ASSESSING THE IMPACT OF THE MELANCTHON QUARRY

Prepared for the Ontario Federation of Agriculture (OFA)

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1.0 Introduction

In 2004, a Boston-based hedge fund, Baupost, under the name The Highland Companies began purchasing farms in the Township of Melancthon. These initial acquisitions were the beginning of an accumulation of roughly 3,400 hectares of prime agricultural land including two of the region's largest potato farms, Downey Potato Farms and Wilson Farms (CBC, 2011; OFA, 2012). The land is excellent for agriculture, especially potatoes, because of unique climactic and soil conditions for growing potatoes – a relatively higher elevation and the prevalence of honeywood silt loam soil (OFA, 2012). After the farm acquisitions, Highland Companies became the largest grower, packer, and distributor of potatoes in the province and currently employs 60-70 men and women in the Melancthon-area farming operation (The Highland Companies, 2012).

In April 2011, The Highland Companies applied for a license to extract aggregates from the site. The Township of Melancthon is home to the largest deposit of amabel dolostone (limestone) in the province of Ontario and Highland Companies are proposing to convert 937.1 hectares of potato farming land to a phased aggregate operation with four extraction sites. The proposal also includes plans to eventually rehabilitate some of the quarry back into agricultural land. However, since the proposed extraction sites will be well below the watertable, extensive water pumping will be required during operation and after rehabilitation, in perpetuity. The proposed quarry would be the largest of its kind in Canada by a single company and the second largest in North America (NDACT, CBC). It is anticipated that the operation will last 50 – 100 years.

Aggregates are defined as a priority in Ontario and are governed by the *Aggregates Resources Act* (*ARA*) and the Provincial Policy Statement (2005) (PPS). Aggregate pits and quarries must obtain a permit or licence under the *ARA* and adhere to all applicable requirements in the Act and its associated policies. The PPS outlines the need for a stable and close to market source of aggregates to keep pace with development across the province. Due to the size and scale of the proposed project, there has been tremendous public interest in the quarry. Resulting from community reaction as well as the potential environmental impacts, the Ministry of the Environment has made the Melancthon Quarry project subject to an environmental assessment (EA) under the *Environmental Assessment Act* (*EAA*).

The Highland Companies, as the proponents of the application, consider the "responsible development and use of natural resources – agriculture, wind energy and aggregates – [as] hallmarks of Melancthon's past" (The Highland Companies, 2012). Opponents to the quarry worry about the size and scope of the excavation and its potential environmental, agricultural, social and economic impacts on this unique potato farming community and the Province of Ontario. Typical EA reviews can take up to two years to conduct, and as such, there will be an extensive review of the project's impacts and a range of opportunities for public participation.

2.0 Research Objective

This paper aims to provide the Ontario Federation of Agriculture (OFA) with background information on the proposed quarry in the Township of Melancthon (see Terms of Reference, Appendix A). The team of student researchers assessed the potential environmental, social and economic impact of the quarry on OFA members and will provide background research and interview findings to the OFA Board of Directors. To meet the research objectives, the team will:

- Provide background on the current provincial policies impacting the proposed quarry in Melancthon Township;
- Conduct background research, and where appropriate, key informant interviews with stakeholder groups; and
- Examine other cases of large-scale quarries in Ontario, Canada and the United States and assess their impact on agricultural land, farming and rehabilitation.

3.0 The Application

In April 2011, a company named 3191574 Nova Scotia Company Limited, a subsidiary of The Highland Companies, applied for an aggregate licence under section 7 (2) (a) of the *ARA*. The company proposed to excavate aggregates from a new quarry with an unlimited annual tonnage condition (see Environmental Registry posting #011-2864). The location of the proposed quarry is in Melancthon Township and is 937.1 hectares in surface size (Figure 1). Highland Companies owns the land and is currently operating as a potato farm under the name Downey Potato Farms. The area within the proposal lies outside of the Niagara Escarpment, Greenbelt, and Oak Ridges Moraine and as such, is not subject to restrictions identified in these plans and associated statutes. The proposal is to successively

extract four separate sections and begin rehabilitation immediately following the quarrying activities within each section (Figure 2). Of the 937 hectares within the application, 765 hectares will be for active aggregate extraction while the remaining will encompass berms, buffer zones, and operation buildings and roads (Figure 1). The remaining land not included in the quarry proposal, as well as the rehabilitated land, will be actively farmed.

The Ministry of Natural Resources (MNR) received over 2,000 objections during the *ARA* objection period and over 3,700 comments through the Environmental Registry posting (Ministry of Natural Resources, 2011).

Figure 1 Proposed quarry licence area (Source: Highland Companies, 2012)

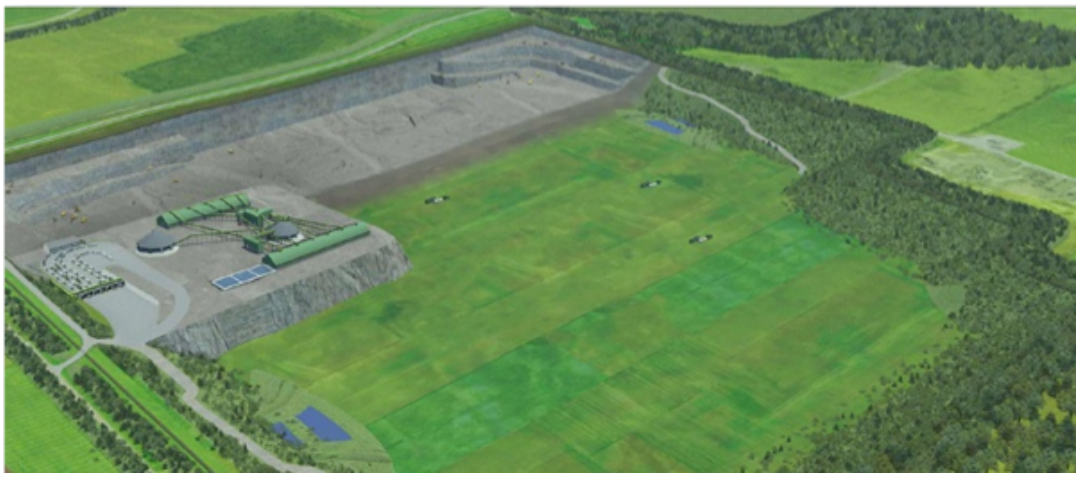

Figure 2 Artistic rendering of an extraction pit and rehabilitation to farmland (Source: Highland Companies, 2012)

4.0 Policy Framework

4.1 *Aggregate Resources Act*

Under the *ARA*, MNR is responsible for setting aggregate extraction standards, issuing approvals and conducting enforcement actions. The aggregate industry is responsible for compliance inspection and reporting, operational accountability, and management of rehabilitation funds. The purpose of the Act is to:

(a) provide for the management of the aggregate resources of Ontario;

(b) control and regulate aggregate operations on Crown and private lands;

(c) require the rehabilitation of land from which aggregate has been excavated; and

(d) minimize adverse impact on the environment in respect of aggregate operations.

