

# Planning Justification Report & Aggregate Resources Act Summary Statement

Edworthy West Pit  
Township of North Dumfries

**January 2023**

Prepared for: Cambridge Aggregates Inc.

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Our File 1896C

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# EXECUTIVE SUMMARY

MacNaughton Hermesen Britton Clarkson Planning Limited (“MHBC Planning”) has been retained by Cambridge Aggregates Inc. (“Cambridge Aggregates”) to provide land use planning services for the proposed Edworthy West Pit. The Edworthy West Pit is proposed to be located on several parcels of land located west of the existing Cambridge Aggregates Pit in the Township of North Dumfries. The area proposed to be Licenced under the Aggregate Resources Act is legally described as Part of Lots 16, 17 and 18, Concession 9 (former geographic Township of Dumfries), Township of North Dumfries, Regional Municipality of Waterloo. In addition to an Aggregate Resources Act Licence Application, Planning Act approval is also required and include an Amendment to the Township of North Dumfries Zoning By-Law. The proposed Edworthy West Pit proposes a Licence area of 44.3 hectares with 35.2 hectares proposed for above the water table extraction. The total tonnage to be excavated annually from the proposed extension area will not exceed 1,000,000 tonnes.

The purpose of the proposed Edworthy West Pit is to replace the depleting reserves at the existing Cambridge Aggregates Pit located about 1km east on Spragues Road. The existing Cambridge Aggregates North Dumfries Pit (“Main Pit”) has limited reserves remaining. Several phases of the existing pit have already undergone progressive rehabilitation back to an agricultural use and are being used for cash crops. Additional progressive rehabilitation is occurring on an on-going basis as the extraction limits are reached. The current Cambridge Aggregates Main Pit supplies a source of high-quality aggregate materials suitable for use as concrete stone. The concrete stone produced at the pit is used to supply the Hanson Ready-Mix Concrete Plants in the Regional area. The proposed Edworthy West Pit will serve as an operational extension to the existing Main Pit and will be operated as a “load and haul” pit. No processing is proposed to occur at the Edworthy West Pit. Aggregate materials will be extracted from the pit and shipped to the Main Pit for processing and shipment to market. The existing Haul Route, using Regional Roads, will continued to be used from the Main Pit. Aggregate material will be transported from the proposed Edworthy West Pit to the Main Pit via Spragues Road which is a Regional Road. As the objective of the Edworthy West Pit is to replace reserves, there will be no increase or change to the annual tonnage or production rates at the Main Pit. The proposed Edworthy West Pit will ensure that there is a continued supply of high-quality aggregate materials, specifically concrete stone, to meet ongoing demand in a close-to-market location. In addition, aggregate extraction is already an established land-use within the immediate area.

As required for the submission of the *Aggregate Resources Act* Licence Application and *Planning Act* applications, a total of 9 studies as well as a Site Plan were completed to assess the potential impacts of the proposed above water table pit on natural heritage features, water resources, cultural heritage resources, agricultural uses etc. as well as adjacent and surrounding sensitive uses.

Aggregate extraction is an interim rural resource use and is a well established land use in the area. The proposed above water table pit represents wise resource management, is consistent with the Provincial Policy Statement with respect to making close-to-market mineral aggregate resources available and



protecting adjacent natural heritage and cultural heritage features. The pit will be progressively rehabilitated back to an agricultural condition with ecological enhancements. As demonstrated in this Report and the submitted technical reports and site plan, the application conforms to the requirements and policies of the Growth Plan for the Greater Golden Horseshoe, Region of Waterloo Official Plan, and the Township Official Plan policies.

The *Aggregate Resources Act* Licence application has been prepared to meet requirements of the Aggregate resources of Ontario standards (August 2020). The Planning Act applications have been prepared in accordance with Region of Waterloo and Township of North Dumfries requirements.

# 1.0 INTRODUCTION

## 1.1 Applicant

Cambridge Aggregates Inc. is a joint venture between a locally-owned aggregate operation and Hanson Aggregates. Cambridge Aggregates has operated in the local construction materials industry for 25 years and currently operates two existing gravel pits in the Township of North Dumfries: License #607701 ("Main Pit") located 1182 Alps Road and License #625889 ("Ayr Pit") located at 1790 Wrigley Road.

## 1.2 Subject Site

The subject site is located at Part of Lots 16, 17, and 18, Concession 9 in the Township of North Dumfries, Regional Municipality of Waterloo (See **Figure 1 - Location**). The area proposed to be licensed under the Aggregate Resources Act is 44.3ha and the proposed limit of extraction area is 35.2 ha. This area is referred to as the "Subject Site" (also referred to as the "Edworthy West Pit"). The Subject Site is part of three (3) separately owned properties (See **Figure 2 – Landscape Context Plan**). The proposed Licence Boundary does not follow the property boundaries; therefore, the combined area of the three properties is referred to as the "Subject Lands". Cambridge Aggregates Inc. has entered into a Lease Agreement with the three property owners to extract the aggregate materials from a portion of the Subject Lands and rehabilitate the area back to a predominately agricultural land use.

The Subject Lands are currently used predominately for agricultural uses, including field crops, pasture areas, and some hobby farming. The Subject Lands also include some natural heritage features and rural residential uses. The larger woodlot on the Subject Lands, identified as a Core Environmental Feature in the Township and Region Official Plan, will be retained and a minimum 15m buffer will be applied from it to the limit of extraction. No buildings or structures are located within Subject Site.

A mix of uses exist in the immediate vicinity of the Subject Lands, including: rural residential lots, an existing Mineral Aggregate Operation (Al's Stone Service, License no. 625482), Rural Industrial (Township Public Works yard) use, and agricultural. A detailed review of surrounding land uses, as well as onsite natural, agricultural, and aggregate resources is included in Section 3 of this report.

## 1.3 Project Description & Overview

The proposed Edworthy West Pit will serve as an extension to the existing Cambridge Aggregate's Main Pit (License #607701) located at 1182 Alps Rd (North of Alps Road and West of Sprague's Road) in the Township of North Dumfries. The pit extension is needed to replace depleting reserves at the Main Pit. No aggregate processing (i.e. washing, crushing, screening) is proposed at the Edworthy West Pit. The Edworthy West Pit will operate as a "load and haul pit" whereby aggregate materials extracted from the pit will be transferred via tri-axle highway trucks to the Main Pit. Material will then be processed, stockpiled, blended and shipped from the Main Pit via the existing haul route along Cedar Creek Road. There will be no increase in annual production levels at the central processing plant in the Main Pit.

The Edworthy West Pit is proposed to have an annual extraction limit of 1,000,000 tonnes. As the Edworthy West Pit will serve as the next phase of extraction at the Main Pit, there will be no increase in production and truck traffic between the existing Main Pit and the proposed Edworthy West Pit.

Two new truck entrances along Spragues Road are proposed, one southern entrance located at the new Edworthy West Pit and a northern entrance at the southern portion of the Main Pit (between Alps Road and Spragues Road (See **Figure 3 – Haul Route**). Region of Waterloo entrance permits will be required for these new truck entrances and will be constructed to Region of Waterloo truck entrance standards.

The Edworthy West Pit will not extract below the water table, the pit floor will remain a minimum of 1.5 metres above the maximum predicted water table across the site. Extraction at the site will be phased and progressively rehabilitated back to a predominately agricultural condition with about two (2) hectares of ecological enhancements (ecological linkages and buffers) proposed in ecologically strategic areas of the site. The final rehabilitated landform will include various side-slope treatments and a relatively flat pit floor. Access ramps will be built into the side-slopes for farm machinery. Additionally, a portion of the final rehabilitated landform will be returned to grade in order to further maximize agricultural area. For more details on the agricultural resources on site, refer to section 3 of this report as well as the Agricultural Impact Assessment (MHBC Planning, January 2023).

The proposed hours of operation for the Edworthy West Pit are 6:00 a.m. to 7:00 p.m. Monday to Friday for shipping operations only; and, 7:00 a.m. to 5:00 p.m. for full operations including extraction and loading.

The aggregate resources located at the proposed Edworthy West Pit are suitable for producing high-quality, specialty aggregate products. The majority of the aggregate extracted and processed at the Main Pit is used as concrete stone to supply Hanson Ready Mix concrete plants located in the local area. There is an on-going and high demand for these aggregate products to support construction and infrastructure projects. The aggregate reserves remaining in the Main Pit Licence will not be able to supply this demand over the next five to ten years and there is immediate need to Licence and make available additional high-quality aggregate materials in this close-to-market location.

## 1.4 Pre-Consultation

Pre-Consultation package was circulated to the Township of North Dumfries, Region of Waterloo, and Grand River Consultation Authority for comments in the fall of 2021. A summary of the Agency Pre-Consultation comments is provided in **Appendix A – Record of Pre-Consultation**. A follow-up in-person pre-consultation meeting with Township staff occurred in March 2022. In addition, consultation also occurred with the Region of Waterloo Environment and Ecological Advisory Committee (EEAC) in January 2022, to confirm the scope of work for the Natural Environment Report.

As confirmed by pre-consultation circulation with Agencies, the following Reports and Studies in **Table 1** will be submitted with the Planning Act and Aggregate Resources Act applications to form a complete application package:

**Table 1: List of Required Reports and Studies**

Report	Author	Date
Planning Justification Report and ARA Summary Statement	MHBC Planning	January 2023
Water Report and Maximum Predicted Water Table Report	MTE Consultants Inc.	June 30, 2022
Cultural Heritage Impact Assessment	MHBC Planning	December 2022
Natural Environment Assessment Report	Goodban Ecological Consulting	January 2023
Noise Impact Assessment	Aeroustics Engineering Ltd.	November 11, 2022
Stage 1 and 2 Archaeological Assessments	AMICK Consultants Limited	June 2022 and February 2022
Air Quality Assessment and Best Management Practices Plan for Dust	RWDI	August 4, 2022 (Report); November 2021 (BMPP)
Traffic Impact Assessment	Paradigm Transportation Solutions	January 2023
Agricultural Impact Assessment	MHBC Planning	January 2023
Slope Stability Report	MTE Consultants Inc.	July 21, 2022
Site Plans	MHBC Planning	January 2023

In addition, an introductory letter was circulated to all neighbours within 500m of the proposed Licence Boundary in June 2022. This letter outlined some preliminary information about the proposed pit and extended an offer to meet to further discuss.

Since 2021, engagement regarding the project has also occurred with the Six Nations of the Grand River and the Mississauga's of the Credit First Nations. Several meetings have occurred with members of the Six Nations of the Grand River and copies of the draft Reports have been circulated for their review and comments.

The Mississauga's of the Credit First Nation have reviewed and provided comments on the Archaeology Reports for the proposed pit.

Consultation and engagement with the Public and Indigenous Communities is ongoing. A Public Consultation Plan is included as **Appendix C** in this Report.

## 2.0 Background

# Information, Pit Design and Summary of Technical Assessments

### 2.1 Overview of Proposed Pit Design & Operation

The Licence boundary for the proposed Edworthy West Pit will have an area of 44.3ha, with a limit of extraction of 35.2ha. Extraction is proposed to occur a minimum of 1.5m above the established maximum predicted water table. The proposed Licence boundary and limit of extraction is comprised of three separate properties. Cambridge Aggregates Inc. has entered into lease and extraction agreements with these three separate property owners.

The proposed Class A Licence will have 1,000,000 maximum annual tonnage limit and will serve as an extension to the existing Cambridge Aggregate Main Pit located at the northwest corner of Alps Road and Spragues Road in the Township of North Dumfries.

The Proposed Edworthy West Pit will be operated in three sequential phases. The southcentral phase will be operated first (Phase 1), followed by the western phase (Phase 2), and the northeast portion of the pit will be operated last (Phase 3). Each extraction phase will be progressively rehabilitated and closely follow extraction.

No processing (including screening, crushing, or washing) will occur at the proposed Edworthy West Pit. The aggregate materials will be extracted, loaded on to highway trucks and hauled to the Main Pit. Further processing and shipment of the materials to market will occur from the Main Pit. As no processing activities are proposed, extraction equipment at the proposed pit will be limited to a single excavator, two (2) extraction or shipment loaders, and highway trucks. The hours of operation for the pit will be Monday to Friday. 6:00am to 7:00am for shipping only and 7:00am to 5:00pm for full operations.

Pit operations will include site preparation and stripping activities, extraction and loading, and progressive and final rehabilitation activities. Stripping and site preparation includes: the removal of the soil and overburden on-site, construction of internal roads, installation of acoustical berms, and the completion of any required pre-extraction monitoring and mitigation activities as outlined on the Site Plan.

Extraction activities include: the removal of aggregate materials above the water from the working face using extraction loaders. Aggregate materials are stockpiled and/or loaded into trucks and shipped off to the Main Pit for further processing. Extraction may occur in several lifts and will occur in three sequential phases to minimize the area disturbed.

Rehabilitation activities include the establishment of side-slopes using on-site and imported material and grading of the pit floor. The pit side-slopes are graded and then immediately seeded with a grass mixture to prevent erosion. Areas of the pit that are suitable to be returned to an agricultural land-use, will be ripped to alleviate compaction and then the on-site topsoil and subsoil is replaced. The recommendations from the Agricultural Impact Assessment (MHBC, January 2023) for the agricultural rehabilitation of the pit floor and side-slopes are included on the site plan.

The proposed rehabilitation plan for the proposed Edworthy West Pit has been designed to re-establish the pre-extraction agricultural uses and also to create some ecological linkages. The rehabilitation plan has been designed in consultation with the three property owners to achieve their desired property conditions and topography.

Given the depth of the pit and the unique shape of the extraction area, various sloping techniques will be implemented to achieve the final rehabilitation landform and maximize the amount of area being returned to an agricultural condition. Through rehabilitation, the proposed Edworthy West pit will be returned to an agricultural condition with strategically located ecological enhancements.

## 2.2 Surrounding Land Uses and Features

As shown in **Figure 2 – Landscape Context Plan**, the subject site is located in a predominately rural area of the Township of North Dumfries, surrounded by primarily agricultural and rural residential land uses. The existing land uses within the vicinity of the Subject Site and Subject Lands include:

- North:** North of the Subject Site and Subject Lands is predominately agricultural land uses consisting of field crops and hedgerows. There are several rural residential land uses located northwest of the northern licence boundary and are accessed via Shouldice Side Road.
- East:** East of the Subject Site is a rural residential property (located on the Subject Lands) and forest and unevaluated wetland features. There are several rural residential properties located along Spragues Road as well as agricultural uses (i.e. field crops)
- South:** South of the Subject Site includes rural residential uses, the Township of North Dumfries Public Works Yard and existing ARA Licence #625482 (Al's Stone Service). There is a woodlot located on the Subject Lands, but not within the Subject Site. Agricultural uses are also located south of Greenfield Road and Spragues Road.
- West :** The predominate land uses west of the Subject Site and Subject Lands are rural residential and agricultural (i.e. field crop). These uses are separated from the Subject Site by Shouldice Side Road.

Shouldice Side Road, Greenfield Road and Spragues Road border the subject lands. The existing Main Pit will be accessed via Spragues Road. No truck traffic will use Greenfield Road or Shouldice Road. A new truck entrance will be constructed on Spragues Road and an entrance for farm/maintenance vehicles only will be located on Shouldice Road.

## 2.3 Aggregate Resources

The Aggregate Resources Inventory Paper (ARIP) 161 for the Regional Municipality of Waterloo identifies the Subject Sands as a sand and gravel deposits of primary and secondary significant. Primary deposits are mapped and identified where major deposits of aggregate resources are known to exist. Secondary deposits also contain significant amounts of sand and gravel. See **Figure 5 – ARIP Mapping**. The aggregate resource deposit on the subject lands is part of Selected Sand and Gravel Resource Area 34, which is an extensive, irregularly shaped outwash deposit. This deposit contains source aggregate suitable for road-base and sub-base aggregate and for hot-laid asphalt paving sand and stone<sup>1</sup>.

Both the Township of North Dumfries and Region of Waterloo Official Plans map the subject lands as a "Mineral Aggregate Resource Area". See **Figures 15 and 10**. Mineral Aggregate Resource Areas have been identified by the Region and Township as having a high potential to contain mineral aggregate resources. Mineral aggregate extraction is permitted in Mineral Aggregate Resource Areas.

In addition to the Provincial and local mapping, site-specific resource investigations were also undertaken on the subject site. A total of 17 boreholes were drilled to assess resource depth and quality. The results of the on-site resource investigations confirm the availability of about 11 million tonnes of high-quality aggregate resource.

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1 ARIP 161, Page 21

## 2.4 Natural Heritage Features

The Subject Site and Subject Lands are predominately in an existing agricultural condition. The boundary of the area proposed to be Licenced under the Aggregate Resources Act, the subject site, has been specifically identified to avoid and exclude significant natural heritage features to the extent possible.

There is a woodlot about 6ha in size located adjacent to the proposed Licence boundary. This woodlot is identified as a Core Environmental Feature in the Region of Waterloo and Township Official Plan - See **Figures 12 and 16**. There is an additional small woodlot located within the proposed Licence boundary adjacent to Spragues Road that will be partially removed as part of extractive activities; this small woodlot is not identified as a Core Environmental Feature. A portion of this feature will be retained as part of the undisturbed setback along Spragues Road. This small woodlot feature is not mapped as a Core Environmental Feature and is not considered to be significant.

Mature trees are also located on the Subject Site adjacent to Shouldice Side Road and along the northern boundary of the Subject Site. These areas will be included within the Licence Boundary but outside of the limit of extraction.

A Natural Environment Level 1 and Level 2 Report (Goodban Ecological Consulting, January 2023) was completed to identify any on-site and adjacent natural heritage features and to complete an impact assessment of the proposed aggregate extraction on any identified significant natural heritage features. The impact assessment determines if there is any potential for negative impacts to the identified significant natural features or their ecological functions, and recommends avoidance and mitigation measures.

Based on site investigations and an assessment of significance, Category 3 Barn Swallow foraging Habitat and foraging habitat for Little Brown Myotis and Northern Myotis were identified within the area proposed to be extracted. Through the implementation of the recommended mitigation measures, it was concluded that the proposed extraction of the Edworthy West Pit would have no negative effects on any Endangered or Threatened species or their habitats.

Except for the foraging habitat for bats and barn swallow all significant natural heritage features are located outside of the proposed extraction limit and therefore direct impacts are largely avoided. Implemented on the ARA Site is a minimum 15m "no touch buffer" from the edge of the Core Environmental Feature. In addition, this "no touch" setback/buffer area is proposed to be tree planted with native species. Additional ecological linkages and enhancement plantings will be incorporated within the Core Environmental Feature and in strategic locations across the subject site. These plantings are detailed on the Rehabilitation Plan of the Site Plan (Page 3 of 3) – **See Figure 19 Enhancement and Rehabilitation Plan**. About 2ha of ecological linkage area will be created. The Natural Environment Report recommends additional mitigation measures to ensure that all of the adjacent natural heritage features are protected, for example: the installation of sediment and erosion control fencing, seeding of disturbed areas as soon as possible, and the creation of wildlife habitat through rehabilitation. All of the recommendations has been included on the ARA Site Plan.

The Natural Environment Report concluded that no significant impacts to the on-site and adjacent natural heritage features are anticipated subject to implementation of the mitigation measures and



recommendations in the Natural Environment Report. These recommended mitigation measures have been implemented on the Site Plan.

## 2.5 Agricultural Resources

The subject lands and subject site are predominately used for agricultural purposes, including field crops, pasture, and hobby farming. Canada Land Inventory (CLI) Soil mapping indicates that the subject lands are mapped as containing primarily Class 1 soils with some Class 4 soils – **See Figure 5 CLI Soil Mapping**. Class 1 through 3 soils are considered to be *Prime Agricultural Land*. Class 4 soils are not considered *Prime Agricultural Land*. The proposed Licence Boundary is mapped as a Prime Agricultural Area in the Province's Agricultural System mapping (See **Figure 7 – Provincial Agricultural and Natural Heritage System Mapping**).

As part of the Agricultural Impact Assessment, a site-specific soil survey was completed by DBH Soils (March 2022) to confirm the CLI soil classifications on the property. The site-specific soil survey concluded that that 41ha of the subject site are considered *Prime Agricultural Lands* (Soil classes 1 to 3) and about 4 ha of the subject site are considered to be Class 4 and 5 soils – **See Figure 5 – DBH Soil Mapping**. A small area of the subject site (0.7ha) located within the small wooded feature adjacent to Spragues Road was not rated. On average, the Subject Site was determined to have a Soil Productivity Rating of 0.84 which corresponds to CLI Class 2.

An Agricultural Impact Study (MHBC, January 2023) was completed in order to evaluate the potential impacts of the proposed Edworthy West Pit on subject site and adjacent agricultural operations. The Report provides recommendations to ensure that the extraction area is returned to an agricultural condition, such as soil management and handling protocols, minimum soil replacement depths, and monitoring requirements.

The objective for the final rehabilitation plan for the Edworthy West Pit is to return as much land as possible back to an Agricultural Condition and create ecological linkages in strategic locations. Some setback areas, outside of the limit of extraction, have also been identified on the Site Plan as areas that will undergo ecological enhancements. Further details regarding the Rehabilitation Plan are included in Section 4.0 (sub-heading 1.6) of this Report.

## 2.6 Water Resources

A Water Resources Report/Maximum Predicted Water Table Report was completed by MTE (March 2022) which presents a characterization of existing hydrogeological and hydrologic conditions, interprets field study results, undertakes an evaluation of potential effects on water resources, water uses, and the natural environment, and provides a monitoring program and Well Interference Complaint Procedure.

The hydrological assessment field work program included the installation of nine (9) borehole and monitoring wells along the boundary of the subject site; an examination of water well records on file with the Ontario Ministry of the Environment, Conservation and Parks (MECP); a private well inventory, and, ongoing measurements of groundwater levels in the monitoring wells. The annual monitoring reports for the Main Pit were also reviewed and included as part of the data analysis. There are no surface water resources on the subject site.

A Terms of Reference (TOR) for the Maximum Predicted Water Table Report was prepared by MTE and submitted in November 2021 to the Township of North Dumfries and the Region of Waterloo. Comments were provided by the Region of Waterloo on January 21, 2022. These comments were addressed by MTE in the final version of the Water Report Maximum Predicted Water Table Report that is submitted with the Edworthy West Pit application package.

The subject site and study area primarily contributes to the Cedar Creek Catchment (located within the Grand River Watershed). Based on GRCA mapping, the northeast edge of the Site (0.58 ha (1.7%) of the extraction area) is located within the 25 year time of travel of the Willard Well Field. The Willard Well Field is located about 2.8km northeast of the subject site. Specific mitigation measures, including the implementation of a spills management plan will ensure that there is no potential impact to the Well Head Protection Area Source Water Protection is further addressed in section 4.0 (sub-heading 1.3) of this Report.

MTE conservatively estimates the maximum predicted water table elevation to be 307.75m ASL on the Subject Site. No below water table extraction will occur; therefore, the maximum depth of the pit floor will be 309.25 m asl. The maximum depth of extraction (309.25 m asl) will ensure that extraction activities remain at least 1.5m above the water table.

Based on their assessment and analysis, MTE concluded the following:

- There will be no discharge to any surface water bodies or courses as a result of extraction activities.
- As this application is for an above water table pit without active dewatering, MTE predicts that there will be no drawdown of the water table beyond the licence boundary.
- Since both the Willard and Middleton Street Wells are completed within the bedrock and the Site will be extracting aggregate from the overburden aquifer above the water table, Site activities do not pose a threat to either well field.
- Fluctuations in groundwater levels are expected to remain in the normal range of annual variation for the groundwater system throughout the life of the proposed pit.
- To account for climate change, a long-term monitoring program has been included on the Site Plans which will span the life of the proposed pit. This long-term monitoring program in combination with the mandated 1.5 m buffer above the established high water table elevation will be used to ensure the pit floor remains above water table.
- No cumulative impacts with respect to water quantity or quality are anticipated
- As long as the proposed recommendations are implemented, then groundwater and surface water resources and their uses will not be impacted by the proposed pit

The following recommendations from the MTE Maximum Predicted Water Table Report have been included on the *Aggregate Resources Act* Site Plan:

Groundwater Monitoring Program:

1. Manual water levels shall be collected on a seasonal basis, three times per year, once in the spring, summer and fall, at all on-Site monitoring wells and participating domestic wells;
2. An annual groundwater monitoring program shall extend throughout the life of the operation so that confirmatory water table elevations can be obtained as the pit develops;
3. The results of the monitoring shall be retained on-file by Cambridge Aggregates so that it can be made available upon request by agencies such as the MNR, MECP, Region of Waterloo or Township of North Dumfries; and
4. Monitoring wells that may be destroyed by extraction activities shall be decommissioned according to the Wells Regulation (O.Reg. 903) and subsequently replaced (with the exception of MW102-20 and MW106-20) at a location that will ensure the new monitoring wells will remain intact to allow groundwater monitoring to continue.

Maximum Predicted Groundwater Table and the Proposed Pit Floor:

1. The maximum depth of extraction shall not occur within 1.5m of the maximum predicted high water table (307.75 m asl).
2. Should the water table elevation occur at higher levels than anticipated based on the results of the ground water monitoring program, the depth of extraction shall be adjusted to ensure a minimum of 1.5 metres is maintained above the water table at all times.

Fuel Storage:

1. Cambridge Aggregates shall adopt their Spill Contingency Plan for the Site and that a QP be retained, in the unlikely event of a spill.
2. Temporary fuel storage facilities are located in designated area. The designated area will be located near the proposed entrance to the Site and outside of Wellhead Protection Areas.
3. All fueling activities will be in accordance with the Liquid Fuels Handling Code, Technical Standards and Safety Act, 2000, as amended.
4. Mobile vehicles will be fueled in a designated area located outside Wellhead Protection Areas. Immobile equipment may be re-fueled with a fuel delivery truck outside of Wellhead Protection Areas.
5. Fuel delivered to the Site will be stored within a horizontal double walled steel fuel tank meeting all current regulated standards, located near the proposed entrance.
6. Fuel hoses on fuel storage tanks will be locked when unattended.
7. Secondary containment measures will be added to the fuel intakes of crushing and screening equipment to protect against accidental spills while be fueled by a fuel truck in the active area of the pit.
8. Maintain a record of fuel deliveries noting the quantity and date of each transfer. A record of fuel deliveries will be maintained noting the quantity and date of fuel transfer.

### Well Interference Complaint Procedure:

Cambridge Aggregates shall adopt the following Well Interference Complaint Procedure:

1. Owners of domestic and farm water supplies experiencing disruption or quality problems shall immediately notify Cambridge Aggregates Inc.
2. Cambridge Aggregates Inc., upon receipt of any water supply disruption complaint, shall retain the services of an independent Qualified Person (QP i.e. P.Geo. or P.Eng.) to investigate the cause of the interference complaint.
3. If, through the investigation, it is determined that pit operations have caused an adverse effect at the well in question, Cambridge Aggregates Inc. shall, at their expense, either restore or replace the affected water supply.
4. If, through the investigation, it is determined that pit operations have not caused an adverse effect to the well in question, Cambridge Aggregates Inc. shall provide a report documenting the results of the investigation to the well owner and retain a copy on-file so that it can be made available upon request by agencies such as the NDMNRF or MECP.

## 2.7 Cultural Heritage Resources

Cultural heritage resources consist of archaeological resources, built heritage resources, and cultural heritage landscapes. Significant cultural heritage resources are identified as resources that are valued for the important contribution they make to our understanding of the history of a place, an event, or a person. Provincial, County and local policies require that significant built heritage resources and significant cultural heritage landscapes be conserved and that significant archaeological resources are conserved by removal and documentation, or by preservation on-site.

A Stage 1 and 2 Archaeological Assessment was prepared by AMICK Consultants Ltd. (2019 and 2020). The Stage 1 background research identified that the study area as exhibiting potential for the identification and recovery of archaeological resources; therefore, a Stage 2 field survey was recommended. No archaeological artifacts were identified as part of the Stage 2 assessment; therefore, no further archaeological assessment are required. The Ministry of Heritage, Sport, Tourism and Culture provided a clearance letter for the Archaeology Assessments in 2021 and 2022.

A Cultural Heritage Impact Assessment (MHBC, December 2022) was completed as required by the Township of North Dumfries. No built structures are located within the proposed Licence boundary; however, identified built Cultural Heritage Resources are located within 120m of the proposed Licence Boundary on adjacent lands. As required by the Township of North Dumfries, the Study Area for the Cultural Heritage Impact Assessment was 500m from the License boundary. Two properties within 120m the Licence Boundary were identified as having heritage status and 18 properties within 500m of the Licence Boundary were identified as having heritage status.

The Cultural Heritage Impact Assessment Report concluded that the temporary nature of the site disturbance will not have a long-term impact on any of the adjacent Cultural Heritage Resources.

## 2.8 Land Use Compatibility

A Noise Impact Assessment was completed by Acoustics (March 2022) and an Air Quality Assessment was completed by RWDI (January 2022). A Best Management Practices Plan for Dust has also been completed (RWDI, November 2021). These reports were completed to assess potential noise and air quality impacts on surrounding sensitive land uses and included recommendations in order to prevent potential adverse impacts. The nearest sensitive land uses, which are characterized as “sensitive receptors” in the Noise and Air Quality Assessment Reports, are located north of the subject site along Shouldice Side Road and east along Spragues Road. Both the Noise and Air Quality Reports assessed the potential for cumulative impacts.

### *2.8.1 Air Quality Assessment*

The Air Quality Assessment quantifies and evaluates air quality impacts from the various air emission sources for the proposed pit operations. These sources include aggregate material handling equipment for the extraction of material at the proposed pit and the handling and processing equipment at the nearby Greenfield Road Pit operated by Al’s Stone Service Inc.

The Air Quality Assessment uses Ambient Air Quality criteria established by the Ontario Ministry of the Environment, Conservation and Parks (MECP) which provide limits for desirable concentrations of contaminants in air based on protection against adverse effects on health or the environment. Potential sources of emissions from the proposed pit include: extraction of sand and gravel, material handling (i.e. loading), movement of equipment over unpaved surfaces, and vehicles.

The Air Quality Assessment assessed two worst-case scenarios to ensure compliance at all locations at the proposed pit. The dispersion model results predicted maximum concentrations that were all less than the relevant criteria for all contaminants at the modelled receptors, based on the assumption that recommended dust control measures were in place for both modelling scenarios. An assessment of background conditions and cumulative impacts was also included in the modelling scenarios. Based on these modelling results, the proposed pit is not predicted to cause a significant air quality impact, with appropriate mitigation measures in place.

The Pit must operate in accordance with the operating standards pertaining to dust outlined in section 0.12 (2) Ontario Regulation 244/97, which include:

- The licensee or permittee shall apply water or another provincially approved dust suppressant to internal haul roads and processing areas, as necessary to mitigate dust, if the pit or quarry is located within 1,000 metres of a sensitive receptor.
- The licensee or permittee shall equip any processing equipment that creates dust with dust suppressing or collection devices if it is located within 300 metres of a sensitive receptor.
- The licensee or permittee shall obtain an environmental compliance approval under the Environmental Protection Act where required to carry out operations at the pit or quarry.

Furthermore, the conclusions in the Air Quality Assessment are based on the following recommendation, has been included on the Site Plans:

- The site will operate in accordance with a Best Management Practices Plan for fugitive dust (BMPP), which may be amended from time to time, considering actual impacts and operational considerations. The recommendations in the BMPP are based on the maximum daily production rates. At lower production rates, the control measures specified in the BMPP can be reduced accordingly, provided dust remains mitigated on site.

A Best Management Practices Plan For Dust has been prepared for the proposed Edworthy West Pit (RWDI, November 2021) and includes dust control measures such as visual monitoring for dust, application of water to reduce and control dust, and reducing or stopping pit activities if dust cannot be mitigated on-site.

### ***2.8.2 Noise Impact Assessment***

A Noise Impact Assessment (Aercoustics, March 2022) was completed for the Edworthy West Pit. The purpose of the study was to establish the sound level limits on nearby noise sensitive receptors based on the noise guidelines of the MECP, assess the sound levels from the proposed pit on the identified sensitive receptors, and where the predicted sound levels were found to exceed the applicable MECP sound level limits, noise control measures were recommended to satisfy these limits.

A total of 17 sensitive receptors were identified, including one vacant land receptor. All receptors were identified as having a current acoustic environment consistent with the Class 2 Area (Urban) designation as defined by MECP Publication NPC 300.

