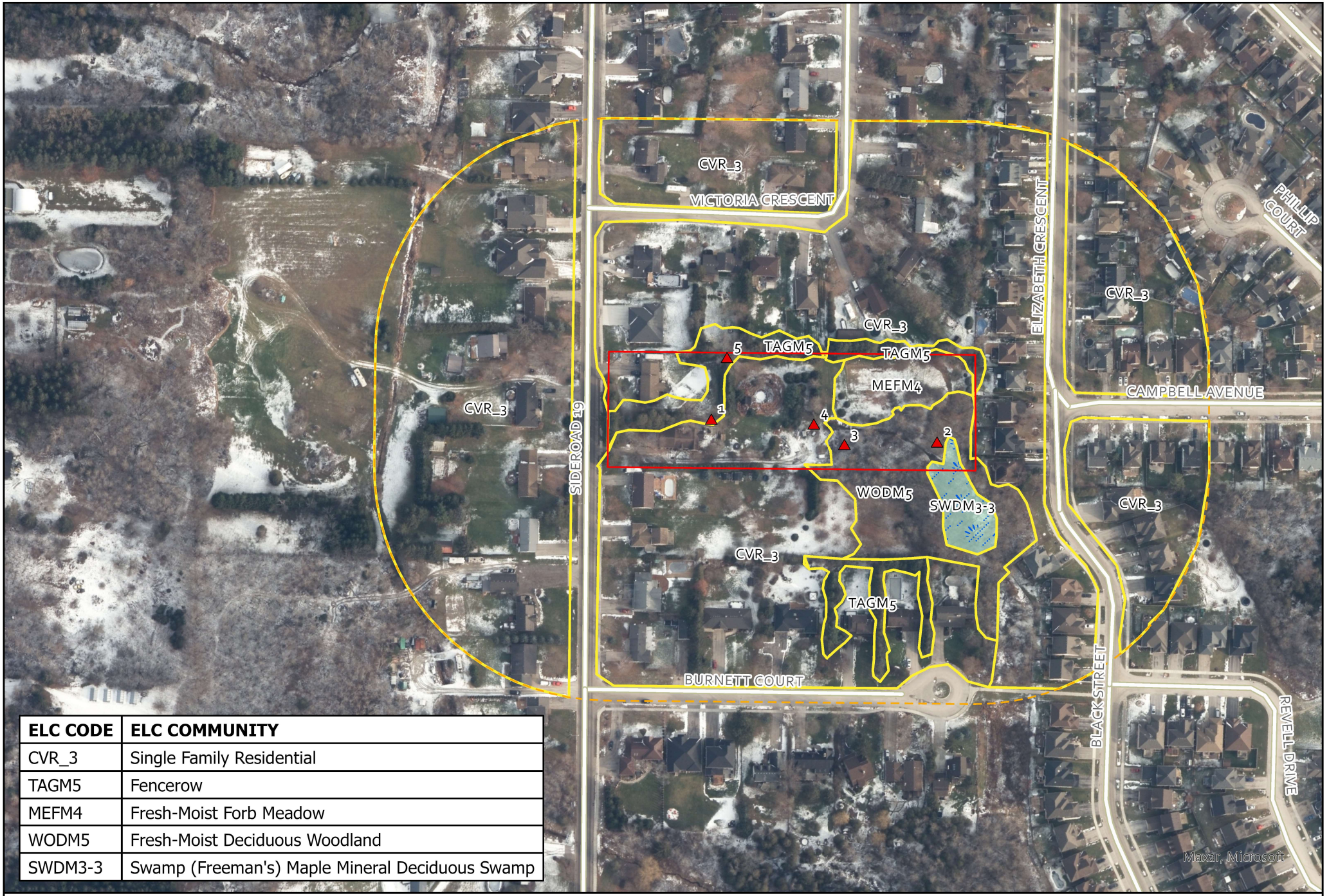
Hill Design Studio Inc., 2025. Landscape Plan Wrighthaven Homes 79 Sideroad 19 Fergus. September 2025.

Lee, H.T., W.D. Bakowsky, J.L. Riley, J. Bowles, M. Puddister, P. Uhlig and S. McMurry. 1998. Ecological Land Classification for Southern Ontario: First Approximation and its Application. Ontario Ministry of Natural Resources, Southcentral Science Section. Science Development and Transfer Branch. SCSS Field Guide FG-02

Linton, J and D. McCorquodale. 2018. Recovery Strategy for the Nine-spotted Lady Beetle (*Coccinella novemnotata*) in Ontario. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources and Forestry, Peterborough, Ontario. vi + 33 pp.

