

PLANNING JUSTIFICATION REPORT:

JEDBURGH PLAINS

Application to Amend the Township of North Dumfries Zoning By-law

1830 WRIGLEY RD
TOWNSHIP OF NORTH DUMFRIES
REGION OF WATERLOO

Prepared for:

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1.0 INTRODUCTION

Esher Planning Inc is applying on behalf of J-AAR Materials Ltd. to amend the Zoning By-law for the Township of North Dumfries, in order to permit a mineral aggregate use. A related application under the Aggregate Resources Act (ARA) has been submitted to the Ministry of Natural Resources (MNR) for Class A, Pit Above Water License.

The proposed development is located at 1830 Wrigley Road, east of the community of Ayr.

The Planning Act and Aggregate Resources Act applications are supported by a series of technical studies which assess the impact of the proposed development on neighbouring residents, the natural environment, water resources, and the local road network. The Site Plans detail the manner in which operations will be carried out as described by the sequence of extraction and progressive rehabilitation.

The following information and reports have been prepared in support of this application:

Maximum Predicted High-Water Table Report: Stonecairn Consultants Inc.

Natural Environment Report: MTE Consultants

Noise Impact Assessment Report: HCG Engineering Ltd.

Air Quality Assessment Report - RWDI

Cultural Heritage/Archaeology Report: Lincoln Environmental Consulting

Traffic Impact Assessment Report: Paradigm Engineering

Site Plans: Harrington McAvan Ltd.

The proposed mineral aggregate operation has been designed in accordance with current industry best practices and reflects the recommendations of the accompanying technical reports. The operational notes on the license site plans were prepared in accordance with the standards of the Aggregate Resources Act and incorporate specific conditions that reflect the technical recommendations and mitigation measures to minimize any potential effects of the proposed development.

This report provides a description of the project and an analysis of the proposed use in the context of current provincial and municipal planning policy.

1.1 *Location and Surrounding Lands*

The Jedburgh Plains Site is located on the north side of Wrigley Road, just east of the community of Ayr. The property is described as Part of Lot 32, Concession 8, and has an area of 39.6 hectares with 29.9 hectares proposed for extraction. The Site is predominantly in agricultural use, with natural heritage features (woodland and wetland) located in the northern portions of the property, outside of the proposed limit of extraction. Farm buildings previously located in the northeast part of the property were removed in 2023.

The surrounding lands include a mix of agricultural, extractive industrial and residential uses. The lands immediately to the west and east of the Site are licenced under the Aggregate Resources Act (see **Figure 2**). The pit to the east is still active. The pit to the west is depleted and in the process of undergoing final rehabilitation with a proposed residential after use. The community of Ayr is located to the west of the Site. Agricultural lands and rural residential uses are found to the south and southeast of the Site.

2.0 DESCRIPTION OF THE PROPOSAL

The proposal is for a mineral aggregate operation with extraction above the water table. The area to be licensed is 39.6 hectares with a proposed extraction area of 29.9 hectares. The proposed annual tonnage limit is 1 Million tonnes. The operational design and rehabilitation of the pit is based on the recommendations of a multi-disciplinary technical team to address provincial policies and regulations. The technical reports assessed the potential impacts of the proposed pit operation on groundwater, natural heritage and cultural heritage features on the site and adjacent lands.

The operations will maintain a minimum 15 m setback from the western property limit, and a 30 m setback from Wrigley Road at the south limit of the property. There is a common boundary agreement with the owners of the property to the east (1790 Wrigley Road) and with this agreement, the proposed setback along the eastern licence limit is zero metres.

The aggregate operations will include extraction of sand and gravel using excavators, loading with front end loaders and transporting by truck to the processing area which is located in the southeast portion of the site. Portable and stationary processing equipment for screening and crushing will be used on site and will generally be located on the pit floor. Other equipment may include excavators, bulldozers and conveyors.

The proposed hours of operation are 7 a.m. to 7 p.m. for processing and shipping, 7 a.m. to noon on Saturdays, and no operations on Sundays or Statutory holidays.

Rehabilitation of the site will progressively restore the extracted lands to an agricultural after use, compatible with the surrounding lands. Importation of excess soil is proposed to restore the Site to the final grades depicted on the rehabilitation plan. The land shall be returned to soil capabilities that are the same as the present capabilities for agriculture. The current agricultural uses shall continue on this site as long as possible during pit operations.

The ARA Site Plans include details about the existing features, operations and rehabilitation as well as technical recommendations as outlined in the reports submitted with the application.

2.1 Aggregate Resource Overview

The subject lands are located within a glaciofluvial outwash deposit, identified in the Aggregate Resources Inventory Paper for the Township of North Dumfries (ARIP 181) as an area of “primary significance”. The site is part of a glacial outwash deposit, located southeast of Ayr. The ARIP report notes that testing of the deposit by MTO revealed a gravel content of 60 to 80 percent, with high percentages of coarse gravel. The deposit consists of sand and gravel, and the material is suitable for a range of construction products including concrete and asphalt products, as well as Granular A and Granular B products.

The quality and quantity of the aggregate resource within the area to be licensed was confirmed by on-site test pits which indicate the surficial sand/gravel resource varies from approximately 6-7 m in thickness. The area to be licensed contains an estimated 7 million tonnes of aggregate resource.

The subject lands are identified in the Official Plan mapping as a mineral aggregate resource area.

2.2 Soil Capability for Agriculture

The Canada Land Inventory (CLI) mapping shows that the majority of the area to be licensed is class 4 with approximately 5 percent of the lands as class 2 soils. According to the CLI land capability class descriptions, soils in this class have severe limitations that restrict the range of crops or require special conservation practices.

In Ontario, class 1-3 agricultural lands are considered “prime agricultural” lands. The Official Plans for both the Region and the Township identify areas of “Prime Agricultural Land” and “Rural Areas” outside of settlement areas in the municipality. Rural Areas are not considered prime agricultural lands. The subject property is mapped as a “Rural Area” in both the ROP and the Township OP. The lands are not defined as prime agricultural lands. This is consistent with the soil capability of the site, which is not considered as prime agricultural land.

2.3 Haul Route

The proposed entrance will be on to Wrigley Road, at the eastern limit of the property. Wrigley Road is identified in the Official Plan as a Regional Road and is currently used for aggregate truck traffic. Truck traffic leaving the site would utilize Wrigley Road, with approximately half of the outbound trucks travelling north via Dumfries Road and the balance travelling either north or south via Spragues Road., and then either north towards Highway #401 or south toward Paris.

The Pit license proposes an annual maximum material extraction of 1,000,000 tonnes. Based on a 300-day operating season, the average number of truckloads is 7 per hour.

2.4 Rehabilitation

In accordance with the requirements of the Aggregate Resources Act Provincial Standards, the extracted area will be progressively rehabilitated, as outlined on the Site Plans. All topsoil and overburden on site will be stripped and stockpiled separately in berms or stockpiles and replaced as quickly as possible in the progressive rehabilitation process. Soil stripping/handling will only occur during dry (unsaturated) and unfrozen conditions. Topsoil berms shall be graded to stable slopes and seeded with a grass/legume mixture to prevent erosion and minimize dust.

In the short term, the land will continue to be used for agriculture until such time as the aggregate extraction commences. The phasing of the pit will maintain lands in agricultural use during pit operations as much as possible.

The final rehabilitation of this property will be to an agricultural after use as shown on the Site Plans.

The ARA Site Plans (Rehabilitation Plan) include additional details regarding progressive and final rehabilitation. The final rehabilitation will be compatible with the surrounding lands and land uses and enhance the existing natural features within and surrounding the site.