Noise predictions were conducted based on the predictable worst-case noise impact for each of the aggregate pit operation areas at each of the receptors. This represents a design case where the pit is running at full capacity with all the equipment operating simultaneously and at locations where the noise impact is highest for each receptor. Most of the time, work would be occurring in other areas of the site, resulting in lower associated noise impacts. Where exceedances to the applicable MECP sound level limits were predicted by the modelling for specific sensitive receptors, noise control measures were then added to the model, and the noise impact was recalculated. This process was repeated until the sound level limits were satisfied. Cumulative noise impacts with the adjacent Pit (AI's Stone Service) were also considered.

To ensure that noise limits at the identified sensitive receptors are kept within the MECP noise level limits a number of mitigation measures will be included on the site plan and incorporated into the pit operation and design. These measures are summarized as follows and are outlined in detail on the Site Plan:

- The installation of acoustic barriers prior to extraction in Phase 2 and 3
- Equipment limitations in Phase 2 within 200m of the west extraction limit; and the
- Limits on shipping hours within 200m of the west extraction limit and during nighttime hours.

Through the implementation of the recommended noise controls summarized above, the proposed aggregate pit operation is predicted to satisfy the MECP noise guidelines.

## 2.9 Transportation System

The proposed Edworthy West Pit will serve as an extension to the Main Pit. Aggregate materials will be extracted from the proposed pit and trucked via Spragues Road to the Main Pit for processing and shipment to market. See **Figure 3 – Haul Route**.

Two new Truck Entrances will be constructed on Spragues Road in accordance with Regional standards and requirements. One new entrance will be located on the southern boundary of the Main Pit and one new entrance located will be located at the proposed Edworthy West Pit. The two new proposed truck entrances have been identified in locations with adequate site distances (Paradigm transportation Solutions Ltd, February 2022). Shouldice Road and Greenfield Road will not be used as truck haul routes.

Goods movement in Waterloo Region is primarily by commercial trucks, including the Hauling of aggregate resources.<sup>2</sup> Spragues Road is a Regional Road that is identified by the Region as being part of the Regional Truck Network<sup>3</sup>. Heavy trucks are permitted on Regional Roads and these roads are designed and constructed to accommodate goods movement via heavy truck traffic or long vehicles.

# 3.0 POLICY REVIEW

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

- Provincial Policy Statement (2020);
- A Place to Grow: Growth Plan for the Greater Golden Horseshoe (August 2020);
- Region of Waterloo Official Plan
- Township of North Dumfries Official Plan
- Township of North Dumfries Zoning By-Law

## 3.1 Provincial Policy Statement (2020)

The Provincial Policy Statement (PPS) was issued under Section 3 of the Planning Act and came into effect on May 1, 2020.

The PPS provides policy direction on matters of provincial interest related to land use planning and development. The PPS provides for appropriate development while protecting resources of provincial interest, public health and safety, and the quality of the natural environment. (Part 1, Preamble).

The PPS is a policy-led planning approach that recognizes the complex inter-relationship among environmental, economic and social factors in land use planning. The PPS supports a comprehensive,

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<sup>2</sup> *Moving Forward Region of Waterloo Transportation Master Plan*, Page 2-1

<sup>3</sup> *Moving Forward Region of Waterloo Transportation Master Plan*, Appendix D - Exhibit 2.2, Page 2-4, Goods Movement Report. See also Region of Waterloo Official Plan Policy 5.A.30

integrated and long-term approach to planning and recognizes linkages among policy areas. (Part III, How to Read the Provincial Policy Statement).

The PPS recognizes that the Province's natural heritage resources, water, agricultural lands, mineral aggregate resources, cultural heritage and archaeological resources provide important environmental, economic and social benefits. The wise use and management of these resources over the long term is a key provincial interest. The province must ensure that its resources are managed in a sustainable way to protect essential ecological processes and public health and safety, minimize environmental and social impacts, and meet its long-term economic needs. (Part IV, Vision for Ontario's Land Use Planning System).

The following policies from the 2020 PPS are relevant to the proposed pit application. A response follows each policy to demonstrate how the proposal is consistent with the PPS:

#### **1.1.4 Rural Areas in Municipalities**

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

*f) 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;*

The subject site is located within a rural area of the Township of North Dumfries and Region of Waterloo. The management or use of mineral aggregate resources is a permitted use in the rural area. The proposed pit represents the wise management of a non-renewable resource that is in close proximity to major markets, and will support long-term economic prosperity and diversity of the rural economy by optimizing the use of land and resources. Once fully extracted, the Edworthy West Pit will be returned to an agricultural use.

#### **1.2.6 Land Use Compatibility**

*1.2.6.1 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 pit has been designed and buffered to mitigate potential adverse effects on nearby sensitive uses. The risk to public health and safety are minimized through the implementation of the recommendations of the technical reports and by the required monitoring and mitigation of potential effects as required by the Aggregate Resources Act Site Plans.

#### **1.6.7 Transportation Systems**

*1.6.7.1 "Transportation systems should be provided which are safe, energy efficient, facilitate the movement of people and goods, and are appropriate to address projected needs."*

*1.6.7.2 "Efficient use shall be made of existing and planned infrastructure..."*



The proposed pit represents an efficient use of existing infrastructure by utilizing existing truck routes including a Regional Road and an existing and established Haul Route. As the proposed pit will replace depleting reserves at the existing pit, there will be no increase in truck traffic.

### ***1.7 Long Term Economic Prosperity***

#### ***1.7.1 "Long-term economic prosperity should be supported by:***

- a) optimizing the long-term availability and use of land, resources, infrastructure and public service facilities;" (1.7.1a)***

The proposed pit optimizes the long-term availability of mineral aggregate resources in a location that is close-to-market and will utilize existing infrastructure. In addition, through rehabilitation activities, the land will be returned to a productive use once extraction is completed.

### ***2.1 Natural Heritage***

#### ***2.1.1 "Natural features and areas shall be protected for the long term."***

The proposed Licence boundary and limit of extraction has been designed to avoid the removal and disturbance of any significant natural heritage features. Adequate buffers and setbacks have been implemented into the pit design to avoid impacts to the adjacent woodlot. In addition, the recommended mitigation measures from the Natural Environment Report have been included on the Aggregate Resources Act Site Plan (e.g. sediment and erosion control fencing) to ensure that there will be no adverse impact to adjacent natural features.

#### ***2.1.2 "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 Subject Site is predominately active agricultural land with limited natural heritage features and no surface water features. The long-term ecological function and biodiversity of the surrounding natural heritage system will be enhanced through the establishment of two ecological linkage areas that will be completed as part of the pit rehabilitation plan.

#### ***2.1.4 and 2.1.5 "Development and site alteration shall not be permitted in..."***

The area proposed to be Licenced is in a predominately agricultural condition. No development or site alteration is proposed in any significant natural heritage features.

#### ***2.1.6 "Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements."***

There is no development or site alteration proposed within fish habitat.

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

There is no development or site alteration proposed within the habitat of endangered and threatened species, besides foraging habitat for bats and barn swallows. The Natural Environment Technical Report concluded the proposed extraction of the Edworthy West Pit will have no negative effects on any Endangered or Threatened species or their habitats.

*2.1.8 "Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 2.1.4, 2.1.5 and 2.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions."*

The adjacent lands to the pit (within 120m) include some natural heritage features (e.g. Region of Waterloo Core Environmental Feature). The Natural Environment Report concluded that there will be no negative impacts on these natural features or their ecological functions. This feature will be enhanced through the completion of the ecological enhancement activities outlined on the Site Plan.

## **2.2 Water**

*2.2.1 "Planning authorities shall protect, improve or restore the quality and quantity of water by..."*

The Water Report and Maximum Predicted Water Table Report identified and characterized on-site and nearby water resource systems. The technical analysis completed in this Report assessed the potential impacts to water resource system from the proposed pit operation including: potential watershed impacts, the protection of municipal drinking water supplies and maintain water resource functions and features.

The Water Report concluded that, as long as the proposed recommendations from the Report are implemented, then groundwater and surface water resources and their uses will not be impacted by the proposed pit.

*2.2.2 "Development and site alteration shall be restricted in or near sensitive surface water features and sensitive ground water features such that these features and their related hydrologic functions will be protected, improved or restored."*

*Mitigative measures and/or alternative development approaches may be required in order to protect, improve or restore sensitive surface water features, sensitive ground water features, and their hydrologic functions."*

The potential impacts of the pit operation relative to the quality and quantity of groundwater and surface water were assessed in the Water Report and Maximum Predicted Water Table Report. The results of the Report conclude that there will be no adverse hydrogeological impacts to water resources. A monitoring and mitigation program will be implemented to ensure that the quality and quantity of both local groundwater and surface water will be maintained.

*2.3.6 "Planning authorities may only permit non-agricultural uses in prime agricultural areas for:  
a) Extraction of mineral aggregate resources may be permitted in prime agricultural areas in accordance with policy 2.5 of the PPS."*

The Subject Site is located within a prime agricultural area and contain prime agricultural lands that, on average, are comprised of Class 2 soils. The lands are not within a specialty crop area. The extraction of

mineral aggregate resources may be permitted in prime agricultural areas in accordance with policy 2.5.4 of the PPS.

*2.3.6.2 "Impacts from any new or expanding non-agricultural uses on surrounding agricultural operations and lands are to be mitigated to the extent feasible."*

As demonstrated in the Agricultural Impact Assessment (MHBC, January 2023) there will be no negative impact to agricultural resources or operations on surrounding lands. The proposed pit will be extracted and rehabilitated sequentially in order to reduce disturbance and all potential impacts (e.g. dust and noise) will be mitigated. The proposed pit will be rehabilitated back to an agricultural condition.

## **2.5 Mineral Aggregate Resources**

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

The area proposed to be Licenced contains mineral aggregate resources consisting of high quality sand and gravel resources that are suitable for use in the production of concrete products. The proposed Licence will make available a mineral aggregate resource that are located close to markets, including Kitchener, Waterloo, Guelph, and Brant areas.

*2.5.2.2 "Extraction shall be undertaken in a manner which minimizes social, economic and environmental impacts"*

A total of nine technical reports were completed to assess the potential impacts of the proposed pit operation. Based on the completed impact assessment, specific mitigation measures have been identified to minimize impacts and have been incorporated into the pit design and operational plans. Therefore, the operation has been designed in a manner which minimizes social, economic and environmental impacts.

*2.5.3.1 "Progressive and final rehabilitation shall be required to accommodate subsequent land uses, to promote land use compatibility, and to recognize the interim nature of extraction. Final rehabilitation shall take surrounding land use and approved land use designations into consideration."*

Extraction and rehabilitation of the pit will occur in phases in order to reduce the amount of area disturbed and ensure that rehabilitation occurs progressively. The final rehabilitation of the pit will be to an agricultural condition with some strategically located ecological enhancements. This proposed final land use is compatible with surrounding land uses and conforms to the land use designations in the Township of Woolwich and Region of Waterloo Official Plans.

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

There is an Aggregate Resources Act Licence located on the east side of Spragues Road (Licence #625482). This Licence is proposed to be rehabilitated to an agricultural land use. In accordance with provincial and local policies, the proposed Edworthy West Pit is also proposed to be rehabilitation back

to an agricultural condition. Therefore, the final rehabilitated land-use for both aggregate operations will be complementary and appropriate for the rural area of the Township of North Dumfries.

*2.5.4.1 "In prime agricultural areas, on prime agricultural land, extraction of mineral aggregate resources is permitted as an interim use provided that the site will be rehabilitated back to an agricultural condition." (2.5.4.1)"*

The proposed extraction area contains Class 1, 2, 3 and 4 soils and is identified as a prime agricultural area according to the Provincial Agricultural System Mapping. Therefore, PPS 2.5.4.1 applies to the proposed application.

A detailed analysis of how the proposed pit is consistent with PPS policy 2.5.4.1 is included in Section 3.1 of this Report.

*2.6.1 "Significant built heritage resources and significant cultural heritage landscapes shall be conserved."*

Based on the Cultural Heritage Impact Assessment (MHBC, December 2022), the proposed pit will have no negative impacts on cultural heritage resources on, or adjacent to, the Subject Site or Subject Lands

*2.6.2 "Development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved."*

A Stage 1 and Stage 2 Archaeological Assessment was completed for the subject site. No archaeological resources were found. Therefore, there will be no impact of the proposed development or site alteration on archaeological resources.

In summary, for reasons set out in this Report, the proposed quarry extension is consistent with the Provincial Policy Statement (2020).

### 3.1.1 Policy Analysis for PPS Policy 2.5.4.1- Rehabilitation Back to an Agricultural Condition

The purpose of this section is to further assess the consistency of the proposed Edworthy West Rehabilitation Plan with Policy 2.5.4.1 of the PPS (2020).

#### 1. Property Context

The area proposed to be licensed and extracted are currently in a predominately agricultural condition and are used for the production of field crops (e.g. corn, soy, and wheat) – **See Figure 2: Landscape Context Plan**. There are some hedgerow features located within the agriculture area of the properties that separate the larger field areas. Of the total proposed licensed area, 20.1 hectares is CLI Class 1 soil, 18.7 hectares is CLI Class 2 soil, and 2.2 hectares is CLI Class 3 soils (DBH Soil Survey, 2022), for a total of

89.8 percent (41 ha) of the lands being considered Prime Agricultural lands (Class 1-3). The remaining 10.2% of the land were not rated or represented CLI Class 4-7 soils. Therefore, the proposed Licence boundary is considered *Prime Agricultural Land* in a *Prime Agricultural Area* in accordance with PPS policies and definitions. 23.

The Subject Lands are comprised of three separate properties with three separate property owners. All three property owners currently farm their land and were closely involved with the development of the Rehabilitation Plan for the Edworthy West Pit as they will continue to farm the land once extraction and rehabilitation activities have been completed. Agricultural activities will also continue during pit operations in phases that have not been extracted and in phases that have been progressively rehabilitated. In addition, a Soil Survey (DBH Soils, March 2022) Agricultural Impact Assessment (MHBC, January 2023), and Slope Stability Assessment (MTE, July 21, 2022) have been completed as part of the Licence Application and to support the final landform proposed on the Rehabilitation Plan. A Concept Plan for the Rehabilitation Plan is shown on **Figure 19 – Enhancement and Rehabilitation Plan**.

## **2. Provincial and Local Policy Context – Rehabilitation to an *Agricultural Condition***

Policy 2.5.1.1 of the Provincial Policy Statement (2020) requires that in *prime agricultural areas*, on *prime agricultural land*, extraction of *mineral aggregate resources* is permitted as an interim use provided that the site will be rehabilitated back to an *agricultural condition*.

The PPS defines *Agricultural Condition* as “in regard to *prime agricultural land* outside of *specialty crop areas*, a condition in which **substantially the same areas** and **same average soil capability** for agriculture are restored.”

In addition, the Region of Waterloo Official Plan (2015) policies for aggregate rehabilitation prioritize rehabilitation to an agricultural use in the Prime Agricultural Area, but recognize that complete agricultural rehabilitation may not be required where:

- the depth of the planned extraction makes restoration of pre-extraction agricultural capability impractical; (OP Policy 9.F.2 a); and
- aggregate extraction would remove natural features such as woodlands, wetlands and watercourses on lands not otherwise protected by the Greenlands Network policies in this Plan, in which case these natural features will be restored and, where possible, enhanced consistent with the intent of Policy 9.C.11 (OP Policy 9.F.2 a)

Extraction will occur a minimum of 1.5m above the water table at the Edworthy West Pit to a maximum depth of 309.25masl. Three sequential extraction and progressive rehabilitation phases are proposed. The Licence is proposed to be rehabilitated back to an agricultural condition with strategically located ecological linkages and ecological enhancement areas. Not all areas of the extraction can be rehabilitation back to an agricultural condition due to side-sloping requirements resulting from the depth of extraction. This proposed rehabilitation plan prioritizes agricultural rehabilitation, given that the lands are *Prime Agriculture Land* in a *Prime Agricultural Area*. But also recognizes and considers that the proposed Edworthy West Licence is also located within the Region of Waterloo Dumfries Carolinian Environmentally Sensitive Landscape and, therefore, ecological enhancements have also been incorporated into the progressive and final Rehabilitation Plan.

As detailed in the Agricultural Impact Assessment (MHBC, January 2023), Cambridge Aggregates Inc. has already completed about 12.5ha of progressive agricultural rehabilitation (back to field crop) at their existing North Dumfries Pit Licence (#607701) which is located about 1.5km northeast of the proposed Edworthy West Licence. This demonstrates the Operators knowledge and ability to successfully return extracted areas to a productive agricultural condition.

How the proposed Edworthy West Rehabilitation Plan meets the two PPS policy tests to achieve *agricultural condition* are further assessed below:

#### **A. Substantially the *same average soil capability***

The pre-extraction soil survey for the properties (DBH Soil Services, March 2022) determined that the Soil Productivity Rating for the Subject Site is 0.84, giving a CLI equivalent rating of Class 2. Therefore, the final rehabilitation plan will ensure that the rehabilitated agricultural areas will be restored to an average of CLI Class 2 soils. This requirement has been included as a note on the Rehabilitation Page of the Site Plan.

The Agricultural Impact Assessment (MHBC, January 2023) recommends detailed site plan notes to ensure that areas identified for agricultural rehabilitation are restored to an average of CLI Class 2 soils. Detailed site plan notes have been included for soil storage and handling, grading, compaction, and establishment of vegetation. In addition, The AIA site plan notes require on-going soil testing in each progressive rehabilitation phase and the completion of an annual monitoring program be undertaken, to demonstrate and document that an average of CLI Class 2 soils have been restored in the agricultural areas of each phase.

As these commitments are included on the Site Plan as site plan notes, the Licensee must fulfill these requirements, prior to surrendering the Aggregate Resources Act Licence which must also be documented and managed through the annual monitoring program, and is legal obligated to complete the rehabilitation as documented on the ARA Site Plan.

These requirements will ensure that an average of CLI Class 2 soils are restored in each progressive rehabilitation phase, thereby achieving the "*Same Average Soil Capability*" component in the definition PPS of "*Agricultural Condition*".

#### **B. Substantially the *same areas***

In consultation with the three property owners who currently farm the lands, the progressive and final Rehabilitation Plan has been specifically designed to maximize the area of each phase that can be returned to an agricultural use by:

- maximizing the pit floor area through steeper side-sloping (2.1:1) in Phase 1, 2, and 3;
- Creating gentler side-slopes in Phase 3 (10:1 and 15:1); and,
- Returning a portion of Phase 2 back to the existing grade.

Given the extraction depth of the proposed pit (28m in some areas), in addition to, the irregular shape of the proposed extraction area, varying side-slope grades have been included on the rehabilitation plan to maximize the area that can be returned to an agricultural condition. The final proposed landform, as shown on the Rehabilitation Page of the Site Plan, will be created through grading, backfilling, and the importation of excess soil (as permitted in Ontario Regulation 244/97).

A mix of steeper side-slopes with a final grade of 2.1:1<sup>4</sup> and gentler side-slopes of 15:1 and 10:1 are included on the Rehabilitation Plan in order to maximize the amount of extraction area that can be returned to an agricultural condition. A Slope Stability Assessment was completed (MTE, July 21, 2022) to ensure that there would be no safety issues associated with the proposed steeper 2.1H:1V slopes in areas of Phase 1, 2, and 3. Under the heading “establishing slopes” in A.R. 6.00.00 (Rehabilitation General) the policy indicates that the minimum sloping requirements for pit is 3:1, but that “*diversity, variability and creativity in landscape design should be encouraged*”. Further, the Ontario Ministry of Agriculture, Farming, and Rural Affairs Draft Agricultural Impact Assessment Guidance Document (March 2018) recommends that non-agricultural side-slopes should meet legislative requirements (i.e. 3:1), **or steeper** if it is justified, in order to minimize side-slope area.

If the standard regulatory 3:1 slopes were implemented in the Rehabilitation Plan for the proposed Edworthy West Pit, than about 50% of the pit floor area would be occupied by slopes and would not be suitable for an agricultural use. By utilizing steeper 2.1:1 slopes, about 4ha of additional pit floor area are created that is suitable for agricultural use, such as cropping.

As required by the policy requirements in A.R. 2.00.2, the proposed sloping variation for the Edworthy West Pit is identified as a variance to the operational standards on the Site Plan.

Areas of the extraction area that are proposed to be returned to an agricultural condition include:

- The pit floor (except for Ecological Linkage Area 2),
- The southwest area of Phase 2 (except for Ecological Linkage Area 1); and,
- The 10:1 and 15:1 side slopes areas in Phase 3.

Areas of the proposed Licenced areas that are proposed to be rehabilitated/enhanced for ecological purposes include:

- The two ecological linkage areas in Phase 2 and between Phase 1 and 2 which will be established to create a linkage with adjacent natural heritage features;
- Some of the undisturbed setback areas in Phase 1, 2, and 3 are also proposed to be ecological enhancement areas and will be planted with native trees, shrubs, and grasses.
- The steeper side slope areas in Phase 1, 2, and 3 that include 2.1:1 and 3:1 side-slope areas will be seeded with a fast growing grass mix to establish a permanent vegetation cover that will stabilize the slopes over the long-term.

As detailed in Table 2 the total area of the proposed Edworthy West Pit extraction area that is currently in an agricultural condition is estimated to be about 33 ha, not including hedgerow features or natural heritage features.

After final rehabilitation is completed, the final end use of the extracted area will include pit floor areas, side-slope areas, and ecological linkages areas. Table 3 outlines the amount of land that will be returned to an agricultural condition in the proposed final rehabilitated landform will be about 23.4ha.

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<sup>4</sup> A slope of 2.1H:1V, instead of 2H:1V, is used in order to achieve slope stability requirements as outlined in the Slope Stability Assessment (MTE, July 21, 2022)

**Table 2: Pre-Extraction Uses and Areas in the Limit of Extraction**

Pre-Extraction Uses in Limit of Extraction	Area
Agricultural Condition	33.1 ha
Hedgerow or natural heritage features	2.1 ha

**Table 3: Post Extraction Uses and Areas in the Limit of Extraction**

Post-Extraction Uses in Limit of Extraction	Area
Agricultural Condition	23.4 ha
Side-slopes (2.1:1 or 3:1)	10.0 ha
Ecological linkage areas (EL1 and EL2)	1.9 ha

Therefore, the Rehabilitation Plan has been designed to maximize the amount of area being returned to agricultural land while also establishing ecological linkage areas. This proposed Plan meets the requirements of PPS Policy 2.5.4.1 to rehabilitate substantially the *same areas* agricultural land pre-extraction back to an agricultural condition post-extraction.

## 3.2 Growth Plan (2020)

The proposed Edworthy West Pit is located within the Greater Golden Horseshoe (GGH) Growth Plan Area. The Growth Plan is the Ontario government's initiative to plan for growth and development in a way that supports economic prosperity, protects the environment, and helps communities achieve a high quality of life.

The 2020 Growth Plan was approved under the Places to Grow Act to take effect on August 28, 2020. The proposed application is therefore subject to the policies of the 2020 Growth Plan.

Section 4 of the Growth Plan states that the: *"GGH contains a broad array of important hydrologic and natural heritage features and areas, a vibrant and diverse agricultural land base, irreplaceable cultural heritage resources, and valuable renewable and non-renewable resources"*.

Further, the Growth Plan recognizes the importance of protecting and managing the GGH's mineral aggregate resources:

*"Building compact communities and the infrastructure needed to support growth requires significant mineral aggregate resources. The Aggregate Resources Act establishes the overall process for the management of mineral aggregate operations, and this Plan works within this framework to provide guidance on where and how aggregate resource extraction can occur, while balancing other planning priorities. The GGH contains significant deposits of mineral aggregate resources, which require long-term management, including aggregate reuse and recycling. Ensuring mineral aggregate resources are available in proximity to demand can support the timely provision of infrastructure and reduce transportation-related greenhouse gas emissions." (4.1)*

Mineral aggregate resources are required to build and maintain new and existing infrastructure as contemplated in the Growth Plan. The proposed Edworthy West Pit will assist in supporting a strong and competitive economy within the Township of North Dumfries and the Region of Waterloo. The proposed pit will provide an essential construction material to support the growth and infrastructure requirements within the GGH.



For context, within 15 km of the Subject Site, the following areas have been designated for future growth in the Growth Plan: Kitchener, Cambridge, Ayr, St. George, and Paris (**See Figure 8: Future Growth Areas in the Growth Plan**)

The subject site is also located in close proximity to highway #401 which provides a direct provincial transportation route to GTA markets. The new growth that is anticipated in the Growth Plan Area of the Province will require a substantial amount of aggregate resources to support construction and infrastructure projects.

The following Growth Plan policies in section 4.2.8 are applicable to the proposed application:

**Table 4: Policy Conformity with the Growth Plan**

Growth Plan Policy Section 4.2.8	Proposed Application
<p>2. "Notwithstanding the policies in subsections 4.2.1, 4.2.2, 4.2.3 and 4.2.4, within the Natural Heritage System, mineral aggregate operations and wayside pits and quarries are subject to the following:</p> <ul style="list-style-type: none"> <li>a) no new mineral aggregate operation and no new wayside pits and quarries, or any ancillary or accessory use thereto, will be permitted in the following key natural heritage features and key hydrologic features: <ul style="list-style-type: none"> <li>i. significant wetlands;</li> <li>ii. habitat of endangered species and threatened species; and</li> <li>iii. significant woodlands unless the woodland is occupied by young plantation or early successional habitat, as defined by the Province, in which case, the application must demonstrate that policies 4.2.8.4 b) and c) and 4.2.8.5 c) have been addressed and that they will be met by the operation;" (4.2.8.1 a)</li> </ul> </li> </ul>	<p>The Proposed Edworthy West pit is not located within the Natural Heritage System and thus these policies do not apply. See <b>Figure 7 – Provincial Agricultural and Natural Heritage System Mapping.</b></p>
<p>3. In prime agricultural areas, applications for new mineral aggregate operations will be supported by an agricultural impact assessment and, where possible, will seek to maintain or improve connectivity of the Agricultural System.</p>	<p>The proposed Edworthy West Pit is located within a Prime Agricultural Area is mapped in the <b>Provincial Agricultural System – See Figure 7.</b> An Agricultural Impact Assessment (MHBC January 2023) was completed to assess potential impacts to agricultural resources. The rehabilitation plan for the Edworthy West pit has been designed to return the extracted area to an Agricultural Condition in accordance with Policy 2.5.4 of the PPS. Therefore, connectivity with the Agricultural System will be maintained.</p>

<p>4. For rehabilitation of new mineral aggregate operation sites, the following apply:</p> <p>a) the disturbed area of a site will be rehabilitated to a state of equal or greater ecological value and, for the entire site, long-term ecological integrity will be maintained or enhanced;</p> <p>b) if there are key natural heritage features or key hydrologic features on the site, or if such features existed on the site at the time of the application:</p> <p style="padding-left: 40px;">i. the health, diversity, and size of these key natural heritage features and key hydrologic features will be maintained or enhanced; and</p> <p style="padding-left: 40px;">ii. any permitted extraction of mineral aggregate resources that occurs in a feature will be completed, and the area will be rehabilitated, as early as possible in the life of the operation;</p> <p>c) aquatic areas remaining after extraction are to be rehabilitated to aquatic enhancement, which will be representative of the natural ecosystem in that particular setting or ecodistrict, and the combined terrestrial and aquatic rehabilitation will meet the intent of policy 4.2.8.4 b); and</p> <p>d) outside the Natural Heritage System for the Growth Plan, and except as provided in policies 4.2.8.4 a), b) and c), final rehabilitation will appropriately reflect the long-term land use of the general area, taking into account applicable policies of this Plan and, to the extent permitted under this Plan, existing municipal and provincial policies. In prime agricultural areas, the site will be rehabilitated in accordance with policy 2.5.4 of the PPS, 2014.</p>	<p>The area if the proposed pit is currently in an active agricultural condition. As required by Provincial policy, the proposed pit will be rehabilitated back to an agricultural condition. In addition, strategically located ecological enhancements are included in the rehabilitation plan and included the creation of 2 linkage areas and enhancement plantings in setback/buffer areas that are located adjacent to off-site natural heritage features. Additional, enhancement plantings are also proposed within the Core Environmental Feature. Therefore, through the pit rehabilitation activities, the long-term ecological integrity of the site will be enhanced.</p> <p>There are no key natural heritage or hydrologic features located within the proposed license boundary. The key natural heritage feature located adjacent to the Licence boundary will be protected.</p> <p>No extraction is proposed in any key natural heritage features.</p> <p>There will be no aquatic areas remaining after extraction as the proposed rehabilitation is to an agricultural condition.</p> <p>The proposed pit is located outside of the Growth Plan Natural Heritage System. In accordance with Growth Plan, PPS, and municipal policies, the pit will be rehabilitated back to an agricultural condition.</p>
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In summary, for reasons set out in this Report, the proposed quarry conforms to the policies of the Growth Plan (2020).

### 3.3 Region of Waterloo Official Plan

The Regional Municipality of Waterloo Official Plan was approved under Section 17 of the Planning Act and came into force on June 18, 2015.

The proposed Edworthy Pit is required to conform to the Region of Waterloo Official Plan. The proposed extraction area is:

- Designated Protected Countryside and Prime Agricultural Area on Map 7 (**Figure 9**);
- Identified as a Mineral Aggregate Resource Area on Map 8 (**Figure 10**);
- Does not include any fuel storage or equipment refueling within the small area of the property that is mapped as a Source Water Protection Area (WPSA-8) on Map 6e (**Figure 11**);
- Located adjacent to a Core Environmental Features on the Regional Greenlands and is located within the Dumfries Carolinian Environmentally Sensitive Landscape Map 4 (**Figure 12**); and
- Has direct access to a Regional Road (Spragues Road) on Map 5b (**Figure 13**).

The subject site is designated “Protected Countryside and Prime Agricultural Area” on Map 7 of the Official Plan (**See Figure 9**). The Protected Countryside and Prime Agricultural Area are intended to permanently protect valuable areas from urban development, while providing the continued use of the lands for agriculture, environmental and other appropriate rural uses including mineral aggregate resources. Mineral aggregate operations may be permitted as interim land uses within the Prime Agricultural Area designation (Policy 6.A.7) and the Protected Countryside Designation (Policy 6.B.2). The proposed Edworthy Pit is an interim use and will be rehabilitated back to an agricultural condition with ecological enhancements in accordance with the policies of Chapter 7 and Chapter 9, as outlined (below).

The Official Plan maps and designates a Greenlands Network which is defined as environmental features and their linkages. The Greenlands Network contributes to maintaining the environmental health of Waterloo Region and the Grand River watershed and the Official Plan contains policies to maintain, enhance or, wherever feasible, restore the Greenlands Network. The Greenlands Network includes Core Environmental Features and Landscape Level Systems.

The Edworthy West Pit does not include any Core Environmental Features within the proposed Licence Boundary or limit of extraction; however, there is a Core Environmental Feature located adjacent to the proposed Licence Boundary (**See Figure 12**). As required by Policy 7.A.6, the limits of this adjacent Core Environmental feature have been field verified through the completion of an Environmental Impact Study. No disturbance will occur in this feature and it will be protected through the implementation of a buffer that is a minimum width of 15m, and sediment and erosion fencing, as recommended by the completed Environmental Impact Study. The implementation of these mitigation measures will ensure that there are no adverse environmental impacts on the adjacent Core Environmental Feature from aggregate extraction activities (Policy 7.C.10). In addition to protection measures and buffers, the Environmental Impact Study also recommends an Ecological Enhancement Plan which includes enhancement plantings within the Core Environmental Feature, the creation of two new linkage areas, and tree and shrub enhancement plantings in setback and buffer areas (**See Figure 19: Ecological Enhancement Plan and Rehabilitation Concept**). These restoration activities will result in an overall

enhancement to the ecological function of the Core Environmental Feature over existing conditions (Policy 7.C.11). All planted vegetation will be native and maintained until it is self-sustaining.

The proposed pit is also located within the Dumfries Carolinian Environmentally Sensitive Landscape (ESL) as shown on **Figure 12**. Aggregate extraction is a permitted land use within an ESL. The Environmental Impact Study (Goodban Ecological Consulting, January 2023) addressed potential impacts from the proposed pit on the Dumfries Carolinian ESL and recommends mitigation measures and the implementation of an Ecological Enhancement Plan to ensure that there will be no adverse impacts on the ESL functions and features (Policy 7.B.12 and 7.B.13). All recommendations from the EIS are included on the Aggregate Resources Act Site Plan.