MECP. 2022. Ministry of Environment, Conservation and Parks. Treed Habitats – Maternity Roost Survey protocol.

OWES. 2013. Ontario Ministry of Natural Resources. *Ontario Wetland Evaluation System: Southern Manual.* 3rd Edition.



ELC CODE	ELC COMMUNITY
CVR_3	Single Family Residential
TAGM5	Fencerow
MEFM4	Fresh-Moist Forb Meadow
WODM5	Fresh-Moist Deciduous Woodland
SWDM3-3	Swamp (Freeman's) Maple Mineral Deciduous Swamp

LEGEND

- SUBJECT PROPERTY
- STUDY AREA
- ECOLOGICAL LAND CLASSIFICATION
- SUITABLE BAT TREES
- WETLAND

Information Sources:

1. Aerial Imagery provided by First Base Solutions, dated 2018, Accessed August 2025.
2. Ecological Land Classification provided by Aboud & Associates, August 2021
3. Candidate Bat Maternity Habitat provided by Aboud & Associates, March 2024

Title:
EXISTING CONDITIONS

Project:
73/79 SIDEROAD 19
TOWNSHIP OF CENTRE
WELLINGTON, ON

Date: AUGUST 2025
Project: AA22-163A
Scale: 1 : 2500

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Figure No:
1

LEGEND

- SUBJECT PROPERTY
- SUITABLE BAT TREES
- SITE PLAN
- SWALE
- SLOPE
- WETLAND

Information Sources:

1. Aerial Imagery provided by First Base Solutions, dated 2018, Accessed August 2025.
2. Site Plan provided by GSP Group dated May 2025.
3. Suitable Bat Maternity Habitat provided by Aboud & Associates, March 2024

Title:
SITE PLAN AND SUITABLE BAT HABITAT TREES

Project:
73/79 SIDEROAD 19
TOWNSHIP OF CENTRE WELLINGTON, ON

Date: AUGUST 2025
Project: AA22-163A
Scale: 1 : 750

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Figure No: 2

LEGEND

- SUBJECT PROPERTY
- STUDY AREA
- WETLAND
- WETLAND BUFFER (10M)
- MONARCH
- SUITABLE BAT TREES
- SC & R- EASTERN WOOD-PEWEE

Information Sources:

1. Aerial Imagery provided by First Base Solutions, dated 2018, Accessed August 2025.
2. Suitable Bat Maternity Habitat provided by Aboud & Associates, March 2024
3. Wetland limit provided by GEI, 2025

Title:
SIGNIFICANT FEATURES

Project:
73/79 SIDEROAD 19
TOWNSHIP OF CENTRE WELLINGTON, ON

Date: AUGUST 2025
Project: AA22-163A
Scale: 1 : 2000

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Figure No: 3

73-79 Sideroad 19, Fergus (WrightHaven)		
Comment #	1st Submission Comment	AA Response
	Natural Resource Solutions Inc. (NRSI) (dated: January 29, 2025)	
1. Policies & Regulations		
1.1	The Township of Centre-Wellington's Zoning By-Law states that lands designated as Core Greenlands under the Township and Regional OP are zoned as "Environmental Protection" lands and that the Environmental Protection Overlay corresponds with the Greenlands designation outlined in the County OP as well as the GRCA's regulation area (2025). Based on this, the presence of the Environmental Protection area within the subject lands, corresponding with the presence of a wetland, should also be recognized as the presence of Core Greenlands.	Acknowledged in response for Comment 1.1
2. Field Surveys		
2.1	In our experience, a three-season vegetation inventory would typically be required, particularly in cases in which natural features have been proposed for removal. As identified in the EIS, both woodland and meadow will be removed in order to facilitate the proposed development. While it is noted that the TOR did not include the requirement for a spring botanical survey, it is recommended that confirmation be provided that the study area does not contain habitat suitable for locally rare or SAR plants from Wellington County that are known to bloom in the spring season in order to justify not completing a spring botanical inventory. It is anticipated that this could be determined through the completion of a desktop screening exercise, using both plant atlases and citizen sciences sources (i.e., iNaturalist) evaluating records of rare/significant plant species known from Wellington County with suitable habitat in the study area. If there is suitable habitat for any rare or SAR spring ephemerals within the subject lands, the completion of this survey may be required.	See response for Comment 2.1. A spring botanical inventory was completed on May 13, 2025.
2.2	Clarification should be provided as to the survey protocols used to investigate the property for Eastern Screech-Owl and associated habitat. The Ontario Breeding Bird Atlas (OBBA) provides the Ontario Eastern Screech-Owl Survey protocols (OBBA 2021).	See response for Comment 2.2.
2.3, 2.4, 2.5	It is recommended that justification be provided as to why breeding bird surveys, insect surveys, and herpetofauna surveys were not completed as part of the field program, despite the background review identifying records of significant species from these taxa groups within the study area and the proposal to remove a variety of natural features from the subject lands	See responses for Comment 2.3, 2.4 and 2.5
3.0 Bats		

