



January 5, 2021

OEC 18-042

Duivenvoorden Haulage Ltd
3425 9th Line
Innisfil, ON
L9S 3Z6

Attention: John Duivenvoorden

**Re: Agricultural Impact Assessment
 For Duivenvoorden Haulage Ltd. Aggregate Pit Expansion
 Located at Part Lot 13, Concession 4, Township of Melancthon
 County of Dufferin**

Dear Mr. Duivenvoorden:

Orion Environmental is pleased to submit our Agricultural Impact Assessment (AIA) report for the aggregate pit expansion located at Part Lot 13, Concession 4, Township of Melancthon, County of Dufferin (see Figure 1). The purpose of the AIA is to assess the long-term agricultural impacts of the removal of the subject lands from agriculture and the impact of establishing an aggregate extraction operation on the adjacent agricultural lands.

To address the implications of developing an aggregate extraction operation on the existing agricultural land use we reviewed the applicable policies of the County of Dufferin, the Township of Melancthon and the province including official plans, Greater Golden Horseshoe Growth Plan, Provincial Policy Statement (2014) and the Ontario Ministry of Agricultural, Food and Rural Affairs policies. To assess the agricultural implications to the property we undertook a comprehensive review of information sources such as soil surveys, historic land use, field review of the site and adjacent lands and review of published information to determine the findings made in this report. The following sections provide our assessment of this information as it pertains to the proposed development.

1.0 BACKGROUND INFORMATION

1.1 Property Description

Part Lot 13, Concession 4, Township of Melancthon is a 41.2-hectare property located on the 4th Line of Melancthon in Dufferin County. The subject lands are identified by the Dufferin County Official Plan (Schedule D – Mineral Aggregate Resource Areas) as ‘*Sand and Gravel Resource Area*’, and by the Township of Melancthon Official Plan (Schedule H – Primary Mineral Aggregate Resource Areas) as ‘*Sand and Gravel Resource Area*.’ The property is currently predominately agricultural with the lands in forage and tilled without a crop planted. There are no structures on the property. Figure 1 shows the location of the property. Figure 2 shows the property features.

1.2 Description of Proposal

Duivenvoorden Haulage Ltd. is proposing to undertake an aggregate pit expansion to their Melancthon Pit (License No. 3726). The expansion would permit a Class ‘A’ (Category 3) License, for a pit above the water table, under the Aggregate Resources Act. The expansion encompasses two properties municipally known as 437202 4th Line and 437138 4th Line in the Township of Melancthon. The proposed license would permit extraction for 500,000 tonnes annually between the existing and proposed operations (shared). The subject applications would grant a license that would permit aggregate extraction to expand north onto the 437202 4th Line property. It would also include a strip of land along the 4th Line adjacent to the existing pit. An Amendment to the Township of Melancthon Official Plan and Zoning By-law are required to permit aggregate extraction, along with the license application to the ARA. The concept plan is appended.

2.0 APPLICABLE PLANNING POLICIES

2.1 Provincial Policy Statement

The Provincial Policy Statement 2014 (PPS) permits the designation of agricultural lands for aggregate extraction in recognition that aggregate resources often occur in formations beneath lands in agriculture. Quality sand and gravel resources in proximity to populated areas are geographically limited and regularly coincide the extensive agricultural land use throughout southern Ontario. The PPS policies recognize the distribution of aggregate versus agricultural resources and provide policies to address this issue.

Section 2.3 of the PPS defines the provincial agricultural policies for the protection of agricultural land and non-agricultural lands uses within prime agricultural areas. Section 2.3.2 of the PPS states: *Planning authorities shall designate prime*

agricultural areas and specialty crop areas in accordance with guidelines developed by the Province, as amended from time to time. This policy enables municipalities to evaluate their natural resource base and develop policies to provide for their utilization.

Section 2.3.6 Non-Agricultural Uses in Prime Agricultural Areas provides direction of the development of aggregate resources within an agrarian landscape. Section 2.3.6.1 states:

Planning authorities may only permit non-agricultural uses in prime agricultural areas for:

- a) extraction of minerals, petroleum resources and mineral aggregate resources, in accordance with policies 2.4 and 2.5;*

The above policy permits the development of aggregate resources in prime agricultural lands and recognizes the principle of using “alternative locations” does not apply to aggregate deposits.

Section 2.5.4 Extract in Prime Agricultural Areas defines the rehabilitation requirements for aggregate operations in Section 2.5.4.1. as follows

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

Complete rehabilitation to an agricultural condition is not required if:

- a) outside of a specialty crop area, 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;*
- b) in a specialty crop area, there is a substantial quantity of high quality mineral aggregate resources below the water table warranting extraction, and the depth of planned extraction makes restoration of pre- extraction agricultural capability unfeasible;*
- c) other alternatives have been considered by the applicant and found unsuitable. The consideration of other alternatives shall include resources in areas of Canada Land Inventory Class 4 through 7 lands, resources on lands identified as designated growth areas, and resources on prime agricultural lands where rehabilitation is feasible. Where no other alternatives are found, prime agricultural lands shall be protected in this order of priority: specialty crop areas, Canada Land Inventory Class 1, 2 and 3*

- lands; and*
- d) *agricultural rehabilitation in remaining areas is maximized.*

The property is not within a specialty crop area. Conceptually the site has the potential for rehabilitation to an agricultural land use. The approach to the rehabilitation will need to be assessed in detail as the resource extraction nears completion to evaluate the availability of suitable fill materials and ground water levels within the pit.

In conclusion the PPS permits the utilization of aggregate deposits within prime agricultural land.

2.2 Greater Golden Horseshoe Growth Plan

The Province has defined the subject property and all the surrounding lands, including the existing aggregate operations as prime agricultural lands in the Greater Golden Horseshoe Growth Plan (GGHGP). The Greater Golden Horseshoe contains significant deposits of mineral aggregate resources, which requires long-term management of these resources to ensure that they are available in proximity to demand and can be supplied in a timely manner to provide for growth. Section 4.1 of the GGHCP confirms the need to utilize significant mineral aggregate resources to support growth.

Mineral aggregate resources are encouraged to be conserved, to promote the wise use and extraction of materials. Section 4.2.8 Mineral Aggregate Resources, Subsection 3 states:

In prime agricultural areas, applications for new mineral aggregate operations will be supported by an agricultural impact assessment and, where possible, will seek to maintain or improve connectivity of the Agricultural System.

Section 4.2.8, Subsection 4 provides direction on the rehabilitation for new aggregate operations sites. Subsection 4d) states that *lands outside of natural heritage systems final rehabilitation will appropriately reflect the long-term land use on the general area.* This statement provides direction that the lands will be rehabilitated back to an agricultural land use which will support the agricultural system once the aggregate resource has been utilized. In prime agricultural areas, the site will be rehabilitated in accordance with the policy 2.5.4 of the PPS, 2014.

In conclusion the GGHGP supports the utilization of aggregate resources within prime agricultural areas subject to compliance with policy 2.5.4 of the PPS. As stated above, aggregate extraction in prime agricultural areas is permitted as an interim use provided the site will be rehabilitated back to agriculture.

2.3 Dufferin County Official Plan

The County of Dufferin Official Plan (July 2017) contains policies that permit the development of aggregate resources located within prime agricultural lands. Section 4 – Countryside Areas provides policies that address the utilization of aggregate deposits in agricultural areas. Section 4.2 – Agricultural Areas, Section 4.2.3.1 Recreational and other Non-Agricultural Uses in Agricultural Areas permits the development of aggregate resources within agricultural areas.

Section 4.4 Management of Mineral Aggregate, Minerals and Petroleum Resources states *that mineral resources are a fixed location non-renewable resource that must be protected and states the County's objective is to protect deposits for future extraction.* Therefore, where significant aggregate resources are beneath existing agricultural land uses there is no reasonable alternative location that can be utilized to avoid impacting the current agricultural use. Rehabilitation back to agriculture enables utilization of these fixed location resources in accordance with the OP and specifically the objectives defined in Section 4.4.1.