During rehabilitation in the agricultural areas the soils shall be replaced in a manner that approximates the original soil profile. Prior to soil placement compacted areas of the pit floor shall be ripped and scarified. As such, it is expected that the same average soil capability will be restored.

The proposed final rehabilitation is compatible with the surrounding lands and land use. The owners will cultivate the rehabilitated lands and plant the areas with a cover crop of grasses and legumes to get the soil productive and return the land to crops and pasture. J-AAR have been very successful with their rehabilitation efforts at their other aggregate sites, including agricultural rehabilitation. The rehabilitation plan is consistent with the Official Plan and the Provincial Planning Statement (2024).

2.5 Background Reports and Site Plans

The Planning Act and Aggregate Resources Act applications are supported by a series of technical studies which have assessed the impact of the proposed operation on the natural environment, cultural heritage, and water resources. These reports have been prepared in accordance with the requirements under the Aggregate Resources Act and also meet the requirements for review of the Planning Act application.

The Site Plans detail the manner in which operations will be carried out as described by the sequence of operations and progressive 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 applications.

The proposed pit operation has been carefully designed and reflects recommendations of the accompanying technical reports, together with comments from reviewing agencies. The operational notes on the license site plans under the Aggregate Resources Act, have incorporated conditions to reflect specific recommendations and measures to mitigate any negative environmental effects.

2.6 Pre-Consultation

A Pre-consultation Meeting and site visit was held with Township staff in the fall of 2024. Staff confirmed that an amendment to Zoning By-law (ZBA) would be required to permit the proposed use.

2.7 Indigenous Consultation

The Crown has a duty to consult First Nation and Métis communities when it has knowledge, real or constructive, of credibly asserted or established Aboriginal or treaty rights and contemplates conduct that might adversely affect those rights. The duty to consult rests with the Crown and the Crown must retain oversight of the consultation process. The Crown may delegate the procedural aspects of the consultation process to project applicants.

The Ministry of Natural Resources (MNR) has delegated the procedural aspects of the duty to consult to J-AAR Materials Ltd. for the related ARA application.

3.0 PLANNING CONSIDERATIONS

The subject lands fall within the Planning jurisdiction of the Township of North Dumfries and the Region of Waterloo. This report evaluates the proposed land use within the context of the Official Plans for the Region and the Township, as well as within the context of Provincial legislation including the Planning Act, and the Provincial Planning Statement (PPS 2024).

The protection and management of aggregate resources has been deemed to be of provincial significance, and their development is regulated by specific legislation. In addition to the Aggregate Resources Act (ARA), the development of aggregate extraction operations must respect the provisions of the Planning Act and give appropriate consideration to the policy framework established by the regional and municipal planning documents.

When making any land use planning decision, it is necessary to review provincial interests and determine how they may be impacted through development. In the case of aggregate development, often more than one provincial interest exists, and it is the goal of sound land use planning to balance and protect these competing interests in the most effective manner, keeping in mind the long term planning horizon.

The property is currently designated as “*Rural*” in the Township Official Plan (see **Figure 4**). The property is currently zoned Rural (Z1) in the Township Zoning By-law (see **Figure 6**). The proposal will require an amendment to rezone the lands from “*Rural*” (Z1) to Gravel Pit (Z14).

The following analysis provides an assessment of the proposal in the context of relevant Provincial and Local planning policies. For ease of reference, the following tables review the proposal against the applicable current planning policies. The evaluation is based on the findings of the technical studies forming part of the application submission, an evaluation and an analysis of the surrounding land use, and the environmental impact of the proposal.

3.1 Planning Act

When carrying out its responsibilities under the Planning Act, a municipality or any other authority which affects a planning matter must have regard for the provincial interests as identified in Section 2 of the Planning Act.

The provincial interests contained in Section 2 of the Planning Act are outlined in the table below. The Jedburgh Plains proposal has been evaluated in the context of these prescribed provincial interests:

Planning Act, Section 2 Evaluation

Provincial Interests	Jedburgh Plains Proposal

Provincial Interests	Jedburgh Plains Proposal
<i>2(a) The protection of ecological systems, including natural areas, features and functions.</i>	The proposed operations and rehabilitation activities for the Jedburgh Plains application have been assessed for any potential impacts on the natural environment. MTE Consultants inventoried the natural heritage features on the site and surrounding lands. The recommendations of the MTE Natural Environment Report have been incorporated into the pit design, thereby protecting ecological systems, natural areas, features and functions.
<i>2(b) The protection of the agricultural resources of the Province</i>	The proposed rehabilitation of the site to agricultural uses allows for the interim use of the site for aggregate extraction while returning the lands to an appropriate use once extraction is complete. This represents wise resource management and protects the resources of the area for the long term.
<i>2(c) The conservation and management of natural resources and the mineral resource base.</i>	Aggregate resources are a provincial interest and should be protected from incompatible land uses and developed responsibly. The proposed pit will provide a high quality supply of mineral aggregate material to the local and regional markets.
<i>2(d) The conservation of features of significant architectural, cultural, historical, archaeological or scientific interest.</i>	The Archaeology Assessment Report prepared by Lincoln Environmental Consulting Corp. evaluated the presence of archaeological features on the site. There were no features of archaeological significance identified on this property. The report has been cleared by the Ministry of Citizenship and Multiculturalism (MCM).
<i>2(e) The supply, efficient use and conservation of energy and water</i>	Ground and surface water features have been studied and documented in the Maximum Predicted Water Table Report prepared by Stonecain Consultants. Mitigation measures included on the Operations Plan such as, groundwater level monitoring and restriction of surface activities will minimize the potential for groundwater disturbance or contamination in accordance with provincial guidelines.

Provincial Interests	Jedburgh Plains Proposal
<i>2(k) The adequate provision of employment opportunities.</i>	The proposed expansion will provide local employment opportunities in the Township.
<i>2(l) The protection of the financial and economic well-being of the Province and its municipalities.</i>	The Township and the Region will see a source of revenue through property tax assessment and annual tonnage contributions (TOARC) fees.
<i>2(m) The coordination of planning activities of public bodies.</i>	The interests of public bodies and agencies are considered by the circulation requirements of the Planning Act and the ARA.
<i>2(n) The resolution of planning conflicts involving public and private interests.</i>	The land use planning process, as well as the ARA licensing process, enables municipalities, agencies and the public to participate in the evaluation of this proposal.
<i>2(o) The protection of public health and safety.</i>	The operational plan contains a variety of mitigation measures which have been developed to minimize the social impact of the proposed pit operation. The requirements of the Operation Plan and site plan notes therein are legally binding as per the ARA.
<i>2(p) The appropriate location of growth and development.</i>	Rural areas are prime location for the development of this non-renewable resource. On- site investigation has confirmed the quality and extent of this resource. The proposal will provide the local market with a supply of high quality construction materials. No significant natural or cultural heritage features will be negatively impacted by the proposed pit operation, and the rehabilitation plans will return the lands to agricultural use.

3.2 Provincial Planning Statement (PPS) 2024

The Province introduced a new Provincial Planning Statement which came into effect on October 20, 2024. The PPS 2024 is issued under *section 3 of the Planning Act*, which requires that all decisions affecting planning matters shall be consistent with the minimum standards set in the Provincial Planning Statement.

The PPS provides policy direction on matters of provincial interest related to land use planning and development. As a key part of Ontario's policy-led planning system, the Provincial Planning Statement sets the policy foundation for regulating the development and use of land province-wide, helping achieve the provincial goal of meeting the needs of a fast-growing province while enhancing the quality of life for all Ontarians.