73-79 Sideroad 19, Fergus (WrightHaven)		
Comment #	1st Submission Comment	AA Response
3.1	Section 2.4.2 provides a description of the Bat Maternity Habitat surveys completed as part of the EIS. Within this section, the author incorrectly states that ELC communities identified as FOD, FOC, FOM, SWD, SWC, and SWM are considered Candidate Bat Maternity Significant Wildlife Habitat (SWH) per the SWH EcoRegion Criterion Schedule 6E. SWH EcoRegion Criterion Schedule 6E identifies only FOD, FOM, SWD and SWM as communities considered Candidate SWH for Bat Maternity Colonies and FOC and SWC ELC communities should not be considered. As described in the EIS, only trees >10cm in Diameter at Breast Height (DBH) were assessed. Current guidance indicates that SAR bats often use trees under 25cm DBH for roosting and all trees of all sizes should be assessed for potential roosting habitat. Trees with suitable rooting features should be considered potential habitat regardless of DBH.	See response for Comment 3.1
3.2	Page 6 of the EIS states that a “thorough walk-through of each suitable vegetation community identified above, where access was provided, was performed” to investigate the potential for bat maternity habitat. While individual candidate roosting trees have been identified in Figure 3 of the EIS, this mapping does not identify the vegetation communities in which these trees have been recorded. It is unclear as to whether this investigation included all treed features within the subject lands. All treed features that may be impacted by the proposed development should be assessed for potential roosting habitat for bat SAR. This includes isolated trees and smaller treed vegetation communities. Confirmation that habitat investigations for SAR bat habitat considered the entirety of treed features that may be impacted by the proposed development should be provided.	See response for Comments 3.2-3.6
3.3	With regards to the interpretation of impacts to bat SAR habitats made within the EIS, NRSI staff generally agreed that the number of candidate roost trees proposed for removal is low. However, additional information is required to complete a fulsome impact assessment with respect to bat SAR habitat. As per the Ministry of the Environment, Conservation and Parks (MECP) guidelines on bat SAR, the habitat for bat SAR should be considered the entire treed feature in which candidate habitat trees occur, and not just the individual candidate roost trees (MECP 2022). Section 3.6 of the EIS states that one of the candidate bat habitat trees is within the woodland community. Based on comparison of Figures 2 and 3 of the EIS, it appears that Candidate Bat Trees 2 and 3 fall within the identified WODM5 woodland community. This should be clarified and the statement made in Section 3.6 should be revised accordingly. It is recommended that mapping identifying the fulsome extent of habitat be identified, including identifying the Candidate Bat Trees in relation to the vegetation communities.	See response for Comments 3.2-3.6
3.4	Once the entirety of the identified Candidate Bat SAR habitat has been identified, a more fulsome impact assessment can be completed, including the identification of the area of habitat to be removed. This assessment should include an assessment of the area of bat habitat to be removed in comparison to available bat habitat in order to confirm whether the removal of potential bat habitat may still be considered limited.	See response for Comments 3.2-3.6

73-79 Sideroad 19, Fergus (WrightHaven)		
Comment #	1st Submission Comment	AA Response
3.5	It is recommended that the author comment on whether or not the proposed development will avoid impairing or eliminating other functions of the habitat that support bat life processes, which the MECP identifies as key considerations for the avoidance of impacts (MECP 2022). For example, will the proposed development avoid fragmenting the habitat and/or avoid creating barriers for bat SAR movement? If the proposed development is determined to eliminate the habitat, or result in the fragmentation the habitat, then additional surveys (i.e., acoustic surveys) would be required to confirm the presence and use of the habitat by bat SAR as per the current provincial protocols.	See response for Comments 3.2-3.6
3.6	In order to adequately demonstrate the avoidance of impacts to bat SAR habitat, it is recommended that additional assessment be provided to complete a more fulsome impact assessment. This should include the identification of the total area of bat habitat, habitat to be removed for the proposed development, and an assessment of whether the proposed development will avoid impairing or eliminating functions of the habitat that support bat life processes.	See response for Comments 3.2-3.6
4.0 Insect SAR		
4.1	The vegetation community identified as Candidate Habitat for insect SAR is a MEFM4 meadow community. The vegetation community mapping outside of the subject lands identifies these lands as primarily single-family residential lands and does not include any other meadow communities. Based on this discrepancy, it is not readily apparent that an abundance of similar habitat is present outside of the subject lands and it is unclear if the identification of this habitat was completed as part of the field investigations completed by Aboud.	See response for Comment 4.1
4.1	Without having identified and confirmed the presence of neighboring habitat, the conclusion that an abundance of habitat is available within the surrounding lands and therefore no negative impacts to these species or their habitat will occur cannot be demonstrated.	See response for Comment 4.1
5.0 Species of Conservation Concern		
5.1	It is recommended that the potential for suitable Western Chorus Frog and other amphibian habitat to occur within the study area be evaluated.	See response for Comment 5.1

