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1. BACKGROUND

1.1 The Proposal

Greenwood Aggregates Limited is proposing to establish a licensed sand and gravel pit on lands described as Part Lots 30, 31 and 32, Concession 4 E.H.S., Town of Mono, in the County of Dufferin.

1.2 Approvals Required

To permit the aggregate operation, the following are required:

- approval of an amendment to the Town of Mono Official Plan, under the Planning Act;
- approval of an amendment to the Town of Mono Zoning By-law, under the Planning Act;
- issuance of a Class A Category 3 Pit License under The Aggregate Resources Act.

The amendment to the Town's Official Plan will change the land use designation of the property from 'Rural' to 'Extractive', as explained in Section 4.1 of this Planning Report..

The amendment to the Zoning By-law will rezone the subject lands from 'A' (Rural) to 'MX' (Extractive Industrial), as explained in Section 5 of this Planning Report.

The Class A Category 3 License would permit extraction of sand and gravel within an identified area above the established water table. The maximum amount of material to be extracted annually would be 1,000,000 tonnes. C.D. Laing Aggregate Management Services Ltd. is currently processing the license application in accordance with the regulations of the Aggregate Resources Act.

1.3 Purpose of this Report

Ron Davidson Land Use Planning Consultant Inc. has been authorized by Greenwood Aggregates Limited to submit the two above-noted Planning Act applications to the Town and provide a Planning Report that evaluates the proposed development within the context of sound land use planning principles.

2. SUBJECT PROPERTY AND ADJACENT LAND USES

2.1 Property Location, Ownership and Description

The lands subject to the proposed aggregate operation are located approximately six kilometres east of Primrose.

The site comprises four properties, as shown on Figure 1 to this Planning Report, which are owned respectively by S. Greenwood Holding Limited (one property) and 1682843 Ontario Limited (three properties). These two corporations fall under the ownership umbrella of Greenwood Aggregates Limited, which is operated by Mr. Sam Greenwood.

Collectively, Mr. Greenwood's holdings comprise 149.2 hectares and have frontages along Provincial Highway 89, 3rd Line East, 4th Line East and 30th Sideroad.

This large holding is bisected by 30th Sideroad. As such, the proposed licensed operation will involve two areas of extraction which are referred to throughout this Planning Report as the "north pit" and the "south pit".

A large percentage of the subject lands is currently in crop production. Hedgerows and trees are located along the fence lines and near the existing buildings. With regard to the existing buildings, three farmhouses and associated outbuildings are present on the site.

The west side of the north pit drops considerably in elevation and is mostly forested. This area will be situated within the licensed boundary but not in the area to be extracted. Lands within the northwest corner of the north lot and the southeast corner of the south lot are also forested, and will also be excluded from the extraction area.

The current use of the subject lands along with the topographical features of the site are illustrated on the Existing Features drawing prepared by Rolland Hyland Consulting.

2.2 Surrounding Land Uses

The subject lands are located to the east of the small settlement area of Violet Hill which comprises residences and two commercial operations. An estate residential subdivision exists to the north, along the opposite side of Provincial Highway 89.

The lands to the east and south of the site appear to be used predominantly for agriculture. Several non-farm residences also exist within the general vicinity of the subject lands.

The aerial photograph provided in Figure 2 to this Planning Report illustrates the land uses of the area. Figure 6 of the Summary Statement jointly prepared by Rolland Hyland Consulting and C.D. Laing Aggregate Management Services Ltd. identifies the location of each residence located within 500 metres of the subject lands.

3. THE PROPOSED PIT

3.1 The Material

The provincial Aggregate Resource Inventory identifies the subject property as being located within a "Selected Sand and Gravel Resource Area" of tertiary significance, as explained in the Summary Statement. A series of test pitting was conducted across the site to confirm the type and amount of aggregate existing on the property. According to the Summary Statement, approximately 24,652,887 tonnes of aggregate are available for extraction. This calculation is based on extraction maintaining a five metre buffer from the established water table. The type of products which can be produced from the materials encountered at this site include, but are not limited to, Granular "B", concrete, most general sand products, clear stone and Granular "A".

3.2 The Operation

Of the 149.23 hectares of land owned by Mr. Greenwood, the proposal is to license 146.5 hectares and extract 83.7 hectares.

The only portion of the Greenwood lands not subject to licensing are the 2.73 hectares located in the northeast corner of the property (adjacent to the Provincial Highway 89 / 4th Line East intersection), which is the area that has been identified as an archaeological site, as explained later in this Report. This excluded area is identified on Figure 1.

Extraction will occur over five phases, A through E, as shown on the Operations drawing. Activities will begin in Phase A, which is located in the southwest portion of the north pit, and move in an easterly and then northerly manner into Phases B and C respectively. Phases D and E are located in the south pit. Extraction in the south pit will move in a west/southwest fashion.

In order to meet market demand, extraction may occur in more than one operating phase at any given time provided noise controls are in place for that area.

Crushing, screening and washing of materials are proposed in the central section of Phase A, as shown on the Operational Plan.

Two of the three dwellings located within the licensed area will be removed, along with the associated farm buildings, in order to allow for extraction in those specific locations. These two dwellings must be vacated before extraction occurs within any portion of those two respective phases. The third dwelling is located outside of the extraction area and will remain on site.

As mentioned previously in this Report, the westerly portion of the north pit exhibits steep slopes. This area of the site will not be extracted. The other two aforementioned forested areas that exist on the subject lands, one within the north pit and the other in the south pit, will also not be extracted. Thirty metre buffer areas around the perimeter of these two forested areas will also be protected.

The standard extraction setback from municipal roads has been increased from 30 metres to 190 metres at its closest point from Provincial Highway 89. This provides for a large separation distance from the estate residential subdivision located along the north side of the highway. In a similar manner, the extraction setback from 4th Line East has been increased to 156 metres which will provide for additional buffer from the residences located along 4th Line.

Extensive berm construction will occur in various locations on the site. The specific berm requirements are shown on the Berm Phasing and Details drawing.

Equipment to be used on the site will include loaders, bulldozers, scrapers, trucks, crushers, screeners, conveyors and power plants. A scale and scale-house will be erected adjacent to the proposed entrance.

Concrete and asphalt will be imported for recycling within the area identified as the "Proposed Stationary Crushing, Screening and Washing Area", located in Phase 1.

Operations on the property will include a washing facility consisting of a lined closed loop system which will recycle water in ponds isolated above the water table. Approvals under the Ontario Water Resources Act will be obtained to allow for the use of water in the day-to-day operations.

Material removed from the south pit will be transported into the north pit for processing and eventual shipping from site through the main entrance. The movement of the material from the south pit to the north pit will occur through a controlled crossing of 30 Sideroad with gates and stop signs.

The maximum amount of aggregate to be removed from this site in any calendar year is 1,000,000 tonnes.

The hours of operation are as follows:

Shipping: Monday to Friday: 6:00 a.m. to 7 p.m.
 Saturday: 6:00 a.m. to 12:00 p.m.

Other operations: Monday to Friday: 7:00 a.m. to 7:00 p.m.

Additional information regarding the operation of the proposed pit is provided on the Operations drawing.

3.3 Haulage Route

Haulage trucks associated with this pit will utilize an entrance proposed along the Provincial Highway, subject to the approval of the Ministry of Transportation. According to the Summary Statement, 75 percent of the trucks will head east upon leaving the site while the remaining 25 percent will travel west. If direct access to the Provincial Highway is permitted, no local roads will be required for use as a haul route.

Recommended road improvements to the Provincial Highway will include left and right turning lands at the site's entrance, along with appropriate tapers, storage and run-out lanes. These improvements will be staged over the first few years of operation.

3.4 Rehabilitation

The subject lands consist of two layers of aggregate material: a layer of gravel on top, and sand underneath. The operator will remove the gravel first, and then return to remove the slower-selling sand at a later time. As such, progressive rehabilitation will occur into two stages. The gravel layer will be excavated first, followed by progressive interim rehabilitation consisting of a thin layer of topsoil and seed. Side-slope rehabilitation will also be completed during this interim rehabilitation stage. When the operator is ready to extract the layer of sand, the thin layer of topsoil will once again be removed. Once the sand has been extracted to the final pit floor depth at five metres above the water table, final rehabilitation will be completed.

In order to control the amount of exposed area at any one time, the amount of active extraction area (not including land that has been temporarily rehabilitated, as explained above) shall not exceed 25 hectares.

Final rehabilitation measures include the spreading of topsoil and overburden that was stored separately in stockpiles and berms. Perimeter slopes will be graded to 3:1 or less, and then topsoiled and seeded with low maintenance grass/clover mix. Longer term side slopes will naturally revegetate with woody species.

When rehabilitation is complete, a total of 52.6 hectares will be restored to an agricultural use, and the remaining 31.1 hectares will become natural areas. The natural areas will be primarily the rehabilitated slopes which will be constructed at a scale of 3:1.

When the final grades have been established, areas of the pit floor including any internal haul roads that have become compacted will be mechanically ripped or tilled to ensure proper drainage. All overburden and topsoil originating from the site will be applied sequentially to the pit floor and side slopes. After the application of topsoil to the rehabilitated areas, it will be prepared for seeding by fine grading or agricultural tilling. All rehabilitated areas will be seeded with a grass legume mixture that is compatible with the soil conditions.

Vegetation that has been planted will be maintained in a healthy growing condition. Should any vegetation die, it will be replaced within one growing season. Additional information regarding the rehabilitation of the site is provided on the Progressive and Final Rehabilitation Plan.

3.5 Site Plans and Background Reports

A series of Site Plans and background reports has been prepared by a team of consultants specializing in various areas of expertise. The recommendations of the background reports were integral to the designing of the proposed pit and have been incorporated into the Site Plans.

Copies of all drawings and reports completed in regard to the propose pit operation have been submitted to the Town in conjunction with this Planning Report and the applications to amend the Town's Official Plan and Zoning By-law. The same information was also circulated to the various commenting agencies as part of the Aggregate Resources Act application review process.

A general description of the various documents prepared in support of the proposed pit is provided below.

3.5.1 Site Plans

The Site Plans prepared by Rollings Hyland Consulting illustrate existing conditions, proposed operations and progressive and final rehabilitation. The Site Plans form the basis of the pit license application under the Aggregate Resources Act and also form an integral part of the review process of the proposed Official Plan Amendment and Zoning By-law Amendment applications. The Site Plans are labelled as follows:

- Page 1: Existing Features
- Page 2: Operations
- Page 3: Progressive and Final Rehabilitation
- Page 4: Sections
- Page 5: Berm Phasing and Details

The Site Plans were prepared taking into consideration the requirements of the Aggregate Resources Act, the County of Dufferin Official Plan, the Town of Mono Official Plan and the Provincial Policy Statement, as well as the recommendations of the consultants retained on behalf of Greenwood Aggregates Limited.

3.5.2 Summary Statement

A Summary Statement, as referenced earlier in this Planning Report, has been prepared by Rollings Hyland Consulting in conjunction with C.D. Laing Aggregate

Management Services. This document provides a detailed overview of the proposed development.

3.5.3 Aggregate Investigation

Geological Investigations conducted an aggregate review of the property and determined that 45,118,798 tonnes of sand and gravel is available for extraction on the subject lands, and that the material found on this site will produce quality aggregate materials.

It should be noted that this figure was reduced to 24,652,887 tonnes after factoring in the extraction buffer areas and the five metre setback from the established water table.

3.5.4 Level 1 and Level 2 Hydrogeological Assessment

Whitewater Hydrogeology Ltd. was retained by Greenwood Aggregates Limited to undertake a hydrogeological assessment of the aggregate operation. The consultant determined that the groundwater and surface water regimes will not be affected by the proposed operations, and as such, there will be no measureable influence from the proposed above-water operation on the groundwater system (including quality and quantity of water to domestic water wells) and the surface water system.

The Assessment included a series of recommendations pertaining to the operation of the pit including the continued on-site monitoring of groundwater.

3.5.5 Natural Environment Level 1 and 2 Technical Report

Robin E. Craig, B.Sc., M.Sc., Certified Wildlife Biologist conducted a Natural Environmental Level 1 and 2 Technical Report. The purpose of the Level 1 component of this Report was to document the presence of significant natural heritage features and fish habitat on the study area and on the adjacent lands within 120 metres of the site. The purpose of the Level 2 component was to assess the negative impacts of an aggregate operation on all documented natural features and to propose preventative, mitigative or remedial measures where necessary. The natural heritage features that were assessed are:

- significant wetlands
- significant portions of the habitat of endangered and threatened species;
- significant Areas of Natural and Scientific Interest (ANSI);
- significant woodland;
- significant valley lands;

- significant wildlife habitat; and,
- fish habitat.

A portion of the Provincially Significant Wetland Violet Hills Wetland Complex is located within 120 metres of the westerly boundary of the site. To protect this feature, an extraction setback of at least 150 metres has been established. Vegetation communities present along the west boundary of the licence adjacent to the wetland will be retained so that wetland ecological functions of these lands will continue. There will be no negative impacts to the wetland or its ecological functions.

Butternut, an endangered species, along with Barn Swallow and Eastern Meadowlark, both threatened species, were found on the property. A total of 26 Butternut were found in the north woodland, all of which will be: clearly marked; excluded from the extraction limit; and, protected by minimum 25 metre setbacks. There will be no negative impact to these Butternut trees. Before any land clearing occurs, a Butternut survey and health assessment will be completed within the area to be cleared for extraction by a qualified professional. Prior to operations occurring, it must be demonstrated to the satisfaction of the Ministry of Natural Resources and Forestry (MNR) that the Endangered Species Act requirements related to protecting Butternut have been met. With regard to the Barn Swallow, certification of a Notice of Activity under the Endangered Species Act to alter (remove) Barn Swallow nesting habitat has been received from MNR. New habitat will be created for Barn Swallows and all other of the exemption guidelines set out in O. Reg. 242/08 Section 23.5 will be adhered to. Also, Eastern Meadowlark habitat within the licence area will be excluded from the extraction limit. There will be no negative impacts to Meadowlark habitat on the site. Endangered bat maternity habitats were not searched for but there is the potential for these habitats within the north and south woodlands of the site and within the components of these woodlands adjacent to and contiguous with the site. All woodland areas on the property will be excluded from the extraction limit and protected by minimum 30 metre setbacks. There will be no negative impact to these potential bat maternity habitats. In addition, there were two threatened species, Bobolinks and Eastern Meadowlarks, observed on lands adjacent to the licence area. Buffer areas and setbacks from the operation of the pit will ensure no negative impacts to these species. Mitigation has been proposed to ensure that prior to land clearing for extraction appropriate surveys will be completed to search for other or newly listed endangered or threatened species. If found, the site plans may be changed or, if possible, exemptions and/or approvals will be sought under the Endangered Species Act or its regulations.

There were significant woodlands found on and adjacent to the site. All woodlands will be excluded from the extraction limit and protected by minimum 30 metre setbacks. Dust control measures will also be implemented as required to protect vegetation and wildlife within the woodlands.

There are significant wildlife habitats found on the property including shrub/early successional habitat and Eastern Wood Pewee habitat. Neither will be negatively impacted by the proposal because they will be excluded from the extraction limits.

The quality and quantity of surface and groundwater leaving the site could potentially impact fish habitat off site. Surface water leaving the site is minimal and there will be no negative impact to quantity or quality. Proposed mitigation to protect ground water leaving the site includes: storing fuel and maintaining equipment in the fuel and maintenance area in accordance with Provincial legislation; preparing, implementing and enforcing a Spills Response Plan; monitoring groundwater to ensure the pit floor stays five metres above the water table; and, ensuring that the quality of groundwater leaving the site meets Provincial standards.

An aggregate application on this property would therefore meet the test of OMNR standards that require no existing natural feature to be impacted by the proposal. The proposal will also meet the test and the intent of the Provincial Policy Statement pertaining to the protection of the natural heritage features.