The PPS recognizes that the Province's natural heritage resources, water, agricultural lands, mineral aggregate resources, cultural heritage and archaeological resources provide important environmental, economic and social benefits. The wise use and management of these resources over the long term is a key provincial interest. The province must ensure that its resources are managed in a sustainable way to conserve biodiversity, protect essential ecological processes and public health and safety, provide for the production of food and fiber, minimize environmental and social impacts and meet its long term economic needs.

The proposed pit contains resources that are considered to be of provincial significance: a high-quality aggregate resource, and agricultural land. The operations and progressive rehabilitation plans have been designed to achieve the balance required to manage these overlapping provincial interests.

The following table provides an evaluation of the proposal in the context of the relevant policies of the PPS. The evaluation is based largely on findings of various technical studies referenced previously in this report.

Provincial Planning Statement – Consistency Analysis

PPS (2024) Policies	Jedburgh Plains Proposal
<p><i>2.5. Rural Areas in Municipalities</i></p> <p><i>Healthy, integrated and viable rural areas should be supported by:</i></p> <p><i>f) promoting the diversification of the economic base and employment opportunities through goods and services, including value-added products and the sustainable management or use of resources.</i></p>	<p>The proposed pit expansion is located in a rural area. The sustainable management or use of mineral aggregate resources contributes to the local economic base. The proposed pit and the return of the lands to an agricultural use post extraction represents sustainable resource management.</p>
<p><i>2.6.1 Rural Lands in Municipalities:</i></p> <p><i>On rural lands in municipalities, permitted uses are:</i></p> <p><i>a) to the management or use of resources;</i></p>	<p>The proposed pit represents the use of a provincially significant natural resource (mineral aggregate) and is an appropriate rural land use. The majority of the lands are designated Extractive and are recognized as an important Mineral Aggregate Resource Area.</p>
<p><i>3.5 Land Use Compatibility</i></p>	<p>The site plans for the proposed pit have</p>

PPS (2024) Policies	Jedburgh Plains Proposal
<p><i>3.5.1 Major facilities and sensitive land uses shall be planned and developed to avoid, or if avoidance is not possible, minimize and mitigate any potential adverse effects from odour, noise and other contaminants, minimize risk to public health and safety, and to ensure the long-term operational and economic viability of major facilities in accordance with provincial guidelines, standards and procedures.</i></p>	<p>been designed to ensure that appropriate mitigation measures are in place to minimize the effects of noise and dust from the operation.</p>
<p><i>4.2.1 Planning authorities shall protect, improve or restore the quality and quantity of water by:</i></p> <p><i>b) minimizing potential negative impacts, including cross-jurisdictional and cross-watershed impacts;</i></p> <p><i>f) implementing necessary restrictions on development and site alteration to:</i></p> <ol style="list-style-type: none"> <i>1. protect all municipal drinking water supplies and designated vulnerable areas; and</i> <i>2. protect, improve or restore vulnerable surface and ground water and their hydrologic functions;</i> 	<p>No municipal drinking water sources are located within the proposed licensed area.</p> <p>Operational best practices are reflected on the Site Plans and are designed to minimize any potential for surface activities to impact groundwater quality. Groundwater level monitoring, and restriction of surface activities (fuel storage and refueling, spills plan, etc.) in accordance with provincial guidelines form part of the operating conditions outlined on the Site Plans.</p> <p>The Stonecairn report concludes that the proposed gravel pit will not have any adverse effect on surface and groundwater in the area.</p>
<p><i>4.3 Agriculture</i></p> <p><i>4.3.2 As part of the agricultural land base, prime agricultural areas, including specialty crop areas, shall be designated and protected for long-term use for agriculture.</i></p> <p><i>4.3.5 Non-Agricultural Uses in Prime Agricultural Area</i></p> <p><i>4.3.5.1 Planning authorities may only permit non-agricultural uses in prime agricultural areas for:</i></p> <p><i>a) extraction of minerals, petroleum resources and mineral aggregate resources</i></p>	<p>The subject property is identified in the Canada Land Inventory Agricultural Capabilities Mapping as predominantly class 4-7 soils. The PPS policies for prime agricultural lands are therefore not applicable to this site, however, the proposed rehabilitation will restore the lands to an agricultural after use, with similar soil capabilities that exist prior to extraction.</p>

PPS (2024) Policies	Jedburgh Plains Proposal
<p><i>in accordance with policies 2.4 and 2.5</i></p> <p><i>b) limited non-residential uses</i></p> <p><i>4.3.5.2 Impacts from any new or expanding non-agricultural uses on the agricultural system are to be avoided, or where avoidance is not possible, minimized and mitigated as determined through an agricultural impact assessment or equivalent analysis, based on provincial guidance.</i></p>	
<p>4.5 Minerals Aggregate Resources</p> <p><i>4.5.1.1 Mineral aggregate resources shall be protected for long-term use and, where provincial information is available, deposits of mineral aggregate resources shall be identified.</i></p> <p>4.5.2 Protection of Long-Term Resource Supply</p> <p><i>4.5.2.1 As much of the mineral aggregate resources as is realistically possible shall be made available as close to markets as possible.</i></p> <p><i>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.</i></p>	<p>The technical studies prepared in support of the proposed pit demonstrate that no natural or cultural heritage features will be impacted by the development. The hydrogeological study has confirmed groundwater elevations and a series of operational practices designed to restrict activities which could present threats to groundwater have been included on the operations plan. Adherence to provincial standards for noise and dust will minimize any potential social impacts and nuisances. The TOARC contributions will provide a sustained fund to the Township for road maintenance along the proposed haul route and ensure safe vehicular access to and from the site is provided over the long-term with minimal disruption to existing traffic flows.</p>

PPS (2024) Policies	Jedburgh Plains Proposal
<p><i>4.5.2.2 Extraction shall be undertaken in a manner which minimizes social, economic and environmental impacts.</i></p>	<p>The site plans for the proposed pit expansion have been designed to ensure that appropriate mitigation measures are in place to minimize the potential social, economic and environmental effects of the pit operations.</p>
<p><i>4.5.3 Rehabilitation</i></p> <p><i>4.5.3.1 Progressive and final rehabilitation shall be required to accommodate subsequent land uses, to promote land use compatibility, to recognize the interim nature of extraction, and to mitigate negative impacts to the extent possible. Final rehabilitation shall take surrounding land use and approved land use designations into consideration.</i></p> <p><i>4.5.3.2 Comprehensive rehabilitation planning is encouraged where there is a concentration of mineral aggregate operations.</i></p>	<p>The proposed rehabilitation to agricultural use, with the same soil capabilities that exist pre-extraction, is consistent with provincial policy. J-AAR Materials Ltd. have demonstrated excellent rehabilitation of their existing pit operations and continue to set the bar high for the industry.</p>
<p><i>4.5.4 Extraction in Prime Agricultural Areas</i></p> <p><i>4.5.4.1 In prime agricultural areas, on prime agricultural land, extraction of mineral aggregate resources is permitted as an interim use provided that</i></p> <ul style="list-style-type: none"> <i>a) impacts to the prime agricultural areas are addressed, in accordance with policy 4.3.5.2; and</i> <i>b) the site will be rehabilitated back to an agricultural condition.</i> 	<p>The site is not within a prime agricultural area.</p>

PPS (2024) Policies	Jedburgh Plains Proposal
<p><i>4.6 Cultural Heritage and Archaeology</i></p> <p><i>4.6.2 Planning authorities shall not permit development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless the significant archaeological resources have been conserved.</i></p>	<p>An Archeological Assessment was completed by Lincoln Consulting Corp and was reviewed and cleared by the Province (MCM). There are no significant archaeological resources identified on the subject lands. The proposal is consistent with the PPS in this regard.</p>

3.3 Official Plan Policies: Region of Waterloo

The Regional Municipality of Waterloo Official Plan (ROP) contains policies and land use schedules to establish locational and development review requirements for various land uses (residential, commercial, industrial, institutional, parks, etc.), set out how agricultural land and other natural features and cultural heritage resources are to be protected and provide direction on how environmental constraints are to be addressed.