73-79 Sideroad 19, Fergus (WrightHaven)		
Comment #	1st Submission Comment	AA Response
5.2	Despite stating that no habitat for this species was identified within the study area, the SWH assessment table (Appendix 6) states that "Woodlands on site and within 120m may provide habitat for Eastern Wood-pewee". This is inconsistent with the conclusion made within Appendix 7. NRSI staff agree that the woodlands on site may provide suitable habitat for Eastern Wood-pewee and recommend this be considered in the EIS and impact assessment. Without having conducted breeding bird surveys to detect the potential presence of this species, candidate habitat for this species, and therefore Candidate SWH, should be assumed present. While Appendix 6 suggests that the author may have considered the WODM5 community as Candidate SWH for this species, this conclusion is not made elsewhere in the EIS or supporting mapping (Figure 3) and the woodland appears to not have been given consideration as SWH. SWH has been discussed further below.	See response for Comment 5.2
5.3	In addition to the potential habitat for SCC that has been described above, which should be considered SWH unless demonstrated otherwise, the EIS has identified SWH based on the presence of habitat for Monarch (Danaus plexippus) and Yellow-banded Bumble Bee (Bombus terricola). Monarch habitat has been identified based on the presence of its larval host plant within the MEFM4 meadow community. Monarch is designated as Special Concern both federally and provincially (Government of Canada 2024, MECP 2024). Therefore, it is considered a SCC in Ontario and its habitat is considered SWH (OMNR 2010). As larval surveys were not completed, MEFM4 has been identified as "assumed" SWH for this SCC. Appendix 6 identifies that MEFM4 also provides potential habitat for Yellow-Banded Bumble Bee; however, this species is not included in the discussion of SWH in the EIS and it is unclear whether or not it has been considered. Similar to the rationale provided in the EIS regarding the removal of Candidate Habitat for SAR, the author states that Monarch utilizes a number of habitats with Milkweed (Asclepias spp.) and that habitat for this species likely occurs elsewhere in the local area, and therefore the development is unlikely to result in negative impacts to this species or its habitat. The EIS has not identified any off-site vegetation communities suitable to support this species and the proposed development will result in the direct removal of the majority of the identified SWH. While the EIS states that planting of trees, shrubs, and native plants such as Milkweed will compensate for lost habitat, no specific details of this restoration appear to be provided and it is unclear how this impact will be effectively mitigated against or offset, if at all.	See response for Comment 5.3
5.4	A revised impact assessment with greater detail and more specific, enhanced mitigation and offsetting measures should be provided, should the proposed development configuration remain the same.	See response for Comment 5.4, and subsequent sections for specific measures.

73-79 Sideroad 19, Fergus (WrightHaven)		
Comment #	1st Submission Comment	AA Response
6.0 Bat Maternity Colonies		
6.1	It is recommended that the author clarify the 1998 ELC code for the WOD vegetation community and, if it is an ELC community that could be considered candidate SWH for Bat Maternity Colonies, also determine the roost tree density for this community to further assess its potential eligibility. Should the roost tree density be greater or equal to 10 roost trees per hectare, this community should be considered Candidate Bat Maternity Colony SWH	See response for Comment 6.1
7.0 Amphibian Breeding Habitat (Wetlands)		
7.1	While the size of this wetland has not been identified in the EIS, it appears to be greater than the required size threshold, based on aerial imagery. Without having completed amphibian call surveys, typically wetlands of suitable size would be considered Candidate Amphibian Breeding Habitat SWH. It is recommended that the potential for this wetland to support this SWH be investigated including, if necessary, the completion of amphibian surveys, and the assessment of impacts made within the EIS revised accordingly	See response for Comment 7.1
8.0 Wetlands		
8.1	It is noted that the EIS states that the wetland is not hydrologically connected to the Irvine Creek Wetland Complex, a Provincially Significant Wetland (PSW) Complex nearby the subject lands. Further discussion of the hydrological connectivity of the wetland is needed. Based on the description provided in Section 4.4, the summary of the Hydrogeological Report (GEI 2024), it appears that the wetland is hydrologically connected downstream to the PSW. Specifically, Section 4.4 states “the wetland area drains in a westerly direction via culverts and streams towards a larger wetland”. The support information on the existing wetland should also identify the source of water (i.e., overland flow vs. groundwater contributions), and groundwater levels (highs and lows). Based on the information provided in the EIS, further support is needed for the statement that the wetland is not connected to the creek and therefore not part of the wetland complex, such as references to policies, definitions, or other supporting facts/features or characteristics. While it is noted that within the previous TOR correspondence, confirmation was provided that the drainage feature was not to be considered part of the identified wetland, it does not appear that confirmation has been provided from the GRCA as to whether the drainage feature is considered a watercourse and/or whether the wetland is hydrologically connected downstream. It is recommended that this be clarified.	See response for Comment 8.1