The implementation of the rehabilitation and enhancement plan (**See Figure 19**) will create two new natural linkage areas that do not currently exist between the adjacent Core Environmental Feature and adjacent wooded areas to the west and north of the proposed Licence boundary. In addition, additional enhancement plantings are propose to occur within the Core Environmental Feature. Thus, linkages will be enhanced on private land in private ownership (Policy 7. E. 8).

Chapter 9 of the ROP provides policies for managing aggregate. As shown on **Figure 10**, the proposed Edworthy West Pit is located within a Mineral Aggregate Resources Area and through site-specific investigations it has been confirmed that the proposed Licence area contains substantial reserves of high quality aggregate resources.

Chapter 9 includes policies for new mineral aggregate operations. A Zoning By-Law Amendment from the Township of North Dumfries is required, in addition to, a Licence Application from the Ministry of Natural Resources and Forestry. These two required applications will be submitted concurrently. The proposed pit will operate above the water table. An analysis of these policies is detailed below.

**Table 5: Region of Waterloo Official Plan Policies 9C: New Mineral Aggregate Operations**

Region of Waterloo Official Plan Policy	Conformity of Proposed Edworthy West Pit
9.C.3 Development applications to permit a new mineral aggregate operation, expand an existing operation, or increase the depth of extraction, will only be permitted where the following studies have been submitted to the satisfaction of the Region or agency with jurisdiction over the issue addressed by the study:	
(a) noise, dust and vibration studies demonstrating that the proposed operation is appropriately designed, buffered and/or separated from any surrounding sensitive land uses to prevent any adverse effects;	<p>A noise study was completed by Aercoustics (November 2022) to assess noise impacts relative to Provincial requirements. The Noise Study recommended specific mitigation measures including acoustic berms and operational limitations to avoid adverse noise impacts on adjacent and surrounding sensitive uses. These mitigations measures have been incorporated into the pit operation design and are implemented on the site plan. Therefore, there will be no adverse noise impacts on sensitive land uses.</p> <p>An Air Quality Assessment (RWDI, August 2022) was completed for the pit operation to assess</p>

	<p>potential dust impacts from the pit operations. The Assessment concluded that, if appropriate mitigation measures (water truck, minoring disturbed areas) were implemented, the proposed pit would not have a significant impact on nearby receptors. In addition, a Best Management Practices for Dust was also operated by RWDI and will be implemented at the pit in order to ensure that dust is appropriately controlled on-site.</p>
<p>(b) a hydrogeological study in accordance with the provisions of the Regional Implementation Guideline for Source Water Protection Studies, demonstrating that the proposed operation will have no negative impacts on the quality and quantity of any surface water or groundwater resources;</p>	<p>A Water Report and Maximum Predicted Water Table Report (MTE, July 2022) was completed and identified the maximum predicted water table by monitoring on-site water levels for more than one year. The maximum pit floor depth will stay a minimum of 1.5m above the determined maximum predicted water table elevation. In addition, this Report also recommends mitigation and monitoring measures to be incorporated on the ARA site plans for the proposed pit to protect ground and surface water resources. . The report concluded that the Proposed Pit will not result in the drawdown of the water table, does not pose a threat to nearby well fields, and will not have an impact on groundwater and surface water resources and their ecological functions.</p>
<p>(c) a Transportation Impact Study in accordance with Policy 5.A.25 indicating how the proposed operation will address any potential impacts on Regional roads and Provincial Highways;</p>	<p>The proposed new Pit will utilize Regional Roads (Spragues Road and Cedar Creek Road) as the main Haul Route. These are existing and identified truck routes that are capable of accommodating heavy truck traffic. The proposed pit will replace the depleting resources at the existing Cambridge Aggregates North Dumfries pit; therefore, there will be no increase in truck traffic as a result of the new pit operation.</p> <p>A Traffic Impact Study was completed by Paradigm Engineering (January 2023) to identify new entrance locations based on a sightline analysis and to assess the suitability of the road network based on a capacity analysis. No road upgrades to Regional Roads are required as a result of the pit operation.</p>
<p>(d) an Environmental Impact Statement in accordance with the policies in Section 7.G, where the proposed mineral aggregate operation is contiguous to a Core Environmental</p>	<p>The proposed pit is located adjacent to a Core Environmental Feature. No extraction or disturbance is proposed to this off-site Core Environmental Feature. A Natural Environment</p>

Feature, or within or contiguous to a Supporting Environmental Feature;	Report was completed which determined that the proposed Pit would have no adverse impacts on the adjacent feature. Additionally, the proposed rehabilitation plan will provide additional natural linkages for core environmental features in the area.
(e) an archaeological assessment and/or Cultural Heritage Impact Assessment in accordance with the policies in Section 3.G	<p>A Stage 1-2 archeological assessment was completed by AMICK consultants which concluded that there was no archeological resources encountered on the subject site.</p> <p>In addition, a Cultural Heritage Impact Assessment was completed by MHBC (December 2022). No Cultural Heritage resources are proposed to be removed, but a number of Built Cultural Heritage Resources are located in close proximity to the proposed pit. The Report concluded that there would be no impacts to adjacent Cultural Heritage Resources.</p>
(f) information on the estimated lifespan of the mineral aggregate operation and demonstration that the final rehabilitation plan is consistent with the policies in this Plan and the Area Municipal official plan;	The proposed pit includes approximately 11 Million tonnes of aggregate resources and will include an annual extraction rate of about 1 Million Tonnes/per year. The estimated lifespan of the pit is approximately 10-15years, based on market demand. The proposed Edworthy Pit will be rehabilitated to an agricultural condition with ecological enhancements in the form of linkages and plantings in the Core Environmental Feature. This is consistent with the PPS, Regional Official Plan, and the North Dumfries Official Plan and the surrounding area.
9.C.4 The studies noted in Policies 9.C.3 and 9.D.1 will take into account the potential cumulative impacts that may result from a proposed new mineral aggregate operation when added to other past, present and proposed future mineral aggregate operations in the vicinity of the proposed new operation. The appropriate level of detail, analysis boundaries and baseline data to be used in the cumulative impact assessment will be determined by the Region, Area Municipalities, the Grand River Conservation Authority and the owner/applicant as part of the pre-submission consultation meeting.	<p>The proposed Edworthy West Pit is located adjacent to an existing Licence (AI's Stone Service ARA Licence #625482). The Air Quality Assessment, Water Report and Noise Impact Assessment included a Cumulative Impact Assessment. No increased in adverse impacts were identified as part of the completed Cumulative Impacts Assessments.</p> <p>In addition, the new proposed pit will replace the reserves at the existing Cambridge Aggregates Pit; therefore, there will be no increase in traffic or production across these two Licences.</p>
9.C.5 To avoid potential overlap among the studies required under Policies 9.C.3 and 9.D.1 and similar studies that may be required by the Province, Area Municipalities or the Grand River	Pre-Consultation for the proposed Edworthy West Pit was completed with in December 2021.

<p>Conservation Authority, the Region will require the owner/applicant to participate in a pre-submission consultation meeting with each of these agencies prior to the submission of any supporting studies. The purpose of this pre-submission consultation meeting will be to identify the specific policy requirements of each of the agencies in each of the substantive areas being studied under Policies 9.B.3, 9.C.3 and 9.D.1 such that a single study can satisfy all of the requirements identified by the agencies. Following the pre-submission consultation meeting, the Region to the extent of its jurisdiction, may scope, waive, or establish a peer review or other suitable evaluation process for any requirements reflected in these studies</p>	<p>A record of pre-consultation is included in <b>Appendix A</b> of this Report.</p>
<p>9.C.6 New mineral aggregate operations will not be permitted on lands designated as Core Environmental Features, except in accordance with the following...<i>[additional wording not copied]</i></p>	<p>The proposed Licence and extraction boundary does not include any lands that are designated as Core Environmental Features.</p>
<p>9.C.7 New mineral aggregate operations proposed within a Source Water Protection Area designated as shown on Maps 6a to 6g may be permitted, except where such uses are prohibited in accordance with the source water protection policies in Chapter 8.</p>	<p>A portion of the northeast area of the proposed Edworthy West Pit is located within a WHPA D (<b>See Figure 11</b>). Well Head Protection Area D is the lowest risk category. Update GRCA source Water protection mapping is shown in <b>Figure 20: GRCA Source Water Protection Mapping</b>, and identifies only a small portion of the WHPA located within the proposed extraction area.</p> <p>Aggregate Extraction is not a restricted land use in Well Head Protection Areas. In addition, no fuel storage or equipment refuelling will occur in the area of the Licence that is mapped as a WHPA D. This has been clearly demarcated on the pit Site Plan. The Water Report concluded that the proposed pit is not anticipated to have a negative impact on water quality or quantity.</p>
<p>9.C.8 New mineral aggregate operations proposed contiguous to Core Environmental Features may be permitted, provided that there will be no adverse environmental impacts to their features or ecological functions and connectivity/linkages.</p>	<p>The Natural Environment Report concluded that there would be no adverse environmental impacts to the adjacent Woodlot, which is designated as a Core Environmental Feature, or its ecological functions. Further, the proposed rehabilitation and Ecological Enhancement Plan, will enhance the natural feature through infill plantings, buffer plantings, and the creation of</p>

	two new ecological linkages to connect adjacent environmental features. <b>See Figure 19.</b>
<p>9.C.10 New mineral aggregate operations, or wayside pits and quarries, may be permitted within Environmentally Sensitive Landscapes where it can be demonstrated to the satisfaction of the Region, in consultation with the Province, Area Municipalities and the Grand River Conservation Authority that</p> <p>(a) notwithstanding Policies 7.B.12, 7.B.13 and 7.B.14, where extraction is proposed contiguous to a Core Environmental Feature, there will be no significant adverse environmental impacts to their features or landscape level ecological functions and connectivity;</p>	<p>The proposed Edworthy West pit is located in the Dumfries Carolinian ESL and is located contiguous to a Core Environmental Feature as mapped by the Regional Official Plan (see policy 9.C.8 analysis above). The Natural Environment Report completed by Goodban Ecological Consultants (January 2023) concluded that there will be no significant adverse environmental impacts to the features or functions of the adjacent Core Environmental Feature. Additionally, the proposed rehabilitation and Ecological Enhancement Plan will result in an overall improvement to the environmental features and functions of the proposed Licence boundary and adjacent lands.</p>
<p>(b) where extraction is proposed within or contiguous to the following features, which are not included within a Core Environmental Feature:</p> <ul style="list-style-type: none"> <li>i) rivers, stream valleys, floodplains, or associated hazardous lands or hazardous sites;</li> <li>ii) fish habitat;</li> <li>iii) meromictic and kettle lakes;</li> <li>iv) significant wildlife habitat; or</li> <li>v) savannas, tallgrass prairies, rare woodland types, cliffs, alvars, sand barrens, marl seeps, bogs and fens;</li> </ul> <p>there will be no significant adverse environmental impacts to their features or landscape level ecological functions and connectivity, although extraction may be considered in habitats which can be effectively replaced or restored in a short to medium time scale such as areas of crop or pasture land, young plantation, early successional woodland, small areas of non-provincially significant marsh or thicket wetland, old field meadow, hedgerows and drainage swales; and</p>	<p>There are no identified rivers, stream valleys, floodplains, or associated hazardous sites located on the Subject Site. There are also no identified fish habitat, meromictic/kettle lakes, significant wildlife habitat savannas, tallgrass prairies, rare woodland types, cliffs, alvars, sand barrens, marl seeps, bogs and fens located on the Subject Lands or Subject Site</p>
<p>(c) the quantity and quality of local surface water and groundwater regimes can be maintained or enhanced.</p>	<p>The Water Report and Maximum Predicted Water Table Report completed by MTE concluded that when considering the recommendations on the ARA Site Plans, the proposed Edworthy Extension will not have an</p>



	impact on groundwater and surface water resources.
<p>9.C.11 Where a new mineral aggregate operation is proposed on lands designated as an Environmentally Sensitive Landscape as shown on Map 4, the Region will recommend to the Province that the Natural Environment Report required under the Aggregate Resources Act also address the following objectives:</p> <p>(a) natural habitat that would be lost from the site will be replaced with equivalent habitat on the property or on adjacent lands, and no less than 35 per cent of the licensed area remaining above the water table after extraction will be rehabilitated to sustainable natural woodland habitat representative of the landscape in which it is located;</p>	<p>No significant natural heritage features will be removed as part of the proposed pit operation.</p> <p>In accordance with Provincial Policy, the pit will be rehabilitated to an agricultural condition. In addition, the Rehabilitation and Ecological Enhancement Plan includes buffer and setback plantings, infilling of the adjacent Core Environmental Feature, and the creation of two new ecological linkage areas. <b>See Figure 19.</b> These new habitat features that will be created are representative and will contribute to the ecological function of the Dumfries Carolinian ESL.</p>
<p>(b) the quantity and quality of surface water and groundwater regimes and aquatic ecosystems remaining after, or created by, extraction will be rehabilitated to sustainable natural aquatic ecosystems representative of the landscape in which they are located;</p>	<p>There are no identified aquatic ecosystems on the Subject Site. The proposed Edworthy Extension will remain above the water table, and will not result in the creation of aquatic ecosystems.</p>
<p>(c) the health, diversity, size, ecological function and connectivity of major natural features remaining within the proposed licensed area will be maintained and, where possible, enhanced before, during and after the extraction of aggregate resources;</p>	<p>The proposed rehabilitation plan includes ecological enhancements to the existing natural feature located to the south of the proposed Edworthy Expansion. Additional natural linkages will be created as per rehabilitation plans.</p>
<p>(d) the rehabilitated area will be maximized and the disturbed area minimized on an ongoing basis during the life-cycle of the pit operation; and</p>	<p>The Edworthy Expansion is proposed to be rehabilitated progressively in 3 progressive stages which limits the amount of disturbed area during the life-cycle of the operation. Progressive rehabilitation will closely follow extraction in order to minimize disturbance and maximize progressive rehabilitation to the extent feasible.</p>

<p>(e) rehabilitation of any area once occupied by natural features or identified as potential enhancement/restoration and/or corridor/linkage areas is completed as early as possible in the life of the extraction operation.</p>	<p>Currently, the area proposed for extraction is in a predominately agricultural condition with no significant natural heritage features.</p> <p>The Ecological Enhancement Plan included with the Environmental Impact Study will be implemented and outlines the timing of the proposed enhancement and rehabilitation plantings based on the sequential operations and rehabilitation of the pit</p>
<p>9.C.12 Development applications that would establish an ancillary use to a mineral aggregate operation will only be permitted where applicable studies identified in Policy 9.C.3 demonstrate to the satisfaction of the Region and/or Area Municipality that the proposed use will mitigate any potential adverse effects.</p>	<p>No ancillary uses to the proposed mineral aggregate operation are proposed</p>
<p>9.C.13 The Region will collaborate with the Province and Area Municipalities to ensure that all appropriate requirements resulting from the review of an application for a mineral aggregate operation are imposed and enforced as:</p> <p>(a) conditions on the license or notes on the site plan required under the Aggregate Resources Act, including but not limited to spill protection measures to prevent discharges to surface water and groundwater resources from on-site fuel storage, vehicle or equipment repair and equipment operation, and spills from salt storage, use and transfer; and other best management practices;</p>	<p>All of the recommended mitigation measures included in the Technical Reports have been included on the ARA Site Plan included with the Application. The Site Plan includes specific notes and restrictions related to fuel storage and equipment refueling. As required by O.Reg 244/97 a Spills Contingency Plan has been developed and will be implemented as part of the quarry operations.</p>
<p>9.C.14 A new mineral aggregate operation proposing to establish or expand a quarry operation may only be permitted by way of an amendment to this Plan. Such amendment will be reviewed in the context of the policies of this Plan, the applicable Area Municipal Official Plan and the Provincial Standards approved under the Aggregate Resources Act.</p>	<p>A quarry operation is not proposed.</p>

Section 9.D includes policies that apply to mineral aggregate operations that are proposed to operation below the water table. The proposed Edworthy West pit proposed to operate above the water table only.

Section 9.F provides local policies for the rehabilitation of Mineral Aggregate Operations in the Region. The following policies apply to the proposed Edworthy Pit.

**Table 6: Township of North Dumfries Official Plan Rehabilitation Policies**

Section 9F Policies: Rehabilitation of Aggregate Operations	Policy Review
9.F.1 All proposals for new mineral aggregate operations, including wayside pits and quarries, will include a rehabilitation plan to the satisfaction of the Region and Area Municipalities that will ensure that:	
(a) progressive rehabilitation will be carried out whenever feasible so that depleted areas are restored while extraction continues in other areas of the site;	The proposed Edworthy West Pit will be extracted and progressively rehabilitated in 3 phases. This will ensure that extracted areas are rehabilitated as soon as possible while extraction continues in other areas on the site. Areas that are not extracted will remain in an agricultural condition. This phased approach to extraction and rehabilitation will minimize the disturbed area.
(b) final rehabilitation will comply with the land use designations contained in this Plan and Area Municipal official plan, and be compatible with the character of surrounding land uses;	The proposed pit will be rehabilitated back to an agricultural condition with ecological linkages and naturalize side-slopes and setbacks. This end use is consistent with the Township of North Dumfries Official Plan and the surrounding rural land uses.
(c) within the Prime Agricultural Area and Rural Areas designations, rehabilitation to agriculture will be the first priority, as follows: i) within the Prime Agricultural Area, substantially the same land area will be rehabilitated back to an agricultural condition to allow for the same range and productivity of crops common in the area; and ii) within Rural Areas, rehabilitation of the site will be carried out so that substantially the same land area and same average soil quality for agriculture are restored.	The proposed Edworthy West Extension is located on Prime Agricultural Land within a Prime Agricultural Area. As such, the lands are proposed to be rehabilitated back to an agricultural condition as detailed in Section 3.1 of this Report.
(d) where mineral aggregate extraction has occurred below the water table, rehabilitation will be in accordance with Policy 9.D.1 (c) to protect groundwater quality	Extraction is not proposed to go below the groundwater table for the proposed Operation.

<p>9.F.2 In the Prime Agricultural Area designation, rehabilitation to agriculture will be the first priority. Notwithstanding this, complete agricultural rehabilitation within the Prime Agricultural Area and Rural Areas designations may not be required where:</p> <p>(a) the depth of the planned extraction makes restoration of pre-extraction agricultural capability impractical;</p> <p>(b) hydrogeological investigations completed in accordance with the policies in this Plan have demonstrated to the satisfaction of the Region that agricultural rehabilitation is not desirable due to groundwater protection requirements;</p> <p>(c) the Region, in collaboration with the Province, Area Municipalities and the Grand River Conservation Authority, have determined a suitable alternative post-extractive use in conformity with the policies in this Plan and the Area Municipal official plan; or</p> <p>(d) Aggregate extraction would remove natural features such as woodlands, wetlands and watercourses on lands not otherwise protected by the Greenlands Network policies in this Plan, in which case these natural features will be restored and, where possible, enhanced consistent with the intent of Policy 9.C.11.</p>	<p>The Edworthy West Pit expansion is proposed to be rehabilitated back to an agricultural condition with ecological linkage areas as outlined in Section 3.1 of this Report</p> <p>The rehabilitation plan has been designed to create a post-extraction landform which maximizes rehabilitation to an agricultural condition to the greatest extent feasible based on the site characteristics.</p>
<p>9.F.3 Where multiple mineral aggregate operations are located in close proximity to one another, the Region will collaborate with the Province, Area Municipalities, the Grand River Conservation Authority and the affected owners/applicants to jointly develop comprehensive rehabilitation plans for multiple properties</p>	<p>The proposed Edworthy West Pit will be rehabilitated to an agricultural condition in accordance with Provincial and Municipal policy.</p>

In conclusion, the proposed Edworthy West Pit conforms to the Regional Municipality of Waterloo Official Plan policies.

## 3.4 Township of North Dumfries Official Plan

The Township of North Dumfries Official Plan, Consolidation November 2018 is currently in effect. In the Township of North Dumfries Official Plan the proposed Licence Boundary is:

- Designated “Prime Agricultural Area” and “Protected Countryside” on Map 7 (**Figure 14**);
- Identified as a “Mineral Aggregate Resource Area” on Map 8 (**Figure 15**);
- Within an Environmentally Sensitive Landscape and adjacent to a Core Environmental Feature (**Figure 16**)
- Outside of Environmental Constraint Area on Map 5B (**Figure 17**); and
- Outside of Hazard Lands on Map 5c (**Figure 18**).

The Township Official Plan permits Mineral Aggregate operations as an interim use in the Agricultural Designation (Policy 2.6.10.4).

The Chapter 4: Economic Development preamble recognizes the importance of aggregate, among other industries, to the location economy of the Township. Further the preamble to Chapter 5: Natural Resource Management, recognizes the importance of the Township’s natural resources, including aggregate resources, to the local economy.

Chapter 5 includes specific policies for Mineral Aggregate Resources. These policies are similar or the same as the Region of Waterloo Official Plan policies for aggregate resources planning and management. A detailed policy analysis for the Region of Waterloo Official Plan policies is included in Section 3.3 of this Report.

Although the proposed Edworthy West Pit is not an expansion that is located adjacent to the existing Cambridge Aggregates Inc. North Dumfries pit, the purpose of the new proposed pit is to replace the depleting reserves at the existing pit and therefore the new Licence could be considered an operational expansion.

Policy 5.2.2.4 of the Township Official Plan states that:

*Development applications to expand an existing mineral aggregate operation located on lands designated as Environmentally Sensitive Landscapes, as illustrated on Map 5A, will be required to:*

*a) demonstrate to the satisfaction of the Region and the Province that substantial progress has been made in the rehabilitation to viable after-use of the disturbed area within the existing licensed area; and*

*b) demonstrate to the satisfaction of the Region that the total active extraction area of the original licensed area and the proposed expansion area is not increasing over the long term. A lesser standard may be considered where it can be demonstrated that the overall rehabilitation goals of the site can be more effectively achieved by deferring rehabilitation until a later stage of the mineral aggregate operation*

The proposed Edworthy West pit is located in the Dumfries Carolinian Environmentally Sensitive Landscape – **See Figure 16**. Within the existing Cambridge Aggregates Inc. Main Pit Licence (Licence 607701), 12.5ha (as of fall 2022) of the pit has been rehabilitated back to an Agricultural Condition and is producing cash crops. By the time that the proposed Edworthy West pit would be operational, as significant portion of the Main Pit Licence would be extracted and progressively rehabilitated. Therefore, there would not be an increase in the overall disturbed area across the two pit operations.

Policy 5.2.3.1 of the Township Official Plan requires that all new mineral aggregate operations required a site-specific amendment to the Township Zoning By-Law. A Township Zoning By-Law Amendment will be applied for concurrently with the Aggregate Resources Act Licence Application. As required by Policy 5.2.3.3, a notice sign providing details on the Application will be installed on the Subject Site. **See Appendix B** for a copy of the Draft Zoning By-Law Amendment.

In accordance with Township policy 5.2.3.4, how agricultural rehabilitation of the proposed Licence will be maximised is outlined in Section 3.1 of this Report.

The applicable policy conformity of Chapter 5 related to the following matters has been assessed in detail in this Report in Section 3.3 (Region of Waterloo Official Plan):

- The Required Technical Information (Section 5.2.4)
- Review Criteria (Section 5.2.5)
- Extraction Below the Water Table (Section 5.2.6);
- Rehabilitation of Aggregate Operations (Section 5.2.8)

The Subject Site is currently zoned Zone 1 – Agriculture in the Township of North Dumfries Zoning By-Law 689-83. A Mineral Aggregate Operation is not permitted in the Agriculture Zone. A Zoning By-Law Amendment is required to permit the Proposed Edworthy West Pit.

General provision 6.22 governs the establishment of Pits and Quarries in the Township of North Dumfries as it relates to zoning.

*6.22 Except by amendment to this By-law, the making or establishment of pits and quarries within the Township is hereby prohibited save and except for those areas located in Zone 14 (Z.14) as shown on the maps forming Schedule 'B' to this By-law and except for those areas shown on the maps forming sections 2.1.111, 20.1.112 and 20.1.113 of Schedule 'A' to this By-law subject to the provisions of sub-section 19A.2 of the said Zone 14.*

*Nothing in this By-law shall prevent the making or establishment of a wayside pit or wayside quarry as defined in this By-law*

The proposed Edworthy West Pit will be required to be re-zoned to the Zone 14 – Mineral Aggregates zone in order to permit the establishment of the Pit. A draft version of the Zoning By-Law Amendment is included in **Appendix B**.

Permitted uses in Zone 14 include:

- the making, establishment, or operation of a pit or quarry;
- Forestry; and

- Accessory buildings or structures which are incidental to and directly related to the extraction operation which are shown on the site plan forming part of the license approval
- Barns, sheds, buildings or structures required as part of the farming operation except a residence or a residential unit
- Accessory signs

The proposed Edworthy West Pit extension will not include any accessory uses, processing, or manufacturing on site, as per the ARA Site Plans. The operation will strictly feed the existing Cambridge Aggregates Main Pit, where all processing of virgin material extracted from the proposed Pit Extension will occur. Therefore, the proposal will conform to the Zone 14 provisions and no site specific zoning is required.

## 3.5 Township of North Dumfries Zoning By-Law

The Subject Site is currently zoned Zone 1 – Agriculture in the Township of North Dumfries Zoning By-Law 689-83.

A Mineral Aggregate Operation is not permitted in the Agriculture Zone. A Zoning By-Law Amendment is required to permit the Proposed Edworthy West Pit.

General provision 6.22 of the Township Zoning By-Law governs the establishment of Pits and Quarries in the Township of North Dumfries as it relates to zoning.

*6.22 Except by amendment to this By-law, the making or establishment of pits and quarries within the Township is hereby prohibited save and except for those areas located in Zone 14 (Z.14) as shown on the maps forming Schedule 'B' to this By-law and except for those areas shown on the maps forming sections 2.1.111, 20.1.112 and 20.1.113 of Schedule 'A' to this By-law subject to the provisions of sub-section 19A.2 of the said Zone 14.*

*Nothing in this By-law shall prevent the making or establishment of a wayside pit or wayside quarry as defined in this By-law*

The proposed Edworthy West Pit will be required to be re-zoned to the Zone 14 – Mineral Aggregates zone in order to permit the establishment of the Pit. A draft version of the Zoning By-Law Amendment is included in **Appendix B**. The Zoning By-Law Amendment will be submitted concurrently with the required Aggregate Resources Act Licence Application.

Permitted uses in Zone 14 include:

- the making, establishment, or operation of a pit or quarry;
- Forestry; and
- Accessory buildings or structures which are incidental to and directly related to the extraction operation which are shown on the site plan forming part of the license approval
- Barns, sheds, buildings or structures required as part of the farming operation except a residence or a residential unit

- Accessory signs

The proposed Edworthy West Pit extension will not include any accessory uses, processing, or manufacturing on site, as per the ARA Site Plans. Therefore, the proposal will conform to the Zone 14 provisions and no site specific zoning is required.

## 4.0 AGGREGATE RESOURCES ACT SUMMARY STATEMENT

This Section is completed in accordance with the Aggregate Resources of Ontario: Technical Reports and Information Standards, August 2020. This Section of the Report fulfills “Part 1.0: Summary Statement” requirement of the Class A License Application.

Cambridge Aggregates Inc. is applying for a Class A License under the Aggregate Resources Act (“ARA”) for a pit above the water table. The proposed pit is referred to as the “Edworthy West Pit” and is located at Part of Lots 16, 17, and 18, Concession 9, Township of North Dumfries, Regional Municipality of Waterloo – **See Figure 1**. The Licence Application is comprised of three separate properties owned by three separate property owners – **See Figure 2**. Cambridge Aggregates Inc. has entered into lease and extraction agreements with these three property owners.

The new proposed License will replace the depleting reserves serve as at the nearby Cambridge Aggregates Inc. Main Pit (existing license #607701). Aggregate resources from the new Licence will be used to continue the production of concrete stone and other granular products to support the Hanson Ready-Mix Concrete Plants. The Hanson Ready-Mix Concrete Plants support local and regional construction markets. The area proposed to be Licensed is 44.3ha with a limit of extraction of 35.2ha.

As identified on Page 2 of 3 of the site plans, the proposed pit extension is to be operated in three sequential phases in a west to east direction. No processing activities (i.e. screening, crushing, washing) are proposed and the maximum annual tonnage for the proposed new license will be 1,000,000 tonnes/annually.

The Site Plans are included in the application package and are comprised of 3 pages that provide details and drawings on:

- Page 1: Existing Features Plan
- Page 2: Operational Plan
- Page 3: Rehabilitation Plan



The Site Plans have been completed in accordance with Aggregate Resources of Ontario Site Plan Standards (August 2020). The pit cross-sections are included on Page 1 and 3 of the Site Plan.

The following Technical Report are included with the Application and have been completed in accordance with the Technical Reports and Information Standards (August 2020),

- 2.1 Maximum Predicted Water Table Report/Water Report (MTE, July 2022)
- 2.2 Natural Environment Level 1 and 2 I Report (Goodban Ecological Consulting, January 2023)
- 2.3 Stage 1 and 2 Archaeological Assessment (AMICK, November 2020)  
Cultural Heritage Impact Assessment (MHBC, December 2022)  
Archaeological and Cultural Heritage Screening Checklists
- 2.4 Agricultural Impact Assessment Report (MHBC, January 2023)
- 2.6 Noise Assessment Report, Aeroustics, November 2022

The following Sections are structured to provide information required under the Provincial Standards for Class A Licence for a pit operation which intends to extract aggregate material from above the maximum predicted water table elevation.

## 1.1 Agricultural Classification & Rehabilitation Techniques

The area proposed to be Licensed is predominately in an active agricultural condition and produces field crops. As shown on **Figure 5**, the Subject Site is mapped as containing Canada Land Inventory Class 1 and Class 4 soils. A Soil Survey of the properties (DBH Soils, March 2022) confirmed that the average CLI soil class across the proposed Licence area is Class 2. As required by the Aggregate Resources Act Application Standards, an Agricultural Impact Assessment (MHBC, January 2023) has been completed as part of the Licence Application.

Extraction is proposed to occur a minimum of 1.5m above the water table and the Edworthy West Pit is proposed to be rehabilitated back to an agricultural condition with strategically located ecological linkages. The steeper side-slope areas will not be returned to an agricultural condition.

The total area of the extraction area that will be returned to an agricultural condition<sup>5</sup> will be 23.4ha. Additional information regarding the design of the rehabilitation plan, rehabilitation techniques, and the progressive rehabilitation phasing is included in Section 3.1.1 and Section 4.1.6 of this Report.

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<sup>5</sup> The PPS 2020 defines *Agricultural Condition* as a condition in which substantially the same areas and same average soil capability for agriculture are restored.

## 1.2 Planning and Land Use Considerations

The subject property is located in a predominately rural and agricultural area of the Township. Only the areas of the property that are currently in agricultural production are proposed to be extracted as part of the pit expansion.

The Subject Site is designated Prime Agricultural Area and Protected Countryside in the Township of North Dumfries and Region of Waterloo Official Plans (**See Figures 14 and 9**). The Subject Site is also designated as a Mineral Aggregate Resources Area in the Township and Region Official Plans. (**See Figures 15 and 10**). Mineral aggregate extraction is permitted in areas outside the Mineral Aggregate Resource Area, where there is a sufficient quantity and quality of resources to warrant extraction. No Official Plan Amendments are required.

In the Township of North Dumfries Zoning By-Law 689-83, the area proposed to be Licensed is currently zoned Zone Z.1 Agricultural. A Zoning By-Law Amendment is required to re-zone the area of the properties that is proposed to be extracted to the Zone Z.14 (Mineral Aggregate Extraction) to permit aggregate extraction.

It is anticipated that the required Planning Act Applications will be submitted concurrently with the ARA Licence Application.

As demonstrated in Section 4.0 of this Report, the proposed Pit extension represents good planning for the Region of Waterloo and Township of North Dumfries. The proposal is consistent with the Provincial Policy Statement (PPS 2020), conforms to the Growth Plan (2020), conforms to the Region of Waterloo Official Plan (2015) and meets the provisions of the Township of North Dumfries Zoning By-Law. See Sections 2.0 and 3.0 of this Report for additional information regarding Planning and Land Use Considerations.

## 1.3 Source Water Protection

The Subject Site located in the Grand River watershed and are subject to the Grand River Source Protection Plan (GRSPP) area).