The subject property is currently designated as “*Protected Countryside*” and “*Rural Area*” in the Regional Official Plan (Map 7). The property is also identified as a “*Mineral Aggregate Resource Area*” on Map 8 of the County Official Plan. There are Regional Greenland features identified in the northern portion of the property, outside of the proposed limits of extraction. A portion of the property is identified as a Source Water Protection Area.

The Regional Plan recognizes the importance of mineral aggregate resources and provides for resource extraction within the Countryside designation. Within the Agricultural Reserve designation, sand and gravel extraction and ancillary uses are permitted without an amendment to the OP, provided that the proposal complies with the policies related to resource extraction (OP Section 9).

The subject property is within an area of agricultural and mineral extractive land uses. There are existing licensed sand and gravel pits adjacent to the east and west of the site. The proposed use has been designed to minimize the impact to the community located to the west of the site. The phasing of extraction and progressive rehabilitation of the site, together with location of acoustic berms and visual screens around the perimeter of the site, are informed by the technical reports and are designed to minimize impacts of the proposed pit operations.

Chapter 6 of the ROP (Supporting the Countryside) sets out the following:

Overall Goal – Protect the rural character of the countryside while supporting the development of strong and prosperous rural communities.

Section 6.A.7 states *“Mineral aggregate operations may be permitted as an interim use in the Prime Agricultural Area and Rural Area designations in accordance with the policies in Chapter 9.”*

Chapter 9 (Managing Aggregate Resources) sets out the detailed policies and approval requirements for new aggregate operations. The overall goal is to *“Plan for the availability of mineral aggregate resources to support the region’s economic and growth needs, while preventing or minimizing any potential impacts of mineral aggregate operations on surface water and groundwater resources, surrounding communities, cultural heritage resources, environmental features and ecological functions, and agricultural resources and operations”*.

The technical reports required to support an application for a mineral aggregate operation are outlined in Section 9.C and include an impact assessment of the proposal as it relates to the following issues: noise, dust, hydrogeology (ground and surface water), transportation, environmental features and functions, and archaeology. The required technical studies for the expansion of an existing mineral aggregate operation, as outlined in Section 9.C.3, have been submitted in support of the applications.

The Region also requires the applicant to provide information on the estimated lifespan of the mineral aggregate operation, and to demonstrate how the final rehabilitation plan is consistent with the policies of the Official Plans (Section 9.C.3. (f)).

An assessment of the cumulative impact that may result from the proposed operation is also to be addressed as part of the required technical review (Section 9.C.3. (g)). The cumulative impacts of noise, dust and traffic have been considered as part of the technical review of the proposal.

The pit operation and rehabilitation has been designed to ensure a logical sequence of extraction and progressive rehabilitation (Section 9.3). The Site Plan includes the recommended technical measures to prevent or minimize potential impacts (Section 9.4). The proposed pit expansion meets the ROP objective to “ensure the availability of mineral aggregate resources occurs as close to markets as possible” (Section 9.5).

The Noise report recommends measures designed to ensure compliance with MECP noise guidelines. These include restrictions related to type and location of equipment, and installation of berms around the perimeter of the site. All of the recommendations are reflected on the Site Plans.

A Water Resources Assessment Report was completed to document surface and groundwater characteristics and assess impacts of the proposed pit expansion. The report includes consideration of the Grand River Source Water Protection Plan. There are no permanent surface water features on the site and no water taking is proposed on the expansion lands. The report recommends a private well survey to establish baseline conditions as well as a groundwater monitoring program as an operating condition.

To mitigate impacts on significant natural heritage features, the MTE report recommendations include establishing a buffer of 30 metres from the Provincially Significant Wetland located in the north part of the property and a minimum 10 metre setback from the significant woodland to the east. Other

recommendations include the installation of sediment and erosion control measures as well as timing restrictions for removal of vegetation to avoid the breeding bird season (April 1 to September 30th). Installation of bat boxes is also proposed and discussion with MECP Species at Risk (SAR) Branch to ensure that appropriate measures are in place to protect any habitat for SAR species on the site. These recommendations are incorporated into the Site Plans.

The Natural Heritage Report concludes that, with the mitigative measures in place, there will be no negative impacts to the natural heritage features or ecological functions identified both on and off site. No cumulative negative impacts on the natural environment are anticipated in association with the proposed pit.

The final rehabilitation of the site will be to agriculture, with the same soil capability as pre-extraction. Extraction and rehabilitation will occur progressively in phases to ensure that as much of the site as possible remains in agricultural production.

The Jedburgh Plains proposal would permit the development of a mineral aggregate operation. An Amendment to the Regional Official Plan is not required.

3.4 Official Plan: Township of North Dumfries

The Township of North Dumfries updated their Official Plan policies in December 2013, through a comprehensive plan amendment (OPA 26). The amendment brought the plan into conformity with the Regional Plan (subject to ongoing appeals and deferrals), and the 2024 PPS. The Township plan closely mirrors the policies in the Regional Official Plan.

The Jedburgh Plains property is designated as ‘Rural Area’ on the Official Plan Land Use Map (No. 2A). It is also identified as ‘Mineral Aggregate Resource Area’ on OP Map No. 5. There are no Environmental Features identified within the proposed area of extraction according to the Official Plan mapping.

The goals of the plan include the following related to mineral aggregates:

To provide for the management of natural resources within the township in a manner that minimizes undesirable short and long term impacts on the natural environment, the quality and quantity of ground and surface water, and the quality of life for existing and future residents. (Section 1.5.5)

Chapter 5 of the OP outlines the Township’s policies for Natural Resource Management, including mineral aggregate resources. According to OP Section 5.1.1.1 *“The primary activities in this designation will be farming, mineral aggregate extraction, and forestry”*. The proposed rehabilitation plan is coordinated with the rehabilitation of the adjacent pit license to the west, operated by CBM.

Section 5.2 of the Official Plan set out the Township’s policies for Mineral Aggregate Resource Areas. Mineral Aggregate extraction is permitted both within and outside the Mineral Aggregate Resource Area, subject to the policies of the Plan (Sec. 5.2.1.1).

Official Plan Section 5.2.1.3 provides that aggregate extraction will be regulated as follows:

To permit accessory uses associated with aggregate operations and processing activities such as crushing, screening, washing, stockpiling, blending with recycled asphalt or concrete materials, storage, weigh scales, parking and office facilities; and Provide site specific zoning in the event that ancillary land uses such as asphalt and concrete plants and aggregate transfer stations are proposed.

The proposed license boundary overlaps Core Environmental Features as outlined on Official Plan Schedule, and the policies require that an Environmental Impact Statement (EIS) be completed to confirm that that there will be no adverse environmental impacts to features or ecological functions and linkages in accordance with OP Policy 5.2.5.3

The Roseville Swamp Cedar Creek Provincially Significant Wetland (PSW) Complex overlaps the northern and northeastern portions of the Licence Area. Cedar Creek also overlaps the northwestern corner of the Licence Area. Both features extend to the west, north and east into the adjacent lands. PSWs are designated Core Environmental Features and development or site alteration are not be permitted (Policy 6.1.7.4). New mineral aggregate operations may be exempt from this provision in accordance with the policies of the ROP, as noted in Section 2.