Section 4.4.2 defines how extraction is to be undertaken in a manner which minimizes social, economic and environmental impacts. Section 4.4.2.2 c) states *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.* Although complete rehabilitation is not always required depending on water table levels or utilization of Class 4 - 7 agricultural land, this policy clearly supports utilization of aggregate resources within agricultural lands. Schedule D Mineral Aggregate Resource Areas (copy appended) defines the subject lands as Sand and Gravel Resource Area.

2.4 Township of Melancthon Official Plan

The Township OP in recognition of the aggregate deposits present within the agricultural areas has policies that permit the removal of agricultural land for the establishment of aggregate extraction. The principle of aggregate extraction within agricultural lands is established in the agricultural and mineral aggregate resource objectives for the Township. Section 2.2.4 Agricultural Resource Objectives subsection (d) permits the extraction of mineral aggregate resources as an interim use that is limited and regulated. Section 2.2.5 Mineral Aggregate Resources Objectives reinforces the intent to operate aggregate extraction within agricultural areas with the stated objective (c) *To minimize any negative impacts of new or expanded mineral aggregate operations on the environment, on existing, approved or permitted land uses,*

and on the area's rural character. These objectives demonstrate the Township's intent to permit mineral aggregate extraction within agricultural areas.

Section 3.17 Mineral Aggregates Resources under Section 3.17.2 Mineral Aggregate Resources Policies subsection (d) *states New mineral aggregate operations, and the associated amendments to this Plan, may be permitted only within those parts of the primary mineral aggregate resource areas that are designated Agricultural or Rural.* Section 3.17.2 (a) *states the policies of this section apply to lands within the primary mineral aggregate resources areas shown on Schedule H.* Schedule H Primary Mineral Aggregate Resources Areas shows the lands designated Sand & Gravel Resource Area, copy appended. This policy would indicate recognition agricultural lands will be affected and the Township accepts this impact to agriculture with the appropriate impact management.

Section 5.6 Extractive Industrial within Section 5.6.2 Planning and Development Policies provides general policies for the development of aggregate extraction industrial land uses. Section 5.6.2 (k) *states: Where a new or expanded mineral aggregate operations is proposed for a site either within the Agricultural designation, such use may be permitted only if the documentation has been provided demonstrating to Council's satisfaction that there is conformity with the following criteria and policies, in addition to all other applicable policies of this Plan.*

- i. The use shall be interim in nature.*
- ii. The site will be progressively rehabilitated to an agricultural condition.*
- iii. Complete rehabilitation to an agricultural condition is not required if:*
 - Outside of a specialty crop area, there is a substantial quantity of mineral aggregate resources below the water table warranting extraction or depth of planned extraction in a quarry makes restoration of pre-extraction agricultural capability unfeasible;*
 - In a specialty crop area, there is a substantial quantity of high quality mineral aggregate resources below the water table warranting extraction, and the depth of planned extraction in a quarry makes restoration of pre-extraction agricultural capability unfeasible;*
 - Other alternatives have been considered by the applicant and found unsuitable. The consideration of other alternatives shall include resources in area 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 shall be protected*

in this order of priority: specialty crop areas, Canada Land Inventory Class 1, 2 and 3 land; and

- *Agricultural rehabilitation in remaining areas is maximized.*

The applicable planning policies support the development of aggregate resources within agricultural land subject to the submission and acceptance of supporting technical studies and rehabilitation to an agricultural use.

3.0 ON-SITE AND SURROUNDING AREA PHYSICAL RESOURCE INVENTORY

To evaluate the impact of removal of the agricultural lands within the proposed licensed extraction area an assessment of the agricultural capability of the land on the subject property and the surrounding area was undertaken to determine the value of the property from an agricultural perspective and the potential impacts to the Township agricultural system from the development.

3.1 Soils

There are two different soil types present on the property according to the OMAFRA Soil Survey Complex. The bulk of property (approximately 35.2 ha / 85% by area) consists of Caledon Fine Sandy Loam. It is designated a Canada Land Inventory (CLI) Class 2 soil with moderate limitations on the range of crops and conservation practices. Caledon Fine Sandy Loam is characterised as being a fine sandy loam material over outwashed gravel that is well drained. The well drained sandy loam material underlain by gravel combined with topography results free draining condition that can lead to drought stress for crops in periods of low precipitation. The is recognized in the CLI designations showing "F" fertility and "M" moisture limitations to cultivation. Field review of the soil conditions identified stones at surface of a size that would require clearing to avoid damage to cultivation equipment in the south east portion of the property. Soil mapping is shown on Figure 3. The CLI soil capability for agriculture is shown on Figure 4.

At the west side of the site (approximately 6ha / 15% by area) the soil is Honeywood Silt Loam. This is a silt loam deposited over silt loam till, the soil is well draining with limited stones. It is a defined as a Class 1 soil with no significant limitations in use for crops and is typically found on areas where the topography does not present any issues to crop production.

3.2 Climate

The spring planting date for tender crops such as corn and soybeans, is estimated as the last day of three consecutive days, with daily mean air temperatures equal to or greater than 12.8 °C. Based on the OMAFRA climate data (OMAFRA 1997) for the area where the property is situated this is between the 12th and 24th of May. The end of season date is the first occurrence of -2 °C or the date when the 30-year average daily mean air temperature dropped to 12°C (or lower). The end of season date for this property is September 23rd. The accumulated crop heat units for the area over the growing season is approximately 2400 to 2500.

3.3 Topography

The majority of the agricultural lands on the property are a mix of simple and complex slopes ranging from 7 to 16%. A copy of the topographic mapping is appended. The slopes direct surface runoff into a depressional area in the centre of the north east portion of the existing fields creating drainage limitations that would adversely impact crop growth (see Figure 2). This area accepts runoff from the lands to the north during spring freshet and major storm events. Within the 29ha of agricultural land only one 5.4 ha field is unaffected by slopes. Based the OMAFRA guidelines for classifying agricultural soils the presence of the moderate slopes (9-15%) reducing the soil capability for agriculture to class 3 - 4. This combination of slopes and depressional areas adversely impacts the selection of crops that can be grown. Review of historic aerial photography clearly demonstrates the topographic lows retained surface runoff which would restrict cultivation and crop productivity depending on frequency and size of precipitation events.

3.4 Drainage

There is no record of any existing or previous tile drainage or evidence of drainage improvements made to land. The topography of the property drains surface runoff both on and off site to the interior of the property with no ability to drain it off-site to a receiving watercourse. This eliminates any opportunity to improve soil productivity through systematic drainage.

Off-site runoff from the lands to the north up to the 15th Side Road and west to a forested wetland on the 5th line drain south into the property. A drainage ditch on north side of the 15th Side Road drains under the road and overland to a drainage ditch that discharges to the subject property. Figure 2 shows the low area that is subject to seasonal ponded water, receiving runoff from the north. The inundation of this area in the spring or during major storm events would be expected to lower the CLI capability to Class 5 based on frequent inundation from major storm events during the growing season. This limitation is supported by Nottawasaga Valley Conservation Authority

mapping which shows a regulated watercourse originating in a forested wetland to the north west draining into the subject property. A copy of the mapping is appended.

4.0 ON-SITE FEATURES

4.1 Farm History and Infrastructure

The farmstead buildings and associated residence have been removed. Historic aerial photograph, circa 1954, shows a bank barn to the south and west of the treed area that defines the original house location. Figure 2 shows the approximate location of the original farmstead.