3.5.6 Erosion Hazard Study

C.C. Tatham & Associates Ltd. was retained to establish the erosion hazard limit associated with the watercourses and steep slopes on the subject property. Specifically, the purpose of the analysis was to confirm that the extraction area of the pit is located outside of the erosion hazard limited.

The results of the assessment revealed that the proposed extraction area is outside of the erosion hazard limit.

3.5.7 Traffic Review

C.C. Tatham & Associates Limited conducted a review of the proposed pit operations from a transportation perspective. The study addressed site access, site traffic volumes and the potential impacts to the adjacent road system.

The consultant determined that under future traffic conditions, for the years 2020 and 2025, site access will provide excellent levels of service with minimal delays. Operations at the site access and along Highway 89 will remain under capacity.

There are constraints along the 3rd Line East relating to grades, topography and natural features that preclude access via the 3rd Line East. As well, sight distances at the intersection of 4th Line East with Highway 89 do not satisfy the minimum MTO requirements for stopping sight distance and therefore access via the 4th Line is not recommended. As such, direct access to Highway 89 is proposed.

Sight distances on Highway 89 at the proposed entrance exceed the Ministry of Transportation guidelines for stopping sight distance for the assumed design speed of

100 kilometres per hour (185 metres). No improvements to address sight distance issues are recommended.

The following improvements were recommended on Highway 89 at the site access to accommodate site traffic when operating at its extraction limit (1,000,000 tonnes per year):

- a right turn taper (60 metres in length and to a width of 3.5 metres) should be provided for the eastbound right turn movement to reduce the long-term maintenance needs for this corner (in consideration of right turning trucks); and
- a left turn lane (15 metre storage + 70 metre parallel lane + 160 metre taper) in addition to a run-out lane (160 metres) is warranted under the 2015, 2020 and 2025 horizons.

The improvements stated above are based on the site operating at its extraction limit of 1,000,000 tonnes per year and the resulting truck volumes that will be generated. Consideration should be given to a staged approach for the road improvements that reflects the actual amount of material to be extracted and shipped, recognizing that the actual amounts will likely be less, particularly during the opening few years. This will also allow the site to be in operation prior to the road improvements being required such that aggregate material from the site can be used in the construction.

3.5.8 Sound Impact Analysis

Valcoustics Canada Ltd. conducted a Sound Impact Analysis to identify the potential noise sources associated with the pit, outline the sound exposure levels expected at surrounding neighbours during the operation of pit, and, provide recommendations for mitigation measures required to meet the Ministry of the Environment and Climate Change (MOECC) environmental noise guidelines.

The consultant concluded that with the appropriate implementation of the mitigation measures outlined herein, the sound exposures from the worst case daily operations will be in compliance with MOECC noise guideline limits.

As the operation moves over the site, the elevation, distance and sound exposure vary relative to off-site receptors. Thus, the noise analysis has been approached on the basis of determining worst case conditions to ensure that the data presented does not under-predict the potential off-site sound exposures. The interpretation of the sound exposure predictions must take this into account. Along the off-site haul route, noise impacts of up to 5 dBA are predicted.

To mitigate the resultant sound exposures at the off-site receptor locations in accordance with the MOECC guidelines, and to minimize the potential off-site noise impacts, the consultant recommends:

- Typical hours of operation should be restricted to between 7:00 a.m. and 7:00 p.m.;
- Shipping activity can be one hour earlier, i.e. 6:00 a.m.;
- Construction and rehabilitation activities should only be permitted between 7:00 a.m. and 7:00 p.m., Monday to Friday;
- The noise mitigation measures and the berming requirements shown on Figures 4 and 5 respectively of the Sound Impact Analysis should be incorporated into the site plans. It should be noted that all of the berms are not required all of the time. The berms required for a particular phase must be constructed prior to extraction occurring within that phase.
- Equipment that is used for the construction and rehabilitation activities must comply with the maximum sound emission limits outlined in MOECC Publication NPC-115. If additional or other equipment is to be used on the site for non-construction or rehabilitation activities, the noise impact assessment needs to be updated and any mitigation recommendations implemented prior to this equipment operating on the site.

With the noise mitigation measures outlined above, the worst case sound exposures will comply with the MOECC noise guidelines at all off-site receptor locations.

It should be noted that Greenwood Aggregates Limited retained RWDI AIR Inc. to conduct a high-level peer review of the study conducted by Valcoustics Canada Ltd. The peer reviewer generally agreed with the Sound Impact Study but did identify certain sections of the Study that needed additional information. Following the peer review, the original Sound Impact Study was amended accordingly.

3.5.9 Air Quality Assessment Report

Trinity Consultants prepared an Air Quality Assessment Report to assess compliance of the proposed operation within the pit in accordance with the Ministry of Environment and Climate Change (MOECC) standards and guidelines for air quality.

The results show that all points of impingement concentrations are below current MOECC criteria. This conclusion is based on the assumption that there will be control measures (i.e. berms) in place at the pit, which are considered to be an appropriate and practical mitigation for pits, and that all material being excavated, as well as on-site roads, will have the expected high moisture level. If this were found not to be the case, dust mitigation would have to be implemented, such as: water spray system in crushing/screening plant; water truck for unpaved roadways; and/or watering of storage piles in the event that they become dry and dusty. In addition, these conclusions are contingent upon adherence to the maximum operating scenarios of twelve hours in any given work day.

A peer review of the Air Quality Assessment Report was also undertaken by RWDI AIR Inc. This review resulted in several changes to the original report, as reflected in the final version of the Air Quality Assessment Report.

3.5.10 Agricultural Impact Assessment

DBH Soil Services Inc. conducted this study to determine the potential impact of the proposed pit on the agricultural lands within the immediate vicinity of the subject lands.

The Aggregate Impact Assessment determined that the subject lands and the surrounding area comprise non-prime agricultural lands and that a considerable amount of parcel fragmentation has occurred in this area of the Municipality. The Assessment concluded that the proposed pit operation would have minimal impact on the surrounding agricultural activities in this area.

3.5.11 Stage 1 and 2 Archaeological Resource Assessment

Archaeological Consultants & Contractors conducted two Stage 1 and 2 Archaeological Resource Assessments for the subject lands. The first assessment applied to the lands best described as the north portion of the north pit, while the second assessment was conducted for the remainder of the site.

During these field assessments, the northeast corner of the site (adjacent to the Provincial Highway 89 / 4th Line East intersection) was documented as a nineteenth century Euro-Canadian site. This potentially represents a single-family, early and early-to-mid nineteenth century home occupation. Due to this finding, the consultant recommended that this site either be protected by establishing a 20 metre buffer with a silt fence and a 50 metre monitoring zone or that a Stage 3 assessment be conducted to further investigate and precisely refine the site's character and extent. Greenwood Aggregates Limited chose to simply avoid this portion of the property entirely by excluding these lands from the licensed area. The license boundary has been set back 100 metres from this archaeological site, a berm will be constructed 150 metres from the site and no extraction will occur within 200 metres.

4. LAND USE POLICY ANALYSIS OF THE APPLICATION

The subject lands fall within the Planning jurisdiction of the County of Dufferin Official Plan and the Town of Mono Official Plan. This Report will evaluate the proposed extraction operation within the context of both Official Plans as well as the Provincial Policy Statement.

4.1 County of Dufferin Official Plan

4.1.1 Land Use Designation

The subject lands are shown on Schedule C (Agricultural Area and Rural Lands) to the Dufferin County Official Plan as 'Rural Lands', as illustrated on Figure 3 to this Planning Report.

According to Section 4.3 *Rural Lands*, specifically Section 4.3.2 *Permitted Uses*, one of the primary uses of land within the 'Rural Lands' designation will be for:

" the management or use of resources, such as forestry and mineral aggregate operations."

Comment: As such, an extractive industrial operation may be permitted within this designation without an amendment to the County Official Plan, subject to compliance with all other relevant Official Plan policies.

4.1.2 Aggregate Deposits in Dufferin County

The objectives of the County as they relate to aggregate are contained in Section 4.4 *Management of Mineral Aggregate, Minerals and Petroleum Resources* and state the following:

4.4.1 Objectives

The County's objectives related to the management of minerals, mineral aggregate resources and petroleum resources include:

- a) *Protect deposits of mineral aggregate resources and areas of potential mineral aggregate resources for potential future extraction.*
- b) *As much of the mineral aggregate resources as is realistically possible will be made available as close to markets as possible.*
- c) *Recognize existing pits and quarries, and protect them from activities that would preclude or hinder their continued use or expansion.*

- d) *The development of new pits and quarries, and petroleum exploration and production are in accordance with the natural heritage policies of this Plan.*
- e) *Provide a framework for mineral aggregate operations such that they are carried out in a manner that minimizes potential negative social, economic and environmental impacts.*
- f) *Provide for the progressive rehabilitation of pits and quarries to an appropriate after-use.*

Comment: The above policies stress the importance of protecting existing aggregate deposits for future extraction while ensuring that such activities have minimal social, economic and environmental impacts.

The general policies for aggregate resources are as follows (edited for relevancy):

4.4.2 Mineral Aggregate Resources

The extraction of mineral aggregate resources will be undertaken in a manner which minimizes social, economic and environmental impacts and the appropriate use and management of mineral aggregate resources.

Deposits of mineral aggregate resources are identified by the Ministry of Northern Development and Mines in the Aggregate Resources Inventory of Dufferin County, Paper 163-Revision 2, 2014, and are identified on Schedule D, in addition to identified mineral aggregate resources.

It is the policy of the County that:

- a) *In accordance with the Provincial Policy Statement, and the policies of this Plan, mineral aggregate resources will be protected for long-term use. Significant mineral aggregate resources are identified on Schedule D, which include significant sand and gravel resources and bedrock mineral aggregate resource areas. The identification of significant mineral aggregate resources does not presume that all lands located within these areas are suitable for the establishment of new or expansions to existing mineral aggregate operations. Furthermore, it is recognized that there is potential for deposits of mineral aggregate resources to exist outside of the areas identified on Schedule D for which there were no records existing at the time this Plan was prepared. The extraction of mineral aggregate resources may be permitted outside of the mineral aggregate resource areas identified on Schedule D where there is a sufficient quantity and quality of mineral aggregate resources to warrant extraction.*

Comment: Only a very small section of the subject lands are identified on Schedule D (see Figure 4 to this Planning Report) as having a significant sand and gravel deposit, and those particular lands are located outside of the

proposed extraction area. (The 'Sand and Gravel Resource Area' has been placed on a large area to the immediate west of the site.) Notwithstanding the exclusion of the subject lands from this aggregate designation, Geological Investigations conducted an aggregate review of the property and determined that 45,118,798 tonnes of sand and gravel is available for extraction on the subject lands, and that the material found on this site will produce quality aggregate materials. It should be noted that this figure was reduced to 24,652,887 tonnes after factoring in the extraction buffer areas and the five metre setback from the established water table. Based on this information, there is sufficient quantity and quality of mineral aggregate resources on the subject lands to warrant extraction.

- d) *Deposits of mineral aggregate resources and mineral aggregate resource operations will be identified in the local municipal official plans.*

Comment: As mentioned above, Schedule D (Mineral Aggregate Resources Areas) of the local Official Plan does not identify the subject lands as having a significant aggregate deposit.

- e) *Mineral aggregate resource conservation will be undertaken, including through the use of accessory aggregate recycling facilities within operations, wherever feasible.*

Comment: The proposed pit operations will include the recycling of used concrete and asphalt.

4.1.3 New Pits

The following policies apply to new pits and quarries in Dufferin County (edited for relevancy):

4.4.2.1 New or Expanding Mineral Resource Operations

New or expanding mineral aggregate resource operations will be managed in a manner which minimizes social, economic and environmental impacts and the appropriate use and management of mineral aggregate resources.

It is the policy of the County that:

- a) *New mineral aggregate resource operations or any expansion to an existing mineral aggregate resource operation that extends beyond the lands identified in the local municipal official plan will require an amendment to the local municipal official plan, and will conform to the policies of this Plan and the local municipal official plan. An amendment to this Plan will not be required for new or expanding mineral resource operations.*

Comment: The above policy confirms that an amendment to the County Official Plan is not required. A local Official Plan Amendment, however, is necessary.

d) *In considering new mineral aggregate resource operations or any expansion to an existing mineral aggregate resource operation, the County and local municipality will be satisfied that prior to approval of a local municipal official plan amendment that impacts are minimized with respect to the following:*

- i. *surrounding land uses and siting of extraction operations, including demonstrating compatibility with the rural character and landscape, including visual impacts;*
- ii. *surrounding sensitive uses through adequate buffering, screening, and other mitigation measures;*

Comment: The proposed aggregate operation has been designed in a manner that strives to minimize the potential impacts on the adjacent land uses. In this regard, the site plans have incorporated the recommendations of a series of background studies including the Sound Impact Analysis and the Air Quality Assessment Report, both of which are intended to protect the neighbouring land owners from the noise, odour, dust and visual aspects of a licensed pit. The extensive berming that has been proposed along the perimeter of most of the extraction area, as shown on the Operations drawing, is an important component of the buffering and screening measures.

By having the haulage trucks enter and exit the gravel pit directly to/from the Provincial Highway, the adjacent Town roads will not form part of the haulage route. This will lessen the overall potential impact of the pit on the neighbouring property owners.

Although the pit will be well-screened from public view, progressive rehabilitation will occur to ensure compatibility with the rural landscape.

- iii. *transportation infrastructure, particularly as it relates to County Roads and Provincial Highways;*

Comment: The Traffic Review conducted by C.C. Tatham & Associates Limited addressed site access, site traffic volumes and the potential impacts to the adjacent road system. The consultant determined that under future total traffic conditions, for the years 2020 and 2025), the site access will provide excellent levels of service with minimal delays. Operations at the site access and along Highway 89 will remain under capacity. The Review also recommended direct access to/from Provincial Highway 89.

Improvements pertaining to a right taper lane and a left turning lane were also recommended.

iv. surface water and groundwater quality and quantity, provincially significant natural features, natural heritage features and areas, and the environment;

Comment: The Natural Environment Technical Report and the Hydrogeological Assessment collectively demonstrated that the proposed pit operations would have no impact on surface water, groundwater, natural heritage features and the environment in general.

v. social and community considerations;

Comment: The team of consultants responsible for designing this aggregate operation has made every effort to lessen the potential impact on the neighbourhood to the greatest extent possible.

vi. cultural heritage and archaeological resources;

Comment: The Archaeological Assessments conducted for this development proposal resulted in a finding of archaeological significance in the northeast corner of the site. Those particular lands have been removed from the licensed area and will be protected as per the recommendation of the consultant.

vii. noise, dust and vibration, in accordance with Provincial Standards;

Comment: The Sound Impact Analysis and the Air Quality Assessment Report have collectively demonstrated that the pit, as proposed, will operate in accordance with the Provincial Standards with regard to noise and dust. There should be no vibration associated with the pit since there will be no blasting or drilling.

viii. the removal and placement of fill, topsoil or overburden;

Comment: All topsoil and overburden stripped from the site will be stored separately on the property and used to construct berms, and later restored as part of the rehabilitation efforts. Clean inert fill may be imported for the construction of the berms. The material will be tested at the source to ensure the material meets the requirements of the Ministry of the Environment and Climate Change.

ix. demonstration that the final rehabilitation plan is consistent with the policies of this Plan and the local municipal official plan;

Comment: Compliance with the rehabilitation policies of the County Official Plan and the local Official Plan will be demonstrated later in this Planning Report.

- x. *other matters identified by the Province, County, or local municipality, or identified in the local municipal official plan; and*

Comment: This Report is attempting to demonstrate compliance of the proposed pit with all relevant policies of the Province, County and Town.

- xi. *requirements under the Aggregate Resources Act.*

Comment: The site plans have been prepared in accordance with all applicable requirements of the Aggregate Resources Act.