A licence is required to operate a pit or quarry on private land in designated areas of Ontario. There are different classes and categories of aggregate licences. A Class A Category 2 licence is required from MNR to remove more than 20,000 tonnes of aggregate annually from a quarry below the water table (Ministry of Natural Resources, 1997). The Aggregate Resources Provincial Standards (1997) provide minimum requirements for proponents when applying for a licence or permit. The standards

are available on MNR's website. The document contains site plan standards, report standards, prescribed conditions and notification and consultation standards. Site plans control the operation and rehabilitation of pits and quarries. These plans must identify:

- Existing features of the area, such as existing natural features and land use on and surrounding the site;
- Operation details, such as the area to be extracted, the depth of extraction, the types of equipment to be used and the hours of operation, and
- How the site will be rehabilitated, including details of both progressive rehabilitation carried out while the pit or quarry is still operating, and final rehabilitation (Ministry of Natural Resources, 1997).

Under the Act, the Minister may refer the application and any objections to a Board for a hearing. The matters to be considered by the Minister or the Board during the review of an aggregate licence shall have regard to,

(a) the effect of the operation of the pit or quarry on the environment;

(b) the effect of the operation of the pit or quarry on nearby communities;

(c) any comments provided by a municipality in which the site is located;

(d) the suitability of the progressive rehabilitation and final rehabilitation plans for the site;

(e) any possible effects on ground and surface water resources;

(f) any possible effects of the operation of the pit or quarry on agricultural resources;

(g) any planning and land use considerations;

(h) the main haulage routes and proposed truck traffic to and from the site;

(i) the quality and quantity of the aggregate on the site;

(j) the applicant's history of compliance with this Act and the regulations, if a licence or permit has previously been issued to the applicant under this Act or a predecessor of this Act; and

(k) such other matters as are considered appropriate.

The Aggregate Resources Program Policies and Internal Procedures Manual provide guidance on the implementation, interpretation and clarification of the Act and its regulations. The Manual is available on MNR's website.

Municipalities can control the location of aggregate operations through zoning by-laws. The *ARA* identifies that the Minister can only issue a licence only if the zoning by-law allows the site to be used for the making, establishment or operation of pits and quarries. Development permits under the *Planning Act* are not required for sites where a licence has been issued (Ministry of Natural Resources, 2006). Other legislation may also apply to pits and quarries, whether on private or Crown lands (e.g. *Environmental Protection Act*, *Ontario Water Resources Act*, *Conservation Authorities Act*, *Lakes and Rivers Improvement Act*, and *Fisheries Act*).

At the local level, The Highland Companies is seeking an amendment to the Township of Melancthon's Official Plan to re-designate the proposed quarry lands to allow aggregate extraction, accessory uses and the continuation of agricultural uses. The amendment would change the land use designations from 'rural', 'industrial' and 'environmental protection area' to 'industrial uses – special provisions,' with an 'environmental protection overlay' applied to a portion of the lands (3191574 Nova Scotia Company, 2011). The company also applied to amend the Township's by-laws. In July 2011, the Council of the Township of Melancthon passed a resolution to request the Ministry of the Environment conduct a full EA of the Highland Companies quarry application.

4.2 Environmental Assessment for Melancthon Quarry

On September 1, 2011, the Lieutenant Governor in Council decided to make the proposed quarry in Melancthon Township subject to the *EAA* (Ministry of the Environment, 2011). As a result, The Highland Companies will be required to undertake a full EA. Since April 2011, the Minister of the Environment received over 700 requests to have an environmental assessment completed for the quarry prior to approval (Ministry of the Environment, 2011). This is the first quarry in Ontario that must complete an EA as part of the approval process. Generally, private sector projects such as quarries are not subject to the *EAA* unless specifically designated by regulation under section 39 (e) of the *EAA*. The regulation for The Highland Companies is O. Reg. 444/11. This is a designation, not a bump-up requirement or Part II Order, but the effect for the community is much the same.

An EA is a planning and decision-making process to identify, assess and document potential environmental impacts of a proposed undertaking on the environment prior to decisions being made about proceeding to construction (Environmental Commissioner of Ontario, 2008). In the *EAA*, the

environment has a broad definition, including but not limited to air, land or water, plant and animal life, including human life, and the social, economic and cultural conditions that influence the life of humans or a community.

From a public participation perspective, undertaking an EA for a proposed quarry is theoretically far superior then solely obtaining a permit under the *ARA*. For example, there is only one opportunity for the public to provide comments on proposed aggregate licence applications but there are many during an EA. In contrast, the *EAA* requires that project proponents shall consult with interested persons when preparing a proposed terms of reference and an EA. The public can also participate in public meetings, open houses and other public forums arranged by the proponent. Public participation opportunities are identified below in the major steps of an environmental assessment:

- Proponent prepares a terms of reference (consultation required);
- Proponent submits a terms of reference;
- Ministry coordinates public, Aboriginal communities and government comments on terms of reference (12 weeks);
- Ministry approves terms of reference or refers to mediation;
- Proponent prepares an environmental assessment (consultation required);
- Proponent submits an environmental assessment;
- Ministry coordinates public, Aboriginal communities and government comments on environmental assessment (7 weeks);
- Ministry prepares the Ministry Review (5 weeks);
- Public inspection of the Ministry Review (5 weeks);
- Minister's decision (13 weeks).

At the end of the process, the Minister of the Environment ultimately decides to approve the undertaking, approve it with conditions, or reject it. However, before an application is decided, either the terms of reference or EA, the Minister may appoint a mediator(s) to resolve any concerns or refer the matter to the Environmental Review Tribunal.

Any person may request that some or all matters of an environmental assessment be referred to the Environmental Review Tribunal for a hearing. This request must be made during the five-week period following the Ministry's decision (Notice of Completion of a Ministry Review). However the

Minister has discretion on whether or not to refer the matter to the Tribunal. If the matter is referred to a hearing, members of the public or organizations may have another opportunity to provide comments on the proposed project to the Tribunal.

The Ministry of the Environment has prepared various guidance documents related to the environmental assessment process and proponents are expected to follow them. These documents provide valuable information for navigating the complex process and are available on the Ministry's website. The documents are:

- Code Of Practice - Preparing And Reviewing Terms Of Reference For Environmental Assessments In Ontario;
- Code Of Practice – Preparing And Reviewing Environmental Assessments In Ontario; and
- Code Of Practice - Consultation In Ontario's Environmental Assessment Process.