4.2 Type and Intensity of Existing Agricultural Production

Currently the lands do not appear to have been planted in a crop in the fall of 2018, but have been historically rented for agriculture. The lands appear as they were ploughed but no crop was planted, as evident by the rough surface dominated by sparse weedy growth. Review of aerial photography for the years 2014, 2015 and the spring of 2018 shows the lands have been in grain, soybean and forage production. The 2018 photography show approximately 3 ha of land was not workable due to the pooling of surface runoff, as shown in Figure 2. Based on the site conditions it is reasonable to expect the lands are rented by an area farmer.

4.3 Off-site Land Use Features

The adjacent lands to the south and west are lands under application for aggregate extraction or existing aggregate operations. The lands to the west and north are agricultural and soil capability Class 1 and 2. The farms are cash cropping operations based on the lack of active livestock facilities. There are no livestock facilities within 750m of the property, therefore compliance with Minimum Distance Separation Guidelines is not applicable.

5.0 AGRICULTURAL VIABILITY

The subject property's viability as an independent agri-business is questionable due to the size of the property, the drainage of surface runoff onto the property and the limited livestock housing. The fact the original bank barn was removed and a small poultry building was constructed would indicate the farm supported only limited livestock production. The designation of the lands as aggregate resources and the presence of existing aggregate operations on the adjacent lands means the lands would be valued as an aggregate resource and not agricultural land. This would inflate the cost per acre beyond what on-site crop production could be reasonably expected to generate a profit.

The cultivation of common field crops on approximately 26ha as a single farming enterprise is not economically sustainable given the current cost of machinery and associated costs of production.

Based on Ontario Ministry of Agriculture, Food and Rural Affairs 2017 crop statistics the average yield for soybeans in Ontario was 45.6 bushels/acres with a farm value of \$12.47/bushel. Cultivation of 26 ha (64 acres) of soybeans under the 2017 field and price would generate a revenue of \$36,392. This would be insufficient to sustain this as a self-sufficient cash cropping operation paying a mortgage, equipment costs, property tax and providing an income. The lands could potentially be incorporated with an existing operation however in my opinion given the limitations to cultivation (e.g., slopes, stoniness, drainage) and the value of the aggregate resource this would not be lands a farmer would purchase for the long-term expansion of their farming operation.

6.0 ASSESSMENT OF THE IMPACTS ON AGRICULTURE

The removal of the property for agriculture for aggregate extraction will not have a discernable impact on the Township's agricultural land base. The Township's predominant land use is agriculture and based on the Canada Land Inventory soil capability mapping prime Class 1 and 2 soils dominate the area. The lands have limitations to cultivation due to the topography, drainage and stoniness which reduce the capability of the soils for the majority of the farm to Class 3 - 4.

Removal of the dwelling or barn and termination of livestock activity is an indicator of the farm unit not being economically self-sustaining. Farms with a profitable land base may convert from livestock to cash cropping or alter the type of livestock raised but still retain the dwelling or use the barns for non-livestock uses. Termination of the dwelling and barn is a strong indicator the farm unit is not economically viable.

The recognition of the aggregate resource as an approved land use in the Official Plan indicates acceptance by the Township and County that these lands would be removed from agriculture for the utilization of the aggregate resource. The predominance of existing aggregate operations in the area centralizes the related activities minimizing dust, noise and truck traffic impacts on the surrounding agricultural lands.

7.0 ALTERNATIVE LOCATION ANALYSIS

Aggregate development must occur within sand and gravel formations; therefore, the assessment of alternative locations is not applicable.

8.0 MITIGATIVE MEASURES

Due to the nature of aggregate extraction the agricultural land use must be removed to utilize the resource. The potential may exist to rehabilitate the site to an agricultural land use but the feasibility of this undertaking must be assessed upon the completion of the extraction operation. Rehabilitation to agriculture would depend on factors such as proximity to water table, nature of available fill, availability of topsoil and economics of potential agri-businesses that the rehabilitated pit could support. Mitigative measures undertaken as part of aggregate extraction such as dust suppression, noise attenuation to provincial standards, and ground water monitoring will effectively potentially mitigate impacts to the adjacent agricultural land use. Given the adjacent lands are cash crop there is no expectation the extraction operations will adversely impact crop production.

9.0 CONCLUSION

Based on the findings documented above there is no expectation the utilization of the aggregate resources will have an adverse impact on the Township agricultural land base or the productivity of the adjacent farming operations. The property is designated for aggregate extraction both the County and Township Official Plans which confirms the intention to remove the lands from agriculture for the utilization of aggregate resources. The parcel is too small to be a self-sustaining operation without its incorporation with larger farm holdings. The designation of the lands for aggregate extraction and the existing aggregate operations will have elevated the land value to that of an aggregate resource. Therefore, there is no reasonable expectation, given the aggregate resource designation, an area farmer could purchase the lands and provide an acceptable return to the investment maintain the lands in agriculture.

If you have any questions or require further information, please do not hesitate to call.

Yours truly,
ORION ENVIRONMENTAL SOLUTIONS, INC.



Paul Neals, B.Sc. Agr., P.Ag.
Principal

PCN:

Attach:

Background Information

Published Information Sources

Ontario Ministry of Agriculture, Food and Rural Affairs, The Minimum Distance Separation (MDS) Document, Publication 853.

Ontario Ministry of Agriculture, Food and Rural Affairs, AgMaps web site.

Ontario Ministry of Agriculture, Food and Rural Affairs, Guidelines on Permitted Uses in Ontario's Prime Agricultural Areas, Publication 851, 2016.

Ontario Ministry of Agriculture, Food and Rural Affairs, Implementation Procedures for the Agricultural System in Ontario's Greater Golden Horseshoe, February 2018.

Ontario Ministry of Agriculture, Food and Rural Affairs, Crop Heat Units for Corn and Other Warm Season Crops in Ontario, Agdex#: 111/31, 1997.

Canada Department of Agriculture, Dufferin County Soil Survey Report No.38, 1964.

County of Dufferin Official Plan, March 2015.

Township of Melancthon Official Plan, September 2017.

Field Survey

Field survey of agricultural land use/cropping on and off site, review of land use adjacent to site and in surrounding area, review of barn structures on and off-site, on-site confirmation of reported soil texture and drainage characteristics.

Consultation

Discussions with landowner on planned use for the property.

Curriculum Vitae Of Study Team

Appended

Soil Sampling

Detailed soil survey not required to address impact of aggregate extraction.

PAUL NEALS

B.Sc.Agr., P.Ag.

Senior Environmental Planner/Professional Agrologist

PROFILE

2016 to present Principal, Orion Environmental Solutions, Inc.
 1995-2016 Vice-President, Azimuth Environmental Consulting, Inc.
 1990-1995 Senior Environmental Planner/Agrologist, Gartner Lee Limited
 1980-1990 Planner/Agrologist, Land Use and Environmental Planning Dept.,
 Design and Development - Transmission Division, Ontario Hydro
 1980 Resource Technician, Nottawasaga Valley Conservation Authority
 1975-1979 B.Sc. Agriculture - University of Guelph

EXPERIENCE

2016 to present Principal, Orion Environmental Solutions

In 2016 Mr. Neals started Orion Environmental Solutions providing expertise to his clients in the areas of Agricultural Impact Assessment., Minimum Distance Calculations, Project Management/Approval Facilitation, Development Land Management, Environmental Due Diligence/Issue Identification, Environmental Policy Review and Development, Environmental Assessment Planning Process Implementation Full and Class EA Project Management and Public Consultation Program Management.

- Environmental Director responsible for the overall management of the natural heritage components for the Link 427 design build/operation/maintenance project involving extension of Highway 427 to Major MacKenzie Drive. Orion is providing expertise to assist in the management of the Vegetation Restoration/Ground Water/Fisheries/Wildlife/Agriculture/Waste Management and Contamination/Habitat Management/Species at Risk and liaison with the project staff from the Ministry of Transportation and Infrastructure Ontario.
- Project Management and approvals facilitation for numerous Environmental Impact Studies for development approvals in Simcoe County and Greater Toronto Area involving provincially and locally

significant wetlands, cold and warm water fisheries, designated significant natural heritage features, Species at Risk, ground /surface water protection, Areas of Natural and Scientific Interest.