73-79 Sideroad 19, Fergus (WrightHaven)		
Comment #	1st Submission Comment	AA Response
8.2	Section 4.4 of the EIS identifies that "no seepage were identified on site, but water levels in the drain on site may be closely related to groundwater levels". It is unclear what surveys, if any, were conducted to identify seepage areas. It is noted that Spotted Jewelweed (Impatiens capensis) was observed in the understory of the wetland. This species may be a groundwater indicator and should prompt further investigation, particularly with the saturated conditions of the soil cores. Further in Section 4.4, it is stated that "it appears that the groundwater surface intersects ground surface in the drain during periods of high groundwater (e.g., spring freshet)". Greater detail should be provided in this section to identify what indicates that groundwater intersects with the surface (i.e., groundwater discharge or seepage). If it is seepage, the earlier statement that no seepage was identified on site should be amended.	See response for Comment 8.2
8.3	Further support for the sentence "Construction dewatering is not expected to impact the wetland area, as the most intensive dewatering will occur at the north end of the site" made in Section 4.4 is required. The estimated zone of influence for the dewatering locations (sanitary sewer connection and SWM pond) should be provided and used to inform the assessment of impacts related to dewatering. This assessment should also include an estimate for the magnitude of dewatering and what volumes are anticipated to be discharged to the wetland. Mitigation measures for this discharge should be included and the timing of dewatering should be discussed, if not in detail than an estimate, or recommendations provided for when the dewatering plan is prepared in order to minimize or avoid impacts to the wetland.	See response for Comment 8.3

73-79 Sideroad 19, Fergus (WrightHaven)		
Comment #	1st Submission Comment	AA Response
8.4	Further discussion and evidence to support the statement "The use of the mitigation methods detailed in this report will result in minor to none impacts to the wetland" made in Section 4.4 is needed, particularly for impacts to the wetland from groundwater dewatering, changes to flow patterns and groundwater from the development, and the sensitivity of the vegetation community, vegetation and wildlife species. Given that the wetland has been identified as Candidate SAR habitat and may be SWH, these items must be considered within the assessment of impacts made within the EIS. Based on the information provided, it is unclear if ecological impacts to the wetland will be avoided. Given that the soils have been identified as being conducive of groundwater infiltration/recharge, further discussion should be provided as to why infiltration opportunities are limited. The discussion of impacts to the wetland should also consider the proposed increase in runoff and include a discussion of monthly volumes and impacts to the hydroperiod of the wetland. In relation to the hydroperiod, a discussion of impacts to wildlife and wildlife habitat should be provided, which will require further characterization of the wildlife and habitat present in the wetland. Based on the information provided in the EIS, it appears the wetland receives approximately 50% of its water from groundwater sources and 50% from surface water. A discussion of impacts related to the change in source water post-development should also be provided.	See response for Comment 8.4
8.5	The EIS has prescribed a variable 10m planted buffer for the wetland in order to mitigate impacts to the feature. It is further recommended that a planting plan be prepared at detailed design that includes trees, shrubs and a groundcover seedmix. This recommendation also includes the use of thorny native species, such as raspberry, to reduce and impede encroachment into the wetland. NRSI staff generally agree that the preparation of a planting plan and use of native species to enhance the 10m buffer and discourage encroachment into the wetland feature. However, greater evidence should be provided in order to demonstrate that the 10m buffer will be sufficient to ensure no negative ecological or hydrological impacts to the wetland. The Township of Centre-Wellington Zoning By-Law states that “No building, structure, or private sewage treatment system shall be constructed closer than 30m from the limit of an EP zone without the prior written approval GRCA” (2024). As described in the EIS, Section 8.4.9 of the GRCA policy identifies that development may be permitted within an area of interference less than or equal to 30m provided there are no negative or adverse hydrological or ecological impacts on the wetland.	See response for Comment 8.5
	GRCA comments - Ecology (dated: Dated January 28, 2025)	
1	As part of the Environmental Impact Study (EIS), the confirmed wetland boundary GPS shapefiles will need to be submitted for the site.	See GRCA Comment 1 response