2

and outlined in detail in Chapter 9 of the ROP

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The northern and northeastern portions of the Licence Area are also designated as Environmental Constraint Areas as per Map 5B of the OP. Environmental Constraint Areas may be hazardous lands, hazardous sites and Greenlands Network features. As per Policy 2.6.12.2, permitted uses within Environmental Constraint Areas include conservation, agriculture, appropriate recreational uses, and forestry and wildlife management. The proposed extraction limit has been developed to exclude these features. An amendment to the Township Official Plan is not required for the proposed development.

3.5 Summary of Planning Analysis

The planning analysis contained in this report demonstrates that the proposal is consistent with the principles, strategic initiatives, objectives and policies of the Regional and Township Official Plans and is consistent with the Provincial Policy Statement (PPS 2024).

Impacts, and cumulative impacts that have been addressed in the technical reports prepared for this application and recommendations incorporated into the Site plans, and are summarized below:

3.5.1 Natural Heritage Features

The Natural Environment Report prepared by MTE Consultants have examined the potential for negative effects on natural heritage features and functions on the Jedburgh Plains property and adjacent lands. During site investigations and field surveys, it was determined that significant natural features and potential habitat for species of risk occurred on or adjacent to the site.

To mitigate impacts on significant natural heritage features, the MTE report recommendations include establishing a buffer of 30 metres from the Provincially Significant Wetland located in the north part of the property and a minimum 10 metre setback from the significant woodland to the east. Other recommendations include the installation of sediment and erosion control measures as well as timing restrictions for removal of vegetation to avoid the breeding bird season (April 1 to September 30th).

Installation of bat boxes is also proposed and discussion with MECP Species at Risk (SAR) Branch to ensure that appropriate measures are in place to protect any habitat for SAR species on the site. These recommendations are incorporated into the Site Plans.

The Natural Heritage Report concludes that, with the mitigative measures in place, there will be no negative impacts to the natural heritage features or ecological functions identified both on and off site. No cumulative negative impacts on the natural environment are anticipated in association with the proposed pit.

3.5.2 Water Resources

Stonecairn prepared a report to characterize the groundwater and surface water features on the site and surrounding lands and evaluate the potential impacts of the proposed aggregate operation on water supplies. Four boreholes (MW101-23 through MW104-23) were advanced to depths ranging from 11 m to 28 m below grade. Water level measurements at the monitoring wells began in May 2023 and continues to date, providing long term data of seasonal high and low water table levels at the site. Three additional boreholes were installed in June 2025 to obtain supplemental groundwater information.

Within the limits of the area to be licensed, the data from the monitoring periods between May 2023 through to July 2025 indicates a typical seasonal range in water levels between 288.85 masl (lowest reading) to 293.00 masl (highest reading). Extraction within the expansion areas will be a minimum of 1.5 metres above the maximum predicted water table. Based on the maximum predicted water table, the maximum depth of extraction will be no lower than 292.5 masl.

The proposed aggregate extraction activities are not expected to adversely impact water supply with this aquifer, since the aquifer is set well below the proposed extraction depth, and active construction dewatering is not proposed as part of the aggregate extraction methodology. In addition, there are no adverse effects on surface water resources expected.

The Stonecairn report recommends that groundwater monitoring be continued quarterly while the pit is in operation. Other recommendations include provisions for fuel storage and erosion control, and the report outlines a suggested well water interference protocol. The recommendations of the report are included as operating conditions on the Site Plans.

3.5.3 Noise

HCG Engineering reviewed the operational plan and proposed phasing for the proposed pit operation and conducted an analysis of the noise and vibration impacts based on a worst-case scenario. HCG provided recommendations to mitigate noise from operations, including perimeter berms and acoustic screens near processing equipment, and these recommendations have been incorporated into the Site Plans for the pit. The Noise Impact Assessment report concluded that the sound emissions from the pit operations on the extension lands, with the recommended noise controls in place, are expected to meet MECP sound levels and operate in compliance with provincial limits. The noise mitigation measures include perimeter berms and noise barriers around equipment and are detailed in the HCG report. These recommendations are reflected on the Site Plans submitted with the application.

3.5.4 Dust and Air Quality

An Air Quality Assessment was completed by RWDI Air Inc., to evaluate potential emissions associated with the proposed aggregate extraction and processing activities, and to determine whether predicted concentrations at nearby sensitive receptors comply with the Ontario Ministry of the Environment, Conservation and Parks (MECP) air quality standards, criteria, and guidelines.

Meteorological data, background concentrations, and receptor locations were applied to ensure representative modelling of site conditions. Air dispersion modelling was completed for two scenarios representing equipment placement at the western and eastern extents of the property. The Assessment also considered cumulative impact of other aggregate operations near the site, using a two kilometer radius for this analysis.

The results of the study indicate that the predicted concentrations of total suspended particulate matter (TSP), particulate matter (PM₁₀ and PM_{2.5}), nitrogen oxides (NO_x), and crystalline silica generally comply with applicable standards, criteria, and guidelines. With appropriate mitigation and operational controls in place, the facility is not expected to cause significant adverse effects at nearby receptors.

Overall, the findings of this assessment demonstrate that the proposed operations can be undertaken in compliance with regulatory requirements and industry best practices for air quality protection.

As a mandatory condition of ARA Site Plans, and in accordance with MECP guidelines, pit operators are required to manage dust from their operations and implement appropriate dust control measures. The Jedburgh Plains site will operate in accordance with a Best Management Practises Plan (BMPP) for fugitive dust. The BMPP includes measures such as watering interior haul roads and stockpiles, ensuring berms are vegetated, ongoing progressive rehabilitation to minimize disturbed areas, as well as mechanical controls on processing equipment such as spray bars for watering. A copy of the BMPP is provided in Appendix F of the Air Quality Assessment Report.

3.5.5 Cultural Heritage Resources

Lincoln Environmental Consulting (LEC) completed Stage 1 and 2 archaeological assessments for the Site in August 2021. Approximately 90% of the study area consists of active agricultural fields. These areas were subject to pedestrian survey at 5-metre intervals in accordance with Section 2.1.1 of the MHSTCI's 2011 Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011). Approximately 10% of the study area consists of woodlot. These areas were subject to test pit survey at 5-metre intervals. All work met provincial standards, and no archaeological sites were identified during the Stage 2 assessment.

The archaeological assessment was conducted to meet the requirements of the Aggregate Resources Act and in accordance with the Standards and Guidelines for Consultant Archaeologists (MTC 2011). The report was submitted to This report is submitted to the Minister of Tourism, Culture and Gaming (MTCG) as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, and a clearance letter from the Ministry has been obtained, confirming that the report meets the current provincial requirements.

3.5.6 Traffic

A Transportation Impact Study (TIS) was prepared by Paradigm, to assess the impact on traffic associated with the proposed development. Development of the site is estimated to generate 14 truck trips in the AM peak hour and 14 trips in the weekday PM hour. The trip distribution is estimated to be split with roughly

half of the outbound trucks travelling north via Dumfries Road and the balance travelling either north or south via Spragues Road. Detailed trip distribution information is found in the TIS. This represents a conservative estimate assuming a maximum annual extraction of 1,000,000 tonnes. The TIS found that the site access location provides sufficient stopping and intersection sight distance for single-unit trucks at a design speed of 90 km/h, and did not identify the need for an eastbound left-turn lane on Wrigley Road.