Based on GRCA mapping, the northeast edge of the Site (0.58 ha (1.7%) of the extraction area) is located within the 25 year time of travel of the Willard Well Field (**See Figure 20**). While the northeast corner of the licensed boundary (outside of the extraction area) is located marginally within the 25 year time of travel of the Middleton Street Well Field (Lake Erie Region Source Protection Committee, 2021).

The area of the Site located within the Willard WHPA is considered to have a low vulnerability (2) (Lake Erie Region Source Protection Committee, 2021). The area of the Site located within the Middleton Street WHPA is considered to have a low vulnerability, however this area has also been identified as an issue contributing area for Trichloroethylene (TCE), sodium and chloride (Figure 8) (Lake Erie Region Source Protection Committee, 2021).

The Clean Water Act identifies specific activities that pose a risk of contamination, which are prescribed by the MECP. Under the Clean Water Act, Aggregate Operations are not identified as a Prescribed Threat.

No permanent fuel storage facilities will be located on the subject site and temporary fuel storage facilities will be located in a designated area outside of the WHPA. No mobile re-fueling will be permitted in the area of the site mapped as a WHPA. These restrictions have been implemented on the Site Plan

A Spills Contingency Plan will be prepared to mitigate any potential contamination. No negative impact to the WHPA or groundwater recharge is anticipated from the Site.

Source Water Protection is addressed in greater detail in Section 4.0 of the MTE Water Resources Report (July 2022).

## 1.4 Quality and Quantity of Aggregate on Site

The proposed Edworthy West Pit is identified as a Mineral Aggregate Resource Area in Provincial and Local mapping (see section 2.3 of this Report). In addition, site specific investigations have confirmed the availability of approximately 11 million tonnes of aggregate resource within the area proposed to be extracted. These high quality aggregate resources meet the required specifications to manufacture concrete stone which is used in the production of ready-mix concrete. Therefore, the aggregate resources extracted from the property will be used to supply the Hanson Ready-Mix concrete business and will also supply granular products for use in construction and infrastructure projects. No more than 1,000,000 tonnes will be shipped from the proposed pit each year. This is the same volume currently produced and shipped at the Main Pit and the Edworthy West Pit will serve as an extension to the Main Pit to replace the depleted reserves.

## 1.5 Haul Routes, Truck Traffic, and Entrance Permits

Aggregate resources extracted from the proposed Edworthy West Pit will be loaded on the highway trucks and shipped to the Main Pit for processing and then shipped to market using existing and established Haul Routes.

A new truck entrance will be constructed from the Edworthy West Pit on Spragues Road and an additional new truck entrance will be constructed at the south extension to the Main Pit on Spragues Road. **(See Figure 3)**. These two new entrances will be designed and built to Regional truck design standards. The new entrance locations are based on a sightline analysis completed by Paradigm Transportation Solutions, January 2022. Spragues Road is a Regional Road that is permitted and designed to accommodate heavy truck traffic.

On average, the Edworthy West pit is forecast to generate 40 truck trips during peak hours. The completed Traffic Impact Assessment (Paradigm Transportation Solutions, January 2023), confirmed that no improvement to the transportation network is required to accommodate this anticipated truck traffic. As no increase in tonnage is proposed between the two licences, no new impacts to the existing haul road is anticipated.

## 1.6 Progressive and Final Rehabilitation

The following provides a detailed overview of the Progressive Rehabilitation Plan for the proposed Edworthy West Pit. Additional detailed information regarding progressive and final rehabilitation is included in Section 3.1.1 of this Report.

### **Phase 1 Rehabilitation**

The pit floor area of Phase 1 will be maximized through the creation of 2.1:1 side-slopes along the limit of extraction. The pit floor area of Phase 1 will be suitable for agricultural uses, including the production of cash crops (e.g. corn, soy, wheat). The pit floor will be graded to direct drainage to the ecological linkage area (EL2) located between Phase 1 and Phase 2. Ecological enhancement plantings are proposed along the western licence boundary of Phase 1, adjacent to the Core Natural Environment Feature. An entrance and access ramp will be maintained in Phase 1 to allow farm machinery access to the Pit Floor from Spragues Road.

### **Phase 2 Rehabilitation**

Phase 2 of the Licence will be rehabilitated to an agricultural condition, with an Ecological Linkage Areas (EL1 and EL2) to connect natural heritage features located adjacent to the Licence boundary with the larger woodlot located adjacent to the central Licence area. Ecological enhancement plantings are also proposed for the undisturbed setback areas.

In the south end of Phase 2, a portion of the excavated pit area is proposed to be rehabilitated back to the original grade, in order to create the ecological linkage area (EL1)) and re-establish the agricultural field located in the far southwest corner of the Licence boundary. By returning this area back to the existing grade, the agricultural field in the southwest corner will be re-established thereby preventing the fragmentation of this area. Due to the narrow width and configuration of the limit of extraction in the south end of Phase 2, side-sloping in this area of the pit was determined to be impracticable as the toe of the slopes would extend into the pit floor and the resulting topography would not be suitable for agricultural use. By returning the south end of Phase 2 back to the original grade, agricultural rehabilitation is maximized and an ecological linkage area can also be accommodated (EL1).

To maximize the remaining agricultural rehabilitation in the northern portion of Phase 1, the slide slopes in this portion of Phase 2 will be established with a 2.1:1 grade and will include an access ramp for farm equipment along the north west side slope to the pit floor. The pit floor will include a slight grade of 1.5% from the west to the east to direct drainage to the Ecological Linkage Area in the centre of the Licence area (EL2). The side-slopes in the northwest portion of Phase 2 will be a 2.1:1 grade to maximize the area of the pit floor that can be rehabilitated back to an agricultural condition while ensuring slope stability. Ecological enhancement plantings are proposed in the undisturbed western and northern setback areas of Phase 1 and farm equipment access and parking is accommodated adjacent to the farm entrance from Shouldice Side Road in the northwest corner.

### **Phase 3 Rehabilitation**

Phase 3 of the Licence area will be rehabilitated back to primarily an agricultural condition with some steep side-slope area that will be vegetated. Some ecological enhancements are proposed within the undisturbed setback along the western Licence boundary of Phase 1.

In consultation with the property owners, the Rehabilitation of Phase 3 was designed to include a 15:1 and 10:1 sloped area along the eastern portion of Phase 3 that would be suitable for the production of forage/hay crops or for use as pasture<sup>6,7</sup>. The western portion of Phase 3 would include a relatively flat pit floor suitable for field crops with 2.1:1 side-slope areas that would be vegetated with grass mixture.

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<sup>6</sup> Agriculture and the Aggregate Industry, Rehabilitation of Extracted Sand and Gravel Lands to An Agricultural After-Use; Ontario Ministry of Natural Resources, Mineral Resources Branch. Industrial Mineral Background Paper 3. Mackintosh, E.E. and E.J. Mozuraitus. 1983.

<sup>7</sup> Draft Agricultural Impact Assessment (AIA) Guidance Document, Ontario Ministry of Agriculture, Farming, and Rural Affairs, March 2018

# 5.0 CONCLUSIONS

The proposed Edworthy West Pit will replace the depleting reserves at the Cambridge Aggregates existing Main Pit and will secure additional high quality aggregate resources. Aggregate resources from the new Licence will continue to supply the Hanson Concrete business and granular materials will be used in local and regional construction projects. No increase to the annual shipped tonnage of the new pit in combination with the existing licence will occur.

The Edworthy West Pit has been designed to minimize impacts on adjacent sensitive receptors and to ensure that there will be no negative impacts to surface and ground water resources as well as natural heritage features.

The subject site will be rehabilitated to a predominately agricultural condition and will also include two new ecological linkages. The Rehabilitation Plan includes varying slope treatments to maximize the amount of area being returned to an agricultural condition.

As demonstrated in this Report, the proposed Edworthy West Extension is:

- Consistent with the Provincial Policy Statement 2020;
- Conforms with the policies of the Growth Plan 2020;
- Conforms to the Region of Waterloo and Township of North Dumfries Official Plans; and,
- Includes all of the information required by the Aggregate Resources Act Provincial Standards (2020).

It is concluded that the proposed development is desirable, appropriate, and represents good planning.

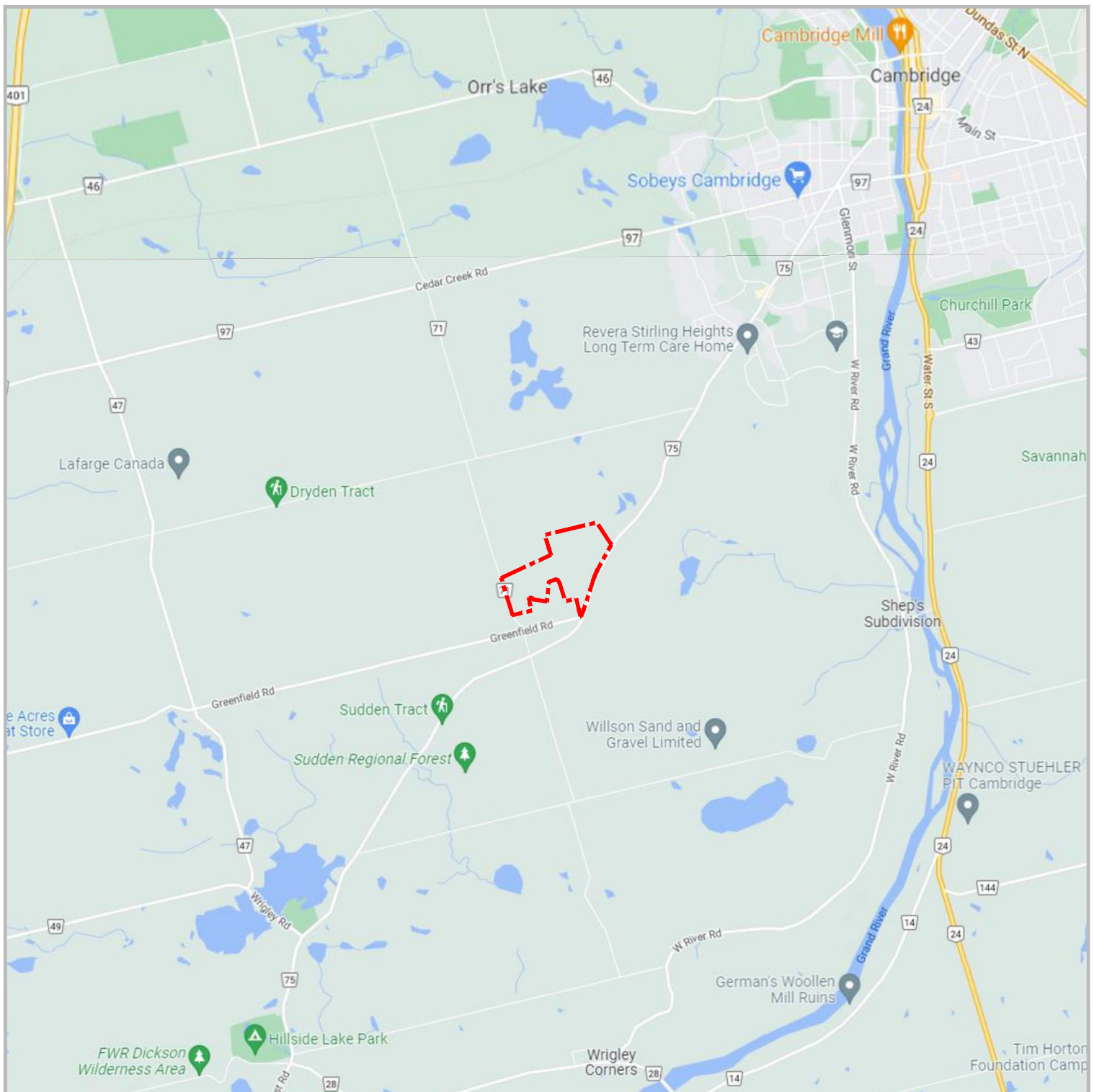
Respectfully submitted by,  
**MHBC**

Caitlin Port, MES, MCIP, RPP



Neal DeRuyter, BES, MCIP, RPP

# Figures



**Figure 1**  
**Location Map**

**LEGEND**



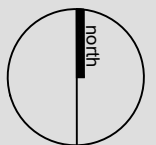
Subject Site

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**DRAWN:** PL



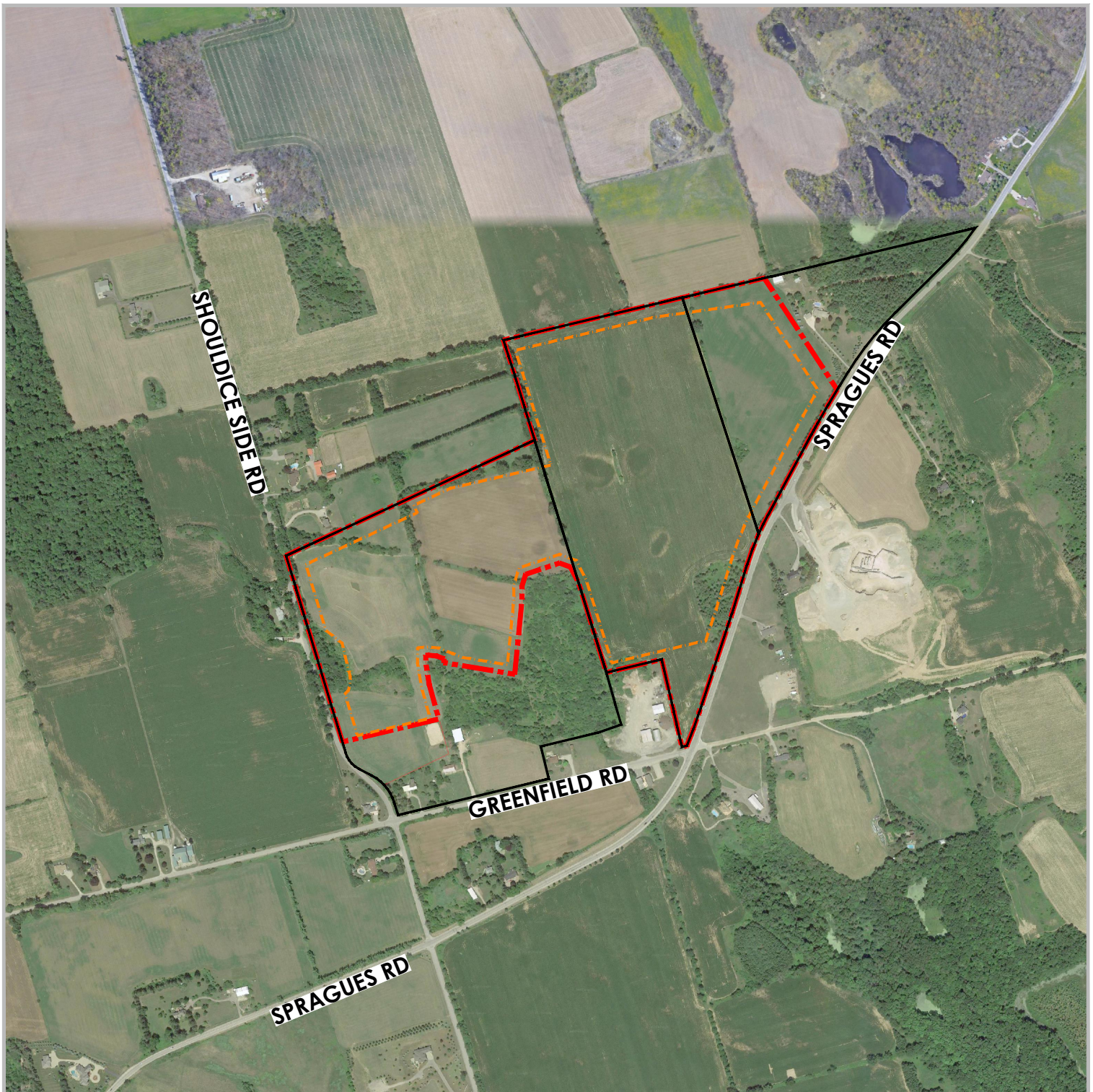
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**West Edworthy Pit**  
Part of Lot 16, 17, and 18, Concession 9  
(former geographic Township of Dumfries)  
Township of North Dumfries  
Regional Municipality of Waterloo

Source: Google Map

**MHBC** PLANNING  
URBAN DESIGN  
& LANDSCAPE  
ARCHITECTURE  
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**Figure 2**  
**Subject Site**

**LEGEND**

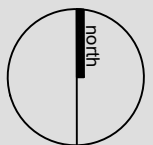
- Subject Site
- Limit of Extraction
- Subject Lands

**DATE:** March, 2022

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**FILE:** 1896E

**DRAWN:** PL



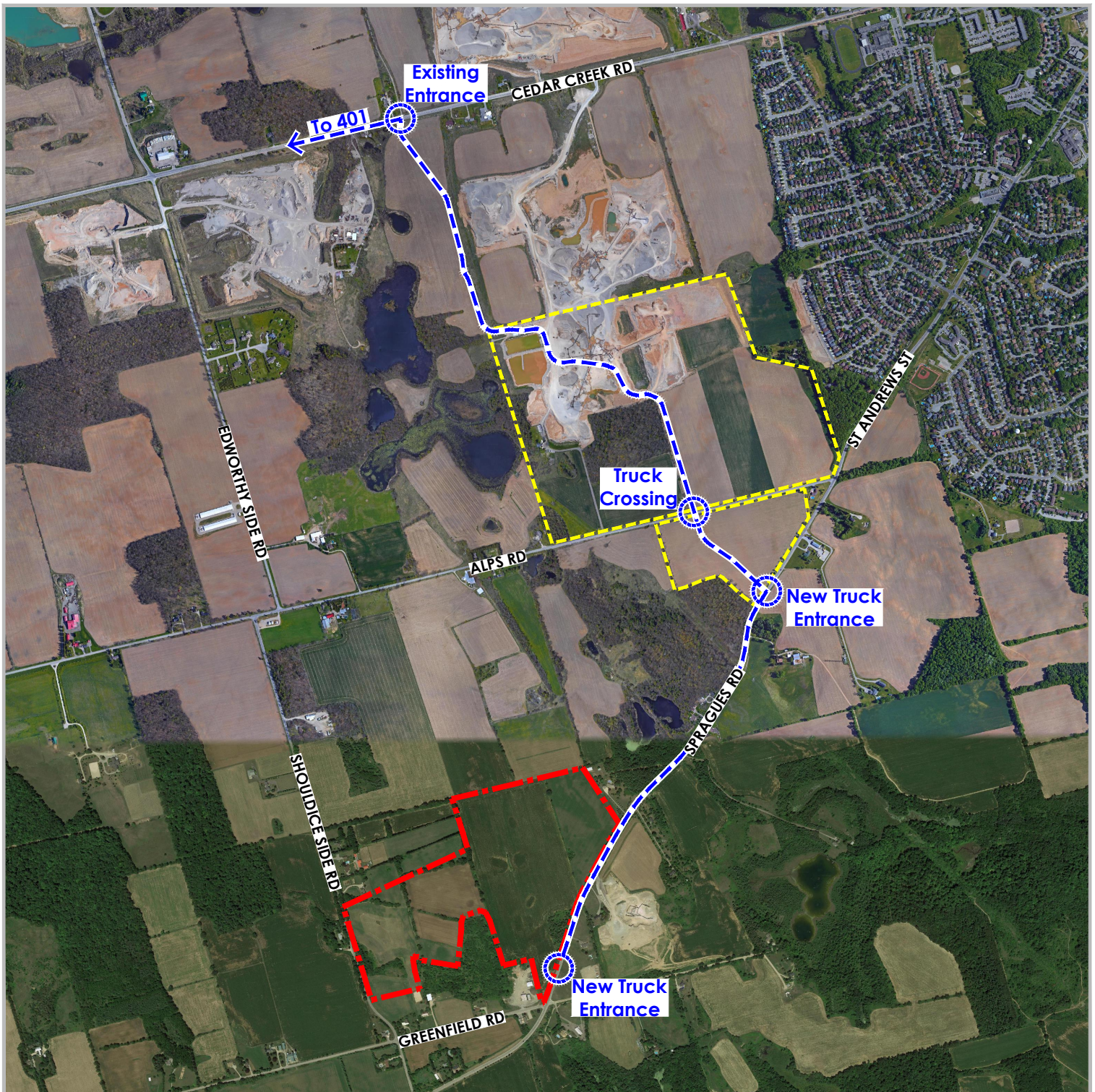
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**West Edworthy Pit**  
Part of Lot 16, 17, and 18, Concession 9  
(former geographic Township of Dumfries)  
Township of North Dumfries  
Regional Municipality of Waterloo

Source: Google Satellite Imagery

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**Figure 3**  
**Entrances and Haul Road**

**LEGEND**

- Subject Site
- Cambridge Aggregates Main Pit
- Truck Entrance / Crossing
- Haul Road

**Notes:**

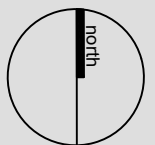
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- Source: Google Satellite Imagery

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**West Edworthy Pit**  
Part of Lot 16, 17, and 18, Concession 9  
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Township of North Dumfries  
Regional Municipality of Waterloo

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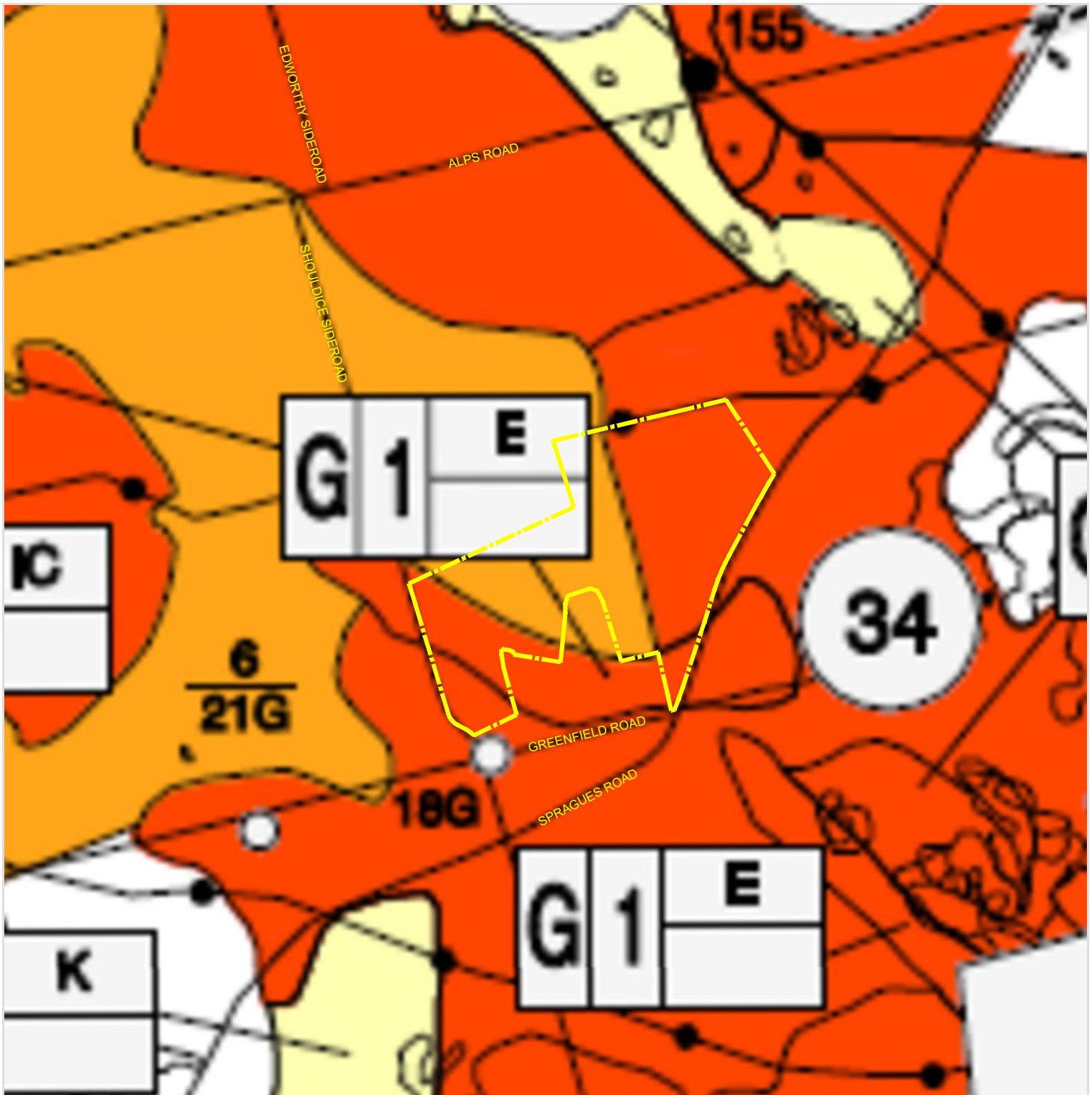


Figure # 4  
ARIP 161:  
**Sand and Gravel  
Deposit Mapping**

**West Edworthy Pit**  
Part of Lots 16, 17, and 18, Concession 9  
(former geographic Township of Dumfries)  
Township of North Dumfries  
Regional Municipality of Waterloo

### LEGEND

- License Boundary
- 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.
- Geological and aggregate thickness boundary of sand and gravel deposits
- Licensed property boundary: Property number: see Table 2
- Unlicensed sand or gravel pit\*. Property number: see Table 2  
\*Abandoned pit or wayside pit operating on demand under authority of a permit
- Test hole location: Identification number: see Table 7
- Selected sample site: Identification number
- Selected water well location. Layers of materials are described by reported thickness of material (in m); reported type of material (number only) - overburden, G - gravel, S - sand, C - clay, T - till, B - boulders, Bk - bedrock, Hpan - narapan, Stn - stones, Slt - silt
- Moraine
- Deposit symbol

Source: Province of Ontario (1998)

<b>DATE:</b> January 7, 2022	
<b>SCALE:</b> N.T.S.	
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Figure 5  
Canada Land Inventory (CLI1)

West Edworthy Pit


Part of Lot 16, 17, and 18, Concession 9  
(former geographic Township of Dumfries)  
Township of North Dumfries  
Regional Municipality of Waterloo


Legend


 Potential Licence Boundary


 Limit of Extraction

Canada Land Inventory (CLI1)


 Class 1

 Class 2

 Class 3

 Class 4

 Class 5

 Organic Soils

NOTES:

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Date: March 17, 2022

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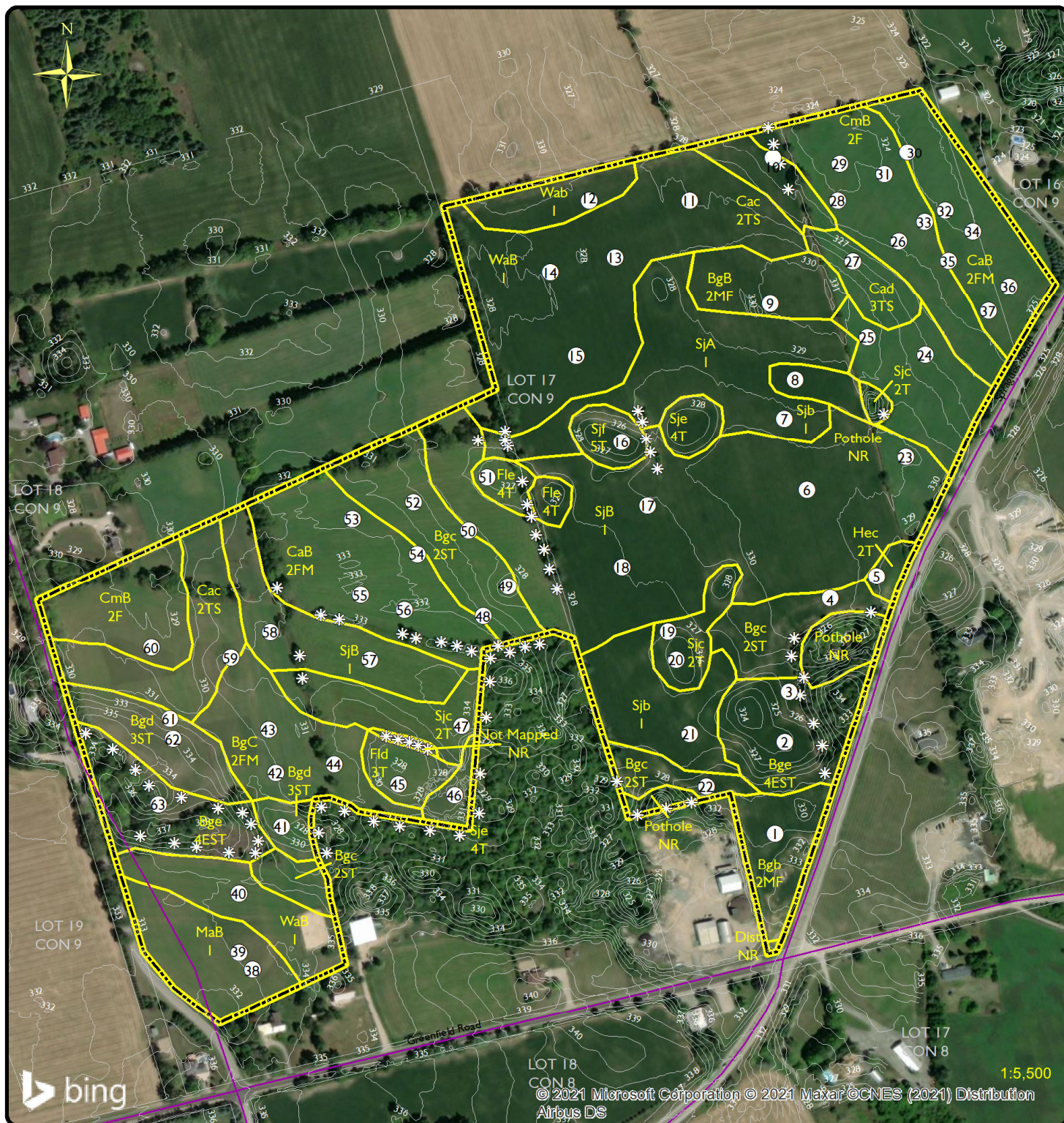
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## Legend

- Soil Inspection Site
- ⊗ Stone Pile
- Contour Line (MHBC)
- Roads (MNR)
- Lot Lines (MNR)
- Soil Polygon Boundary
- Potential License Boundary (45.6 ha)

### Soil Code

Bg - Burford gravelly loam  
Ca - Caledon sandy loam  
Cm - Camilla sandy loam  
Fl - Floradale loam  
He - Heidelberg fine sandy loam  
Ma - Mannheim loam  
Sj - St. Jacobs loam  
Wa - Waterloo fine sandy loam  
Dist = Disturbed Area  
Pothole/NR = Not Rated

### 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%

Lower case = Slope length < 50 m  
Upper case = Slope length > 50 m

### Soil Code

Bgb  
2MF  
CLI Class  
CLI Subclass

### CLI Subclass Limitation

E - Erosion  
F - Fertility  
M - Moisture  
S - Adverse Soil Characteristics  
T - Topography

Figure 6

Soils and  
Canada Land Inventory (CLI)  
Edworthy Pit West

DBH Soil Services Inc.