73-79 Sideroad 19, Fergus (WrightHaven)		
Comment #	1st Submission Comment	AA Response
2	Section 4.2.1. Buffers – the report identifies a variable 10 metre wetland buffer with a planting plan to enhance buffer function. This is not adequate as the post-development water balance is proposed to essentially double the runoff volume directed towards the wetland. This will not provide adequate space and time for the extra runoff to be assimilated. Additional development setback and buffering should be explored.	See GRCA Comment 2 response
3	Section 4.3 Geotechnical Investigation – the report identifies the likely need for grading and cut and fill operations and also recommends the use of a low permeability liner on the SWM pond. This requirement should be further identified/detailed as it influences the overall layout and supporting infrastructure. This should be clarified before getting to the detailed design stage	See GRCA Comment 3 response.
4	Section 4.4 Hydrogeological Report – the report states "A water balance assessment for this site has been completed and is discussed in Section 4.2.4". This section is missing in the EIS and should be provided.	See GRCA Comment 4 response.
5	Section 4.5 Functional Servicing and Stormwater Management Report – the identified post-development water balance does not achieve matched pre-development conditions which is not supported. The post-development runoff volumes directed towards the wetland are basically double pre-development conditions, recharge volumes for the site are half of pre-development conditions and the runoff volume directed towards Sideroad 19 are almost doubled. The report also identifies that changes to the water balance will not be possible to mitigate using LID methods to enhance infiltration	See GRCA Comment 5 response.
6	The EIS should be amended to identify and interpret how the existing wetland will respond to any proposed increase in surface water volume contribution as well as the storm sewer that runs close to the Southwest corner ultimately discharging to the IrvineCreek Provincially Significant Wetland. Alternative site plan configuration and SWM treatment train should be explored before detailed design.	See GRCA Comment 6 response.
7	Section 5.3 GRCA Wetland Policies – the EIS has not satisfactorily addressed GRCA Policy 8.4.9. The potential negative impacts to the wetland feature and its hydrologic functions, as well as the down stream area to receive and respond to the identified increase in volume contributions need to be further identified and interpreted.	See GRCA comment 7 response.

Season			Plant [1] Type	Scientific Name	Common Name	CC [2]	CW [3]	SARO [4] Status	SARA [5] Status	Global [6] Rank	Prov. [7] Rank	Wellington County[8]
Spring	Summer	Fall										
✓	✓	✓	TR	*Acer negundo*	Manitoba Maple	0	0	NL	NL	G5	S5	
✓		✓	TR	*Acer platanoides*	Norway Maple	*	5	NL	NL	GNR	SNA	
✓	✓	✓	TR	*Acer X freemanii*	Freeman's Maple	6	-5	NL	NL	GNR	SNA	
✓		✓	FO	*Aegopodium podagraria*	Goutweed	*	0	NL	NL	GNR	SNA	
✓	✓	✓	FO	*Alliaria petiolata*	Garlic Mustard	*	0	NL	NL	GNR	SNA	
✓	✓		FO	*Arctium minus*	Common Burdock	*	3	NL	NL	GNR	SNA	
	✓		FO	*Aruncus dioicus*	Common Goatsbeard	*	3	NL	NL	G5	SNA	
	✓	✓	FO	*Asclepias syriaca*	Common Milkweed	0	5	NL	NL	G5	S5	
	✓		SE	*Carex norvegica*	Norway Sedge		0	NL	NL	G4G5	S4	
	✓		SE	*Carex sp.*	Sedge species							
		✓	FO	*Cichorium intybus*	Chicory	*	5	NL	NL	GNR	SNA	
		✓	FO	*Circaea canadensis*	Broad-leaved Enchanter's Nightshade	2	3	NL	NL	G5	S5	
✓		✓	FO	*Cirsium arvense*	Canada Thistle	*	3	NL	NL	G5	SNA	
✓	✓		FO	*Cirsium vulgare*	Bull Thistle	*	3	NL	NL	GNR	SNA	
	✓		SH	*Cornus racemosa*	Gray Dogwood	2	0	Nl	NL	G5?	S5	
✓	✓		SH	*Cornus rugosa*	Round-leaved Dogwood	6	5	NL	NL	G5	S5	✓
✓	✓	✓	SH	*Cornus sericea*	Red-osier Dogwood	2	-3	NL	NL	G5	S5	
	✓	✓	GR	*Dactylis glomerata*	Orchard Grass	*	3	NL	NL	GNR	SNA	
	✓	✓	FO	*Daucus carota*	Wild Carrot	*	5	NL	NL	GNR	SNA	
	✓		VI	*Echinocystis lobata*	Wild Mock-cucumber	3	-3	NL	NL	G5	S5	
✓			FE	*Equisetum arvense*	Field Horsetail	0	0	NL	NL	G5	S5	
	✓		FE	*Equisetum sp.*	Horsetail species							
	✓	✓	FO	*Erigeron philadelphicus*	Philadelphia Fleabane	1	-3	NL	NL	G5	S5	
	✓	✓	FO	*Fragaria vesca*	Woodland Strawberry	4	3	NL	NL	G5	S5	
✓			FO	*Fragaria virginiana*	Wild Strawberry	2	3	NL	NL	G5	S5	
✓			TR	*Fraxinus pennsylvanica*	Green Ash	3	-3	NL	NL	G5	S4	
✓			FO	*Galium mollugo*	Smooth Bedstraw	*	5	NL	NL	GNR	SNA	