- Undertook agricultural impact assessments for residential and commercial development approvals in Simcoe County, the Greater Toronto Area and throughout southern Ontario. Assessed the impact of the loss of agricultural land and the Minimum Separation Distance requirements for development based on the surrounding existing agricultural operations.

1995 – 2016 Vice-President, Azimuth Environmental Consulting, Inc.

Mr. Neals is a founding member of Azimuth Environmental Consulting, Inc. Throughout his 40-year career he has been involved with hundreds of projects utilizing his expertise in environmental assessment process, public consultation, impact analysis, natural resource inventories, land use/socioeconomic analysis and interpretation, and route/site selection.

- Environmental Manager responsible for the overall management of the natural heritage components for the Highway 407 East Phase 2 design build/operation/maintenance project involving 32km of new freeway. Azimuth is providing expertise in the Vegetation Restoration/Ground Water/Fisheries/Wildlife/Agriculture/Waste Management and Contamination/Habitat Management/Species at Risk, preparation of the Class EA for the truck layby and highway maintenance facilities, provide environmental input into the Community Value Plan and provide environmental monitoring during construction.
- Project Management and field studies for numerous Environmental Impact Studies for development approvals in Simcoe County and Greater Toronto Area involving provincially and locally significant wetlands, cold and warm water fisheries, designated significant natural heritage features, Species at Risk, ground /surface water protection, Areas of Natural and Scientific Interest.
- Project Manager for Block 40/47 environmental studies for the preparation of the Master Environmental Servicing Plan. Responsible for coordination of ecology and hydrogeological disciplines, liaison with Ministry of Natural Resources and Forestry, Toronto Region Conservation Authority and City of Vaughan. Provided expert testimony before the Ontario Municipal Board

to on the environmental matters and agriculture to obtain approval of the zoning amendments to permit the submission of draft plans.

- A working knowledge of the municipal/provincial/federal guidelines, statutes and policies governing infrastructure and land development approvals in Ontario.
- Environmental Planner/Class EA process advisor on Municipal Class EA projects involving municipal roads, water supply and sewage treatment systems. Responsible for implementation of Class EA planning process, public consultation, land use/socioeconomic impact assessment, evaluation methodologies for the assessment of alternatives, government agency liaison, public liaison committee consultation and report preparation.
- Acted as municipal peer reviewer for numerous Environmental Impact Studies to provide staff with opinion on the degree of compliance with EIS requirements and the thoroughness and accuracy of the study.
- Project Manager/Environmental Planner for the numerous route selection studies for natural gas transmission pipelines. Responsible for the development and implementation of the route selection planning process, land use/agricultural/socioeconomic impact assessment, public/agency consultation, impact mitigation study on preferred route, and preparation of the Environmental Report, subject to review by the Ontario Energy Board. Presented expert testimony on the environmental issues associated with the aforementioned projects before the Ontario Energy Board. All project approved.
- Environmental Planner on Ministry of Transportation Class EA Group B and C projects encompassing route selection for new provincial 400 series highways, road maintenance construction projects, truck inspection facility and numerous highway upgrade projects. Responsible for environmental planning process, preparation of the Transportation Environmental Study Report or Screening Report, coordination of the environmental/land use/socioeconomic studies, public and agency consultation.
- Project Manager on a number of Secondary Plan studies in Central Ontario. Responsible for the coordination of the natural heritage inventory, integration of ground and surface water studies into protection of the natural heritage features for the delineation of the limits of the Environmental Protection areas and the developable lands. Undertook a lead role in

facilitating approvals through affected municipalities, conservation authorities and provincial ministries.

- Undertook agricultural impact assessments for residential and commercial development approvals in Simcoe County, the Greater Toronto Area and throughout southern Ontario for Environmental Assessment Act and Ontario Energy Act approvals for hydro transmission rights-of-way, provincial highways and natural gas pipelines. Assessed the impact of the loss of agricultural land and the Minimum Separation Distance requirements for development based on the surrounding existing agricultural operations.
- Project Manager and Environmental Planner for landfill site selection studies. Responsible for planning process development, data collection, identification and evaluation of candidate areas and candidate site, government and public consultation program, evaluation methodology and preparation of the environmental assessment report.

1990 – 1995 Senior Environmental Planner, Gartner Lee Limited

Mr. Neals was a Senior Environmental Planner with Gartner Lee Limited. Environmental assessment projects Paul has undertaken include waste management studies for landfill site selection, landfill operations, EA's for provincial highways and natural gas pipeline projects, site plans for aggregate pit expansion and management of environmental studies for private electricity generation facilities.

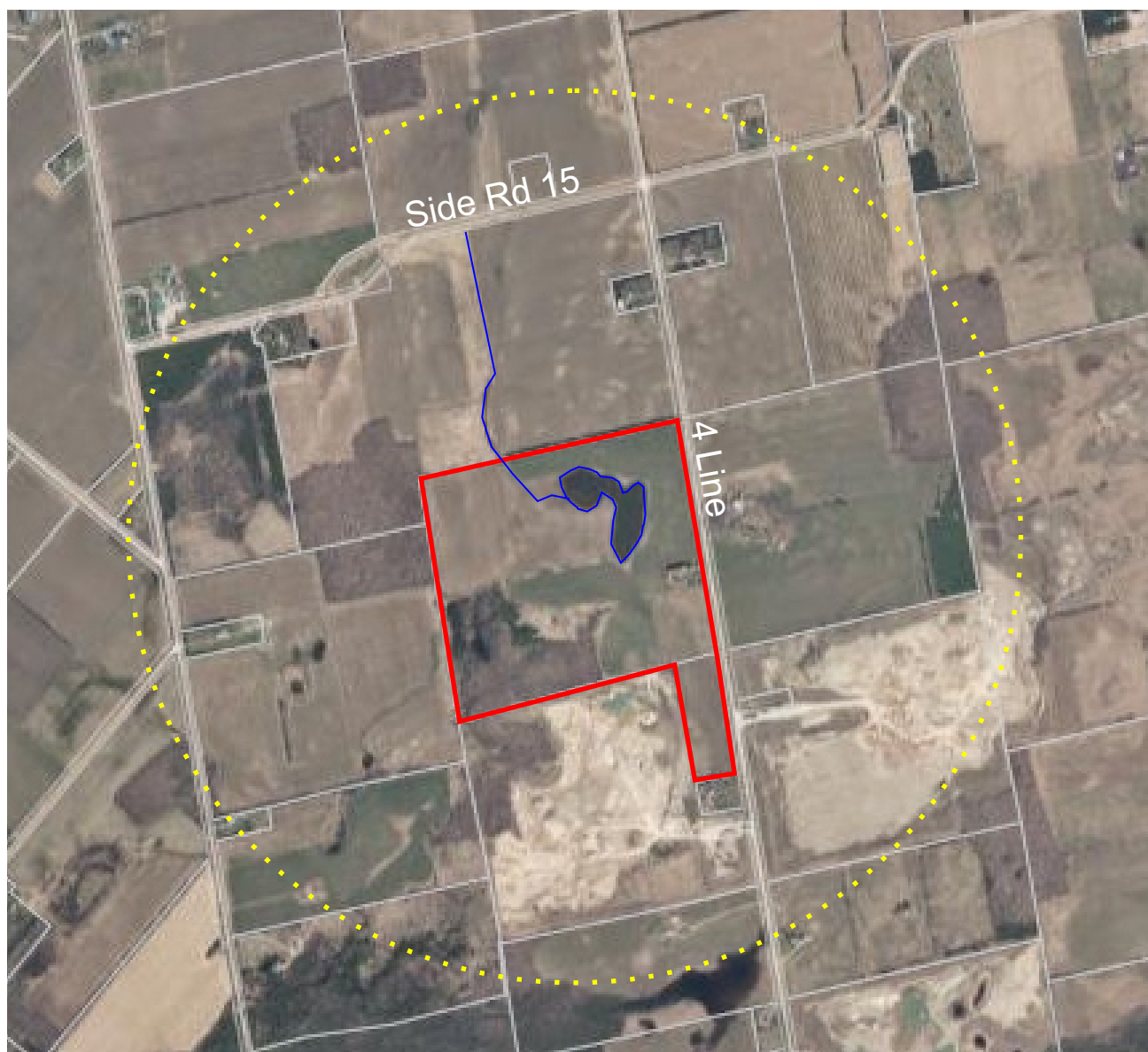
1980-1990 – Planner Agrologist, Land Use & Environmental Planning Dept. Design & Development Transmission Division, Ontario Hydro