August 4, 2021



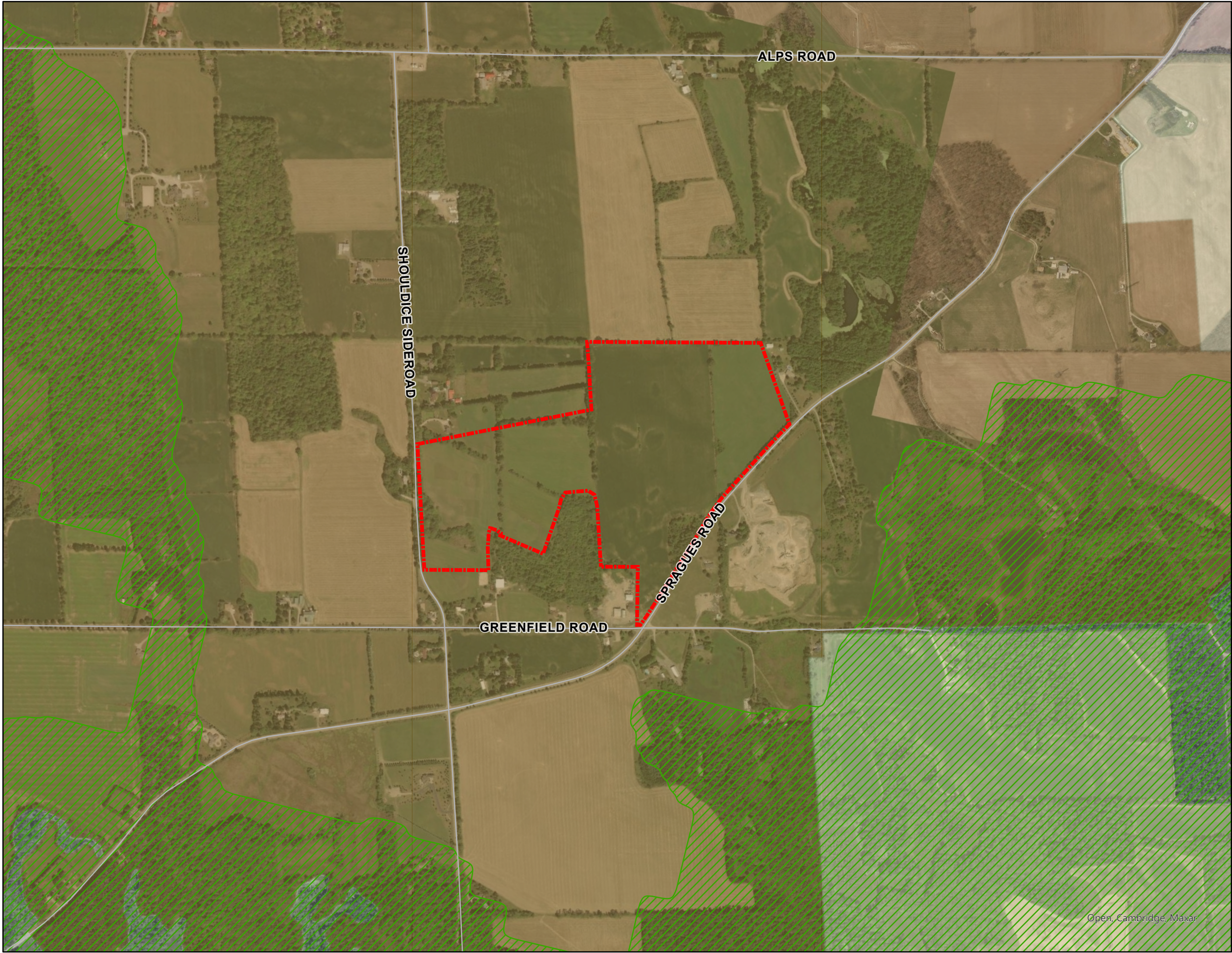


Figure 7  
**Natural Heritage and  
Agricultural System**  
**West Edworthy Pit**  
Part of Lots 16, 17, and 18, Concession 9  
(former geographic Township of Dumfries)  
Township of North Dumfries  
Regional Municipality of Waterloo

- Legend
- Potential Licence Boundary
  - Natural Heritage System Area**
    - NHS Area (Undifferentiated)
  - Agricultural Land Base**
    - Prime Agricultural Area
    - Candidate Area
    - Specialty Crop Area

NOTES:  
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• World Imagery: Cambridge, Maxar

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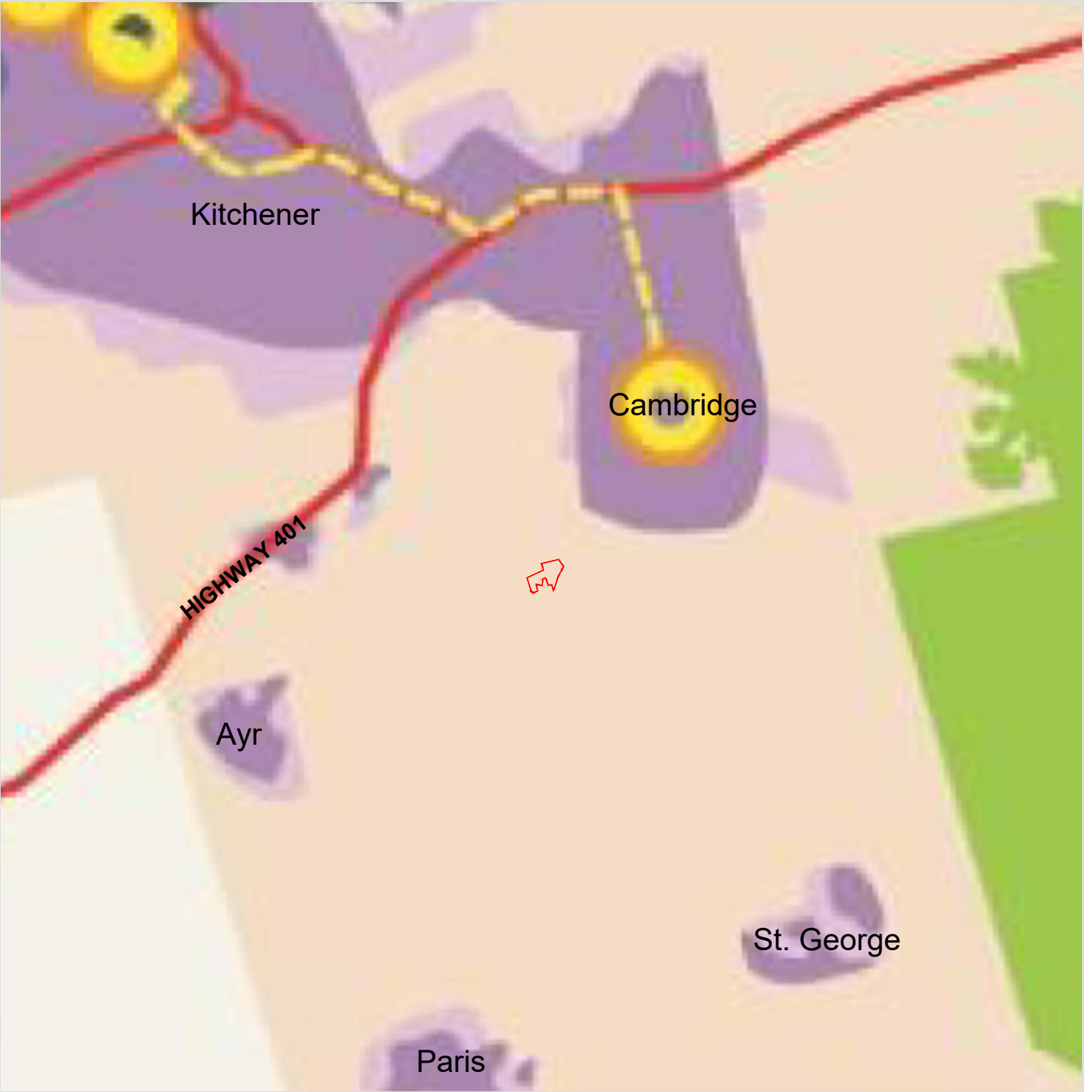


Figure # 8  
A Place to Grow  
Schedule 2:  
**A Place to Grow  
Concept**

**West Edworthy Pit**  
Part of Lots 16, 17, and 18, Concession 9  
(former geographic Township of Dumfries)  
Township of North Dumfries  
Regional Municipality of Waterloo

**LEGEND**

- License Boundary
- Urban Growth Centres
- Existing Major Highways\*
- Built-Up Area – Conceptual
- Designated Greenfield
- Greenbelt Area\*
- Greater Golden Horseshoe Growth Plan Area\*\*

Source: Province of Ontario - A Place to Grow

<b>DATE:</b>	January 7, 2022
<b>SCALE:</b>	N.T.S.
<b>FILE:</b>	1896E
<b>DRAWN:</b>	CF

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& LANDSCAPE  
ARCHITECTURE**

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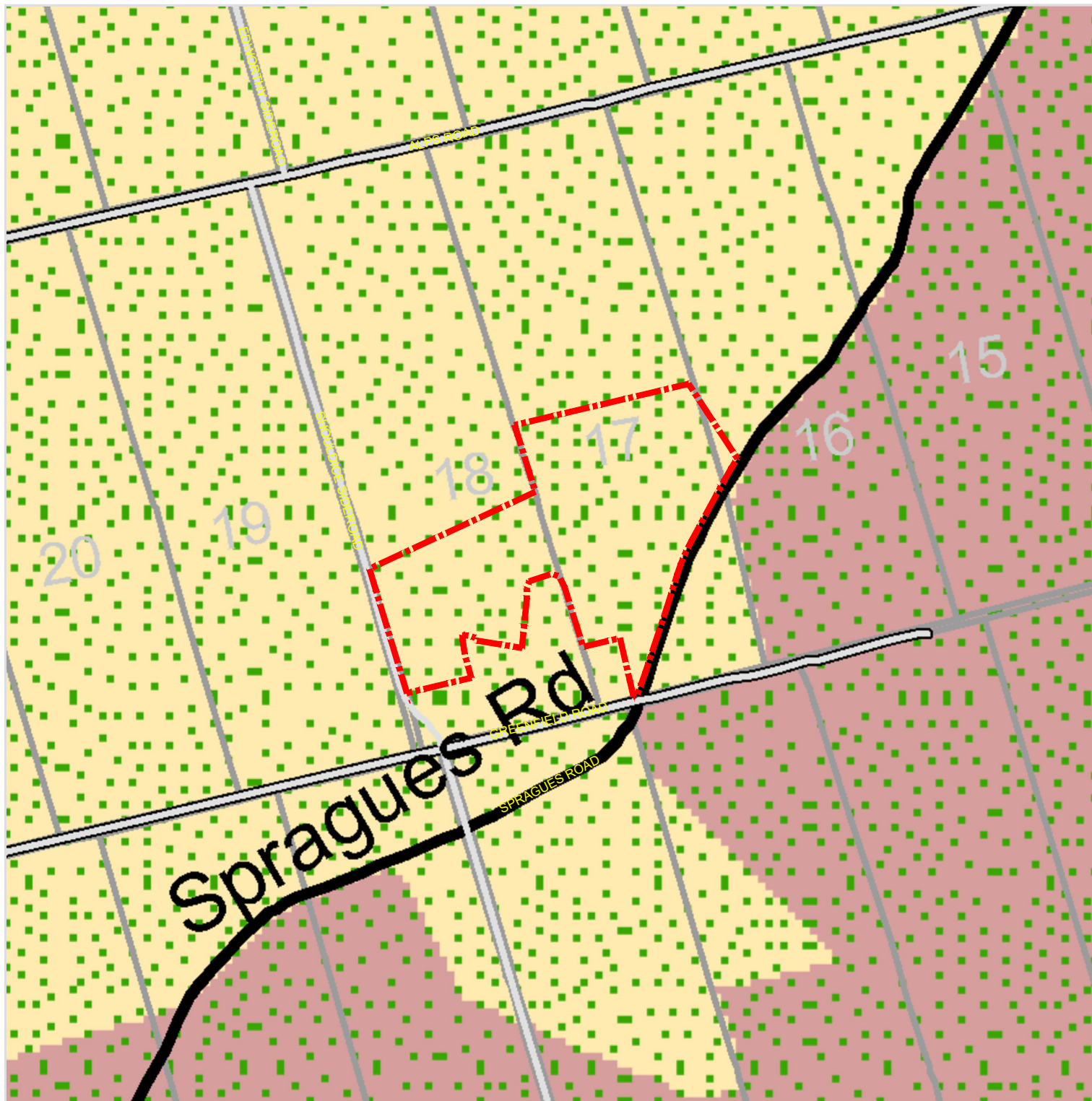


Figure 9  
Township of North  
Dumfries Official Plan  
(2018):  
**Map 7 The Countryside**

#### West Edworthy Pit

Part of Lot 16, 17, and 18, Concession 9  
(former geographic Township of Dumfries)  
Township of North Dumfries  
Regional Municipality of Waterloo

#### LEGEND

- License Boundary
- Protected Countryside
- Prime Agricultural Area
- Rural Areas

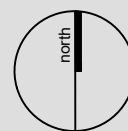
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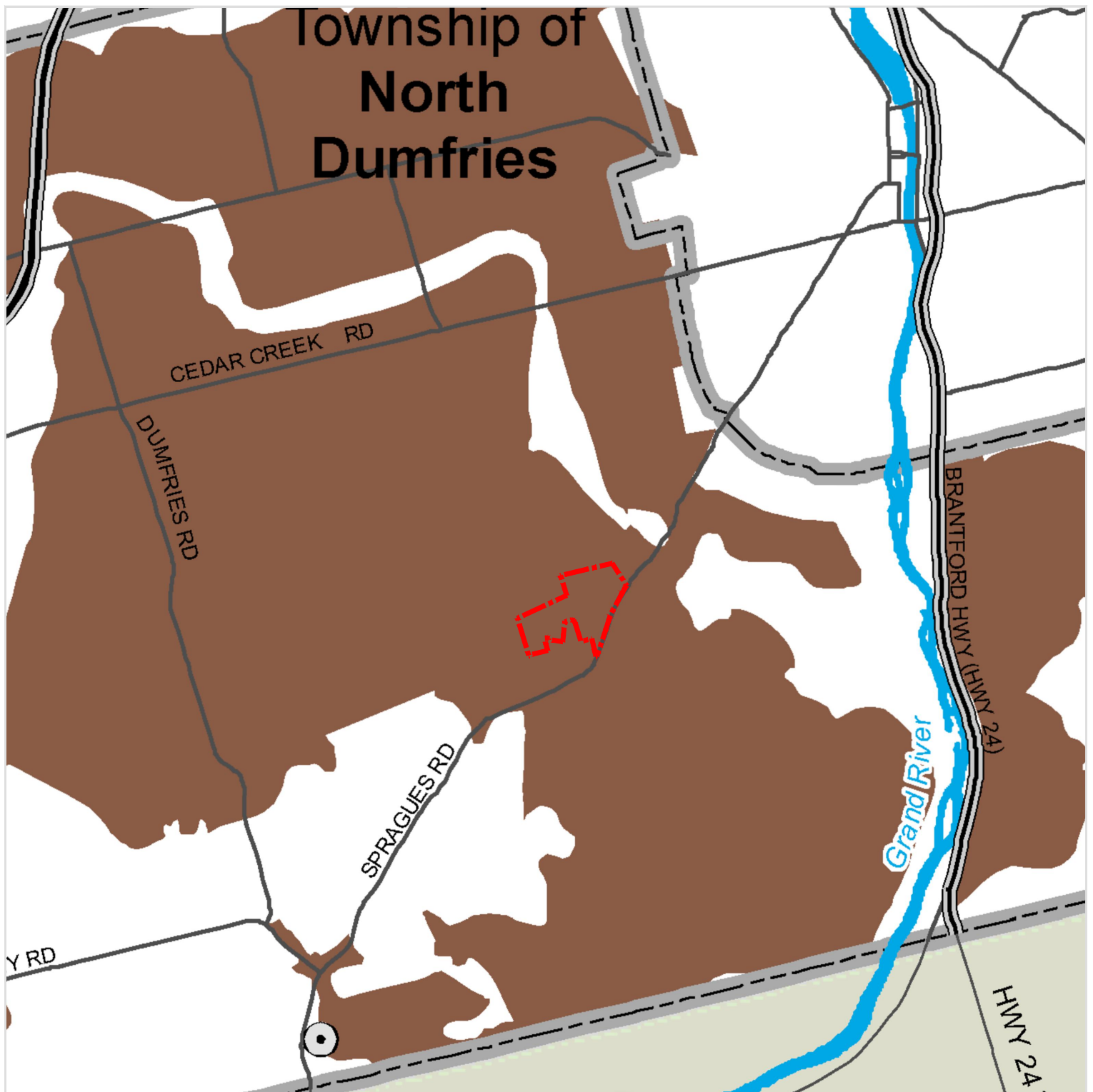




Figure 10  
Region of Waterloo  
Official Plan (2015):  
**Map 8 Mineral  
Aggregate Resource  
Areas and Aggregate  
Bedrock Deposits**

**West Edworthy Pit**

Part of Lot 16, 17, and 18, Concession 9  
(former geographic Township of Dumfries)  
Township of North Dumfries  
Regional Municipality of Waterloo

**LEGEND**

-  License Boundary
-  Mineral Aggregate Resource Areas

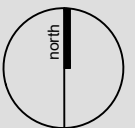
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**PLANNING  
URBAN DESIGN  
& LANDSCAPE  
ARCHITECTURE**

200-540 BINGEMANS CENTRE DR. KITCHENER, ON, N2B 3X9  
P: 519.576.3650 F: 519.576.0121 | WWW.MHBCPLAN.COM

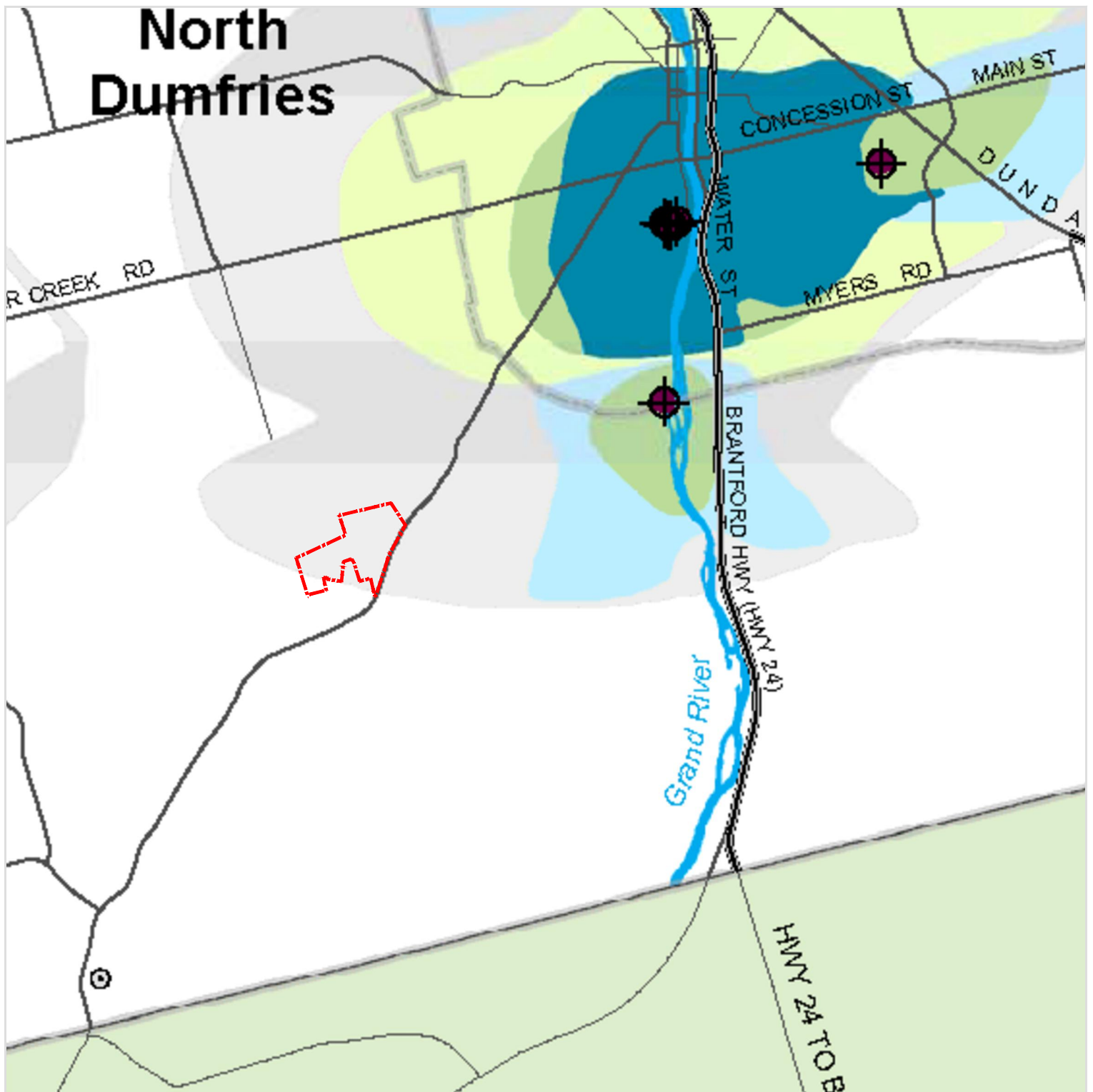


Figure 11  
Region of Waterloo  
Official Plan (2015):  
**Map 6e Township of  
North Dumfries Source  
Water Protection Areas**

**West Edworthy Pit**  
Part of Lot 16, 17, and 18, Concession 9  
(former geographic Township of Dumfries)  
Township of North Dumfries  
Regional Municipality of Waterloo

#### LEGEND

License Boundary

#### Wellhead Protection Areas

WPSA-1

WPSA-2

WPSA-4

WPSA-5

WPSA-7

WPSA-8

Municipal Wellheads

Source: Region of Waterloo

Provincial Highway  
 Regional Road  
 River  
 Municipal Boundary

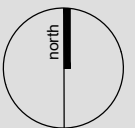
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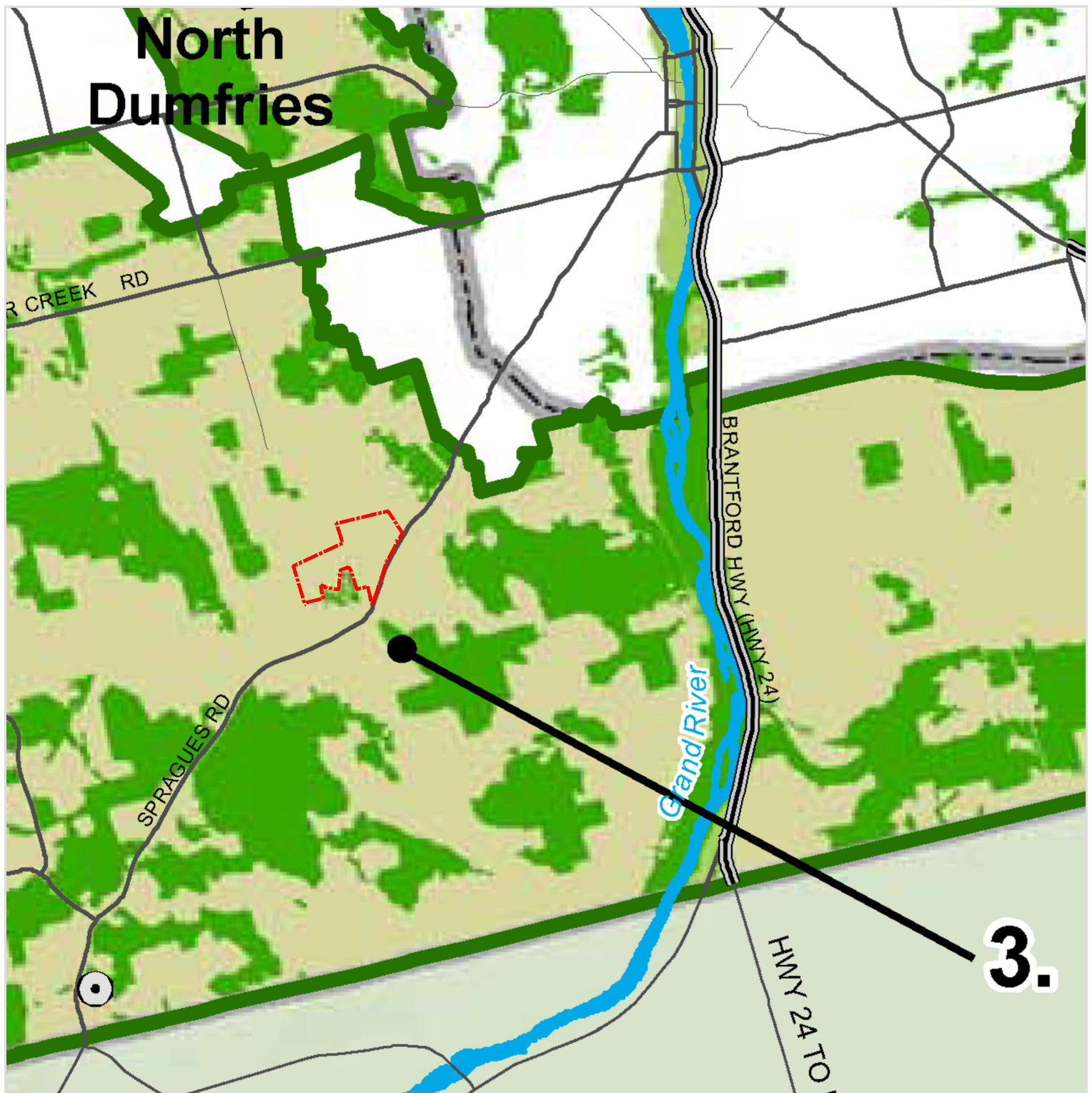


Figure 12  
Region of Waterloo  
Official Plan (2015):  
**Map 4 Greenlands  
Network**

**West Edworthy Pit**

Part of Lot 16, 17, and 18, Concession 9  
(former geographic Township of Dumfries)  
Township of North Dumfries  
Regional Municipality of Waterloo

**LEGEND**

License Boundary

Significant Valleys

Environmentally Sensitive  
Landscape  
3. Dumfries Carolinian

Core Environmental Features  
include: Provincially Significant Wetlands;  
Environmentally Sensitive Policy Areas;  
Regional Forests; Forests greater than 4 ha;  
and Significant Valley Features

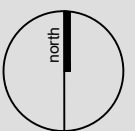
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**DATE:** March, 2022

**SCALE:** 1:50,000

**FILE:** 1896E

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ARCHITECTURE**

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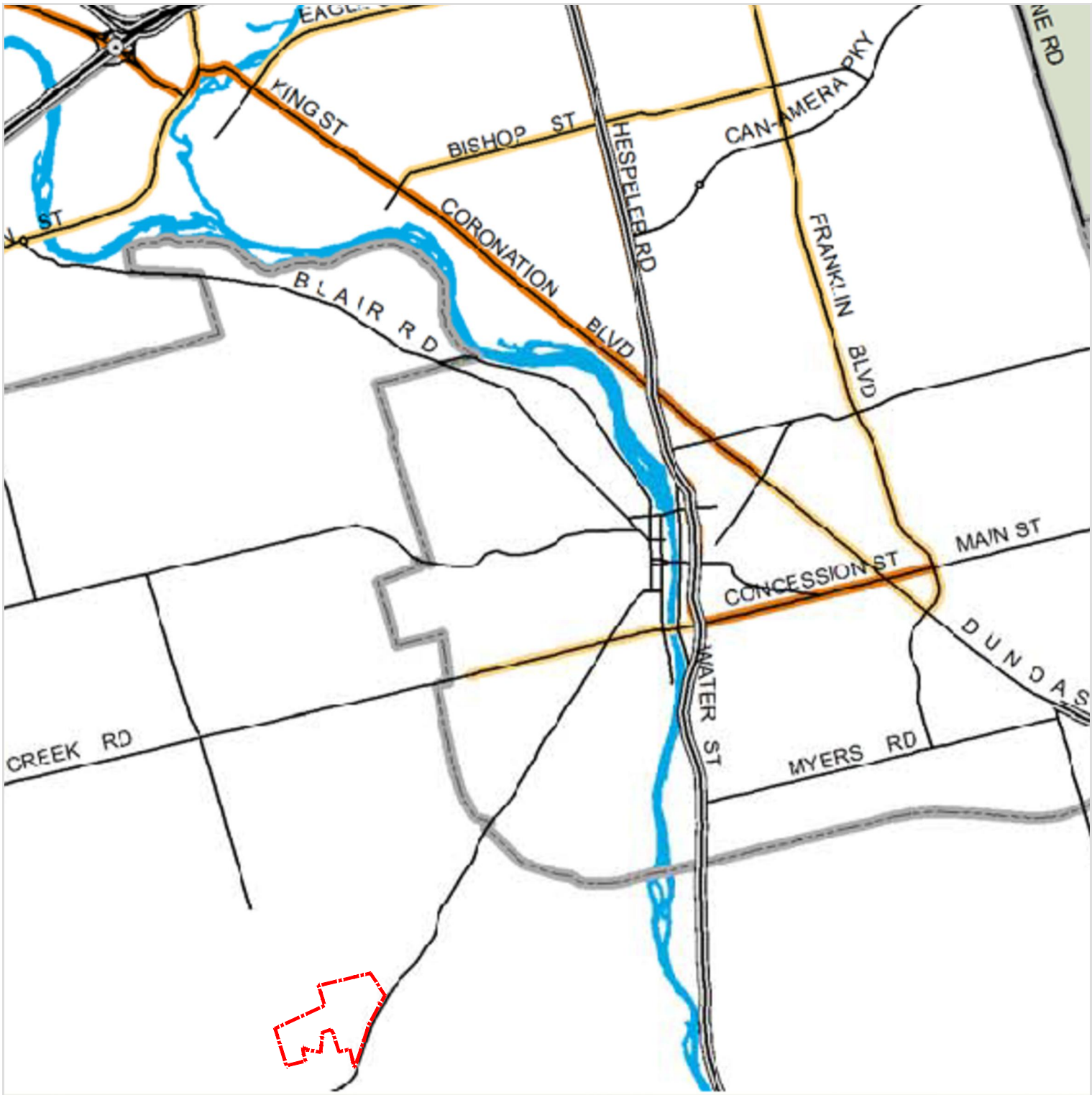


Figure 13  
Region of Waterloo  
Official Plan (2015):  
**Map 5a Regional Transit  
Network**

**West Edworthy Pit**  
Part of Lot 16, 17, and 18, Concession 9  
(former geographic Township of Dumfries)  
Township of North Dumfries  
Regional Municipality of Waterloo

**LEGEND**

- License Boundary
- Existing Transit Corridor
- Planned Transit Corridor
- Provincial Highway
- Regional Road
- ~ River
- Municipal Boundary

Source: Region of Waterloo

**DATE:** January, 2023

**SCALE:** 1:50,000

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K:\1896C- EDWORTHY\RPT\JAN2023\FIG 13 - ROP MAP 5A 27JAN23.DWG

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URBAN DESIGN  
& LANDSCAPE  
ARCHITECTURE**

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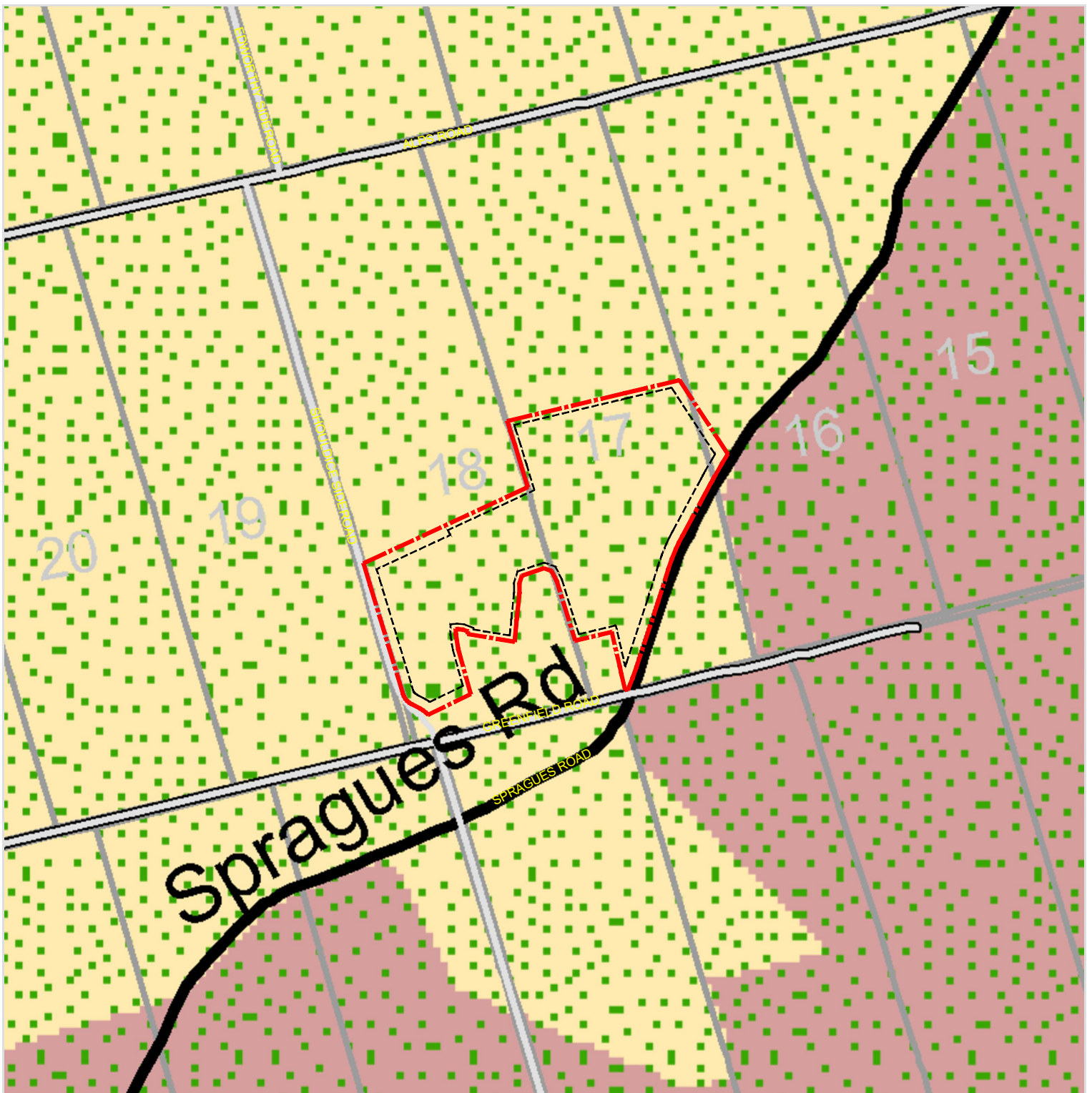