✓				*Geranium maculatum*	Spotted Geranium	6	3	NL	NL	G5	S5	
	✓	✓	FO	*Geranium robertianum*	Herb-robert	2	3	NL	NL	G5	S5	
✓	✓	✓	FO	*Geum aleppicum*	Yellow Avens	2	0	NL	NL	G5	S5	
✓		✓	FO	*Glechoma hederacea*	Ground Ivy	*	3	NL	NL	GNR	SNA	
	✓		FO	*Hemerocallis lilioasphodelus*	Yellow Daylily	*	5	Nl	NL	GNR	SNA	
	✓		FO	*Hypericum sp.*	St. John's-wort species							
✓	✓	✓	FO	*Impatiens capensis*	Spotted Jewelweed							
	✓	✓	TR	*Juglans nigra*	Black Walnut	5	3	NL	NL	G5	S4?	
✓		✓	FO	*Lamium purpureum*	Purple Deadnettle	*	5	NL	NL	GNR	SNA	
	✓		FO	*Leucanthemum vulgare*	Oxeye Daisy		5	NL	NL	GNR	SNA	
	✓	✓	FO	*Lotus corniculatus*	Garden Bird's-foot Trefoil	*	3	NL	NL	GNR	SNA	
✓	✓	✓	TR	*Malus pumila*	Common Apple	*	5	NL	NL	G5	SNA	
		✓	FO	*Malva moschata*	Musk Cheeseweed	*	5	NL	NL	GNR	SNA	
	✓		FO	*Malva sp.*	Cheeseweed species							
✓	✓	✓	FE	*Matteuccia struthiopteris*	Ostrich Fern	5	0	NL	NL	G5T5	S5	
		✓	FO	*Medicago lupulina*	Black Medic	*	3	NL	NL	GNR	SNA	
✓			FO	*Myosotis sylvatica*	Woodland Forget-me-not	*	5	NL	NL	G5	SNA	
	✓	✓	VW	*Parthenocissus quinquefolia*	Virginia Creeper	6	3	NL	NL	G5	S4?	
✓		✓	TR	*Picea abies*	Norway Spruce	*	5	NL	NL	G5	SNA	
✓		✓	TR	*Picea glauca*	White Spruce	6	3	NL	NL	G5	S5	
✓			TR	*Picea pungens*	Blue Spruce		3	NL	NL	G5	SNA	
✓	✓	✓	FO	*Plantago major*	Common Plantain	*	3	NL	NL	G5	S5	
✓		✓	GR	*Poa pratensis*	Kentucky Bluegrass	0	3	NL	NL	G5T5	SNA	
	✓		TR	*Populus balsamifera*	Balsam Poplar	4	-3	NL	NL	G5	S5	
✓	✓	✓	TR	*Populus tremuloides*	Trembling Aspen	2	0	NL	NL	G5	S5	
	✓	✓	FO	*Prunella vulgaris*	Self-heal	*	0	NL	NL	G5TU	SNA	
	✓	✓	TR	*Prunus avium*	Sweet Cherry	*	5	NL	NL	GNR	SNA	
✓			SH	*Prunus virginiana*	Choke Cherry	2	3	NL	NL	G5	S5	
		✓	FO	*Ranunculus acris*	Tall Buttercup	*	0	NL	NL	G5	SNA	
✓	✓	✓	SH	*Rhamnus cathartica*	Common Buckthorn	*	0	NL	NL	GNR	SNA	
✓			SH	*Ribes americanum*	Wild Black Currant	4	-3	NL	NL	G5	S5	
✓			SH	*Ribes cynosbati*	Prickly Gooseberry	4	3	NL	NL	G5	S5	
	✓		SH	*Ribes sp.*	Gooseberry species							
	✓	✓	SH	*Rubus idaeus ssp. idaeus*	Common Red Raspberry		3	NL	NL	G5T5	S5	