The assessment analyzed current conditions and a five year forecast of traffic conditions (through 2030). Based on the findings of the Study, the development of the subject site is forecast to have a negligible impact on traffic operations in the study area.

3.5.7 Visual Impact

Vegetated berms will be installed to screen views into the subject lands from Wrigley Road. Once the operations are completed, the seeded berms will be removed, and the rehabilitated land will again be visible from the road. The recommended screening measures will help to minimize any potential negative visual impacts of the proposed operations, while allowing the subject property to be compatible with its surroundings upon its rehabilitation.

3.6 Township of North Dumfries Zoning By-law

The Township implements its Official Plan policies and regulates land uses through its Zoning By-Law. Zoning By-law 689-83, as Amended, was consolidated in July 2012.

The current zoning of the property is Z.1 (Rural). The proposed application is to change the zoning, for the proposed pit, to Gravel Pit Zone 14 (Z.14). This latter zone provides for the following permitted uses:

- the making, establishment or operations of a pit or quarry;
- buildings or structures which are incidental to and directly related to the extraction operation and which are shown on the site plan forming part of the license approval; and
- nothing in the foregoing shall be deemed to permit any manufacturing, commercial or processing operation except for the screening, washing, crushing and storage of material mined on the site.

An amendment to the North Dumfries Zoning By-law is required for the proposed pit extension.

An application for a zoning by-law amendment is being submitted to the Township of North Dumfries Zoning By-law 689-83, to rezone the lands from “Rural” (Z1) to Gravel Pit (Z14) to permit the establishment of a Class A pit license, Category 3, above the water table.

4.0 PLANNING CONCLUSION

The zoning by-law amendment and ARA license applications are supported by the foregoing land use planning analysis, the Summary Statement, the ARA site plans and related requirements, and the associated technical reports referenced in this document.

Based on these submissions it is concluded that:

- 1) The proposed pit is located in a provincially, regionally and locally recognized aggregate resource area.
- 2) The deposit can be extracted in such a manner that potential environmental and social impacts are minimized.
- 3) The matters of provincial interest as identified in Section 2 of the Planning Act have been properly assessed and the proposal has appropriate regard to these provincial interests.
- 4) The Provincial Planning Statement 2024, contains policy requiring mineral aggregate resources to be protected and that as much of the resource as possible be made available as close to market as is possible. The proposal is consistent with this provincial objective as well as provincial policy related to the protection of natural heritage, water and cultural resources and the protection of public health and safety.
- 5) The proposed pit, through its Operations Plan, Rehabilitation Plan and the recommendations of the supporting technical reports, is consistent with provincial policy as set out in the 2024 Provincial Policy Statement.
- 6) The proposal conforms to the relevant policies of the Region of Waterloo Official Plan with regard to amendments for new aggregate extraction applications.
- 7) The proposal conforms to the relevant policies of the Township of North Dumfries Official Plan with regard to amendments for new aggregate extraction applications.
- 8) The proposed pit operation has been carefully designed and reflects recommendations of the accompanying technical reports. The operational notes on the license site plans under the Aggregate Resources Act, have incorporated conditions to reflect specific recommendations and measure to mitigate any negative environmental effects.
- 9) The ARA site plans, prepared by taking into consideration the technical studies, surrounding land uses and legislative requirements, are designed to minimize environmental and social impacts in accordance with the Provincial Standards established under the ARA.
- 10) The proposed rezoning to “Gravel Pit” is appropriate for the proposed use. No special conditions or exceptions are proposed.

The proposal is consistent with the 2024 Provincial Planning Statement and conforms with the Official Plans for the Township of North Dumfries and the Region of Waterloo.

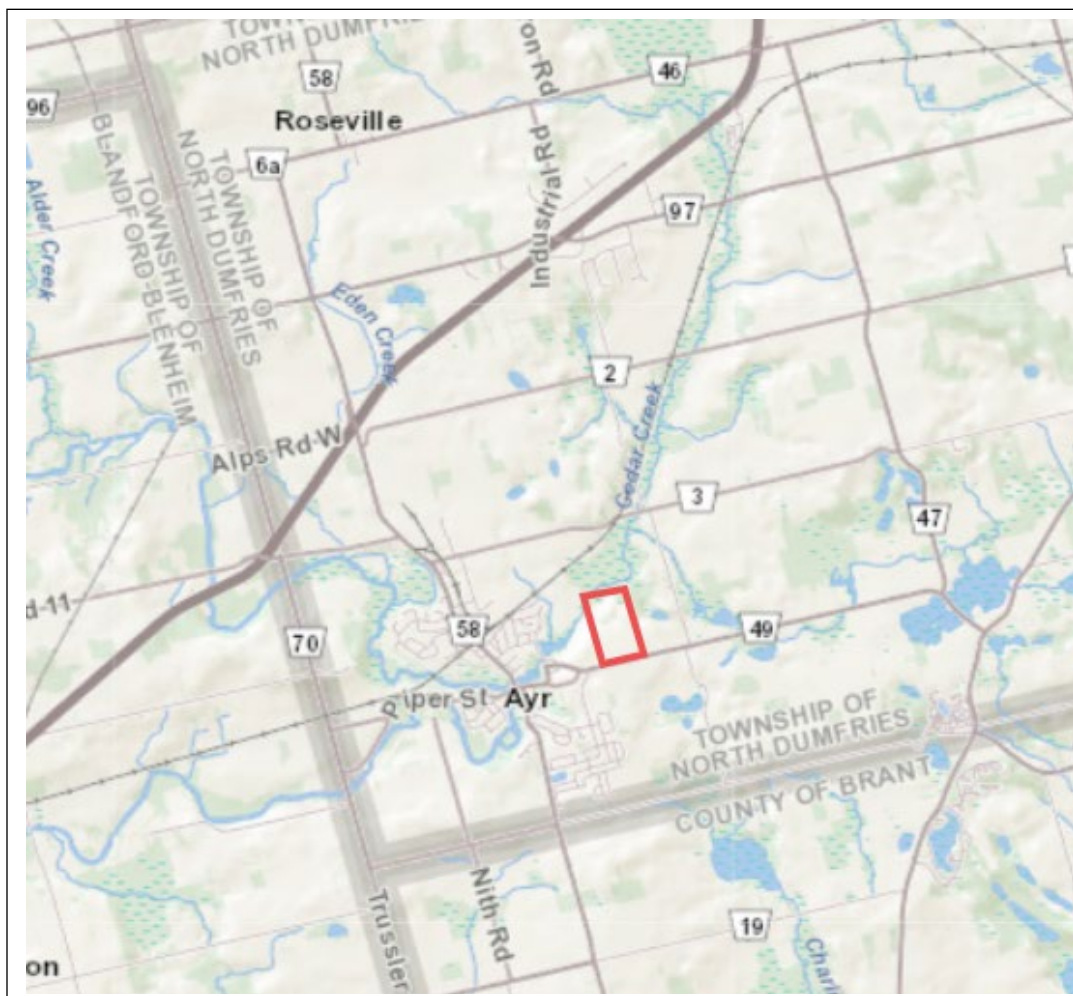
In my professional opinion, the proposal represents good land use planning.

Prepared by:



Melanie Horton, MCIP, RPP
Esher Planning Inc.