Figure #14  
Township of North  
Dumfries Official Plan  
(2018):  
**Map 7 The Countryside**

#### West Edworthy Pit

Part of Lots 16, 17, and 18, Concession 9  
(former geographic Township of Dumfries)  
Township of North Dumfries  
Regional Municipality of Waterloo

#### LEGEND

-  License Boundary
-  Limit of Extraction
-  Protected Countryside
-  Prime Agricultural Area
-  Rural Areas

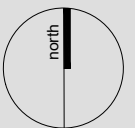
Source: Township of North Dumfries

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SCALE: 1:15,000

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& LANDSCAPE  
ARCHITECTURE

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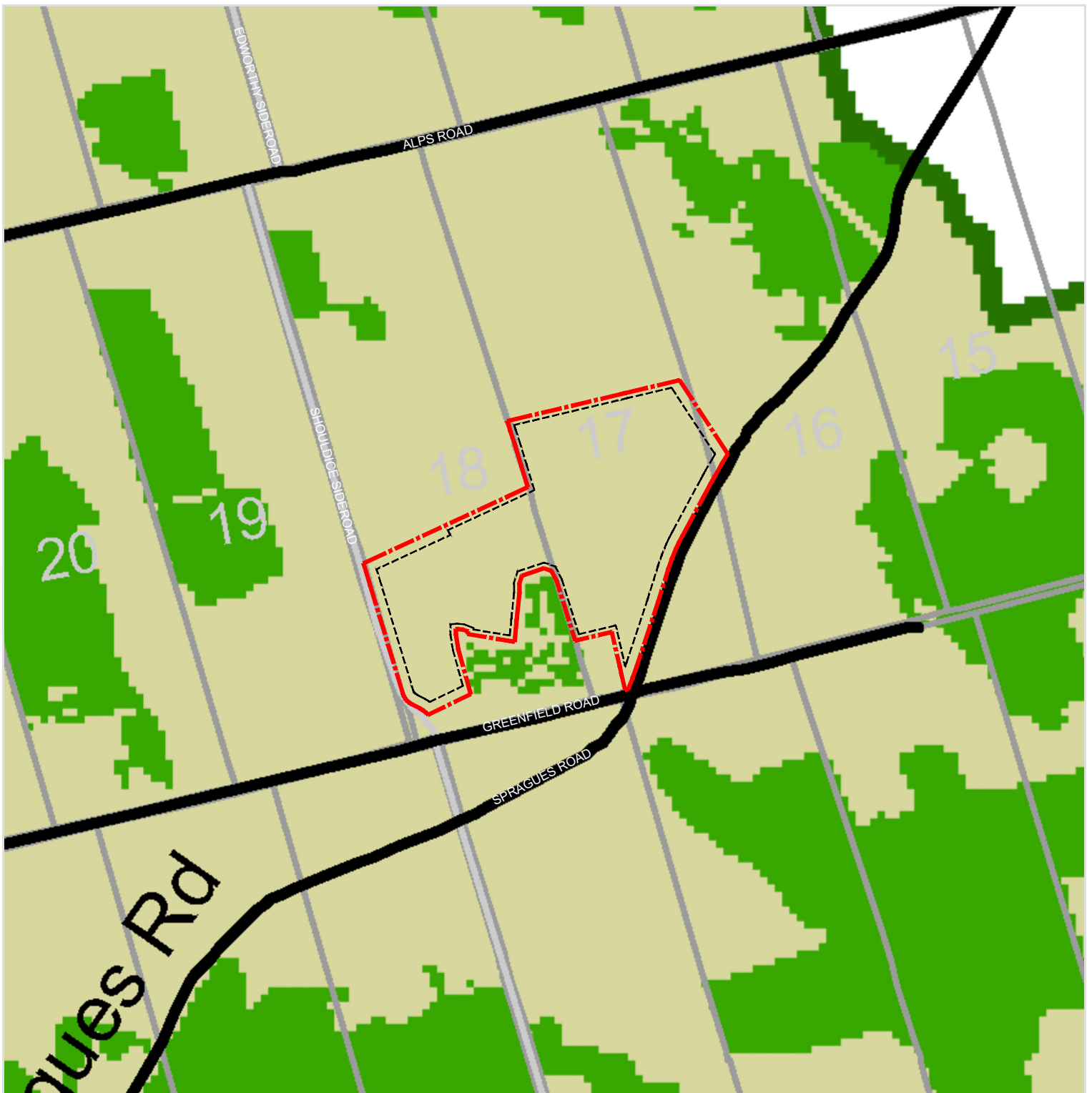


Figure # 15  
Township of North  
Dumfries Official Plan  
(2018):  
**Map 5A Greenlands  
Network**

#### West Edworthy Pit

Part of Lots 16, 17, and 18, Concession 9  
(former geographic Township of Dumfries)  
Township of North Dumfries  
Regional Municipality of Waterloo

#### LEGEND

- Subject Lands
- Limit of Extraction

- Significant Valleys
- Environmentally Sensitive Landscape
- Core Environmental Features

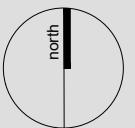
Source: Township of North Dumfries

**DATE:** January 7, 2022

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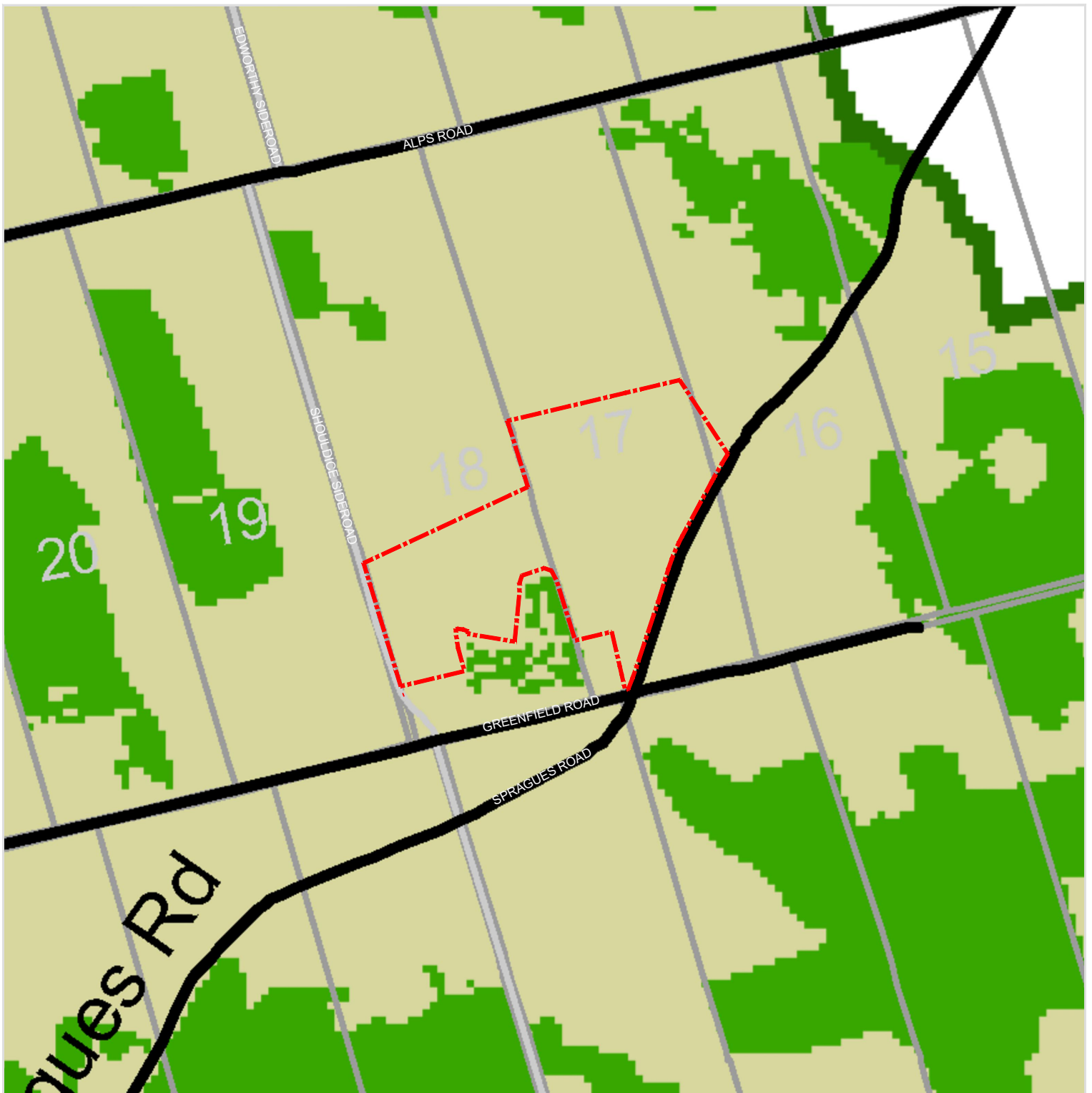


Figure 16  
Township of North  
Dumfries Official Plan  
(2018):  
**Map 5A Greenlands  
Network**

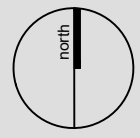
**West Edworthy Pit**  
Part of Lot 16, 17, and 18, Concession 9  
(former geographic Township of Dumfries)  
Township of North Dumfries  
Regional Municipality of Waterloo

**LEGEND**

- Subject Lands
- Significant Valleys
- Environmentally Sensitive Landscape
- Core Environmental Features

Source: Township of North Dumfries

<b>DATE:</b>	March, 2022
<b>SCALE:</b>	1:15,000
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ARCHITECTURE**

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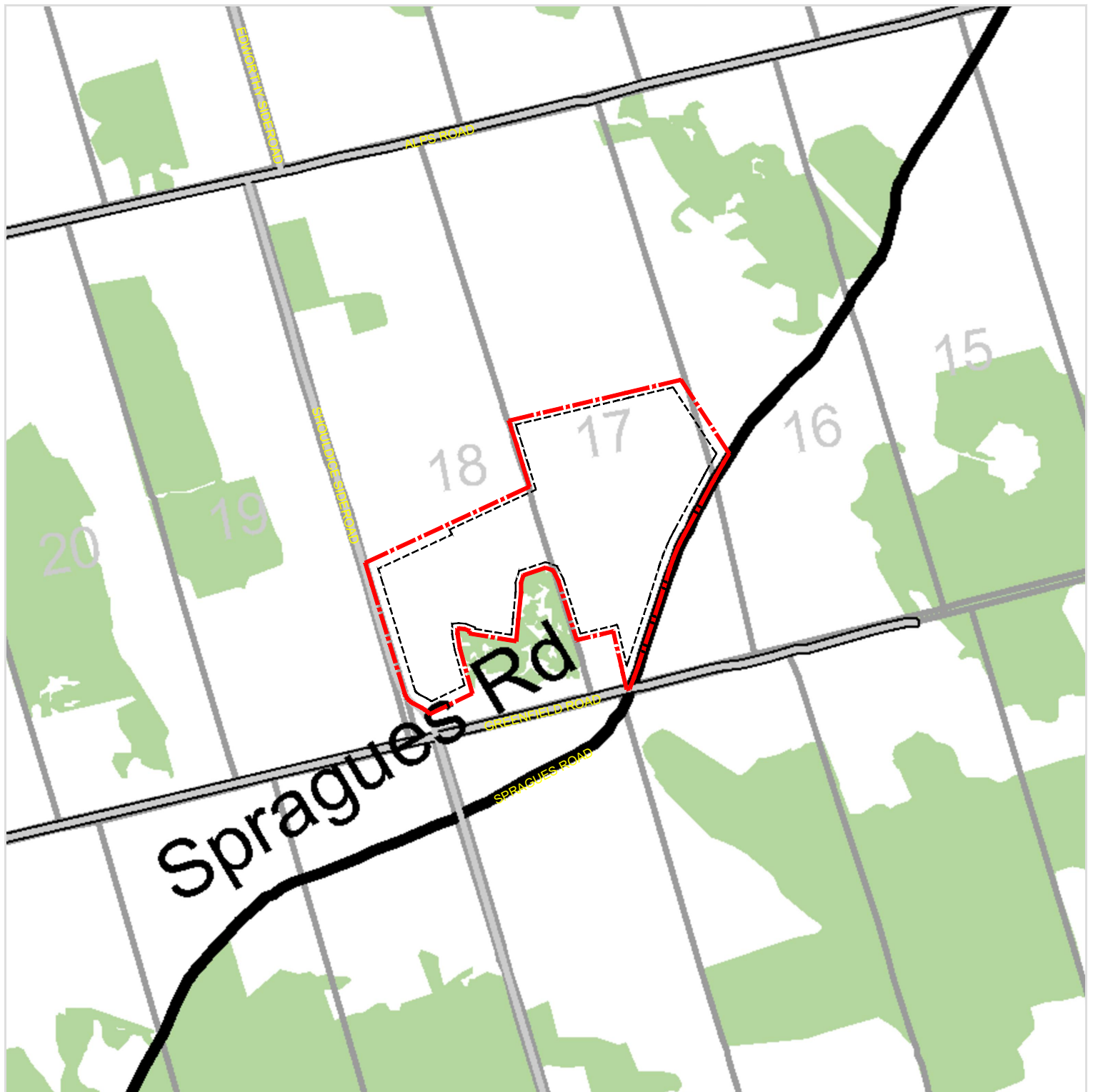


Figure # 17  
Township of North  
Dumfries Official Plan  
(2018):  
**Map 5B Environmental  
Constrain Areas**

**West Edworthy Pit**  
Part of Lots 16, 17, and 18, Concession 9  
(former geographic Township of Dumfries)  
Township of North Dumfries  
Regional Municipality of Waterloo

#### LEGEND

- License Boundary
- Limit of Extraction
- Environmental Constraint Areas

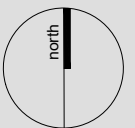
Source: Township of North Dumfries

**DATE:** January 7, 2022

**SCALE:** 1:15,000

**FILE:** 1896E

**DRAWN:** CF



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5B.DWG



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ARCHITECTURE**

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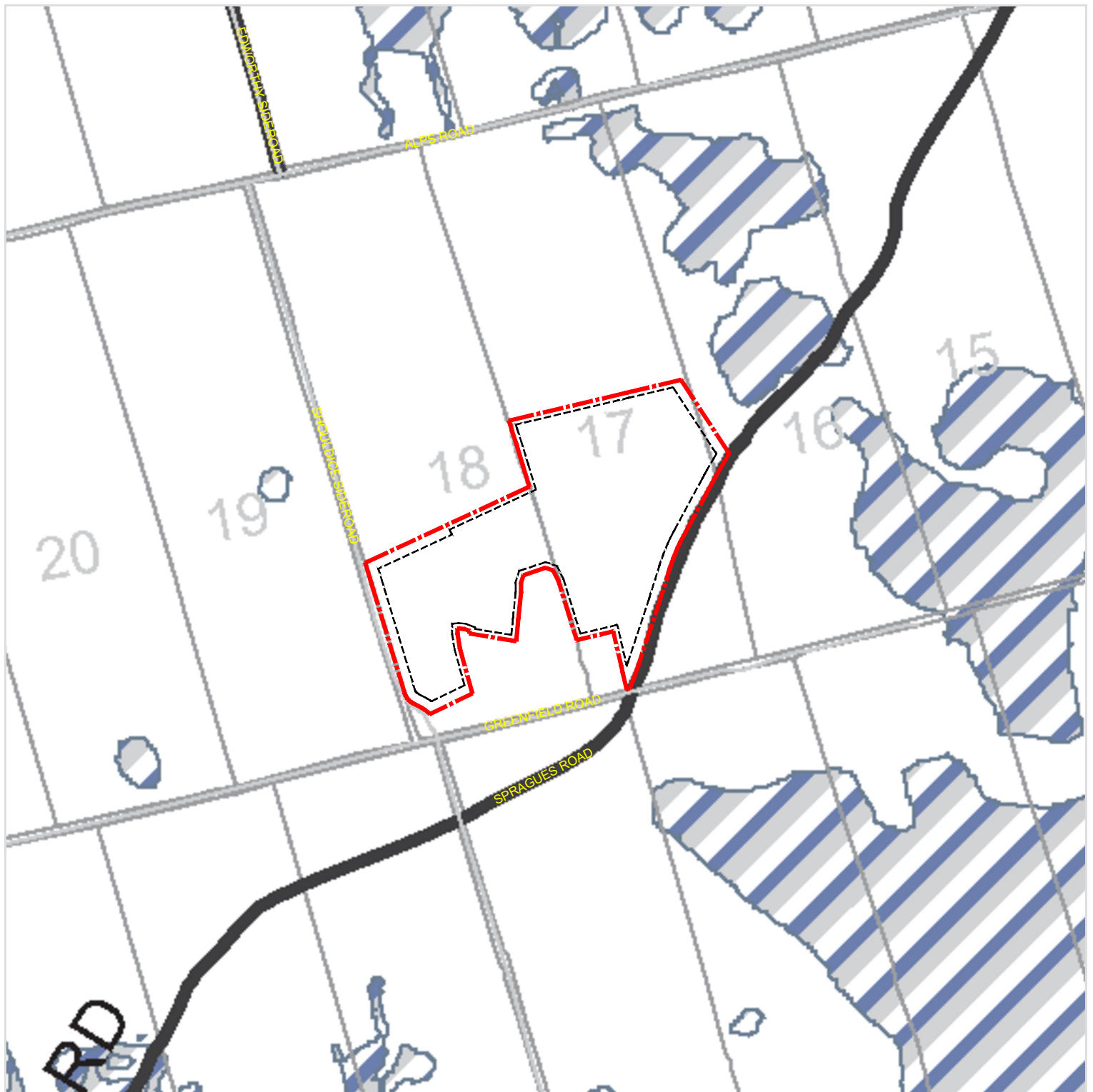





Figure # 18  
Township of North  
Dumfries Official Plan  
(2018):  
**Map 5C Hazard Lands**

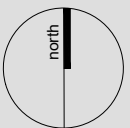
**West Edworthy Pit**  
Part of Lots 16, 17, and 18, Concession 9  
(former geographic Township of Dumfries)  
Township of North Dumfries  
Regional Municipality of Waterloo

**LEGEND**

-  License Boundary
-  Limit of Extraction
-  Hazard Lands

Source: Township of North Dumfries

<b>DATE:</b>	January 7, 2022
<b>SCALE:</b>	1:15,000
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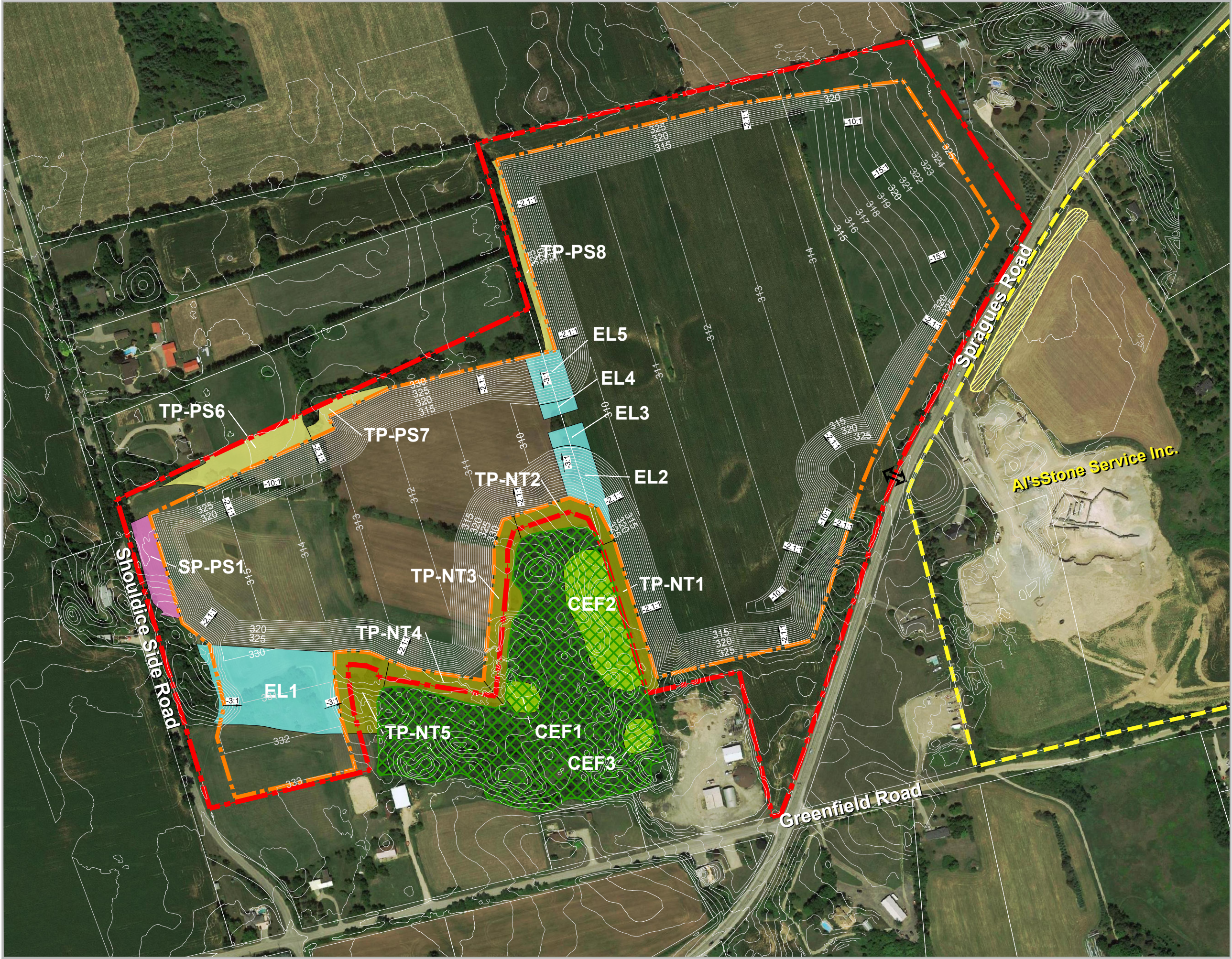
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ARCHITECTURE**

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**Figure 19**  
**Enhancement Plan and**  
**Rehabilitation Plan**  
**West Edworthy Pit**  
Part of Lot 16, 17 and 18, Concession 9  
Regional Municipality of Waterloo

**LEGEND**

- Licence Boundary
- Limit of Extraction
- Potential Site Entrance / Exit
- Core Environmental Feature
- Shrub-planting - Property Setback (SP-PS1)
- Tree-planting - No Touch Buffer (TP-NT1 to TP-NT5)
- Tree-planting - Property Setback (TP-PS6 to TP-PS8)
- Core Environmental Feature - Enhancement Area (CEF1 to CEF4)
- Ecological Linkage (EL1 to EL5)
- Existing Berm

Goodban Ecological Consulting Inc.

Date:	January, 2023
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File:	1896C
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**PLANNING**  
**URBAN DESIGN**  
**& LANDSCAPE**  
**ARCHITECTURE**  
200-540 BINGEMANS CENTRE DR. KITCHENER, ON, N2B 3X9  
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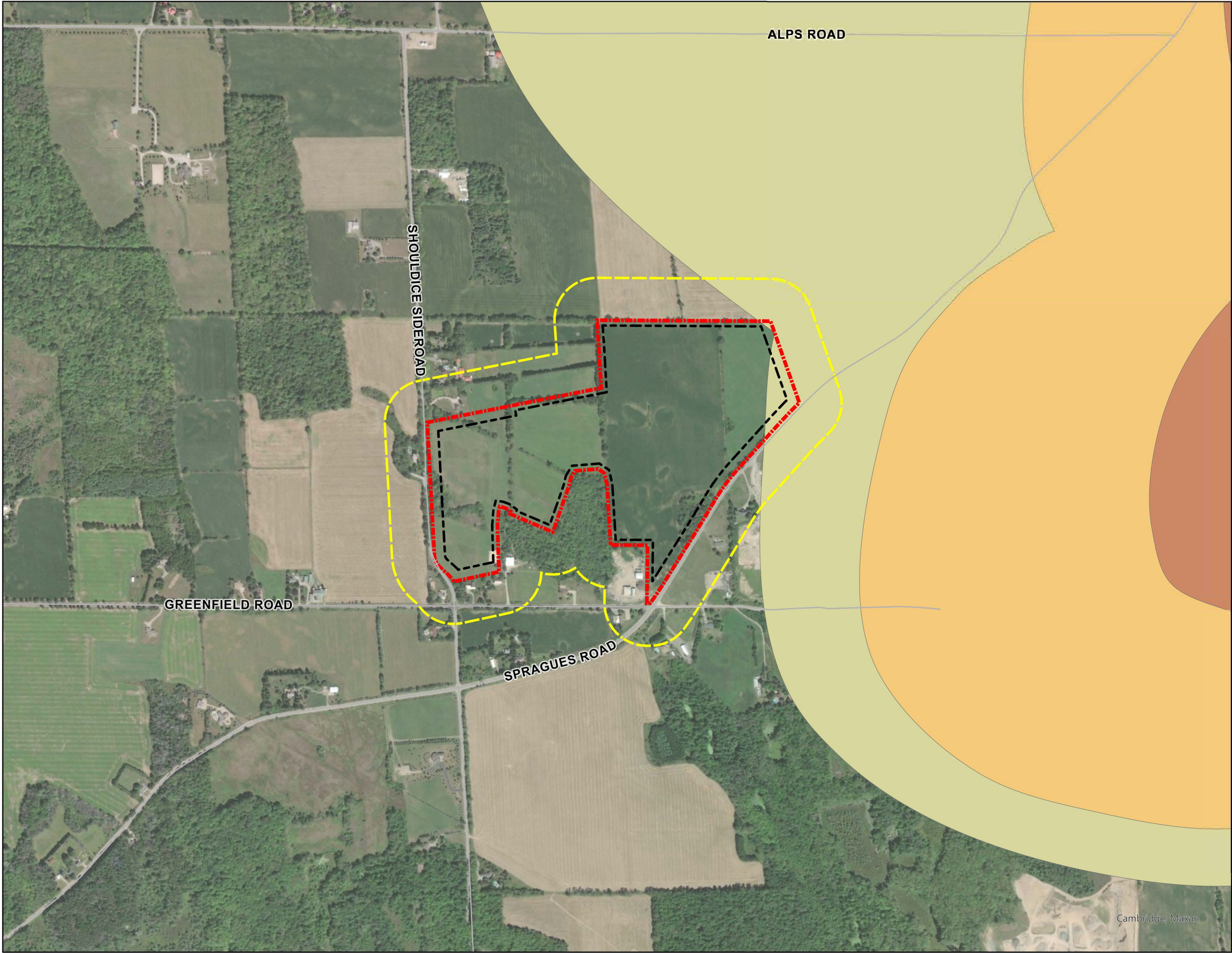


Figure # 20  
Source Water Protection

**West Edworthy Pit**  
Part of Lots 16, 17, and 18, Concession 9  
(former geographic Township of Dumfries)  
Township of North Dumfries  
Regional Municipality of Waterloo

**Legend**

Limit of Extraction  
 Potential Licence Boundary  
 Primary Study Area (120m)

**Wellhead Protection Area Zone**

WHPA-B  
 WHPA-C  
 WHPA-D

**NOTES:**

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- World Imagery: Cambridge, Maxar

Date: January 6, 2022      File: 1896E

Document Path: C:\Users\landscap\Documents\ArcGIS\Projects\1896E\_Edworthy\_West\_Pit\1896E\_Edworthy\_West\_Pit.aprx      Drawn: CF

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# Appendices

# Appendix A



*The TOWNSHIP of*  
**NORTH DUMFRIES**

2958 Greenfield Road, P.O. Box 1060, Ayr, Ontario – N0B 1E0

March 15, 2022

Email: [cport@mhbcplan.com](mailto:cport@mhbcplan.com)

Caitlin Port, MES, MCIP, RPP  
MHBC Planning, Urban Design & Landscape Architecture  
540 Bingemans Centre Drive, Suite 200  
Kitchener ON N2B 3X9

Dear Ms. Port.

**Re: Pre-Consultation Application - File No: PC-22/21  
Cambridge Aggregate, Inc. "Edworthy West Pit"  
Located at 1262 Greenfield Road, 1354 Spragues Road, and Con 9 PT Lot  
17, Township of North Dumfries.**

---

A pre-consultation package regarding the Zoning By-law Amendment was circulated to Agencies and Departments. The Township and agencies have provided specific comments pertaining to your application regarding the proposed aggregate pit, which are attached to this letter for your information. Please contact the appropriate representative for any questions you may have.

During the review of the formal application submission, it may be determined that additional studies or information is required as a result of issues arising during the processing of the application. The applicant will be required to provide technical studies and necessary information as identified by the Township and Agencies at their expense.

### **PROPOSAL**

It is our understanding the the Cambridge Aggregate, Inc. proposes a new aggregate pit "Edworthy West Pit" on three distinct parcels (1) 1262 Greenfield Road, (2) 1354 Spragues Road, (3) the parcel legally described as Con 9 Pt Lot 17.

The property is currently zoned as Zone Z.1 Agricultural. A proposed "Aggregate Pit" required a Zone By-law Amendment from Zone Z.1 (Agricultural) to Zone Z.14 (Mineral Aggregate Extraction).

The area proposed to be licensed for the proposed Edworthy West Pit consist of 46ha (106.25 acres). The extraction area is proposed to be 38.0ha (93.9 acres) in size. The proposed Pit extraction area will remain 1.5 m above the groundwater table.

The proposed Licence Pit will serve as an extension to the existing Cambridge Aggregates North Dumfries Pit "Main Pit" (ARA License 607701), located at 1182 Alps Road.



## *The TOWNSHIP of* **NORTH DUMFRIES**

2958 Greenfield Road, P.O. Box 1060, Ayr, Ontario – N0B 1E0

Aggregate materials from the proposed new License will be trucked to the existing License for processing, blending, stockpiling, and shipping to market. No Core Environmental features are proposed to be included within the Licensed area or limit of extraction.

### **TOWNSHIP COMMENTS**

- The Owner/Applicant is required to submit a Planning Justification Report to provide a background context, an overview of the purpose and effect of an application and establish a professional planning rationale for the application by demonstrating how a proposal conforms to applicable planning policy documents (PPS, Growth Plan, Region and Township OP).
- As per the Growth Plan policy, an Agricultural Impact Assessment will be required to determine how to avoid, minimize and mitigate impacts on agricultural lands and operations.
- The subject property "1262 Greenfield Road" is listed on the Municipal Heritage Registry. As per policy 7.5 of the Township Official Plan, the Applicant is required to submit the Cultural Heritage Impact Assessment.
- The mineral aggregate operation should be screened while it is in progress and prior to extraction in a manner that is compatible with the surrounding visual environment.