- f) *A pre-application consultation meeting with the Province, County, local municipality and applicable Conservation Authority will be required to ensure that any specific requirements for each of the agencies are addressed to avoid overlap among the required studies, and such that the studies can satisfy all the requirements of the identified agencies. Following the pre-application consultation meeting, the County and/or local municipality to the extent of its jurisdiction, may appropriately scope, waive, or establish a peer review or other suitable evaluation process for any required study, at the expense of the applicant.*

Comment: Pre-consultation with the Town, County, Conservation Authority and the Province occurred for the several months leading up to the submission of the Planning Act applications and the circulation of the Aggregate Resources Acts license application package.

- h) *The County will encourage the Province to ensure that all appropriate requirements resulting from the review of an application for a new or expanding mineral aggregate operation are imposed and enforced as conditions on the license or through the site plan required under the Aggregate Resources Act, particularly as it relates to the matters identified in Section 4.4.2.1 c).*

Comment: Requirements deemed appropriate should be imposed through the licensing process.

4.4.2.2 *Rehabilitation*

The County will require the rehabilitation of mineral aggregate resource operations after the extraction and other related activities has ceased.

It is the policy of the County that:

- a) *Progressive and final rehabilitation will be required to accommodate subsequent land uses, to promote land use compatibility, to recognize the interim nature of extraction, and to minimize impacts, to the extent possible. Final rehabilitation will take into consideration the pre-extraction land use designation and conditions, and*

compatibility with the character of the surrounding land uses and approved land use designations, in consideration of the County Plan and local municipal official plan, as well as the opportunity to accommodate parks and open space uses.

Comment: The subject lands consist of two layers of aggregate material: a layer of gravel on top, and sand underneath. The operator will remove the gravel first, and then return to remove the slower-selling sand at a later time. As such, progressive rehabilitation will occur into two stages. The gravel layer will be excavated first, followed by progressive interim rehabilitation consisting of a thin layer of topsoil and seed. Side-slope rehabilitation will also be completed during this interim rehabilitation stage. When the operator is ready to extract the layer of sand, the thin layer of topsoil will once again be removed. Once the sand has been extracted to the final pit floor depth at five metres above the water table, final rehabilitation will be completed. In order to control the amount of exposed area at any one time, the amount of active extraction area (not including land that has been temporarily rehabilitated, as explained above) shall not exceed 25 hectares.

Final rehabilitation measures includes the spreading of topsoil and overburden that was stored separately in stockpiles and berms. Perimeter slopes will be graded to 3:1 or less, topsoiled and seeded with low maintenance grass/clover mix. Longer term side slopes will naturally revegetate with woody species.

When rehabilitation is complete, a total of 52.6 hectares will be restored to an agricultural use, and the remaining 31.1 hectares will become natural areas. The natural areas will be primarily the rehabilitated slopes which will be constructed at a scale of 3:1. The rehabilitated lands will be compatible with the surrounding area.

b) Comprehensive and coordinated rehabilitation planning is encouraged where there is a concentration of mineral aggregate operations.

Comment: No other aggregate operations existing within close proximity of the subject lands. As such, coordinated rehabilitation planning is not possible.

c) In prime agricultural areas, on prime agricultural land the extraction of mineral aggregate resources is permitted as an interim use provided the site will be rehabilitated back to an agricultural condition. Complete rehabilitation back to an agricultural condition is not required if:

i. there is a substantial quantity of mineral aggregate resources below the water table warranting extraction, or the depth of planned extraction in a quarry makes restoration of pre-extraction agricultural capability unfeasible;

- ii. *other mineral aggregate resource extraction alternatives have been considered by the proponent and found unsuitable. The consideration of other mineral aggregate resource extraction alternatives will include mineral aggregate resources in areas of Canada Land Inventory Class 4 through 7 lands, resources on lands identified as settlement areas, and, resources on prime agricultural lands where rehabilitation is feasible. Where no other alternatives are found, prime agricultural lands will be protected in this order of priority: Canada Land Inventory Class 1, 2 and 3 lands; and*
- iii. *agricultural rehabilitation in remaining areas is maximized.*

Comment: The subject lands are not considered to be prime agricultural lands. The site comprises of lands rated as Classes 4, 5 and 6 on the Canada Land Inventory soil capability mapping. That notwithstanding, most of the disturbed lands will be rehabilitated to an agricultural use.

4.1.4 Natural Environment

The following policies pertaining to the protection of the natural environment are relevant to the proposed aggregate operation (edited for relevancy):

5.2 Natural Heritage System Strategy Framework

It is the policy of the County that:

- a) *The County and local municipalities, in cooperation with the Ministry of Natural Resources, Niagara Escarpment Commission and Conservation Authorities, will undertake a County-wide Natural Heritage System Strategy (NHSS) to identify, map and detail natural heritage features and areas, as well as surface water features and groundwater features, including the form and function of the identified features, and to identify linkages and connections between these features. The NHSS will reinforce the protection, restoration, or, where possible, the enhancement of identified natural heritage features and areas, and promote the overall diversity and interconnectivity of natural heritage features, functions and areas. The County will undertake a County-wide Natural Heritage System Strategy at the time of the first County Official Plan Review, which will be implemented through an amendment to this Plan. Schedule E identifies the Provincially Significant Wetlands, Areas of Natural and Scientific Interest, woodlands, and unevaluated wetlands which should form the basis for the identification of the natural heritage system. The identification of natural heritage features and areas, and related policies are provided in Section 5.3. A preliminary County-wide natural heritage system is illustrated on Schedule E1, which includes the Provincial Plan natural heritage systems, as well as the natural heritage features and areas that are identified on Schedule E, in addition to watercourses, and associated flooding hazards, steep slopes, unstable soils and erosion hazards, which establish linkages between the natural heritage features and areas. The Provincial Plan*

natural heritage systems include the Escarpment Natural Area and Escarpment Protection Area of the Niagara Escarpment Plan, the Natural Heritage System of the Greenbelt Plan, and the Natural Core Area and Natural Linkage Area of the Oak Ridges Moraine Conservation Plan.

5.3 Natural Heritage Features and Functions

The County encourages the protection, restoration, or where possible, enhancement of natural heritage features and associated functions. While the location and significance of these features has yet to be determined in some cases, all of these features need to be considered when applications for development and site alteration are being evaluated. It is recognized that additional natural heritage features will be identified by the County, local municipalities, applicable Conservation Authority's and/or the Ministry of Natural Resources.

Schedule E is intended to reflect the following known natural heritage features and areas:

- a) Provincially Significant Wetlands (which are also designated on Schedule B);*
- b) Provincially Significant Areas of Natural and Scientific Interest (ANSI), including Earth Science and Life Science ANSI's;*
- c) Woodlands; and*
- d) Unevaluated wetlands and locally or regionally significant wetlands.*

The boundaries of these features and areas are considered to be approximate, and their boundaries may be further refined without an amendment to this Plan.

An ecological site assessment by a qualified professional will be required for development applications where natural vegetation or landscape features exist on or near the property.

Where natural heritage features and areas are identified, a more detailed assessment of the feature will be undertaken to determine the significance of the natural heritage feature and areas.

Where any land within a Provincially Significant Wetlands designation on Schedule B or a natural heritage feature and area identified on Schedule E is held under private ownership, this Plan will not be construed as implying that such areas are free and open to the general public.

The local municipal official plans will provide more detailed policy guidance with respect to the identification and protection of natural features and areas, and consistent with the policies of this Plan.

Development and Site Alteration

- a) *Development and site alteration will not be permitted in significant wetlands.*
- b) *Development and site alteration will not be permitted in
 - i. *significant woodlands;*
 - ii. *significant valleylands;*
 - iii. *significant wildlife habitat; and,*
 - iv. *significant areas of natural and scientific interest,*

*unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.**
- c) *Development and site alteration will not be permitted in fish habitat except in accordance with Provincial and Federal requirements.*
- d) *Development and site alteration will not be permitted in habitat of endangered species and threatened species, except in accordance with Provincial and Federal requirements.*
- e) *Nothing in the policies of Section 5.2 and 5.3 are intended to limit the ability of agricultural uses to continue.*

Comment: Schedule E (Natural Heritage Features) to the Official Plan identifies Provincially Significant Wetlands, ANSI's and Woodlands. As shown on Figure 5 to this Planning Report, Woodlands do exist on the subject property. These same areas are shown on Schedule E-1 (Natural Heritage Features) as a 'County Preliminary Natural Heritage System', as illustrated on Figure 6. The Natural Environment Technical Report has demonstrated that this natural heritage feature and related system will be protected from operations.

Because of the scale of the County mapping, it must be understood that the features on Schedules E and E-1 are not provided with a high degree of accuracy. The location of the 'Woodland' and its associated 'County Preliminary Natural Heritage System' on Schedules E and E-1 respectively, as illustrated on Figures 5 and 6, are only approximate. A more precise location of these features is provided in the Natural Environment Technical Report.

Schedule B (Community Structure and Land Use) to the Official Plan identifies the 'Provincially Significant Wetlands' within the County. The lands to the west of the subject lands, across 3rd Line East are shown as a 'Provincially Significant Wetland', as illustrated on Figure 7 of this Planning Report. The Natural Environment Technical Report has considered this

natural heritage feature and has determined that the 150 metre separation distance between the wetland and the extraction area will adequately protect the wetland from potential impacts from the pit.

With regard to threatened and endangered species, Butternut trees (endangered) were found on the property, and all have been excluded from the extraction area, and 25 metre setbacks will be established for further protection. Barn Swallow and Eastern Meadowlark (threatened) were found on the property. New habitat will be created for the Barn Swallows in accordance with the Endangered Species Act. Eastern Meadowlark habitat within the licence area will be excluded from the extraction limit. There will be no negative impacts to Meadowlark habitat on the site according to the Natural Environment Technical Report.

Also, there are significant wildlife habitats found on the property including shrub/early successional habitat and Eastern Wood Pewee habitat. Neither will be negatively impacted by the proposal because the habitat will be excluded from the extraction limits.

The Natural Environment Technical Report, which also serves as an Environmental Impact Study (EIS), has been prepared in accordance with the EIS policies contained in the County Official Plan (not provided in this Planning Report). The EIS has demonstrated that the proposed aggregate operation would have no negative impacts on the various natural heritage features identified in the Official Plan or their functions.

4.1.5 Water Resources and Source Water Protection

Section 5.4 *Water Resources and Source Water Protection* of the County Official Plan states the following (edited for relevancy):

5.4.2 Sourcewater Protection

It is the policy of the County that:

- a) *The County and local municipalities will support and participate in initiatives that implement the Clean Water Act, where necessary and appropriate, and ensure coordination amongst local municipalities. It is recognized that at the time this Plan was prepared Source Protection Plans are in the process of being approved. Once the Source Protection Plans are approved, an amendment to this Plan and the local municipal official plans will be required to implement the Source Protection Plans through appropriate official plan policies and mapping. Until such time as these Plans are amended, the local municipal official plans will continue to provide policy guidance with respect to the protection of source water drinking water sources, including designated vulnerable areas, wellhead protection areas, significant groundwater recharge areas, and areas susceptible to groundwater*

contamination and depletion. Appendix 2 illustrates boundaries of the Source Protection Plans applicable to the County, and identifies the municipal wellhead protection areas and vulnerable aquifer areas based on the associated Source Protection Assessment Reports. (Modification 11a subject to appeal)

- b) The County and local municipalities will support the implementation of restrictions on development and site alteration to protect all municipal drinking water supplies and designated vulnerable areas, and protect, improve or restore vulnerable and sensitive surface and ground water features and their hydrologic functions.*
- c) Prior to the approval of development applications within designated vulnerable areas, the proponents shall demonstrate to the satisfaction of the County, local municipality, Conservation Authority and Province, where necessary, that the quality and quantity of municipal drinking water sources will not be negatively impacted.*

Comment: Appendix 2 (Source Water Protection) to the Official Plan (see Figure 8 to this Planning Report) identifies the subject lands as being situated within a 'Significant Groundwater Recharge Area'. The 'Vulnerable Aquifer' rating for the lands within the extraction area is "Low". Some of the lands located along the western boundary of the site, but outside of the extraction area, have a "high" rating. The Hydrogeological Assessment considered this matter and stated following:

The closest municipal water supply is located in the community of Rosemont, which obtains its groundwater supply from both the overburden and bedrock aquifer. The proposed Violet Hill Pit is located 5.3 km from the delineated Rosemont Well Head Protection Areas (WHPAs). Although the proposed pit is located outside of a municipal WHPA, the assessment has included a review of the groundwater/aquifer vulnerability in the area. Groundwater vulnerability is reported to be "low" at the proposed Violet Hill Pit property, with the exception of limited area along the western property boundary, which is delineated as an area underlain by a Highly Vulnerable Aquifer (HVA) due to the thin unsaturated overburden thickness. The proposed change in land use from agriculture to aggregate extraction may increase the vulnerability; therefore it is important to assess the threats (if any) associated with an aggregate operation. A recent study by MNRF to assess the role of the aggregate industry and associated lands in the context of source water programs did not find any documented scientific evidence linking the extraction and processing of stone, sand and gravel as a threat to drinking water sources. The Province of Ontario has identified 21 prescribed drinking water threats under the Clean Water Act, nineteen of which relate to water quality and two to water quantity. The current land use at the proposed Violet Hill Pit is primarily agriculture, which results in at least five potential prescribed drinking water threats, which are:

1. Agricultural source material – application to land
2. Agricultural source material – storage
3. Agricultural source material – management
4. Commercial fertilizer – application
5. Pesticide – application

The proposed change in land use will temporally reduce the prescribed drinking water threats to only the handling of fuel. On that note, fuel will be stored in accordance with Provincial fuel handling legislation. Based on the foregoing, the proposed pit should not negatively affect the quality or quantity of a municipal drinking water source.

4.1.6 Transportation

Section 7.2.2 *Provincial Highways and County Roads* states the following (edited for relevancy):

7.2.2 *Highways and County Roads*

It is the policy of the County that:

- b) *Direct access to a Provincial Highway is only permitted provided that the proponent of development meets the Ministry of Transportation's access management practices and principles and demonstrates to the satisfaction of the County, local municipality, and the Province that direct access is appropriate, considering the settlement structure and land use policies of this Plan and the local municipal official plan and the following:*
 - i. *the location of proposed access with respect to sight lines, topography and the geometric design of the highway; and*
 - ii. *the effect of turning movements on through traffic taking into consideration the volume of traffic generated by the proposed land use, other existing direct accesses onto the highway within the immediate vicinity and the need for turning, acceleration and/or deceleration lanes.*
- c) *Where new development is abutting a Provincial Highway and a County or local municipal road, the development is encouraged to gain access from first the local municipal road wherever practical, followed by the consideration of the County Road, where possible.*

Comment: C.C. Tatham & Associates Limited conducted a review of the proposed pit operations and recommended that the new pit have direct access from the Provincial Highway. No improvements to address sight distance issues were recommended; however, improvements were recommended

pertaining to the construction of a right turning taper for eastbound right turn movement, a left turn lane and a run-out lane.

4.1.7 Official Plan Review Summary

Based on the foregoing, it is evident that the proposed aggregate extraction operation conforms with the relevant policies of the County's Official Plan.

4.2 Town of Mono Official Plan

4.2.1 Land Use Designation

The subject lands are designated 'Rural' on Schedule A to the Town's Official Plan, as illustrated on Figure 9 to this Planning Report.

Permitted uses within the 'Rural' designation include agriculture, forestry and conservation. An aggregate extraction operation is not permitted without an amendment to the Official Plan. In this regard, an application to change the land use designation of the proposed licensed area from 'Rural' to 'Extractive' has been filed with the Town.

4.2.2 Aggregate Resources

Section 4 *Basis of the Plan* states the following:

7. AGGREGATE RESOURCES

Mineral aggregate resources exist within the municipality and are shown on Figure 1A – Sand and Gravel Resources and Figure 1B – Bedrock Resources. The Town will ensure that such resources are protected for long term use and that any future extraction is undertaken in a manner which minimizes social and environmental impacts, taking matters of health and safety of the Town's inhabitants into account.

