PLANNING REPORT & AGGREGATE RESOURCES ACT SUMMARY STATEMENT

PREPARED FOR:

CBM Aggregates, a Division of St. Marys Cement Inc. (Canada)
Township of Puslinch
County of Wellington

File no. Y321AU

May 2026

ANTHONY PIT

4454 Victoria Road South

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1.0 Executive Summary

CBM Aggregates, a division of St. Marys Cement Inc. (Canada) ("CBM") is applying for a Class 'A' Licence under the *Aggregate Resources Act* ("ARA") for a pit below the water table. In addition, CBM is applying for a County of Wellington Official Plan Amendment ("OPA") and a Township of Puslinch Zoning By-law Amendment ("ZBA") under the *Planning Act* to permit aggregate extraction on lands located at 4454 Victoria Road South. The proposed aggregate extraction operation is referred to as the "Anthony Pit". In this report, "subject lands" refers to the area proposed to be licenced under the ARA.

The area which is proposed to be licenced under the ARA is 18.0 hectares (44.5 acres) with a proposed extraction area of 8.7 hectares (21.5 acres). The subject lands contain approximately 1 million tonnes of high-quality sand and gravel resources within the proposed extraction area. The proposed maximum annual tonnage is 1,000,000 tonnes. The proposed operation will occur through four (4) extraction phases.

The subject lands are legally described as Part of Lot 22, Concession 8, Township of Puslinch, in the County of Wellington. The proposed pit is located approximately 6.0 km, by road, to the CBM Aberfoyle Pit (ARA Licence #5520) at 4350 Concession Road 7 where processing is proposed to occur along with other nearby CBM processing plants. There will be no on-site processing of aggregate at the Anthony Pit.

The subject lands are currently used for agricultural uses and contain an occupied residential dwelling, a detached garage and a shed. The buildings on the site are located outside of the extraction area. Agricultural production on the lands consists of corn production. Two small ponds (wetlands) are located outside of the extraction area of the proposed pit.

The subject lands are designated 'Secondary Agricultural' and 'Greenlands' on Schedule B7 of the County of Wellington Official Plan. The majority of the subject lands are identified as Sand and Gravel Resources of Primary and Secondary Significance within the 'Mineral Aggregate Resource Overlay' on Schedule D of the Official Plan. The subject lands are zoned Agricultural (A), with a portion within the Environmental Protection Overlay on Schedule A of the Township of Puslinch Zoning By-law 23/2018.

There is one active pit (Dufferin Aggregates' Aberfoyle Pit 2) and CBM's surrendered Tikal Pit located to the east of the subject lands across Victoria Road South. Rural residential uses and commercial uses are also located to the east of the proposed pit. Environmental areas, rural residential and agricultural uses are located to the north and south of the subject lands. To the west are environmental areas and a residential subdivision. The existing Aberfoyle Settlement Area is located approximately 316 metres west of the subject lands.

The subject lands are surrounded by the Mill Creek Provincially Significant Wetland ("PSW") Complex and associated woodlands. No extraction or disturbance is proposed in any portion of the PSW. Potential impacts of the proposed pit on the Mill Creek PSW complex and nearby natural heritage features have been thoroughly examined through the technical studies undertaken with the application to demonstrate no negative impacts.

Applications to amend the County of Wellington Official Plan and Township of Puslinch Zoning By-law have been submitted in conjunction with the ARA Class 'A' licence application.

The proposed Anthony Pit requires a combination of technical studies and reports for the submission of the ARA Licence and *Planning Act* applications. Potential adverse impacts have been assessed through the Natural Environment Report and Environmental Impact Study, Level 1 and 2 Water Report, Maximum Predicted Water Table Report, Cultural Heritage Report, Best Management Plan for Fugitive Dust, Noise Impact Assessment, Agricultural Considerations Review, Archaeological Assessment and Traffic Impact Assessment. ARA Site Plans for the proposed pit have also been submitted as part of the applications.

The proposed Anthony Pit will be progressively rehabilitated to enhance the natural and ecological area of the site. Proposed rehabilitation activities will include tree planting within the setbacks, naturalized ponds, a new wetland and an agricultural area.

The Official Plan Amendment and Zoning By-law Amendment are consistent with the Provincial Planning Statement (2024) and conforms to the County of Wellington Official Plan based on the following:

- Stantec prepared a Natural Environment Report (Stantec, 2026) which confirmed that there are no significant valleylands, fish habitat, or significant areas of natural and scientific interest located within the proposed Licence Boundary or the 120 metres adjacent lands of the pit. The proposed pit is located adjacent to the Mill Creek PSW, Species at Risk ("SAR") habitat (bats, Eastern meadowlark), significant woodlands and significant wildlife habitat. Mitigation measures have been implemented on the site plan including setbacks, environmental monitoring and rehabilitation activities to restore, enhance and offset potential impacts of the pit. The Natural Environment Report concluded that, through the implementation of the recommended mitigation measures, there will be no negative impacts on the Mill Creek PSW, surrounding SAR habitat, significant woodlands, or significant wildlife habitat.
- Stantec prepared a Level 1 and 2 Water Report (Stantec, 2026) which concluded that the method of aggregate extraction at the Anthony Pit is designed to minimize potential effects on local water resources, subject to the recommended mitigation measures including: groundwater level monitoring, water quality testing, designated fueling locations and implementation of spills management response plans, completion of a private well survey prior to below water extraction.
- Stantec prepared a Noise Impact Assessment (Stantec, 2026) which concluded that the proposed Anthony Pit operation is predicted to satisfy Ministry of Environment, Conservation and Parks ("MECP") sound level limits at nearby receptors based on the recommendations and mitigation measures provided in the assessment and implemented on the ARA Site Plan. These mitigation measures include the construction of acoustic berms and operational restrictions that will be implemented to mitigate noise to acceptable levels.
- Stantec prepared a Stage 1-2 Archaeological Assessment (Stantec, 2024) for the subject lands which was accepted by the Ministry of Citizenship and Multiculturalism ("MCM") and entered into the Ontario Public Register of Archaeological Reports. The assessment resulted in the identification of one archeological location within the proposed extraction area which has been sufficiently documented and does not fulfill the criteria for further archaeological investigation (i.e., Stage 3).
- CIMA+ prepared a Transportation Impact Assessment (CIMA+, 2025) which concluded that studied intersections are projected to operate at an LOS B, with little delay and reasonable

queues with the addition of future truck traffic. No operational roadway improvements, such as exclusive turn lanes at the site accesses, would be required to accommodate the projected pit traffic at the study intersections. The assessment recommended two safety-related activities to be included as part of the Site Plan, namely the removal of excess vegetation to meet required stopping site distance standards, and the installation of "slippery when wet" road signs at key locations prone to weather effects.

- The operational design of the proposed Anthony Pit incorporates the recommendations of the technical reports prepared for the application to ensure that the pit can operate within the Provincial guidelines and minimize social, economic and environmental impacts.

The *Aggregate Resources Act* Licence application for the proposed Anthony Pit has been prepared to meet all the Provincial Standard requirements for a Class 'A,' pit below the water table. The *Planning Act* applications have been prepared in accordance with the County of Wellington Official Plan requirements.

2.0 Proposal

2.1 CBM Aggregates

CBM Aggregates is a division of St. Marys Cement Inc. (Canada) ("CBM") and is a full-service provider and distributor of high-quality aggregate materials for all construction needs. CBM has licensed pits and quarries across southern Ontario, including several other pits in the Township of Puslinch that are both active and rehabilitated. Over the last 10 years, CBM has rehabilitated and surrendered approximately 40 hectares of land within the Township of Puslinch which includes areas subject to redevelopment for industrial and rural uses. This total does not account for lands that are currently being progressively rehabilitated that are still licenced under the *Aggregate Resources Act*.

2.2 Subject Lands

The subject lands, which is the area proposed to be licenced – approximately 18.0 ha (44.5 acres), are located at 4454 Victoria Road South, and are legally described as Part of Lot 22, Concession 8, Township of Puslinch in the County of Wellington (**Figure 1**). The subject lands are currently in agricultural use and contain an occupied house, detached garage and shed. The proposed operation does not propose to remove any of the existing buildings on the subject lands.

A former (unlicensed) gravel pit and two small ponds (wetlands) are within the proposed licenced area of the subject lands. The subject lands are currently used for agricultural uses, i.e. corn production.

The subject lands are located within a larger property that is approximately 23.4 hectares in size. As shown on **Figure 4**, the proposed licensed area has been delineated to avoid significant natural heritage features. The extraction limit has been delineated to avoid the developed area located along the front portion of the site. Further, the proposed extraction area is setback at least 30 metres from the adjacent Mill Creek PSW.

The subject lands are located in a rural area of the County of Wellington. The Aberfoyle Settlement Area is located over 300 metres west of the subject lands.

The property owner is leasing the subject lands to CBM to establish and operate the Anthony Pit.

2.3 Project Description

CBM is applying for a Class 'A' Licence under the *Aggregate Resources Act* to permit a below water pit. The proposed area to be licenced is 18.0 hectares (44.5 acres) with a proposed extraction area of 8.7 hectares (21.5 acres). The proposed Anthony Pit will haul extracted aggregate materials to the CBM Aberfoyle Pit (Licence #5520) located 6.0 km southwest of the subject lands or other nearby CBM processing facilities. The proposed Anthony Pit will not contain any processing, washing, or recycling on the site. There will be no water taking (e.g. dewatering or pumping) on site.

The proposed Anthony Pit will be accessed via the existing entrance located at the east end of the subject lands onto Victoria Road South (**Figure 2**). Noise mitigation measures such as noise barriers and acoustic berms along the paved driveway will be implemented to minimize adverse impacts on the on-site dwelling and nearby dwellings. Internal road upgrades will follow existing driveway, consider overhanging

trees and avoid compression of critical root zones of natural features. In addition, the footprint of the proposed paved driveway will be reduced to the greatest extent possible to avoid further encroachment to the adjacent natural features as provided on the site plan.

Trucks will ship materials to the existing CBM Aberfoyle Pit and other nearby operations.

Lands that are not located within the proposed extraction area will be used for setbacks from environmental features, access roads, and for landscaped visual and acoustic berms. The existing vegetation in these setbacks will be maintained, except where berms are required to be constructed. There will be a 30 metre setback from the PSW and a 15 metre setback from the remaining portions of the proposed licence limit.

There are approximately 1.0 million tonnes of high-quality sand and gravel resources available within the proposed extraction area. The proposed maximum annual tonnage for the pit is 1,000,000 tonnes. The resources are identified as sand and gravel resources of primary significance in the Aggregate Resources Inventory Paper ("ARIP") 162 (**Figure 3**). Approximately 1.87 ha of the proposed extraction area is not identified as a sand and gravel deposit in the ARIP 162. Site specific testing was conducted for these areas and verified that marketable material is present.

Based on the available reserves on the subject lands, CBM anticipates that extraction would be completed within a few years at the Anthony Pit thereby limiting the duration of the pit operation and accelerating progressive rehabilitation accordingly.

Materials will be extracted via excavators, loaders and a dragline for below water extraction; stockpiled within the extraction area; and then shipped, via highway trucks, for processing to the CBM Aberfoyle Pit or other nearby CBM processing plants. Highway trucks will ship materials from the subject lands along Victoria Road South, Wellington Road 34 and Concession Road 7 to the main processing plant at the Aberfoyle Pit (**Figure 2**). The proposed haul route is currently used for heavy truck traffic from nearby operations. This is a travel distance of 6.0 km. Trucks will not be permitted to travel south on Victoria Road South or use Gilmour Road.

The processed aggregate from the Aberfoyle Pit will then be shipped to market using the existing truck entrance/exit on Concession Road 7, east along McLean Road and then primarily east to Highway 6. This is the existing truck haul route for the Aberfoyle Pit.

Hauling extracted aggregate materials to existing CBM processing sites makes efficient use of existing infrastructure and does not require new processing facilities to be established at this site which would otherwise result in additional noise and operational activities. The existing CBM processing facilities at the licenced pits are located in areas with limited sensitive uses in close proximity to Highway 401.

The proposed hours of operation for the Anthony Pit are 7 am to 7 pm Monday to Friday, and 8 am to 4 pm on Saturdays.

The lands will be extracted to a maximum depth of 304 masl. The removal of aggregate resources from below the water table will result in the creation of two ponds that together total approximately 3.9 ha in area. Shallow shoreline areas are proposed around the perimeter of the created ponds.

A new wetland habitat of approximately 0.09 ha will be created in the area in between the two ponds. Agricultural lands will be restored in the eastern portion of the extraction area, not proposed for below water extraction. The total area of land to be rehabilitated to an agricultural condition is 3.9 ha.

In addition, approximately 1.8 ha of new forest cover will be created within the 30 metre setbacks adjacent to the Mill Creek PSW and along areas with acoustic berms.

The ARA Site Plans (Rehabilitation Plan) include additional details regarding progressive and final rehabilitation. The rehabilitated landform will be compatible with the surrounding area.

2.4 Required Applications

The following approvals are required to permit the proposed Anthony Pit:

- An amendment to Schedules B7 and Schedule D of the County of Wellington Official Plan to permit an aggregate operation;
- An amendment to the Township of Puslinch Zoning By-law to rezone the lands from the Agricultural (A) zone to Extractive Industrial (EXI) zone and Agricultural (A) zone with site specific provisions; and
- A Class 'A' licence for a below water pit under the *Aggregate Resources Act*.

The Technical Reports prepared by CBM for the ARA licence and planning applications include the following:

- Planning Report & Aggregate Resources Act Summary Statement, Agricultural Considerations Review (Appendix A), MHBC, March 2026;
- Aggregate Resources Act Site Plans, MHBC, March 2026;
- Level 1 and 2 Water Report, Stantec, February 2026;
- Maximum Predicted Water Table Report, Stantec, February 2026;
- Natural Environment Report, Stantec, March 2026;
- Transportation Impact Assessment, CIMA+, October 2025;
- Cultural Heritage Report, Stantec, September 2025;
- Stage 1 and 2 Archaeological Assessment, Stantec, December 2024;
- Noise Assessment Report, Stantec, January 2026; and
- Best Management Plan for Fugitive Dust, Stantec, January 2026.

3.0 Background

3.1 Surrounding Land Uses and Features

The subject lands are located within a rural area of the Township of Puslinch, in proximity to Aberfoyle. The following is a description of the land uses surrounding the proposed Anthony Pit (**Figure 1**).

NORTH: The former CBM Tikal Pit and Victoria Road South to are north of the subject lands. There are rural residential dwellings, the Mini Lakes Condominium Community, a Christmas tree farm, and natural heritage features located to the north.

EAST: To the east of the subject lands is Dufferin Aggregates' Aberfoyle Pit 2 (an active below water mineral aggregate operation), rural commercial uses, and three (3) houses located along Victoria Road South.

SOUTH: Wooded areas and agricultural operations are immediately south of the subject lands. Two (2) houses and Gilmour Road are located further south.

WEST: To the west of the subject lands are wooded areas and agricultural fields. Further west is the community of Aberfoyle.

Generally, the subject lands are surrounded by a mix of land uses including mineral aggregate extraction, natural areas, residential uses and rural commercial uses.

The proposed extraction limit is setback from the surrounding sensitive land uses and natural features. The closest off-site house which is located within the Mini Lakes Condominium Community is approximately 112 metres from the proposed extraction limit. Setbacks will be applied from the adjacent provincially significant wetland. Additional mitigation measures will be implemented with respect to the significant woodlands.

3.2 Aggregate Resources

The majority of the subject lands are mapped as a gravel resource of primary significance in the Wellington County ARIP 162 (**Figure 3**). Approximately 1.87 ha of the proposed extraction area is not identified as a sand and gravel deposit in the ARIP 162. Site-specific resource testing was undertaken to assess on-site resource quality and quantity, and to confirm the primary significance identification in the ARIP mapping. Grain size analysis data indicate the gravel size generally ranged from fine to coarse, while the sand size generally ranged from medium to coarse. These sand and gravel soils are typically well graded (i.e., uniformity coefficient greater than 10%) and contain trace amounts of fines (i.e., silt and clay).

Based on the on-site resource testing, there are approximately 1.0 million tonnes of high-quality sand and gravel resources available within the proposed extraction area. The majority of resources are located below the water table. The sand and gravel thickness ranges from 15 to 22 metres. CBM is applying for an annual maximum extraction limit of 1,000,000 tonnes.

Resources extracted from the proposed Anthony Pit lands will be processed at CBM's Aberfoyle Pit and other nearby CBM processing plants. This location is close to market, and the proposed pit will supply a source of high-quality materials. Making additional resources available from the subject lands for processing at the existing pit would allow CBM to continue to serve local infrastructure and construction projects including areas that have been designated for a significant amount of growth and development within the County.

3.3 Natural Heritage Features

The Natural Environment Report was prepared to fulfill the ARA technical standards (MNR, 2020) for a Natural Environment Report, as well as the requirement for an Environmental Impact Assessment as per the County's Official Plan (Wellington County, 2025).

The Natural Environment Report ("NER") assessed the potential impacts of the proposed pit on the natural features identified on, or within 120 metres of, the proposed licence area. The NER included the following components: a background data review to identify natural heritage features, including habitat of endangered or threatened species within the Study Area; field surveys which assessed suitable habitat and signs of SAR, vegetation communities, botanical inventories and targeted studies such as: black ash survey, wetland delineation, amphibian call count surveys, salamander surveys, turtle basking surveys, bird surveys, bat surveys, terrestrial insect surveys and headwater drainage feature assessment.

The proposed Anthony Pit is located adjacent to the Mill Creek PSW, SAR habitat, significant woodlands and significant wildlife habitat. The NER included a field assessment of the mapped PSW to delineate wetland boundaries. The proposed licenced boundary has been designed to avoid the boundaries of the PSW and includes a 30 metre setback to the extraction limit. The NER concluded that there are no anticipated impacts to the Mill Creek PSW's features or functions subject to the implementation of the recommended mitigation measures.

The NER confirmed there are no significant wetlands, fish habitat, significant valleylands, or significant areas of natural and scientific interest located within the proposed licence area of the pit.

The NER concludes that significant wildlife habitat for amphibian breeding habitat will be temporarily displaced to accommodate extraction which will be mitigated through site rehabilitation and creation of natural features.

In addition, an area of exposed gravel/sand identified as potentially supporting turtle nesting will be removed during extraction activities. To offset this loss, the construction of a nesting mound is proposed prior to the removal of the existing nesting site.

The report concludes that there will be a loss of 1.56 ha of potential bat species at risk maternity roost habitat and eighteen candidate roost trees. The NER recommends that indirect impacts such as onsite light use, be limited as work is undertaken during daylight hours during the bat active period. Compensation and mitigation measures are recommended for bat species at risk, including: the installation of artificial roosting structures; the inclusion of oak and maple in the replanting plan; and the reduction of illumination and light spill through design. Consultation with MECP is recommended to confirm appropriate mitigation and compensation for bat SAR.

The Anthony Pit will be progressively rehabilitated to a naturalized area that enhances the ecological value of the lands. A wooded

area, a wetland, two naturalized ponds and an agricultural area will be created.

The NER concluded that through the implementation of the recommended mitigation measures, there will be no negative impacts to the wetlands, significant woodland, significant wildlife habitat or SAR habitat on or within 120 metres of the proposed Anthony Pit.

3.4 Water Resources

Stantec prepared a Level 1 and 2 Water Report and Maximum Predicted Water Table Report for the proposed Anthony Pit to fulfill the ARA technical standards when proposing to extract below the maximum predicted water table. The reports were also prepared to fulfill the requirement of water resources impact studies as required in the Wellington County Official Plan.

The Maximum Predicted Water Table Report estimated that the maximum predicted groundwater table within the limit of extraction at the Site is about 322.7 masl in the northeastern corner to 320.3 masl in the southwestern corner.

The Water Report identified and assessed the potential impacts that the proposed below water pit could have on groundwater and surface water features located within the zone of influence. For the proposed Anthony Pit, the Water Report estimated the zone of influence to extend no further than 200 metres from the edge of the north and south below water table pit ponds. The hydrogeological assessment includes a review of Source Protection Plans, field investigations including borehole drilling and baseline groundwater monitoring, a review of local groundwater users, the development of a water budget, the construction of a three-dimensional numerical groundwater flow model, the development of a thermal transport model to predict thermal impacts, and the development of a monitoring program for groundwater.

Geological borehole drilling was carried out at five locations between November 1 and 8, 2021, with monitoring commencing in November 2021, and continuing on a quarterly basis through November 2024.

The technical analysis undertaken for the Water Report determined that there are seven overburden groundwater users within the 120 metres of the subject lands which are completed within the underlying limestone bedrock aquifer. The Water Report concludes that subject to implementation of recommended contingency plans and mitigation measures, the proposed pit ponds do not reflect a source protection threat to local groundwater supply wells.

Water budget calculations have been completed to approximate changes to on-site infiltration volumes, in response to the proposed aggregate pit which concluded that the proposed pit ponds should have no effect on local surface water or groundwater flow conditions.

Long term monitoring of local water resources is recommended to confirm that surface water flow rates do not vary from their observed norms

The Water Report concluded that in response to extraction below the groundwater table, the actual effects of short-term aggregate extraction are not likely to be distinguishable from typical seasonal fluctuations; and over the long term, groundwater baseflow to Aberfoyle Creek should remain consistent with pre-development conditions.

3.5 Agricultural Resources

Approximately 7.0 ha of the subject lands are actively farmed for corn crops and contain a

house, detached garage and shed, which are outside the proposed extraction limit.

An Agricultural Considerations Review was completed by MHBC which included a soil survey (**Appendix A**) to evaluate the agricultural resources both on the subject lands and within the surrounding area (1 km). The review included a survey of the subject lands and surrounding agricultural land uses to understand potential impacts that the proposed operation could have on the agricultural system.

The Soil Survey identified that the proposed licence area contains Class 2, 3, 4 and 5 soils. The soil series were identified as Dumfries Loam, Burford Loam, Gilford Loam, and Muck Soils. Dumfries Loam is the well-drained member of the Dumfries Soil catena and developed on stony soil material derived from limestone. Burford Loam is the well-drained member of the Burford Soil catena and are well drained loam materials occurring over coarse gravels. Gilford Loam is the poorly drained member of the Burford Soil Catena and are located in depressional areas and are typically seasonally wet areas, with shallow water tables. The surface soils generally comprise high organic matter content, while the lower layers comprise gleyed materials and gravels within 50 cm of the surface. Muck soils are very poorly drained organic deposits that have accumulated in shallow lakes, ponds, and undrained depressional areas.

Class 1 to 3 soils are considered prime agricultural lands (OMAFA, 2025).

The County of Wellington Official Plan designates the subject lands as 'Secondary Agricultural' (**Figure 5**). The subject lands do not contain prime agricultural areas based on the County Official Plan.

The review concluded that, subject to the implementation of the proposed mitigation measures regarding water quality and quantity, noise, dust, and traffic, and agricultural rehabilitation, there are no anticipated impacts to the agricultural system as a result of the proposed Anthony Pit.

3.6 Cultural Heritage Resources

The Cultural Heritage Report and Heritage Impact Assessment were prepared to fulfill the ARA technical standards for a Cultural Heritage Report, as well as to satisfy the Heritage Impact Assessment requirements of the County of Wellington Official Plan. The Cultural Heritage Report was prepared to identify the presence of built heritage resources ("BHR") and cultural heritage landscapes ("CHL") within the Study Area, to understand the potential impacts of the Project on these resources, and to prepare mitigation strategies to reduce these impacts. The Study Area includes a 50-metre boundary around the property.

Historical research, municipal and agency data requests, and field investigations conducted for this report identified one potential BHR located at 4436 Victoria Road South, south of the subject lands. The report concluded that based on the location of the BHR which is more than 150 metres away from the pit, and separation by another property parcel and Provincially Significant Wetland, no direct or indirect impacts are anticipated, and no mitigation measures are required and there are no further recommended cultural heritage reporting requirements.

3.7 Transportation System

The proposed Anthony Pit is located on Victoria Road South, approximately 6.0 km from the processing plant at the CBM Aberfoyle Pit. The proposed haul route accesses the subject lands through Victoria Road South and travels north

onto Wellington Road 34 until trucks reach Concession Road 7. The proposed haul route utilizes roads that can accommodate heavy truck traffic. Specifically, approximately 420 meters of the haul route stretch on Victoria Road South contains existing truck traffic from the Dufferin Aggregates Aberfoyle Pit 2 (Licence #5609). No truck traffic is proposed south onto Victoria Road South or Gilmore Road.

Access to the Anthony Pit will be from the existing property entrance (**Figure 2**). Approximately 230 metres of the internal driveway will be paves to mitigate potential dust and noise impacts while considering footprints of adjacent natural features.

There are active mineral aggregate operations along the proposed haul route. All other uses along the haul route are residential, agricultural and commercial.

CIMA+ prepared a Traffic Impact Study ("TIS") to evaluate impacts that the proposed Anthony Pit could have on the transportation systems in the area and identify any required infrastructure improvements to accommodate future traffic volumes. The TIS evaluated the potential impacts from the future truck traffic that will be generated from the proposed pit along the proposed haul route. The proposed operation would generate a total of 12 trips during the AM and PM peak hours (6 in, 6 out). Travel demand is not anticipated to increase on surrounding road networks.

The report reviewed the historic turning movement count data at the intersections of Victoria Road South and Wellington County Road 34 and future traffic modeling to determine that intersections are projected to operate at an LOS B, with little delay and reasonable queues.

Sightline assessments revealed one area of concern due to obstructive foliage at the site access on Victoria Road South. Mitigating this issue through vegetation clearance is recommended to meet required stopping sight distance standards, particularly for heavy vehicles.

The TIS concluded that the proposed pit can be accommodated by the existing and future road network without the need for major infrastructure improvements. With mitigative measures in place, notably the installation of "slippery when wet" road signs at key locations, the pit traffic is expected to integrate safely and efficiently within the existing transportation system.

4.0 Policy Review

The following is an assessment of the proposed Anthony Pit relative to the policies and provisions of the following documents:

- Provincial Planning Statement (2024);
- County of Wellington Official Plan 1999 (Office Consolidation May 2025); and
- Township of Puslinch Zoning By-law No. 023-18.

4.1 Provincial Planning Statement (2024)

The Provincial Planning Statement ("PPS") is issued under the authority of Section 3 of the *Planning Act* and came into effect October 20, 2024, replacing the Provincial Policy Statement issued May 1, 2020. The 2024 PPS applies to all decisions regarding the exercise that affects a land use planning matter made on or after October 20, 2024.

The PPS provides policy direction on matters of provincial interest related to land use planning and development. The intent of the PPS is to provide a vision for land use planning in Ontario that encourages the efficient use of land, resources and public investment in infrastructure. A mix of land uses are encouraged to provide choice and diversity to create complete communities. The PPS strongly encourages development that will provide long-term prosperity, environmental health and social well-being. One of the key considerations of the PPS is that planning decisions 'shall be consistent' with the Planning Statement.

The PPS recognizes the key Provincial interest in natural heritage, water, agricultural, mineral, and cultural heritage and archaeological resources as they provide important economic, environmental, and social benefits. The wise use and management of these resources over the long term is a key provincial interest.

The following is an analysis of the proposed Anthony Pit in the context of the policies in the PPS.

Rural Areas in Municipalities

Section 2.5.1 *Healthy, integrated and viable rural areas should be supported by:*

e) promoting diversification of the economic base and employment opportunities through goods and services, including value-added products and the sustainable management or use of resources;

g) conserving biodiversity and considering the ecological benefits provided by nature.

The proposed Anthony Pit promotes a diversification of economic base and employment opportunities through the use and management of natural resources.

The proposed Anthony Pit has been designed according to the technical studies prepared which conclude that subject to the recommended mitigation measures, the proposed pit will not create negative impacts to the rural area and natural heritage features. The proposed licence area has been delineated to avoid natural features and conserve biodiversity.

Rural Lands in Municipalities

Section 2.6.1 *On rural lands located in municipalities, permitted uses are:*

a) the management or use of resources;

The use and management of mineral aggregate resources and their extraction is permitted within the rural lands of municipalities.

Transportation and Infrastructure Corridors

Section 3.3.2 *Major goods movement facilities and corridors shall be protected for the long term.*

Victoria Road South, Wellington Road 34 and Concession Road 7 are existing haul routes and major goods movement corridors for the surrounding mineral aggregate operations. The proposed pit makes use of existing road infrastructure that accommodates heavy truck traffic.

Land Use Compatibility

Section 3.5.1 *Major facilities and sensitive land uses shall be planned and developed to avoid, or if avoidance is not possible, minimize and mitigate any potential adverse effects from odour, noise and other contaminants, minimize risk to public health and safety, and to ensure the long-term operational and economic viability of major facilities in accordance with provincial guidelines, standards and procedures.*

The proposed Anthony Pit has been designed and buffered to mitigate potential adverse effects on surrounding sensitive land uses. The Mini Lake Condominium Community is located approximately 110 metres from the extraction limit of the Anthony Pit, with the closest dwelling at 112 metres away. An acoustic berm will be implemented in the nearest licence limit to buffer the pit from the community. The condominium community is a common elements community with freehold title of the homes in the subdivision. The area closest to the subject lands is zone Open Space (sp-70), where *uses, buildings or structures not directly related to the sewage disposal system* are prohibited.

Acoustic and visual berms will be constructed in accordance with the Noise Report and as included on the ARA Site Plans to mitigate noise impacts in compliance with Provincial regulations. The berms will also screen pit operations from adjacent roads and residences, including the on-site dwelling. The Best Management Plan for Fugitive Dust for the Anthony Pit provides recommendations of regular monitoring and inspection to mitigate potential dust impacts.

The majority of the internal access road of the pit will be paved (approximately 230 metres) to limit noise of truck traffic, potential dust impacts on the on-site dwelling and surrounding sensitive uses; and while considering impacts on natural heritage features.

The proposed extraction area of the pit is situated in the rear / southern portion of the property, furthest from surrounding residential uses.

Rehabilitation will be progressive following the direction of extraction and involve the creation of two ponds, a wetland and an agricultural area. Based on the amount of available reserves on the subject lands, the operation of the Anthony Pit is expected to be completed within a few years, limiting the duration of the pit operation and accelerating progressive rehabilitation.

Natural Heritage

Section 4.1.1 *Natural features and areas shall be protected for the long term.*

Natural features and areas will be protected for the long term by avoiding natural features and implementing mitigation measures to protect adjacent natural features.

Section 4.1.2 *The diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of natural heritage systems, should be maintained,*

restored or, where possible, improved, recognizing linkages between and among natural heritage features and areas, surface water features and ground water features.

The diversity and connectivity of natural features in the area, and the long-term ecological function and biodiversity of natural heritage systems will be maintained and enhanced during operations by establishing a minimum 30 metre buffer from significant wetlands and mitigation measures to consider woodlands adjacent to the proposed extraction area. This will ensure that the form and ecological functions of these features will be maintained. Progressive rehabilitation of the pit will increase the area of natural features including wooded areas (1.8 ha), wetland (0.09 ha), open water (3.9 ha) and improve the overall diversity of naturalized habitats on the landscape post-rehabilitation.

The NER concluded that through the implementation of the recommended mitigation measures, there will be no negative impacts to the significant wetland and other natural features on or within 120 metres of the proposed Anthony Pit.

Section 4.1.4 *Development and site alteration shall not be permitted in:*

a) significant wetlands in Ecoregions 5E, 6E and 7E[1]; and

There are no significant wetlands within the proposed licence area of the Anthony Pit.

Section 4.1.5 *Development and site alteration shall not be permitted in:*

a) significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E;

b) significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);

c) significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);

d) significant wildlife habitat;

e) significant areas of natural and scientific interest; and

unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

There are no significant wetlands, significant valleylands, or significant areas of natural and scientific interest within the proposed extraction area of the pit. A 30-metre setback will be applied from the significant wetland. Setbacks, environmental monitoring, and restoration of the 0.02 hectares of significant woodlands proposed for removal are proposed to ensure no negative impacts to the natural feature.

The proposed pit contains significant wildlife habitat where impacts will be mitigated based on recommendations from the NER. Notably, the creation of a turtle nesting mound, and the implementation of shoreline aquatic vegetation as part of progressive rehabilitation.

The NER concluded that there will be no negative impacts to the significant natural features on or within 120m of the proposed license area.

Section 4.1.6 *Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.*

There is no fish habitat on the subject lands.

Section 4.1.7 *Development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.*

The NER concluded that permitting under the *Endangered Species Act* ("ESA") may be required to address potential impacts to bat SAR habitat, although consideration will be given to the policy in place at the time of SAR habitat removal (*Species Conservation Act*). The Ministry of Environment, Conservation and Parks ("MECP") will be consulted through the licence application process.

Section 4.1.8 *Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 4.1.4, 4.1.5, and 4.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions*

The NER evaluated the ecological function of the adjacent significant wetland and significant woodland. While the existing gravel internal access road is within 2 metres of adjacent natural features, planned road upgrades will consider overhanging trees and avoid compression of critical root zones of adjacent wetlands and woodlands; and the footprint be reduced to the greatest extent possible. The use of heavy trucks on this road would only occur during pit operation which is expected to be completed within a few years. As such, there will be no direct negative impacts on the natural features. The extraction area is appropriately setback from these features.

Mitigation measures have been implemented on the ARA Site Plan to the natural features and their ecological functions.

Water

Section 4.2.2 *Development and site alteration shall be restricted in or near sensitive surface water features and sensitive ground water features such that these features and their related hydrologic functions will be protected, improved or restored, which may require mitigative measures and/or alternative development approaches.*

The Level 1 and Level 2 Water Report was completed to evaluate any potential impacts of the proposed pit on the quality and quantity of groundwater resources and surface water features. The Water Report concludes that long-term groundwater and surface water quality impacts are not anticipated as a result of the proposed pit. Further, recommendations outlined in the Water Report will be contained within the ARA Site Plan to mitigate potential impacts.