FIGURE 1: LOCATION



JEDBURGH PLAINS

1830 Wrigley Road
Part Lot 32, Concession 8
Township of North Dumfries, Region of Waterloo



FIGURE 2: SURROUNDING LANDS

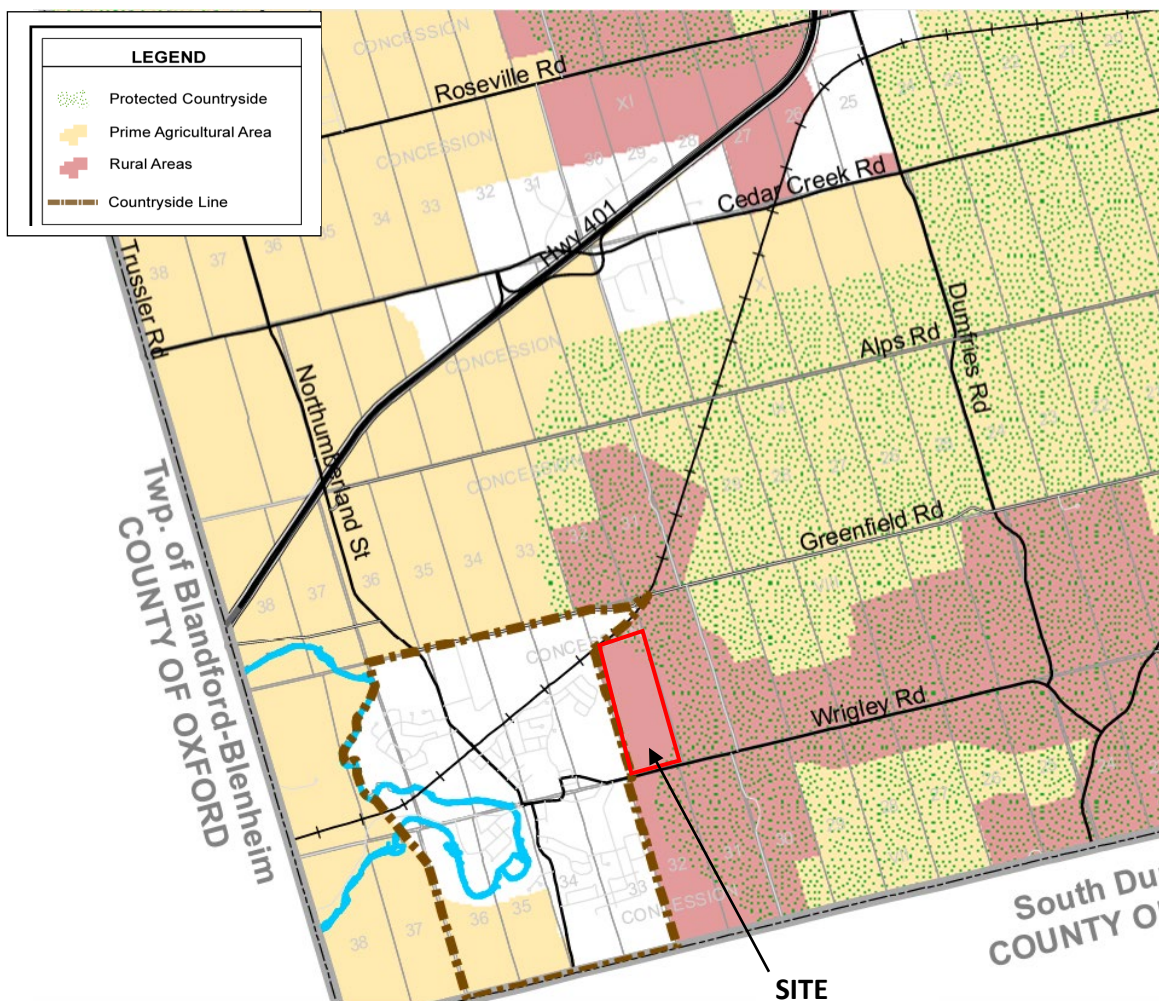


JEDBURGH PLAINS

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**FIGURE 3: NORTH DUMFRIES OFFICIAL PLAN
MAP 7, THE COUNTRYSIDE**

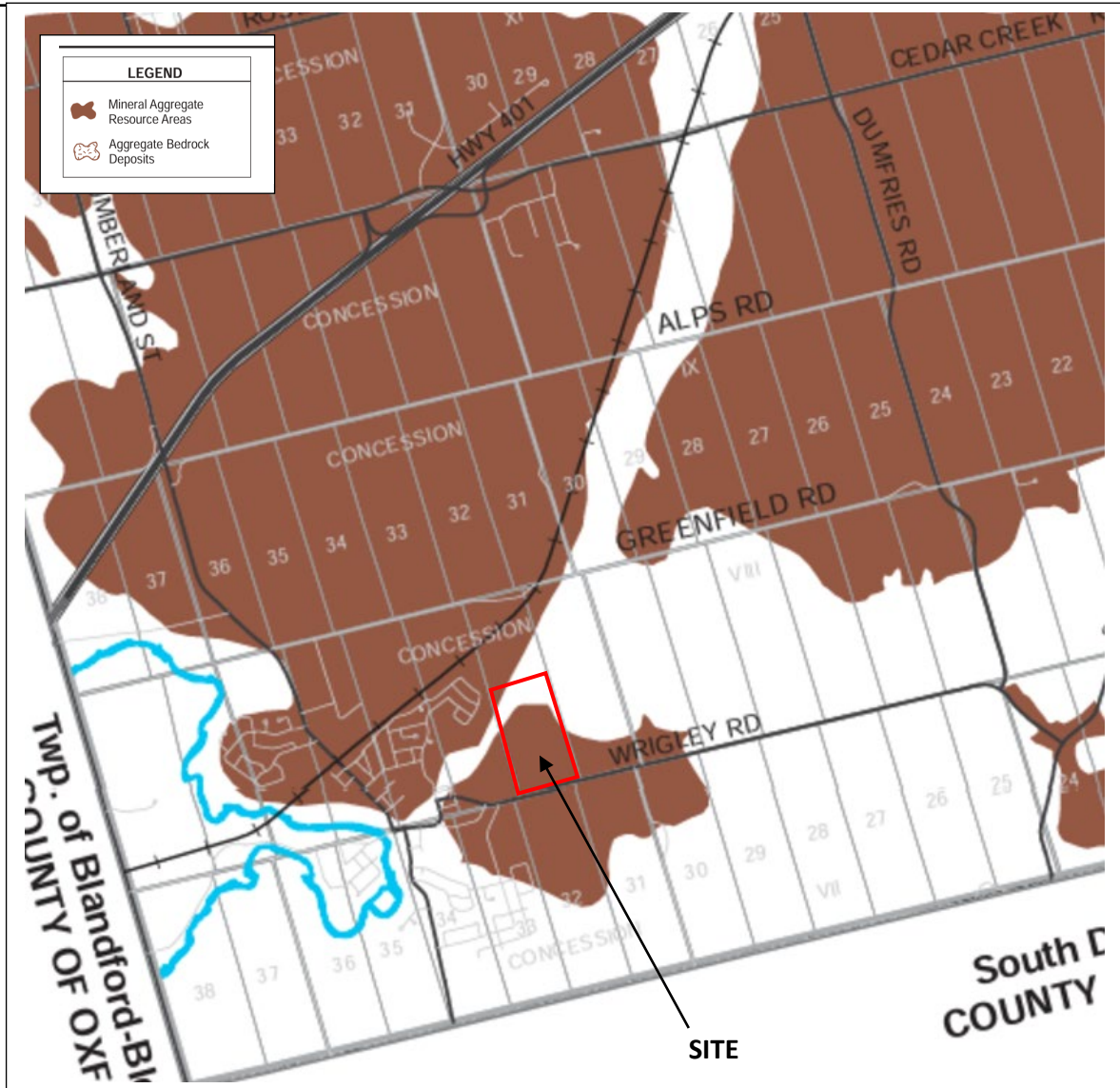


JEDBURGH PLAINS

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**FIGURE 4: NORTH DUMFRIES OFFICIAL PLAN
MAP 8, MINERAL AGGREGATE RESOURCE AREAS**