The Town will protect areas adjacent to or in known deposits of mineral aggregate resources by restricting development and activities, in adjacent areas, that would preclude or hinder the establishment of new operations or access to the resources, in accordance with the Provincial Policy Statement.

Comment: A very small section of the proposed licensed area is identified on Schedule 1A (Sand and Gravel Resources) as 'Selected Sand and Gravel Resource Area, Secondary Significance', as shown on Figure 10 of this Planning Report. That specific area, however, is located outside of the proposed extraction area. As stated earlier in this Report, however, an aggregate review was conducted for this site and determined that 45,118,798 tonnes of sand and gravel is available for extraction on the

subject lands, and that the material found on this site will produce quality aggregate materials. This figure was reduced to 24,652,887 tonnes after factoring in the extraction buffer areas and the five metre setback from the established water table.

4.2.3 New Pits

Section 12 *Extractive Areas* of the Official Plan states the following with regard to new pits and quarries (edited for relevancy):

(1) *BASIC OBJECTIVES*

The basic objectives which led to the designation of land uses as Extractive on schedule "A" are as follows:

- (a) *to recognize the Planning Area's existing and licensed mineral aggregate operations;*
- (b) *to protect existing mineral aggregate operations from development of a nonextractive nature which could preclude or hinder the possibilities of future expansion or continued use of such operations for extraction;*
- (c) *to recognize and minimize possible adverse effects of mineral aggregate extraction as a land use on adjoining uses which could occur during extraction, processing and transportation of mineral aggregate resources, and to preserve natural heritage features and systems, scenic areas and agricultural uses.*
- (d) *To promote the highest standard of rehabilitation for pits and quarries by encouraging the phasing of land uses and requiring that the ultimate best uses for Extractive lands be considered before and during the extractive phase of operations.*
- (e) *to recognize wayside pits and quarries, portable asphalt plants and portable concrete plants used on public authority contracts throughout the Town, without the need for an official plan amendment, rezoning or development permit under the Planning Act, except those areas of existing development or particular environmental sensitivity which have been determined to be incompatible with extraction and associated activities. Such facilities shall be subject to site plan approval in accordance with Section 24 of this Plan, provided the implementation of site plan control does not conflict with the provisions and requirements of the Aggregate Resources Act.*

Comment: The proposed aggregate operation has been designed to minimize the potential impacts on the adjacent land uses during the pit construction, extraction, processing, transportation and rehabilitation. In this regard, the site plans have incorporated the recommendations from a series of

background studies including the Sound Impact Analysis and the Air Quality Assessment Report, both of which are intended to protect the neighbouring land owners from the noise, odour, dust and visual aspects of a licensed pit. The extensive berming that has been proposed along the perimeter of most of the extraction area, as shown on the Operations drawing and Berm Phasing and Details drawing, is an important component of the buffering and screening measures. Also, by having the haulage trucks enter and exit the pit directly to/from the Provincial Highway, the adjacent Town roads will not form part of the haulage route, which will lessen the overall potential impact of the pit on the neighbouring property owners. As well, the Natural Environment Technical Report and Hydrogeological Investigation have collectively demonstrated that the pit operations will not impact on the natural heritage features of the area or on surface water and groundwater features, including drinking water.

Progressive rehabilitation will occur in two stages. The gravel layer will be excavated first, followed by progressive interim rehabilitation consisting of a thin layer of topsoil and seed. When Greenwood Aggregates Limited is ready to extract the layer of sand, the thin layer of topsoil will once again be removed. Once the sand has been extracted to the final pit floor depth at five metres above the water table, final rehabilitation will be completed. Although the pit will be well-screened from public view, progressive rehabilitation will occur to ensure compatibility with the rural landscape. Final rehabilitation measures include the spreading of topsoil and overburden that was stored separately in stockpiles and berms. Perimeter slopes will be graded to 3:1 or less, topsoiled and seeded with low maintenance grass/clover mix. Longer term side slopes will naturally revegetate with woody species. When rehabilitation is complete, a total of 52.6 hectares will be restored to an agricultural use, and the remaining 31.1 hectares will become natural areas. The natural areas will occur primarily on the rehabilitated slopes which will be constructed at a scale of 3:1. The rehabilitated lands will be compatible with the surrounding area.

(2) PHASING OF DEVELOPMENT

It is the intention of this Plan that all development and predominant land uses in any area designated Extractive shall be considered as sequential in three distinct Phases which may be recognized as follows:

(a) PHASE I

The first or pre-extractive Phase shall be that period which occurs, or has occurred, prior to the date of issue of a valid Provincial license for operation of a pit or quarry in such area.

(b) PHASE II

The second or extractive Phase shall be that period during which active mineral aggregate extraction is underway in a pit or quarry, including any necessary rehabilitation, in accordance with an approved Provincial license. No Amendment of this Plan shall be necessary for Phase II development to commence in any designated Extractive area.

(c) PHASE III

Where active mineral aggregate operations have ceased and no further mineral aggregate extraction is viable and/or authorized, progressive and final rehabilitation shall be required to accommodate land uses approved by the rehabilitation plan, to promote land use compatibility, and to recognize the interim nature of extraction.

Comment: The subject lands are not designated 'Extractive' at this time, and as such, an amendment to the Town's Official Plan is necessary before the license can be granted. An amendment to the Zoning By-law is also required.

(3) PLANNING POLICIES

(a) USES PERMITTED

The uses permitted in Phase II shall be quarrying or the extraction of sand, gravel, or other aggregates, plus accessory operations associated with material mined on the site, such as crushing, screening, recycling, aggregate storage and topsoil stockpiling. In addition, any necessary progressive rehabilitation shall be permitted.

Other uses permitted in various phases where progressive rehabilitation is occurring shall include agriculture, forestry, recreation or conservation uses.

Comment: The aggregate activities proposed for the site are acknowledged as permitted uses in the above policy.

(b) LOCATION

(ii) Distance Separation from Residences

The implementing Zoning Bylaw may establish the following distance separations from residential buildings on adjoining properties:

- 122 metres for sand or gravel extraction;
- 213.5 metres for extraction of quarry stone;
- 213.5 metres for processing or manufacturing operations;

unless a noise assessment and/or air assessment report determines that Provincial guidelines can be satisfied.

(iii) *Exposure of Operations*

In order to preserve the scenic beauty and amenity of surrounding areas, Phase II uses permitted in Extractive areas will be appropriately screened from public view, in accordance with Section 12(3)(d).

Comment: Aggregate extraction will occur within 122 metres of five detached dwellings, which are labelled as R7, R8, R9, R10 and R12 on the Operations drawing. The Sound Impact Analysis and the Air Quality Assessment Report have collectively concluded that the aggregate operation, as proposed, will meet Provincial guidelines with respect to noise and dust. Greenwood Aggregates Limited chose to have the Sound Impact Analysis peer reviewed by another noise expert, and the few recommendations of the peer reviewer were addressed in the final version of the Report.

(c) *ZONING*

No new extractive operation will be permitted by rezoning unless such operation complies with the policies of this Plan and the Niagara Escarpment Commission. Before such rezoning is passed by Council, the applicant shall enter into a development agreement with the municipality.

Comment: The proposed pit will comply with the policies of the Town's Official Plan. The lands are not located within the Niagara Escarpment planning area.

If required by Town Council, Greenwood Aggregates Limited will enter into an agreement the Municipality.

(d) *BUFFERING*

Adequate planting strips, earth berms, screening and/or fencing shall be provided between extractive operations and other existing land uses.

Comment: As per the recommendations of the Sound Impact Analysis, extensive berming will be constructed around a significant portion of the extraction area. The specific berm details are shown on the Berm Phasing and Details drawing.

A 1.2 metre high post and wire fence will be erected along the boundary of the licensed area. Heavy-duty farm gates with locks will be installed at all entrances.

(e) DEVELOPMENT AGREEMENTS

The Town shall require new mineral aggregate operations to enter into a development agreement to address such matters as the Town may require, in accordance with applicable Provincial legislation, including:

- (i) Requirements for financial securities to ensure compliance with the agreement;*
- (ii) Approval of all haul routes used for transporting aggregate extraction materials;*
- (iii) Require contributions from extraction operators for haul road maintenance;*
- (iv) Approval of access to extraction operations from public roads; and,*
- (v) Other matters not in conflict with the Aggregate Resources Act.*

Comment: Greenwood Aggregates Limited will discuss the specific details of the development agreement with the Town.

(f) ADDITIONAL REQUIREMENTS

- (i) Water Supply, Pumping and Waste Disposal*

All extractive operations are subject to the technical requirements and approvals process of the appropriate agency or authority with respect to water supply, pumping and waste disposal, where required.

- (ii) Emissions*

All extractive and related operations must satisfy requirements of the Ministry of the Environment concerning emissions, including dust, noise and vibration.

- (iii) Development Policies*

Every development in any Extractive area shall comply with all relevant General Development policies contained in Section 24 of this Plan.

- (iv) General*

All mineral aggregate extractive operations must comply with The Aggregate Resources Act as administered by the Ministry of Natural Resources and also the policies set out in this Section which are in addition to, but not intended to be in conflict with, this Act.

Comment: The proposed aggregate extraction operation has been designed by a team of experts in various fields in accordance with all relevant policies pertaining to sand and gravel pits including dust, noise, vibration, natural heritage features, surface water, groundwater and transportation.

The proposal is also consistent with the relevant policies of Section 24 *General Development*

4.2.4 Natural Environment

Section 14 *Environmental Protection Areas* of the Town's Official Plan states the following (edited for relevancy):

(1) *BASIC OBJECTIVES*

The basic objectives which led to the designation of lands as Environmental Protection on Schedule "A" are as follows:

- (b) *to identify significant natural features and their associated ecological functions in the Town as part of an overall Natural Heritage Strategy and identify natural connections between the features which shall be maintained and improved as environmental corridors and ecological linkages where possible.*
- (c) *to prohibit development and site alteration in provincially significant wetlands;*
- (d) *to protect significant natural heritage features and areas, that may not be identified in 14 (1)(b), from development and site alteration that would result in a negative impact on the feature or its ecological function.*
- (e) *to prohibit development and site alteration in fish habitat and in habitat of endangered and threatened species, except in accordance with provincial and federal requirements.*
- (f) *to prohibit development on hazardous lands and sites such as floodplains, erosion areas, unstable soils, or unstable bedrock.*
- (g) *to protect, enhance or restore the quality and quantity of the Town's surface and groundwater resources through municipal initiatives, community stewardship and appropriate development controls.*
- (h) *to integrate Environmental Protection Areas into the Town's natural heritage, parks and open space systems, provided that no negative impacts will occur to the significant natural feature or its ecological function.*

Comment: No portion of the subject lands is designated 'Environmental Protection' on Schedule A of the Town's Official Plan (see Figure 9 to this Planning

Report). The adjacent Provincially Significant Wetland Complex is shown as 'Escarpment Natural Area' on Schedule A and as 'Significant Wetlands' on Schedule 3 (Environmental Resource) to the Official Plan (see Figure 11 of this Planning Report). The Natural Environment Technical Report has determined that the 150 metre separation distance between the pit and the wetland boundary will adequately protect this feature and its function.

The Natural Environment Technical Report has also determined that the Significant Woodlands on the property and adjacent lands will be protected from the pit operations.

With regard to threatened and endangered species, Butternut trees (endangered) were found on the property, and all have been excluded from the extraction area. Buffer areas of 25 metres will be established to further protect these trees. Barn Swallow and Eastern Meadowlark (threatened) were also found on the property. New habitat will be created for the Barn Swallows in accordance with the Endangered Species Act. Eastern Meadowlark habitat within the licence area will be excluded from the extraction limit. There will be no negative impacts to Meadowlark habitat on the site according to the Natural Environment Technical Report.

Also, there are significant wildlife habitats found on the property, specifically shrub/early successional habitat and Eastern Wood Pewee habitat. Neither will be negatively impacted by the proposal because they will be excluded from the extraction limits.

The steep slopes located along the west side of the north pit are located within the proposed extraction limits. The Erosions Hazard Study conducted for this site, however, concluded that the extraction area is outside of the erosion hazard limits and therefore the slope should not be impacted by the future aggregate operations.

The Hydrogeologist Investigation has determined that the proposed operation will have no impact on the surface water and groundwater features in the area.

4.2.5 Water Resources and Source Water Protection

Section 21 *Groundwater Resources* of the Town's Official Plan states the following (edited for relevancy):

(2) *WATER QUALITY AND QUANTITY*

- (a) *The Town will utilize its powers under the Planning Act to control land uses, development and site alteration in and adjacent to, areas containing significant groundwater resources.*

- (b) *The Town will identify areas containing municipal water supply, vulnerable aquifers or other groundwater resources in the Official Plan on Figure 4 – Sourcewater Protection Area and Groundwater Vulnerability and provide for the protection and conservation of groundwater resources in these areas.*
- (c) *The Town will encourage the sustainable use of groundwater resources so as not to significantly reduce the quantity or quality of water resources.*
- (d) *All new development will be required to adopt water conservation measures.*

Comment: Schedule 4 (Sourcewater Protection Area Groundwater Vulnerability) identifies very small portions of the extraction area as "High" and "Medium" in terms of 'Aquifer Vulnerability' (see Figure 12 of this Planning Report). The Hydrogeological Assessment has reviewed this matter and concluded that the proposed pit operations should not affect the quality or quantity of a municipal drinking water sources. The Assessment explains that a recent study by MNRF to assess the role of the aggregate industry and associated lands in the context of source water programs did not find any documented scientific evidence linking the extraction and processing of stone, sand and gravel as a threat to drinking water sources. The Province of Ontario has identified 21 prescribed drinking water threats under the Clean Water Act, nineteen of which relate to water quality and two to water quantity. The current land use at the proposed pit is primarily agriculture, which results in at least five potential prescribed drinking water threats, which are:

1. Agricultural source material – application to land
2. Agricultural source material – storage
3. Agricultural source material – management
4. Commercial fertilizer – application
5. Pesticide – application

The proposed change in land use will temporality reduce the prescribed drinking water threats to only the handling of fuel. On this note, fuel will be stored on site in compliance with Provincial legislation.

(4) GROUNDWATER PROTECTION AREAS

- (a) *The Town will identify Ground Water Protection Areas in the Official Plan on Schedule F – Well Head Protection Areas, based on available information. As more detailed information becomes available, the Town may further categorize Well Head Protection Areas, or portions thereof, based on their specific characteristics and/or sensitivity. Within those portions of the Town affected by the Oak Ridges Moraine Conservation Plan, the policies of Section 20 of this Plan shall apply.*

Comment: The subject lands are not situated close to a Groundwater Protection Area, as demonstrated on Schedule F (not provided in this Planning Report) and as stated in the Hydrogeological Assessment.

4.2.6 Transportation

Section 24 *General Development Policies* of the Town's Official Plan states the following (edited for relevancy):

(19) MINISTRY OF TRANSPORTATION REQUIREMENTS

In addition to all the applicable municipal requirements, all proposed development located adjacent to and/or in the vicinity of a Provincial highway, within the permit control areas defined by the Public Transportation and Highway Improvement Act (PTHIA), will be subject to the Ministry of Transportation policies, standards and permitting requirements. Early or pre-consultation with the Ministry of Transportation is encouraged. New direct or upgraded access connections onto a Provincial highway shall need to meet the Ministry of Transportation's "Highway Access Management Guideline" requirements.

Comment: The Traffic Review prepared in support of the proposed development has recommended direct access to the pit from the Provincial Highway, subject to certain improvements. The Traffic Review is currently being considered by the Ministry of Transportation.