4.3 The Provincial Policy Statement

This section will outline the province of Ontario's approach to farmland protection as well as aggregate extraction with the intention of highlighting what can be considered as competing provincial interests. The PPS was created "to provide policy direction on matters of provincial interest related to land use planning and development". In essence, the PPS creates the foundation for the regulation of land development and use of land in the province on Ontario. As part of its mandate, the PPS aims to "support the provincial goal to enhance the quality of life for the citizens of Ontario" (PPS, 2005). All land use planning decisions in Ontario must be consistent with policies of the PPS.

The PPS contains competing priorities for the long-term protection of both prime agricultural areas and mineral aggregate resources. For example, under section 2.3.1 of the PPS it states that;

> Prime agricultural areas shall be protected for long-term use for agriculture.
>
> > Prime agricultural areas are areas where prime agricultural lands predominate. Specialty crop areas shall be given the highest priority for protection, followed by Classes 1, 2 and 3 soils, in this order of priority.

In addition, section 2.5.1 of the PPS states that "[m]ineral aggregate resources shall be protected for long-term use." Section 2.5.2.1 of the PPS also directs that "[a]s much of the mineral aggregate resources as is realistically possible shall be made available as close to markets as possible" and that a "demonstration of need" is not required.

Despite the priority to protect prime agricultural areas, section 2.5.4.1 states that extraction of mineral aggregate resources is permitted on these lands, "as an interim use provided that rehabilitation of the site will be carried out so that substantially the same areas and same average soil quality for agriculture are restored." Section 2.5.4.1 outlines the exemption of aggregate extraction processes from the complete agricultural rehabilitation process if:

> a) 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) 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 to 7 soils, 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 Classes 1, 2 and 3; and
>
> c) agricultural rehabilitation in remaining areas is maximized."

Comparing these priorities with provincial policy in sections 1.7.1 and 2.3.3.1 further highlights the incongruent approach to farmland protection and aggregate extraction.

> 1.7.1 Long-Term Economic Prosperity
>
> (g) providing the sustainability of the agri-food sector by protecting agricultural resources and minimizing land use conflicts.

2.3.3.1 In prime agricultural areas, permitted uses and activities are: agricultural uses, secondary uses and agriculture-related uses.

Proposed new secondary uses and agriculture-related uses shall be compatible with, and shall not hinder, surrounding agricultural operations. These uses shall be limited in scale, and criteria for these uses shall be included in municipal planning documents as recommended by the Province, or based on municipal approaches which achieve the same objective.

More specifically, the incongruence between policy objectives is outlined when considering section 2.3.3.1 (shown above) with section 2.5.2.5 which states;

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

a) resource use would not be feasible; or

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

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

While these policies do provide decision-makers with the discretion to determine if a proposed development is in the best interest of the province, the PPS treats agricultural production on prime agricultural farmland (which has aggregate beneath it) as a secondary use to aggregate extraction. Given the contradiction of aggregate and agriculture policies, it can be speculated that the promotion and production of aggregate extraction is considered to contribute more to the well being of Ontario's citizens when compared to the protection and promotion of prime agricultural farmland. While discretion has been built into provincial policy processes to allow for the best decisions to be made,

clarification regarding the competing interests between the protection of prime agricultural farmland and the production of mineral aggregates would allow for a more cohesive PPS.

5.0 Competing Priorities – Aggregate and Agriculture

The province has competing priorities with respect to aggregate extraction and the protection of prime agricultural land. This section will explore these areas in greater detail.

5.1 Aggregate extraction in Ontario

Despite strong concerns and growing opposition from environmental and community groups to the proposed quarry in Melancthon Township, the province's demand for aggregate found "close to market" is increasing. With provincial population projections ranging from 17-52 per cent increase by 2036 (*Ontario Population Projects Update*, Ministry of Finance, 2011), the next 20+ years will see a growing demand for high-quality, locally extracted aggregate in Ontario. The provincial growth plan, outlined in *Places to Grow, Growth Plan for the Greater Golden Horseshoe* (2005) identifies 25 "urban growth centres" in the Greater Golden Horseshoe (GGH) and areas surrounding the Greater Toronto Area (GTA).

These centres are poised to add thousands of additional residents and jobs in the coming decades. With this increased growth comes a higher demand for aggregate in Ontario. Provincial projections indicate that Ontarians will use 186 million tonnes of aggregate per year for the next 20 years (*State of the Aggregate Resource in Ontario Study [SAROS]*, 2010). According to *SAROS* (2010) there are currently 317 million tonnes of aggregate reserves in the GTA market; the majority of the reserves in Ontario, however, are not located "close to market". In Ontario "...ninety-three percent of unlicensed bedrock resources have overlapping environmental, planning and agricultural constraints" (2010).

5.2 Aggregate Uses/Recycling

To date, in order to mitigate the expensive shipping and infrastructure costs associated with transporting aggregate long distances, it is a provincial priority to source aggregate near to the market in which they will be used. Aggregate material in Ontario is primarily used for roads, concrete, sidewalks and bridges, but can also be found in other materials such as steel, glass, fertilizer and paint. While the use of recycled aggregate or secondary aggregate has increased over the past several years,

municipalities still require additional awareness around aggregate recycling practices. In addition, provincial standards promoting the use of "high performance" materials are increasing the need for primary aggregate extraction in Ontario (*SAROS*, 2010) and limiting the market for recycled or secondary materials.

5.3 Aggregate Royalties

The Highland Companies is proposing a new "mega quarry" in Ontario. A mega-quarry is defined by MNR as a quarry having 150 million tonnes of reserves and a production capacity of 10 million tonnes annually (*SAROS*, 2010). In order to offset the economic costs incurred by Ontario municipalities that are home to pits and quarries, such as increased wear and tear on infrastructure, the government has established an Aggregate Resources Trust. This Trust is funded by each aggregate licensee in the province, and payments are made into the Trust based on the "quantity of aggregate material removed from the site" (*Ontario Aggregate Resources Act*, 2000).

Two-tier municipalities currently receive 7.5 cents (1.5 cents to the upper tier and 6 cents to the lower tier) and single tier municipalities receive 7.5 cents per tonne of extracted aggregate. For example, in the case of Melanchthon Township, Dufferin County would receive 1.5 cents and the Township would receive 6 cents. At the 2012 Ontario Good Roads Association (OGRA) Conference, leaders from the top 10 aggregate producing municipalities met to devise a strategy that would see an increase in this royalty recognizing the social, infrastructure and environmental concerns of aggregate-producing municipalities. The group, led by the City of Kawartha Lakes, met with industry representatives, including the Ontario Sand Stone and Gravel Association, and received endorsement of this strategy. Together municipalities and industry received a public commitment from the Minister of Natural Resources to review the tariff (*Interview*, OGRA, 2012).