Mr. Neals undertook environmental, land use and agricultural impact studies required to obtain approval under the Environmental Assessment Act for the construction of transmission facilities throughout northern and southern Ontario. Responsible for management in interdisciplinary team, route selection process, field studies and impact assessment, public and agency consultation and report preparation. Provided expert testimony before the Consolidated Hearings Board.

PROFESSIONAL AFFILIATIONS, CERTIFICATION & TRAINING

Ontario Institute of Agrologists (1982 - 1994, 2015 – 2021)

Member of Barrie Huronia Rotary Club



Duivenvoorden Haulage AIA

LEGEND



Subject Property



Study Area

Note: aerial photo 2018 Dufferin County

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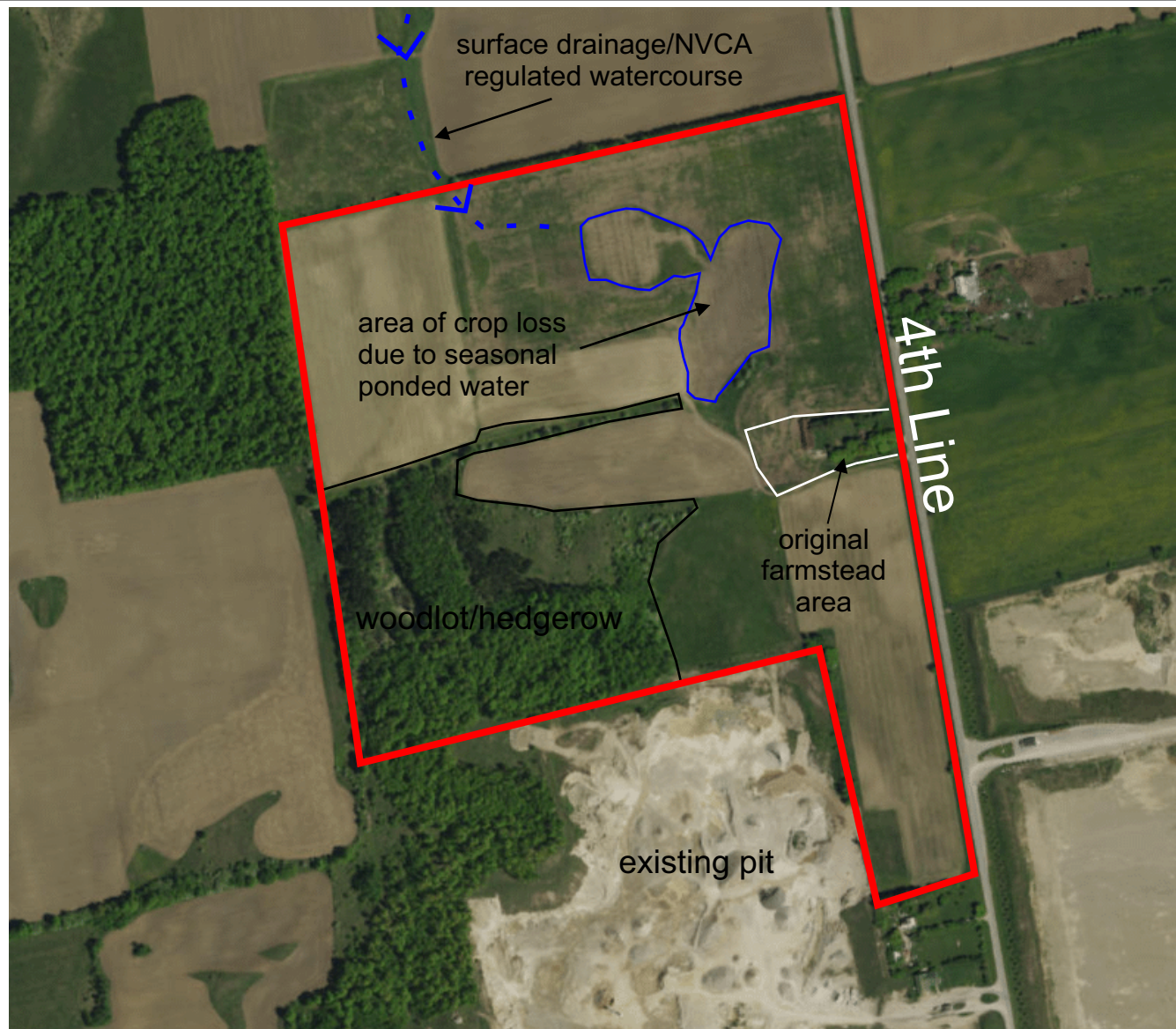
DATE ISSUED: JAN 2021