### **SUBMISSION REQUIREMENT**

- Complete Zoning By-law Amendment Application Form
- Planning Justification Report
- Traffic Impact Study
- Cultural Heritage Impact Assessment (Term of Reference attached)
- Access Permit as required by Region of Waterloo
- Hydrogeological Study
- Archaeological Assessment and Acknowledgement letter
- Stationary Noise Study
- Air Quality Study
- Environmental Impact Study
- Agricultural Impact Assessment
- Proposed text and schedules for the Zoning By-law Amendment

**NOTE:** A digital submission package is required and can be submitted via email/USB/Dropbox/shared drive, etc.



*The TOWNSHIP of*  
**NORTH DUMFRIES**

2958 Greenfield Road, P.O. Box 1060, Ayr, Ontario – N0B 1E0

**APPLICATION FEE**

**Zoning By-law Amendment Application**

- Zoning By-law Amendment Application fee \$ \$33,000 payable to Township of North Dumfries.
- Zoning By-law Amendment peer review refundable deposit \$ \$22,000, payable to the Township of North Dumfries.
- A fee in the amount of \$15,000, payable to the Region of Waterloo.
- A fee in the amount of \$9,835, payable to the Grand River Conservation Authority (GRCA).

**TOWNSHIP AND AGENCY COMMENTS**

1. Regional Municipality of Waterloo – Matthew Colley: [MColley@regionofwaterloo.ca](mailto:MColley@regionofwaterloo.ca)  
Comments provided on December 20, 2021
2. GRCA – John Brum: [jbrum@grandriver.ca](mailto:jbrum@grandriver.ca)  
Comments provided on December 17, 2021
3. Engineering & Public Works Department – Lee Robinson:  
[lrobinson@northdumfries.ca](mailto:lrobinson@northdumfries.ca), Comments provided on January 5, 2022
4. Energy Plus – Helen Robinson: [hrobinson@energyplus.ca](mailto:hrobinson@energyplus.ca)  
Comments Received on December 15, 2021
5. Waterloo Catholic District School Board – Jordan Neale: [Jordan.Neale@wcdsb.ca](mailto:Jordan.Neale@wcdsb.ca)  
Comments provided on December 17, 2021
6. Enbridge – Adam Collier: [Adam.Collier@enbridge.com](mailto:Adam.Collier@enbridge.com)  
Comments provided on December 07, 2021

Should you have any questions, please do not hesitate to contact me at [smughal@northdumfries.ca](mailto:smughal@northdumfries.ca) or by telephone at 519-632-8800 ext. 132.

Yours sincerely,

Shahid Mughal, MCIP, RPP  
Township Planner





**Regional Comments - Pre-Submission  
Proposed Zoning By-law Amendment and Aggregate  
Resources Act Application  
Cambridge Aggregates Inc.  
Edworthy West Pit – Part of Lots 16-18, Concession 9  
Township of North Dumfries  
December 20, 2021**

**Proposal**

The owner/applicant has submitted a proposal for an above water table aggregate extraction operations for the lands identified as 1262 Greenfield Road, 1354 Spragues Road and Concession 9 PT Lot 17 in Township of North Dumfries. The location map is shown below. The owner/applicant currently operates two existing gravel pits in North Dumfries: License #607701 at 1182 Alps Road (Main Pit) and License #625889 at 1790 Wrigley Road (Ayr Pit).



The proposal for a new pit (Edworthy West) will serve as an extension to the Main Pit at 1182 Alps Road. The proposed licensed area is approximately 46 hectares in size, an extraction area of 38 hectares, with extraction proposed 1.5 metres above the water table, and a tonnage limit of 1,000,000 tonnes per annum. The proposed Edworthy West Pit will serve as an extension to the Main Pit and will replace depleting reserves. There is no increase to the current annual production between the new license and existing Main Pit license. Aggregate materials from the proposed pit will be trucked to the Main Pit for processing, blending, stockpiling, and shipping to market.

Two new entrances onto Spragues Road are proposed. One southern entrance at the new License and a northern entrance at the southern portion of the Main Pit. The existing haul route via Cedar Creek Road will continue to be issued.

The area proposed to be licensed is designated as Mineral Aggregate in the Regional Official Plan (ROP). There are no Core Environmental features within the proposed licensed area or limit of extraction.

The comments provided herein are intended to guide the next steps and identify requirements for information to be submitted in support of a future Zoning By-law Amendment application to rezone the lands from Agricultural in the Township Zoning By-Law to Mineral Aggregate Extraction. The information provided in this letter is based on information submitted to date.

### **General Planning Comments**

The owner/applicant acknowledges that a number of technical studies are underway to be submitted with the Zoning By-Law Amendment and Aggregate Resources Act License Applications:

- Environmental Report
- Archaeological Assessment
- Water Report
- Noise Report
- Traffic Brief (related to access onto Spragues Road)
- Air Quality
- Agricultural Impact Assessment
- Planning Report
- ARA Site Plans.

### **Aggregate Resources Act License:**

Regional Staff acknowledge that the owner/applicant understands that while the license approval process and rezoning process can proceed simultaneously that the Ministry will not be able to issue License approval until the zoning is in place.

### **Planning Justification Report:**

The owner/applicant is required to submit a Planning Justification Report to advise as to how the proposed development conforms or is consistent with the Provincial Policy Statement (2020), Growth Plan (2020), Regional Official Plan and Township Official Plan. Regional Staff advise that any relevant policies in Chapter 9 – Managing Aggregate Resources of the ROP must be addressed including the cumulative impact policy in the ROP (9.C.4). The required technical reports should ensure that the

cumulative impacts are addressed in a comprehensive manner in accordance with the policy.

### **Hydrogeology and Source Water**

The subject property is located in a Wellhead Protection Area D for Middleton and Willard Wellfields and a Wellhead Sensitivity Area.

As required by ROP policy 9.C.3 (b), a hydrogeological study completed as part of a complete Zoning By-Law Amendment application. Regional Staff advise the owner/applicant that the proposed study may be subject to a peer review at no cost to the Region. The owner/applicant will be responsible for the cost of the peer review if applicable for this study in accordance with Regional By-law 21-02, or any future successor by-law.

In addition, if the owner/applicant is contemplating asphalt recycling at the proposed pit, Regional Staff will require detailed information regarding stormwater controls in those areas.

Please reach out to Regional Hydrogeology Staff to discuss the draft Terms of Reference. The appropriate contact is Geoff Moroz, Hydrogeologist at [gmoroz@regionofwaterloo.ca](mailto:gmoroz@regionofwaterloo.ca)

### **Archaeological Assessment**

Regional Staff have reviewed the Stage 1-2 Assessment Documents for the subject property entitled, "Stage 1-2 Archaeological Property Assessment: Edworthy West) authored by AMICK (June 8, 2020) and "Stage 1-2 Archaeological Property Assessment: Edworthy West Additional Lands" authored by AMICK (April 19, 2021).

Regional Staff acknowledge that the owner/applicant must submit the Ministry Acknowledgement Letter, for the latter document, to the satisfaction of the Region, as part of a complete Zoning By-Law Amendment application.

### **Land Use Compatibility:**

Regional Staff acknowledge that the owner/applicant must address land use compatibility for the proposed aggregate operation. Regional Staff acknowledge that all technical studies must address the cumulative impact policies of the ROP. The following studies will be required:

#### **Noise Study:**

The owner/applicant must submit a noise study to address stationary noise. The stationary noise study must specifically address noise impacts on the nearby sensitive receptors. The Noise Study must include the sources from the proposed operation on nearby noise-sensitive receptors. It is the responsibility of the owner/applicant to ensure sensitive receptors are not adversely affected by anticipated noise impacts, vibration impacts, or other land use compatibility impacts.

The noise consultant preparing the study must be pre approved by the Region of Waterloo. The noise consultant is responsible for obtaining current information, applying professional expertise in performing calculations, making detailed and justified recommendations, and submitting the Consultant Noise Study Declaration and Owner/Authorized Agent Statement.

The noise study is to be submitted digitally as part of a complete Zoning By-Law Amendment application. Regional Staff advise the owner/applicant that the proposed study will be subject to a peer review at no cost to the Region. The owner/applicant will be responsible for the cost of the peer review in accordance with Regional By-law 21-02 or any future successor by-law.

#### *Air Quality Study:*

The owner/applicant must complete an air quality study, as part of a complete application, to ensure that the proposed aggregate operation demonstrates compliance with Ontario Regulation 419/05 and meets applicable air quality regulations and standards. This includes addressing any mitigation related to dust (i.e. dust management plan) for adjacent land uses. Regional Staff advise the owner/applicant that the proposed study will be subject to a peer review at no cost to the Region. The owner/applicant will be responsible for the cost of the peer review in accordance with Regional By-law 21-02 or any future successor by-law.

#### **Agricultural Impact Assessment**

In accordance with the A Place to Grow: A Growth Plan for the Greater Golden Horseshoe (2019), an Agricultural Impact Assessment will be required as part of a complete Zoning By-law Amendment application. The Region does not have, or recommend, any specific guidelines for such assessments, but refers the owner/applicant to the Province's guidance material (e.g. draft Guidance Document for Agricultural Impact Assessments) for additional guidance.

Regional Staff advise the owner/applicant that the proposed study will be subject to a peer review at no cost to the Region. The owner/applicant will be responsible for the cost of the peer review in accordance with Regional By-law 21-02 or any future successor by-law.

#### **Environmental Planning**

The subject lands are located within the Dumfries Carolinian Environmentally Sensitive Landscape, and include a Core Environmental Feature (Significant Woodland). No extraction of the Core Environmental Feature is proposed, and the pre-submission proposes a setback of approximately 15m from the edge of the Significant Woodland.

In accordance with Regional Official Plan (ROP) policies of Chapters 7 and 9, an Environmental Impact Statement (EIS) will be required in support of the proposed aggregate extraction operation. The EIS is to be undertaken in accordance with the ROP and Greenlands Network Implementation Guideline (GNIG), according to a Terms of Reference (TOR) that is developed in consultation with the Region and Township.

The Region's Ecological and Environmental Advisory Committee (EEAC) will be consulted through the review of the TOR and application, and the applicant is advised that the TOR should be submitted at the earliest opportunity in order to ensure adequate time to provide for EEAC review and meeting scheduling. A site visit to review any feature delineations is requested, and ideally at a time that will provide for EEAC members to attend once a working group is struck. Regional Staff acknowledge that a draft TOR has been submitted for the EIS and recommend the owner/applicant reach out to the contact provided below to discuss next steps with proceeding to EEAC.

Relevant ROP policies which will need to be specifically assessed through the EIS include policies 9.C.4, 9.C.8, 9.C.10 and 9.C.11, and the TOR should indicate a policy analysis will be included with the EIS. ROP Policy 9.C.8 requires it be demonstrated that no adverse environmental impacts (as defined by the ROP) will occur as a result of aggregate operations adjacent to Core Environmental Features.

In addition to the above information and policy requirements, the scoped EIS will be required to address the following, at minimum:

- confirmation of ecologically appropriate boundaries of the Core Environmental Features within and contiguous to the subject property;
  - a. delineation and design of suitable buffers between the proposed operation (licensed area) and the Core Environmental Features;
  - b. a biophysical survey to identify natural habitats and/or populations of Regionally significant plant and animal species on the subject lands that might be adversely affected by the proposed operation;
  - c. maintaining quantitative and qualitative aspects of the hydrological and hydrogeological regimes sustaining the Core Environmental Features; and
  - d. content of a during-development and post-development monitoring program.

If there are any questions regarding the above environmental planning comments, the applicant is advised to contact Jane Gurney ([jgurney@regionofwaterloo.ca](mailto:jgurney@regionofwaterloo.ca)). The current fee for review of a scoped EIS is \$2,300, payable at the time of complete application or when the EIS is submitted for review, whichever occurs first.

### **Access Permit/TIS:**

A Regional Access Permit is required for a new access to Regional Road #75 (Spragues Road). The fee for this permit is \$230.00.

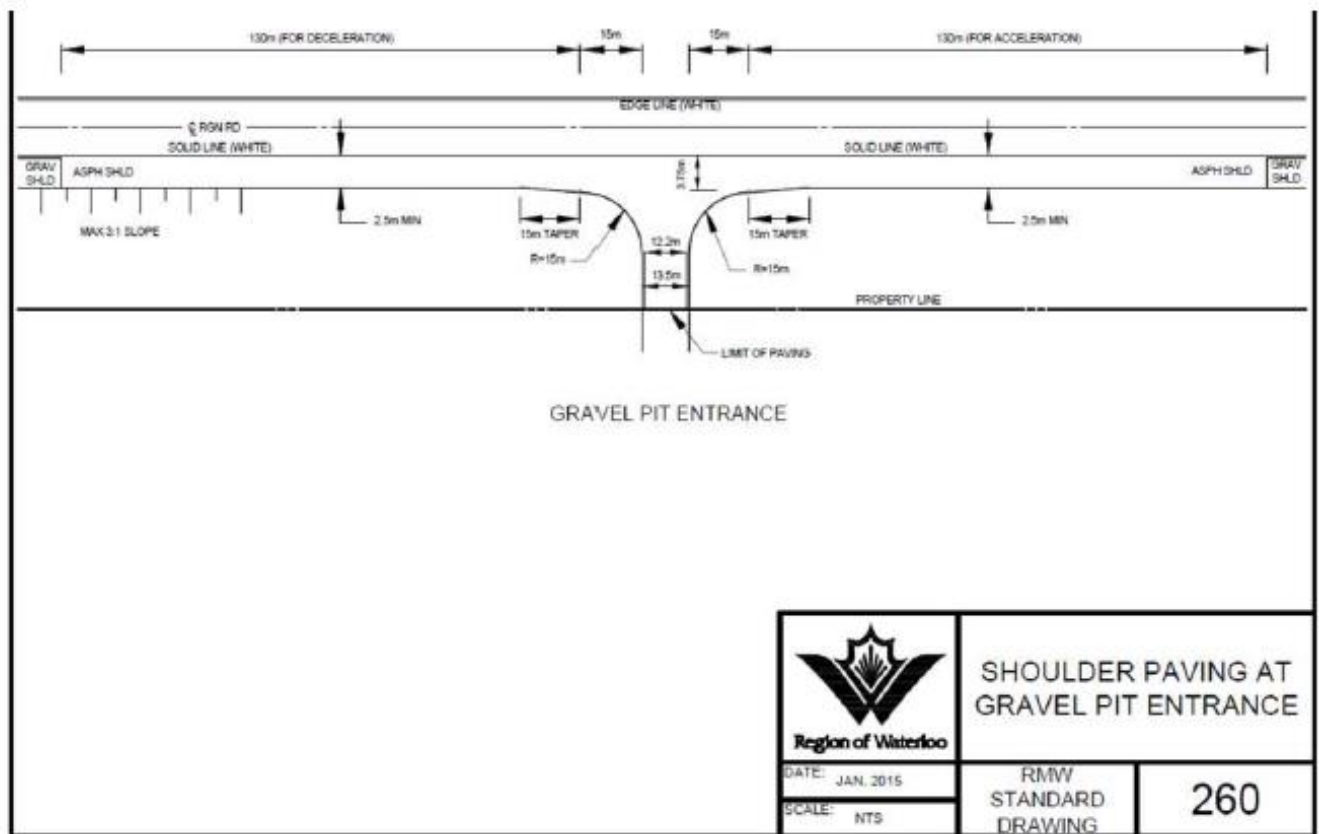
A scoped Transportation Impact Study (TIS) at the proposed access(s) to Spragues Road would be required as part of an Access Permit application.

The study should include the operation and turn lane requirements at the access(s). The proposed access would have to meet the Region's Access Policy, including the 2017 TAC Sight Distance Guidelines. The owner/applicants transportation consultant would be required to attend a TIS pre-consultation meeting with Regional Staff prior to commencing the study.

Before the Regional Access Permit is issued, the recommended and approved off site works would require an approved functional design, cost estimate, letter of credit and agreement to the satisfaction of the Region. It is Regional Staff's understand that two accesses to Spragues Road are proposed and therefore the TIS would need to identify the need for both access. The owner/applicant is responsible for all costs associated with both accesses.

There will be a \$500.00 fee for the review of the TIS by the Region and this is required prior to Regional approval of the study.

The access would also have to be in accordance with the Region's Standard Drawing 260, Shoulder Paving at Gravel Pit Entrance (see below). This is required to ensure the integrity of the Region's roadway on the approach to the gravel pit access, which is historically damaged from entering/exiting vehicles. Unless there has been a policy change, the gravel pit access must comply with the approved plan on the next page.



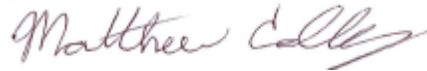
### **Summary**

The above information represents the information required by the Region to evaluate Zoning By-law amendment application for the proposed aggregate extraction operation. The following will be required, at a minimum, with a Zoning By-law amendment application:

- Planning Justification Report
- Access Permit and TIS
- Hydrogeological Study
- Archaeological Assessment and Acknowledgement letter
- Stationary Noise Study;
- Air Quality Study
- Environmental Impact Study (EIS)
- Agricultural Impact Assessment
- A fee in the amount of \$15,000, payable to the Region of Waterloo is required at the time of a Zoning By-law amendment application, in accordance with Regional By-law 21-02; or any future successor by-law.
- Electronic files are requested for all of the information submitted to the Region.

If you require clarification or further information regarding any of these items, please do not hesitate to contact me.

Yours truly,

A handwritten signature in dark ink, appearing to read "Matthew Colley", with a stylized flourish at the end.

Matthew Colley, MCIP, RPP  
Principal Planner





## PLAN REVIEW REPORT: Township of North Dumfries Shahid Mughal

**DATE:** December 17, 2021 **YOUR FILE:** PC-22/21

**RE:** **Pre-Consultation Application (PC-22/21)**  
Proposed New Aggregate Pit  
Cambridge Aggregates Inc. (c/o MHBC Planning)  
1262 Greenfield Road, 1354 Spragues Road, and Part of Lot 17, Concession 9  
Township of North Dumfries

### GRCA COMMENT\*:

In support of the future Planning Act applications, the Grand River Conservation Authority (GRCA) would require the submission of a scoped Environmental Impact Study and hydrogeological study. Additional detailed comments are provided below.

### BACKGROUND:

#### 1. Resource Issues:

Information currently available at this office indicates that the northeast portion of the subject lands contain portions of steep valley slope and their regulated allowances. The subject lands are also located within a small portion of the regulated allowances of an adjacent wetland area (refer to the enclosed map). Further, it would appear that there is also a small wetland pocket located on the subject lands. Consequently, portions of the subject lands are regulated by GRCA under Ontario Regulation 150/06 (Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation).

#### 2. Legislative/Policy Requirements and Implications:

It is our understanding that the applicants are proposing a new, above water table, aggregate pit on the subject lands.

According to the submitted application, the applicants indicate that no Core Environmental Features are included within the proposed limits of aggregate extraction. However, we note that a small woodlot within the vacant parcel along Spragues Road would be impacted by the proposed extraction limits. The GRCA has further determined that there may be a small, wetland pocket located within the edge of the field on the parcel identified as 1354 Spragues Road. While our current on-line mapping does not identify this feature, GRCA staff has reviewed air photos between 2000 and 2020 and this feature is present on the landscape. In order to further consider supporting the proposed extraction within this area, the GRCA requires that the identified wetland area be evaluated and its significance determined in accordance with GRCA and Provincial policies. If this feature is determined and confirmed to be a wetland and is significant, the wetland



feature will need to be retained on the landscape and an appropriate buffer would be required from any proposed development. Any new development adjacent to this wetland area would need to further demonstrate no negative impacts on this natural feature or its ecological function. Please further note that any development/site alteration within or adjacent to a wetland may require a permit from the GRCA under Ontario Regulation 150/06.

We would further recommend that the applicants contact both the Ministry of Northern Development, Mining, Natural Resources and Forestry (MNDMNRF) and the Ministry of the Environment, Conservation and Parks (MECP) to confirm the presence of any endangered/threatened species on the subject lands. This confirmation will need to be identified and addressed in the EIS in consultation with the MNRF and the MECP.

Based on the foregoing, the applicants will need to demonstrate that the proposed new above water table pit will not have a negative hydrological and ecological impact on the identified natural heritage features. In support of the Planning Act applications, they will need to submit a scoped Environmental Impact Study (EIS) and scoped hydrogeological study. In consultation with the Region of Waterloo and the Township of North Dumfries, we would recommend that the proponent's consultants submit a draft terms of reference for this EIS and hydrogeological studies to be reviewed and approved by the GRCA prior to initiating these studies.

### **3. Plan Review Fees:**

The above-noted application is within a GRCA area of interest due to the presence of the steep slopes and adjacent wetland areas. Please note that the GRCA provides comments on all Aggregate Act applications and related Planning Act applications. According to the GRCA's current plan review fees, for an above water table aggregate application with features of interest within 120 metres of the license limit, the fee would be \$9,550 payable to the GRCA. Please further note that these fees will be increased as of January 1, 2022. If applicable, additional fees for permits will also be required for any new development/site alteration within the GRCA's regulated areas under Ontario Regulation 150/06. Our current fee schedule is available under the Planning & Development section on our website at [www.grandriver.ca](http://www.grandriver.ca).

We trust the above is of assistance on this matter. If you require any further information, please do not hesitate to contact the undersigned at ext. 2233 or [jbrum@grandriver.ca](mailto:jbrum@grandriver.ca).



---

John Brum  
Resource Planner  
Grand River Conservation Authority

JB/

Encl.

cc: Matthew Colley, Cheryl Marcy & Jane Gurney, Region of Waterloo (via email)  
Caitlin Port, MHBC Planning (via email)

***\* These comments are respectfully submitted as advice and reflect resource concerns within the scope and mandate of the Grand River Conservation Authority.***



*The TOWNSHIP of*  
**NORTH DUMFRIES**

## MEMORANDUM

**To:** Development Services, Township of North Dumfries

**Attention:** Shahid Mughal, Planner

**From:** Lee Robinson, P.Eng., Director of Public Works

**Re:** Request for Comments

**Date:** Wednesday, January 5, 2022

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Application(s): PC 22/21
Owner(s):
Civic Address: 1262 Greenfield Road and 1354 Spragues Road

### Comments:

The Engineering and Public Works Department has reviewed the Request for Comments for PC-22/21 and offers the following comments.

- Entrances will not be permitted onto Greenfield Road or Shouldice Sideroad
- Spragues Road is a Regional Road. Any new or additional entrances to Spragues Road will require a permit from the Region of Waterloo
- Traffic from the gravel pit operations will not be permitted on Greenfield Road or Shouldice Sideroad, existing haul routes must be used.
- The following studies/reports will be required to support the application.
  - Natural Environment Report
  - Archeological Assessment
  - Hydrogeological Study
  - Geotechnical Study
  - Noise Impact/Assessment Study
  - Traffic Impact Study
  - Air Quality Report



**ENERGY+ INC.**

December 15, 2021

File:M/ENG/1262 Greenfield Rd., / 1354 Spragues Rd  
PC22/21, North Dumfries

Township of North Dumfries  
Planning Services Department  
2958 Greenfield Road, P.O. Box 1060  
Ayr, ON N0B 1E0  
Attn: Shahid Mughal

Via E-Mail

**Re: 1262 Greenfield Rd., / 1354 Spragues Rd., North Dumfries, PC22/21 Pre consultation  
proposal for a new extraction pit**

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Energy+ Inc. has no objection to the proposal by the Applicant/Owner for a new extraction pit with two entrances onto Spragues Road.

The Owner/Applicant may be required to enter into an agreement with Energy+ Inc. to determine the terms and conditions to service the proposed development at 100% cost. Please allow a minimum of six (6) months for determination of servicing needs.

The Owner/Applicant will be responsible for all costs associated with the relocation and/or upgrade of the existing electrical plant, if required as a result of this proposal. As per Energy+ Inc., Current Conditions to Service, latest edition, only one service per property is permitted.

The Owner/Applicant will be required to grant easements at 100 % cost to the satisfaction of Energy+ Inc., if required as a result of this proposal.

Should you require additional information, do not hesitate to contact me at your convenience.

Yours truly,  
Energy+ Inc.

*Helen Robinson*

Helen Robinson  
Legal Co-Ordinator, Engineering Department  
/hr

## Shahid Mughal

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**From:** Planning <planning@wcdsb.ca>  
**Sent:** December 17, 2021 4:48 PM  
**To:** Shahid Mughal  
**Subject:** RE: Request for Comments\_ PC-22-21\_re- ZBA, located at 1262 Greenfield Road, 1354 Spragues Road, and Con 9 PT Lot 17, Township of North Dumfries.

Good Afternoon Shahid,

The Waterloo Catholic District School Board has reviewed the above application and based on our development circulation criteria have the following comment(s)/condition(s):

A) That any applicable Education Development Charges shall be collected prior to the issuance of a building permit(s).

If you require any further information, please contact me by e-mail at [Jordan.Neale@wcdsb.ca](mailto:Jordan.Neale@wcdsb.ca).

Thank you,

**Jordan Neale**

Planning Technician, WCDSB

480 Dutton Dr, Waterloo, ON N2L 4C6

519-578-3660 ext. 2355

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**From:** Shahid Mughal <smughal@northdumfries.ca>  
**Sent:** Tuesday, December 7, 2021 2:02 PM  
**To:** Planning Applications <PlanningApplications@regionofwaterloo.ca>; Matthew Colley <MColley@regionofwaterloo.ca>; John Brum <jbrum@grandriver.ca>; Lee Robinson <lrobinson@northdumfries.ca>; Robert Shantz <rshantz@northdumfries.ca>; Shannon Black <sblack@northdumfries.ca>; John Stauffer <JStauffer@uniongas.com>; Adam Collier <Adam.Collier@enbridge.com>; Helen Robinson <hrobinson@energyplus.ca>; Planning <planning@wcdsb.ca>; WRDSB Planning <planning@wrdsb.ca>; Rodney Rolleman <rrolleman@northdumfries.ca>; araapprovals@ontario.ca  
**Cc:** Andrew Mcneely <amcneely@northdumfries.ca>; Margaret McCreery <mmccreery@northdumfries.ca>; Christina Blazinovic <cblazinovic@northdumfries.ca>  
**Subject:** RE: Request for Comments\_ PC-22-21\_re- ZBA, located at 1262 Greenfield Road, 1354 Spragues Road, and Con 9 PT Lot 17, Township of North Dumfries.

**Caution** - External Email - This Message comes from an external organization. Do NOT click on unrecognized links or provide your username and/or password.

Good afternoon,

Please disregard my earlier email regarding a referral for pre-consultation for Edworthy West Pit. Attached is a referral with minor edits and a revised response date for comments.

## Shahid Mughal

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**From:** Adam Collier <Adam.Collier@enbridge.com>  
**Sent:** December 7, 2021 2:17 PM  
**To:** Shahid Mughal  
**Subject:** RE: Request for Comments\_ PC-22-21\_re- ZBA, located at 1262 Greenfield Road, 1354 Spragues Road, and Con 9 PT Lot 17, Township of North Dumfries.  
**Attachments:** 1262 Greenfield.pdf

Good afternoon Shahid,

Please find the attached PDF file showing locate information for our gas plant location in respect to the above-mentioned projects, **for engineering purposes only**. The location of Enbridge Gas Inc. facilities on this drawing is approximate and is to be used for information purposes. We have a NPS 26" 6160 kPa transmission line in an easement at the north end of these properties. It is understood that locates must be obtained through **Ontario One Call Limited at 1-800-400-2255** to confirm location of our gas line prior to excavation. Please also let me know if our gas mains will be exposed at any time. Further precautions/supports would be required if that is the case. If any excavation was to occur it would require an Enbridge Storage and Transmission Representative to be onsite. Please see below for our observation requirements.

Observation from an Enbridge Gas Inc. representative is required when third party excavations are completed above or adjacent to:

- Mains and services operating at a pressure greater than 1900kPa, regardless of size
- Mains and services NPS 4 or larger with a MOP of greater than 700kPa
- Mains and services NPS 8 or larger, regardless of pressure

Take Care,

**Adam Collier**

Advisor, Construction & Project Management  
Waterloo/ Brantford

—

ENBRIDGE GAS INC.

TEL: 519-885-7400 ext. 5067428 | CELL: 519-400-2521 | [Adam.Collier@enbridge.com](mailto:Adam.Collier@enbridge.com)  
603 Kumpf Drive, Waterloo, Ontario, Canada, N2J 4A4

Enbridge.com

Integrity. Safety. Respect. Inclusion.

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**From:** Shahid Mughal <smughal@northdumfries.ca>  
**Sent:** Tuesday, December 7, 2021 2:02 PM  
**To:** Planning Applications <PlanningApplications@regionofwaterloo.ca>; Matthew Colley <MColley@regionofwaterloo.ca>; John Brum <jbrum@grandriver.ca>; Lee Robinson <lrobinson@northdumfries.ca>; Robert Shantz <rshantz@northdumfries.ca>; Shannon Black <sblack@northdumfries.ca>; John Stauffer <John.Stauffer@enbridge.com>; Adam Collier <Adam.Collier@enbridge.com>; Helen Robinson <hrobinson@energyplus.ca>; Planning <planning@wcdsb.ca>; WRDSB Planning <planning@wrdsb.ca>; Rodney Rolleman <rrolleman@northdumfries.ca>; araapprovals@ontario.ca  
**Cc:** Andrew Mcneely <amcneely@northdumfries.ca>; Margaret McCreery <mmccreery@northdumfries.ca>; Christina Blazinovic <cblazinovic@northdumfries.ca>





*The TOWNSHIP of*  
**NORTH DUMFRIES**

## **CULTURAL HERITAGE IMPACT ASSESSMENT TERMS OF REFERENCE**

Prepared By: Planning Division  
Development Services Department  
June 2016  
Revised November 2018



## 1. ***When is a Cultural Heritage Impact Assessment Required?***

A Cultural Heritage Impact Assessment (CHIA) is required for the following application types if the application is adjacent to or contains a property that is included on the *Township of North Dumfries Inventory of Buildings of Architectural and Historical Importance*:

- Notice of Intent to Demolish – Section 27(3) of the *Ontario Heritage Act*
- Application to Demolish – Section 34(1) of the *Ontario Heritage Act*
- Official Plan Amendment
- Zoning By-law Amendment
- Plans of Subdivision / Condominium
- Site Plan Control

A CHIA may be required by Staff for the following additional application types:

- Consent and/or Minor Variance and Building Permit applications for any property included on the *Township of North Dumfries Inventory of Buildings of Architectural and Historical Importance*
- Consent and/or Minor Variance and Building Permit applications for any property adjacent to a cultural heritage resource included on the *Township of North Dumfries Inventory of Buildings of Architectural and Historical Importance*

## 2. ***Purpose of a Cultural Heritage Impact Assessment***

Heritage conservation involves identifying, protecting and promoting the elements that our society values. A CHIA is the primary heritage planning tool utilized by the Township to assess and review the potential cultural heritage significance of a particular resource, consider the impact of any proposed site development or alteration and recommend an overall approach that best conserves any identified cultural heritage resource(s).

A CHIA forms an integral part of the Municipal planning framework. Its rationale emerges from a range of Provincial and Municipal policies including:

- *Provincial Policy Statement, 2014, Policies 2.6.1 and 2.6.3*
- *Ontario Planning Act, R.S.O. 1990, Part I, 2(d)*
- *Ontario Heritage Act, R.S.O. 1990, Part IV, Sections 27, 29 and 34*
- *Township of North Dumfries Official Plan, Sections 7.1, 7.2, 7.3 and 7.5*

Where there is a potential of impacting archaeological resources an archaeological assessment must be undertaken by a licensed archeologist as an additional study. Please refer to the Ministry of Tourism, Culture and Sport for the triggers and stages of an archeological assessment.

### **3. Who Can Prepare a Cultural Heritage Impact Assessment ?**

All CHIAs and other related documents including adaptive reuse plans and site security plans must be prepared by a qualified heritage professional such as a heritage planner and/or heritage architect with a demonstrated knowledge of accepted heritage conservation standards, and who has undertaken historical research and identification / evaluation of cultural heritage value.

All heritage consultants submitting a CHIA must be members in good standing of the Canadian Association of Heritage Professionals.

In addition, under Provincial law, only a licensed, professional archeologist may carry out an Archeological Assessment using specific Provincial standards and guidelines.

### **4. What Should a Cultural Heritage Impact Assessment Contain and in What Format?**

The CHIA will include, but is not limited to the following information:

#### **(1) Introduction to the Development Site**

- A location plan indicating the subject property (Property Data Map and aerial photo).
- Concise written and visual description of the property identifying significant features, buildings, landscape and vistas.
- A concise written and visual description of the cultural heritage resource(s) contained within the development site identifying significant features, buildings, landscape, vistas and including any heritage recognition of the property with existing heritage descriptions as available. Reference should be made to the *Township of North Dumfries Inventory of Buildings of Architectural and Historical Significance*, *Ontario Heritage Properties Database*, *Parks Canada National Historic Sites of Canada*, and/or *Canadian Register of Historic Places*.