In February 2012, proponents of the quarry, The Highland Companies, made a presentation to the members of Council in Melancthon Township. Should the quarry be approved, it would see an annual extraction of approximately 10 million tonnes per year, with a royalty of 6 cents per tonne, or $600,000, to the Township annually. The Highland Companies are advocating for increased royalties, similar to those paid in Quebec, which would see Highland paying 50 cents per tonne of aggregate with a $5 million royalty to the Township annually (The Highland Companies, *Presentation to Melancthon*

Town Council, February 2012). Currently, the province has issued 3,700 licenses and 3,300 permits, leading to over $20 million annually in royalty payments to Ontario municipalities (The Ontario Aggregate Resource Trust website, 2012).

5.4 Agricultural Land Classification

Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) and the Canada Land Inventory (CLI) have developed definitions for the different classes of land present in Ontario. The Inventory uses soil and climate conditions to evaluate the suitability, including both potential and limitations, to grow common field crops. The CLI does not take into account specialty crops or horticulture. There are seven different classes of agricultural land in Canada that range from free of limitations to grow crops to marsh or wetland. The PPS defines "prime" agricultural land as specialty crop areas and lands with a CLI classification of 1, 2 or 3. The definitions of these include:

> *"**Class 1 - Soils in this class have no significant limitations in use for crops.***
> *Soils in Class 1 are level to nearly level, deep, well to imperfectly drained and have good nutrient and water holding capacity. They can be managed and cropped without difficulty. Under good management they are moderately high to high in productivity for the full range of common field crops*
> ***Class 2 - Soils in this class have moderate limitations that reduce the choice of crops, or require moderate conservation practices.***
> *These soils are deep and may not hold moisture and nutrients as well as Class 1 soils. The limitations are moderate and the soils can be managed and cropped with little difficulty. Under good management they are moderately high to high in productivity for a wide range of common field crops.*
> ***Class 3 - Soils in this class have moderately severe limitations that reduce the choice of crops or require special conservation practices.***
> *The limitations are more severe than for Class 2 soils. They affect one or more of the following practices: timing and ease of tillage; planting and harvesting; choice of crops; and methods of conservation. Under good management these soils are fair to moderately high in productivity for a wide range of common field crops."* (OMAFRA, 2011)

There are also several subclasses of the soil classes that take into account other conditions that affect soil and growth including: adverse climate, stoniness, permeability, erosion, fertility, moisture, topography etc (OMAFRA, 2011). Only 0.5 per cent of Canadian land is considered Class 1 agricultural land; over half of this land is located in the province of Ontario (Ontario Farmland Trust, 2007).

The land in Melancthon Township is extremely well suited to agriculture and more specifically the vegetable crop of potatoes. The land making up the proposal for the Highland Quarry is 95.8 per cent Class 1 agricultural land with the remainder of the proposal at Class 2, 3, and 4. Thus, almost all of the land is prime agricultural land in class 1, 2 or 3. Potatoes are a cool-season crop that is congruent with the slightly cooler climate in Melancthon Township (DFA, 2011). The land is flat, free of stones and other natural obstacles and very well draining. It has been described as a "joy to work" by local farmers. The pocket of the honeywood silt loam is very small in Dufferin County and is roughly 6,070 hectares. This pocket of land could be considered to be some of the best potato land in Ontario.

5.5 Farmland Preservation

The major assumption underlying farmland preservation is that it is important to protect significant areas to agriculture in the interest of the public good and future generations. Generally land-use classification schemes have been developed for this use (Smit et. al., 1987). Farmland can provide many natural amenities to those that live near it that can include: open space, rural character, wildlife habitat and groundwater recharge areas. In conjunction, farmland supports the agricultural economy, ensures food security and local supply of food that can have positive environmental benefits (Ontario Farmland Trust, 2007).

Over 70 per cent of the land in Dufferin County is classified as "prime" agricultural land in accordance with the Canadian Land Inventory for Agricultural Lands. According to the *The County of Dufferin and its Member Municipalities Growth Management Strategy 2009,* agriculture represents a large portion of Dufferin County's economy and it generated $103.8 million in gross farm receipts in 2006. This works out to an average of $1306 gross income per hectare of farmland in the County. As of the 2006 Canadian Census, Melancthon Township was host to the largest number of farms and land area used for agriculture in Dufferin County. Subsequently Melancthon Township is host to some of the most prosperous farms and they account for 29 per cent of the gross farm receipts in the County (Dillon Consulting & Watson and Associates Ltd.). The land in Melancthon will likely generate significantly more

income per hectare than the average hectare of land in the County as it grows a higher value crop-potatoes.

6.0 Stakeholder Response

To explore the province's competing needs for agricultural land and aggregate, the team interviewed or researched the positions of key stakeholder groups representing the agricultural, environmental and aggregate sectors.

6.1 The Dufferin Federation of Agriculture

The Dufferin Federation of Agriculture (DFA) is firmly opposed to the proposed Melancthon Quarry. The Federation's position paper on the matter states that farmland is disappearing at an alarming rate in Ontario and this valuable resource should be protected. The soil and climate in Melancthon Township makes it unique to growing potatoes in the province of Ontario. They further state that they do not believe the land will be adequately rehabilitated back to the prime agricultural land it is today due to the lack of "proven techniques" to do so. Since aggregates are considered an interim use, the DFA wants an independent cost-benefit analysis commissioned that compares the short-term economic benefits of the proposed quarry to the long-term benefits of continuing potato production for perpetuity. This study should include the secondary and tertiary economic benefits resulting from the primary economic benefits of food production.

6.2 The Highland Companies

As the proponents of the proposal the Highland Companies are naturally in favour of the Melancthon Quarry. They feel that they have submitted a comprehensive plan that, while large, has foresight and will take due care to be responsible. Since they are one company they have an advantage in long term planning and visioning. In addition, they believe that the site for the quarry is ideal and is free of obstacles like wetlands, major waterways, natural features, and restrictive Provincial land policies as well as being close to the GTA market. They are advocating for a significant increase the levy on tonnes of aggregate for Melancthon Township and Dufferin County. They also have a hire locally first policy and state they have a commitment to rehabilitate the land back to agriculture.

6.3 Ontario Good Roads Association

The Ontario Good Roads Association (ORGA) is a non profit, membership-based organization made up of over 450 municipalities in Ontario. The mandate of OGRA is to represent the infrastructure

interests of municipalities through advocacy, consultation, training and the delivery of identified services. With respect to a position on the quarry, OGRA is not in the business of commenting on land use issues. Instead, OGRA has focused on the impact that this proposed quarry would have on municipal infrastructure. OGRA has gone on record saying that the existing aggregate royalty program needs to be revamped so that municipalities can sustain the assets affected by aggregate extraction and transportation.