4.3 Agriculture

Section 4.3.1.2 *As part of the agricultural land base, prime agricultural areas, including specialty crop areas, shall be designated and protected for long-term use for agriculture.*

While the subject lands contain prime agricultural lands (Class 2 and 3) according to the Soil Survey, the lands are not designated as a Prime Agricultural Area in the County's Official Plan or Provincial Agricultural Systems mapping. Therefore, there are no prime agricultural areas located on the subject lands per the PPS and County Official Plan.

4.5 Mineral Aggregate Resources

4.5.1 General Policies for Mineral Aggregate Resources

1. Mineral aggregate resources shall be protected for long-term use and, where provincial information is available, deposits of mineral aggregate resources shall be identified.

The majority of the subject lands are identified to contain Sand and Gravel of Primary Significance based on the County Official Plan and provincial mapping. Mineral aggregate resources are to be protected for long-term use.

Section 4.5.2.1 *As much of the mineral aggregate resources as is realistically possible shall be made available as close to markets as possible.*

The proposed Anthony Pit makes significant, high quality aggregate resources available from a close to market location.

Section 4.5.2.2 *Extraction shall be undertaken in a manner which minimizes social, economic and environmental impacts.*

The Anthony Pit has been carefully designed so that extraction occurs in a way which minimizes social, economic and environmental impacts.

Section 4.5.2.5 *In known deposits of mineral aggregate resources and on adjacent lands, development and activities which would preclude or hinder the establishment of new operations or access to the resources shall only be permitted if:*

a) resource use would not be feasible; or

b) the proposed land use or development serves a greater long-term public interest; and

c) issues of public health, public safety and environmental impact are addressed.

The subject lands are located within a known deposit of mineral aggregate resources which is to be protected from development and activities which would preclude or hinder access to resources.

Section 4.5.3.1 *Progressive and final rehabilitation shall be required to accommodate subsequent land uses, to promote land use compatibility, to recognize the interim nature of extraction, and to mitigate negative impacts to the extent possible. Final rehabilitation shall take surrounding land use and approved land use designations into consideration.*

The proposed licence area will be progressively rehabilitated to an agricultural landform, natural heritage features including new woodlands, a wetland and ponds. Final rehabilitation will be compatible with surrounding land uses and approved land use designations.

Section 4.5.3.2 *Comprehensive rehabilitation planning is encouraged where there is a concentration of mineral aggregate operations.*

There is one active mineral aggregate operation in proximity to the Anthony Pit located across Victoria Road South. The proposed extraction area of the Anthony Pit is setback over 300 metres from the road.

The rehabilitation plan of the pit has taken into consideration adjacent land uses including agricultural uses and natural features.

4.6 Cultural Heritage and Archaeology

1. Protected heritage property, which may contain built heritage resources or cultural heritage landscapes, shall be conserved.

The Cultural Heritage Report identified one potential heritage resource at 4436 Victoria Road South. As the location of the resource is more than 150 metres away from planned extraction activities, is separated from the proposed Anthony Pit by another property parcel and a Provincially Significant Wetland, no direct or indirect impacts are anticipated to result, and no mitigation measures are required.

2. Planning authorities shall not permit development and site alteration on lands containing archaeological resources or areas of archaeological potential unless the significant archaeological resources have been conserved.

The Stage 1 and 2 Archaeological Assessment for the subject lands resulted in the identification of one location within the proposed extraction area which has been

sufficiently documented and does not fulfill the criteria for further archaeological investigation (i.e., Stage 3). The assessment was accepted by the Ministry of Citizenship and Multiculturalism ("MCM") and entered into the Ontario Public Register of Archaeological Reports.

In conclusion, the proposed Anthony Pit applications are consistent with the policies of the PPS.

4.2 County of Wellington Official Plan

The County of Wellington Official Plan provides direction over the next 20 years to the physical development of the County, its local municipalities, and to the long-term protection of County Resources.

The subject lands are part of the Rural System of the County of Wellington. The County of Wellington Official Plan recognizes that the Rural System will provide opportunities for employment and that the main employment generator in the rural system will be resource-based industries, including aggregate operations (Policy 4.2.5).

The subject lands are designated 'Secondary Agricultural' and 'Greenlands' in Schedule B7, Land Use Puslinch, of the County Official Plan (**Figure 5**). Section 4.3.2 identifies that 'Secondary Agricultural' areas are those "with agricultural capability, but determined not to be prime agricultural areas." The County Official Plan permits a range of other uses within the designation following the dominant agricultural use.

Areas within the subject lands are mapped in the Greenlands System identified on Schedule B7, including 'Greenlands'.

At the time of writing this Report, the County of Wellington plans adopted an Official Plan Amendment ("OPA 131") to expand the Aberfoyle settlement area boundary within the Township of Puslinch and designate additional residential lands to meet projected population growth in the County. The proposed Aberfoyle settlement boundary expansion is located adjacent to the west, south and north boundaries of the Anthony Pit (**Figure 7**).

The proposed land use designations nearest to the subject lands include 'Core Greenlands' and 'Greenlands' to remain; and new 'Residential' designation. It is our understanding that no development applications are currently proposed on these lands to be redesignated to 'Residential.'

A small part of the Mini Lake Condominium Community is proposed to be redesignated to 'Residential,' where the community's sewage disposal system is located and the applicable zone is Open Space (sp-70), where *uses, buildings or structures not directly related to the sewage disposal system* are prohibited. Nevertheless, the anticipated duration of the proposed Anthony Pit would likely conclude prior to any development occurring on adjacent lands.

It should be noted that surrounding natural features, such as the Mill Creek PSW, are located between the proposed pit and the lands included within the urban expansion area. At the time of the Anthony Pit application, OPA 131 is not in full force and effect as a final decision has not been made by the Province as approval authority.

4.6 Impact Assessment

Section 4.6.1 of the Official Plan states that the County or local municipality may require studies to be undertaken to measure various impacts and to propose methods of reducing or

eliminating impacts. The Official Plan states that studies completed as part of a licensing procedure (e.g. *Aggregate Resources Act*) may fulfill all or part of the requirements of this section.

In accordance, the following studies have been submitted with the proposed Anthony Pit Application:

- *Aggregate Resources Act* (ARA) Site Plans;
- Planning Report and ARA Summary Statement, Agricultural Considerations Review (Appendix A);
- Natural Environment Report / Environmental Impact Study;
- Level 1 and 2 Water Report;
- Maximum Predicted Water Table Report;
- Stage 1 and 2 Archaeological Assessments;
- Noise Impact Assessment Report;
- Transportation Impact Assessment; and
- Best Management Plan for Fugitive Dust.

4.6.5.1 Rural Development in Prime or Secondary Agricultural Areas

Where development is proposed in prime or secondary agricultural areas, a Council may require an assessment of the impacts the development may have on agricultural activities in the area. An assessment may include any or all of the following:

a) the opportunity to use lands of lower agricultural potential;

Provincial policy, including the PPS, does not require the assessment of alternative lands of lower agricultural potential for the development of a mineral aggregate operation.

b) compliance with the minimum distance separation formulae for livestock operations;

As provided in Section 4, Implementation Guidelines, of *The Minimum Distance Separation (MDS) Document* (OMAFA, 2016), a minimum distance separation setback is not required for the extraction of mineral aggregate resources.

c) the degree to which agricultural expansion may be constrained;

According to the Agricultural Considerations Review (**Appendix A**), the surrounding agricultural system is highly fragmented by nature of surrounding residential and aggregate uses; natural features and settlement areas. The proposed pit provides lands to be rehabilitated to an agricultural condition and the remainder proposed to be rehabilitated to ponds and natural features which can provide ecosystem services that support agriculture.

d) potential interference with normal agricultural activities and practices;

The proposed pit will be buffered from adjacent agricultural land uses through the provision of setbacks, berms, and existing vegetation.

e) potential interference with the movement of agricultural machinery on roads;

Impacts on traffic will be mitigated through recommendations of the Traffic Impact Study, notably, removing excess vegetation along the shoulder of the roadway; and installing "slippery when wet" road signs at locations prone to adverse weather effects.

f) such other concerns as a Council may consider relevant.

The Agricultural Considerations Review provides additional mitigation measures and rehabilitation recommendations for the site to restore 3.9 hectares of agricultural land to an average soil capability of CLI Class 2.

4.9.5 Source Water Protection

4.9.5.12 Communal Well Policy Areas

Schedule C7, Sourcewater Protection Puslinch, of the Official Plan identifies portions of the subject lands within the 'Private Communal System Policy Area' (**Figure 6**). These policy areas are not subject to the *Clean Water Act*, 2006, but require a level of protection as they serve as drinking water for residential communities.

a) *The following land uses shall be prohibited within 100 metres of the well under the circumstances outlined in the Ontario Ministry of the Environment and Climate Change's Table of Drinking Water Threats, November 2009 and as may be amended.*

- *Agricultural uses that involve the storage of agricultural source material;*
- *The storage of non-agricultural source material;*
- *The storage of commercial fertilizer as defined in O.Reg 267/03 under the Nutrient Management Act;*
- *The storage of pesticides;*
- *The storage of road salt and/or snow;*
- *The storage of liquid fuel above grade and below grade, except where the handling and storage of liquid fuel is required for emergency back-up generators; and*
- *The storage of dense non-aqueous phase liquids and/or organic solvents.*

The proposed Anthony Pit does not include any of the above uses. Mineral aggregate operations are not a prescribed drinking water threat according to O. Reg. 287/07 under the *Clean Water Act*.

b) *The submission of a Disclosure Report shall be required as part of a complete application under the Planning Act for development, redevelopment, or site alteration. The report shall disclose the nature of the proposed use and whether the handling and storage of any chemicals is expected to occur, including related volumes, types, storage, handling, disposal, etc. The report shall also disclose the proposed management programs associated with the use of chemicals at the site, including risk management/reduction measures, emergency response plans, spill response/prevention plans, employee awareness training, and best management practices and monitoring programs.*

The ARA Site Plans and the Level 1 and 2 Water Report outline the proposed operation and the proposed best management practices and response plans for potential spills.

c) *Development proposals may be subject to additional study requirements, including but not limited to, the preparation of a risk assessment report, hydrogeological analysis, and/or geotechnical investigation as deemed reasonable by the local municipality in consultation with the County's Risk Management Official.*

Risk assessments and hydrogeological analyses shall identify the existing groundwater quality and local hydrogeological setting, the nature of any predicted adverse impacts, the ability to eliminate or effectively mitigate these impacts and the measures that will be taken to achieve mitigation objectives. The County's Risk Management Official may further determine the scope of risk assessments and hydrogeological analyses on a site-specific basis, taking into consideration the proposed use.

No new uses shall be permitted unless it can be demonstrated that the proposed uses can be established within an acceptable level of risk to groundwater and surface water quality and without any adverse impact on ground water and surface water

quality, as determined by the Risk Management Official.

A Level 1 and 2 Water Report was prepared to assess potential impacts of the proposed pit on groundwater and surface water quality and quantity. The report concludes that no negative impacts are anticipated subject to the recommended mitigation measures as a result of the proposed pit.

4.10.1 Mill Creek Watershed

The proposed Anthony Pit is located within the Mill Creek Watershed. To ensure the protection of Mill Creek and its watershed, the County Official Plan outlines policies to be followed, which include:

a) *the natural heritage features identified by the Mill Creek Watershed Study will be included within Wellington County's Greenland System and will be protected;*

The proposed extraction area of the Anthony Pit was designed to avoid, protect and mitigate potential impacts to the natural features located adjacent to the subject lands. Final rehabilitation activities of the pit will include enhancements to the natural area.

b) *infiltration levels will be maintained by:*

- *Limiting impervious cover (buildings & pavement) in a subcatchment area(s) to 20% requiring storm water best management practices to encourage infiltration and maintain water quality and quantity.*

There are no proposed structures as part of the proposed pit. The entrance of the site will be paved to limit dust and noise impacts on the surrounding sensitive land uses.

d) *encourage stream rehabilitation and restoration efforts that result in improved bank stability, increased vegetative cover, pond discharge controls and improved aquatic habitat.*

The proposed rehabilitation will increase natural vegetative cover on the subject lands and provide for improved aquatic habitat through the creation of a new wetland and two ponds.

5.0 Greenlands System

The Greenlands System is divided into two categories, Core Greenlands and Greenlands. The Greenlands System will be maintained or enhanced. Activities which diminish or degrade the essential functions of the Greenlands System will be prohibited.

5.4 Core Greenlands

The Core Greenlands designation includes lands which have greater sensitivity or significance. This includes all wetlands, habitat of endangered or threatened species and fish habitat, and hazard lands.

All areas proximal to the Anthony Pit designated 'Core Greenlands' are located outside of the extraction limit and will be buffered by a 30-metre setback. The rehabilitation plan for the proposed pit will incorporate the development of additional wetland areas and habitat of endangered or threatened species within the extraction limit. The final pit ponds will be structured to support fish habitat.

Approximately 230 metres of the existing gravel driveway on the site will be paved to serve as an internal haul road for the operation. The paved portion of the access road will act as a mitigation to limit potential dust, noise, and sediment impacts on the adjacent wetland and wooded area.

Policy 5.4.1 of the County Official Plan requires that "*the appropriate Conservation Authority should be contacted when development is proposed in or adjacent to a wetland.*"

The Grand River Conservation Authority will be circulated as a commenting agency for the ARA and *Planning Act* applications of the Anthony Pit.

5.5 Greenlands

The Greenlands designation includes other significant natural heritage features including habitat, areas of natural and scientific interest (ANSI), streams and valley lands, woodlands, environmentally sensitive areas, ponds, lakes and reservoirs and natural links.

The proposed licence area includes approximately 3.68 hectares of lands designated 'Greenlands' in Schedule B7 of the Official Plan (**Figure 5**). There are no significant features within the proposed extraction limit. As outlined in the NER, the 10-30 metre setbacks as measured from the adjacent features are expected to be sufficient to protect the root zones of the woodlands and treed components of the wetlands.

The NER provides an assessment of the acoustic berms proposed within the setback areas where a limited area of significant woodland will be removed. The NER concludes that the proposed removal will not impact the form or function of the woodland. In addition, these setback areas will be reforested as part of the rehabilitation plan of the pit. Therefore, the proposed pit is not anticipated to negatively impact the adjacent natural features or their ecological functions (Policy 5.5.4).

5.6 Development Control in Core Greenlands & Greenlands

Within the Core Greenlands designation, development and site alteration shall not be permitted in Provincially Significant Wetlands or in significant habitat of threatened or endangered species, except in accordance with provincial and federal requirements (5.6.1).

There is no development proposed within the adjacent PSWs. The NER assessed the potential impacts of the proposed pit on significant habitat of threatened or endangered species. The report provided mitigation measures to offset impacts to wildlife habitat, including the provision of a new wetland and natural features.

5.7 Restoration and Enhancement

Section 5.7 of the Official Plan recognizes that while the majority of the County policy framework is focused on protecting natural heritage features from development and site alteration, the County also supports restoration and enhancement of the natural heritage system. This section acknowledges that the development control process can provide a means to identify opportunities for restoration and enhancement where development activities are taking place.

The proposed pit application represents an opportunity to enhance the County's Greenlands system by creating new aquatic and terrestrial habitat while also making available high-quality aggregate resources close to market.

6.5 Secondary Agricultural Areas

Section 6.5 states that uses permitted within the 'Secondary Agricultural' area designation include those permitted in Prime Agricultural Areas. Licenced Aggregate Operations are permitted within Prime Agricultural Areas (6.4.3).

6.6 Mineral Aggregate Areas

Mineral aggregate areas are part of the County's Rural System which is primarily natural resource land and other uses typically found in non-urban areas. The Rural System, for the most part, is a relatively stable part of the County landscape devoted to economic activities based on natural resources. The County's policies are intended to maintain the essential character of these areas to ensure that the economic activities and employment opportunities which depend on Wellington's natural resources are maintained and enhanced.

6.6.1 Mineral Aggregate Resource Overlay

Policy 6.6.1 states that lands within the Mineral Aggregate Resource Overlay are areas of high potential for mineral aggregate extraction and are shown as an overlay on Schedule D. These lands have been identified by the Province in the Aggregate Resource Inventory Paper (ARIP) 162 which generally consist of sand and gravel deposits and selected bedrock resources that the Province has identified as being of primary, or secondary significance.

Section 6.6.1 also states that there are sites in the Mineral Aggregate Resource Overlay where there is an existing or approved mineral aggregate operation that lies outside of the sand and gravel resource areas of Primary or Secondary Significance and selected bedrock resources.

The majority of the subject lands are identified as 'Sand and gravel resources of Primary and Secondary Significance' in Schedule D, Mineral Aggregate Resource Overlay, of the County Official Plan (**Figure 8**). Approximately 1.87 hectares of the proposed extraction area is not identified as a mineral aggregate deposit. However, according to on-site testing, marketable aggregate material is located in this area.

The Mineral Aggregate Resource Overlay only indicates that aggregate deposits are likely to be available, it does not presume that all conditions are appropriate to allow extraction to proceed. Similarly, the Mineral Aggregate Resource Overlay does not limit applications for new or expanding aggregate operations only to these areas in the County as specifically recognized in Section 6.6.1. The intention is to make as much aggregate resources available as close to markets as is realistically possible, consistent with the direction provided in the PPS.

6.6.5 New Mineral Aggregate Operations

Aggregate operations are identified as a permitted use in the 'Secondary Agricultural' and 'Greenlands' designation, subject to the policies of the Official Plan. Section 6.5.5 states that new or expanding mineral aggregate operations require an amendment to the Mineral Aggregate Area shown on Schedule B of the Official Plan. CBM is applying for an amendment to the County's Official Plan to permit the proposed pit by establishing the Mineral Aggregate Area on the subject lands as expanding the Mineral Aggregate Resource Overlay by approximately 4.0 hectares. A draft Official Plan Amendment is included as **Appendix B**.

Section 6.6.5 of the Official Plan outlines the policies to be satisfied when establishing a new or expanding mineral aggregate operation. The following policies are considered:

Official Plan Section 6.6.5	Proposed Application
a) the impact on adjacent land uses and residents and public health and safety;	There will be no adverse impacts to public health and safety related to this proposal as demonstrated by the technical studies and reports submitted with the applications.
b) the impact on the physical (including natural) environment;	According to the technical reports, the proposed Anthony Pit is not anticipated to have a negative impact on the natural environment, water resources or transportation network.
c) the capabilities for agriculture and other land uses;	The subject lands are not designated as a prime agricultural area in the County's Official Plan. An

	Agricultural Considerations review, attached as **Appendix A**, was completed to assess agricultural resources on the subject lands and within the surrounding area. Prime agricultural lands, including Class 2, 3 Soils are found on the subject lands as determined through the Soil Survey. It was determined that there will be no negative impacts on agricultural resources as a result of the proposed pit.
d) the impact on the transportation system;	The Traffic Impact Study concluded that the existing transportation infrastructure can accommodate the projected increase in traffic due to the pit's operation. Two safety-related activities are implemented on the site plan in accordance with the recommendations of the study. Those include (1) the removal of excess vegetation to satisfy stopping distance standards, and (2) the installation of a "slippery when wet" road signed at locations prone to weather impacts. Additionally, both current and future traffic conditions, including the added site-generated traffic, are anticipated to not result in significant impacts on the surrounding road network.
e) existing and potential municipal water supply resources are protected in accordance with Sections 4.9.5 and 4.9.5.9 of this Plan and the applicable Source Protection Plan;	Existing and potential municipal water supply resources will be protected. The subject lands are not located within a Wellhead Protection Area, or Issue Contributing Area based on the Grand River Source Protection Plan (**Figure 10**). However, the subject lands are located within a Wellhead Water Quantity Zone, Intake Protection Zone, and Significant Groundwater Recharge Area. Fuel storage, equipment filling and equipment maintenance will be carried out in accordance with best management practises and implementation of spill management response plans, as recommended in the Level 1 and 2 Water Report.
f) the possible effect on the water table or surface drainage patterns;	The Level 1 and 2 Water Report concluded that the implementation of the proposed recommended mitigation measures is anticipated to create no negative impacts to the water table or surface drainage patterns.

g) the manner in which the operation will be carried out;	Extraction will occur in four phases generally in a southwest direction. Extracted materials will be shipped to the CBM Aberfoyle Pit for processing using highway trucks. Based on the available reserves on the subject lands, CBM anticipates that extraction would be completed within a few years at the Anthony Pit thereby limiting the duration of the pit operation and accelerating progressive rehabilitation accordingly. Details of the operation including phasing and progressive rehabilitation are provided in Section 2.3 of this Report.
h) the nature of rehabilitation work that is proposed; and	The subject lands will be rehabilitated through the creation of two naturalized ponds, with an approximate total area of 3.9 ha. In addition, a new wetland area (0.09 ha), vegetated areas (1.8 ha) and agricultural lands (3.0 ha) will be created. Details of the rehabilitation plan are provided on the ARA Site Plans.
i) the effect on cultural heritage resources and other matters deemed relevant by Council.	The Cultural Heritage Report identified a built heritage resource located 205 metres from the proposed extraction and appropriately buffered by natural features. The report concluded that no direct impacts are anticipated and thus, no further mitigation measures are recommended.

6.6.6 Public Information

When approvals are being considered for mineral aggregate operations, the following information shall be made available to the public:

a) Detailed site plans
b) Estimated quality and quantity of the resource
c) Description of the surrounding lands
d) Any related reports prepared by the proponent
e) Any other information deemed relevant by Council

This information will be made available to the public including the ARA Site Plan. This Report and the Site Plan contain information on the surrounding lands. Further, the related reports and other information required under the *Planning Act* and *Aggregate Resources Act* have been submitted with the proposed pit application. CBM will establish a project website where these studies and information will be available to the public.

6.6.7 Ancillary Uses

Section 6.6.7 identifies criteria for establishing ancillary uses. The ancillary uses specifically identified in Section 6.6.4 which include "asphalt

plants, concrete plants, aggregate transfer stations, stockpiling and blending of aggregates with materials such as salt, sand-salt mixture and recycled road material," which are not proposed at the pit.

6.6.8 Rehabilitation

Section 6.6.8 of the County's Official Plan states that all proposals for new aggregate extraction shall include a plan for eventual rehabilitation. The plan shall:

a) provide for progressive rehabilitation whenever feasible;
b) be prepared in detail by a recognized expect;
c) be compatible with the long term uses permitted by the surrounding official plan designations;
d) on lands designated Prime Agricultural Areas, provide a detailed agricultural rehabilitation plan which restores substantially the same areas and average soil quality for agriculture as before extraction occurred; and
e) on lands designated Secondary Agricultural Areas, provide an agricultural rehabilitation plan which, whenever feasible, restores substantially the same areas and average soil quality for agriculture as before extraction occurred.

A progressive Rehabilitation Plan has been submitted for the proposed Anthony Pit which was prepared by a qualified expert authorized to prepare site plans under the *Aggregate Resources Act*. As the subject lands are designated 'Secondary Agricultural' and 'Greenlands', the lands will be progressively rehabilitated to agricultural lands with an average soil capability of Class 2 Soils, which is the same and better soil capability as current conditions.

Other rehabilitated features will include two naturalized ponds, new wetlands, and wooded areas. These features will provide aquatic, terrestrial and fish habitat and the final rehabilitation will be compatible with surrounding land uses and approved land use designations.

6.6.9 Mining Below the Water Table

Section 6.6.9 states that extraction below the water table may only be allowed and complete [agricultural] rehabilitation is not required if the following is demonstrated:

a) there is a substantial quantity of mineral aggregates below the water table warranting extraction or the depth of planned extraction in a quarry makes rehabilitation unfeasible;

The subject lands contain about 1 million tonnes of high-quality aggregate material. The majority of the sand and gravel resources located on the subject lands are located below the water table; therefore, there is a substantial quantity of mineral aggregates below the water table warranting extraction. Approximately 3.9 hectares of the extraction area will not be extracted below the water table and be rehabilitated back to an agricultural condition.

b) on lands designated Prime Agricultural Areas, other alternatives have been considered by the applicant and found unsuitable, and rehabilitation in remaining areas will be maximized;

The subject lands are not designated Prime Agricultural Area in the County's Official Plan based on Schedule B7.

c) impacts on the environment, including quality and quantity of surface and groundwater resources, will be minimal; and

Impacts on the environment will be minimized in accordance with provincial and municipal

standards as detailed in the Level 1 & 2 Water Report and Natural Environment Report.

d) *the intended after use will be compatible with the long term uses of adjacent areas*.

The proposed extraction area will be rehabilitated to agricultural land and natural heritage features compatible with the long-term uses of adjacent areas.

Mitigation measures have been developed and the operation has been carefully designed to ensure the proposed pit minimizes social, economic and environmental impacts.

The proposed amendment and pit application conform to the County's Official Plan.

4.3 Township of Puslinch Zoning By-law

The subject lands are zoned Agricultural (A), in the Township of Puslinch Zoning By-law 23/2018 (**Figure 9**). Portions of the subject lands also contain the Environmental Protection (EP) Overlay. This is not a separate zone but an overlay that represents natural heritage features included in the 'Greenlands' designation in the County's Official Plan as well as lands regulated by the Grand River Conservation Authority.

Section 13.2 outlines the special provisions that may apply to proposed development within the EP Overlay. It must be demonstrated that there will be no negative impacts on the specified natural features or their ecological functions. The Natural Environment Report concludes that there are no natural features in the extraction limit within the EP Overlay. Sufficient setbacks from adjacent natural features have been implemented on the ARA site plan.

Surrounding lands are zoned Agricultural (A), Open Space (OS) and Extractive Industrial (EXI).

CBM is applying to amend the Zoning By-law from the Agricultural (A) Zone to the Extractive Industrial (EXI) Zone for the area within the extraction area. The remaining area of the licence, where the visual and acoustic berms; and internal access road are proposed, will be rezoned to Agricultural with site specific provisions (A-sp##).

No changes are proposed to the Environmental Protection Overlay.

A draft Zoning By-law amendment is included as **Appendix C** of this report.

5.0 Aggregate Resources Act Summary Statement

The following information is provided to address the requirements for a Summary Statement for a Class A Licence as set out in the Aggregate Resources of Ontario Standards (2020).

The CVs for the Report Authors are included in **Appendix D**.

5.1 Standard 1.1: Agricultural Classification of the Site

According to Soil Survey and Agricultural Considerations Review (**Appendix A**), the subject lands contain Class 2, 3 4 and 5 soils in which Class 1 to 3 soils are considered prime agricultural lands. The soil series were identified as Dumfries Loam, Burford Loam, Gilford Loam, and Muck Soils. The Burford Loam is described as the well-drained member of the Burford Soil catena occurring over coarse gravels. The Dumfries Sandy Loam is described as the well-drained member of the Burford Soil catena and developed on stony soil derived from limestone. Gilford Loam is the poorly drained member of the Burford Soil Catena and are located in depressional areas and are typically seasonally wet areas, with shallow water tables. Muck soils are very poorly drained organic deposits that have accumulated in shallow lakes, ponds, and undrained depressional areas.

The County of Wellington's Official Plan designates the subject lands as 'Secondary Agricultural' (**Figure 5**). The subject lands are not located within a Prime Agricultural Area based on the County's Official Plan.

Approximately 3.9 ha of the eastern portion of the extraction area are proposed to be returned to an agricultural condition as part of rehabilitation of the Anthony Pit with the same average soil capability as current conditions.

Proposed rehabilitation techniques for agricultural rehabilitation are included on the ARA Site Plan in accordance with the recommendations of the Agricultural Considerations Review.

Please refer to Section 3.5 and **Appendix A** of this Report for further information on agricultural resources.

5.2 Standard 1.2: Applicable Planning and Land Use Considerations

The lands surrounding the proposed Anthony Pit include a licenced aggregate operation, natural heritage features, residential uses, agricultural and rural commercial uses. The closest house is approximately 112 metres from the extraction area. At the time of writing this Report, the County adopted an Official Plan amendment ("OPA 131") to expand the 'Aberfoyle Secondary Settlement Area' adjacent to the boundary of the proposed pit (**Figure 7**).

The subject lands are designated 'Secondary Agricultural' and 'Greenlands' in the County's Official Plan according to Schedule B7 (**Figure 5**). The majority of the subject lands are located within the Mineral Aggregate Resource Overlay on Schedule D of the County's Official Plan (**Figure 8**). The subject lands are zoned Agricultural with an Environmental Protection overlay in the Township's Zoning By-law (**Figure 9**).

In addition to the ARA Licence Application, a County of Wellington Official Plan Amendment and Township of Puslinch Zoning By-Law Amendment are also required to permit the proposed pit.

Please refer to Sections 3.0 and 4.0 of this Report for a further discussion on Planning and Land Use Considerations.

5.3 Standard 1.3: Source Protection Area Considerations

The subject lands are not located within a Wellhead Protection Area, or Issue Contributing Area as identified in the Grand River Source Protection Plan (**Figure 10**). The subject lands are mapped in an Intake Protection Zone 3, Wellhead Water Quantity Zone, and Significant Groundwater Recharge Area.

The Level 1 and 2 Water Report identified the following two conditions that will affect the water table locally as a response to aggregate extraction:

- Water replacement of extracted aggregate; and
- Adjustment of the water table gradient in response to the new pit ponds.

To ensure no adverse impacts to the water resources as a result of the Anthony Pit, the recommendations of the Water Report consist of groundwater level monitoring; groundwater quality testing; equipment fuel filling and maintenance be carried out in accordance with best management practices; and a private well survey be conducted prior to below water extraction to identify private water supply wells in use. The Water Report confirms that the proposed pit will not affect the groundwater recharge potential of the local overburden soils.

5.4 Standard 1.4: Quality and Quantity of Aggregate

The majority of the subject lands are identified as having sand and gravel resources of primary significance according to ARIP 162 (**Figure 3**). Approximately 1.87 ha of the proposed extraction area is not identified as a sand and gravel deposit in the ARIP 162 or the County Official Plan. Site-specific resource testing was undertaken to assess on-site resource quality and quantity, and to confirm the primary material significance throughout the subject lands. Grain size analysis data indicate the gravel size generally ranged from fine to coarse, while the sand size generally ranged from medium to coarse. These sand and gravel soils are typically well graded (i.e., uniformity coefficient greater than 10%) and contain trace amounts of fines (i.e., silt and clay).

Based on the on-site resource testing, there are approximately 1 million tonnes of high-quality sand and gravel resources available within the proposed extraction area. The majority of the sand and gravel resources located on the subject land are located below the water table. The sand and gravel deposit on site has an average thickness of approximately 15 to 22 metres. Resources extracted from the subject lands are capable of producing concrete, crushed stone, granular and sand products.

Resources extracted from the subject lands will be transferred via highway trucks and processed at the CBM Aberfoyle Pit (Licence #5520) or other nearby CBM processing facilities.

Please refer to Section 3.2 of this Report for further information on aggregate quantity and quality.

5.5 Standard 1.5: Main Haulage Routes

Materials extracted from the subject lands are proposed to be processed at the CBM Aberfoyle Pit or other nearby CBM processing facilities and then shipped to market. Extracted material will be hauled using highway trucks from the subject lands approximately 6.0 km to the existing pit, along Victoria Road South, Wellington Road 34 and Concession Road 7. There will be no truck traffic heading south on Victoria Road South.

The Traffic Impact Study found that during there would be 12 trips during both the AM and PM peak hours (6 inbound, 6 outbound).

A single truck entrance/exit is proposed along the eastern terminus of the subject lands along Victoria Road South. An access permit will be obtained from the Township as the applicable road authority.

Please refer to Section 3.6 of this Report for further information on haul routes and truck traffic.

5.6 Standard 1.6: Progressive and Final Rehabilitation

The lands will be extracted to a maximum depth of approximately 304 masl. Two ponds will result from the extraction activity. The two ponds will be positioned in the southwestern portions of the subject lands and be separated by a small wetland (0.09 ha) pocket created as part of the rehabilitation process. The pond located on the western edge of the property will be approximately 1.7 hectares in size. The pond to the east of the western pond will be approximately 2.2 hectares in size. Below water, the rehabilitated side slopes will be 2:1 or the natural angle of repose, while the above water side slopes will be 3:1. Shallow and undulating shoreline areas are proposed around the perimeter of the ponds to create varying topography and pond depths.

Approximately 1.8 hectares of new forest cover will be created which is proposed to occur within the 30 metres setback areas adjacent to the Mill Creek PSW primarily along the northern, southern and western setback areas. An agricultural area of 3.9 hectares will be created in the eastern portion of the extraction limit where no below water extraction is proposed. These features will be created progressively as extraction proceeds through the site as outlined on the phasing plans of the ARA Site Plans.

The rehabilitated landform will be compatible with the surrounding area.

Refer to Section 2.3 of this Report and the ARA site Plans (Rehabilitation Plan) for additional details regarding progressive and final rehabilitation.

6.0 Conclusions

CBM is applying for a Class 'A' Licence under the *Aggregate Resources Act*, a County of Wellington Official Plan Amendment and a Township of Puslinch Zoning By-law Amendment to permit aggregate extraction below the water table on lands located at 4454 Victoria Road South, legally described as Part of Lot 22, Concession 8, Township of Puslinch, County of Wellington.

The subject lands contain about 1 million tonnes of high-quality sand and gravel resources in a location that is close to market with ongoing aggregate extraction and approved facilities to process the materials extracted from the subject lands. Resources extracted from the subject lands will help support the timely provision of infrastructure.

The operational design of the pit incorporates the recommendations of the technical reports prepared for the application in order that the pit can operate within Provincial guidelines and minimize social, economic and environmental impacts.