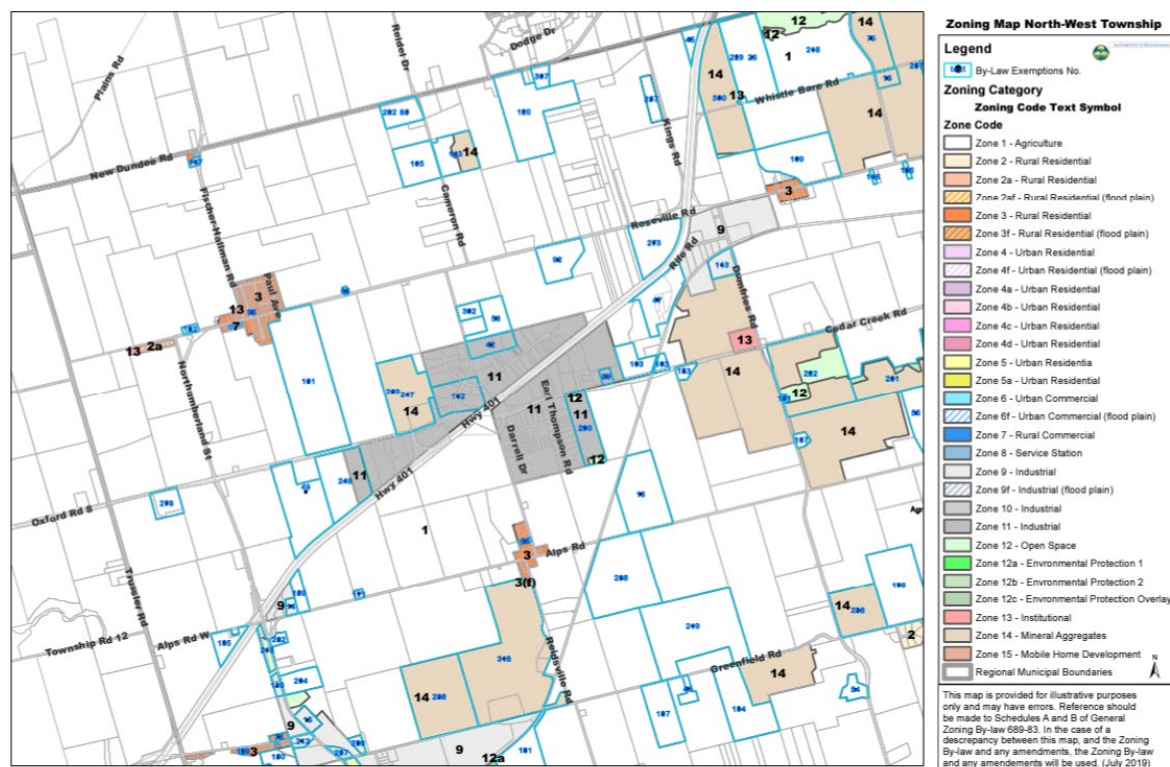


JEDBURGH PLAINS

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FIGURE 5: TOWNSHIP OF NORTH DUMFRIES, ZONING

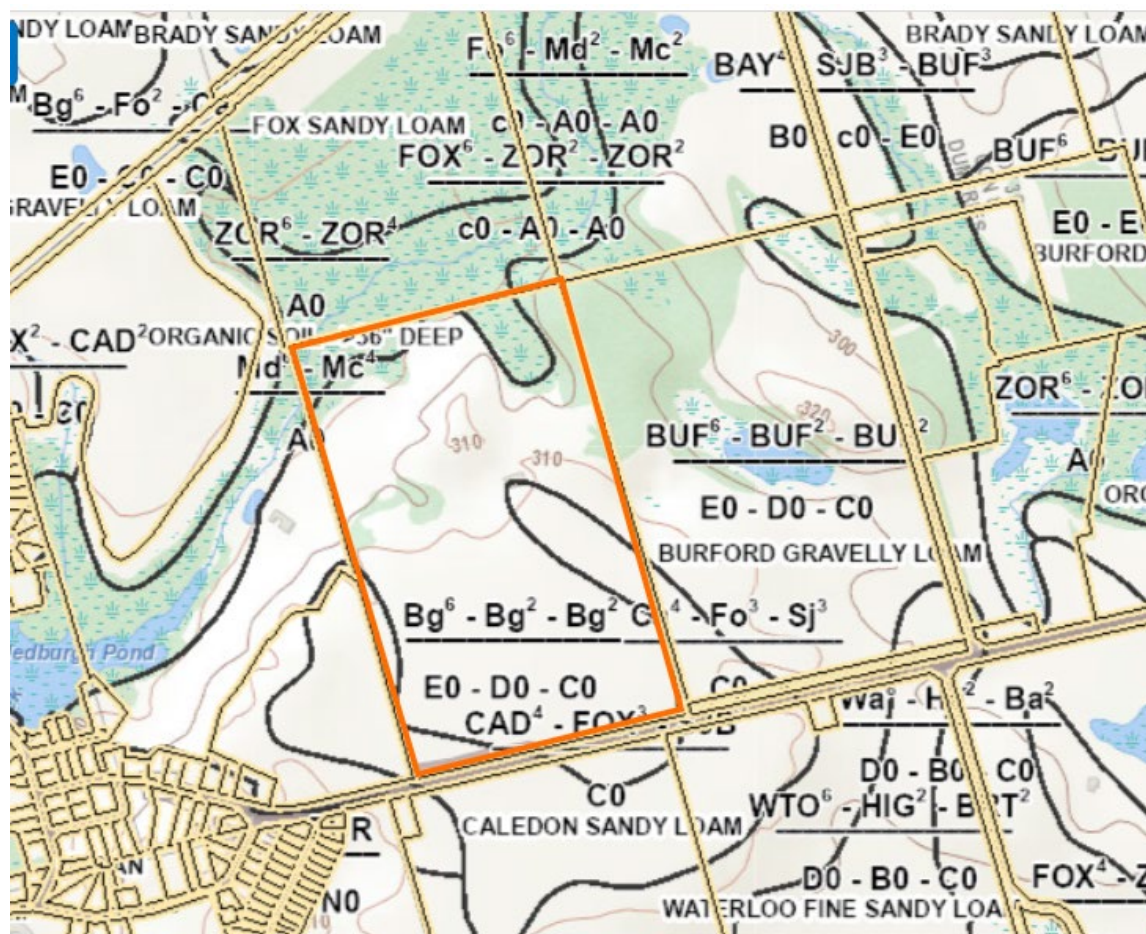


JEDBURGH PLAINS

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FIGURE 6: SOILS AND CANADA LAND INVENTORY MAPPING



JEDBURGH PLAINS

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WATERLOO

LEGEND
(Some map units and symbols may not apply to this map)

- 1 Selected sand and gravel resource area, primary significance, deposit number, see Table 3.
- 2 Selected sand and gravel resource area, secondary significance.
- 3 Sand and gravel deposit, tertiary significance.
- 4 Other surficial deposits or exposed bedrock.

JEDBURGH PLAINS