OGRA has devoted considerable resources to making sure that the stewardship of our road network does not adversely affect the natural environment (road salt is an example of this) and OGRA wants to see any development pursue similar objectives. Currently the aggregate royalties program is administered by The Ontario Aggregate Resources Corporation (TOARC). The program is approximately $20 million in size, and royalties are transferred without stipulation to the affected parties. Prior to 1997, it was possible for the Minister of Natural Resources to place conditions on how these funds could be spent.

OGRA has worked with the top 10 producing aggregate communities to get their interests in front of the provincial authorities that have overall responsibility for all aspects of aggregate extraction in Ontario. OGRA has also actively endorsed revisiting the aggregate royalty conditional on the funds being dedicated back to affect municipal infrastructure.

6.4 Ontario Stone, Sand and Gravel Association

The Ontario Stone, Sand and Gravel Association (OSSGA) is a non-profit industry association representing over 250 sand, gravel, and crushed stone producers and suppliers of valuable industry products and services. Collectively, their members supply the majority of the approximately 172 million tonnes of aggregate consumed annually in the province to build and maintain Ontario's infrastructure needs. OSSGA works in partnership with government and the public to promote a safe and competitive aggregate industry contributing to the creation of strong communities in the province.

The OSSGA does not have an active position on the quarry. Due to the diversity of their membership, the OSSGA does not offer comment on specific applications (The Highland Companies is an Associate Member of the OSSGA; their status is "Associate" since they do not have an active license in Ontario). While the OSSGA does not have a formal position on the quarry, they are actively highlighting

the need for "close to market" aggregate solutions in Ontario. They believe that the proposed quarry in Melancthon has raised public and political awareness around the need for aggregates and their importance to retaining the "quality of life" to which Ontarians have become accustomed.

The OSSGA firmly supports the findings in the *SAROS* (2010) report that indicate Ontario will be experiencing an aggregate shortage in the coming decades. While the OSSGA does not take active positions on license applications, they do advocate on other leading issues impacting upon the aggregate sector. For example:

- Recycling: The OSSGA are active proponents of recycling aggregate, and are in active discussions with the province and their membership on this issue.
- Aggregate royalties: The OSSGA supports incrementally increasing the aggregate royalty in Ontario. While they have not set a specific dollar amount or timeline, the OSSGA holds that the province's use of these funds should be more transparent, and municipalities should be mandated to use royalties for infrastructure upgrades.
- Transportation: The OSSGA supports improving transportation networks to assist with moving aggregate across the province. They are in active discussions with the province around: the location of pits/quarries relative to railway networks; the importance of road upgrades to the industry; and the importance of viewing the Great Lakes as an opportunity to move aggregate by water.
- Rehabilitation: The OSSGA has recently undertaken a research project on the status of rehabilitated pits and quarries in Ontario (from 1970-2010). They are issuing a report in April, 2012 that will document the relative health and use of some 300 decommissioned sites across the province. Early findings indicate that once a pit/quarry has been rehabilitated, while it may not return to its previous use, 100% sites do "disappear back into the community fabric" i.e. the Arboretum at the University of Guelph.

6.5 David Suzuki Foundation

The David Suzuki Foundation (DSF) has analyzed reports submitted as part of Highland Company's application regarding the Melancthon Quarry and has taken issue with several particulars within supposed environmental impacts mentioned as well as a general method for data collection carried out by the Highland Companies. The issues were highlighted in an open letter to the Ontario MNR and can be summarized into two specific areas. First, the analysis of the waterways on the

application site were monitored in a manner that provides significant gaps in the data and does not take into account the different cycles that the waterway undergoes through different seasons. This according to DSF could overlook potential impacts upon fish and their ability to spawn and appropriate studies need to be conducted to assess these potentials. Secondly regarding wildlife, in particular the bobolink, there was no habitat studies conducted within the application area. The David Suzuki Foundation is calling for these gaps to be addressed through a full EA of the project so as to allow a comprehensive analysis of the potential environmental impacts of the Melancthon Quarry to guide the decisions making process going forward.

6.6 Conservation Authorities

Conservation authorities are local, watershed-based, resource management agencies. They are involved in many aspects of local land use planning and environmental permitting. For example, some conservation authorities provide technical and policy advice to municipalities on water quality, environmental impacts, watershed science, hydrogeology and stormwater management. Conservation authorities also regulate development and other activities in or near river or stream valleys, Great Lakes and large inland lake shorelines, hazardous lands, watercourses, and wetlands and are extensively involved in source water protection planning.

The proposed quarry is situated within the jurisdiction of the Nottawasaga Valley Conservation Authority (NVCA). In April 2011, NVCA objected to the proposed quarry because of the following concerns:

1. Potential impacts to adjacent surface and ground water quality and quantity.
2. Potential impacts to adjacent wetlands related to water quality and quantity.
3. Potential impacts on terrestrial natural features and systems.
4. Potential fisheries impacts including impacts to a high quality coldwater fishery
5. Potential offsite impacts related to erosion and flooding (Nottawasaga Valley Conservation Authority, 2011).

NVCA forwarded these concerns to the Township of Melancthon in response to an official plan amendment proposal to allow for aggregate extraction on the site. It identified that due to the size and

complexity of the proposal, it has not been able to complete a comprehensive review of the application (Nottawasaga Valley Conservation Authority, 2011). NVCA hired a consultant to provide technical assistance in the review of the application, for example performing a comprehensive review of the application and undertaking field monitoring to supplement the information provided by Highland (Nottawasaga Valley Conservation Authority, 2011).

The proposed quarry is potentially located in the headwaters of the Grand River and Grand River Conservation Authority also identified to the municipality that there was "insufficient information provided in the reports to assess the potential impacts to the Grand River watershed" and that there were outstanding questions related to the potential impacts. It recommended that the official plan amendment not be approved "at this time" (Grand River Conservation Authority, 2011).

6.7 North Dufferin Agricultural and Community Task Force

Formed in 2009, the North Dufferin Agricultural and Community Task Force (NDACT) have emerged as the preeminent opponent to the proposed quarry in the Township of Melancthon. Comprised of local landowners, farmers, community members and concerned citizens, the NDACT is actively researching and lobbying against the quarry. Citing community, agricultural and environmental concerns, the group has become a strong voice speaking out to "protect the unique and non-renewable resources of North Dufferin County" (NDACT website, 2012). Their mission, to raise awareness around this quarry, was realized in the summer of 2011. NDACT hosted "Foodstock" an event that brought together dozens of local chefs, musicians and over 20,000 people to raise funds to help oppose the quarry.

7.0 Analysis of Potential Impact

There are a number of effects that are associated with the proposed Melancthon Quarry. This section of the report will focus upon these impacts and their significance to the project and what effect they have upon its viability in four categories including: environmental, social, political and economical.