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Not To Scale

Figure 1
Site Location



Duivenvoorden Haulage AIA

LEGEND



Subject Property

Note: aerial photo 2018 Dufferin County

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Not To Scale

Figure 2
Site Features



Duivenvoorden Haulage AIA

LEGEND



Subject Property

Note: aerial photo/CLI from Agmaps, OMAFRA

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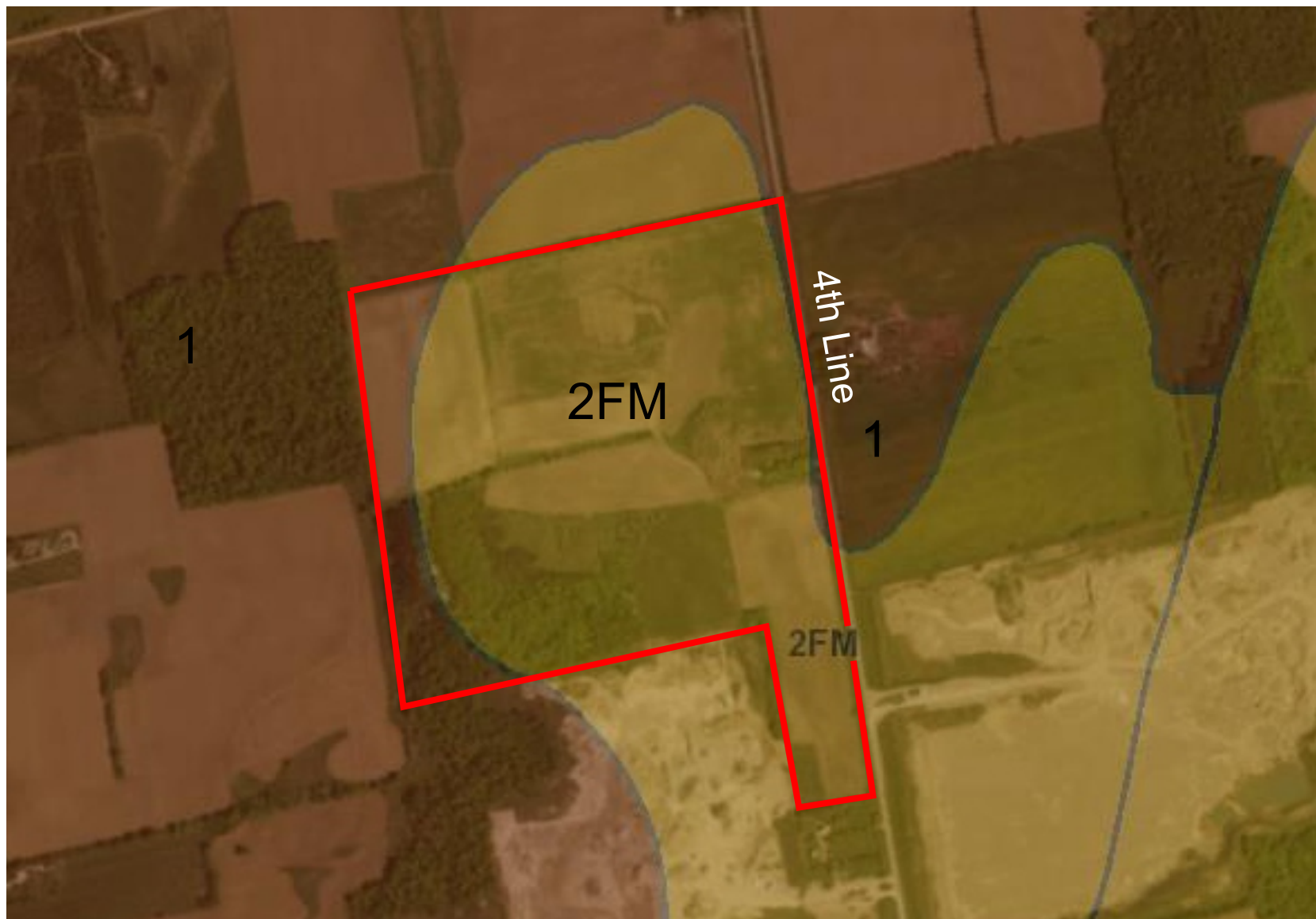
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**Figure 3
Soils**



Duivenvoorden Haulage AIA

LEGEND



Subject Property

Note: aerial photo/CLI from Agmaps, OMAFRA

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Not To Scale

Figure 4
Soil Capability

APPENDICES

Appendix A: Nottawasaga Valley Conservation Authority Regulation Mapping

Appendix B: Contour Mapping

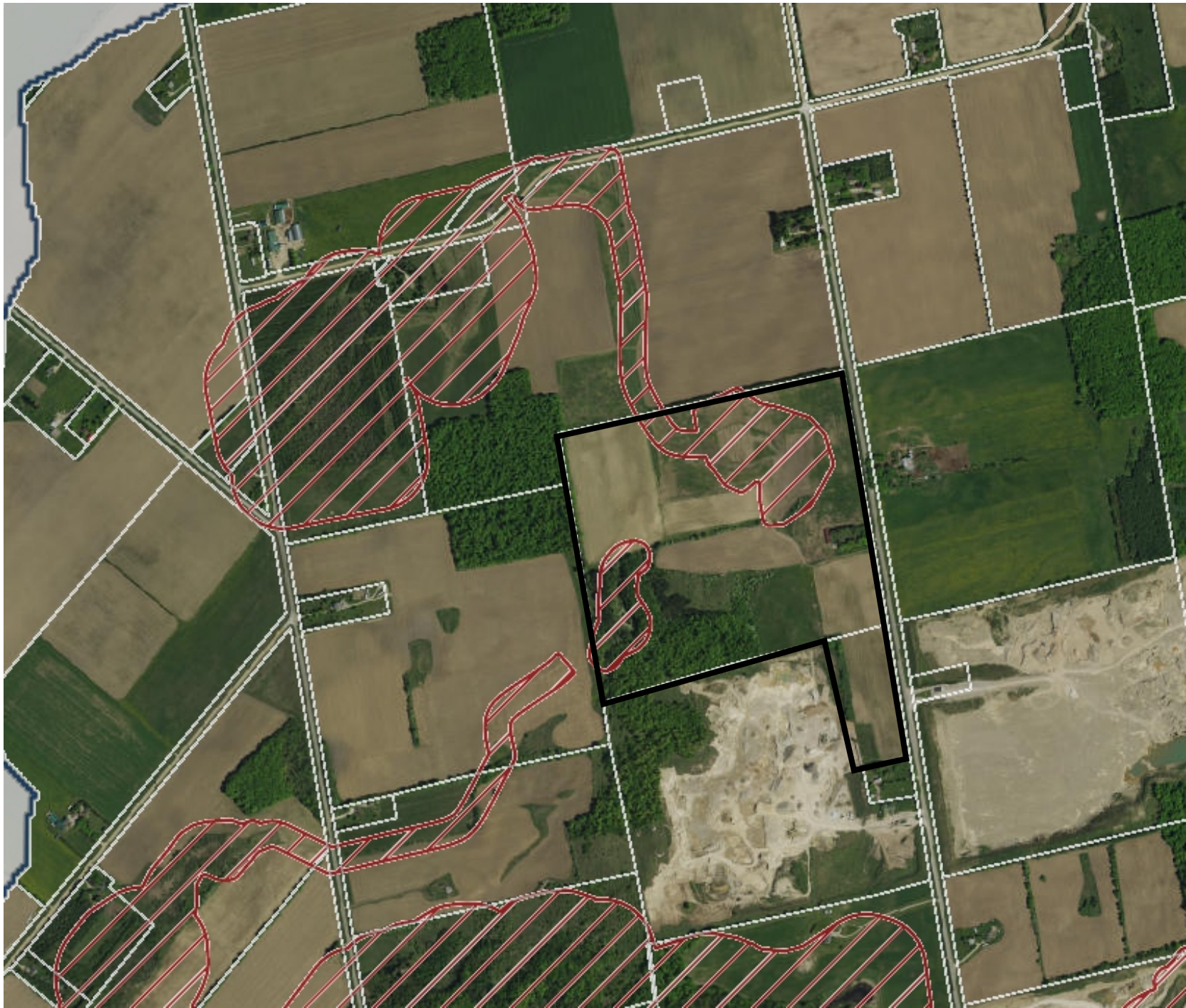
Appendix C: 1954 Aerial Photography

Appendix D: Schedule D - Mineral Aggregate Resource Areas, Dufferin County

Appendix E: Schedule H – Primary Mineral Aggregate Resource Areas
Township of Melancthon