4.2.7 Application Requirements

Section 25 *Implementation* of the Town's Official Plan states the following (edited for relevancy):

(11) COMPLETE APPLICATION REQUIREMENTS

(a) General Policies

- (i) Prior to the submission of an application for an Official Plan Amendment, Zoning Bylaw Amendment, draft plan of subdivision or condominium and/or a site plan approval, applicants are required to preconsult with the Town staff.*
- (ii) Prior to the submission of any other development application, applicants are encouraged to pre-consult with the Town staff and with the relevant Conservation Authority and County of Dufferin, as appropriate.*
- (iii) The pre-consultation process is intended to scope the issues associated with a specific development proposal and/or change(s) in land use and set out clear requirements for a complete application. The form and level of pre-*

consultation will vary based on application type and context and shall be according to the process described in a Pre-consultation Bylaw.

- (iv) *Any application for amendment(s) to the Official Plan or Zoning Bylaw, application for approval of a plan of subdivision or condominium, or application for consent will not be deemed complete by the Town and the time period within which the Council is required to make a decision will not commence, unless it is accompanied by:*
 - (1) *the prescribed information and material as required under the Planning Act; and*
 - (2) *other information and material deemed necessary by the Town in accordance with this Plan.*

- (v) *In addition to the requirements noted in the applicable sections of this Official Plan, the Town may require additional information and material to be submitted as part of a complete application. The following broad categories describe additional information and material that may be required and the type of studies or documents that may be identified during the pre-consultation process as being required to be submitted as part of a complete development application:*

- (1) *Natural Heritage*

The submission of reports, studies and/or drawings, which identify and demonstrate, to the satisfaction of the Town and the relevant Conservation Authority, that there will be no negative impacts on natural heritage features and areas or their ecological functions; and identifies proposed mitigation measures to ensure ecological functions, diversity, and connectivity of natural heritage features and areas are maintained, restored, and where possible enhanced. Any information and material submitted must recognize linkages between and among natural heritage features and areas and surface water features and groundwater features.

This may include, but shall not be limited to:

- (a) *Environmental Impact Study (or scoped Environmental Impact Study) within 120 metres of a significant woodland, significant wetland, Life Science ANSI, fish habitat, significant wildlife habitat, significant valleylands, habitat of endangered and threatened species, and 50 metres within an Earth Science ANSI.*
- (b) *Environmental Implementation Report*
- (c) *Ecological Land Classification*

- (d) *Natural Hazard Assessment that addresses flooding and erosion hazards*
- (e) *Hydrogeological Study*
- (f) *Hydrology Study*
- (g) *Water Budget*
- (h) *Soil Stability and Geotechnical Analysis*
- (i) *Tree and/or Vegetation Inventory Report*
- (j) *Vegetation Compensation Plan*
- (k) *Topographical Survey/Slope Analysis*
- (l) *Geotechnical Report*

2. *Planning*

The submission of reports, studies and/or statements that demonstrate, to the satisfaction of the Town, how the proposed development and/or change in land use is consistent with the applicable provisions of the Provincial Policy Statement, conforms to the Official Plan, conforms to any Provincial Plans that are in effect, and provides an integrated approach to land use planning.

This may include, but shall not be limited to:

- (a) *Planning Justification Report*
- (b) *Statement of Conformity and/or Consistency with applicable policies*
- (c) *Employment and/or Residential Lands Needs Analysis*
- (d) *Employment Lands Conversion Justification Report*
- (e) *Conceptual Site Plan Layout*
- (f) *Detailed Site Plan*

3. *Transportation*

The submission of reports, studies and/or drawings, which address any change or impact to the transportation network resulting from a proposed development and/or change in land use. Such analyses will demonstrate, to

the satisfaction of the Town, how the proposed development can be accommodated by the existing transportation network or where new transportation infrastructure is required. Where an expansion to the existing transportation infrastructure is necessary, such analyses will demonstrate that the expansions will be adequate to accommodate the proposed development.

This may include, but shall not be limited:

- (a) Traffic Impact or Transportation Study*
- (b) Parking Study*
- (c) Transportation Demand Management Plan*

Comment: Pre-consultation with various authorities including the Town, County, Conservation Authority and the Province occurred for the several months leading up to the submission of the Planning Act applications and the circulation of the Aggregate Resources Acts application package.

A series of site plans and background studies prepared in support of this development has been circulated as part of the Aggregate Resources Act application and submitted to the Town in conjunction with the applications to amend the Official Plan and Zoning By-law. This supporting information includes:

- Site Plans (Existing Features, Operations, Progressive and Final Rehabilitation, Sections, and Berm Phasing and Details);
- Summary Statement;
- Aggregate Investigation;
- Level 1 and Level 2 Hydrogeological Assessment;
- Natural Environment Level 1 and 2 Technical Report;
- Erosion Hazard Study;
- Traffic Review;
- Sound Impact Analysis (plus a peer review);
- Air Quality Assessment Report (plus a peer review);
- Agricultural Impact Assessment;

- Stage 1 and 2 Archaeological Resource Assessment;
- Planning Report

4.2.8 Official Plan Review Summary

It is evident that the proposed amendments to the Town of Mono Official Plan and Zoning By-law, intended to permit an extraction operation on the subject lands, maintain the intent and purpose of the local Official Plan.

4.3 The Provincial Policy Statement

Section 3 of the Planning Act requires all decisions made under the Act by an approval authority to "be consistent with" the Provincial Policy Statement (PPS).

The PPS provides a number of policies that are designed to protect planning matters of interest to the Ontario Government. The following is an evaluation of the proposed development within the context of the PPS policies that are relevant to a pit or quarry operation:

4.3.1 Rural Lands

The subject property is not considered to be prime agricultural land. As such, the policies for 'Rural Lands' apply to the proposed development.

Permitted uses on rural lands include "*the management or use of resources*". It is worth noting that the PPS also allows for aggregate extraction on prime agricultural lands, but with tighter restrictions on extraction below the water table and final rehabilitation.

4.3.2 Mineral Aggregate Resources

Section 2.5 of the PPS states:

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

Comment: The subject lands have not been identified in the County of local Official Plans as having an aggregate deposit; however, the Aggregate Investigation prepared in support of the proposed pit operation has demonstrated that a considerable amount of good quality aggregate is available on the site for extraction.

2.5.2 Protection of Long-term Resource Supply

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

Demonstration of need for mineral aggregate resources, including any type of supply/demand analysis, shall not be required, notwithstanding the availability, designation or licensing for extraction of mineral aggregate resources locally or elsewhere.

Comment: This policy speaks to the recognized importance of pits and quarries in Ontario.

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

Comment: The extraction of aggregate will take place in accordance with the approved Site Plans. These drawings take into account the recommendations of the Hydrogeological Assessment, Natural Environment Technical Report, Erosion Hazard Study, Traffic Review, Sound Impact Analysis and the Air Quality Assessment Report, as well as the various policies of the County Official Plan, local Official Plan and the Provincial Policy Statement that are intended to minimize the social and environmental impacts of a pit.

2.5.2.3 *Mineral aggregate resource conservation shall be undertaken, including through the use of accessory aggregate recycling facilities within operations, wherever feasible.*

Comment: Recycling of used asphalt and concrete will occur on the site.

2.5.2.4 *Mineral aggregate operations shall be protected from development and activities that would preclude or hinder their expansion or continued use or which would be incompatible for reasons of public health, public safety or environmental impact. Existing mineral aggregate operations shall be permitted to continue without the need for official plan amendment, rezoning or development permit under the Planning Act. When a license for extraction or operation ceases to exist, policy 2.5.2.5 continues to apply.*

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

a) *resource use would not be feasible; or*

- b) *the proposed land use or development serves a greater long-term public interest; and*
- c) *issues of public health, public safety and environmental impact are addressed.*

Comment: The above policies recognize the importance of aggregate resources in Ontario and strive to ensure that other developments do not occur on or near potential aggregate sites before the deposit is removed from the ground.

2.5.3 Rehabilitation

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

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

2.5.3.3 *In parts of the Province not designated under the Aggregate Resources Act, rehabilitation standards that are compatible with those under the Act should be adopted for extraction operations on private lands.*

Comment: Progressive rehabilitation on the site will occur into two stages. The gravel layer will be excavated first, followed by progressive interim rehabilitation consisting of a thin layer of topsoil and seed. When the operator is ready to extract the layer of sand, the thin layer of topsoil will once again be removed. Once the sand has been extracted to the final pit floor depth at five metres above the water table, final rehabilitation will be completed. Although the pit will be well-screened from public view, progressive rehabilitation will occur to ensure compatibility with the rural landscape. Final rehabilitation measures includes the spreading of topsoil and overburden that was stored separately in stockpiles and berms. Perimeter slopes will be graded to 3:1 or less, topsoiled and seeded with low maintenance grass/clover mix. Longer term side slopes will naturally revegetate with woody species. When rehabilitation is complete, a total of 52.6 hectares will be restored to an agricultural use, and the remaining 31.1 hectares will become natural areas. The natural areas will be located along the rehabilitated slopes which will be constructed at a scale of 3:1. The rehabilitated lands will be compatible with the surrounding area.

4.3.3 Natural Environment

Section 2.1 of the PPS states:

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

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.*

2.1.3 *Natural heritage systems shall be identified in Ecoregions 6E and 7E¹, recognizing that natural heritage systems will vary in size and form in settlement areas, rural areas, and agricultural areas.*

2.1.4 *Development and site alteration shall not be permitted in:*

- a) *significant wetlands in Ecoregions 5E, 6E and 7E¹; and*
- b) *significant coastal wetlands.*

2.1.5 *Development and site alteration shall not be permitted in:*

- a) *significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E¹;*
- b) *significant woodlands in Ecoregions 5E, 6E and 7E¹ (excluding islands in Lake Huron and the St. Marys River)¹;*
- c) *significant valleylands in Ecoregions 5E, 6E and 7E¹ (excluding islands in Lake Huron and the St. Marys River)¹;*
- d) *significant wildlife habitat;*
- e) *significant areas of natural and scientific interest; and,*
- f) *coastal wetlands in Ecoregions 5E, 6E and 7E¹ that are not subject to policy 2.1.4(b);*

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

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

- 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.*
- 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.*
- 2.1.9 *Nothing in policy 2.1 is intended to limit the ability of existing agricultural uses to continue.*

Comment: The Natural Environmental Technical Report, which also serves an Environmental Impact Study, concluded that the proposed pit can operate without adverse environmental impacts to the natural features existing in the area provided that the design, management and mitigation recommendations are implemented, as explained earlier in this Planning Report.

4.3.4 Water

Section 2.2 of the PPS states:

- 2.2.1 *Planning authorities shall protect, improve or restore the quality and quantity of water by:*
- a) *using the watershed as the ecologically meaningful scale for integrated and long-term planning, which can be a foundation for considering cumulative impacts of development;*
 - b) *minimizing potential negative impacts, including cross-jurisdictional and cross-watershed impacts;*
 - c) *identifying surface water features, ground water features, hydrologic functions and natural heritage features and areas, and surface water features including shoreline areas, which are necessary for the ecological and hydrological integrity of the watershed;*
 - d) *maintain linkages and related functions among ground water features, hydrologic functions, natural heritage features and areas, and surface water features including shoreline areas;*
 - e) *implementing necessary restrictions on development and site alteration to:*

1. *protect all municipal drinking water supplies and designated vulnerable areas; and*
 2. *protect, improve or restore vulnerable surface and ground water, sensitive surface water features and sensitive ground water features, and their hydrologic functions;*
- f) *planning for efficient and sustainable use of water resources, through practices for water conservation and sustaining water quality;*
 - g) *ensure consideration of environmental lake capacity, where applicable; and,*
 - h) *ensuring stormwater management practices minimize stormwater volumes and contaminant loads, and maintain or increase the extent of vegetative and pervious surfaces.*

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.

Comment: The Hydrogeological Assessment and the Natural Environment Report have collectively demonstrated that the pit would have no impact on the surface water or ground water features in the area, including the neighbouring residential wells.

4.3.5 Cultural Heritage and Archaeology

Section 2.6 of the PPS states:

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

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.*

2.6.3 *Planning authorities shall not permit development and site alteration on adjacent lands to protected heritage property except where the proposed development and site alteration has been evaluated and it has been demonstrated that the heritage attributes of the protected heritage property will be conserved.*

2.6.4 *Planning authorities should consider and promote archaeological management plans and cultural plans in conserving cultural heritage and archaeological resources.*

2.6.5 *Planning authorities shall consider the interests of the Aboriginal communities in conserving cultural heritage and archaeological resources.*

Comment: The Archaeological Assessments conducted for the subject lands identified the northeast corner of the site (adjacent to the Provincial Highway 89 / 4th Line East intersection) as a nineteenth century Euro-Canadian site. This potentially represents a single-family, early and early-to-mid nineteenth century home occupation. As a result, the consultant recommended that this site either be protected by establishing a 20 metre buffer with a silt fence and a 50 metre monitoring zone or that a Stage 3 assessment be conducted to further investigate and precisely refine the site's character and extent. Greenwood Aggregates Limited has chosen to avoid this portion of the property by excluding these lands from the licensed area. The license boundary has been set back 100 metres from this archaeological site, a berm will be constructed 150 metres from the site and no extraction will occur within 200 metres.

4.3.6 Summary of Provincial Policy Statement Consistency

Based on this review, the proposed extraction operation is consistent with the Provincial Policy Statement.

5. TOWN OF MONO ZONING BY-LAW

The area to be licensed is currently zoned 'A' (Rural) in the Town's Zoning By-law, as illustrated in Figure 13 to this Planning Report.

The 'A' zone generally permits agriculture, forestry and conservation uses. A licensed permit is not allowed within this zone.

The proposed Zoning By-law Amendment would rezone the 'A' lands to 'MX' (Extractive Industrial), a zoning category that would permit the intended operation.

Relief from the 'MX' zone provisions will be required as follows:

Section 16(2)(b) of the Zoning By-law states that extraction is not permitted within 121.93 metres of a lot line that abuts a zone other than an Industrial zone. The proposed extraction area shown on the Operations drawing is, at its closest point, 15 metres from a lot line. An exception to this provision will be required.

Also, Section 16(2)(c) states that no concrete batching, crushing or screening shall be located within 213.37 metres of any lot line which abuts a zone other than an industrial zone. The proposed stationary, crushing, screening and washing area shown on the Operations drawing is 110 metres from the closest property boundary. This should be reflected in the Zoning By-law Amendment.

In addition, Section 16(2)(d) states that no land in the 'MX' zone shall be used for any other purpose than for planting grass, shrubs, trees or similar uses within 30.49 metres of any zone other than an Industrial Zone or within 21.34 metres of any street line. As noted above, extraction is proposed at its closest point 15 metres from the boundary of the subject property, and therefore an exception to this zoning provision will be required. No activity will occur within 30 metres of the road allowance except for the construction of berms.

It should be noted that despite the aforementioned relief that is necessary from some of the 'MX' zone provisions, the proposed pit conforms with the Province's requirements of the Aggregate Resources Act.

6. CONCLUSIONS

Greenwood Aggregates Limited has retained the services of several consultants to properly plan a new aggregate extraction operation. This team of experts, which includes specialists in the fields of aggregate, agriculture, wildlife, hydrogeology, transportation, slope stability and archaeology, has studied the subject lands and surrounding area and collectively designed a sand and gravel pit proposal that would:

- be as compatible with the adjacent properties as possible;
- have no noticeable impact on the natural environment;
- not impact upon the surface water and groundwater features of the area, including drinking water;
- maintain the intent and purpose of the County of Dufferin Official Plan;
- maintain the intent and purpose of the Town of Mono Official Plan, and,
- be consistent with the Provincial Policy Statement.

Based on the foregoing, it is evident that this proposed extraction operation, as proposed on the series of site plans, will represent appropriate land use planning.

7. **RECOMMENDATION**

This Planning Report has provided a thorough evaluation of the proposed development. In view of the conclusions provided in Section 6, it is my professional opinion that approval should be given to the requested amendments to the Town's Official Plan and Zoning By-law.

Respectfully submitted,



Ron Davidson, BES, MCIP, RPP

Acknowledgements:

Rollings Hyland Consulting

C.D. Laing Aggregate Management Services

Geological Investigations

Whitewater Hydrogeology Ltd.