7.1 Environmental

The range of environmental impacts associated with aggregate quarries based upon the review of literature relate to two areas; noise, dust and vibration in one category and groundwater in another. Both will be reviewed to assess the potential impacts of the Melancthon quarry based upon reviews and case study data from similar projects. Aggregates can also impact wildlife and fish populations, but these will not be discussed in this paper.

7.1.1 Noise, Dust and Vibration

Dust and particulates from the extraction process can have serious human health effects that are both acute and long-term. The short-term effects include inflammation of the lungs from inhalation and the longer-term effects include incidences of cancer from inhalation of total suspended particulates (TSP) that are shown to be as high as 400 per cent the average rate within 1 kilometre of the quarry when downwind (Bluvshtein, Mahrer, Sandler and Rytwo, 2011). The standards implemented by the provincial government, when adhered to, will mitigate the impact this has on the area surrounding the quarry. Noise and vibration from the quarry is significant and can have serious impacts upon the environment and human and animal population (Birch, Datson and Lowndes, 2008). Although, similar to dust, when provincial standards are adhered to there would be no expected impact upon the surrounding area of the Melancthon Quarry (Sylvestre-Williams and Rimrott, 2011).

7.1.2 Groundwater disruption

There are two distinct effects from the quarry possible in relation to water; quantity and quality. Natural deposits of aggregates act as reservoirs for groundwater and their removal can disrupt and alter groundwater flow and storage (Binstock and Carter-Whitney, 2011). When the aggregates are extracted the groundwater infills the area causing the water table to drop. This drop disrupts the water tables ability to recharge surrounding systems reliant upon the groundwater discharge such as ponds, wetlands and streams. The lowering of the water table can also affect wells situated within the area which is a serious concern for farms surrounding the quarry. The complexity associated with groundwater systems makes it difficult for the recharge system to replicate the natural process meaning certain areas surrounding the quarry may be more affected than others in terms of water quantity. Again this issue mainly pertains to surrounding farms dependent upon wells where the effects would be extreme if losses occurred. In terms of groundwater quality it has been found based on a review of case studies that contamination of groundwater has been negligible and cases involving contamination include fuel storage and asphalt plants located on quarries and are very limited in their occurrence.

Overall environmental impacts of the Melancthon quarry would involve possible negative effects from groundwater flow disruption that has been documented in other case studies; notably within Minnesota quarry case studies (Green, Pavlish, Leete and Alexander, 2003: 2005). These effects are unpredictable due to variability in the way the quarry will develop as it progresses below the water table and in how it will be dewatered (Green, Pavlish, Leete and Alexander, 2003: 2005). Other environmental effects would be negligible based upon the location of the quarry and its proximity to residential and commercial areas if the recommendations presented to Highland Companies through the air quality and noise control reports as part of their application are adhered to.

7.2 Social

The potential social effects of the Melancthon Quarry include changes to real estate values, traffic, employment, and municipal revenues and will be talked about in detail to understand their components.

7.2.1 Real Estate

Housing and property values have not been affected by aggregate quarries in case studies analysis. The most significant example is found within Ohio and Kentucky where property "within the influence" of the quarry appreciated 6.09 per cent annually compared to 4.32 per cent in the surrounding area outside the influence of the quarry (Willingham, 2002). This shows that there is no evidence of impacts upon housing and property values related to aggregate quarries within the study area. However, each individual area is unique; there is the potential for land value to increase significantly due to the presence of aggregate resources being present or decrease depending upon the perception within the market. Therefore while there is no evidence of past land value changes the context surrounding the site and market will dictate values in each case.

7.2.2 Traffic

Increases in traffic are to be expected as, estimated by the Highland Companies, 300 trucks per hour will be needed to transport aggregates from the site (Melancthonquarry.ca). The majority of the traffic will occur along Provincial Highway 124 and based upon assessments and studies done of similar transportation of aggregates in Ontario and Florida have shown that traffic will not be significantly impeded and road quality will not be sacrificed (Garrod and Barnett, 2008). It is still imperative to conduct a specific traffic study as the haul route has not been described beyond its "main" route of

highway 124 and other impacts may arise (Melancthonquarry.ca). Impacts are subjective to the particular context of the case and local impact needs to be confirmed for a complete haul route.

7.2.3 Employment

The Highland Companies expect to create a total of 465 permanent positions at the peak of operation for the quarry (Altus Group, 2010). The majority of these jobs will be related to the transportation of the aggregates (300) and will not reach their peak until the project has been fully developed (Altus Group, 2010). The majority of the jobs that will be available to the community are lower level jobs whereas the expertise required for upper-level positions will require bringing in human capital from outside the township and most likely the community. In addition to these permanent positions it is expected that 356 temporary jobs will be created for each of the 4 excavation areas up to a year before they are fully operational (Altus Group, 2010).

7.2.4 Community

The farming community within Melancthon is deeply entrenched and the quarry issue has brought a divide amongst its members. The feelings gathered from the interviews conducted are that with the advancement of the project the cohesiveness of this community will be dissolved as pressures on existing farming practice are enhanced. In particular it was noted anecdotally that opposition to the Melancthon Quarry can affect the farmers' ties to the market and those actors in the market (suppliers, distributors, etc.) due to the power and leverage that Highland's subsidiary company, Downey Potato Farms, holds.

7.2.5 Municipal Revenue

While the majority of municipal revenue relating to the quarry can be seen as a social aspect as it will fund municipal services utilized by citizens, it is explained in detail in the seventh section below.

7.3 Political

The political ramifications of the Melancthon Quarry are the possible impact on the EA process, provincial priorities regarding farmland and aggregates, and setting precedent regarding the requirements for proposals. All three of these areas will be examined in detail below to describe their possible effects.

7.3.1 Environmental Assessment Process

As it stands currently, the application of an EA to the Melancthon Quarry could change the standards for future licensing applications regarding aggregate extraction across the province of

Ontario. Although this is the first and only instance, necessitating an EA for these types of large scale aggregate applications could become common practice dependent upon the information gathered and its impacts upon the Melancthon Quarry.

7.3.2 Provincial Priorities

The PPS regards aggregates as a high priority and although the protection of agriculture and agricultural land is also a priority, due to the growth of the province there is a demand for aggregates for construction at the cheapest cost possible and close to the GTA. This has created a situation where these two provincial priorities are often in conflict. If it is found that the loss of farmland associated with the Melancthon Quarry and its impact upon the agricultural industry within the province is too great, it would demonstrate that province is prioritizing the long-term protection of agriculture land over the short-term demand for aggregates. To achieve this, quarry opponents would have to successfully demonstrate that the permanent loss of farmland due to aggregate operation would have a significant negative effect on the local community and the province, which will be analyzed in a section below.