- A concise written and visual description of the surrounding context including adjacent heritage properties, their landscapes and any potential undesigned cultural heritage resource(s).
- Present owner contact information.

## **(2) Overview of Applicable Heritage Legislation, Policies and Guidelines**

The CHIA must provide a detailed description of the heritage planning framework stemming from legislation, policies and guidelines that are applicable to the subject proposal. In addition, an analysis must be provided below under Conservation Strategy in sub-section 9 of this document, on how the proposal has been developed in accordance with the applicable heritage planning framework.

Legislation, policies and guidelines (as updated from time to time) that are to be assessed must include, but are not limited to:

- The *Ontario Heritage Act*
- The *Planning Act*
- The *Provincial Policy Statement*
- The *Growth Plan for the Greater Golden Horseshoe*
- Ontario Heritage Tool Kit (Ministry of Culture)
  - Heritage Property Evaluation
  - Heritage Conservation Districts
  - Heritage Resources in the Land Use Planning Process
- Eight Guiding Principles in Conservation of Built Heritage Properties (Ministry of Culture, 2007)
- Standards and Guidelines for the Conservation of Historic Places in Canada (Canada's Historic Places, 2010)
- Building Resilience: Practical Guidelines for the Sustainable Rehabilitation of Buildings in Canada (2016)
- Region of Waterloo – Practical Conservation Guidelines for Heritage Properties. These guidelines provide heritage conservation tips on topics such as additions, infill and new construction, landscaping, masonry, metalwork, paint and colour, porches, roofs, and windows/shutters/doors.
- Region of Waterloo - Official Plan (2015)
- Region of Waterloo - Arts, Culture and Heritage Master Plan (2002)
- Region of Waterloo – Archaeological Facilities Master Plan (1989)
- Region of Waterloo - Guidelines for CHL Conservation (2013; Reviewed 2017)
- Township of North Dumfries - Official Plan

- Township of North Dumfries - Cultural Heritage Impact Assessment Terms of Reference
- Township of North Dumfries - Greenfield Heritage Conservation District Study Report (January 2014)
- Township of North Dumfries - Greenfield Heritage Conservation Plan Report (March 2014)
- The Grand River – Canadian Heritage System

### **(3) Background Research and Analysis**

- Comprehensive written and visual research and analysis related to all potential cultural heritage value or interest of the site (both identified and unidentified) as per the applicable legislation, policies and guidelines including: physical or design, historical or associative, and contextual values.
- A development history of the site including original construction, additions and alterations with substantiated dates of construction.
- Research material to include relevant historic maps and atlases, drawings, photographs, sketches / renderings, permit records, land records, assessment rolls, Township of North Dumfries directories, etc.

### **(4) Statement of Significance**

- A statement of significance identifying the cultural heritage value and heritage attributes of the cultural heritage resource(s). This statement will be informed by current research and analysis of the site as well as pre-existing heritage descriptions. This statement is to follow applicable legislation, policies and guidelines such as the Provincial guidelines set out in the *Ontario Heritage Tool Kit*.
- The statement of significance will be written in a way that does not respond to or anticipate any current or proposed interventions. The Township may, at its discretion and upon review, reject or use the statement of significance, in whole or in part, in crafting its own statement of significance (reasons for listing or designation) for the subject property.
- Professional quality record photographs of the cultural heritage resource in its present state.

### **(5) Assessment of Existing Condition**

- A comprehensive written description accompanied with high quality color photographic documentation of the cultural heritage resource(s) in its current condition and physical context (location, streetscape, etc).
- If demolition or removal of the heritage resource (in full or part) is proposed, a companion written and visual assessment and analysis by a qualified individual shall be undertaken which documents the economic value of the building in terms of structural deficiencies, mold, water or outside climate damage to the interior of the building, or other factors influencing the request. The analysis and assessment shall include the ability to restore and recover against the observed physical damage (in full or in part). The demolition must be assessed in accordance with applicable legislation, policies and guidelines.

### **(6) Description of the Proposed Development or Site Alteration**

- A written and visual description of the proposed development or site alteration.

### **(7) Impact of Development or Site Alteration**

- An assessment identifying any impact(s) the proposed development or site alteration may have on the cultural heritage resource(s) as per applicable legislation, policies and guidelines. Impacts on a cultural heritage resource(s) as stated in the *Ontario Heritage Tool Kit* and *Appleton Charter* include, but are not limited to:
  - + Removal of any, or part of any, significant heritage attributes or features
  - + Alteration that impact on the historic fabric and appearance
  - + Shadow impacts that alter the appearance and/or setting of a heritage attribute, or change the viability of an associated natural feature
  - + Isolation of a heritage attribute from its surrounding environment, context or a significant relationship
  - + Direct or indirect obstruction of significant views or vistas within, from or of built and natural features

- + A change in land use (such as rezoning a church to a multi-unit residence) where the change in use negates the property's cultural heritage value
- + Land disturbances such as a change in grade that alters soils, and drainage patterns that adversely affect a cultural heritage resource, including archeological resource
- + Relocation (to be considered under the conditions described in the *Appleton Charter*)

#### **(8) Considered Alternatives and Mitigation Strategies**

- An assessment of alternative options, mitigation measures, and conservation methods that may be considered to avoid or limit the negative impact on the cultural heritage resource(s), as per applicable legislation, policies and guidelines. Methods of minimizing or avoiding a negative impact on a cultural heritage resource(s) as stated in the *Ontario Heritage Tool Kit* include, but are not limited to:
  - + Alternative development approaches
  - + Isolating development and site alteration from significant built and natural features and vistas
  - + Design guidelines that harmonize mass, setback, setting and materials;
  - + Limiting height and density so as to respect scale and context of the significant built heritage resource
  - + Allowing only compatible infill and additions that are complementary and reinforce the key elements or attributes of the built heritage resource
  - + Reversible alterations
  - + Relocation (to be considered under the conditions described in the *Appleton Charter*)

#### **(9) Conservation Strategy**

- The preferred strategy based on best-practice conservation principles and applicable legislation, policies and guidelines that protect and enhance the

cultural heritage value and heritage attributes of the cultural heritage resource(s) including, but not limited to:

- + A mitigation strategy including the proposed methods
  - + A conservation scope of work including the proposed methods
  - + An implementation and monitoring plan
  - + Recommendation for additional studies / plans related to, but not limited to: conservation, interpretation and/or commemoration
- If removal of the cultural heritage resource is recommended, the CHIA must provide site specific requirements in terms of features or resources that can be protected, removed and re-used, and, undertake a photographic documentation of the history and importance of the built feature prior to demolition. The photographic documentation shall be presented and transferred to the Township.
  - A detailed analysis on how the preferred strategy is in accordance with the applicable legislation, policies and guidelines. Reference conservation principles and precedents.

#### **(10) Appendices**

- A bibliography listing research materials used and sources consulted in preparing the CHIA

#### **5. *How Many Copies of a CHIA are to be Provided to the Township?***

- Please provide the following to the Township of North Dumfries Planning Division:
  - + Three (3) bound hard copies
  - + One (1) camera ready copy
  - + One (1) CD copy in a PDF Format

## 6. Consultation Process

- As part of the consideration of a CHIA, consultation with Township Staff and the North Dumfries Heritage Advisory Committee are required. This shall involve:
  - + A pre-consultation meeting with Staff prior to the commencement of the CHIA.
  - + Presentation and discussion with the Heritage Advisory Committee and Township Staff on the *draft* CHIA Report.
  - + Presentation and recommendations with the Heritage Advisory Committee and Township Staff on the *final* CHIA Report.
  - + Staff Report to Council on the CHIA Report.

### Contact Information:

Township of North Dumfries  
North Dumfries Community Complex  
2958 Greenfield Road  
P.O. Box 1060  
Ayr, Ontario NOB 1E0

Tel. (519) 632-8800  
Email [mail@northdumfries.ca](mailto:mail@northdumfries.ca)





# Appendix B

# THE CORPORATION OF THE TOWNSHIP OF NORTH DUMFRIES

## BY-LAW NUMBER XXXX-23

Being A By-Law to amend By-Law Number 689-83, as amended, being a Zoning By-law for the Township of North Dumfries;

WHEREAS an application (File XXX) was received from Cambridge Aggregates Inc. with respect to lands described as Concession 9, Part of Lots 16-18, Township of North Dumfries, Regional Municipality of Waterloo to amend By-law Number 689-83, to change the present Zone 1 – Agriculture to Zone 14 – Mineral Aggregates

WHEREAS the Planning Act empowers a municipality to pass by-laws prohibiting the use of land and the erection, location and use of buildings or structures, except as set out in the by-law;

AND WHEREAS the Council of the Corporation of the Township of North Dumfries, under Section 39 of the *Planning Act*, R.S.O. 1990, c. P. 13, deems it to be desirable to further amend said By-law Number 689-83 for the future development and use of the lands described above;

NOW THEREFORE, Township Council enacts as follows:

1. That By-law Number 689-83, as amended, is hereby further amended insofar as the zoning on these lands, being Part of Lots 16-18, Concession 9, is changed in part from Zone 1 – Agriculture (Z.1) to Zone 14 – Mineral Aggregates (Z.14) as shown on attached Schedule A.
2. THAT this by-law shall come into force on the final passing thereof by the Council of the Corporation of the Township of North Dumfries subject to compliance with the provisions of the Planning Act, R.S.O. 1990, c.P.13.

READ a first and second time in the Council Chambers of the Township of North Dumfries this XX day of XXX, 2023.

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Mayor

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Clerk

READ a third time and Finally Passed in the Council Chambers of the Township of North Dumfries this XX day of XXX, 2023

Mayor Clerk

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Mayor

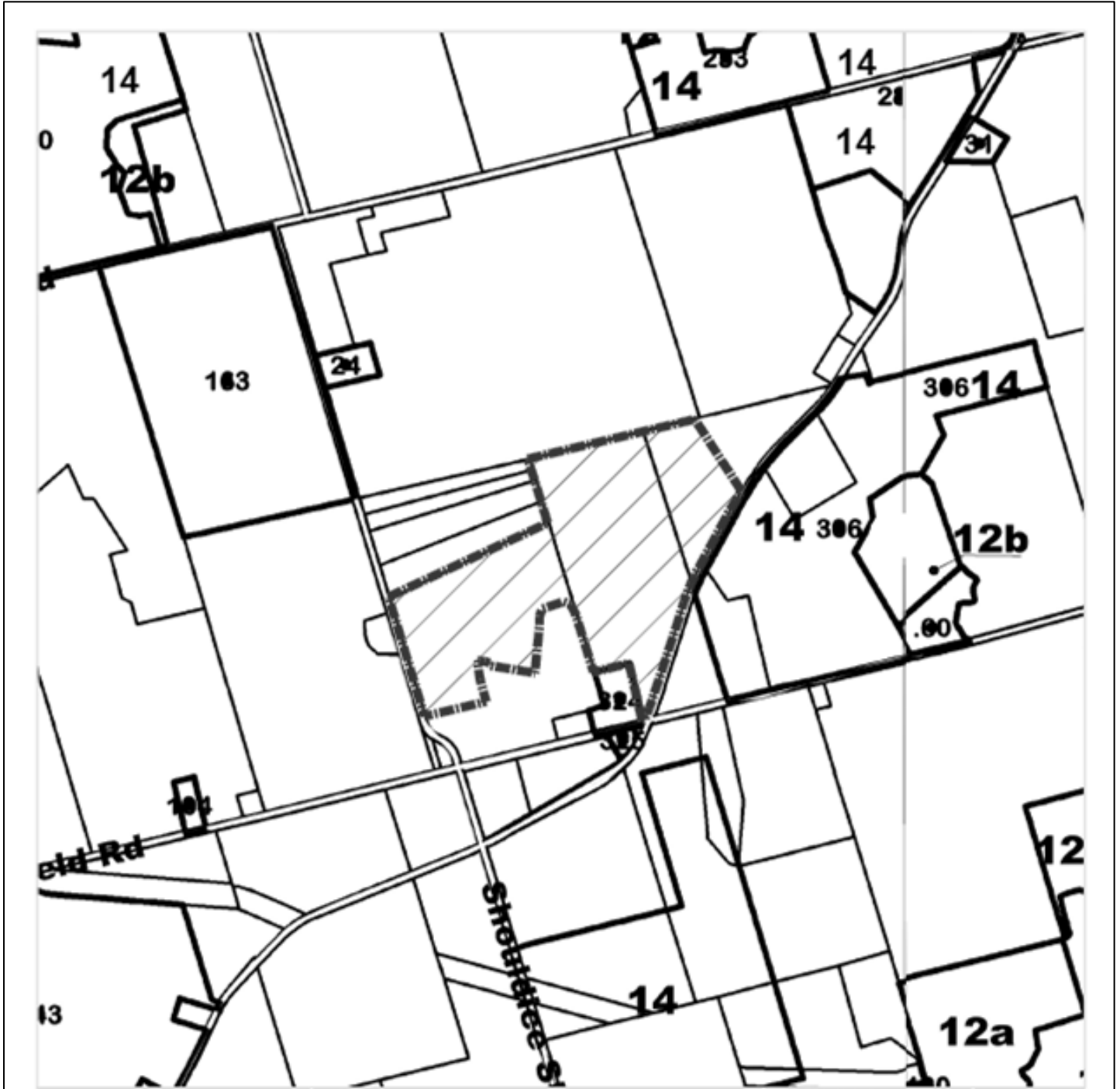
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Clerk

**SCHEDULE A to By-Law \_\_\_\_\_ - 23**

## Concession 9, Part of Lots 16-18,

Township of North Dumfries, Regional Municipality of Waterloo



## Lands to be Re-Zoned from Zone 1 to Zone 14

# Appendix C

# **Proposed Edworthy West Gravel Pit Public Consultation Summary & Strategy**

Part of Lots 16,17, and 18, Concession 9, Township of North Dumfries

## **Prepared for:**

Cambridge Aggregates Inc.

December 2022

Prepared by:

**MacNaughton Hermesen Britton Clarkson Planning Limited (MHBC)**

540 Bingemans Centre Drive, Suite 200

Kitchener, ON N2B 3X9

T: 519.576.3650 ext. 733

F: 905.576.0121

Our File: 1896C



# Cambridge Aggregates Inc. Edworthy West Gravel Pit Public Consultation Plan and Summary

## 1 Introduction

Cambridge Aggregates Inc. is proposing a new Aggregate Resources Act Licence for an above water table gravel pit known as the proposed “Edworthy West Pit”, located at the northwest corner of Greenfield Road and Spragues Road, in the Township of North Dumfries. The lands proposed are located about 1.5km south of the existing Cambridge Aggregates Main Pit and area legally described as Part of Lots 16,17, and 18, Concession 9, Township of North Dumfries in the Regional Municipality of Waterloo. The subject lands are bounded to the east by Spragues Road, to the south by Spragues Road and Greenfield Road, to the west by Shouldice Road, and to the north by agricultural land.

The proposed new gravel pit requires both approvals from the Ministry of Natural Resources and Forestry (MNRF) under the *Aggregate Resources Act* as well as the Township of North Dumfries under the *Planning Act*. The following applications and approvals outlined in Table 1 are required:

*Table 1: Applications Required and Approval Authority*

Application	Legislative Authority	Approval Authority
Class A Licence	Aggregate Resources Act	Ministry of Natural Resources and Forestry.
Township of Wainfleet Zoning By-Law Amendment	Planning Act	Township of North Dumfries

As outlined in this Report, both the *Planning Act* and the *Aggregate Resources Act* include statutory requirements for public consultation.



## 2 Consultation Activities Completed (prior to Applications being submitted)

Prior to the submission of the applications outlined in Table 1, the following consultation activities have already occurred or are ongoing:

1. Ongoing correspondence and involvement of the Mississaugas of the Credit First Nation (MCFN) regarding property Archaeology Assessments.
2. Ongoing correspondence and involvement of the Six Nations of the Grand River (SNGR) regarding the proposed property development
3. Pre-consultation with the Region of Waterloo, Township of North Dumfries, and Grand River Conservation Authority in 2020 and 2021
4. Attendance at Region of Waterloo Environment and Ecological Advisory Committee meeting on January 31, 2022 to discuss the EIS terms of reference
5. Pre-consultation Meeting held with the Township of North Dumfries on March 24, 2022
6. An Introductory Letter (see attached) was sent to all landowners within 500m of the proposed Licence Boundary with an offer to meet to further discuss the Application.

## 3 Following the Submission of Applications – Review and Comment Period

Following the submission of applications outlined in Table 1, the following activities will occur:

1. The Township of North Dumfries will review the Zoning By-Law Amendment Application and provide a *Notice of Complete Application*.
2. MNRF reviews the Aggregate Resources Act Licence Application and issues a *Notice of Complete application*.
3. Once deemed completed, copies of the Application submission packages (including all technical reports and Site Plan) are available for public review from the Township, MNRF, or the Applicant.
4. Notices of Public Meetings issued by the Township as required by *Planning Act* Public Meeting(s) hosted by the Township
5. Public Notice of Application circulated to adjacent Landowners within 120m of the Licence Boundary required by *Aggregate Resources Act*
6. Cambridge Aggregates Inc. publishes a Newspaper notice detailing information about the Aggregate Resources Act Licence Application and Public Information Session
7. A Public Information Session, under the *Aggregate Resources Act*, is hosted by Cambridge Aggregates Inc.

8. Under the *Aggregate Resources Act*, a 60-Day period is provided for interested parties to review and provide comments on the Licence Application
9. Posting of the ARA Application on the Environmental Registry of Ontario
10. Posting of the Application materials on the Townships website
11. Initiation and continuation of the Duty to Consult engagement activities with Indigenous Communities, as directed by MNRF

#### 4 Following Planning Act Public Meeting / ARA Public Information Session / End of 60-Day ARA Notice Period

1. Cambridge Aggregates Inc. to review and respond to all comments received by the Public through the ARA 60-Day period. Under the ARA, the applicant has a two-year period to completed the consultation process
2. ARA Objection Forms served to persons to confirm if comments have been resolved
3. A record of public, agency, and Indigenous community consultation is compiled and submitted to MNRF
4. Township Council meeting to make a decision on the Zoning By-Law Amendment Application
5. Notice of Decision (ZBA) – issued and circulated by Township of Wainfleet
6. Notice of Licence Referral or Recommendation to Issue Licence – issued and circulated by MNRF
7. Notice of Referral or Recommendation posted to the Environmental Registry of Ontario

**Property Address:**

**Mailing Address:**

May 18, 2022

Dear Neighbour:

**RE: Cambridge Aggregates Inc. – Proposed Edworthy West Gravel Pit Application  
Introductory Project Letter**

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Over the past two years, Cambridge Aggregates Inc. has been completing the required background studies and technical reports required to submit applications for a new gravel pit that is proposed to be located at the corner of Spragues Road and Greenfield Road in the Township of North Dumfries (part of lots 16-18, Concession 9 – see attached map). We anticipate submitting the required applications to the Township of North Dumfries and Ministry of Northern Development and Mines, Natural Resources and Forestry this summer.

Cambridge Aggregates Inc. is a joint venture between a locally-owned family business that has operated in the local construction materials industry for 25 years and Lehigh Hanson. Cambridge Aggregates Inc. currently operates two existing gravel pits in the Township of North Dumfries: Licence #607701 located at 1182 Alps Road (Main Pit) and Licence #625889 located at 1790 Wrigley Rd (Ayr Pit).

The proposed new gravel pit (known as the “Edworthy West Pit”) would cover a total of 44 hectares (109 acres) with a proposed extraction area of approximately 35 hectares (86 acres). Only extraction above the water table is proposed at the new pit. In addition, no aggregate crushing, washing, processing, or recycling is proposed at this pit. The only activities that will occur at the new proposed pit are: extraction, loading, and shipping of aggregate materials. Aggregate materials will be shipped from the proposed Edworthy West Pit via Spragues Road, to the Main Pit for processing. There will be no trucks on Shouldice Road or Greenfield Road. We are leasing these lands from three local farmers and will return the area back to an agricultural condition through progressive and final rehabilitation. In addition, we have committed to completing ecological enhancements on these properties to better connect and improve the adjacent natural heritage features.

The purpose of the new proposed Edworthy West gravel pit will be to replace the depleting aggregate reserves at our Main Pit. The high-quality aggregate resources that we extract and process at our Main Pit are used to supply the local Hanson Ready-Mix operation which produces ready-mix concrete products. We also make granular products which are used in local and regional infrastructure projects such as road building and maintenance. There is high demand for the aggregate materials produced at our Main Pit and we anticipate that the majority of our Main Pit will be depleted and rehabilitated back to farmland in the next five years. We have already extracted and completed progressive rehabilitation back to an agricultural condition in a significant portion of our Main Pit.

To permit the Edworthy West Pit the following applications are required:

1. A Zoning By-Law Amendment submitted to the Township of North Dumfries; and,
2. An Aggregate Resources Act Licence Application submitted to the Ministry of Northern Development and Mines, Natural Resources and Forestry.

We are planning on submitting these applications concurrently this summer.

These two application processes will include several opportunities for public consultation, including an Open House and Township Public Meeting. We are committed to a transparent application process and engaging with the community on this project.

Prior to formally submitting our applications, we would like to invite you to meet with us to discuss any comments or questions that you may have regarding these applications and the proposed project. If you are interested, we would like to invite you to a one-on-one meeting with us during the week of **June 13<sup>th</sup> to 17<sup>th</sup>** at our office at **1182 Alps Road**, North Dumfries. Please contact our Planning Consultant via the contact information below, to arrange a meeting time. Virtual meetings can also be accommodated.

Caitlin Port, MHBC Planning  
Email: [cport@mhbcplan.com](mailto:cport@mhbcplan.com)  
Phone: #519-576-3650

In the meantime, if you would like more information or have any questions please feel free to contact me.

Yours truly,



**Chris Isley, Director**  
**Cambridge Aggregates Inc.**  
Ph: 519-223-2084  
Em: [chris@iugroup.ca](mailto:chris@iugroup.ca)

Attached      Project Location Map







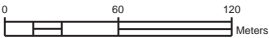
# CONCEPT PLAN

**Cambridge Aggregates Inc.**  
**Proposed Edworthy West Pit**

Part of Lots 16, 17 and 18, Concession 9 (former geographic Township of Dumfries) Township of North Dumfries  
Regional Municipality of Waterloo

## Legend

-  Proposed Licence Boundary - 44.3 hectares
-  Proposed Limit of Extraction - 35.2 hectares

Date	May 2022
Sources	2020 aerial photography from Region of Waterloo Base information from West Edworthy Site Plan prepared by MHBC dated October 2021
Scale - 1:4000	 Meters

N:\Brian\1896C - Cambridge Aggregates - West Edworthy Site\Drawings\Site Plan\West Edworthy Pit\CAD\1896C - Site Plan.dwg



# Appendix D



## CURRICULUM VITAE

**Neal DeRuyter**, BES, MCIP, RPP

### EDUCATION

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

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. He has provided expert evidence before the Ontario Municipal Board and Local Planning Appeal 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

2017- Present	Partner MacNaughton Hermsen Britton Clarkson Planning Limited
2013- 2017	Associate, MacNaughton Hermsen Britton Clarkson Planning Limited
2009- 2013	Planner, MacNaughton Hermsen Britton Clarkson Planning Limited

### PROFESSIONAL ASSOCIATIONS

Full Member, Ontario Professional Planners Institute  
Full Member, Canadian Institute of Planners

### CONTACT

540 Bingemans Centre Drive,  
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F 519 576 0121  
nderuyter@mhbcplan.com  
www.mhbcplan.com

## CURRICULUM **VITAE**

**Neal DeRuyter**, BES, MCIP, RPP

### PROFESSIONAL SERVICE

- 2014-Present     Member, University of Waterloo PRAGMA Council
- 2012-Present     Member, Ontario Expropriation Association
- 2015-Present     Member, Eastern Ontario Committee, Ontario Stone, Sand & Gravel Association

### 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.
- 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.

### CONTACT

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nderuyter@mhbcplan.com  
www.mhbcplan.com

## CURRICULUM **VITAE**

**Neal DeRuyter**, BES, MCIP, RPP

- 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.
- Planning research and assessment for expropriation matters on behalf of public and private sector clients.

### SELECTED PROJECT EXAMPLES

- AAROC Aggregates Bardoel Pit, Township of Southwest Oxford
- Bell Sand Farms Grose Pit Extension, Perth County
- Brock University, Niagara Escarpment Plan Lands, City of St. Catharines
- Cambridge Aggregates Inc. Edworthy West Pit, Township of North Dumfries
- CBM Ayr Pit Site Plan Amendment, Township of North Dumfries
- 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 Site Plan and Licence Amendments, 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
- Gallo Contracting Industrial Use, Township of Puslinch
- Graham Brothers Caledon Pit Site Plan Amendment and NEP Amendment, Town of Caledon
- Halton Crushed Stone Erin Pit Extension, Town of Erin
- 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 Site Plan Amendment, Township of Ramara
- James Dick Construction Ltd. Reid Road Quarry, Town of Milton
- Kaneff Properties, Royal Niagara Golf Club, City of St. Catharines

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## CURRICULUM **VITAE**

**Neal DeRuyter**, BES, MCIP, RPP

- Kieswetter Excavating Heidelberg Pit Site Plan Amendment, Township of Wilmot
- KPM Brantford Plant Expansion, Brant County
- Lafarge Canada Inc. Navan Quarry Extension, City of Ottawa
- Lillycrop Highway 6 Expropriation, Township of Puslinch
- Limehouse Clay Products Ltd. Site Plan Amendment, Town of Halton Hills
- 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
- 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. 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
- Thomas Cavanagh Construction Almonte 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
- 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

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## CURRICULUM **VITAE**

**Neal DeRuyter**, BES, MCIP, RPP

- Waterford Sand & Gravel Law Quarry Extension, Township of Wainfleet
- Wm. J. Gies Construction Stockyards Lands, Township of Woolwich

### PRESENTATIONS

- "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

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## CURRICULUM VITAE

**Caitlin Port**, MES, MCIP, RPP

### EDUCATION

2014  
Master of Environmental Studies in Planning  
University of Waterloo

2009  
Bachelor of Environmental Studies  
Honours Environment & Resource Studies  
Biology Minor  
University of Waterloo

Caitlin Port, is an Associate with MHBC specializing in aggregate resource and rural land use planning.

Ms. Port has coordinated and prepared a number of aggregate projects across Ontario, including Licence Applications, Official Plan Amendments, and Zoning By-Law Amendments. She has experience writing and analyzing planning policies, preparing Planning Justification Reports, presenting at Public Meetings, and participating in Ontario Municipal Board Hearings. She has also prepared Aggregate Resources Act Site Plans, has experience with Site Plan Amendment Applications and has undertaken various policy reviews and due diligence reports for clients across Ontario.

In addition to aggregate management planning, Ms. Port also has experience with rural planning, including: on-Farm diversified uses, rural severances, small to medium scale residential development, and rural industrial development.

Ms. Port has authored three studies on aggregate rehabilitation in Ontario for the Ontario Stone, Sand, and Gravel Association and has presented on aggregate rehabilitation to a number of academic, municipal and community groups.

Ms. Port is a Registered Professional Planner and is qualified by the Ontario Municipal Board as an expert in Land Use Planning.

### PROFESSIONAL ACCREDITATIONS/ASSOCIATIONS

- Full Member, Canadian Institute of Planners (CIP)
- Full Member, Ontario Professional Planners Institute (OPPI)
- Articling Agrologist (A.Ag) with the Ontario Institute of Agrologists
- Member, Ontario Stone, Sand & Gravel Association Rehabilitation and Waterloo-Wellington-Brant Regional Committee (OSSGA)

### CONTACT

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www.mhbcplan.com

## CURRICULUM **VITAE**

Caitlin Port, MES, MCIP, RPP

### PROFESSIONAL HISTORY

- 2020 - Present Associate,  
MacNaughton Hermsen Britton Clarkson Planning Limited
- 2017 - Present Senior Planner,  
MacNaughton Hermsen Britton Clarkson Planning Limited
- 2014 - 2017 Planner,  
Skelton Brumwell and Associates Ltd.
- 2013 Field and Research Assistant,  
Ontario Stone, Sand, and Gravel Association

### SELECTED AGGREGATE RESOURCES PROJECT EXPERIENCE

- Bell Sand Farms Ltd., Bell Sand Farms Pit Extension - Licence Application and Planning Approvals
- Waterford Sand and Gravel Ltd - Licence Application and Planning Approvals
- Lafarge Canada Inc., Brantford Pit Expansion - Licence Application and Planning Approvals
- J.G. Stewart, Haliburton Quarry – Licence Application to convert pit to a quarry
- Capital Paving Ltd., Shantz Station Pit - Licence Application and Planning Approvals
- James Dick Construction, Reid Road Reservoir Quarry, Milton - Licence Application and Planning Approvals
- Tomlinson Group, Brickyards Quarry, Ottawa - Licence Application and Planning Approvals
- Development of the Aggregate Rehabilitation Best Management Practices – Preparation and submission of a set of Aggregate Rehabilitation Best Management Practices to the Ministry of Natural Resources and Forestry.

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## CURRICULUM VITAE

**Caitlin Port**, MES, MCIP, RPP

- VicDom Sand and Gravel, Utica Pit, Uxbridge – Licence Application and Planning Approvals
- Lippa Pit and Quarry - Licence Application and Planning Approvals
- VicDom Sand and Gravel Brock Road Amalgamation, Uxbridge – Licence Application and Planning Approvals
- Giofam Investments Inc. – Licence Application and Planning Approvals. Provided Expert Testimony on the *Aggregate Resources Act* Licence Application and *Planning Act Applications*.
- Miller Paving Ltd., Braeside Quarry – Licence Application and Planning Approvals. Assist with OMB Hearing
- Authored the Ontario Stone, Sand, and Gravel Association *Study of Aggregate Site Rehabilitation in Ontario Study Part II* (2013) and Part II Addendum (2014)
- Authored the Ontario Stone, Sand, and Gravel Association *Aquatic Aggregate Rehabilitation Study* (2017)

## SELECTED MUNICIPAL PLANNING EXPERIENCE

- LAV Developments – Zoning By-Law Amendment to permit a townhouse residential development
- Luso Valley Estate – Zoning By-Law Amendment to permit a wedding event use on property
- Erin Estate Weddings – Zoning By-Law Amendment to permit a wedding event use on the property
- Hearthstone Homes – Plan of Vacant Land Condominium to permit a 20 unit condominium development.
- Colacem Cement Plant – Assist with the preparation of evidence and materials for a Local Planning Appeal Tribunal Hearing on a Official Plan Amendment and Zoning By-Law Amendment to permit the establishment of a cement plant.
- Victoria Mews Seniors Housing Community – Zoning By-Law Amendment and Site Plan Application for a 30 unit residential housing project in Victoria Harbour
- Granite Ridge Phase II Subdivision - Plan of Subdivision, Condominium Application, Official Plan Amendment, Zoning By-

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www.mhbcplan.com

## CURRICULUM VITAE

**Caitlin Port**, MES, MCIP, RPP

Law Amendment, to permit the development of a 33 lot estate residential subdivision with common element features including a central water feature and open space

- Undertook a planning review and public consultation as part of the development of the Delphi Point ANSI Park Management Plan for the Town of the Blue Mountains
- Stewart Industrial Development – Zoning By-Law Amendment and OMB Hearing Preparation
- Various Consent and Minor Variance Applications across central Ontario

### PUBLICATIONS

- Port, C. (February 2015). The Real Story, Avenues, Volume 5, Issue 1, pp 17-18 Port, C. (2015). Study of Aggregate Site Rehabilitation in Ontario, Part III, Study Addendum. The Ontario Stone, Sand, & Gravel Association.
- Port, C & Moos, M. (2014). Growing food in the suburbs: estimating the land potential for sub-urban agriculture in Waterloo, Ontario. Journal of Planning Practice and Research. 29(2), 152-170
- Port, C. (February 2014). Closing the Gap. Avenues, Volume 4, Issue 1, pp 10-13 Port, C. & Scott, M. (2014).
- Study of Aggregate Site Rehabilitation in Ontario, Part II, Consolidated Report 2010-2013. The Ontario Stone, Sand, & Gravel Association. Port, C. (2013). Reducing aggregate-related land use conflicts. Ontario Planning Journal, 28, 4 (pg.18)

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