✓		✓	FO	*Rubus pubescens*	Dewberry	4	-3	NL	NL	G5	S5	
	✓		SH	*Sambucus canadensis*	Common Elderberry	5	-3	NL	NL	G5	S5	
	✓		SH	*Sambucus nigra*	Black Elderberry		-3	NL	NL	G5	SNA	
	✓	✓	VI	*Solanum dulcamara*	Bittersweet Nightshade	*	0	NL	NL	GNR	SNA	
	✓	✓	FO	*Solidago canadensis*	Canada Goldenrod	1	3	NL	NL	G5T5	S5	
	✓		TR	*Sorbus aucuparia*	European Mountain-ash	*	5	NL	NL	G5	SNA	
		✓	FO	*Symphyotrichum lateriflorum*	Calico Aster	3	0	NL	NL	G5	S5	
	✓	✓	FO	*Symphyotrichum novae-angliae*	New England Aster	2	-3	NL	NL	G5	S5	
	✓		FO	*Symphyotrichum sp.*	Aster species							
✓		✓	SH	*Syringa vulgaris*	Common Lilac	*	5	NL	NL	GNR	SNA	
	✓	✓	FO	*Tanacetum vulgare*	Common Tansy	*	5	NL	NL	GNR	SNA	
✓		✓	FO	*Taraxacum officinale*	Common Dandelion	*	3	NL	NL	G5	SNA	
		✓	TR	*Thuja occidentalis*	Eastern White Cedar	4	-3	NL	NL	G5	S5	
✓	✓	✓	VW	*Toxicodendron radicans*	Poison Ivy	5	-1	NL	NL	G5	S5	
✓	✓	✓	FO	*Trifolium pratense*	Red Clover	*	3	NL	NL	GNR	SNA	
✓			FO	*Trifolium repens*	White Clover	*	3	NL	NL	GNR	SNA	
✓	✓	✓	FO	*Tussilago farfara*	Colt's-foot	*	3	NL	NL	GNR	SNA	
✓	✓	✓	TR	*Ulmus americana*	American Elm	3	-3	NL	NL	G5	S5	
		✓	FO	*Verbascum thapsus*	Common Mullein	*	5	NL	NL	GNR	SNA	
	✓		FO	*Vicia americana*	American Vetch	5	5	NL	NL	G5	S5	
✓			FO	*Viola sororia*	Wooly Blue Violet	4	0	NL	NL	G5	S5	
	✓		FO	*Viola sp.*	Violet species							
✓	✓	✓	VW	*Vitis riparia*	Riverbank Grape	0	0	NL	NL	G5	S5	

1. Plant Types: AL = Algae; FE = Fern; FO = Forb; GR = Grass; LC = Lichen; LV = Liverwort; MO = Moss; RU = Rush; SE = Sedge; SH = Shrub; TR = Tree; VI = Herbaceous vine; VW = Woody Vine
2. CC: Coefficient of Conservatism reflects a species' fidelity to a specific habitat. Range from 0 to 10; 10 = very conservative, not likely in disturbed habitats, 1 = least conservative, likely found in a broad range of habitat. * = value not assigned because they are non-native
3. CW: Coefficient of Wetness reflects a species' affinity for wet soil conditions. Range from -5 to 5; -5 = obligate wetland species, 5 = obligate upland species.
4. SARO: Status under the Provincial Endangered Species Act, listed on the Species at Risk in Ontario (SARO) list. In order of severity, statuses include: EXP = Extirpated; END = Endangered; THR = Threatened; SC = Special Concern
5. SARA: Status under the National Species at Risk Act (SARA), assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). In order of severity, statuses include: EXP = Extirpated; END = Endangered; THR = Threatened; SC = Special Concern
6. Global rarity rank. Range from G1 to G5; G1 = Extremely rare, G5 = Very Common. NR = Unranked; U = Unrankable.
7. Provincial rarity rank. Range from S1 to S5; S1 = Extremely rare, S5 = Very Common. NR = Unranked; U = Unrankable.
8. Significant Plant List for Wellington County (Dougan & Associates, 2009)