7.3.3 Precedent Setting

The acceptance of the Melancthon Quarry would rely upon accepting a dewatering system being applied to a scale larger than has been field tested with no guarantee that it would work appropriately (Genivar, 2011). The system in question has been used at the Dufferin Aggregates Milton Quarry but is a scale much smaller than what is being proposed at Melancthon Quarry (Genivar, 2011). Previously applications have been denied based upon dewatering systems not being field tested, the most recent example is the quarry proposed by St. Mary's Cement for Flamborough, Ontario (McGuinness, 2010). To accept a proposal that does not include a proven system for dewatering within the quarry would set a precedent for Ontario and endanger the rehabilitation of aggregate quarries. The precedence would be the acceptance of risking permanent loss of Class 1 farmland for short-term aggregate demand shown within the province.

7.3.4 North American Free Trade Association Law (NAFTA) Suit

There is the potential for a suit under NAFTA guidelines by Highland Company against the provincial government if the Melancthon Quarry application is denied. These political impacts are the most significant of all the impacts that could potentially result from the Melancthon Quarry. They are driven however by the economic costs and incentives that are described in detail in the following section. In NAFTA's Chapter 11 guidelines that deal specifically with investments within the trilateral

agreement, a foreign investor is permitted to sue for compensation if an opportunity for investment or profit is denied due to public policy or government action within the country of application (Government of Canada, 2003). The suit is against the federal government of the country in question and arbitration occurs between the investor and government body with an arbitrator assigned under NAFTA (Government of Canada, 2003). In relation to the Melancthon quarry application, if the outcome of the EA results in the application being denied then the federal government of Canada becomes vulnerable to a potential suit by Highland Companies under NAFTA (CBC, 2011). Similar situations include a $275 million dollar suit against the federal government of Canada by St. Mary's Cement for a denial of opportunity when a quarry application was withheld in Flamborough (CBC, 2011). The compensation sought is in relation to the size of the quarry therefore the potential for compensation within Melancthon would be significantly higher than that sought in the St. Mary's case (CBC, 2011).

8.0 Economic

The economic impact of the Melancthon Quarry involves both long-term and short-term benefits and drawbacks that are the source of the debate regarding the preservation of farmland and the aggregate industry.

8.1 Short Term Economic Impacts

As discussed in relation to social impacts, there will be the generation of approximately 465 permanent jobs once the quarry reaches maximum production and an additional 356 jobs during the construction phase of each one of the four excavation areas. In addition, the Aggregate Levy is required under the *ARA* and dictates that a total of 11.5 cents from every tonne of aggregate removed from the Melancthon quarry would be divided among the Township of Melancthon (6 cents), Dufferin County (1.5 cents), the provincial government (3.5 cents) and the fund for the Management of Abandoned Aggregate Properties (MAAP) program (Ministry of Natural Resources, 2010). In the case of the proposed Melancthon quarry, this tax would result in 60 million dollars for the Township and 15 million dollars to the County over the lifespan of the quarry if the expected output from the quarry is congruent with the Highland Company's estimates (Melancthonquarry.ca). The projected lifespan of the project is estimated from 50 to 100 years and based upon their expectations the quarry will yield approximately one billion tonnes at an expected rate of ten million tonnes per year. Based on these projections

Melancthon Township will receive approximately $600,000 dollars per year for the entire period and the county $150,000 per year.

In 2010, the Township recorded revenues of $2,513,503 dollars, and with the additional anticipated revenue from the quarry, the Township could expect its revenues to expand approximately 24 per cent (Township of Melancthon, 2010). The Highland Companies has proposed to increase the rate to the township from $0.06 to $0.50, which would represent five million dollars, nearly double the yearly revenue of the Township.

This structure of the Aggregate Levy creates influence for small townships to gain revenue that is exorbitantly higher than what can be gained through keeping the land under agricultural use. This creates the possibility for priorities to be shifted towards aggregate use in small townships where revenue sources are limited and services are poorly funded. This would be exacerbated if Highland's proposal to increase the fee eight times its original rate is accepted.

8.2 Long Term Economic Impacts

Due to depth of the quarry, there will be areas that have too high of a gradient to be adequately reclaimed for farmland use. Within the application, Highland states that 544 hectares of the 937 hectares quarry land will be rehabilitated back to agricultural use (www.melancthonquarry.ca). This means that at its maximum, only 58 per cent of the current output of the farmland could be reached. The true cost of the short-term quarry project is a permanent loss of 42 per cent of the class 1 agricultural land on the site. For the remaining 58 per cent to become viable, reclamation needs to take place over several years after quarry operations have ceased in order to develop the soil quality, meaning several years of inactivity on the land.

9.0 Rehabilitation

Rehabilitation is the treatment of land from which aggregates have been extracted to return this land to its former use or to change it into a use that is compatible with the surrounding land. Progressive rehabilitation refers to rehabilitation that is done sequentially during the period of the extraction of the aggregates. This reduces both the time and cost of the rehabilitation (MNR, 1984). It

has been noted that the rehabilitation effort will be faster if a balance of planting and adaptive management is achieved (Trimble & Siebert, 2002).

The largest concerns with extractive resources on agricultural land are: a) the loss of food production and b) the rehabilitation of the land after the extraction is complete. Considering that land that can be used for agriculture is a finite resource, these concerns are extremely legitimate. Rehabilitation practices and knowledge have advanced dramatically in recent years (Trimble & Siebert, 2002).

In 1985 the Ontario Ministry of Agriculture and Food undertook a study to evaluate the rehabilitation of sand and gravel pits and several lessons can be taken from this. The key to successful rehabilitation is thorough planning. As long as the proponent intends to rehabilitate the gravel pit to agricultural land, they can make appropriate decisions through the extraction program. The size and scope of this study was very small and focused on smaller pits than the proposed Melancthon Quarry (Mackintosh & Hoffman, 1985).

During the extraction of the resource, the proponent must follow several important steps as to ensure a successful rehabilitation back to agricultural land. Planning throughout the process is very important to understand the effects that the extraction will have on the future use of the land and this future use must be congruent with surrounding land. The topsoil, subsoil and overburden should be stripped and stored separately for future use. The pit must be re-graded consistently as to avoid compaction from heavy equipment driving on it throughout extraction and prevent surface water pooling. Post-rehabilitation management is equally as important and can include: applying fertilizer, picking stones, leveling and timing crop inputs. After rehabilitation the farmer can further undertake management practice to increase profitability depending on the crop of choice (Mackintosh & Hoffman, 1985). The rehabilitated land should be re-vegetated as soon as possible as to minimize the potential for wind erosion (Trimble & Siebert, 2002).