The proposed Anthony Pit represents the wise use and management of significant aggregate resources and is in the public interest in consideration of the economic, social and environmental factors that apply to this application. The proposal is consistent with the PPS and conforms to the Wellington County Official Plan.

Respectfully submitted,

MHBC

Neal DeRuyter, BES, MCIP, RPP
Partner

Vince Deschamps, M.Sc, MCIP, RPP
Associate

Yara Elmahdy, BES
Planner

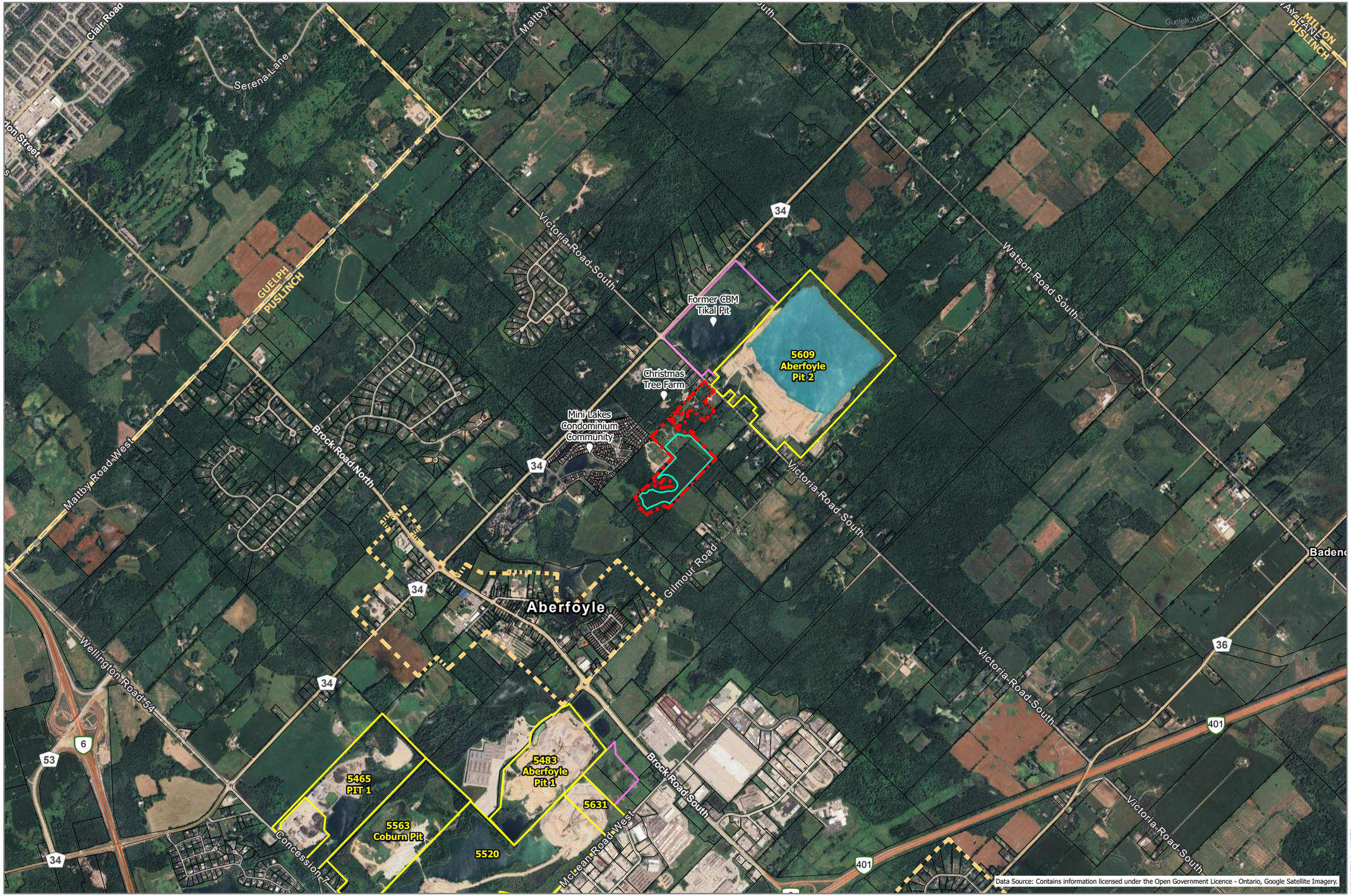


Figure 1 - Context Plan

- Boundary of Area to be Licensed
- Limit of Excavation
- Aggregate Site Authorized Active
- Innactive Aggregate Site
- Municipal Boundary
- Settlement Area

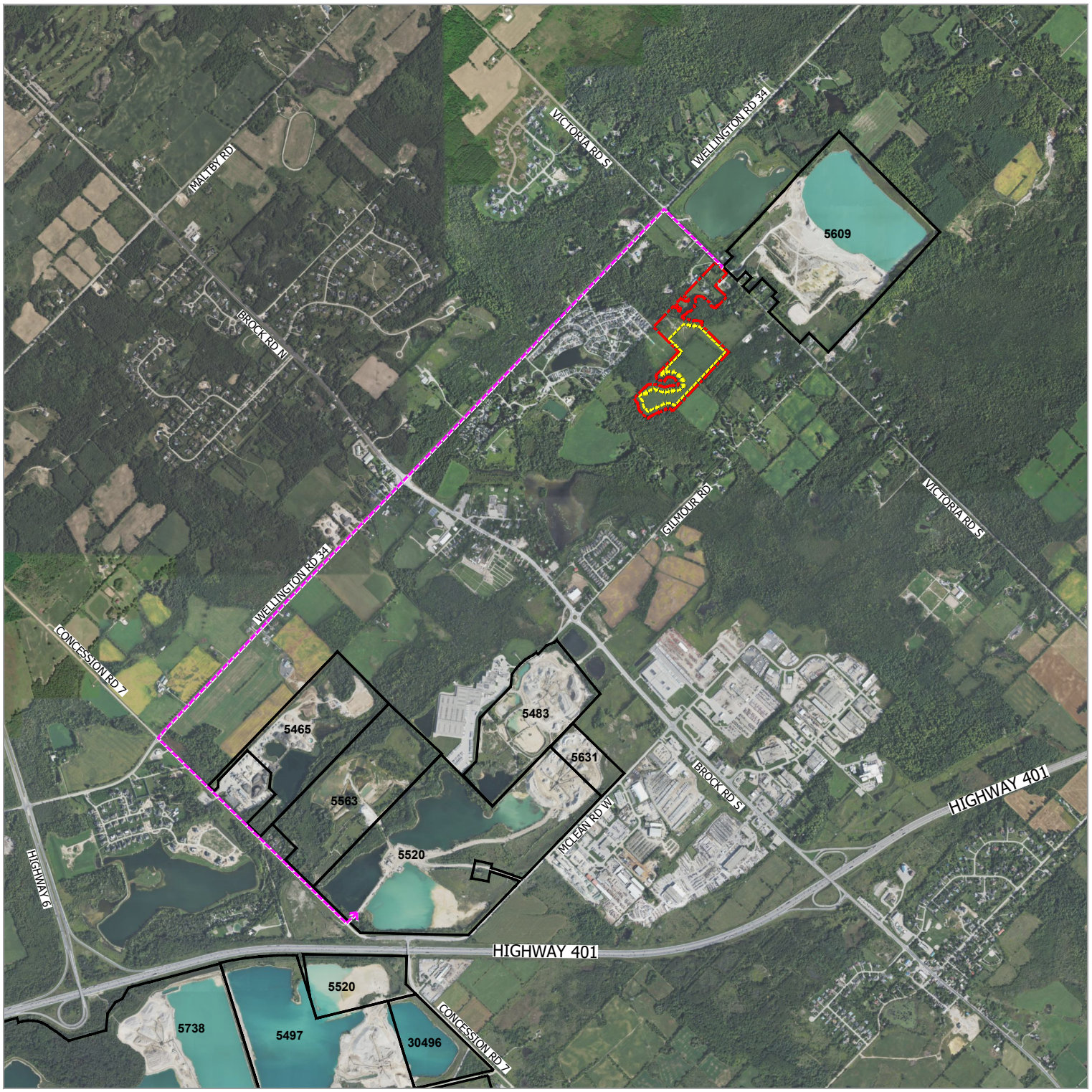


Figure 2 - Proposed Haul Route to Aberfoyle Pit (Licence # 5520)

Boundary of Area to be Licensed

Proposed Limit of Excavation

Aggregate Site Authorized Active

Proposed Haul Route

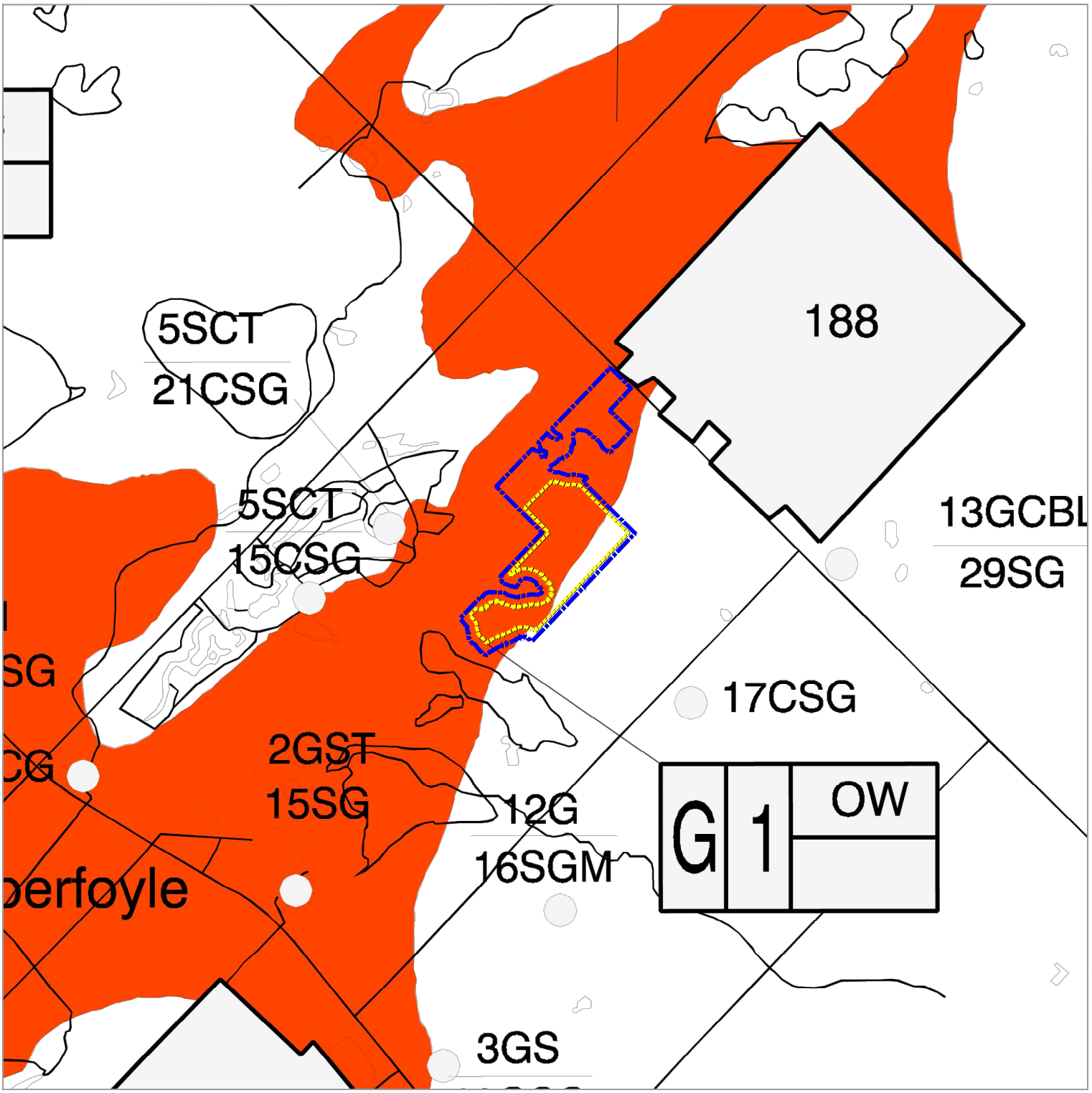
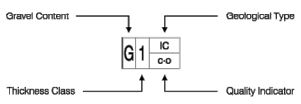


Figure 3 - Wellington County Aggregate Resources Inventory Paper 162 Sand and Gravel Resources

- Boundary of Area to be Licensed
- Limit of Excavation
- 1 — Selected sand and gravel resource area, primary significance; deposit number; see Table 3.
- Selected sand and gravel resource area, secondary significance.
- Sand and gravel deposit, tertiary significance.
- Other surficial deposits or exposed bedrock.

DEPOSIT SYMBOL



Deposits are identified by Gravel Content, Thickness Class, Geological Type and Quality Indicator. Gravel Content is expressed as a percentage of gravel-sized material (i.e., material retained on the 4.75 mm sieve). Thickness Class is based on potential aggregate tonnage per hectare. Geological Type refers to geological origin. Quality indicator describes objectionable grain size and lithology.

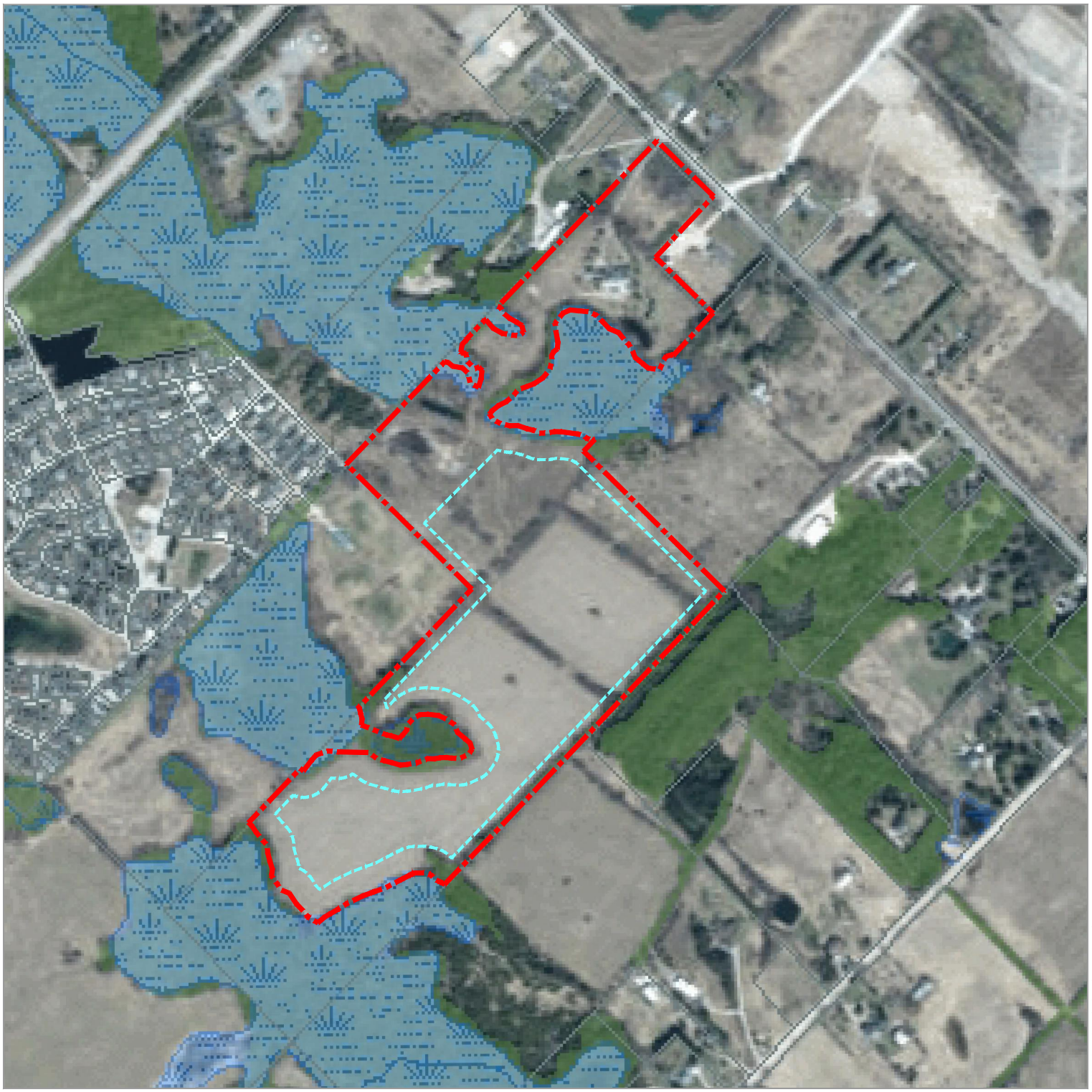


Figure 4 - Natural Heritage System

- Boundary of Area to be Licensed
- Proposed Limit of Excavation
- Unevaluated Wetland
- Provincially Significant Wetland
- Woodland

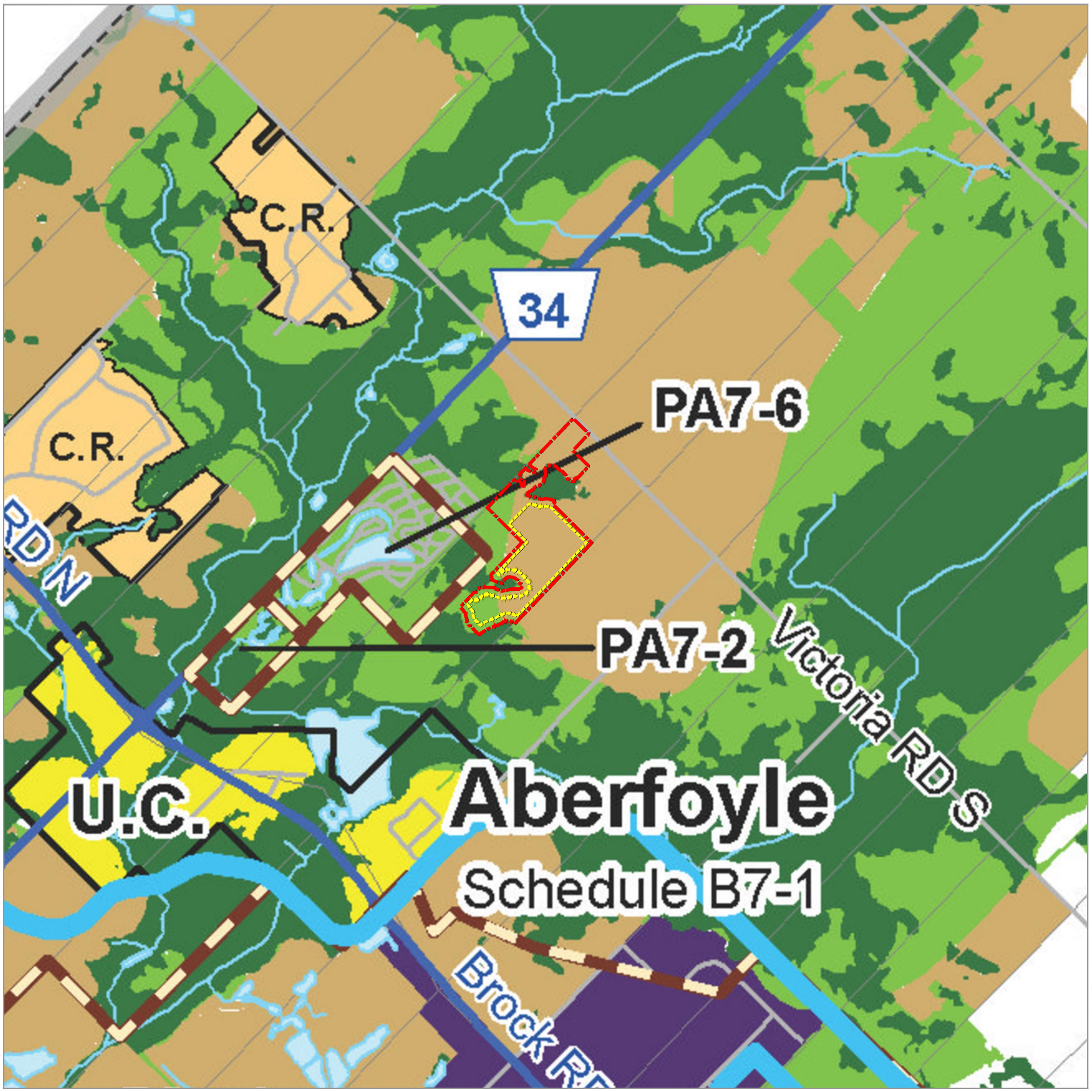


Figure 5 - County of Wellington Official Plan, Schedule B7 Land Use

Boundary of Area to be Licensed
Proposed Limit of Excavation

The Greenlands System
- Core Greenlands
- Greenlands
- Earth Science ANSI

The Rural System
- Prime Agricultural
- Secondary Agricultural
- H. Hamlet Area
- U.C. Secondary Urban Centre
- Mineral Aggregate Area
- Recreational
- Rural Employment Area
- C.R. Country Residential
- PA Policy Area
- Regionally Significant Economic Development Study Area

Other
- Landfill Site
- Proposed Interchange
- Proposed Major Roadways
- County Roads
- Provincial Highway

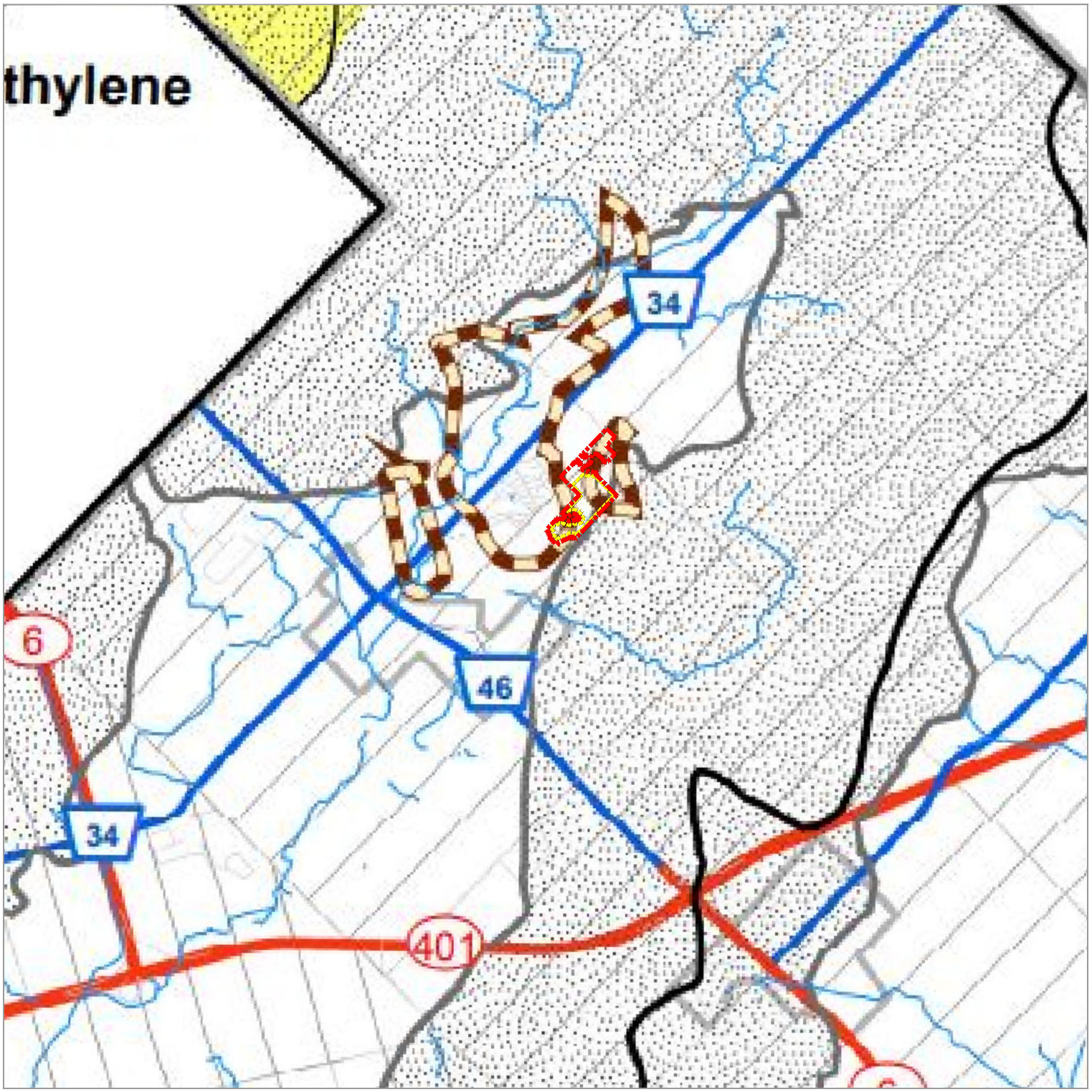


Figure 6 - County of Wellington Official Plan, Schedule C7 Sourcewater Protection Puslinch

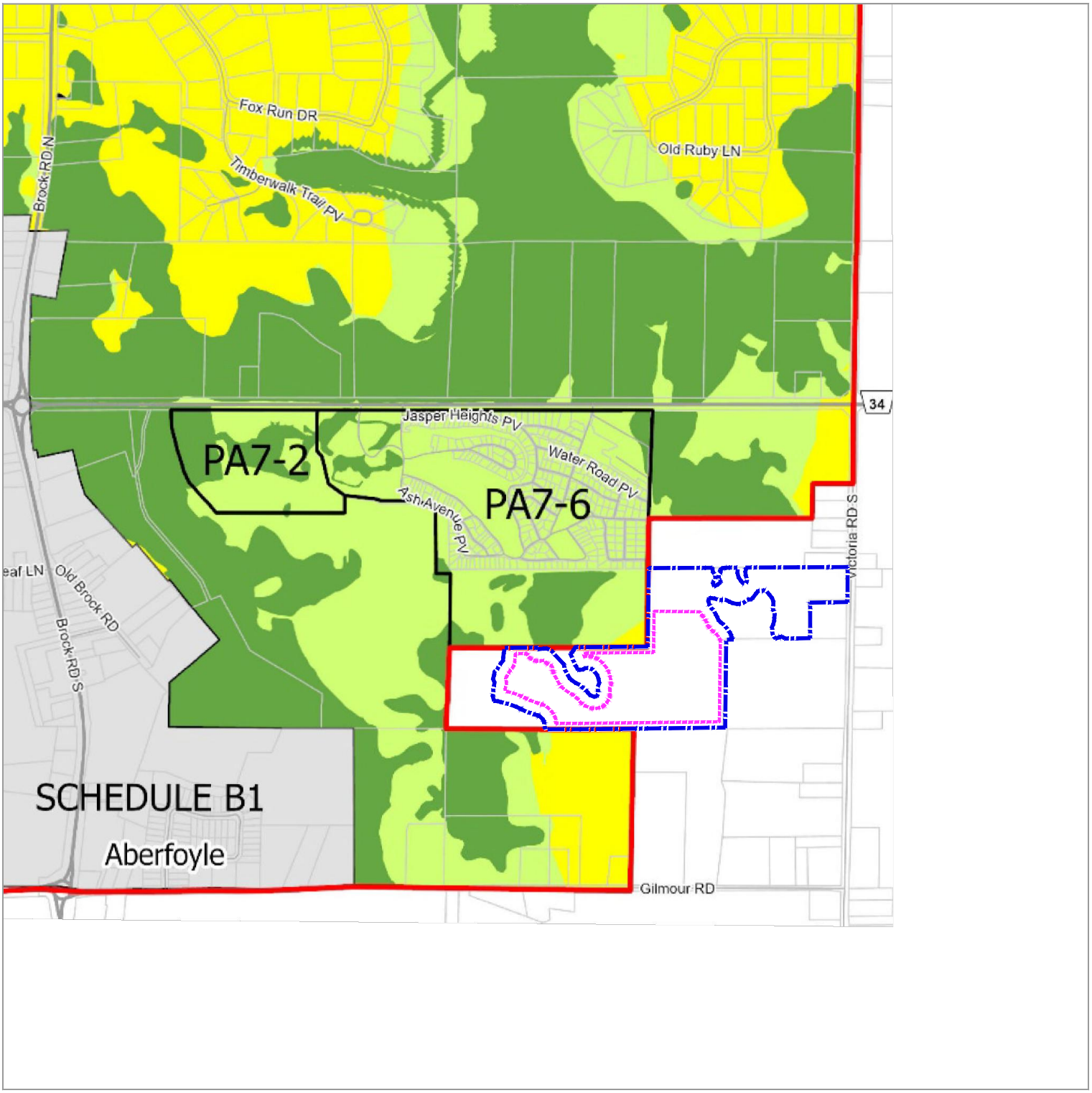


Figure 7 - County of Wellington Official Plan Amendment No. 131, Schedule A-5

- Boundary of Area to be Licensed
- Proposed Limit of Excavation
- Expanded Aberfoyle Boundary
- Lands to be redesignated Residential
- Lands to be redesignated Highway Commercial
- Lands to be redesignated Residential Transition
- Lands to be redesignated Industrial
- Lands to be redesignated Greenlands
- Lands to be redesignated Core Greenlands
- Core Greenlands and Greenlands to remain
- Current Aberfoyle Boundary
- Existing Policy Area
- Lands to be subject to New Policy Area

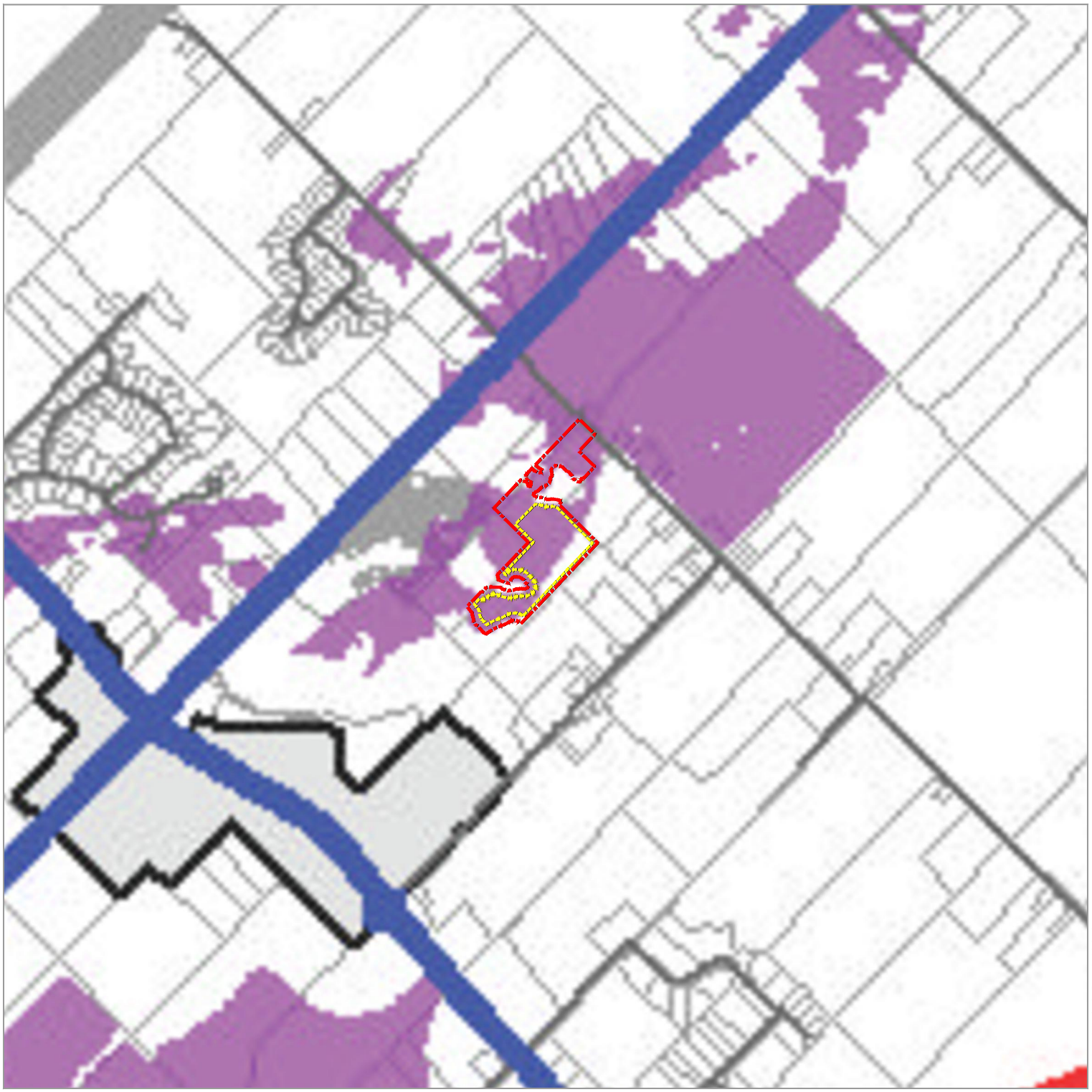


Figure 8 - County of Wellington Official Plan, Schedule D Mineral Aggregate Resource Overlay