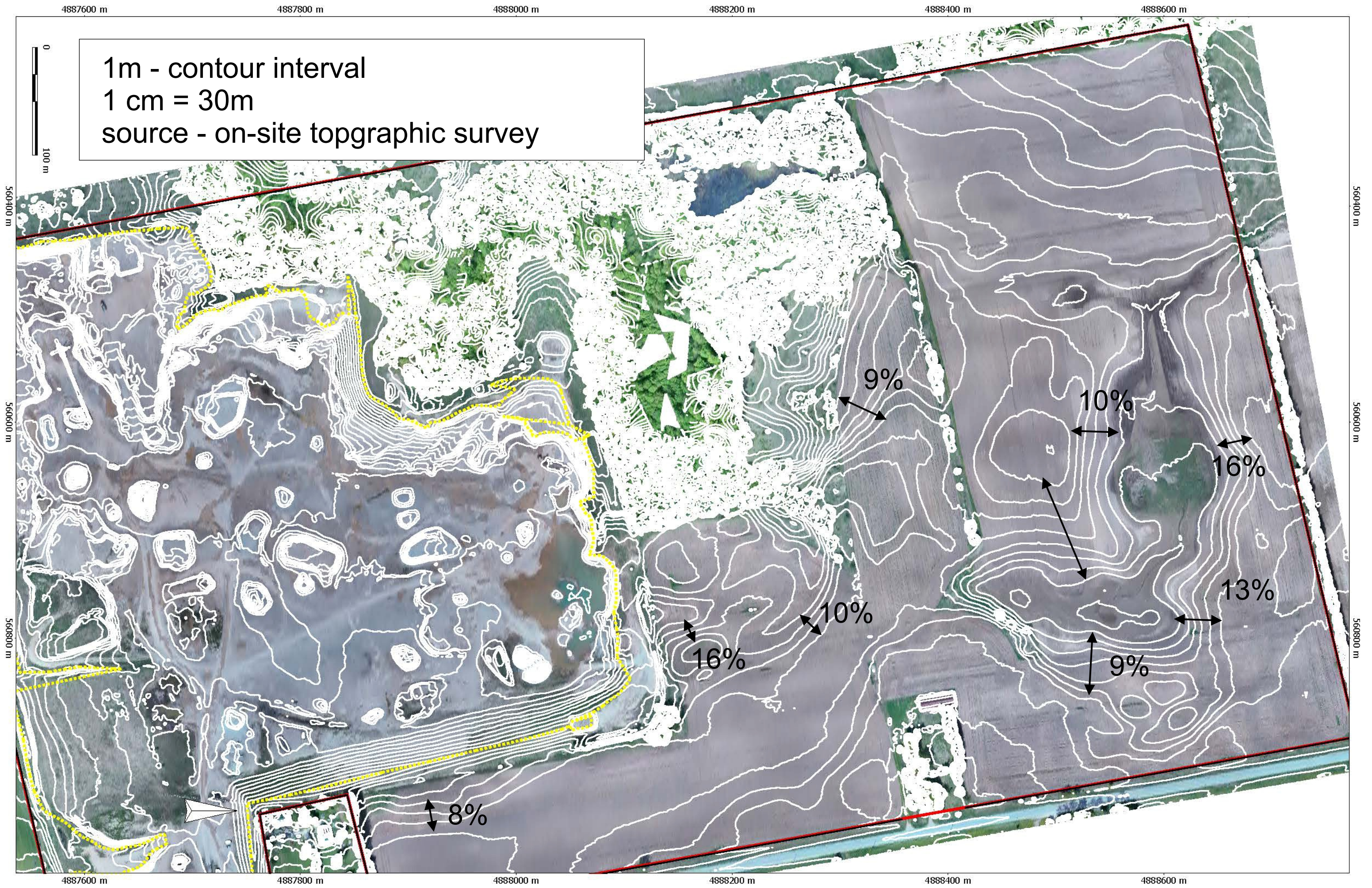
Appendix F: Concept Plan

**Appendix A: Nottawasaga Valley Conservation Authority Regulation
Mapping**

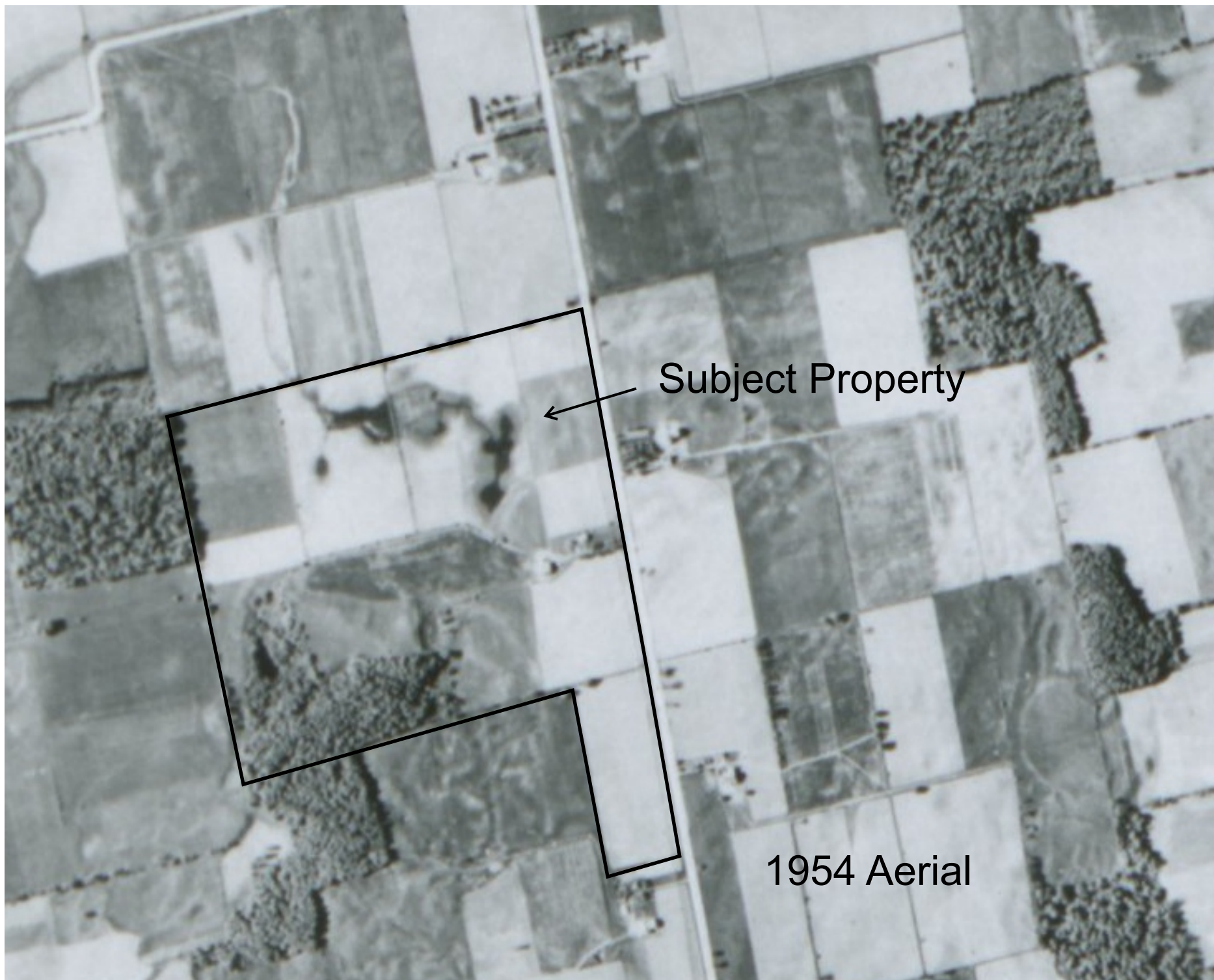


NVCA Regulation Mapping (NVCA web site Jan 5, 2021)