Robin E. Craig, B.Sc., M.Sc., Certified Wildlife Biologist

C.C. Tatham & Associates Ltd.

Valcoustics Canada Ltd.

RWDI AIR Inc.

Trinity Consultants


DBH Soil Services Inc.

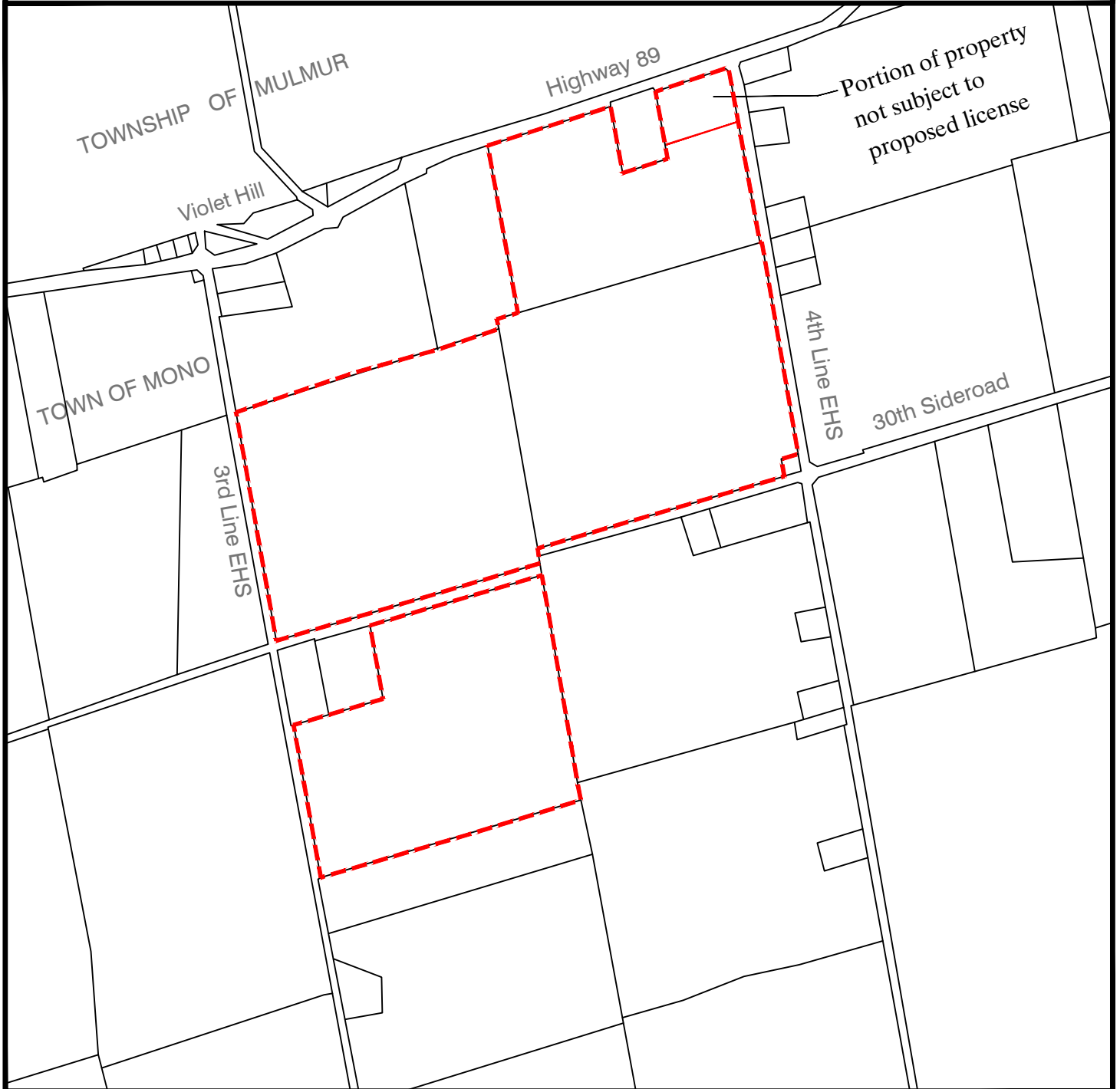
Archaeological Consultants & Contractors

FIGURES

- Figure 1: Location of Subject Lands
- Figure 2: Aerial Photograph
- Figure 3: Dufferin County Official Plan
Schedule C: Agricultural Area and Rural Lands
- Figure 4: Dufferin County Official Plan
Schedule D: Mineral Aggregate Resource Areas
- Figure 5: Dufferin County Official Plan
Schedule E: Natural Heritage Features
- Figure 6: Dufferin County Official Plan
Schedule E-1: Natural Heritage Systems
- Figure 7: Dufferin County Official Plan
Schedule B: Community Structure and Land Use
- Figure 8: Dufferin County Official Plan
Appendix 2: Source Water Protection
- Figure 9: Town of Mono Official Plan
Schedule A
- Figure 10: Town of Mono Official Plan
Figure 1A: Sand and Gravel Resources

Figure 1: Location Map

 Subject Lands





"Violet Hill Pit"
Greenwood Aggregates Limited
Part Lots 30, 31 and 32, Concession 4 E.H.S.
Town of Mono
County of Dufferin

RD **RON DAVIDSON**
LAND USE PLANNING CONSULTANT INC
OWEN SOUND, ONTARIO

SCALE 1:15 000

Figure 2: Aerial Photograph



-  Area to be Licensed
-  Area to be Extracted



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Town of Mono
County of Dufferin

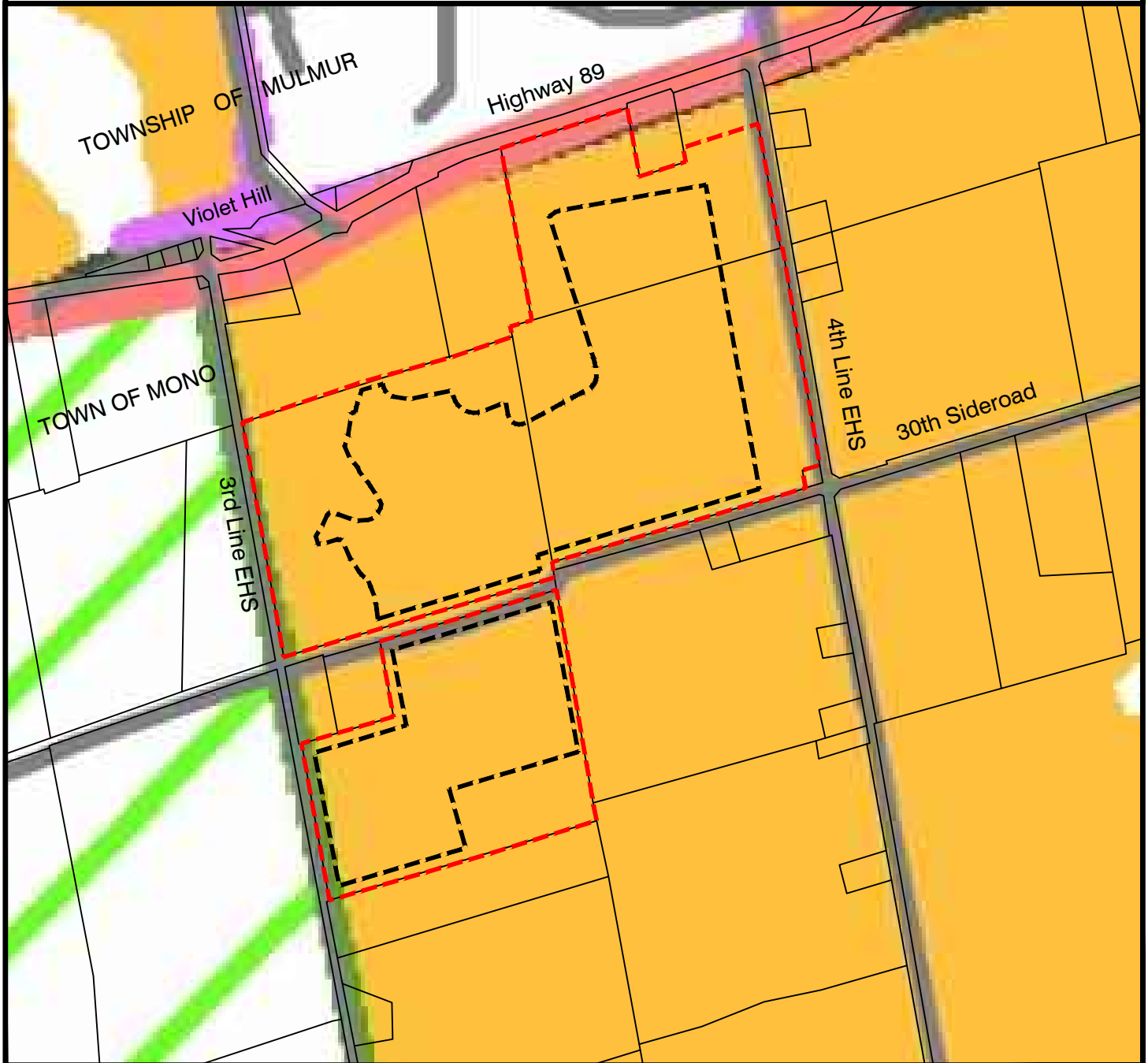
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Figure 3: Dufferin County Official Plan
 Schedule C: Agricultural Area and Rural Lands



- Area to be Licensed
- Area to be Extracted
- Community Settlement Area
- Rural Lands
- Provincial Plan Areas



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 Town of Mono
 County of Dufferin

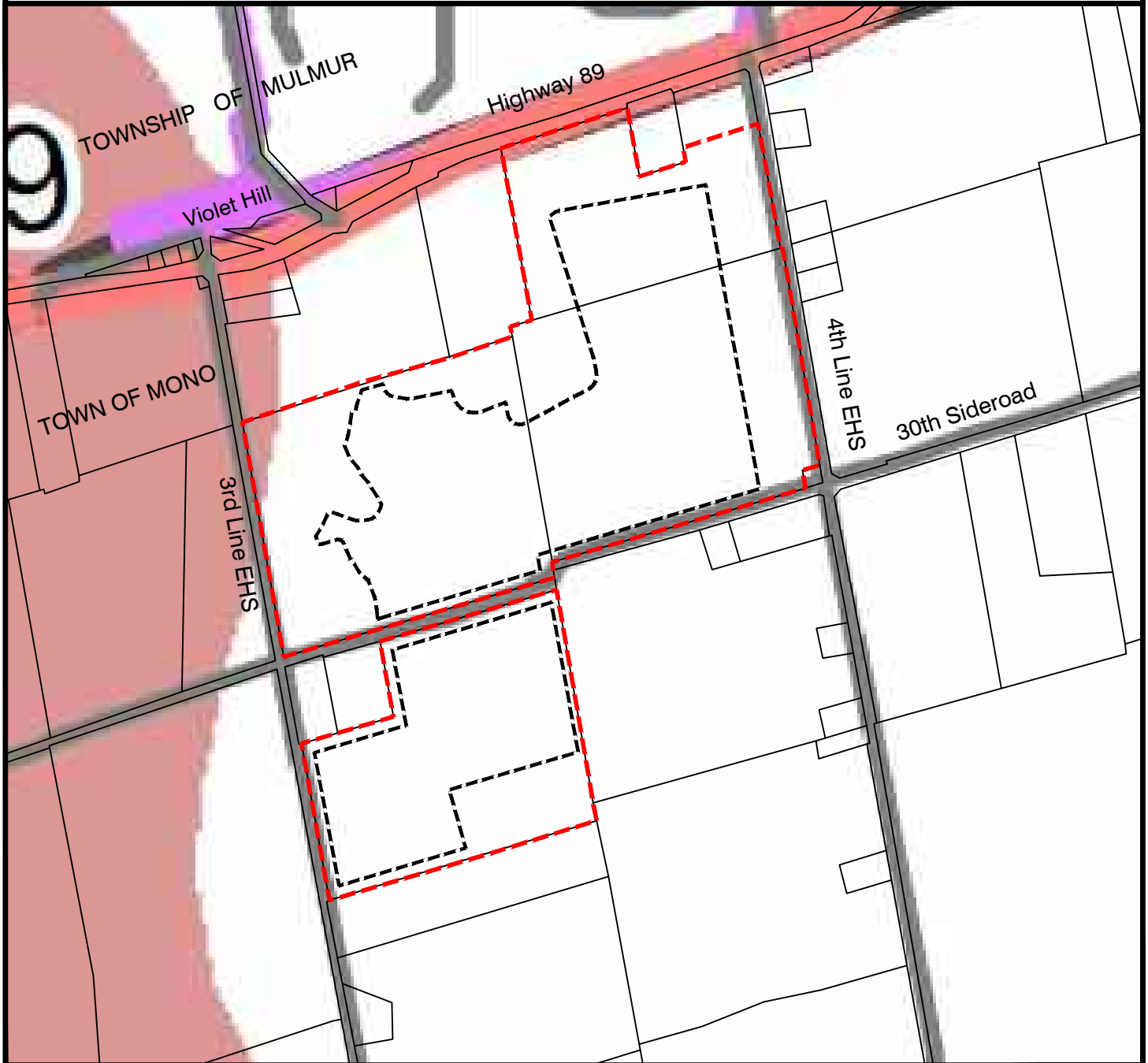
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Figure 4: Dufferin County Official Plan Schedule D: Mineral Aggregate Resource Areas



- Area to be Licensed
- Area to be Extracted
- Community Settlement Area
- Sand and Gravel Resource Area











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County of Dufferin

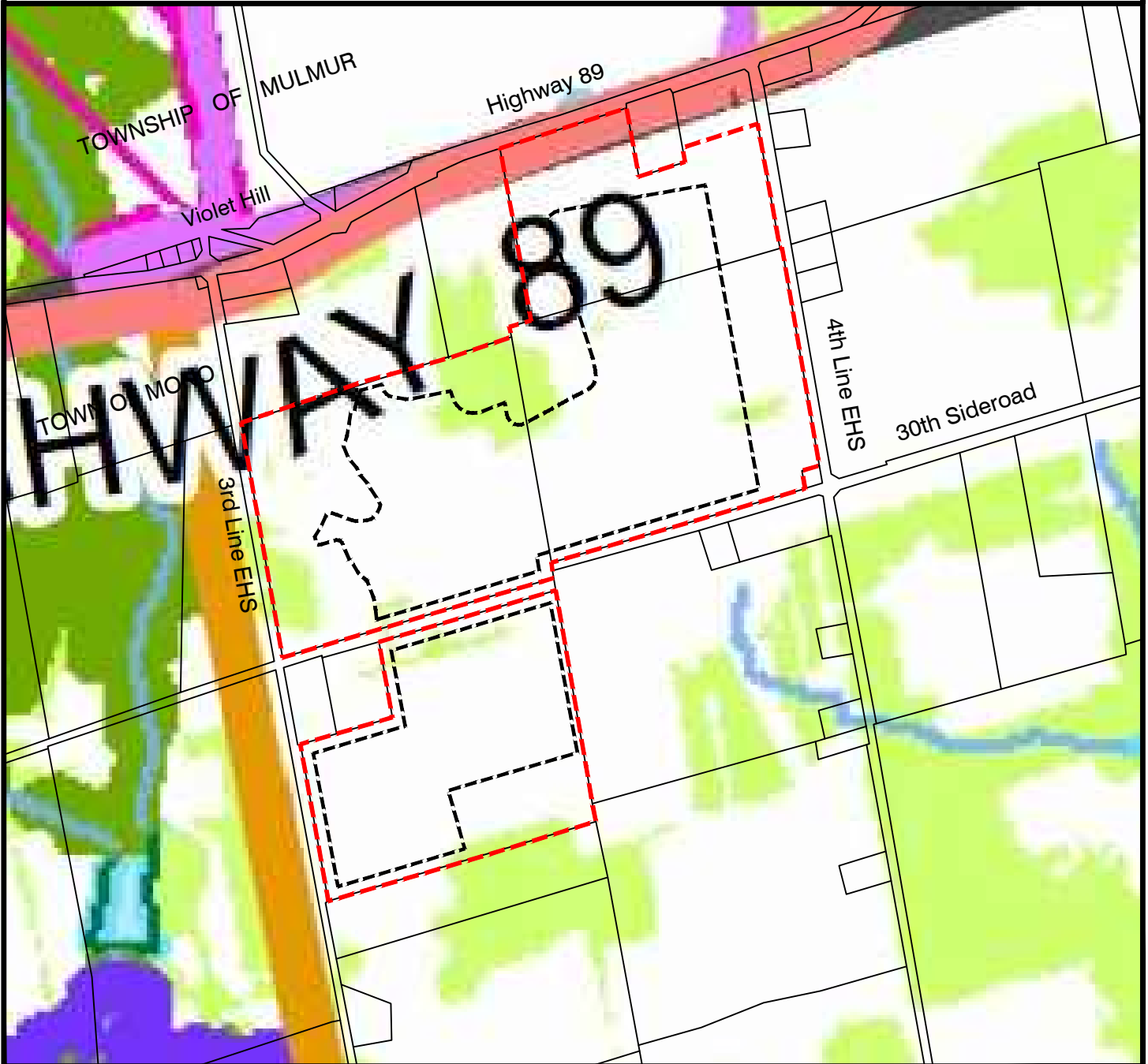
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Figure 5: Dufferin County Official Plan
Schedule E: Natural Heritage Features