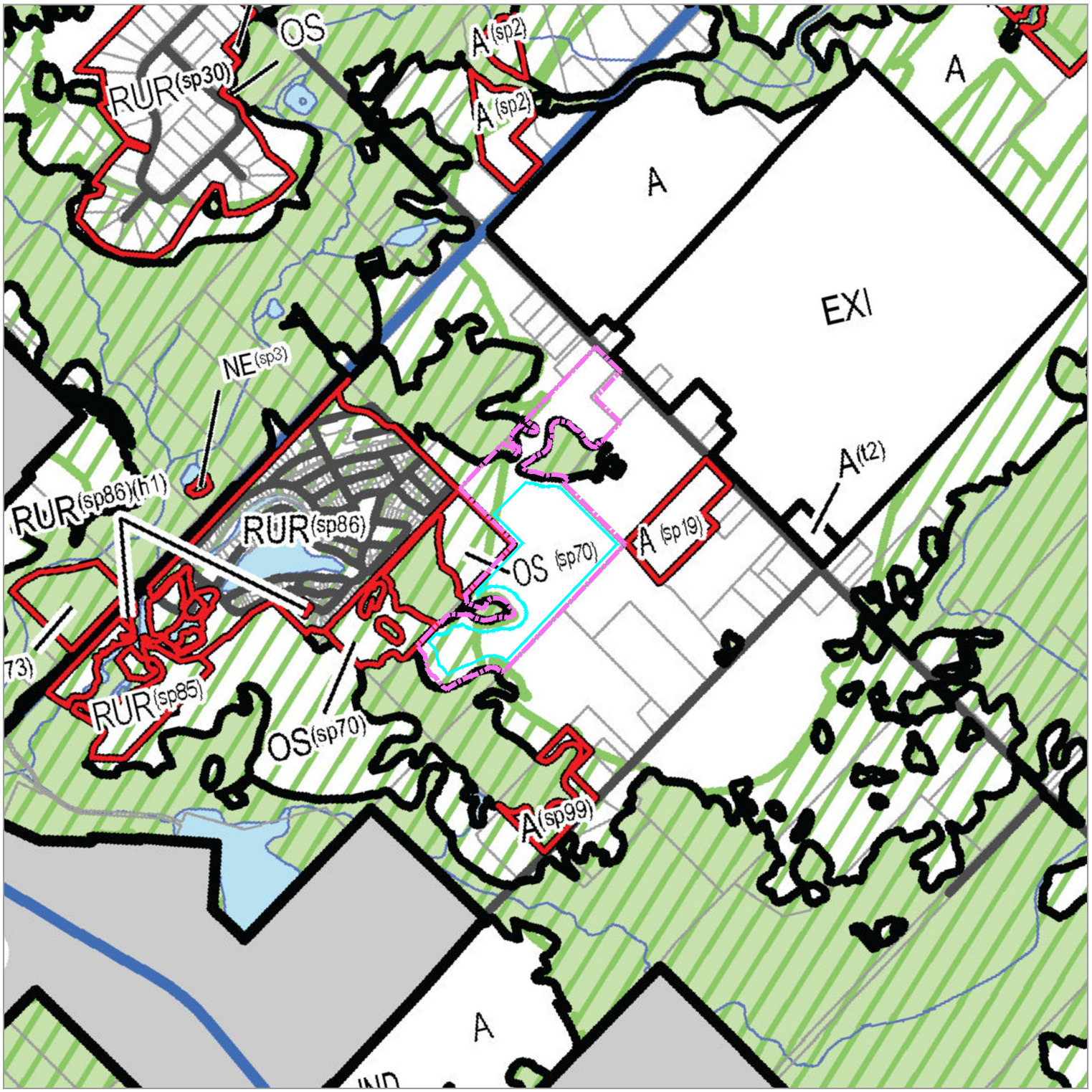


Figure 9 - Township of Puslinch Zoning By-law No. 023-18, Schedule 'A'

- Boundary of Area to be Licensed
- Proposed Limit of Excavation
- Site Specific Exemption
- Zoning Limits
- Environmental Protection Overlay
- Natural Environment

Zone Descriptions

A	Agricultural	HC	Highway Commercial	RR	Resort Residential
AC	Agricultural Commercial	HR	Hamlet Residential	RUR	Rural Residential
C	Commercial	I	Institutional	UR	Urban Residential
CMU	Core Mixed Use	IND	Industrial	f-	Aberfoyle Flood Plain Overlay
DI	Disposal Industrial	NE	Natural Environment	(sp#)	Site Specific Exemption
EXI	Extractive Industrial	OS	Open Space	(h#)	Holding Provision
FD	Future Development	RC	Resort Commercial	(t#)	Temporary Zone

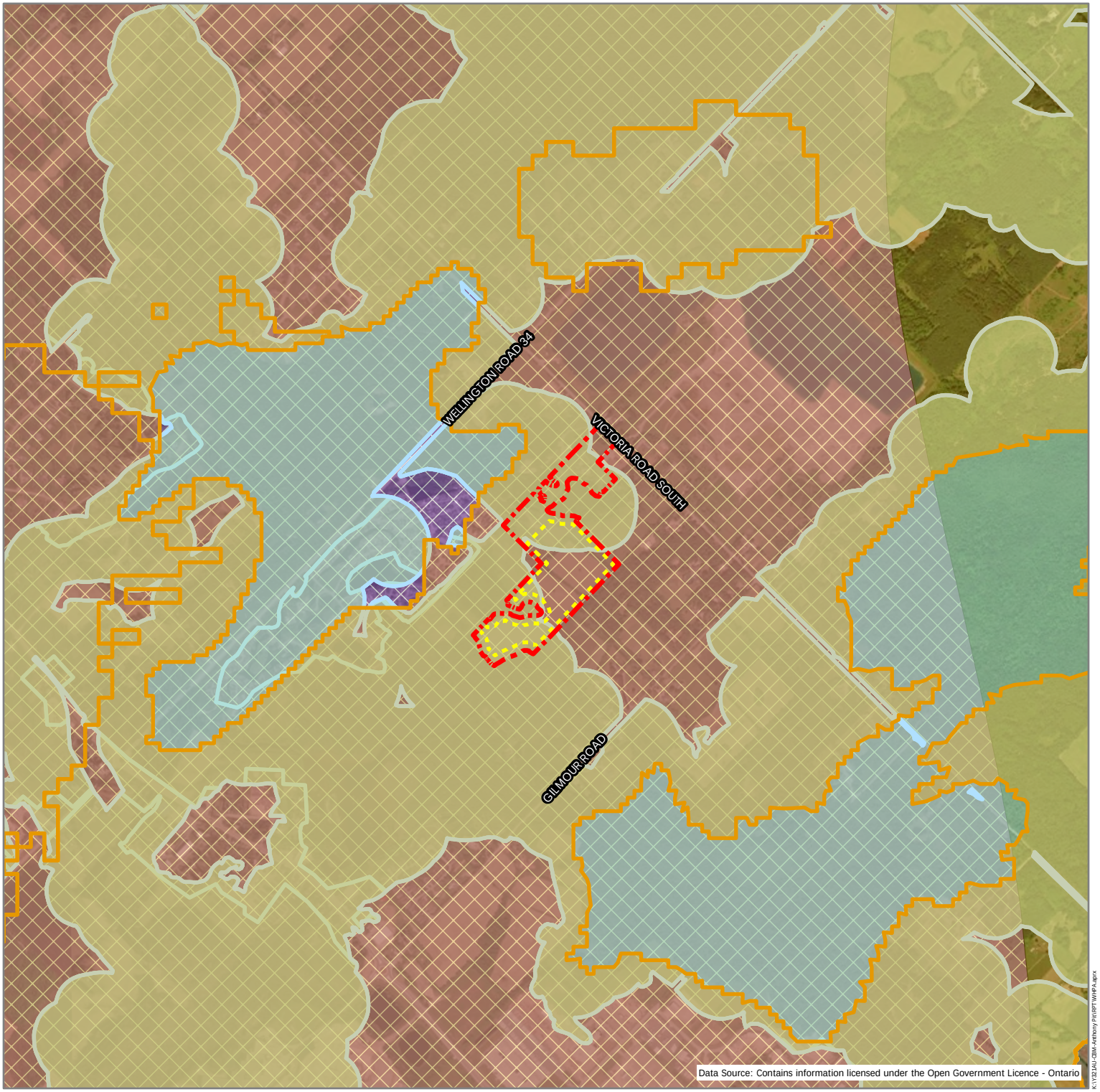


Figure 10 - Grand River Source Water Protection Plan

Boundary of Area to be Licensed

Limit of Excavation

Significant Ground Water Recharge Area (GRCA) - NA

IPZ (Intake Protection Zone) - 3 (GRCA)

Wellhead Water Quantity Zone (GRCA)
Significant Risk (Draft)

A

Appendix A: Agricultural Considerations Review

MHBC | PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE

January 5, 2026

CBM Aggregates, a division of St. Marys Cement Inc. (Canada)
55 Industrial Street
Toronto, ON
M4G 3W9

RE: Proposed Anthony Pit: Agricultural Considerations Review
OUR FILE Y321AU

MacNaughton Hermsen Britton Clarkson Planning Ltd. ("MHBC") has been retained by CBM Aggregates, a division of St. Mary's Cement Inc. (Canada) ("CBM"), to complete an Agricultural Review in support of their application to permit the Anthony Pit on lands located at 4454 Victoria Road South, legally described as Part of Lot 22, Concession 8, Geographic Township of Puslinch (**Figure 1**). The proposed pit is a below water, Class A licence pit application.

The purpose of this letter is to outline any potential impacts that the proposed pit may have on the agricultural system, and the agricultural operations in the surrounding area. The subject lands are designated 'Secondary Agricultural Area' within the Wellington County Official Plan (**Figure 2**). The Plan defines Agricultural Impact Assessment as "*means a study that evaluates the potential impacts of non-agricultural development on agricultural operations and the Agricultural System and recommends ways to avoid or, if avoidance is not possible, minimize and mitigate adverse impacts*".

It also defines Agricultural System as:

> "*the system mapped and issued by the Province, comprised of a group of inter-connected elements that collectively create a viable, thriving agricultural sector. It has two components:*
>
> 1. *An agricultural land base comprised of prime agricultural areas, including specialty crop areas and rural lands that together create a continuous productive land base for agriculture;*
> 2. *An agri-food network which includes infrastructure, services, and assets important to the viability of the agri-food sector."*

Key Findings & Summary:

- Northeast of the subject lands are buffered from surrounding agricultural operations and rural residential uses via the Natural Heritage System (NHS) Area.
- The majority of the subject lands are designated Secondary Agricultural by the County. Northeast of the subject lands is within Core Greenlands and Greenlands designation.
- The subject lands are not designated as Prime Agricultural Area in the County's Official Plan.

- The subject lands contain CLI Class 2,3,4 and 5 soils, with Class 2 being the most abundant. They are not identified as a Specialty Crop Area by Provincial Mapping.
- The secondary study area consists primarily of aggregate pits, and rural residential lots, with some cash cropping/hay production.
- The proposed pit extension is not anticipated to have any negative impacts on the agricultural system in the area, subject to the implementation of recommended mitigation measures.

Introduction & Project Description:

The Anthony Pit lands are located at 4454 Victoria Road South, legally described as Part of Lot 22, Concession 8, in the Geographic Township of Puslinch. The application is for a Class A below water pit, with an annual extraction limit of 1,000,000 tonnes. Based on studies completed by CBM, there is an estimated 1 million tonnes of high-quality sand and gravel resources available within the proposed extraction area.

The proposed application is for extraction of a below water pit on the subject lands with a proposed licenced area of 18.0 hectares (44.5 acres). The proposed extraction area of the pit is approximately 8.7 hectares (21.5 acres). The proposed pit will not contain any processing, washing, or recycling on the site. There will be no water taking (pumping or dewatering) on site. Materials will be extracted via excavators and dragline, stockpiled within the extraction area and then shipped via highway trucks, for processing at the Aberfoyle Pit (Licence #5520) and other nearby CBM processing facilities. The proposed Anthony Pit will be accessed via the existing entrance located at the east end of the subject lands. Truck travel will not be permitted to head south from the subject lands on Victoria Road South. Trucks will use the existing access for pit access.

The Anthony Pit is proposed to be extracted to a maximum depth of 304.0 masl; the depth varies between 2 metres and 21 metres. The removal of aggregate resources from below the water table will result in the creation of two ponds that (together) will total approximately 3.9 hectares in area. Shallow shoreline areas are proposed around the perimeter of the ponds.

The project is required to apply for an Aggregate Resources Act licence. This application requires several technical studies which have been reviewed as part of this letter. These include:

- Aggregate Resources Act Site Plans, MHBC Planning Ltd.
- Planning Report and Aggregate Resources Act Summary Statement, MHBC Planning Ltd.
- Water Report (Level 1 & 2), Stantec.
- Maximum Predicted Water Table Report,
- Natural Environment Report (EIS), Stantec.
- Transportation Impact Assessment, CIMA+.
- Cultural Heritage Report, Stantec.
- Stage 1 & 2 Archaeological Assessment, Stantec.
- Noise Assessment Report, Stantec.
- Best Management Plan for Fugitive Dust, Stantec.

As part of this review, the following documents and resources were also reviewed:

- Site plans including Existing Features Plan, Operational Plan, and Rehabilitation Plan;
- Soil data resource information, which should include Ontario Soil Survey reports and mapping, the provincial digital soil resource database, Canada Land Inventory Agricultural Capability mapping, and Soil Suitability information and mapping;

- Aerial Photography (historic and recent) with an effective user scale of 1:10,000 or smaller;
- OMAFRA's constructed and agricultural Artificial Drainage Mapping;
- Agricultural Systems data form OMAFRA's Agricultural Systems Portal;
- Parcel mapping/fabric of the area.
- Soil Survey and Canada Land Inventory Classification was prepared by DBH Soil Services Inc.;
- Agronomy Guide for Field Crops – Publication 811;
- Statistics Canada (2021 and 2011)

An agricultural land use assessment was conducted with additional information gathered from Google Satellite imagery used to gain a better understanding of agricultural operations in the primary and secondary study areas that were inaccessible or unobservable. A summary of the land use assessment is included in this report. The potential for impacts will vary based on the type, concentration, and sensitivity of agricultural activities identified in the Primary and Secondary Study Areas.

The purpose of this Agricultural Considerations Letter is to provide a high-level evaluation of the potential impacts of the proposed aggregate extraction operation on surrounding agricultural operations as well as the greater Agricultural System. This letter will identify any potential mitigation measures to minimize and mitigate any potential impacts to the extent feasible.

As previously discussed, the subject lands are designated 'Secondary Agricultural Area' within the Wellington County Official Plan, according to Schedule B7. The Official Plan does not consider Secondary Agricultural Areas as Prime Agricultural Areas. As such, the PPS does not require an Agricultural Impact Assessment in support of the proposed applications.

The Wellington County Official Plan requires consideration of capabilities of the lands for agriculture (Policy 6.6.5c) and agricultural rehabilitation where feasible (Policy 6.6.8e) for applications to permit mineral aggregate operations, including in Secondary Agricultural Areas. As such, this section provides a review of soil capability for agriculture and surrounding agricultural land uses, an assessment of any potential impact to surrounding agricultural uses and resources, and recommendations for the area of the site proposed to be rehabilitated to agriculture.

Description of Soils

The Canada Land Inventory (CLI) system uses soil attributes to create a seven-class system of land use capabilities. Class 1, 2 and 3 soils are capable of sustained common field crop production. Class 4 soils are limited for sustained agriculture while Class 5 is capable for use of permanent pasture and hay. The sixth class is best utilized for wild pasture and Class 7 is for soils or landforms that are not capable for use for arable culture or permanent pasture. According to the Canada Land Inventory Soils Map produced by the province, (**Figure 3**), the subject lands are comprised of CLI Class 2, 3, and 5 soils. CLI Class 2 and 3 soils are considered prime agricultural soils (see Section 4.1 of this report for further discussion on this matter).

To confirm the soil type and classification and to help inform the rehabilitation plans, a Soil Survey and Canada Land Inventory Classification was prepared by DBH Soil Services Inc. (DBH). A copy of the Soil Survey is included as **Attachment B** of this letter. On-site soil surveys were conducted on May 3rd, 2024, to more accurately map and classify the soil resources of the soil materials on the subject lands. The soil survey included a number of tasks including:

- Completion of a review of published soil data;

- Review of published Canada Land Inventory (CLI) ratings for the soils in the area surrounding the subject lands;
- Review of aerial photography and interpretation of the soil polygons, disturbed soil areas and miscellaneous landscape units (i.e. streams, wayside pits);
- On-site soil survey; and
- Mapping to illustrate the location of the subject lands, the occurrence of soil polygons and appropriate CLI capability ratings.

A total of 19 soil inspection sites within the proposed licenced area were examined and the information was then correlated with soil descriptions in order to produce the soils map. A soil map identifying the soil series present on the subject lands is shown on **Figure 4**. The majority of the soil inspection sites were limited to shallow depths (topsoil, A horizon only) due to the stoniness of the soil materials.

The onsite soil survey identified four soil series, and one miscellaneous soil group. The soil series were identified as Dumfries Loam, Burford Loam, Gilford Loam, and Muck Soils. The miscellaneous soil group was identified as disturbed lands and include the residential unit area, the laneways, and any areas where the surface soil materials have been altered.

Dumfries Loam is the well-drained member of the Dumfries Soil catena and developed on stony soil material derived from limestone. Burford Loam is the well-drained member of the Burford Soil catena and are well drained loam materials occurring over coarse gravels. Gilford Loam is the poorly drained member of the Burford Soil Catena and are located in depressional areas and are typically seasonally wet areas, with shallow water tables. The surface soils generally comprise high organic matter content, while the lower layers comprise gleyed materials and gravels within 50 cm of the surface. Muck soils are very poorly drained organic deposits that have accumulated in shallow lakes, ponds, and undrained depressional areas.

The following tables summarize the relative percent area occupied by each capability class for the subject lands:

Table 1: Canada Land Inventory – Anthony Pit

Canada Land Inventory Class (CLI)	Licence Area		Limit of Extraction	
	Area (ha)	Percent Occurrence (%)	Area (ha)	Percent Occurrence (%)
Class 1	-	-	-	-
Class 2	12.5.	53.9	9.6	92.2
Class 3	1.3	5.6	0.1	1.2
Class 4	0.8	3.4	0.1	1.2
Class 5	0.7	3.0	-	-
Class 6	-	-	-	-
Class 7	-	-	-	-
Not Rated	7.9	34.1	0.6	5.5
Totals	23.5	100	10.4	100

The proposed licensed area is comprised of approximately 59.5 percent Canada Land Inventory (CLI) class 1 – 3 soils, with CLI class 2 representing approximately 53.9 percent, and CLI class 3 representing approximately 5.6 percent. The remaining mineral soils (CLI class 4 – 7) comprise approximately 6.4 percent of the licenced area. Unrated soils comprise 34.1 percent of the licenced area. The Extraction Area comprises approximately 93.4 percent CLI class 1 – 3 soils, with CLI class 2 representing approximately 92.2 percent and CLI class 3 representing approximately 1.2 percent. The remaining mineral soils (CLI class 4 – 7) comprise approximately 1.2 percent of the Limit of Extraction Area. The DBH analysis confirms that a large portion of the subject lands is comprised of Class 2 soils. The presence of the Class 2 and 3 soils mean that the subject lands are considered prime agricultural lands.

Concerning drainage on the properties, an evaluation was done by DBH through a correlation of observations noted during windshield surveys, aerial photographic interpretation, and a review of the OMAFRA's Artificial Drainage System Mapping. Based on the information available, it does not appear that drainage systems are registered to the subject lands. As well, observations noted during the surficial soil survey indicated that the lands are not irrigated, and that the property is not set up for the use of irrigation equipment. Therefore, no additional investment in agriculture is associated with these lands.

The Hoffman Productivity Index (HPI) is a tool that is used to relate the productivity of lands to the CLI soil capability. The value is derived from the sum of the percent occurrence of each CLI Soil Capability Class on the parcel multiplied by the productivity index corresponding to the soil class. Based on the findings from the Soil Survey prepared by DBH Soil Services Inc., the calculated Soil Productivity Rating is 0.49 or a CLI class 4 equivalent for the proposed licenced area, and 0.75 or a CLI Class 2 equivalent for the proposed extraction area.

Agricultural Uses on the Subject Lands and the Surrounding Area

The agricultural land use assessment completed as part of this review was based on a study area comprised of a 'Primary Study Area' and 'Secondary Study Area.' The Primary Study Area is comprised of the lands within 120 metres of the proposed area to be licenced that will be directly affected by aggregate extraction. The Secondary Study Area encompasses a radius of 1.5 kilometers from the subject lands that has the potential to be directly and/or indirectly impacted by the proposed aggregate extraction operations.

A plan identifying the adjacent properties, existing crops, and existing barns within the study area is included as **Figure 5** of this letter. The inventory of existing agricultural land uses, cropping practices and structures is based on observations made during a site visit, review of air photography and input from the current landowner. A review of 2021, 2016, and 2011 Census of Agriculture data was also undertaken to confirm if the agricultural uses in the Study Areas are representative of agricultural production patterns and livestock types in the broader region.

Primary Study Area

Based on the Ontario Ministry of Agriculture, Food, and Agribusiness (OMAFA) 'Draft Agricultural Impact Assessment (AIA) Guidance Document' (herein referred to as 'OMAFA AIA Guidelines'), the primary study area when conducting an Agricultural Impact Assessment for mineral aggregate

resource extraction consists of the proposed licence area and lands within 120 metres of the licenced area. As shown in **Figure 5**, land uses within the primary study area consist of agriculture and rural residential with natural heritage features (woodlands and wetlands) interspersed. Agricultural uses within the primary study area consist of typical cash crops (corn) with some fields visible only in aerial imagery (due to surrounding woodlots) making roadside crop identification impossible. Through a review of aerial imagery, these fields do not appear to have any established specialty cropping practices or perennial crops (ex. orchards) that stray from the characteristics of the surrounding agricultural area. At the time of the site visit, agricultural production on the lands consisted of corn production. No agricultural structures were present on the lands. There are no visible signs of extensive agricultural improvements to the lands proposed to be licenced (e.g. new fencing, tile drainage).

Secondary Study Area

According to the OMAFRA AIA Guidelines, the secondary study area should include lands that will be potentially impacted by the development and should, at a minimum, include lands adjacent to the primary study area. For mineral aggregate operations, the extent of the secondary study area varies depending on the scale and extent of the proposed mineral aggregate operation and on agriculture in the surrounding area. The secondary study area for this review includes lands within 1.5 kilometers of the proposed licenced boundary.

As shown on **Figure 5**, land uses within the secondary study area generally consist of a mixture of agriculture (cash crops), environmental features (wetlands and woodlands), and lands within the Aberfoyle Settlement Area. Surrounding crops (at the time of the site visit) included hay and soy (southeast), and corn (south). As well, a Christmas Tree farm (Ho Ho's Christmas Trees) is mapped northwest and adjacent to the subject lands; no plantation style coniferous tree plantings are observable from aerial imagery. Several fields within this area were observed as fallow at the time of the site visit. Four livestock operations were observed within the Secondary Study Area. A boarding kennel was observed just southeast of the subject lands off Victoria Road South.

Based on the site visit, the agricultural lands within the Primary and Secondary Study Areas reflect typical agricultural cropping practices that are predominant throughout southern Ontario (soybean and corn production). No extensive land improvement investment such as tile drainage, irrigation or other specialized cropping practices or equipment was observed or documented within the Primary or Secondary Study Areas.

The surrounding area (Secondary Study Area) also includes two aggregate pits: Aberfoyle Pit 2 (Licence No. 5609) and Aberfoyle Pit 1 (Licence No. 5483). More aggregate operations exist beyond the Secondary Study Area to the south-west of the site. A Rural Employment Area is also located just south of the Secondary Study Area.

There are also many rural residential lots within the Secondary Study Area, along Victoria Road South, Wellington Road 34, and Gilmour Road. A number of these lots were likely created through rural residential severances or by plan of subdivision.

Overall, the Secondary Study Area is representative of normal cropping practices for the County (typical crop patterns) and is highly fragmented by nature of numerous rural residential dwellings, rural estate subdivisions, the Aberfoyle Settlement Area, a Rural Employment Area, and existing aggregate operations.

Census of Agriculture & Ontario Business, Agri-Food, and Farm Data Profile for Township of Puslinch

The 2021, 2016, and 2011 Census of Agriculture and OMAFA's Ontario business, agri-food, and farm data profile for Township of Puslinch were reviewed to provide an overview of agricultural production patterns and parcel size in this census consolidated subdivision.

North American Industry Classification System (NAICS) data for 2011, 2016, and 2021 were also utilized to determine trends in farm types within the Township. In 2021, crop farming in the Township of Puslinch was dominated by oilseed and grain farming, which accounted for 22% of all farms in the Township. Within this category, soybean farming made up 37.9%, corn farming 34.5%, and other grain farming 17.2%[4]. Oilseed and grain farming has increased in the Township since 2011 (increase of 3.6% in number of oilseed and grain farms from 2011 to 2021). As of 2021, the next most common category of crop farming in Puslinch is other crop farming (15.2%), which primarily includes hay farming (65% of other crop farming). Other crop farming has decreased since 2011 (decrease of 23.1%). Oilseed and grain farming and corn farming are the most common crop type within the study area, which is generally reflective of agricultural patterns throughout Township of Puslinch.

In terms of livestock, other animal production comprised 26.5% of total farms (of which 65.7% of farms were horse and other equine production and 20% animal combination farming) in Puslinch. Other animal production has exhibited a 35.2% decrease in number of farms since 2011[5]. Cattle ranching and farming comprises 15.2% of total farms within the Township, of which primarily beef cattle (90%) and dairy cattle (10%). Four horse farms were observed within the Secondary Study Area, and no other occupied livestock facilities. This is consistent with the agricultural trends identified in the Township's census data.

In terms of parcel size, in 2021 the greatest number of farms (35.6%) were within the 10-69-acre farm size, followed by 27.3% of farms falling in the 70-129-acre range[1]. The area of lands in crop production has decreased since 2011 from 7,491[2] hectares to 3,925[3] hectares, representing a decrease of 47.6%.

Based on the site visit, the agricultural activities within the Primary Study Area appear to be consistent with of broader cropping trends in Township of Puslinch. The surrounding crops include typical cash crops such as soybeans and corn. Occupied livestock operations consisted only of four horse farms.

Overall, both the Primary and Secondary Study Areas are representative of normal agricultural production for this area and do not consist of specialized farming practices or specialty crops.

[1] Table 32-10-0232-01 Farms classified by total farm area, Census of Agriculture, 2021
[2] Table 32-10-0406-01 Land use, Census of Agriculture, 2011 and 2016, inactive
[3] Table 32-10-0249-01 Land use, Census of Agriculture, 2021
[4] Table 32-10-0231-01 Farms classified by farm type, Census of Agriculture, 2021
[5] Table 32-10-0403-01 Farms classified by farm type, Census of Agriculture, 2011 and 2016, inactive

Assessment of Impacts

This subsection provides an assessment of the potential impacts of the proposed pit on components of the Agricultural System.

Table 2 below is consistent with Table 3 (*Minimize and Mitigate Impacts*) found in section 3.2.2 of the Province's *Draft Agricultural Impact Assessment Guidelines*. The purpose of this table is to provide a summary of how the proposed pit minimizes or mitigates impacts on surrounding agricultural uses.

Table 2: Summary of Net Impacts

Objective	Mitigation Measure	Description
Minimize the loss of agricultural land	Select areas with less agricultural land and lower priority agricultural lands	The subject lands are not considered a part of the County's prime agricultural area and as such, constitute lower priority agricultural lands.
	Rehabilitate the land	The extent of the subject lands where above the water table extraction is proposed will be rehabilitated to an agricultural condition with the same average soil capability (i.e. Class 2).
	Phase Development	Development and rehabilitation will be phased to ensure that agricultural activities continue on the lands until it is needed to be extracted. Extraction phases 1 and 2 (portion of site proposed to be extracted above the water table and returned to an agricultural condition) shall undergo progressive rehabilitation in direct correlation to the development of the pit as the extraction limits in each phase are reached and enough area is available to ensure that rehabilitation activities will not interfere with the production and stockpiling of aggregate materials.
Minimize the fragmentation of agricultural land	Maintain farm parcels	The surrounding agricultural system is already highly fragmented by nature of surrounding rural residential, estate residential, and aggregate uses; natural features; and, settlement areas. The proposed pit will not serve to worsen fragmentation, with a portion proposed to be rehabilitated to an agricultural condition and the remainder proposed to be rehabilitated to ponds and natural features which can provide ecosystem services that support agriculture.
Minimize impacts on farmland and agricultural operations	Minimum Distance Separation	MDS I and II setbacks are not required for mineral aggregate resources.
	Select compatible land uses; put lower impact development adjacent	The proposed pit would be buffered from adjacent agricultural land uses through the provision of setbacks, berms, and existing vegetation.

	to farmland and operations	
	Design to support agriculture (e.g. help farms to continue to operate; help prevent and reduce trespassing and vandalism)	Conflicts between the proposed pit and the surrounding agricultural land uses will be minimized through the implementation of physical and visual barriers (vegetative berms) as required by the ARA site plans. Impacts to traffic will be mitigated based on the recommendations of the traffic report.
Minimize and mitigate changes in water quality or quantity	Implement a groundwater monitoring program	A groundwater monitoring program is included on the Site Plan.
Mitigating impacts during construction or operations (e.g. mitigate dust, noise)	Adjust operational procedures to accommodate agriculture in the area	This area of the County is characterized by higher levels of aggregate activities; surrounding agricultural uses are accustomed to the operational procedures associated with mineral resource extraction. Dust suppression will be applied as required by O. Reg. 244/97 under the Aggregate Resources Act.
	Vegetative berms	Proposed setbacks will create buffering between the proposed pit and surrounding land uses (including agricultural operations).
	Maintain, restore, or construct farm infrastructure	The subject lands do not include any farm infrastructure that is proposed to be removed.
Mitigate ongoing impacts from new development	Implement measures that can be in place post development to support compatibility with agriculture	All planting associated with the berms will be non-invasive species and will not impact agricultural rehabilitation or production when a portion of the lands are returned to an agricultural condition.
Education to achieve greater compatibility between agricultural and non-agricultural uses	Education and awareness	CBM will educate the public on rehabilitation efforts to demonstrate the importance and impact of agricultural rehabilitation. CBM plans to continue to build internal expertise and knowledge on agricultural rehabilitation, including through working closely with local farmers.

Agricultural Rehabilitation

4.6 hectares of the licenced area are proposed to be returned to an agricultural condition with an average soil capability of CLI Class 2.

The following recommendations are made for agricultural rehabilitation, where applicable:

1. Agricultural rehabilitation shall be in accordance with the agricultural rehabilitation sequence schematic on the Rehabilitation Plan to ensure best practices are followed throughout the progressive rehabilitation of the pit.
2. Progressive rehabilitation procedures that avoid substantial storage of topsoil and minimize the storage of subsoil shall be implemented. Stripped soils, not required for berm construction, shall be moved directly to depleted areas where they will be immediately used for agricultural rehabilitation. Stripping areas shall be limited to what is required for the season of operation.
3. During pit operations, access to the agricultural rehabilitation area and undisturbed areas used for agricultural purposes will be maintained.
4. Topsoil shall be replaced across the site at the same pre-extraction depths, as documented in the DBH Soil Report, 2024, which is approximately 15 centimeters for topsoil in accordance with the agricultural schematic on the plan. DBH's soil inspection sites were limited to shallow depths (topsoil, A horizon only) due to the stoniness of the soil materials.
5. Soil will be handled under suitable conditions. Travel over soils and rehabilitated areas shall be minimized to reduce compaction. Ripping / tilling the soil will occur, where necessary, to alleviate soil compaction and shall avoid the mixing of soil materials / layers during the process.
6. Once grading is completed, a vegetation cover (such as perennial crops) shall be immediately established within the agricultural rehabilitation area to reduce erosion, add organic matter to the soil and improve soil structure. A grass-legume cover crop shall be established throughout rehabilitation and maintained for up to five years and ploughed under annually to promote and increase organic matter. Alternatively, field crops (e.g. wheat, soy, corn, hay) shall be established immediately following rehabilitation grading.
7. After final rehabilitation, soil testing shall be completed by a qualified professional to analyze soil conditions to demonstrate that pre-extraction soil capability has been restored. Adjustments to cropping practices and/or soil amendments may be required based on the results of the soil testing and shall be undertaken in consultation with the property owner. A report shall be submitted by a qualified professional following final rehabilitation and provided to MNR prior to Licence surrender to demonstrate that the agricultural area has been rehabilitated back to the pre-extraction soil capability (CLI Class 2 soil capability).
8. Best management practices shall be implemented with respect to the storage and application of organic material, fertilizers, and pesticides.