Appendix B – Contour Mapping



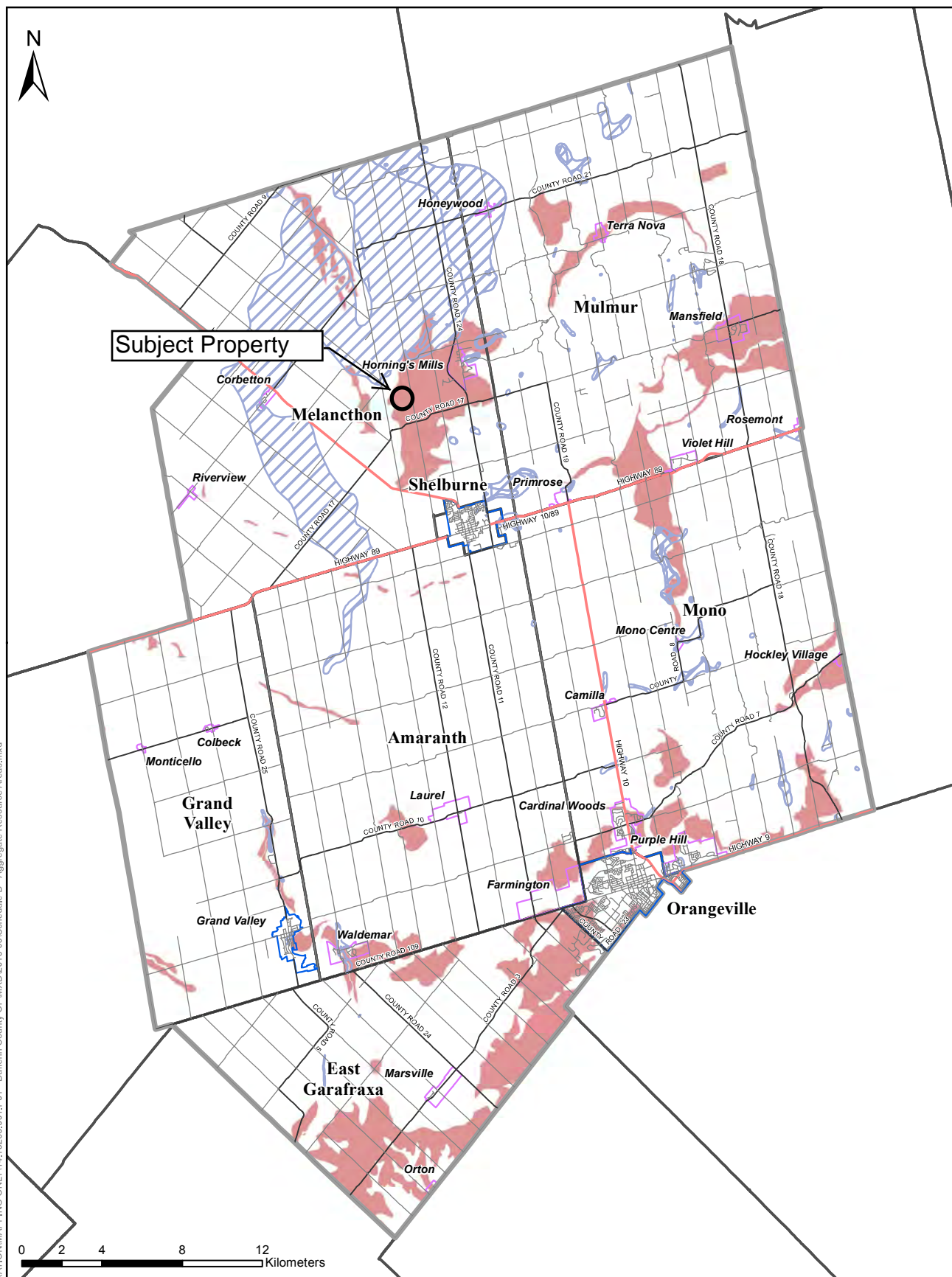
Appendix C – 1954 Aerial Photography










Subject Property

1954 Aerial



**Appendix D: Schedule D - Mineral Aggregate Resource Areas
Dufferin County**



Legend

-  Urban Settlement Area
-  Community Settlement Area
-  Provincial Highway
-  County Road
-  Other Road
-  Dufferin County Boundary
-  Municipal Boundaries

Mineral Aggregate Resources (S. 4.4)

-  Sand and Gravel Resource Area
-  Bedrock Resource Area



**Schedule D
Mineral Aggregate
Resource Areas**

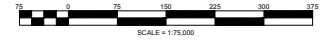



Date: March 2015


**Appendix E: Schedule H – Primary Mineral Aggregate Resource Areas
Township of Melancthon**


SCHEDULE H PRIMARY MINERAL AGGREGATE RESOURCE AREAS

OFFICIAL PLAN
FOR
TOWNSHIP OF
MELANCTHON



 SAND & GRAVEL RESOURCE
AREA

 BEDROCK RESOURCE AREA
- WITHIN 8m OF SURFACE

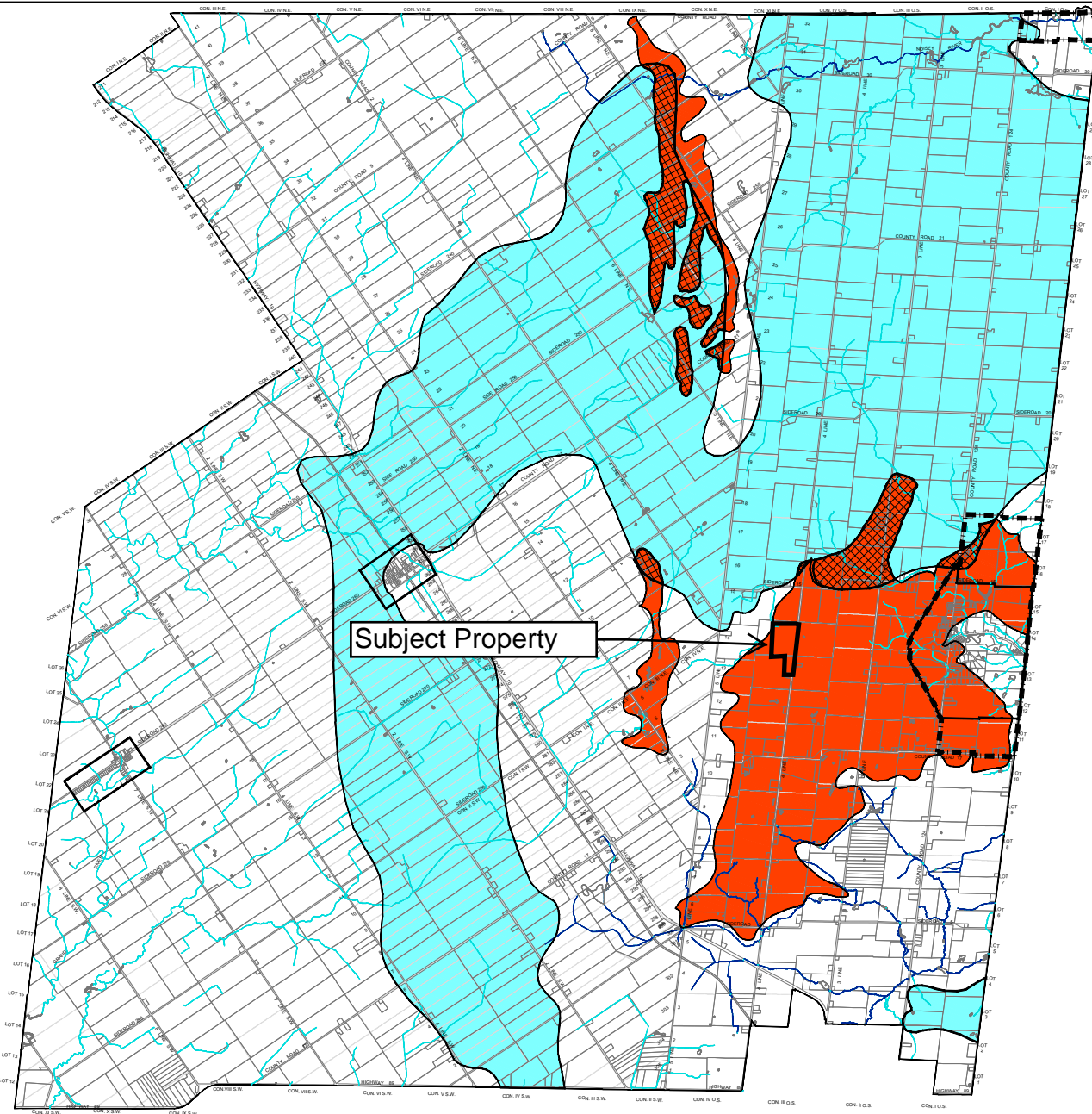
 AREA OF BOTH PRIMARY
SAND & GRAVEL AND
PRIMARY BEDROCK

See Section 3.17.

 NIAGARA ESCARPMENT
DEVELOPMENT CONTROL AREA



OCTOBER, 2017



Appendix F: Concept Plan