- | | | |
|---|---|--|
|  Area to be Licensed |  Niagara Escarpment Plan Area |  Woodlands |
|  Area to be Extracted |  Provincially Significant Wetlands |  Earth Science ANSI |
|  Community Settlement Area | |  Life Science ANSI |




"Violet Hill Pit"
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OWEN SOUND, ONTARIO

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Figure 6: Dufferin County Official Plan
 Schedule E-1: Natural Heritage Systems




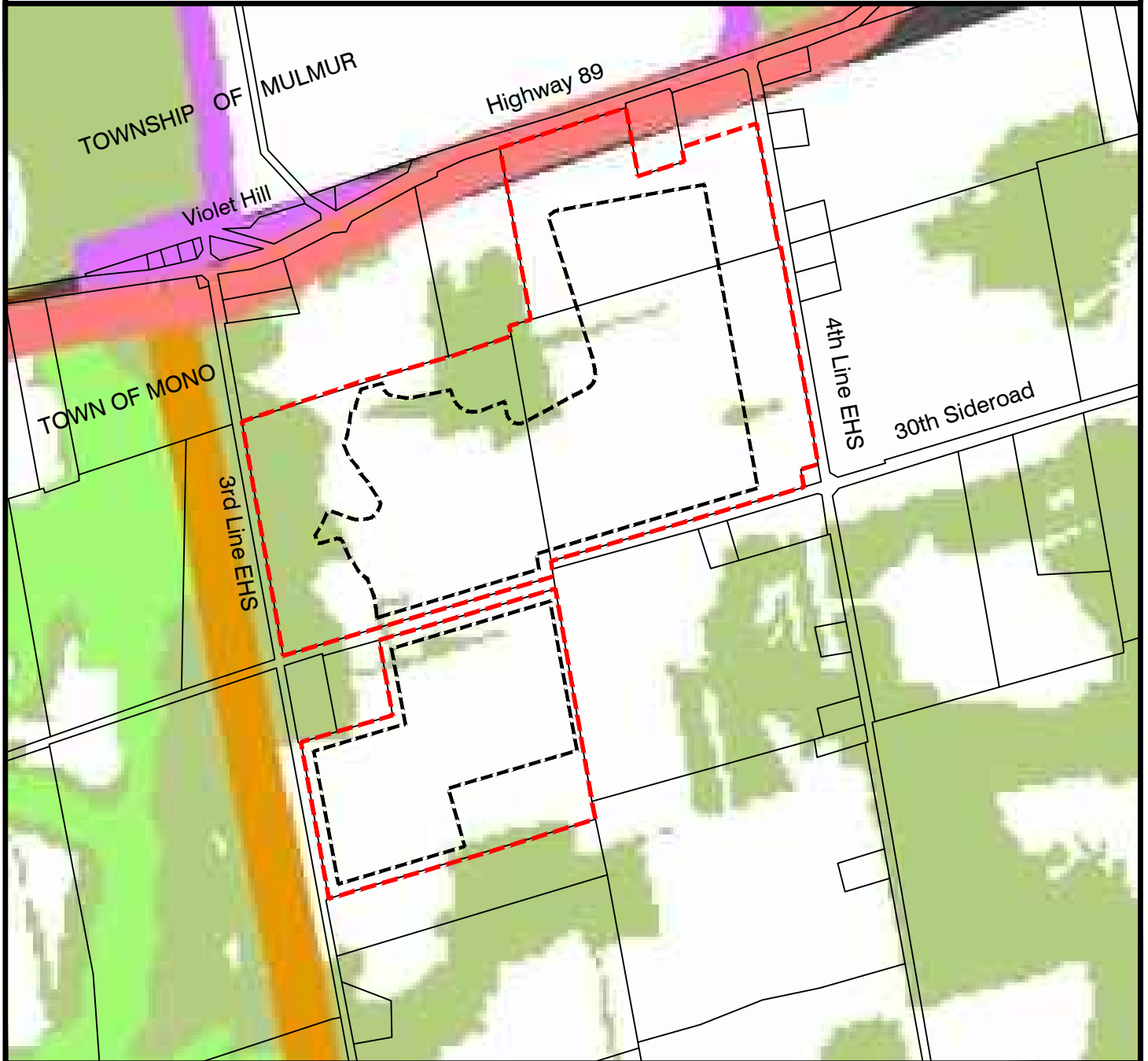
 Area to be Licensed

 Area to be Extracted

 Community Settlement Area

 County Preliminary Natural Heritage System

 Escarpment Natural Area









"Violet Hill Pit"
 Greenwood Aggregates Limited
 Part Lots 30, 31 and 32, Concession 4 E.H.S.
 Town of Mono
 County of Dufferin

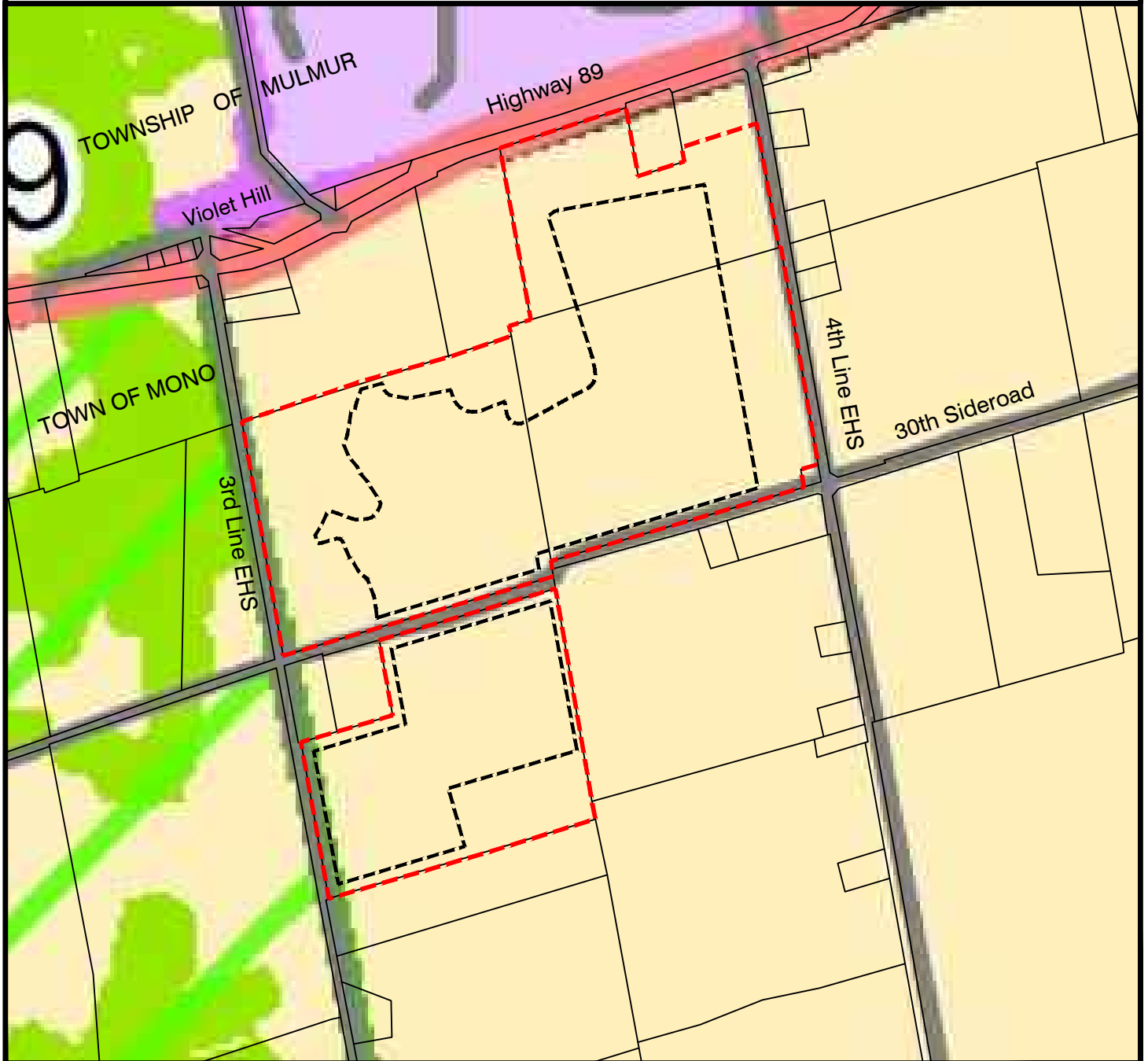
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SCALE 1:15 000

Figure 7: Dufferin County Official Plan
 Schedule B: Community Structure and Land Use









- | | | | |
|---|---------------------------|---|----------------------------------|
|  | Area to be Licensed |  | Countryside Area |
|  | Area to be Extracted |  | Provincial Plan Area |
|  | Community Settlement Area |  | Provincially Significant Wetland |



"Violet Hill Pit"
 Greenwood Aggregates Limited
 Part Lots 30, 31 and 32, Concession 4 E.H.S.
 Town of Mono
 County of Dufferin

Figure 8: Dufferin County Official Plan
Appendix 2: Source Water Protection



- | | |
|---|--|
|  Area to be Licensed |  Vulnerable Aquifer: High |
|  Area to be Extracted |  Vulnerable Aquifer: Medium |
|  Significant Groundwater Recharge Area |  Vulnerable Aquifer: Low |









"Violet Hill Pit"
Greenwood Aggregates Limited
Part Lots 30, 31 and 32, Concession 4 E.H.S.
Town of Mono
County of Dufferin

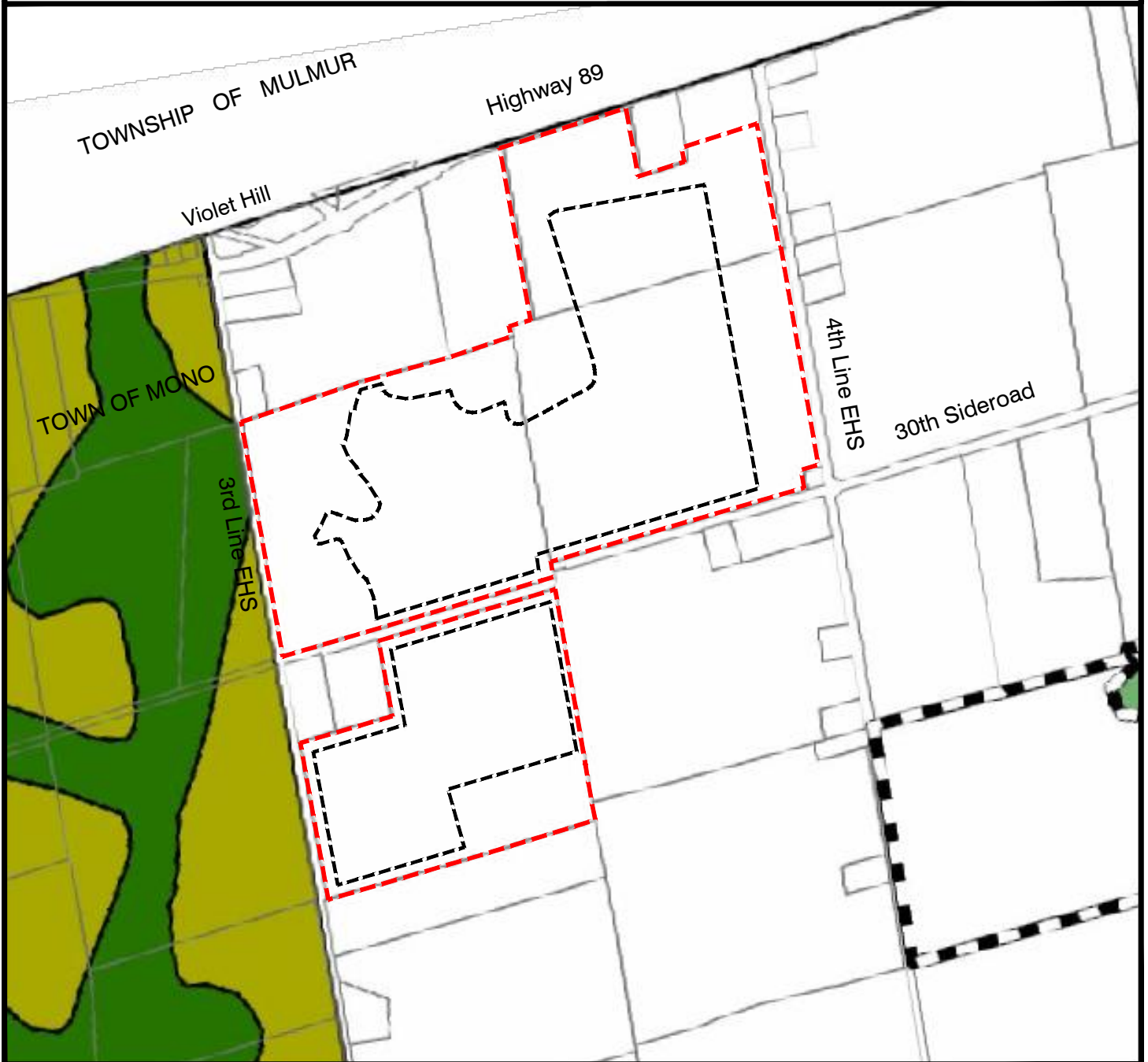
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SCALE 1:15 000

Figure 9: Town of Mono Official Plan
Schedule A



- | | | | |
|---|----------------------|---|-------------------------|
|  | Area to be Licensed |  | Escarpment Natural Area |
|  | Area to be Extracted |  | Escarpment Rural Area |
|  | Rural |  | See Text - Special |