Yours truly,

MHBC

Pierre Chauvin, BSc (Agr), MA, MCIP, RPP
Partner

Chelsea Brooks, MA, MSc(Pl.), RPP, MCIP
Senior Planner

cc. *Yara Elmahdy, MHBC*
Neal DeRuyter, MHBC

Attach *Attachment 1 - Figures*
Attachment 2 - Soil Survey

A

Attachment 1: Figures

Figure 1 - Context Plan

- Boundary of Area to be Licensed
- Limit of Excavation
- Aggregate Site Authorized Active
- Municipal Boundary
- Settlement Area

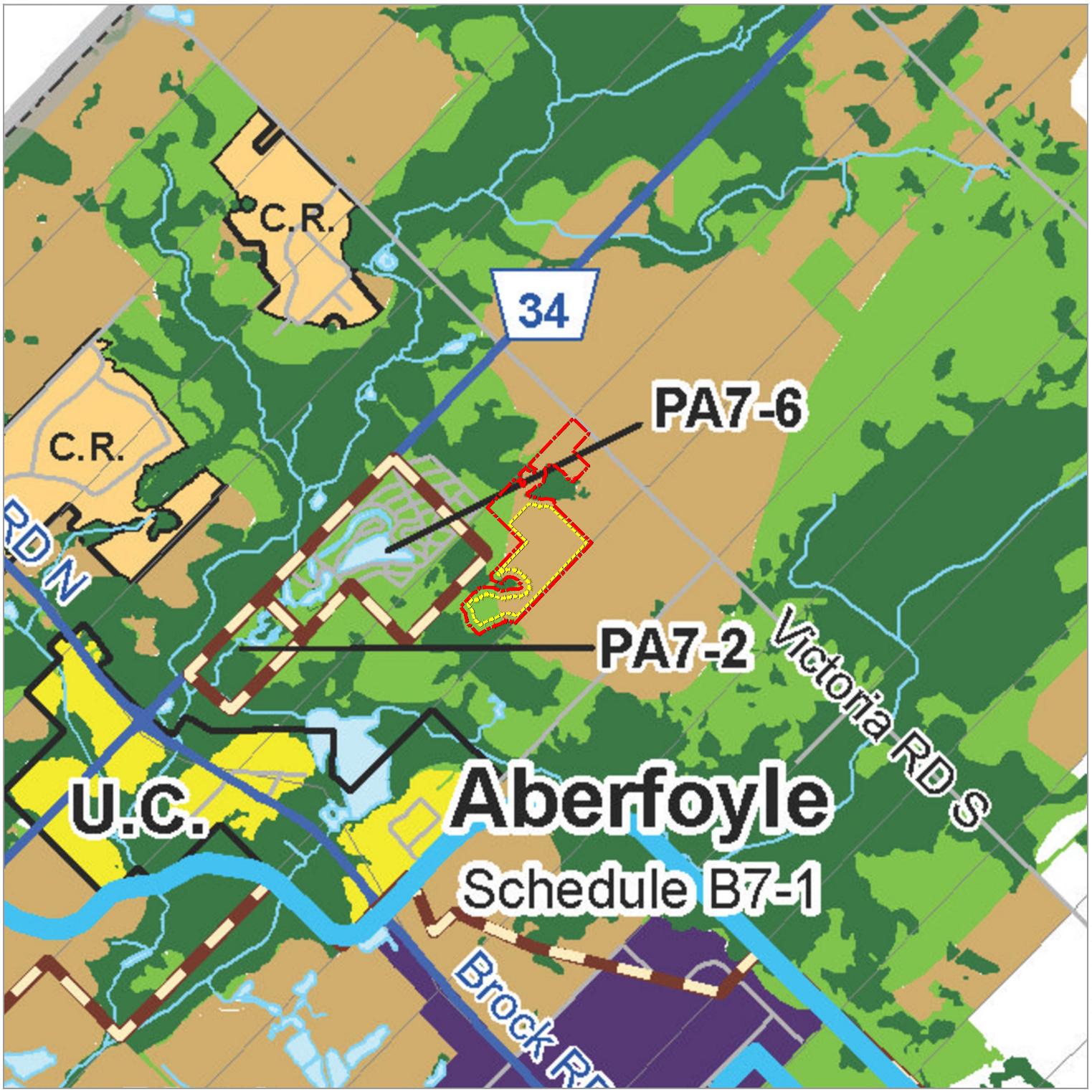


Figure 2 - County of Wellington Official Plan, Schedule B7 Land Use

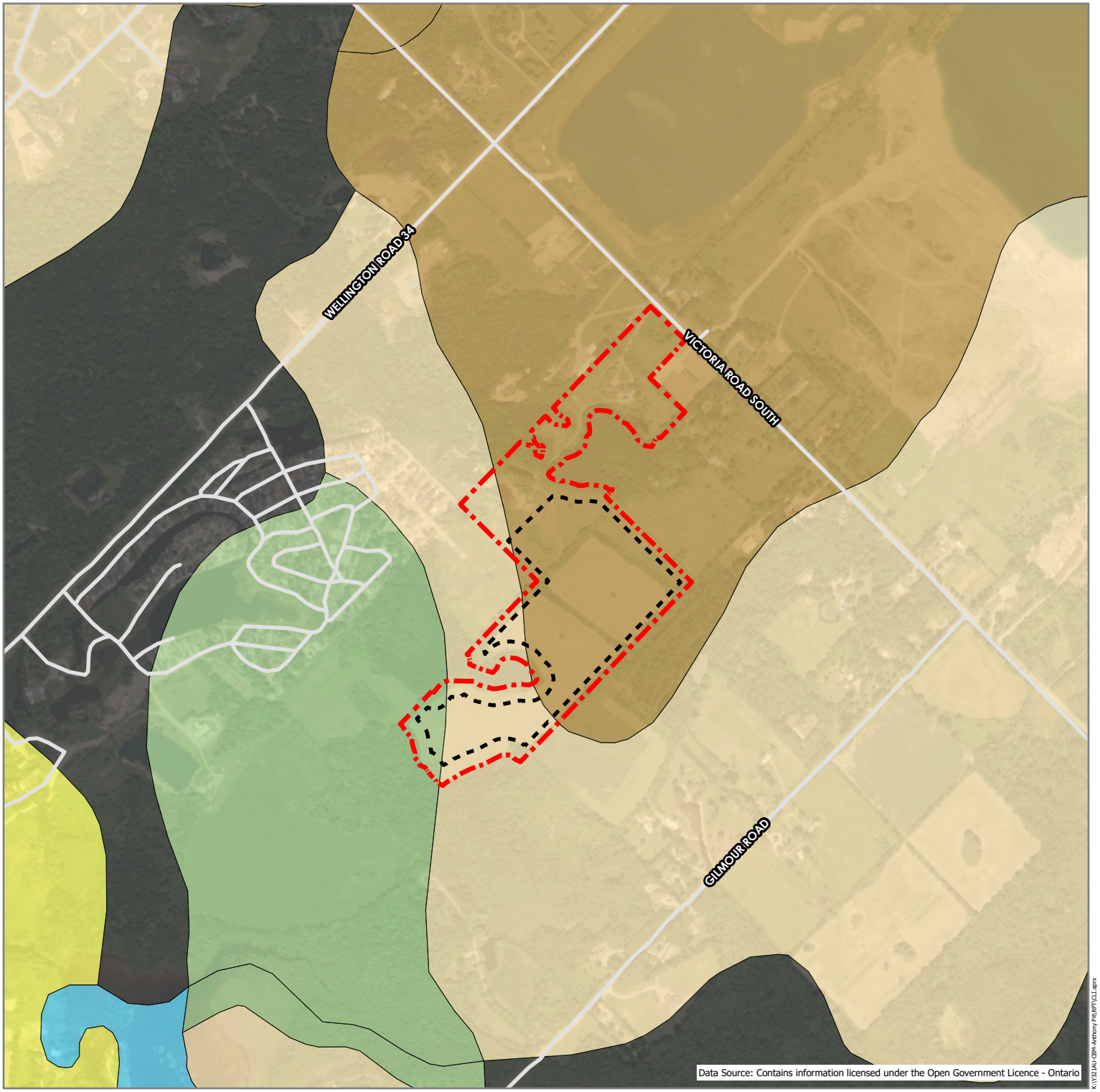


Figure 3 - Canada Land Inventory Soils

Boundary of Area to be Licensed

Limit of Excavation

Soil Class

Class 1

Class 2

Class 3

Class 4

Class 5

Class 6

Class 7

Organic

Water

Other



Figure 4: Detailed Soil Survey

LEGEND

Subject Lands

- Soil Inspection Location
- Maximum Extraction Limit
- Proposed License Boundary
- Parcels
- Soil Polygon Boundary
- Study Area

Roads

- Local Road - Rural
- County

Soil Code	
Bg	Burford Loam
Dl	Dumfries Loam
Gf	Gilford Loam
Dist	Disturbed Soils

CLI Subclass Limitation	
F	Fertility
M	Moisture
S	Combined subclasses
T	Topography
W	Excess Moisture

Slope Class	
Aa	0.0 - 0.5%
Bb	0.5 - 2.0%
Cc	2.0 - 5.0%
Dd	5.0 - 9.0%
Ee	9.0 - 15.0%
Ff	15.0 - 30.0%
Gg	30.0 - 45.0%

Slope length < 50 m
Slope length > 50 m

Soil Code — Slope Code
Dl
2FM
CLI Class — CLI Subclass

DATE: May, 2024

SCALE: NTS

FILE: Y321BA

DRAWN: DGS

north

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4454 Victoria Road South
Part of Lot 22, Concession 8
Township of Puslinch
County of Wellington

Source:
Detailed Soil Survey and Canada Land Inventory (CLI)
DBH Soil Services Inc. May 2024.

MHBC PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
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Figure 4: **Agricultural Land Uses**

4454 Victoria Road South, R.R. #1
Puslinch, ON

LEGEND

- Subject Lands
- 1.5km Buffer
- Settlement Boundary
- Municipal Boundary
- Rural Employment Area
- Active Pit
- Unoccupied Barn
- Horse and other equine production

Agricultural Land Use

- Corn
- Fallow
- Hay
- Soy
- Unknown

Sources:

- Land use information based on field observations July, 2022 & Aerial imagery interpretation
- Contains information licensed under the Open Government Licence – Ontario.

DATE: December, 2025

FILE: Y321AZ

SCALE: 1:20,000

DRAWN: GC

north

Document Path: K:\Y321BA-CBM-Tikal\AIA\Agricultural_Land_Use2.aprx

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B

Attachment 2: DBH Soil Survey

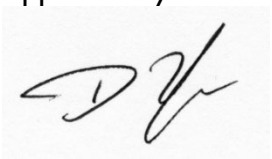
DOCUMENT TRANSMITTAL

Document:	**SOIL SURVEY AND CANADA LAND INVENTORY (CLI) EVALUATION** **TIKAL PIT** **4454 VICTORIA ROAD SOUTH** **TOWNSHIP OF PUSLINCH** **COUNTY OF WELLINGTON**		
Prepared for:	Ms. Chelsea Major MHBC – Urban Design & Landscape Architecture 540 Bingemans Centre Drive Suite 200 Kitchener, ON N2B 3X9	Date Our Ref. No. Your Ref. No.	May 17, 2024 2023 - 22
Attention:	Ms. Major	DRAFT ☑	FINAL

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Approved by:



Dave Hodgson, P. Ag.
President
DBH Soil Services Inc.

SOIL SURVEY AND CANADA LAND INVENTORY (CLI) EVALUATION
TIKAL PIT
4454 VICTORIA ROAD SOUTH
TOWNSHIP OF PUSLINCH
COUNTY OF WELLINGTON
DRAFT

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May 17, 2024

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APPENDIX B Grand River Conservation Authority Contour Mapping
APPENDIX C Soil Inspection Site Characteristics
APPENDIX D Curriculum Vitae

1.0 BACKGROUND

DBH Soil Services Inc. was retained to complete a Soil Survey and Canada Land Inventory (CLI) classification assessment for an area identified as:

4454 Victoria Road South
Township of Puslinch
County of Wellington

This area is comprised of one parcel identified by the Municipal Property Assessment Corporation (MPAC) Roll Number 230100000601950000. The Roll Number was identified in the County of Wellington online mapping (https://sgis.wellington.ca/Maps/index.html?viewer=WellingtonCountyExternal).

A visual representation of the property size, shape and relative location is presented as an image reproduced from Explore Wellington online mapping viewer. Image 1 (below) illustrates the relative location and shape of the parcel as provided in the Explore Wellington Imagery (https://sgis.wellington.ca/Maps/index.html?viewer=WellingtonCountyExternal) as a blue outline and fill.

Image 1 Explore Wellington Imagery



Source: Explore Wellington Imagery (https://sgis.wellington.ca/Maps/index.html?viewer=WellingtonCountyExternal)

For the purposes of this Soil Survey and CLI evaluation, this parcel is henceforth referred to as the Study Area.

The Study Area lands comprise approximately 23.5 ha (58.06 acres) of which much of the lands are used for agricultural crop production (common field crop, soybean in the 2023 growing season based on crop stubble). The non-cropped lands included woodland areas located in fence rows, large woodland areas near the residential unit (east) and in the western portion of the parcel. Additional woodland areas were noted in fence rows throughout the parcel. Scrub lands were noted west of the residential unit, and in the central area. Areas of surface water (ponding) were noted near the residential unit and in the central portions of the parcel.

A rural residential unit was observed on the eastern portion of the parcel fronting Victoria Road South. No livestock or livestock facilities were observed on the property during the onsite soil survey.

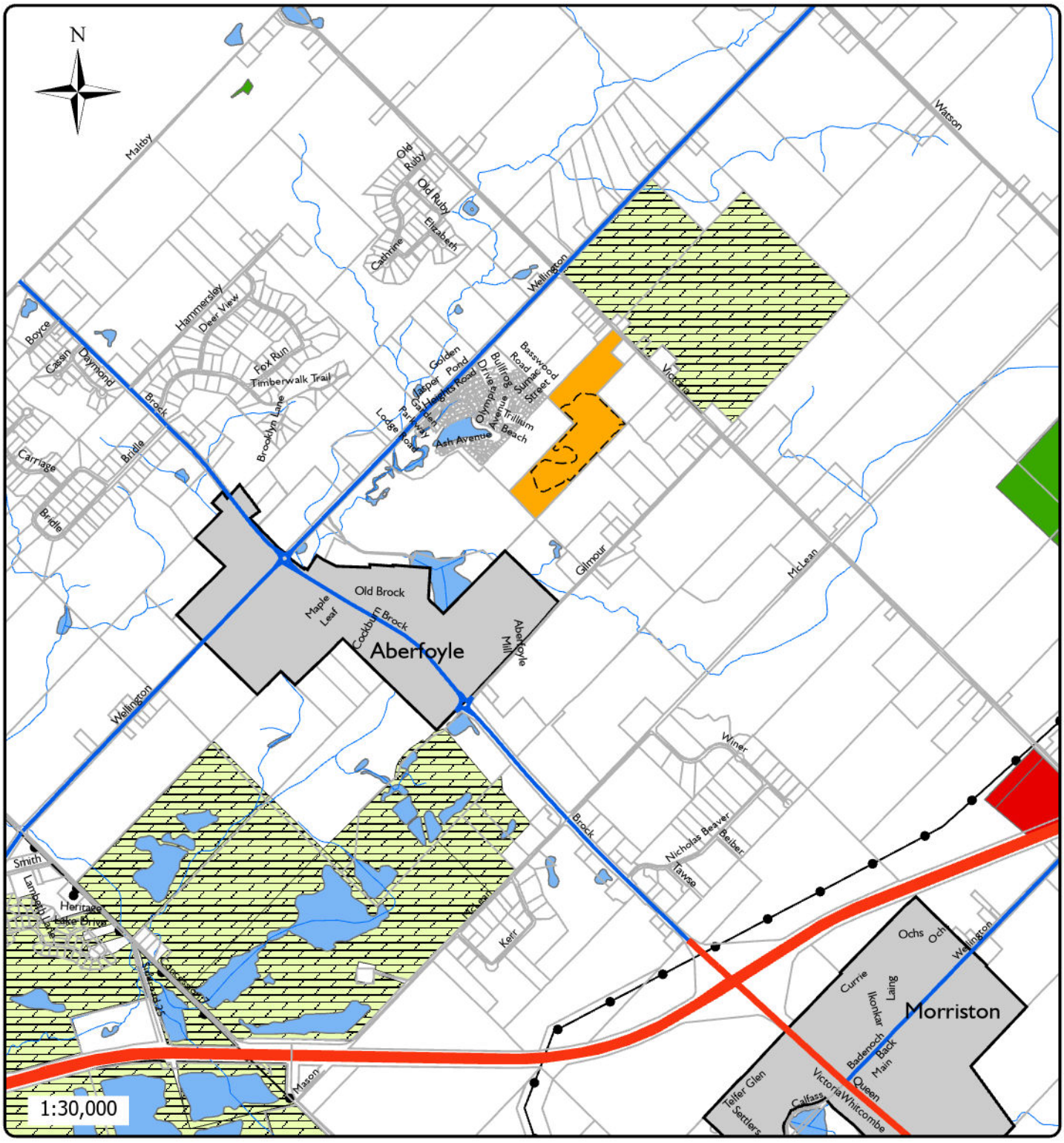
The Study Area is roughly bounded: on the east by Victoria Road South, rural residential units, and woodlands; on the south by woodlands, agricultural fields, and rural residential units; on the west by woodlands, agricultural fields; and on the north by agricultural fields, woodlands, and the Millcreek Country Club community.

The Study Area is located east of the urban area of Aberfoyle, approximately 2.7 km north of Highway 401, and approximately 4.2 km southeast of the urban area of Guelph.

This report was completed to document the existing soil conditions and to provide a more detailed assessment of the CLI classification of the soil resources onsite. This report documents the methodology, findings, conclusions, and mapping completed for this study.

Figure 1 illustrates the relative location of the Study Area with respect to the above-mentioned geographical and cultural features.

Figure 1 also illustrates the Maximum Extraction Area and the License Area (Study Area).



Legend

- Utility Line (MNRF)
- Watercourse (MNRF)
- Aggregate Authorized Active (MNRF)
- Maximum Extraction Area
- Parcels (Wellington County)
- Settlements (Wellington County)
- Study Area (License Area)

Tile Drainage (OMAFRA)

- Random
- Systematic

Roads (Wellington County)

- Local Road - Rural
- County
- Expressway
- Highway

Figure 1

Location

DBH Soil Services Inc.

May 2024

2.0 METHODOLOGY

2.1 FIELD DATA COLLECTION

2.1.1 SOIL INVESTIGATION

Basic soils (and CLI) information was provided in the OMAFRA soils and mapping report *Soil Survey of Wellington County (Report No. 35 of the Ontario Soil Survey, Hoffman, D.W, B.C. Matthews and R.E. Wicklund,1963),* Digital mapping was provided by OMAFRA through the Land Information Ontario (LIO) warehouse website. The digital mapping was provided at a scale of 1:50000. Mapping at this scale is of a general nature when referring to site-specific planning; therefore, detailed soils or soil verification assessments are often required for farm scale or lot size planning initiatives and applications for amendments to Official Plans and/or Zoning By-Laws.

In an effort to 'standardize' the approach or methodology used in detailed soil surveys, OMAFRA created guidelines for detailed soil surveys in a document titled *Guidelines for Detailed Soil Surveys for Agricultural Land Use Planning*. This OMAFRA document was available online until recently. Recent email conversations with staff from OMAFRA indicated that OMAFRA is transitioning from the older government website to a new centralized website. It was noted that this document is slated for transition but has not been added to the new site. Further, OMAFRA will be updating the document to include more detailed instructions as to the depths of soil inspection, and to indicate that detailed soil survey is useful in more than just agricultural land use planning. Staff from OMAFRA have indicated that in the interim, the document can still be identified (included as Appendix A), with further reference being made to the Mapping Systems Working Group documents as follows:

Soil Mapping System for Canada: (https://sis.agr.gc.ca/cansis/publications/manuals/1981-smsc/index.html).

Soil Survey Handbook: (https://sis.agr.gc.ca/cansis/publications/manuals/1987-9/index.html).

The original OMAFRA guidelines (Appendix A) were created in response to concerns with the accuracy of published mapping and classification of soil materials and that the existing information is of too general a nature to adequately describe and interpret the soil properties for site-specific planning purposes.

The standards for completing a detailed soil evaluation included the following tasks:

- Completion of a review of published soil information – County/Region Soil Report of the Ontario Soil Survey (OMAFRA),
- Conduct a review of published Canada Land Inventory (CLI) ratings for the soils of this area,
- Conduct an aerial photographic review and interpretation of the soil polygons, disturbed soil areas and miscellaneous landscape units (ie: streams, wayside pits),

- Conduct an onsite soil survey at an appropriate scale and survey density,
- Completion of mapping to illustrate the location of the property, the occurrence of the OMAFRA soil polygons and appropriate CLI capability ratings,
- Completion of a report outlining the methodologies employed, findings (including a discussion of relevant features identified) and a conclusion as to the relevance of the CLI classifications for the soil polygons on the property and how they relate to the Provincial Policy Statement.

Further, OMAFRA has provided a document titled "Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for Application of the Canada Land Inventory in Ontario." http://www.omafra.gov.on.ca/english/landuse/classify.htm (July 2023, online version).

A detailed onsite soil survey and surrounding land reconnaissance survey were conducted on May 3, 2024.

2.1.2 PHYSIOGRAPHY

Physiographic information and Quaternary Geology information was provided in *The Physiography of Southern Ontario 3rd Edition, Ontario Geological Survey Special Volume 2, Ministry of Natural Resources, 1984*. A further review of the digital Physiographic from the Land Information Ontario website was completed.

Physiographic information provides details on the parent materials from which the soil developed in a specific area.

2.1.3 TOPOGRAPHY AND CLIMATE

Topographic information was reviewed and correlated to the 0.5 m contour mapping available from the Grand River Conservation Authority (GRCA) website (https://maps.grandriver.ca/web-gis/public/?theme=MYP&bbox=539184,4790579,566563,4805220). The GRCA contour mapping is provided in Appendix B.

Additional contour data, mapping and assessments were reviewed and included the 1:10000 scale Ontario Base Mapping, LIO digital contour mapping, detailed soil survey assessment (using a handheld clinometer), aerial photo interpretation and windshield surveys.

Climate data was taken from the OMAFRA document titled *Agronomy Guide for Field Crops – Publication 811 (2017)* and the *Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) Factsheet – Crop Heat Units for Corn and Other Warm Season Crops in Ontario, 1993*.

3.0 FINDINGS

3.1 PHYSIOGRAPHY AND CLIMATE

The *Physiography of Southern Ontario* Physiographic Unit Map indicates that the Study Area is located in the Horseshoe Moraines Physiographic Region. The Horseshoe Moraines Physiographic Region is a large, horseshoe shaped area that flanks the upland areas west of the highest portions of the Niagara Cuesta. The chief landforms are irregular stony knobs and ridges that are composed of till, with some sand and gravel deposits, and sand/gravel terraces with swampy valley floors. The southern portion of the Horseshoe Moraine Physiographic Region near Paris comprises moderately hilly areas that flatten out.

The surface material in this physiographic region is generally sandy overlying till, kames, moraines and outwash sands which may occur in the hollows. The majority of the surface sands are fine sandy materials.

3.2 TOPOGRAPHY

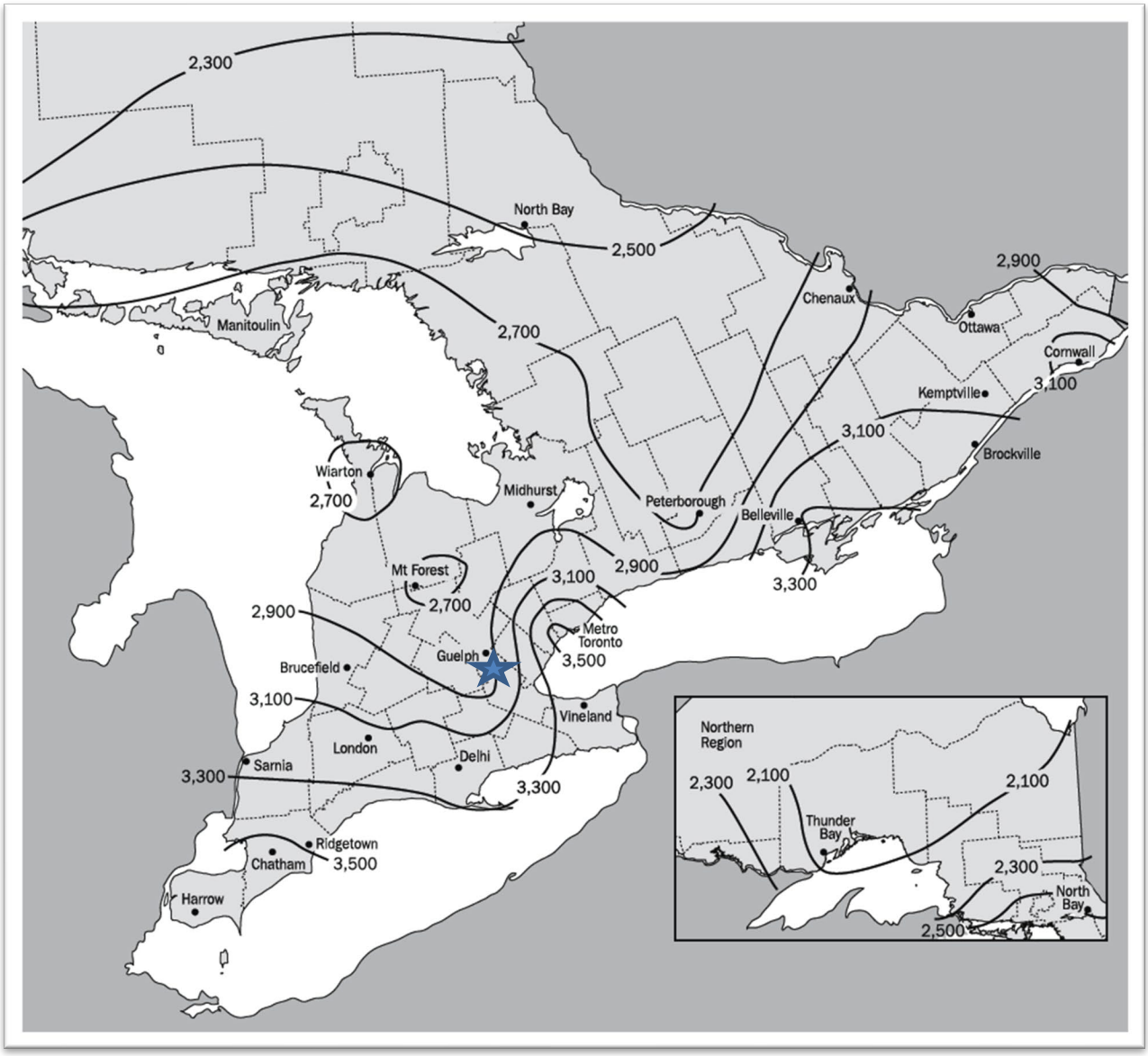
The topography of the Study Area is a mix of gently sloping lands, combined with steeper slopes located adjacent to the ponded areas, a small knoll in the central area, and along the western edge of the fields, in the western portion of the property

3.3 CLIMATE

The Study Area is located near the 2900 average accumulated Crop Heat Units area in Ontario. The Crop Heat Units (CHU) index was originally developed for field corn and has been in use in Ontario for 30 years. The CHU ratings are based on the total accumulated crop heat units for the frost-free growing season in each area of the province. CHU averages range between 2500 near North Bay to over 3500 near Windsor. The higher the CHU value, the longer the growing season and greater are the opportunities for growing value crops.

Crop Heat Units for corn (based on 1971-2000 observed daily minimum and maximum temperature (OMAFRA, 2009)) map image is illustrated below. The approximate location of the Study Area is marked with a blue star.

Image 2 Crop Heat Units Mapping



Source: Agronomy Guide for Field Crops OMAFRA – Publication 811

3.4 DETAILED SOIL SURVEY

A detailed on-site soil survey was conducted to map and classify the soil resources of the soil materials on the Study Area lands. The soil survey included the following tasks:

- Completion of a review of published soil information *(Soil Survey of Wellington County (Report No. 35 of the Ontario Soil Survey, Hoffman, D.W, B.C. Matthews and R.E. Wicklund,1963))*
- Conduct a review of published Canada Land Inventory (CLI) ratings for the soils of this area,
- Conduct an aerial photographic review and interpretation of the soil polygons,

disturbed soil areas and miscellaneous landscape units (ie: streams, boulder pavement, wayside pits),
- Conduct an on-site soil survey,
- Completion of mapping to illustrate the location of the property, the occurrence of soil polygons and appropriate CLI capability ratings,
- Completion of a report outlining the methodologies employed, findings (including a discussion of relevant features identified) and a conclusion as to the relevance of the CLI classifications for the soil polygons on the property.

The detailed soil survey of the Study Area lands, and reconnaissance of the surrounding area was conducted on May 3, 2024. Aerial photographic interpretation was used to delineate soil polygon boundaries by comparing areas, on stereoscopic photographs (and imagery), for similar tone and texture. Delineated soil polygons were evaluated for the purpose of verifying soil series and polygon boundaries. The evaluation was completed through an examination of the existing soil conditions to a minimum depth of 100 cm or to refusal. A handheld Dutch soil auger and/or Dutch stone auger was used to extract the soil material to a minimum depth of one metre (or to refusal).

Each soil profile was examined to assess inherent soil characteristics. Soil attributes were correlated with the *Canadian System of Soil Classification (CSSC) (Agriculture Canada, 1998)* and the *Field Manual for Describing Soils in Ontario (Ontario Centre for Soil Resource Evaluation, 1993)*. A handheld clinometer was used to assess percent slope characteristics. Soils were assigned to a soil map unit (series) based on soil texture (hand texturing assessment), soil drainage class and topography (position and slope).

Depth to free water within one metre of the soil surface was also recorded at inspection sites located on lower slope positions (where applicable). Names for the soil series and the CLI ratings were assigned to each soil polygon by correlating the soil series with soils information presented in the *Soil Survey of Wellington County (Report No. 35 of the Ontario Soil Survey, Hoffman, D.W, B.C. Matthews and R.E. Wicklund,1963)* and with the CLI information presented on the 1:50000 scale manuscript mapping, and the OMAFRA digital soils data.

Observations noted at the time of the onsite soil survey included:
- The majority of the Study Area lands were used for the production of common field crop (soybean in the 2023 growing season).
- Woodland areas were noted around the ponded areas, along the eastern portion of the parcel, in fence rows, and along the western portions of the parcel.
- A small area of scrubland was noted in the eastern portion of the Study Area.
- The lands were generally gently sloping, except for steeper slopes near the ponded areas.
- Stone piles were noted along the edge of the fields in various locations around the Study Area.
- Stones were noted on the surface of the soils throughout the parcel.
- Stones were of varying size including gravel and cobble sizes.
- Stones were rounded (river stone).

- A few small ponds and seasonally ponded areas were noted.
- A larger poorly drained area was noted in the western portion of the parcel.

Photographs 1 through 6 provide a depiction of the general Study Area physical conditions. The area near the residential unit is considered a disturbed soil area. This area extends to the west past the large, ponded area and includes steeper, short slopes. Based on the small piles of stone and soil materials located within this area, this area was considered a disturbed area. Smaller ponded areas were noted along the northern property boundary, adjacent to the disturbed area.

The north central area included small ponds, disturbed areas (associated with a small cabin), and small wayside pits. Small piles of soil, stones and other detritus were noted in this area. The remainder of the Study Area included agricultural fields, ponded areas, and woodlands.

Photograph 1 illustrates the hummocky topography looking west from near the back of the residential unit and pathway.



Photograph 1

Photograph 2 illustrates the stony soils from the wall of a small wayside pit on the Study Area lands.



Photograph 2

Photograph 3 looks to the west from the central area at the gently sloping lands.



Photograph 3

Photograph 4 illustrates the steeply sloped lands around a ponded area on the Study Area.



Photograph 4

Photograph 5 illustrates the relative size and intensity of surface stone that was observed in the Study Area.



Photograph 5

Photograph 6 illustrates the relative size and quantity of stone observed in one of the stone piles observed on the Study Area.



Photograph 6

A total of 19 soil inspection sites were examined in the Study Area. The majority of these soil inspection sites were limited to shallow depths (topsoil, A horizon only) due to the stoniness of the soil materials.

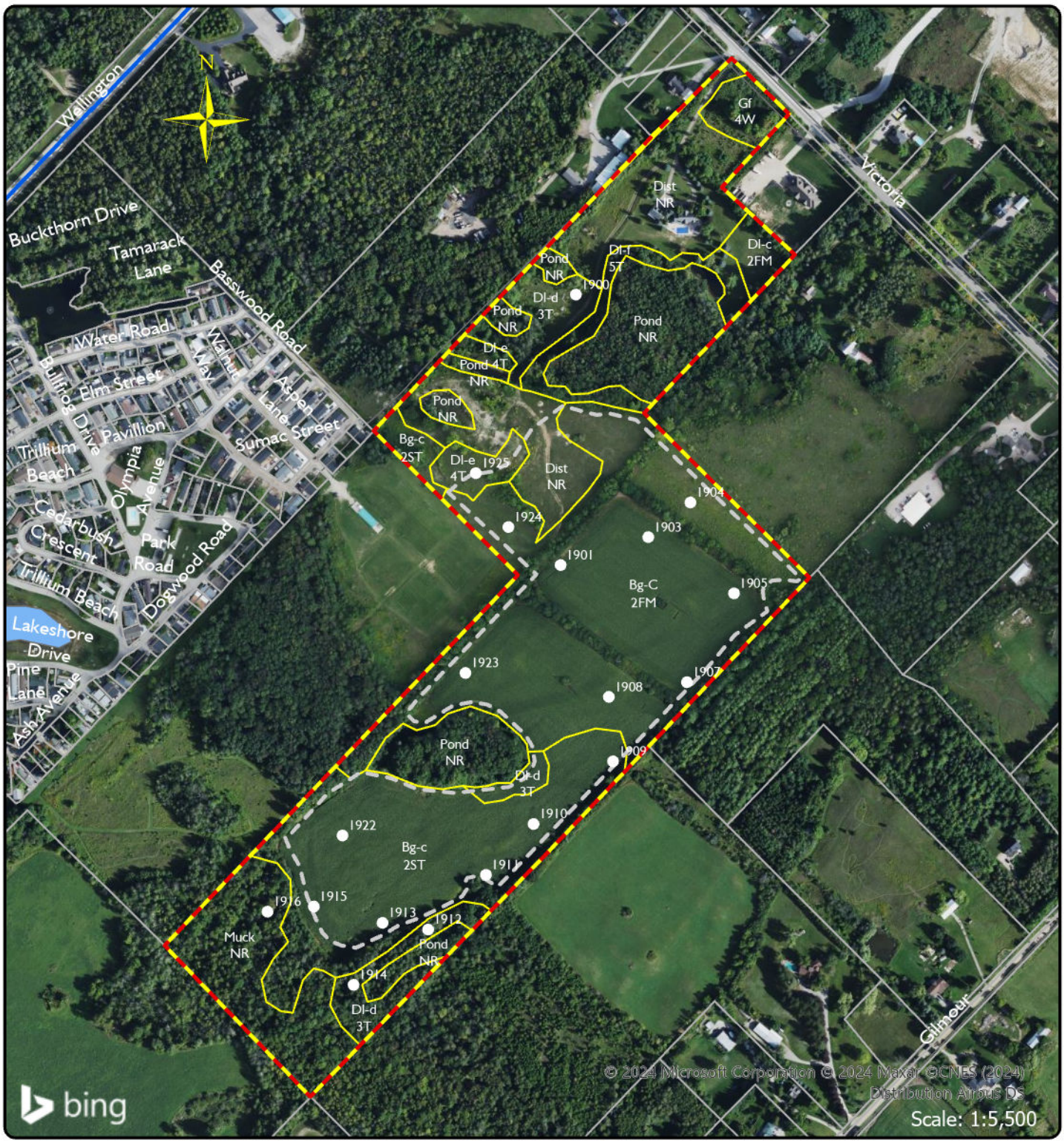
The soil inspection information was correlated with soil descriptions in the *Soil Survey of Wellington County (Report No. 35 of the Ontario Soil Survey, Hoffman, D.W, B.C. Matthews and R.E. Wicklund,1963) and* the OMAFRA digital soils data (Land Information Ontario, 2022), prior to the production of the soils map in Figure 2. Soil names used in the identification of the soil series on Figure 2 were taken from the *Soil Survey of Wellington County (Report No. 35 of the Ontario Soil Survey, Hoffman, D.W, B.C. Matthews and R.E. Wicklund,1963)*.

It should be noted that the soil mapping provided with the *Soil Survey of Wellington County (Report No. 35 of the Ontario Soil Survey, Hoffman, D.W, B.C. Matthews and R.E. Wicklund,1963)* report makes use of slope groupings as follows:

TOPOGRAPHIC CLASSES

A_0 - Smooth basin	B_0 - Irregular basin
A_1 - Smooth level	B_1 - Irregular level
A_2 - Smooth very gently sloping	B_2 - Irregular very gently sloping
A_3 - Smooth gently sloping	B_3 - Irregular gently sloping
A_4 - Smooth moderately sloping	B_4 - Irregular moderately sloping
A_5 - Smooth steeply sloping	B_5 - Irregular steeply sloping
A_6 - Smooth very steeply sloping	B_6 - Irregular very steeply sloping

Source: *Soil Survey of Wellington County (Report No. 35 of the Ontario Soil Survey, Hoffman, D.W, B.C. Matthews and R.E. Wicklund,1963)*.



Legend

- Soil Inspection Location
- Maximum Extraction Limit
- Proposed License Boundary
- Parcels
- Soil Polygon Boundary
- Study Area

Roads

- Local Road - Rural
- County

Soil Code

Bg - Burford Loam
Dl - Dumfries Loam
Gf - Gilford Loam
Dist - Disturbed Soils

CLI Subclass Limitation

F - Fertility
M - Moisture
S - Combined subclasses
T - Topography
W - Excess Moisture

Slope Class

Aa = 0.0 - 0.5%
Bb = 0.5 - 2.0%
Cc = 2.0 - 5.0%
Dd = 5.0 - 9.0%
Ee = 9.0 - 15.0%
Ff = 15.0 - 30.0%
Gg = 30.0 - 45.0%

Slope length < 50 m
Slope length > 50 m

Soil Code — Slope Code
Dl — 2FM
CLI Class — CLI Subclass

Figure 2

Detailed Soil Survey and Canada Land Inventory(CLI)

DBH Soil Services Inc.

May 2024

The standard slope groupings (as presented in the Ontario Centre for Soil Resource Evaluation document *Field Manual for Describing Soils in Ontario*, 4th Edition (1993) provides slope groupings as follows: Aa = 0.0 – 0.5 percent; Bb = 0.5 – 2.0 percent; Cc = 2.0 – 5.0 percent; Dd = 5.0 – 9.0 percent; Ee = 9.0 – 15.0 percent; Ff = 15.0 – 30.0 percent; and Gg = 30.0 – 45.0 percent. Where capital letters represent simple slopes (slope lengths greater than 50 metres), while lower case letters represent complex slopes (slope lengths less than 50 metres).

On review of the OMAFRA document *Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for Application of the Canada Land Inventory In Ontario* soils are rated for topography with slopes grouped similar to the description provided in the *Field Manual for Describing Soils in Ontario* and are presented as follows: <2; 2-5; 5-9; 9-15; 15-30; 30-60; and >60.

For the purposes of providing mapping and soil capability ratings that are consistent with the OMAFRA document *Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for Application of the Canada Land Inventory In Ontario*, the slope groupings and mapping presented in this report reflect the standard percent slope groupings as are documented in the *Field Manual for Describing Soils in Ontario*, 4th Edition (1993).

The onsite soil survey identified four soil series, and one miscellaneous soil group. The soil series were identified as Dumfries Loam, Burford Loam, Gilford Loam, and Muck Soils. The miscellaneous soil group was identified as disturbed lands. Disturbed soils include the residential unit area, the laneways, and any areas where the surface soil materials have been altered.

Small ponds and seasonally ponded areas were noted during the onsite visit. Small areas of imperfectly drained, and poorly drained soils were observed, and were too small to map out individually.

Dumfries Loam is the well-drained member of the Dumfries Soil catena. Dumfries soils developed on stony soil material derived from limestone. The topography is generally hilly with steep complex (slope length less than 50 m) slopes. It is noted in the *Soil Survey of Wellington County (Report No. 35 of the Ontario Soil Survey, Hoffman, D.W, B.C. Matthews and R.E. Wicklund,1963)* that "there are often areas of poorly drained soils too small to be delineated". These areas are not easily drained and are often not arable.

Burford Loam is the well-drained member of the Burford Soil catena. Burford soils are well drained loam materials occurring over coarse gravels. The gravel materials were deposited by glacial meltwater spillways. The deposits are stratified with a considerable range in size from fine sands to cobbles. The topography is gently undulating. Gravel, stones, and stones are present on the surface and throughout the soil profile.

Gilford Loam is the poorly drained member of the Burford Soil Catena. Gilford soils are located in depressional areas and are typically seasonally wet areas, with shallow water tables. The surface soils generally comprise high organic matter content, while the lower layers comprise gleyed materials and gravels within 50 cm of the surface.

Muck soils are very poorly drained organic deposits that have accumulated in shallow lakes, ponds, and undrained depressional areas. The organic deposits are well decomposed, with coarse woody fragments from trees, and roots.

A description of the soil at each inspection site is included in Appendix C.

3.5 ARTIFICIAL DRAINAGE

An evaluation of artificial drainage on the Study Area was completed through a correlation of observations noted during the windshield surveys, aerial photographic interpretation, and a review of the OMAFRA Artificial Drainage System Mapping. Figure 1 illustrates the tile drainage areas that are registered in the OMAFRA database.

Visual evidence supporting the use of subsurface tile drains would include observations of drain outlets to roadside ditches or surface waterways, and surface inlet structures (hickenbottom or french drain inlets).

Evidence in support of subsurface tile drainage on aerial photographs would be based on the visual pattern of tile drainage lines as identified by linear features in the agricultural lands and by the respective light and dark tones on the aerial photographs. The light and dark tones relate to the moisture content in the surface soils at the time the aerial photograph was taken.

OMAFRA Artificial Drainage System Maps were reviewed to determine if an agricultural tile drainage system had been registered to the Study Area. The OMAFRA maps revealed that no agricultural drainage systems were registered on the Study Area (Figure 1).

Absence of agricultural drainage systems is typical of areas where the soil developed on sandy or gravelly materials. The soil is generally open or coarse texture where water easily infiltrates and moves through the soil profile.

3.6 IRRIGATION

Observations noted during the surficial soil survey indicated that the Study Area is not irrigated, and that the property is not set up for the use of irrigation equipment. Visual evidence supporting the use of irrigation equipment would include the presence of the irrigation equipment (piping, water guns, sprayers, tubing, etc), the presence of a body of water capable of sustaining the irrigation operation and lands that are appropriate for the use of such equipment.

No irrigation equipment was observed onsite during the course of the on-site survey.

3.7 LANDFORMING

With the exception of the creation of a laneway to allow access to the property (and the farmstead area and farther to the west) there is no evidence of any landforming for the purposes of leveling or reducing slope for the enhancement of agricultural activities or operations.

3.8 SOIL CAPABILITY FOR AGRICULTURE

Basic information about the soils of Ontario is made more useful by providing an interpretation of the agricultural capability of the soil for various crops. The CLI system combines attributes of the soil to place the soils into a seven-class system of land use capabilities. The CLI soil capability classification system groups mineral soils according to their potentialities and limitations for agricultural use. The first three classes are considered capable of sustained production of common field crops, the fourth is marginal for sustained agriculture, the fifth is capable for use of permanent pasture and hay, the sixth for wild pasture and the seventh class is for soils or landforms incapable for use for arable culture or permanent pasture. Organic or Muck soils are not classified under this system. Disturbed Soil Areas are not rated under this system.

The OMAFRA document *Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for Application of the Canada Land Inventory in Ontario* defines CLI classification as follows:

Class 1 - Soils in this class have no significant limitations in use for crops. Soils in Class 1 are level to nearly level, deep, well to imperfectly drained and have good nutrient and water holding capacity. They can be managed and cropped without difficulty. Under good management they are moderately high to high in productivity for the full range of common field crops

Class 2 - Soils in this class have moderate limitations that reduce the choice of crops, or require moderate conservation practices. These soils are deep and may not hold moisture and nutrients as well as Class 1 soils. The limitations are moderate and the soils can be managed and cropped with little difficulty. Under good management they are moderately high to high in productivity for a wide range of common field crops.

Class 3 - Soils in this class have moderately severe limitations that reduce the choice of crops or require special conservation practices. The limitations are more severe than for Class 2 soils. They affect one or more of the following practices: timing and ease of tillage; planting and harvesting; choice of crops; and methods of conservation. Under good management these soils are fair to moderately high in productivity for a wide range of common field crops.

Class 4 - Soils in this class have severe limitations that restrict the choice of crops, or require special conservation practices and very careful management, or both. The severe limitations seriously affect one or more of the following practices: timing and ease of tillage; planting and harvesting; choice of crops; and methods of conservation. These soils are low to medium in productivity for a narrow to wide range of common field crops, but may have higher productivity for a specially adapted crop.

Class 5 - Soils in this class have very severe limitations that restrict their capability to producing perennial forage crops, and improvement practices are feasible. The limitations are so severe that the soils are not capable of use for sustained production of annual field crops. The soils are capable of producing native or tame species of perennial forage plants and may be improved through the use of farm machinery. Feasible improvement practices may include clearing of bush, cultivation, seeding, fertilizing or water control.

Class 6 - Soils in this class are unsuited for cultivation, but are capable of use for unimproved permanent pasture. These soils may provide some sustained grazing for farm animals, but the limitations are so severe that improvement through the use of farm machinery is impractical. The terrain may be unsuitable for the use of farm machinery, or the soils may not respond to improvement, or the grazing season may be very short.

Class 7 - Soils in this class have no capability for arable culture or permanent pasture. This class includes marsh, rockland and soil on very steep slopes.

The OMAFRA document *Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for Application of the Canada Land Inventory in Ontario* defines the CLI subclassification as follows:

Subclass F – Low Natural Fertility: This subclass is made up of soils having low fertility that is either correctable with careful management in the use of fertilizers and soil amendments or is difficult to correct in a feasible way. The limitation may be due to a lack of available plant nutrients, high acidity, low exchange capacity, or presence of toxic compounds.

Subclass M – Moisture Deficiency: This subclass denotes soils which have low moisture holding capacities and are more prone to droughtiness.

Subclass S – Adverse Soil Characteristics: This subclass denotes a combination of limitations of equal severity. In Ontario it has often been used to denote a combination of fertility (f) and moisture (m) when these are present with a third limitation such as topography (t) or stoniness (p).

Subclass T - Topography: This subclass denotes limitations due to slope steepness and length. Such limitations may hinder machinery use, decrease the uniformity of crop growth and maturity, and increase water erosion potential.

Subclass W - Excess Water: The presence of excess soil moisture, other than that brought about by inundation, is a limitation to field crop agriculture. Excess water may result from inadequate soil drainage, a high-water table, seepage, or runoff from surrounding areas. This limitation only applies to soils classified as poorly or very poorly drained.

Each polygon identified on-site was classified according to the CLI rating system then correlated to the CLI classifications as presented in the *Soil Survey of Wellington County (Report No. 35 of the Ontario Soil Survey, Hoffman, D.W, B.C. Matthews and R.E. Wicklund,1963)*, the digital soil data

provided by OMAFRA, and the OMAFRA document *Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for the Application of the Canada Land Inventory in Ontario*.

Dumfries soils located on complex (slope length less than 50 m) 'c' slopes (2-5 percent) were rated as CLI class 2FM, on complex 'd' slopes (5-9 percent) as CLI class 3T, on complex 'd' slopes (5-9 percent) as CLI class 3T, on complex 'e' slopes (9-15 percent) as CLI class 4T, and on complex 'f' slopes (15-30 percent) as CLI class 5T.

Burford soils located on simple 'C' slopes (2-5 percent) (slope length greater than 50 m) were rated as 2FM, and on complex 'c' slopes (slope length less than 50 m) were rated as 2ST.

Gilford Loam soil was rated as 4W.

Muck soils are not classified in the Canada Land Inventory rating system.

Disturbed soils are not rated in the CLI classification system.

Table 1 summarizes the relative percent area occupied by each capability class for the Proposed License Area and the Maximum Extraction Area.

Table 1 Canada Land Inventory – Study Area

Canada Land Inventory Class (CLI)	Proposed License Area (ha)	Proposed License Area Percent Occurrence	Maximum Extraction Area (ha)	Maximum Extraction Area Percent Occurrence
Class 1	-	-	-	-
Class 2	12.5	53.9	9.6	92.2
Class 3	1.3	5.6	0.1	1.2
Class 4	0.8	3.4	0.1	1.2
Class 5	0.7	3.0	-	-
Class 6	-	-	-	-
Class 7	-	-	-	-
Not Rated (Disturbed areas, ponded areas, and organic soil)	7.9	34.1	0.6	5.5
Totals	23.5	100.0	10.4	100.0

The Proposed License Area comprised approximately 59.5 percent CLI class 1 – 3 soils, with CLI class 2 of approximately 53.9 percent, and CLI class 3 of approximately 5.6 percent. The remaining mineral soils (CLI class 4 – 7) comprise approximately 6.4 percent of the Study Area. Not rated (disturbed soil areas) comprised approximately 34.1 percent.

The Maximum Extraction Area comprised approximately 93.4 percent CLI class 1 – 3 soils, with CLI class 2 of approximately 92.2 percent, and CLI class 3 of approximately 1.2 percent. The remaining mineral soils (CLI class 4 – 7) comprise approximately 1.2 percent of the Study Area. Not rated (disturbed soil areas) comprised approximately 5.5 percent.

3.9 HOFFMAN PRODUCTIVITY INDEX (SOIL PRODUCTIVITY RATING)

The Hoffman Productivity Index (HPI) is a tool that was published in ARDA Report No. 4 *The Assessment of Soil Productivity for Agriculture* and is used to relate the productivity of lands to the CLI soil capability.

These indices are also referred to as the Soil Productivity Index and are used to calculate and assign a parcel or polygon a single value which represents the overall productivity of that parcel or polygon.

The single value is derived from the sum of the percent occurrence of each CLI Soil Capability Class on the parcel or within the polygon multiplied by the productivity index corresponding to the soil class.

Certain assumptions are made when using the productivity index. The HPI assumes that if the same level of management is applied to areas of differing CLI classes, then the productivity for each class will differ. Hoffman determined the average yields produced for common field crops on lands with CLI classes 1 to 4 within Ontario.

In developing the HPI, it was determined that a CLI class 2 land produced approximately 80% of the yield that would be associated with a CLI class 1 land. Further that a CLI class 3 land produced approximately 64% of the yield that would be associated with a CLI class1 land, while a CLI class 4 land produced approximately 49%. Values for class 5 through class 7 lands were extrapolated. As a result, it was determined that the productivity ranges were as follows as illustrated in Table 2.

Table 2 Soil Productivity Index Ranges

Soil Productivity Index Ratings	
CLI Class	**Soil Productivity Index**
1	1.0
2	0.8
3	0.64
4	0.49
5	0.33
6	0.17
7	0.02

A parcels or polygons HPI or Soil Productivity Index is calculated as follows:

Soil Productivity Index =
(percent occurrence of class 1 lands x 1.0) + (percent occurrence of class 2 lands x 0.8) + (percent occurrence of class 3 lands x 0.64) + (percent occurrence of class 4 lands x 0.49) + (percent occurrence of class 5 lands x 0.33) + (percent occurrence of class 6 lands x 0.17) + (percent occurrence of class 7 lands x 0.02)

Once a Soil Productivity Index value is calculated for the parcel or polygon, the value can be related back to a CLI Equivalent. The following table (Table 3) illustrates the range of values which can be directly correlated to the equivalent CLI class.

Table 3 Soil Productivity Index Range and Equivalent CLI

Soil Productivity Index Range	
Equivalent CLI Class	**Soil Productivity Range**
1	0.90 - 1.00
2	0.73 - 0.89
3	0.58 – 0.72
4	0.43 – 0.57
5	0.28 – 0.42
6	0.10 – 0.27
7	0.00 – 0.09

With respect to the Study Area Lands, an HPI calculation was completed. The HPI value and subsequent CLI class are provided in Table 4.

Table 4 Soil (Hoffman) Productivity Rating and Equivalent CLI Class

	Soil (Hoffman) Productivity Rating	Corresponding CLI Class
Proposed License Boundary	0.494	4
Maximum Extraction Area	0.749	2

The calculated Soil Productivity Rating for the Proposed License Boundary Area was 0.494 or a CLI class 4 equivalent.

The calculated Soil Productivity Rating for the Maximum Extraction Area was 0.749 or a CLI class 2 equivalent.

4.0 SUMMARY AND CONCLUSIONS

DBH Soil Services Inc. was retained to complete a Soil Survey and Canada Land Inventory (CLI) classification assessment for an area identified as:

4454 Victoria Road South
Township of Puslinch
County of Wellington

The Study Area lands comprise approximately 23.5 ha (58.06 acres) of which much of the lands are used for agricultural crop production (common field crop). The non-cropped lands included woodland areas located in fence rows, large woodland areas near the residential unit (east) and in the western portion of the parcel. Additional woodland areas were noted in fence rows throughout the parcel. Scrub lands were noted west of the residential unit, and in the central area. Areas of surface water (ponding) were noted near the residential unit and in the central portions of the parcel.

A rural residential unit was observed on the eastern portion of the parcel fronting Victoria Road South. No livestock was observed on the property during the onsite soil survey.

The results of the Soil Survey assessment include the following:

- The Study Area is roughly bounded: on the east by Victoria Road South, rural residential units, and woodlands; on the south by woodlands, agricultural fields, and rural residential units; on the west by woodlands, agricultural fields; and on the north by agricultural fields, woodlands, and the Millcreek Country Club community.

- The Study Area is located east of the urban area of Aberfoyle, approximately 2.7 km north of Highway 401, and approximately 4.2 km southeast of the urban area of Guelph.

- A large portion of the Study Area lands was used for the production of common field crops.

- The remaining portions of the Study Area lands were comprised of woodlands, ponded areas, and a small area of scrublands.

- A few small, ponded areas, and seasonally ponded areas were noted on the Study Area.

- A large woodland area was observed in the western extent of the Study Area and near the residential unit.

- Stone piles (cobble and boulder size) were noted along portions of the woodlots, fence rows, and along the property boundaries.

- No irrigation equipment or irrigation systems were observed on the Study Area

- There are no registered artificial tile drains associated with this property.

- The Proposed License Area comprised approximately 59.5 percent CLI class 1 – 3 soils, with CLI class 2 of approximately 53.9 percent, and CLI class 3 of approximately 5.6 percent. The remaining mineral soils (CLI class 4 – 7) comprise approximately 6.4 percent of the Study Area. Not rated (disturbed soil areas) comprised approximately 34.1 percent.

- The Maximum Extraction Area comprised approximately 93.4 percent CLI class 1 – 3 soils, with CLI class 2 of approximately 92.2 percent, and CLI class 3 of approximately 1.2 percent. The remaining mineral soils (CLI class 4 – 7) comprise approximately 1.2 percent of the Study Area. Not rated (disturbed soil areas) comprised approximately 5.5 percent.

- The calculated Soil Productivity Rating for the Proposed License Boundary Area was 0.494 or a CLI class 4 equivalent.

- The calculated Soil Productivity Rating for the Preliminary Extraction Area was 0.749 or a CLI class 2 equivalent.

5.0 REFERENCES

The following data sources were used to carry out the detailed Soil Survey and CLI assessment for this study:

- 1:10000 scale Ministry of Natural Resources (MNR) Aerial Photography, 1978,
- 1:10000 scale Ontario Base Map (1983) Ministry of Natural Resources:
    - 10 17 5650 48100
    - 10 17 5700 48100

  1:50000 scale NTS Map No 40 P/8 and P/9. 1984. Ministry of Energy Mines and Resources, Canada,
- 1:50000 scale NTS Map No 40 P/8 and P/9. Canada Land Inventory (CLI) Capability Mapping,
- Agricultural Information Atlas (online resource, Ontario Ministry of Natural Resources),
- *Agronomy Guide for Field Crops (Publication 811). (2017).* Ontario Ministry of Agriculture, Food and Rural Affairs,
- ARDA Report No. 4, *The Assessment of Soil Productivity for Agriculture,*
- *Canadian System of Soil Classification (CSSC) (Agriculture Canada, 1998)* and the *Field Manual for Describing Soils in Ontario (Ontario Centre for Soil Resource Evaluation, 1993)*.
- *Classifying Prime and Marginal Agricultural Soils and Landscapes:* Guidelines for Application of the Canada Land Inventory in Ontario. OMAFRA. Online, 2023,
- County of Wellington online mapping, (https://sgis.wellington.ca/Maps/index.html?viewer=WellingtonCountyExternal),
- *Draft Agricultural Impact Assessment (AIA) Guidance Document (March 2018),*
- *Google Earth Pro Imagery,*
- Grand River Conservation Authority (GRCA) website (https://maps.grandriver.ca/web-gis/public/?theme=MYP&bbox=539184,4790579,566563,4805220),
- *Greenbelt Plan* (2022),
- *Growth Plan for the Greater Golden Horseshoe (2020),*
- *Guide to Agricultural Land Use*, Ontario Ministry of Agriculture, Food and Rural Affairs, March 1995,
- *Guidelines for Detailed Soil Surveys for Agricultural Land Use Planning (OMAFRA, 2022 online),*
- Guidelines on Permitted Uses in Ontario's Prime Agricultural Areas (Publication 851), Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), 2016,
- Online Soils data for the Province of Ontario (Land Information Ontario (LIO), 2023,
- Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) Factsheet – Crop Heat Units for Corn and Other Warm Season Crops in Ontario, 1993,
- Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) AgMaps online mapping, (http://www.gisapplication.lrc.gov.on.ca/AIA/Index.html?viewer=AIA.AIA&locale=en-US),
- Ontario Ministry of Agriculture and Food - Land Use Systems Mapping,
- Ontario Ministry of Agriculture and Food - Artificial Drainage System Mapping,
- *Provincial Policy Statement, 2020,*
- *Soil Mapping System for Canada:* (https://sis.agr.gc.ca/cansis/publications/manuals/1981-smsc/index.html),

- *Soil Survey Handbook:* (https://sis.agr.gc.ca/cansis/publications/manuals/1987-9/index.html),
- *Soil Survey of Wellington County (Report No. 35 of the Ontario Soil Survey, Hoffman, D.W, B.C. Matthews and R.E. Wicklund,1963)*
- *The Physiography of Southern Ontario 3rd Edition, Ontario Geological Survey Special Volume 2, Ministry of Natural Resources, 1984,*
- Windshield and field surveys by DBH Soil Services staff, May 3, 2024.

APPENDIX A

OMAFRA ***Guidelines for Detailed Soil Surveys for Agricultural Land Use Planning***



Guidelines for Detailed Soil Surveys for Agricultural Land Use Planning

Table of Contents

1. Introduction
2. Components of the Detailed Soil Survey
3. References
4. Qualifications
5. Related Links

Introduction

More detailed, property specific soil surveys are sometimes needed when a land use change (e.g., an official plan amendment) is being sought that would permanently remove the land from agriculture. The Planning Act establishes that decision makers such as municipalities and the Ontario Municipal Board must have regard for the Provincial Policy Statement of 1997. This statement provides direction on the protection of prime agricultural areas, and establishes criteria to be considered when prime agricultural lands are to be designated for non-agricultural land uses.

The following guidelines provide direction for land resource consultants and their clients undertaking detailed soil surveys for the assessment of agricultural crop capabilities and suitabilities. For these guidelines a "detailed" soil survey is one compiled at a working map scale of 1:10,000 or greater. These guidelines, or terms of reference, are a set of basic requirements to ensure that planners, landowners and consultants have the necessary detailed agricultural land resource information presented and reported in a standard form in order to make planning decisions or to advocate for changes to planning decisions.

The need for detailed soil information for some local decisions often arises from concerns with

1. the accuracy of the published soil information mapping, classification, and agricultural interpretations.
2. situations where the published information is too general for decisions about a specific area.

"Published soil information" refers to the county and municipal soil reports and maps, and also the Agricultural Capability maps. These map and report documents are all available from OMAF.

Soil Survey Components

1. The soil survey should be done according to generally accepted soil survey procedures and be based on an adequate density and distribution of soil profile and landscape inspections. A general guideline is one ground inspection per two square centimetres on the final map (Soil Mapping System for Canada, Agriculture Canada, 1981). At a scale of 1:10,000 this is one inspection per two hectares. Inspection locations and data should be included with the soil map and report.
   The "Field Manual for Describing Soils in Ontario" (Ontario Centre for Soil Resource Evaluation, 1993) provides guidelines for classifying soils and the landscapes in which they occur.
2. Soils of the subject area should be correlated with the soils classified in the published soil survey map and report for that county or municipality.
3. Agricultural capability for common field crops (corn, soybeans, small grains, forages) should be interpreted using the document "Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for the Application of the Canada Land Inventory in Ontario" (www.omafra.gov.on.ca/english/ag.html). As explained in this document, land and soils which are classified as "prime agricultural land" (CLI classes 1 to 3) have necessary capital improvements in place or it is physically feasible for the landowner/manager/farmer to make the necessary improvements. If it is not feasible to make improvements that would enable mechanized row cropping, then the land may be considered as less than "prime" (CLI class 4 or 5). The question of "feasibility" often arises about land with wetness limitations for which more drainage improvement is required for productivity to be optimized. Each case must be considered individually. The Agricultural Drainage System Mapping (OMAF) for the subject area is a necessary reference to help argue and answer the question of drainage improvement feasibility.
4. If the subject area lies within or adjacent to a larger area of specialty crop production, then its soil suitability for specialty crops needs to be evaluated. (Provincial Policy Statement, 1996). "Specialty crops" refer to fruit, vegetable and other crops grown commercially in Ontario and which cannot be grouped with the general "common field crop" types listed above. A definition of "Specialty crop land" is given in the Provincial Policy Statement. The following publications and guidelines are useful for evaluating land and soil quality for specialty crops:
   a. More recent soil survey reports (Brant, Elgin, Haldimand-Norfolk, Middlesex, and Niagara) include ratings of soil suitability for some specialty crops. The ratings published in these reports may also guide the interpretation of reasonably correlated soils in adjacent counties whose soil reports contain no such specialty crop interpretations.
   b. The publication "A Compilation of Soil, Water and Climatic Requirements for Selected Horticultural Crops in Southern Ontario" (Ontario Institute of Pedology Publication, 1989) outlines general landscape and moisture needs for more than 40 different tree fruit, small fruit and vegetable crops. It comprises many of the soil principles used to arrive at the soil suitability ratings given in soil survey publications cited in (a).
   c. Irrigation and/or artificial drainage are often necessary, depending on the site and crop. Climatic regime needs consideration. The longer the frost free period and the greater the heat units available, the greater the range and productivity of crops land tends to support.
   d. In general, soils which are interpreted to be "prime" (Class 1-3) for the common field crop types of corn, soybeans, small grains and forages will have viable suitability for a range of specialty crops. This is most true of sandy and

loamy soils. Clayey soils are suitable for a lesser range of specialty crops but may still be well suited for some crops.

References

Provincial Policy Statement, 1997. As it regards agriculture, see www.omafra.gov.on.ca/english/landuse/facts/provpoli.htm

The Canadian System of Soil Classification; Agriculture and Agri-Food Canada, 1998

Field Manual for Describing Soils in Ontario; Ontario Centre for Soil Resource Evaluation, 1993.

Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for Application of the Canada Land Inventory in Ontario; Ontario Ministry of Agriculture and Food, 2004

A Soil Mapping System for Canada: Revised; Agriculture Canada, 1981

Agricultural Drainage Systems Mapping, OMAF, 1983

A Compilation of Soil, Water and Climatic Requirements for Selected Horticultural Crops in Southern Ontario, Ontario Institute of Pedology, 1993

Qualifications

In order to ensure that all of the components for the detailed soil survey are completed properly, an experienced pedologist should be retained for any survey work. The Ontario Ministry of Agriculture and Food provides a list of consulting businesses with expertise in pedology.