"Violet Hill Pit"
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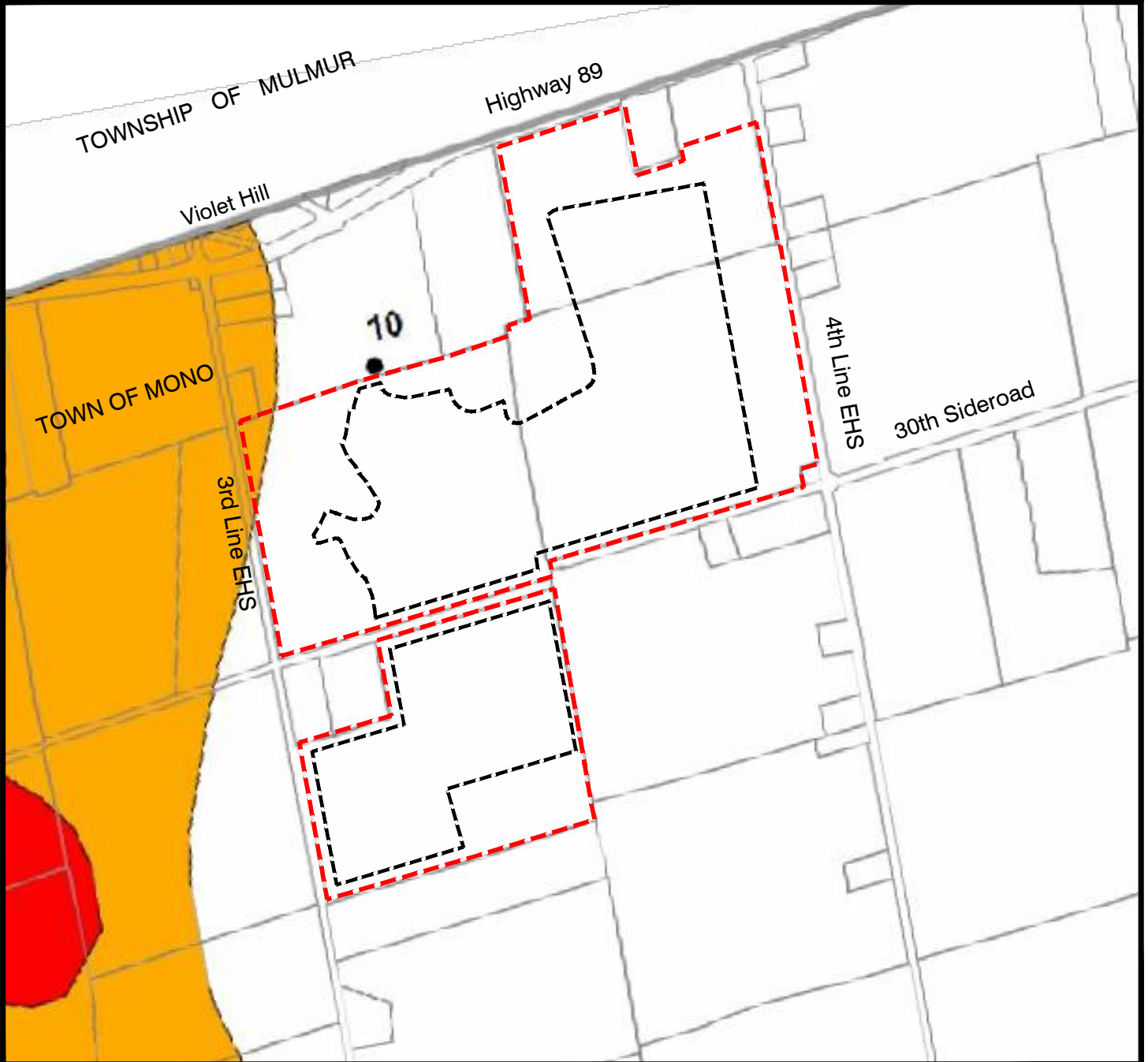
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LAND USE PLANNING CONSULTANT INC
OWEN SOUND, ONTARIO

SCALE 1:15 000

Figure 10: Town of Mono Official Plan
 Figure 1A: Sand and Gravel Resources







- Abandoned Pit
- ▭ (Red dashed border) Area to be Licensed
- ▭ (Black dashed border) Area to be Extracted
- ▭ (Red solid fill) Selected Sand and Gravel Resource Area, primary significance
- ▭ (Yellow solid fill) Selected Sand and Gravel Resource Area, secondary significance

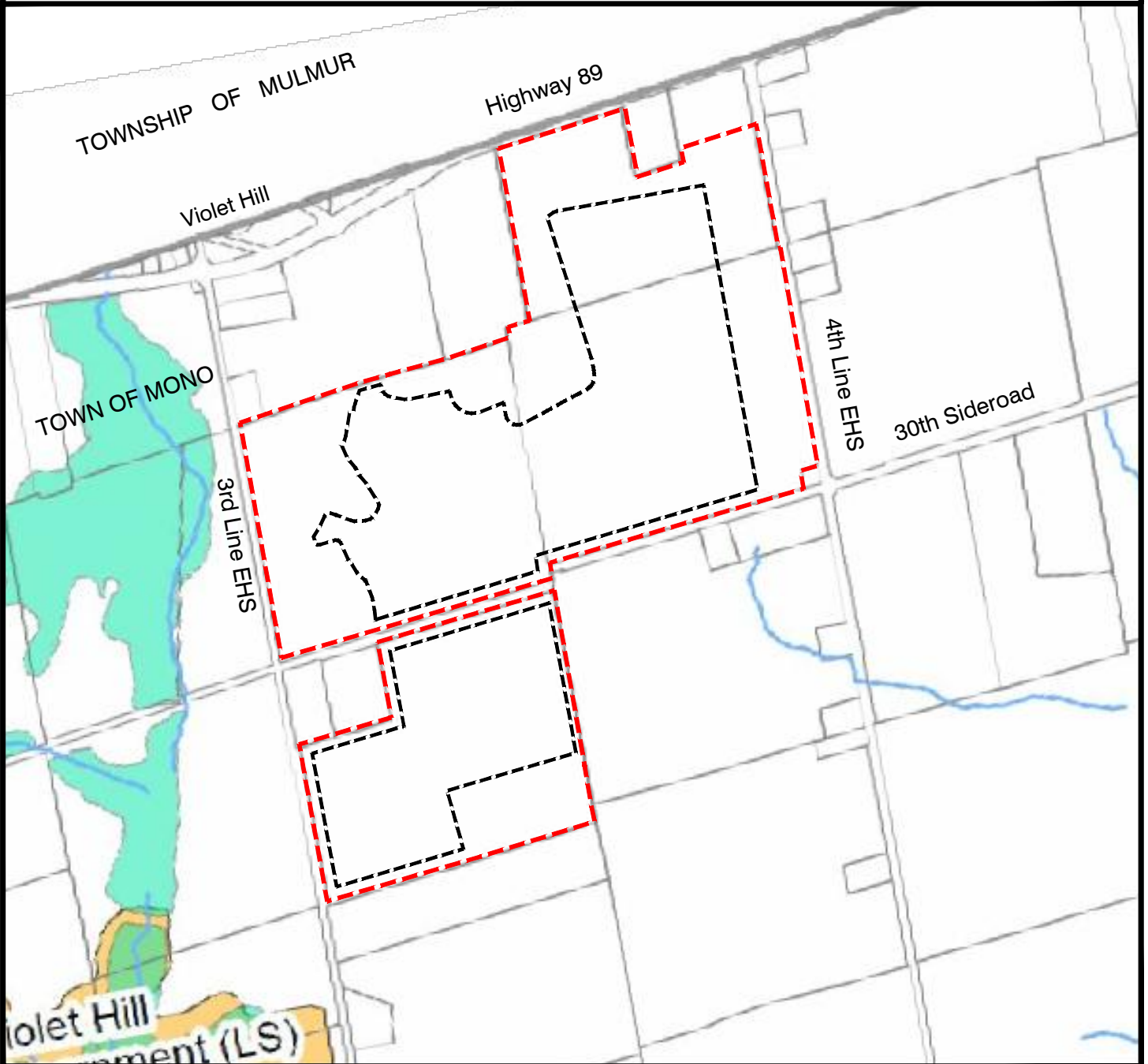


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Figure 11: Town of Mono Official Plan
 Figure 3: Environmental Resource



- | | |
|--|--|
|  Area to be Licensed |  Significant Wetlands |
|  Area to be Extracted |  Area of Natural and Scientific Interest - Life Science |

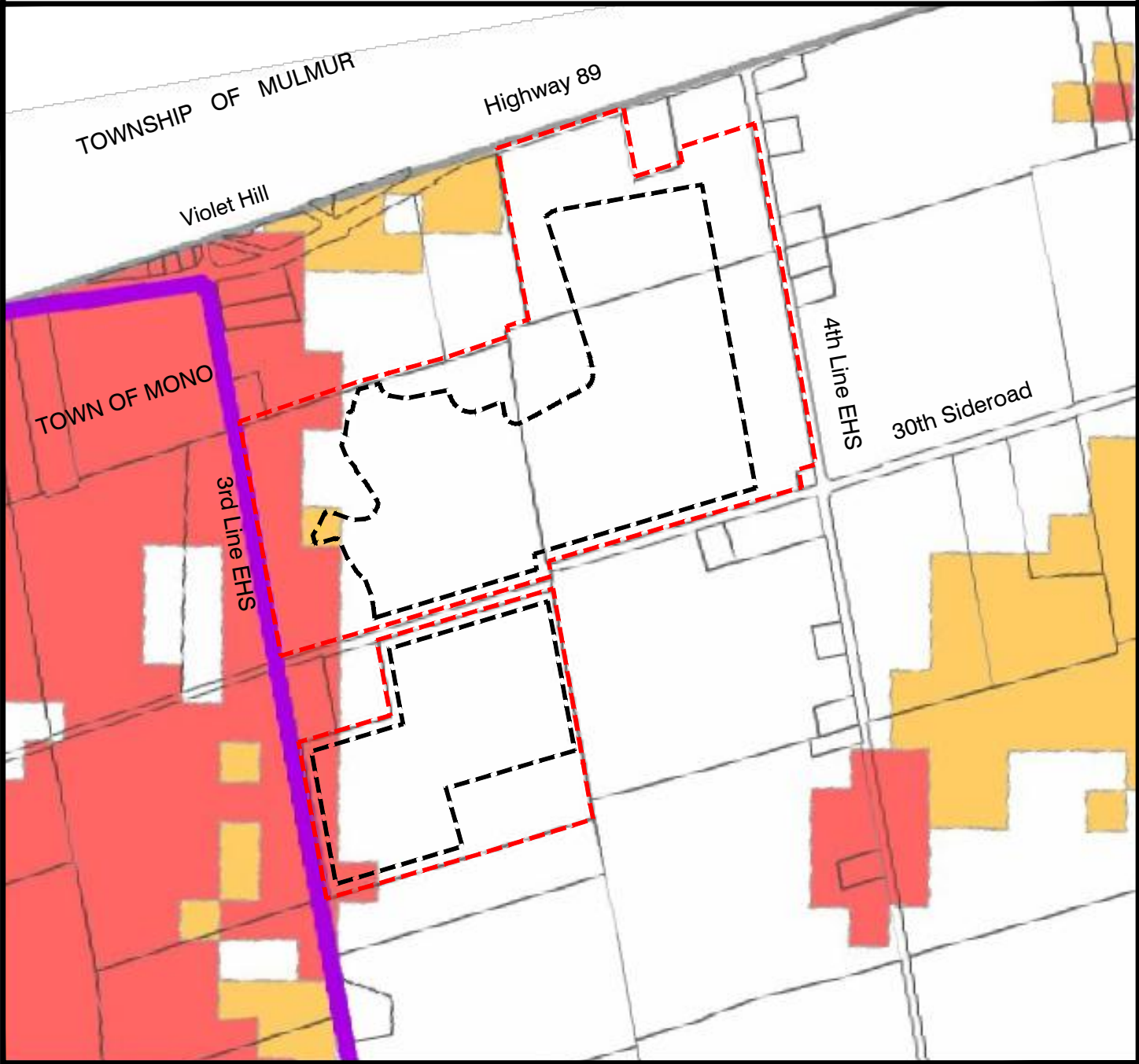


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Figure 12: Town of Mono Official Plan
 Figure 4: Sourcewater Protection Area
 Groundwater Vulnerability










- Area to be Licensed
- Area to be Extracted
- Aquifer Vulnerability: High
- Aquifer Vulnerability: Medium
- Niagara Escarpment Boundary

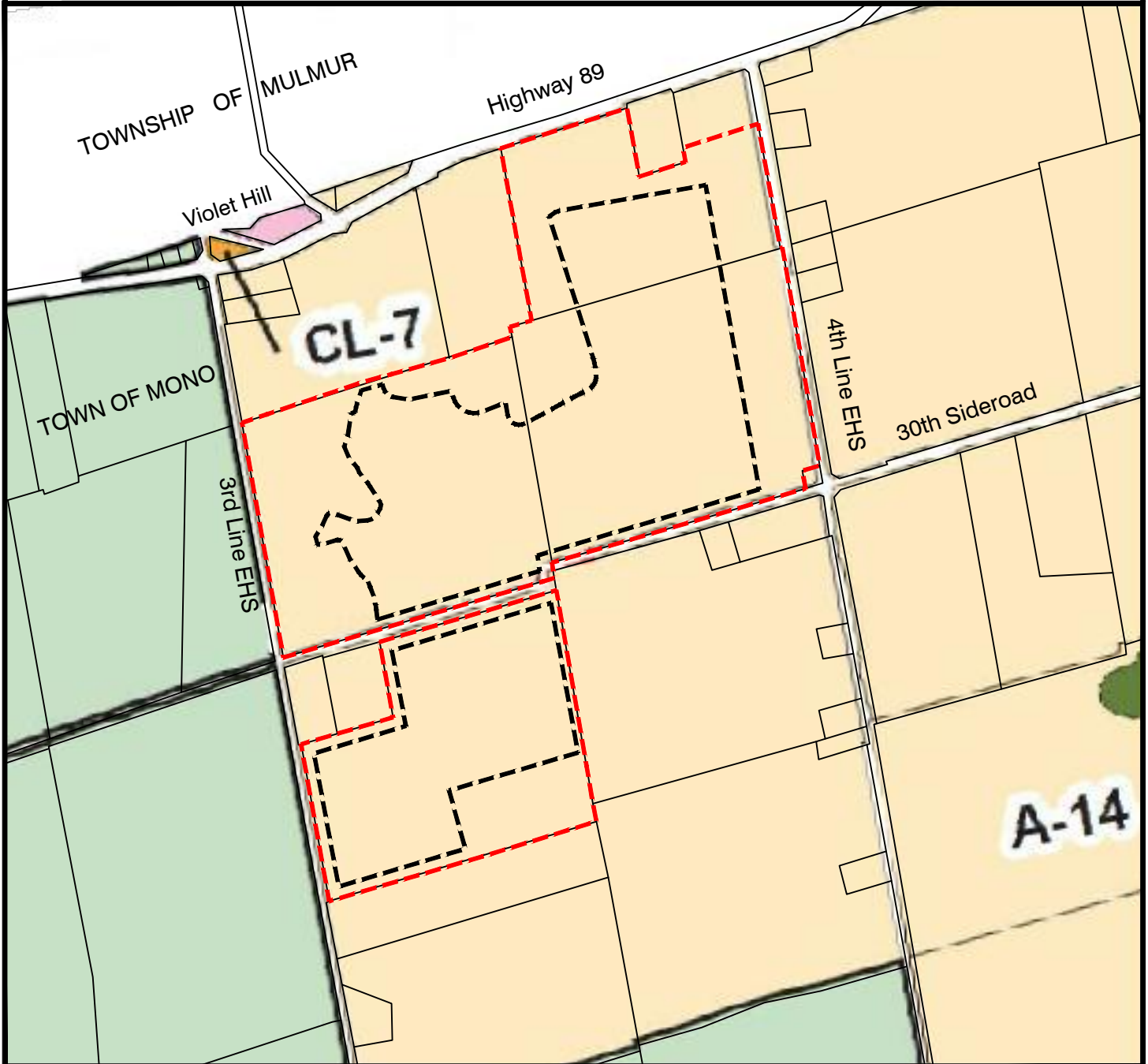


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Figure 13: Town of Mono Zoning By-law No. 78-1
Schedule A



- | | | |
|--|---|---|
|  Area to be Licensed |  OS Open Space | |
|  Area to be Extracted |  EP Environmental Protection | |
|  A Rural |  CL Local Commercial |  CH Highway Commercial |



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