Feedback and technical inquiries to: landuse@omafra.gov.on.ca

Related Links

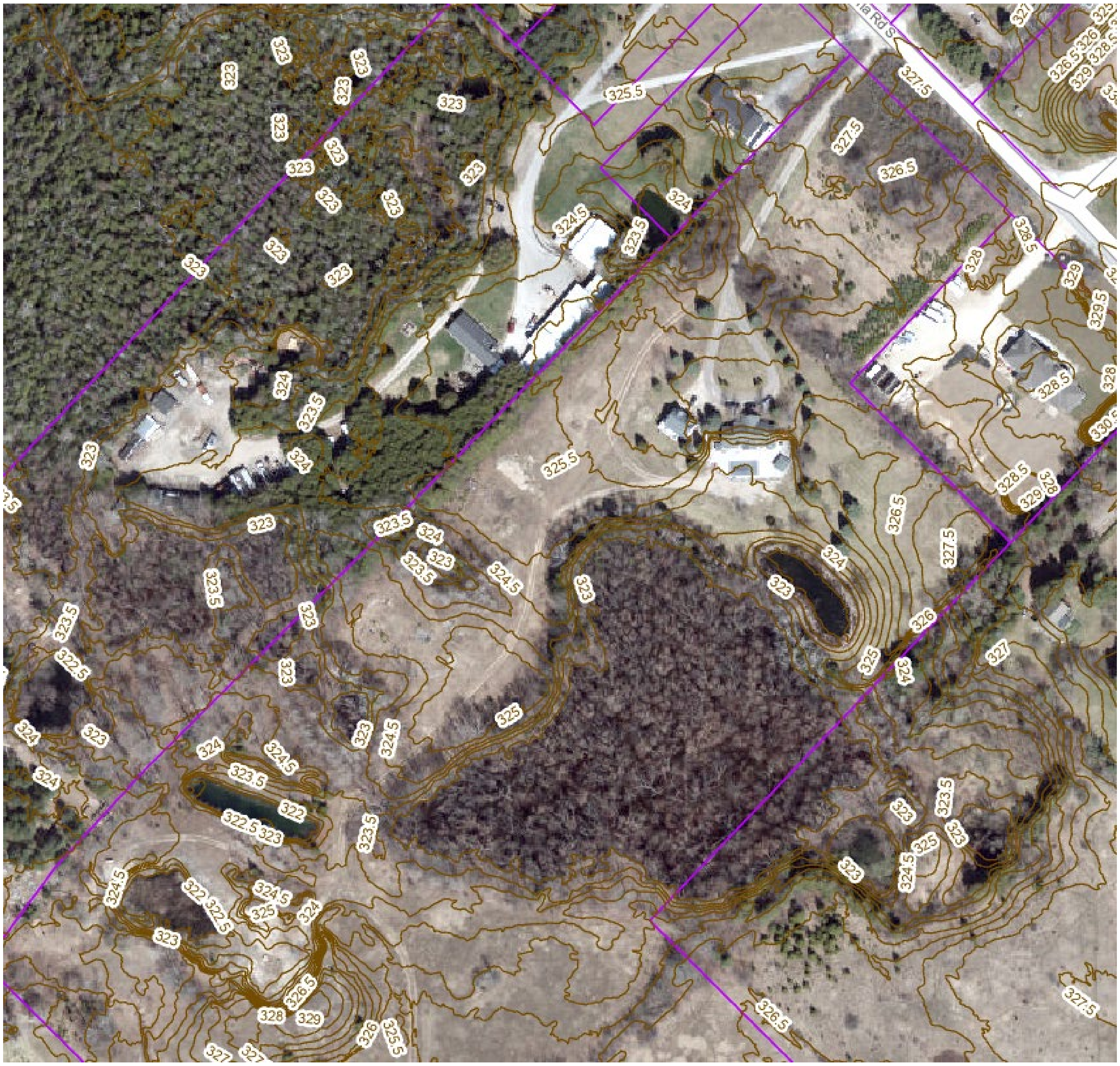
- Classifying Prime and Marginal Agricultural Soils and Landscapes: Guidelines for Application of the Canada Land Inventory in Ontario
- Provincial Policy Statement Agricultural Policies

For more information:
Toll Free: 1-877-424-1300
Local: (519) 826-4047
E-mail: ag.info.omafra@ontario.ca

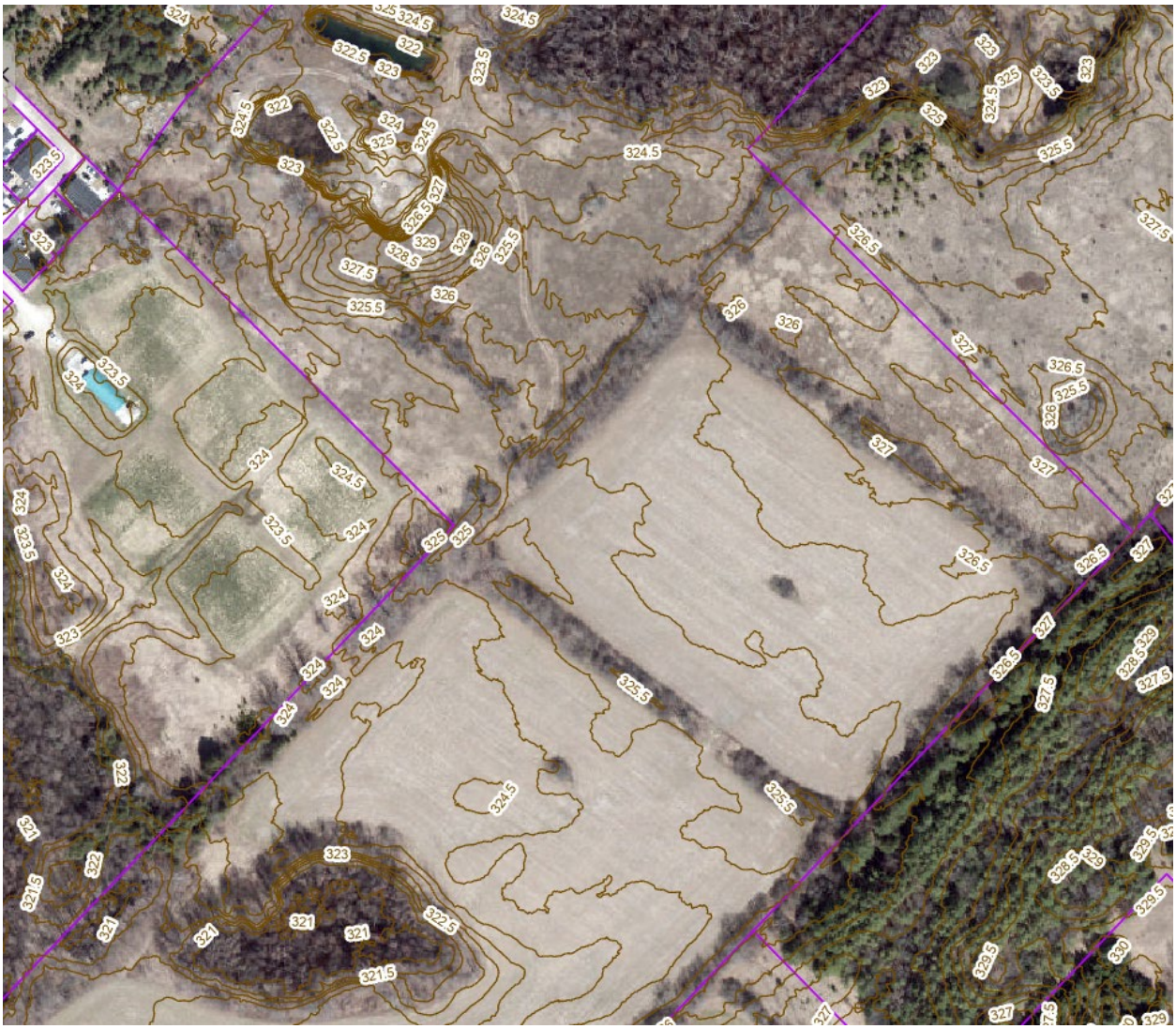
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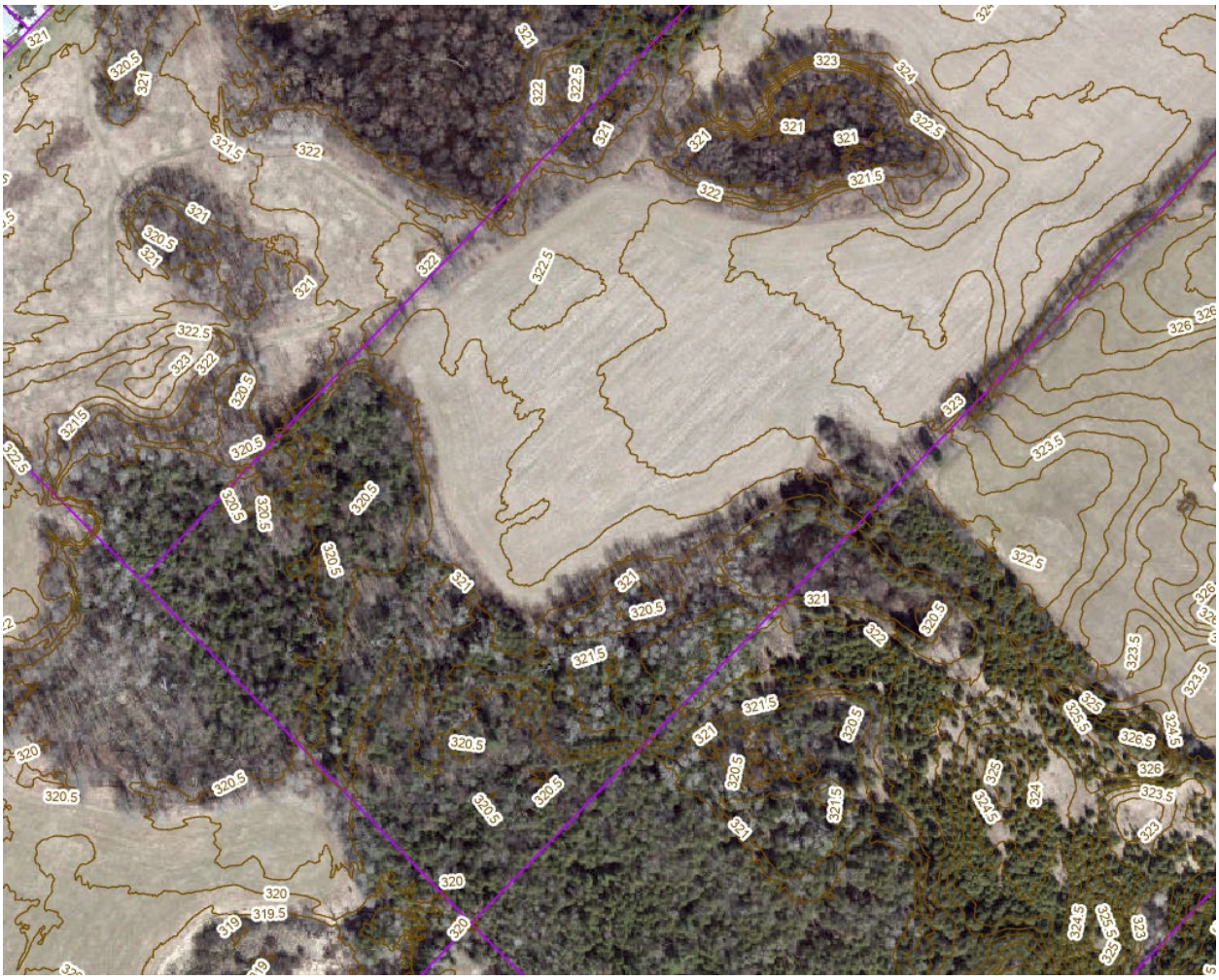
APPENDIX B

Grand River Conservation Authority Contour Mapping



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APPENDIX C

Soil Inspection Data

Soil Inspection Site Number	Horizon	Depth of Horizon (cm)	Soil Texture	Drainage Class	Soil Series
1900	Ah	0 - 22	SL	Well	Dumfries
1901	Ap	0 – 18	SL	Well	Burford
1903	Ap	0 – 18	SL	Well	Burford
1904	Ah	0 – 15	SL	Well	Burford
1905	Ah	0 – 15	SL	Well	Burford
1907	Ap Bm	0 – 30 30 - 48	SL	Well	Burford
1908	Ah	0 – 15	SL	Well	Burford
1909	Ah	0 – 15	SL	Well	Burford
1910	Ap	0 – 20	SL	Well	Burford
1911	Ap	0 – 15	SL	Well	Burford
1912	Ah	0 – 21	SL	Well	Dumfries
1913	Ap	0 – 15	SL	Well	Burford
1914	Ah Bm	0 – 25 25 – 35	SL	Well	Dumfries
1915	Ap	0 – 15	SL	Well	Burford
1916	O	0 – 100	Oh	Very Poor	Muck
1922	Ap	0 – 15	SL	Well	Burford
1923	Ap	0 – 15	SL	Well	Burford
1924	Ap	0 – 15	SL	Well	Burford
1925	Ap	0 – 12	SL	Well	Dumfries

Notes: L = Loam; SL = Sandy Loam, LS = Loamy Sand, fSL = fine Sandy Loam, fS = fine Sand, S = Sand; gSL = gravelly Sandy Loam; vgSL = very gravelly Sandy Loam, SiL = Silt Loam, gSCL = gravelly Sandy Clay Loam, Oh = Organic Humic.

A horizon = topsoil. B horizon = subsoil. C horizon = parent material. O = Organic Soil

* = refusal (stone, tree root, etc).

APPENDIX D

Curriculum Vitae

DBH Soil Services Inc
217 Highgate Court
Kitchener Ontario N2N 3N9

phone: (519) 578-9226
email: dhodgson@dbhsoilservices.ca

DAVID B. HODGSON, B.Sc., P. Ag.
PRESIDENT – Senior Pedologist/Agrologist

EDUCATION

- B.Sc. (Agriculture), 1983-1987; University of Guelph, Major in Soil Science
- Agricultural Engineering, 1982-1983; University of Guelph.
- Materials Science Technology, 1981-1982; Northern Alberta Institute of Technology (NAIT), Edmonton, Alberta.

AREAS OF PROFESSIONAL EXPERIENCE

2000 to Present

Senior Pedologist/President. DBH Soil Services Inc., Kitchener, Ontario.
Mr. Hodgson provides expertise in the investigation, assessment and resource evaluation of agricultural operations/facilities and soil materials. Dave is directly responsible for the field and office operations of DBH Soil Services and for providing advanced problem solving skills as required on an individual client/project basis. Dave is skilled at assessing soil and agricultural resources, determining potential impacts and is responsible for providing the analysis of and recommendations for the remediation of impacts to soil/agricultural/environmental systems in both rural and urban environments.

1992 to 2000

Pedologist/Project Scientist. Ecologistics Limited, Waterloo, Ontario.
As pedologist (soil scientist), Mr. Hodgson provided expertise in the morphological, chemical and physical characterization of insitu soils. As such, Mr. Hodgson was involved in a variety of environmental assessment, waste management, agricultural research and site/route selection studies.
Dave was directly responsible for compiling, analysis and management of the environmental resource information. Dave is skilled at evaluating the resource information utilizing Geographic Information System (GIS) applications.

Dave was also involved the firms Environmental Audit and Remediation Division in the capacity of: asbestos identification; an inspector for the remediation of a pesticide contaminated site; and an investigator for Phase I and Phase II Audits.

SELECT PROJECT EXPERIENCE

Environmental Assessment Studies

- Agricultural Component of the Highway 401 Widening Milton to Wellington County Boundary, 2023 – ongoing.
- Agricultural Component of the Highway 6 Widening Hamilton 2022 – ongoing.
- Agricultural Component of the Bradford Bypass (Highway 400 to 404 link) 2021 – ongoing.
- Agricultural Component of the Green for Life (GFL) Environmental, Moose Creek, Eastern Ontario Waste Handling Facility (EOWHF) Expansion, 2020 – 2023.
- Agricultural Component of the Greater Toronto Area West (GTAW) Highway 413 Corridor Assessment, 2019 – ongoing.
- Peer Review of the Walker Environmental Group (WEG) Inc. Southwestern Landfill Proposal, Ingersoll, 2013 – 2021.
- Agricultural Component for the High-Speed Rail Kitchener to London –Terms of Reference, 2018,
- Agricultural Component of the Mount Nemo Heritage District Conservation Study – City of Burlington, 2014 – 2015.
- Agricultural Component of the Greater Toronto Area West (GTAW) Highway Corridor Assessment – Phase 2, 2014 – 2016.

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- Peer Review of the Agricultural Component of the Walker Group Landfill – Ingersoll, 2013 – 2015.
- Agricultural Component of the Highway 407 East Extension Design and Build Phase, 2012 – 2013.
- Agricultural Component of the Beechwood Road Environmental Centre (Landfill/Recycling) – Napanee, 2012 – 2013.
- Agricultural Component of the Clean Harbors Hazardous Waste Landfill Lambton County 2009 – 2015.
- Agricultural Component of the Highway 401 widening Cambridge to Halton Region 2009 – 2012.
- Agricultural Component of the Upper York Sanitary Sewer Study, York Region, 2009 – 2013.
- Agricultural Component of the Greater Toronto Area West Corridor Environmental Assessment Study 2007 – 2013 (Phase 1).
- Agricultural Component of the Niagara to GTA Planning and Environmental Assessment Study, 2007 – 2013.
- Agricultural Component of the Highway 401 widening, Chatham, 2006 - 2007.
- Agricultural Component of the Trafalgar Road study, Halton Region, 2005.
- Agricultural Component of the Highway 404 Extension North, 2004.
- Agricultural Component of the Highway 404 – 400 Bradford Bypass, 2004.
- Agricultural Component of the Highway 407 East Extension, 2002 – 2010.

Agricultural Impact Assessment/Minimum Distance Separation Studies

- Whistle Bare Road, North Dumfries Minimum Distance Separation (MDS1 Assessment), 2024.
- Balsam Road, Pickering Minimum Distances Separation (MDS1) Assessment, 2024.
- Port Hope West Urban Boundary Expansion Scoped Agricultural Impact Assessment (including MDS1), 2023.
- Port Hope East Urban Boundary Expansion Scoped Agricultural Impact Assessment (including MDS1), 2023.
- Town of King Battery Energy Storage System (BESS) Agricultural Impact Assessment, 2023.
- City of London Agricultural Impact Assessment (including MDS1), 2023.
- Caledonia Secondary Plan Scoped Agricultural Impact Assessment (including MDS), 2023.
- Inglewood Well Agricultural Impact Assessment, 2023.
- Orangeville Battery Energy Storage System (BESS) Agricultural Impact Assessment, 2023.
- County Road 109 Realignment Agricultural Impact Assessment, 2023.
- Thornbury Acres Agricultural Impact Assessment (including MDS1), 2022 – 2023.
- Highway 6 Widening Hamilton Agricultural Impact Assessment, 2022 – ongoing.
- Whistle Bare Pit Agricultural Impact Assessment, 2022.
- Middletown Road Agricultural Impact Assessment (including MDS1), 2022.
- Claremont, Durham Region Minimum Distance Separation (MDS1), 2022.
- Grand Valley Settlement Area Boundary Expansion 2022 - ongoing.
- Hagersville Minimum Distance Separation (MDS1), 2022.
- East River Road Minimum Distance Separation (MDS1), County of Brant, 2022.
- Brampton Brick Norval Quarry, Agricultural Impact Assessment, 2022 – ongoing.
- Northfield Drive Minimum Distance Separation (MDS1), Waterloo Region, 2021
- Bradford Bypass Highway 400- 404 Link, Agricultural Impact Assessment, 2021 – ongoing.
- Wilfrid Laurier Milton Campus, Agricultural Impact Assessment (including MDS1), 2021 – 2023.
- Town of Lincoln Road Realignment, Agricultural Impact Assessment, 2021 – 2023.
- Britannia Secondary Plan, Agricultural Impact Assessment (including MDS1), Milton, 2021 – 2023.
- Reesor Road Minimum Distance Separation (MDS1), Markham, 2021.
- Maclean School Road Minimum Distance Separation (MDS1), County of Brant, 2021.
- Petersburgh Sand Pit, Agricultural Impact Assessment, 2021 – 2022.
- Milton, CRH Quarry Expansion, Agricultural Impact Assessment, 2020 – 2022.
- Grimsby, Specialty Crop Area Redesignation, Agricultural Impact Assessment, 2020 - 2022.
- Halton Hills, Premier Gateway Phase 2 Employment Lands Secondary Plan, Agricultural Impact Assessment (including MDS1), 2020 - 2021.
- Milton Education Village Secondary Plan, Agricultural Impact Assessment (including MDS1), 2020 - 2021.
- Woodstock, Pattullo Avenue Realignment, Agricultural Impact Assessment, 2020 - 2021.

- Smithville, West Lincoln Master Community Plan, Agricultural Impact Assessment (including MDS1), AECOM, 2019 – 2022.
- Kirby Road Agricultural Impact Assessment, HDR, Vaughan, 2019 – 2021.
- Elfrida Lands, City of Hamilton, Agricultural Impact Assessment Update, WSP, 2019 – 2021.
- Dorsay Development – Durham Region High Level Agricultural Assessment, 2019.
- Stoney Creek Landfill AIA Update – GHD, 2019.
- Town of Wilmot, Agricultural Impact Assessment (AIA) Aggregate Pit Study (Hallman Pit), 2018, on-going.
- Courtice Area Southeast Secondary Plan (Clarington) Agricultural Impact Assessment (AIA) (including MDS1), 2019,
- Town of Halton Hills, Minimum Distance Separation (MDS 1), August 2018,
- Cedar Creek Pit/Alps Pit (North Dumfries), Agricultural Impact Assessment (AIA), 2018 – 2021,
- Belle Aire Road (Simcoe County) Agricultural Impact Assessment (AIA) Study (including MDS1), 2019,
- Vinemount Quarry Extension (Niagara) Agricultural Impact Assessment (AIA) Study, December 2017.
- Grimsby – Agricultural Impact Assessment Opinion, November 2017.
- City of Hamilton, Urban Core Developments – Agricultural Capability Assessment, February 2017.
- Township of North Dumfries – Minimum Distance Separation (MDS 1), February 2017.
- Township of Erin, County of Wellington – Minimum Distance Separation 1(MDS1 Study), 2016.
- Halton Hills Employment Area Secondary Plan, Halton, 2015 - 2016.
- Peer Review of Agricultural Impact Assessment, Oro-Medonte Township, 2015.
- Greenwood Construction Aggregate Pit, Mono Township, 2014 - 2015.
- Innisfil Mapleview Developments, Town of Innisfil – Minimum Distance Separation (MDS 1), 2014.
- Loyalist Township – Minimum Distance Separation (MDS 1 & 2), 2014.
- Rivera Fine Homes, Caledon – Minimum Distance Separation (MDS 1), 2014.
- Town of Milton PanAm Velodrome – Minimum Distance Separation (MDS) 2012 – 2013.

Soil Surveys/Soil Evaluations

- Ontario Stone, Sand & Gravel Association Case Study Rehabilitated Pits, 2023 – ongoing.
- Soil Survey and Canada Land Inventory Evaluation, Neubauer Pit, 2023.
- Soil Survey and Canada Land Inventory Evaluation, David Pit, 2023.
- Soil Survey and Canada Land Inventory Evaluation, Pinehurst Road, 2023.
- Soil Survey and Canada Land Inventory Evaluation, Paris Plains Church Road Site, 2022.
- Soil Survey and Canada Land Inventory Evaluation, Mulmur Site, 2022.
- Soil Survey and Canada Land Inventory Evaluation, Port Colborne Site, 2022.
- Soil Survey and Canada Land Inventory Evaluation, Pike Site, 2022.
- Soil Survey and Canada Land Inventory Evaluation, New Dundee Road Site, 2022.
- Soil Survey and Canada Land Inventory Evaluation, Gehl Farm, 2022
- Soil Sampling, City of Kitchener, 2021 – 2022.
- Soybean Cyst Nematode Soil Sampling, Enbridge, 2021.
- Soil Survey and Canada Land Inventory Evaluation, Max Becker Enterprises, City of Kitchener, 2021
- Soil Survey and Canada Land Inventory Evaluation, Max Beck Enterprises, City of Kitchener, 2021 – 2022.
- Soil Survey and Canada Land Inventory Evaluation, Burlington, Nelson Quarry, 2020-2021.
- City of Kitchener, City Wide Soil Studies, 2020-ongoing.
- Soil Survey, Fallowfield Drive, City of Kitchener Development Manual Study, 2020 - ongoing.
- Soil Survey, Williamsburg Estates, City of Kitchener Development Manual Study, 2020 - 2021.
- Soil Survey, South Estates, City of Kitchener Development Manual Study, 2020 - 2021.
- Soil Survey and Canada Land Inventory Evaluation, Burlington, Nelson Quarry, 2019.
- Soil Survey and Canada Land Inventory Evaluation, Maryhill Pit, 2019.
- Soil Survey and Canada Land Inventory Evaluation, Glen Morris Pit, Lafarge Canada, 2018,
- Soil Survey and Canada Land Inventory Evaluation, Brantford Pit Extension, Lafarge Canada, 2018,
- Soil Survey and Canada Land Inventory Evaluation, Pinkney Pit Extension, Lafarge Canada, May 2018,
- Soil evaluation and opinion, King-Vaughan Road, March 2018,

- Soil Sampling, Upper Medway Watershed, Agriculture and Agri-Food Canada. December 2017 – June 2018.
- Soil Survey and Canada Land Inventory Evaluation, Hillsburgh Pit Extension, SBM St Marys, December 2017.
- Soil Survey and Canada Land Inventory Evaluation, Erin South Pit Extension, Halton Crushed Stone, December 2017.
- City of Kitchener, City Wide Urban Soil Assessments, 2016 – On-going.
- Soil Survey and Canada Land Inventory Evaluation, Solar Feed-In Tariff (FIT) Program Study, 2016.
    - Bruce County (15 sites)
    - Grey County (4 sites)
- Soil Survey and Canada Land Inventory Evaluation, Wasaga Beach area, County of Simcoe, 2016.
- Soil Survey and Canada Land Inventory Evaluation Study, MHBC Bradford, Simcoe County, 2016.
- Soil Survey and Canada Land Inventory Evaluation, Solar Feed-In Tariff (FIT Program Study), Carbon Foot Print Offsetters, Durham Region, 2015.
- Soil Survey and Canada Land Inventory Evaluation, Solar Feed-In Tariff (FIT Program Study), Abundant Solar Energy (12 Sites – Peterborough, Madoc, Havelock, Belleville), 2015.
- Soil Survey and Canada Land Inventory Evaluation, Solar Feed-In Tariff (FIT Program Study), City of Hamilton, 2015.

Municipal Comprehensive Review and Mapping Studies (MCR)

- Bruce County 2022 – 2023.
- Simcoe County, 2020 - ongoing.
- Northumberland County, 2020 - ongoing.
- Halton Region, 2019 - 2022.

Land Evaluation and Area Review Studies (LEAR)

- Land Evaluation and Area Review (LEAR) presentation for Lanark County Council, 2024.
- Land Evaluation and Area Review (LEAR) Town of Amaranth, 2023 – ongoing.
- Mapping Audit Bruce County. Assessment of Prime and Non-Prime Agricultural Lands, 2022.
- Mapping Audit Northumberland County. Comparison of Regional and Provincial Prime Agricultural Area Mapping – 2021 - ongoing.
- Mapping Audit Simcoe County. Comparison of Regional and Provincial Prime Agricultural Area Mapping – 2021 - ongoing.
- Mapping Audit Halton Region. Comparison of Regional and Provincial Prime Agricultural Area Mapping – 2019 - 2022.
- Land Evaluation and Area Review (LEAR) – Soils Component, in Association with AgPlan Ltd, Kanata/Munster. December 2017 – July 2018.
- Land Evaluation and Area Review (LEAR) – Soils Component, Prince Edward County, 2016 – 2017.
- Land Evaluation and Area Review (LEAR) – Soils Component, Peel Region, 2013 - 2014.
- Land Evaluation and Area Review (LEAR), Minto Communities, Ottawa, 2012 – 2013.
- GIS and LE component of Land Evaluation and Area Review (LEAR), York Region 2008 – 2009.
- Land Evaluation and Area Review (LEAR), Mattamy Homes, City of Ottawa – Orleans, 2008 – 2009.
- GIS for Manitoba Environmental Goods and Services (EG&S) Study. 2007 – 2008.
- GIS and LE component of Land Evaluation and Area Review (LEAR), Halton Region 2007 - 2008.
- GIS and LE component of Land Evaluation and Area Review (LEAR), City of Hamilton, 2003 – 2005.

Expert Witness

- Local Planning Appeal Tribunal (LPAT) Hearing, Greenwood Aggregates Limited, Violet Hill Pit Application, 2020.
- Ontario Municipal Board (OMB) Hearing, Burl's Creek Event Grounds 2018-2019.
- Town of Mono Council Meeting, Greenwood Aggregates Violet Hill Pit, January 2018.
- Ontario Municipal Board (OMB) Hearing, Burl's Creek Event Grounds, Simcoe County, 2015 – 2016.
- Ontario Municipal Board (OMB) Hearing, Town of Woolwich, Gravel Pit, 2012 – 2013.
- Ontario Municipal Board (OMB) Hearing, Mattamy Homes – City of Ottawa, 2011 – 2012.

- Ontario Municipal Board (OMB) Hearing, Town of Colgan, Simcoe County, 2010.
- Presentation to Planning Staff on behalf of Mr. MacLaren, City of Ottawa, 2005.
- Ontario Municipal Board (OMB) Hearing, Flamborough Severance, 2002.
- Preparation for an Ontario Municipal Board Hearing, Flamborough Golf Course, 2001.
- Ontario Municipal Board (OMB) Hearing, Stratford RV Resort and Campground – Wetland Delineation Assessment, 2000.
- Ontario Municipal Board (OMB) Hearing, Watcha Farms, Grey County, Agricultural Impact Assessment – Land Use Zoning Change, 1999-2000.
- Ontario Municipal Board (OMB) Hearing, Town of St. Vincent Agricultural Impact Assessment – Land Use Zoning Change, 1999 – 2000.
- Halton Agricultural Advisory Committee (HAAC), Halton Joint Venture Golf Course Proposal - Agricultural Impact Assessment for Zoning Change, 1999-2000
- Halton Agricultural Advisory Committee (HAAC), Sixteen Mile Creek Golf Course Proposal – Agricultural Impact Assessment for Zoning Change, 1999.
- Ontario Municipal Board (OMB) Hearing, Town of Flamborough, Environs Agricultural Impact Assessment for Zoning Change – Golf Course Proposal, 1999.
- Ontario Municipal Board (OMB) Hearing, Stratford RV Resort and Campground – Agricultural Impact Assessment, 1998.

Monitoring Studies

- Ontario Stone, Sand, and Gravel Association (OSSGA) Rehabilitation Study, 2023 – ongoing.
- Enbridge Soil Sampling for Soybean Cyst Nematode, various sites Lambton County, 2022
- Union Gas/Enbridge Gas 20" Gas Pipeline Construction Monitoring – Kingsville – 2019 - 2020.
- Union Gas/Enbridge Gas – Gas Pipeline Construction Monitoring for Tree Clearing. Kingsville Project. February/March 2019.
- CAEPLA – Union Gas 36" Gas Pipeline Construction Monitoring and Post Construction Clean Up – Agricultural Monitoring Panhandle Project. 2017 – 2018.
- CAEPLA – Union Gas 36" Gas Pipeline Construction Clearing Panhandle Project (Dawn Station to Dover Station) – Agricultural Monitoring, 2017 (Feb-March).
- City of Kitchener, Soil Sampling and data set analysis, 2017 – On-going.
- GAPLO – Union Gas 48" Gas Pipeline (Hamilton Station to Milton) Construction Soil and Agricultural Monitoring, 2016 – 2017.
- GAPLO – Union Gas 48" Gas Pipeline (Hamilton –Milton) Clearing – Agricultural Monitoring, 2016.

Publications

D.E. Stephenson and D.B. Hodgson, 1996. Root Zone Moisture Gradients Adjacent to a Cedar Swamp in Southern Ontario. In Malamoottil, G., B.G. Warner and E.A. McBean., *Wetlands Environmental Gradients, Boundaries, and Buffers*, Wetlands Research Centre, University of Waterloo. Pp. 298.

B

Appendix B: Draft Wellington County Official Plan Amendment Text and Schedule

AMENDMENT NUMBER ___

TO THE OFFICIAL PLAN FOR THE

COUNTY OF WELLINGTON

Applicant: CBM Aggregates, a Division of St. Marys Cement Inc. (Canada)
Proposed Anthony Pit
Part of Lot 22, Concession 8
Township of Puslinch

County File No. OP-2026-XXX

AMENDMENT NUMBER ___
TO THE
COUNTY OF WELLINGTON OFFICIAL PLAN

INDEX

PART A – THE PREAMBLE

The Preamble provides an explanation of the proposed amendment including the purpose, location and background information, but does not form part of this amendment.

PART B – THE AMENDMENT

The Amendment describes the changes and/or modifications to the Wellington County Official Plan which constitute Official Plan Amendment Number ___.

PART C – THE APPENDICES

The Appendices, if included herein, provide information related to the Amendment, but do not constitute part of the Amendment.

PART A – THE PREAMBLE

PURPOSE

The purpose of this proposed amendment is to:

1. Amend Schedule B7 of the Official Plan (the land use schedule for the Township of Puslinch) to allow for an aggregate extraction operation by adding the Mineral Aggregate Area Overlay to the subject lands.
2. Amend Schedule B7 of the Official Plan to remove the Greenlands designation and replace it with the Secondary Agricultural designation.
3. Amend Schedule D of the Official Plan (Mineral Aggregate Resource Overlay) to add the entirety of the subject lands to the Sand and Gravel Resources of Primary and Secondary Significance Boundary.

These amendments represent map changes only.

LOCATION

The subject lands are located at 4454 Victoria Road South, legally described as Part of Lot 22, Concession 8 in the Township of Puslinch.

In conjunction with a licence application under the Aggregate Resources Act, this application proposed to licence 18.0 ha (44.5 acres) of land of which 8.7 ha (21.5 acres) are proposed for extraction.

BASIS

The County Official Plan provides for the establishment of a new aggregate extraction operation subject to consideration of the potential impacts of such land uses on the natural environment, surrounding land uses, and the agricultural operations.

The proposed extraction area contains approximately 1 million tonnes of high-quality sand and gravel resources. Resources will be extracted both above and below the water table.

The maximum annual tonnage limit is proposed to be 1,000,000 tonnes. There will be no aggregate processing on the subject lands as extracted resources will be transported by truck west to the CBM Aberfoyle Pit operation for processing and shipment. The existing haul route and main entrance, of the Aberfoyle Pit, onto Concession Road 7 will remain the same.

The subject lands are within the Secondary Agricultural and Greenlands designation of the County of Wellington Official Plan. The Greenlands designation is related to a

hedgerow that has been identified as a non signification woodland through field verification.

New mineral aggregate operations shall only be established through amendment to Mineral Aggregate Area shown on Schedule 'B' of the Official Plan. To permit a new extraction operation, an Official Plan Amendment is required to include the proposed pit lands within the Mineral Aggregate Area.

As part of this application, a request has also been made to revise the boundary of the Greenlands designation which would result in a total net loss of the Greenlands designation of approximately 3.68 ha. These changes are being made to more closely align with the field-verified boundary of the adjacent significant wetlands which will be protected from aggregate extraction.

The Mineral Aggregate Resource Overlay on Schedule 'D' of the Official Plan generally identifies areas of high potential for mineral aggregate extraction. These lands have been identified based on geological information in the Ministry of Energy and Mines Aggregate Resources Inventory Paper (ARIP No. 162) or are areas licenced for a pit or quarry. The amendment also includes a map change to include the proposed licence area within the Schedule D overlay (approximately 18.0 ha / 44.5 ac).

OTHER APPROVALS

An application for a Class 'A' Licence under the *Aggregate Resources Act* has been submitted to the Ministry of Natural Resources. An application for a Zoning By-law Amendment to permit the pit has also been submitted to the Township of Puslinch.

SUPPORTING INFORMATION

In support of the proposed amendment to the Official Plan, CBM Aggregates has prepared a hydrogeological assessment, archaeological assessment, cultural heritage assessment, natural environment assessment, traffic impact study, noise assessment, management plan for fugitive dust and planning justification report.

PART B – THE AMENDMENT

All of this part of the document entitled **Part B – The Amendment**, consisting of the following text and maps constitute Amendment No.___ to the County of Wellington Official Plan.

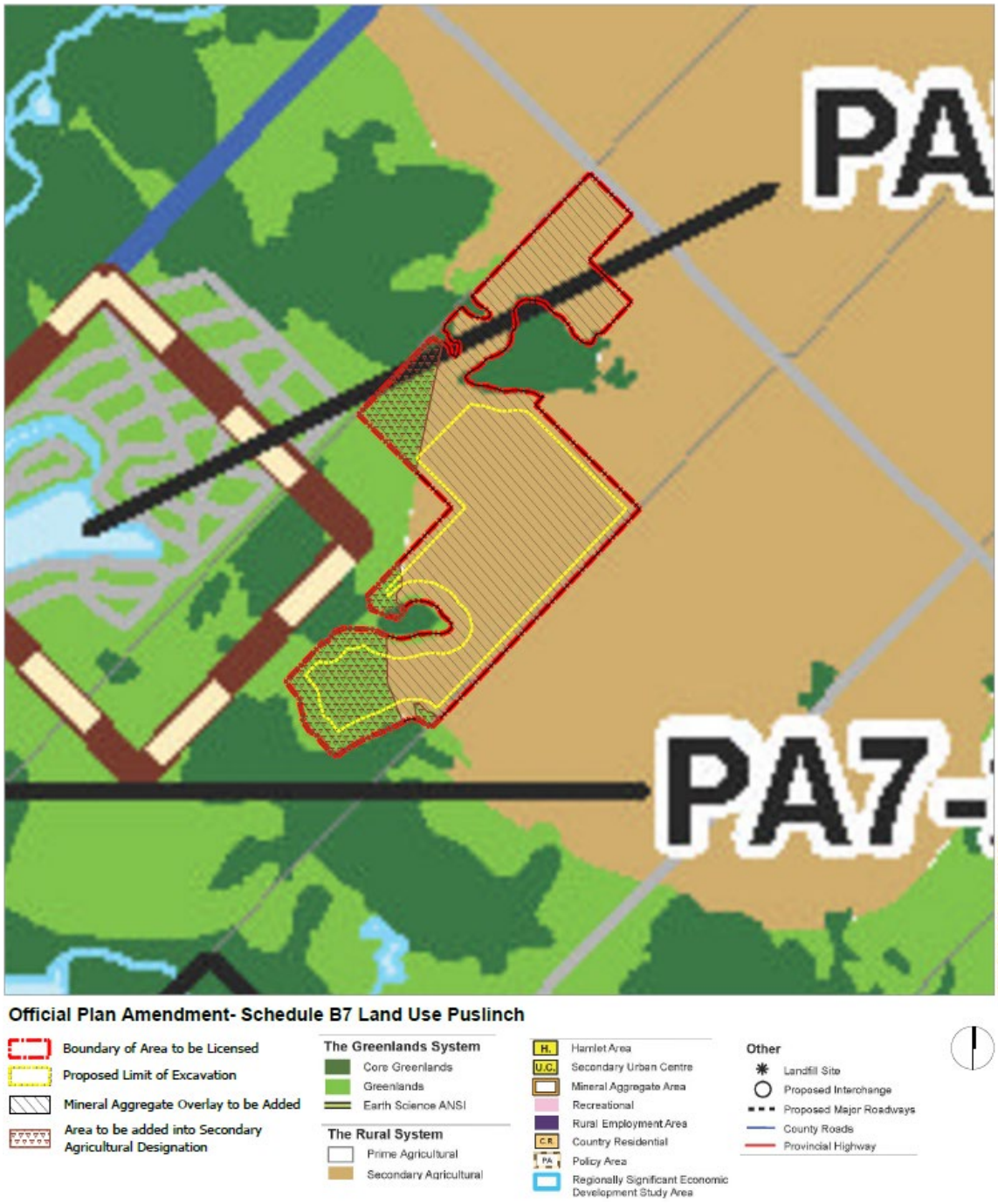
DETAILS OF THE AMENDMENT

The Official Plan of the County of Wellington is hereby amended as follows:

1. **THAT** Schedule B7 (Puslinch) be amended by changing the designation on portions of Part of Lot 22, Concession 8, in the Township of Puslinch by adding the Mineral Aggregate Area to the subject lands as illustrated on the attached Schedule "A" of this Amendment.
2. **THAT** Schedule D (Mineral Aggregate Resource Overlay) be amended by adding Mineral Aggregate Resource Overlay on Part of Lot 22, Concession 8, in the Township of Puslinch by revising the Sand and Gravel Resources of Primary and Secondary Significance Boundary as it relates to the subject lands as illustrated on the attached Schedule "B" of this Amendment.

AMENDMENT NUMBER ___
TO THE
COUNTY OF WELLINGTON OFFICIAL PLAN

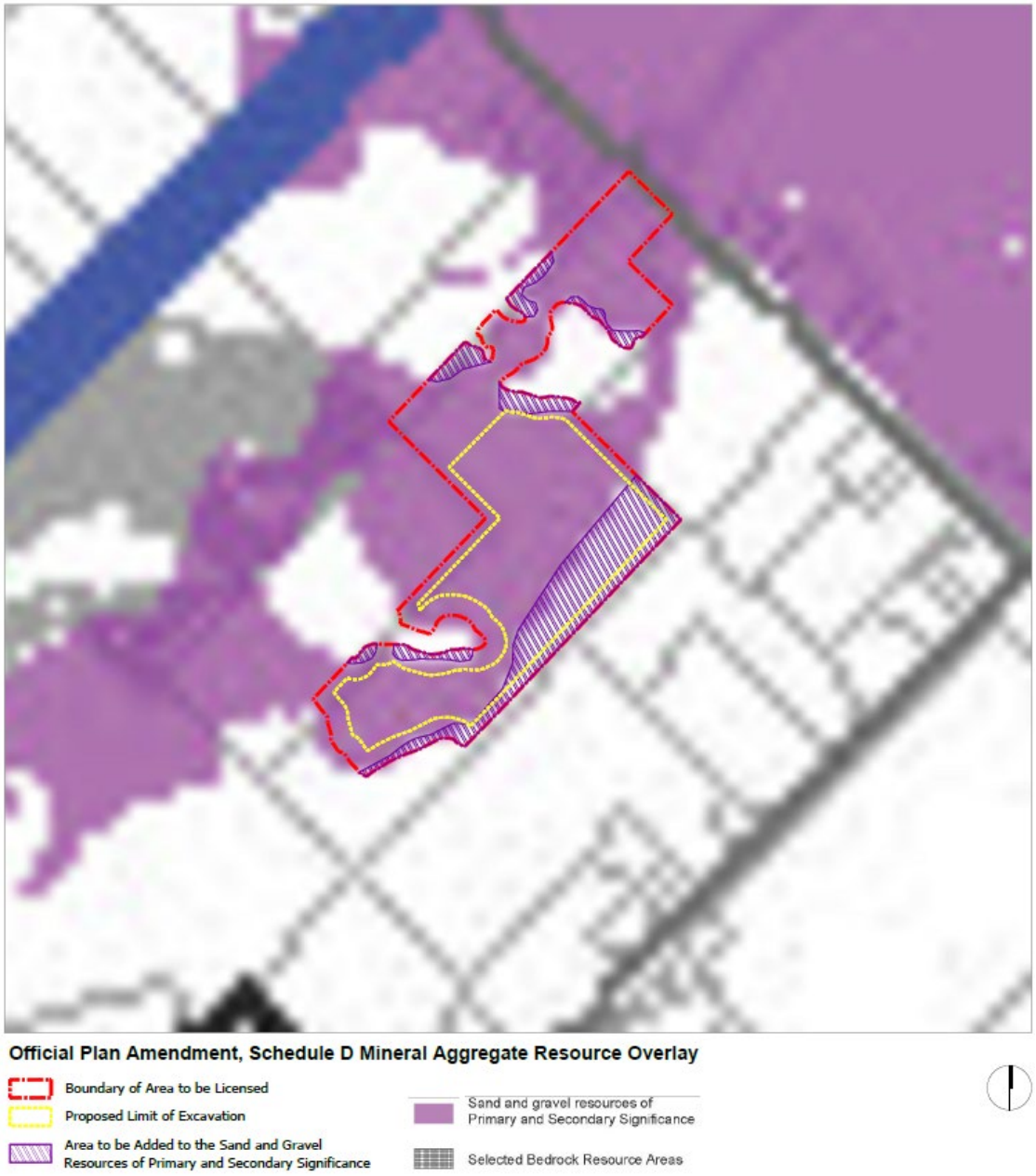
Schedule "A"



Amendment to Schedule B7 (Puslinch)

AMENDMENT NUMBER ___
TO THE
COUNTY OF WELLINGTON OFFICIAL PLAN

Schedule "B"



Amendment to Schedule D

C

Appendix C: Draft Puslinch Zoning Bylaw Amendment Text and Schedule

THE CORPORATION OF THE TOWNSHIP OF PUSLINCH

BY-LAW NUMBER 2026-###

A BY-LAW TO AMEND BY-LAW NUMBER 023/18, AS AMENDED, BEING THE ZONING BY-LAW OF THE TOWNSHIP OF PUSLINCH

WHEREAS, the Council of the Corporation of the Township of Puslinch deem it appropriate and in the public interest to amend By-Law Number 023/18 pursuant to Section 34 of the Planning Act, R.S.O. 1990 as amended;

NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE TOWNSHIP OF PUSLINCH ENACTS AS FOLLOWS:

1. THAT Schedule "A" of the By-law 023/18 is hereby amended by Part of Lot 22, Concession 8 within the Township of Puslinch, 4454 Victoria Road South, from Agricultural (A) Zone to the Extractive Industrial (EX) Zone as shown on Schedule "A" of this By-law.
2. THAT the Environmental Protection Overlay remains on site as shown on Schedule "A" of this By-law.
3. That Table 14.1, Site Specific Special Provisions is amended by adding the following Site Specific Special Provisions:

No.	Parent Zone	By-law	Additional Permitted Uses	Prohibited Uses	Site Specific Special Provisions
##	A	##/2026	N/A	N/A	Visual and acoustic mitigation required for the pit as well as the truck entrance/exit can occur on these lands while such lands remain licensed under the Aggregate Resources Act. A portion of these lands will also be used as an extraction setback from adjacent significant natural features

4. If By-law Number 023/18 has come into full force and effect as it relates to the above-noted lands, this By-law shall become effective from the date of passage

by Council and come into force in accordance with the requirements of the Planning Act, R.S.O. 1990 as amended.

READ A FIRST AND SECOND TIME THIS_____OF_____, 2026.

_____ _____

MAYOR CLERK

READ A THIRD TIME AND PASSED THIS_____OF_____, 2026.

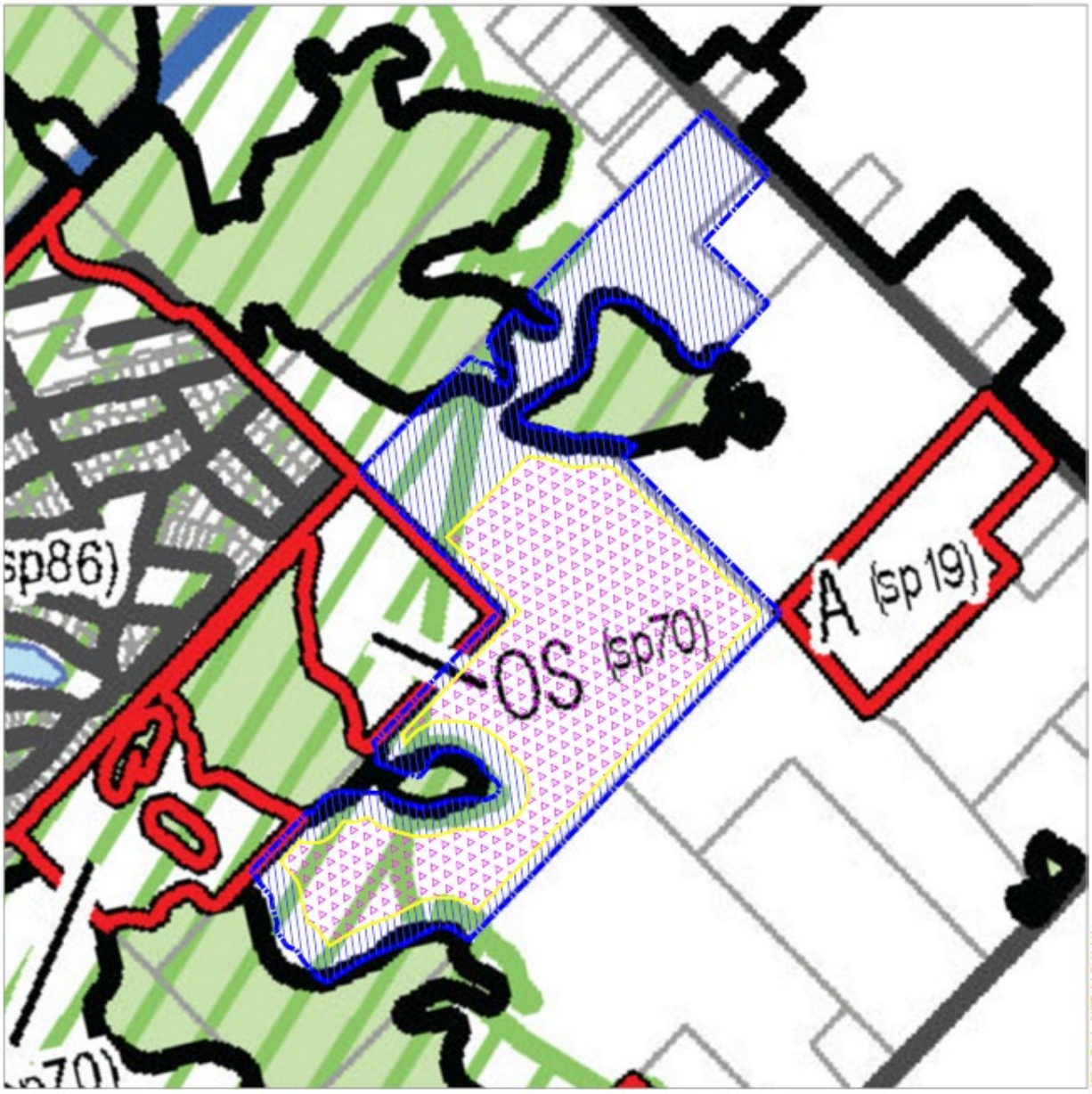
_____ _____

MAYOR CLERK

THE CORPORATION OF THE TOWNSHIP OF PUSLINCH

BY-LAW NUMBER 2026-###

Schedule "A"



Zoning By-law Amendment- Township of Puslinch Zoning By-law No. 023-18, Schedule 'A'

Boundary of Area to be Licensed

Proposed Limit of Excavation

Area to be rezoned from Agricultural (A) to Extractive Industrial (EXI) Zone.

Area to be rezoned from Agricultural (A) to Agricultural (A-SP##)

Zone Descriptions

A	Agricultural	HC	Highway Commercial	RR	Resort Residential
AC	Agricultural Commercial	HR	Hamlet Residential	RUR	Rural Residential
C	Commercial	I	Institutional	UR	Urban Residential
CMU	Core Mixed Use	IND	Industrial	f-	Aberfoyle Flood Plain Overlay
DI	Disposal Industrial	NE	Natural Environment	(sp#)	Site Specific Exemption
EXI	Extractive Industrial	OS	Open Space	(h#)	Holding Provision
FD	Future Development	RC	Resort Commercial	(t#)	Temporary Zone

Site Specific Exemption | Zoning Limits | Natural Environment | Environmental Protection Overlay (to remain)

This is Schedule "A" to By-law No. 2026-###

Passed this_____of_____, 2026.

_____

MAYOR

_____

CLERK

D

Appendix D: Curriculum Vitae of Report Authors

Education

University of Waterloo
Bachelor of Environmental Studies
Honours Planning (Co-op)
2008

Professional Associations

Full Member, Canadian Institute of Planners (CIP)

Full Member, Ontario Professional Planners Institute (OPPI)

Member, Pragma Council (University of Waterloo)

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MHBC | PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE

Neal DeRuyter

BES, MCIP, RPP

Neal DeRuyter, a Partner with MHBC, joined the firm in 2009 after graduating from the University of Waterloo in the Honours Planning Co-op program. Mr. DeRuyter has worked as a Planner in the private and public sectors with experience in aggregate resource, development and municipal planning.

Mr. DeRuyter has processed and managed several development applications including zoning by-law amendments, official plan amendments, and licence and site plan applications under the Aggregate Resources Act. He is certified by the Ministry of Natural Resources & Forestry to prepare site plans under the Aggregate Resources Act. He is a Registered Professional Planner and is a member of the Canadian Institute of Planners and Ontario Professional Planners Institute. He has provided expert evidence before the Ontario Municipal Board, Local Planning Appeal Tribunal and Ontario Land Tribunal.

He has participated and authored several research studies and articles related to aggregate resource management. Mr. DeRuyter has presented on several occasions for various events at the School of Planning at the University of Waterloo. Mr. DeRuyter is a member of the Pragma Council at the University of Waterloo.

Professional History

Partner, MacNaughton Hermsen Britton Clarkson Planning Limited (2017 – Present)

Associate, MacNaughton Hermsen Britton Clarkson Planning Limited (2013 – 2017)

Planner, MacNaughton Hermsen Britton Clarkson Planning Limited (2009 – 2013)

Publications

- 'Future Aggregate Availability and Alternatives Analysis, State of the Aggregate Resource in Ontario Study, 2009' (MNR)
- 'The Future of Ontario's Close to Market Aggregate Supply: The 2015 Provincial Plan Review' (OSSGA, 2015)
- Agricultural Impact Assessment and Rehabilitation Plan Guidelines for Aggregate Extraction, 2016 (OMAFRA)

Selected Project Experience

- Research, preparation and coordination of reports / applications under the Planning Act, Niagara Escarpment Planning and Development Act and Aggregate Resources Act.
- Project management services for development applications.
- Conduct notification and consultation processes under the Aggregate Resources Act. including consultations with Indigenous Communities.
- Due diligence and property overview reports for prospective aggregate sites.
- Aggregate Resources Act site plan amendments.
- Planning assessment for commercial, residential, agricultural and industrial developments.
- Planning assessment for proposed urban use requests in Niagara Escarpment Plan through 2015-2017 Review.
- Research and preparation of reports / evidence for hearings before the Ontario Municipal Board / Local Planning Appeal Tribunal/Ontario Land Tribunal.
- Planning research and assessment for expropriation matters on behalf of public and private sector clients.

Selected Project Examples

- Bell Sand Farms Grose Pit Extension, Perth County
- Blueland McCormick Pit, Town of Caledon
- Brock University, Niagara Escarpment Plan Lands, City of St. Catharines
- Cambridge Aggregates Inc. Edworthy West Pit, Township of North Dumfries
- CBM Ayr Pit, Township of North Dumfries
- CBM Brantford Pit, County of Brant
- CBM Bromberg Pit, Township of North Dumfries
- CBM Dorchester Pit, Municipality of Thames Centre
- CBM Eramosa Pit Extension, Township of Centre Wellington
- CBM Aberfoyle South Pit Expansion, Township of Puslinch
- CBM Lanci Pit Expansion, Township of Puslinch
- Caledon Sand & Gravel, Town of Caledon
- Capital Paving Shantz Station Pit, Township of Woolwich
- City of Iqaluit Pit and Quarry Operations Plans
- City of Kingston, Barriefield Affordable Housing Feasibility Study
- Erie Sand & Gravel MOS Pit, Municipality of Leamington
- Fidelity Construction Colborne Pit, Township of Cramahe
- Gallo Contracting Industrial Use, Township of Puslinch
- Halton Crushed Stone Erin Pit Extension, Town of Erin
- J-AAR Materials Ltd. Bardoel Pit, Township of Southwest Oxford
- James Dick Construction Ltd. Adjala Pit Extension, Township of Adjala-Tosorontio
- James Dick Construction Ltd. Erin Pit Extension, Town of Caledon
- James Dick Construction Ltd. Gamebridge Quarry, Township of Ramara
- James Dick Construction Ltd. Reid Road Quarry, Town of Milton
- Kaneff Properties, Royal Niagara Golf Club, City of St. Catharines
- KPM Brantford Plant Expansion, Brant County
- Lafarge Canada Inc. Brantford Pit Expansion, County of Brant
- Lafarge Canada Inc. Hagersville Quarry, County of Haldimand
- Lafarge Canada Inc. Navan Quarry Extension, City of Ottawa
- Lafarge Canada Inc. Talbot Pit, City of London
- Lafarge Canada Inc. West Paris Pit, County of Brant
- Lillycrop Highway 6 Expropriation, Township of Puslinch
- Limehouse Clay Products Ltd. Georgetown Quarry, Town of Halton Hills
- Miller Aggregates Paris Plains Pit, Brant County
- Ministry of Agriculture, Food and Rural Affairs, Agricultural Impact Assessment and Rehabilitation Plan Guidelines for Aggregate Extraction (2016)
- Ministry of Natural Resources and Forestry, State of the Aggregate Resources in Ontario Study (2009)
- Ministry of Transportation, Highway 410 Expropriation, Town of Caledon
- North York Sand & Gravel Manvers Pit, City of Kawartha Lakes

- Nunavut Association of Municipalities Aggregate Resource Management Plans
- Ontario Stone, Sand & Gravel Association, Municipal Official Plan Reviews in Ontario
- Ontario Trap Rock Quarry, Town of Bruce Mines
- Queenston Quarry Reclamation Company Redevelopment, Town of Niagara-on-the-Lake
- Ramada Beacon Hotel, Town of Lincoln
- R.W. Tomlinson Ltd. Brechin Quarry, City of Kawartha Lakes
- R.W. Tomlinson Ltd. Brickyards Quarry, City of Ottawa
- R.W. Tomlinson Ltd. East Oxford Pit, Municipality of North Grenville
- R.W. Tomlinson Ltd. Environmental Services, Joyceville Environmental Centre, City of Kingston
- R.W. Tomlinson Ltd. Kemptville Quarry, Municipality of North Grenville
- R.W. Tomlinson Ltd. Moodie Quarry Expansion, City of Ottawa
- R.W. Tomlinson Ltd. Moore Quarry, City of Ottawa
- R.W. Tomlinson Ltd. Napanee Asphalt Plant, Town of Greater Napanee
- R.W. Tomlinson Ltd. Reids Mills Pit, City of Ottawa
- R.W. Tomlinson Ltd. Stittsville Quarry, City of Ottawa
- R.W. Tomlinson Ltd. Storyland Pit, Renfrew County
- R.W. Tomlinson Ltd. Ready-Mix Site Plan Approval, City of Ottawa
- Sunrock Canada Burnt River Quarry, City of Kawartha Lakes
- Sunrock Canada Hockley Pit, Town of Uxbridge
- Tackaberry Construction, Woods Quarry Expansion, Elizabethtown-Kitley Township
- Thomas Cavanagh Construction West Carleton Quarry Extension, City of Ottawa
- Thomas Cavanagh Construction Arnott Pit, Lanark County
- Thomas Cavanagh Construction Highland Line Pit, Lanark County
- Thomas Cavanagh Construction Goulbourn Quarry, City of Ottawa
- Thomas Cavanagh Construction Pembroke Quarry, Renfrew County
- Township of Guelph-Eramosa, Review of Tri-City Spencer Pit
- Township of West Lincoln, Preliminary Bedrock Resource Assessment in Smithville
- Walker Aggregates Inc. Amherstburg Quarry and McGregor Quarry, Town of Amherstburg
- Waterford Sand & Gravel Law Quarry Extension, Township of Wainfleet
- Wm. J. Gies Construction Stockyards Lands, Township of Woolwich

Presentations

- "2024 Planning and Policies Update"- Ontario Stone Sand and Gravel Association, 2024 AGM
- "Planners Forum" - Ontario Stone Sand & Gravel Association 2023 AGM
- "Bill 23 and Provincial Planning Changes" – Ontario Stone Sand & Gravel Association 2023
- "Ontario Land Use Planning Update" – Ontario Stone Sand & Gravel Association 2022 AGM
- "Public Engagement in the Time of Covid-19" – Ontario Stone Sand & Gravel Association 2021 AGM
- "Aggregate Information Session & Tour" – OPPI Southwest District 2018
- "Coordinated Plan Review" – Ontario Stone Sand & Gravel Association 2018 AGM
- "Planning as a Profession" – Faculty of Environment Open House at the University of Waterloo, March 2013
- "Rehabilitation of Licensed Pits and Quarries" – Canadian Association of Certified Planning Technicians Professional Development Conference, October 21, 2011
- Professional Practice, Public and Private Administration (PLAN 403), University of Waterloo, January 2010

Articles

- "Planning for a sustainable community" – Avenues Magazine (Ontario Stone, Sand & Gravel Association), Volume 1, Issue 2, 2011
- "The closer the better" – Avenues Magazine (Ontario Stone, Sand & Gravel Association), Volume 2, Issue 2, 2012
- "Diminishing supply" - Avenues Magazine (Ontario Stone, Sand & Gravel Association), Volume 3, Issue 1, 2013
- "Shipping aggregate from further afield" – Avenues Magazine (Ontario Stone, Sand & Gravel Association), Volume 3, Issue 2, 2013
- "The feasibility of alternative transportation options" – Avenues Magazine (Ontario Stone, Sand & Gravel Association), Volume 4, Issue 1, 2014
- "Keeping residents safe and dry" – Avenues Magazine (Ontario Stone, Sand & Gravel Association), Volume 4, Issue 2, 2014

MHBC

Education

University of Waterloo
Doctorate- School of Planning
(ongoing)

University of Guelph
Master of Science in Rural Planning & Development
2000

University of Waterloo
Bachelor of Environmental Studies
Honours Environment & Resource Studies
1988

Professional Associations

Registered Professional Planner

Full Member, Ontario Professional Planners Institute (OPPI)

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MHBC | PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE

Vince Deschamps

M.Sc, MCIP, RPP

Vince Deschamps is an Associate with MHBC specilizing in aggregate resouce, natural heritage and rural land use planning.

Mr. Deschamps has over 30 years of professional experience across a broad range of sectors in Canada and internationally, with a deep interest in Indigenous land use planning systems, resource conservation and biodiversity assessment. Vince is at the forefront of Natural Capital and Ecosystem Service Assessment (NCESA), as a scientific discipline as well as a means to anticipate and plan for the effects of climate change. The NCESA approach is based upon the complex inter-relationships between ecological, socio-economic and cultural values of landscapes and communities, and this is reflected in Mr. Deschamps' research interests and professional practice as a land use planner.

Within the extraction industry, Mr. Deschamps has provided support in assessing the impacts of aggregate and mining activities on biodiversity both domestically across Ontario, Quebec and Labrador, as well as internationally in Indonesia and Romania. The biodiversity component of these projects comprised a variety of tasks, including the review of ecological baseline studies, the development and coordination of extensive ecological field investigations, the management of expert staff and sub-consultants, data analysis, developing management options, report preparation, client management and agency consultation.

Mr. Deschamps is a Registered Professional Planner and a citizen of the Métis Nation of Ontario.

Professional History

Associate, MacNaughton Hermsen Britton Clarkson Planning Limited

(2020-Present)

Director of Sustainability, Moneta Gold Inc.

(2021-2023)

Senior Land Use Planner, Gwich'in Land Use Planning Board

(2020-2022)

Midwestern Ontario Program Director, Nature Conservancy of Canada.

(2017-2019)

Senior Planning Ecologist, Beacon Environmental

(2016-2017)

Senior Environmental Planner, Stantec Consulting Ltd

(2011-2016)

Senior Environmental Planner, AECOM

(2009-2011)

Senior Environmental Planner, ERM Canada Corp

(2007-2009)

Senior Environmental Planner (RJ Burnside & Associates Ltd)

(2005-2007)

Senior Project Manager (ESG International Inc/Stantec Consulting Ltd)

(2001-2005)

Selected Aggregate Resources Project Experience

- Tri City Lands Ltd., Spencer Pit – Natural Environment Level 1 & 2 Report
- Walker Industries, Upper's Lane Quarry – field investigations in support of a Natural Environment Level 1 & 2 Report
- Jennison Construction Ltd, Clinton Pit – Natural Environment Level 1 & 2 Report and expert witness testimony at OMB
- Waterford Sand and Gravel Ltd., Dunnville Quarry Expansion – Natural Environment Level 1 and 2 Report
- Township of East Garafraxa Gravel Pit Expansion – Natural Environmental Level 1 & 2 Report
- PT Holcim Indonesia, Semen Dwima Agung Cement Operation – IFC (World Bank) Biodiversity Evaluation

Selected Mining Project Experience

- Moneta Gold Inc. – Director of Sustainability
- Greenstone Gold Mines, Hard Rock Mine – EIA Terrestrial Disciple Lead
- Eramet/Weda Bay Nickel – ESHIA Terrestrial Biodiversity Team Leader
- Iron Ore Company of Canada – Compatibility Assessment Team Lead
- PT Freeport Indonesia – External Environmental Audit Biodiversity Lead
- Newmont Mining, Martabe Project – Biodiversity Management and Impact Assessment Lead
- Rosia Montana Gold Corporation, Rosia Montana Project – EIA Biodiversity Lead

Selected Indigenous & Land Use Planning Experience

- Gwich'in Land Use Plan Comprehensive Review
- Attawapiskat First Nation Community Based Land Use Plan
- Pays Plat First Nation Land Assessment & Selection
- Animbiigoo Zaagi'igan Anishinaabek First Nation Land Assessment and Selection
- Sand Point First Nation Land Use Plan
- Comprehensive Review & Overhaul of Barbados Groundwater Protection Zoning Policy & System

Selected Land Development Planning Experience

Rehabilitation of the Gore Road from King Street to Patterson Sideroad Municipal Class Environmental Assessment (Schedule B)

- Kincardine Avenue Municipal Service Extension Municipal Class Environmental Assessment (Schedule B)
- Municipal Class EA (Schedule C) for the East Luther Grand Valley Water Pollution Control Plant
- Oak Ridges Moraine Conservation Plan Conformity Report for the Colgan Water Supply Municipal Class EA (Schedule B)
- Bonaire Highlands Scoped Environmental Impact Study
- Veterans Way Lands Environmental Impact Study
- Aberfoyle Creek Estates Phase III Environmental Impact Statement
- Giant's Tomb Subdivision Environmental Impact Statement Review
- Pickering - Kingston Road Environmental Report
- Gamble Road, Lot 5 Environmental Impact Statement
- Hilltop Community, Ayr Environmental Impact Statement
- Churchville Planning & Heritage Study (Natural Heritage Component)
- Humber College Institute of Technology and Advanced Learning, Orangeville Campus, Environmental Management Plan

Part B: Terrestrial and Aquatic Resources

- Trelane Natural Heritage Study

Selected Renewable Energy Project Experience

- Sydenham Wind Energy Centre, Townships of Brooke-Alvinston and Dawn-Euphemia, ON
- Suncor Energy Adelaide Wind Power Project, Municipality of Adelaide-Metcalfe, ON
- Suncor Energy Cedar Point Wind Power Project, Town of Plympton-Wyoming and the Municipality of Lambton Shores, ON
- Bow Lake Wind Farm, Townships of Smilsky and Peever, ON
- Environmental Permitting for Bluewater, Goshen and Jericho Wind Energy Centres, NextEra Energy Canada, Huron and Lambton Counties, ON

Selected Natural Capital & Resource Economics Project Experience

- Valuing Natural Capital in the Lake Simcoe Watershed
- Ecosystem Service Values and Great Lakes Shoreline Ecosystems
- Northwest Brampton Urban Boundary Review, Shale Resources Review
- The Nature Conservancy-Indonesia Program – Carbon/Mangrove Rehabilitation Feasibility Study
- The Nature Conservancy-Indonesia Program – Value of Water Resources in Berau Regency, East Kalimantan
- The Nature Conservancy-Indonesia Program – Value of Water Resources in Lore Lindu National Park, Central Sulawesi
- Leuser Management Unit and CIDA Awards for Canadians –Evaluation of Community Forests as a Buffer Zone Initiative

MHBC

Publications

• Contributor to the Natural Capital Lab, and wrote a series of blogs on the Eco-sociocultual Values of Natural Capital (http://naturalcapitallab.com/blog/)

• Co-presented "Natural Capital Assessment: The Practitioner's Dilemma – Why Hasn't It Caught On In Ontario" at AD Latornell Symposium, Aliston Ontario, November 2014.

• Co-authored "Trends in Forest Ownership, Forest Resources Tenure and Institutional Arrangement: Are they Contributing to Better Forest Management and Poverty Reduction? Case Studies from Indonesia." Prepared for the FAO Regional Workshop in Bangkok, Thailand, October 2005.

• "Biodiversity and Social Benefits in Community-Based Forest Management: The Leuser Ecosystem, Indonesia". Ecological Integrity and Protected Areas, 2001: Proceedings of the Parks Research Forum of Ontario (PRFO) Annual General Meeting, pp. 201-208, 2001.

MHBC

Education

University of Waterloo
Bachelor of Environmental Studies,
Honours of Urban and Regional Planning
2024

Professional Associations

Candidate Member, Ontario Professional Planners Institute (OPPI)

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MHBC | PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE

Yara Elmahdy

BES, Candidate RPP

Yara joined MHBC in June of 2024 after receiving her Bachelor of Environmental Studies Honors Co-op Planning (BES) with specializations in Environmental Planning and Management; and Land Development Planning from the University of Waterloo. Yara has worked for regional and township planning departments for the review of aggregate and development applications.

Yara provides a variety of land use planning consulting services to private sector clients including project coordination and management, due diligence, policy research and review and assistance in Aggregate Resources Act Licence Applications and a variety of planning approvals (Official Plan and Zoning By-law Amendments, Plans of Subdivision and Condominium, Site Plan Approvals, Consents and Minor Variances).

Yara is a candidate member of the Canadian Institute of Planners.

Professional History

Planner, MacNaughton Hermsen Britton Clarkson Planning Limited

(2024 – Present)

Community Planning Intern, Region of Halton

(2022 – 2023)

Planning Administrative Support, Township of Ramara

(2022)

Professional Experience

Experience in all facets of development applications including applications for minor variance, severance, Plan of Subdivision, Plan of Condominium, Site Plan approval, Zoning By-law and Official Plan Amendment.

Project Management

- Coordination of technical requirements with sub-consultants.
- Minor Variance, Severance, Site Plan, Official Plan and Zoning By-law amendment approvals.

Aggregate / Industrial

- Preparation of due-diligence reports identifying the detailed requirements for the approval of residential, commercial and Industrial developments in municipalities across Ontario.
- Property investigations and planning assessments for due diligence reviews for mineral aggregate and concrete and asphalt plant projects
- Research, preparation and co-ordination of reports / applications under the *Planning Act* (Zoning By-law Amendment, Official Plan Amendment) and the *Aggregate Resources Act* (licence and site plan amendment applications).

Residential / Mixed-Use / Commercial

- Various Consent and Minor Variance Applications across south and central Ontario
- Preparation of planning assessments and due diligence reviews to identify development potential of properties for a range of clients

Other

- Presentation and representation at public meetings, committees and municipal Council on behalf of clients.
- Extensive research of land use policy and regulation and prepare planning justification reports in support of development applications.