There are some associated problems with rehabilitation. Firstly, the soil structure is irrevocably changed and may result in soil compaction, which in turn results in drainage problems. Secondly, steep slopes that are unsuitable for agriculture take up large portions of the quarry sites. Thirdly, since the site is usually lower in topography than the surrounding land, water can flow into and pool in this lower

topography. This water can cause excessive moisture and bring water-borne contaminants into the sites. Lastly, overall effective rehabilitation is difficult to judge due to the varying nature of each individual site. Some practices worked at some sites when they were not effective at other sites (Mackintosh & Hoffman, 1985).

In the case of the Melancthon quarry, the proponent has prepared a site plan, agricultural impact assessment and rehabilitation report in part of their application to the ARA which they state:

> *"…However, given the ratio of width to depth (ranging from 36:1 to 10:1) and landscape position, general air flow and microclimatic conditions will not be significantly altered and the predicted conditions will not pose any significant limitations to production of crops common to the region. The physical characteristics of the site are well-suited to agricultural rehabilitation, and the availability of a wide range of technically feasible rehabilitation techniques ensures agronomic success."*

The Highland Companies state that this quarry will be progressively rehabilitated back to prime agricultural land despite it necessitating dewatering of 600 million litres of water daily (Melancthonquarry.ca). The Highland Companies further state that they will cause no negative impacts to the agricultural industry in Melancthon or the surrounding farming operations (S.E. Yundt Ltd, 2011). This is not taking into account the projected permanent loss of 42 per cent of the land due to gradation of the land within the quarry.

While reclamation will be progressive based upon the use of four phases within the site each year between active quarry use and active agricultural use, this represents an economic loss on prime agricultural farmland. In addition to this, an extensive and complex groundwater recharge system would need to be in operation permanently and consistently and working effectively. This is because the 58 per cent agricultural land that is expected to go through a reclamation process will be situated well below the surrounding ground level and therefore below the water table.

The uncertainty regarding the ability of the dewatering system to work effectively on such a large scale means that this quarry can be seen to have a smaller success rate for rehabilitation than other similar operations in Ontario. On average, these operations were at best seen to make use of 62 per cent of agricultural land (Binstock and Carter-Whitney, 2011). There has been no conclusive

evidence that reclamation processes in Ontario can restore land to its pre-quarry Canada Land Inventory class which in the case of the Melancthon Quarry is Class 1 (Binstock and Carter-Whitney, 2011).

A study conducted in Oregon, where there are similarities between the demand for locally sourced aggregates and a priority on protecting farmland exists as in Ontario, shows an increasing demand for aggregates will increase the pressure to develop farmland for aggregate extraction (Jaeger, 2005). If farmland is prioritized first to be protected, there will be an increase in distance travelled in order to transport aggregates and therefore the cost of aggregates will increase as the distance increases. However, the net benefit of the protected farmland will not increase significantly due to the availability through global markets for food while aggregates, due to their prohibitive costs, require a local market. As such, as the cost of aggregate increases, there will be an increase in pressure to develop all types of farmland.

10.0 Conclusion

The immediate and permanent loss of 42 per cent of the prime agricultural land on the Melancthon Quarry application site represents a significant impact to agriculture within Ontario. The approval of the quarry would set a precedent, by nature of its scale and impact, for future applications regarding aggregate extraction on agricultural farmland. In addition, the potential hydrological and agricultural impacts to areas adjacent to or near the quarry from pumping water into groundwater aquifers remains largely unknown. The lack of information regarding technologically proven and viable rehabilitation plans suggests that the amount of land that can be rehabilitated is not as high as the stated 58 per cent. Based upon these findings, the approval of the Melancthon Quarry application would reinforce the priorities of the provincial government in Ontario, with respect to aggregate, while jeopardizing the remaining finite, prime agricultural farmland in Ontario.

The EA will provide an opportunity for OFA to more fully participate in the approval process of this quarry. While it is unlikely the quarry will not receive approval under the EA, the EA process could substantially change the scope and magnitude of the project, depending on the issues brought forward. The OFA should strive to fully participate in every public consultation opportunity and have a clear message and recommendations. Given the policy context within Ontario, there is the potential that the quarry might be approved in some form. Should this occur, it would become imperative for stakeholders to advocate for certain conditions to be included, legally, to help limit the impact of the Melancthon

Quarry on agricultural land but also to ensure their future enforcement.

Biggest issues for OFA should be the loss of excellent potato growing land to an aggregate quarry; while there are plans to rehabilitation back to agriculture it is unlikely this will the same quality of land as it was before.

11.0 Recommendations

Based upon the conclusions reached within this report the following recommendations should be considered by the OFA as strategies not only in relation to the Melancthon Quarry but to preserve agricultural land in Ontario:

- Advocate for the protection of agricultural farmland to take priority over aggregate extraction through *direct* reference or mention in the PPS.
    - This can occur during the currently ongoing PPS review. Use this Quarry as an example to highlight the conflicting priorities.
- Work collaboratively with the OMAFRA to ensure that the site is property reviewed from an agricultural perspective.
- Advocate for rehabilitation plans to be identifiable and explained in full and include only proven measures.
- Request an increase in the Aggregate Levy and advocate for these funds to be directly linked to the rehabilitation of agricultural land.
- Create a broad-based public relations strategy to highlight the potential impacts of the quarry on agricultural land.
- Participate fully in the EA process in order to highlight the unique nature of the region and reduce any potential negative impacts to the local and provincial agricultural communities.

Appendix A

TERMS OF REFERENCE:
Client: Ontario Federation of Agriculture (OFA)
Project: Assessing the impact of the Melancthon Aggregate Quarry Project
University of Guelph student project for: RPD 6280 – Advanced Planning Practice

BACKGROUND:
A group of US investors, forming the Highland Companies, have purchased over 2500 acres of "prime" farmland, consisting of honeywood silt loam soil or Class 1 land in Melanchthon Township (Dufferin County). They make up the proponents of a proposal that would create the largest aggregate quarry in Ontario. Melancthon Township is home to the largest deposit of amabel dolostone (limestone) in the province of Ontario. The proposed the quarry would span 2300 acres with an excavation area of 1890 acres – the largest of its kind in Ontario. Aggregates are identified as a provincial priority and are governed by the Provincial Policy Statement (2005). However, due to the scale of the project, there has been tremendous public interest in the quarry. The Ministry of the Environment has made this project subject to an Environmental Assessment (EA).

The Ontario Federation of Agriculture (OFA) is a membership-based non-profit organization representing over 37,000 farmers in the province. The OFA will be forming a policy position on the quarry and will be participating in the EA process (e.g., providing comments during public consultation). To prepare for this process, the OFA would like to gain a better understanding of the social, economic and environmental impacts of the quarry on its membership and the general rural community.

OBJECTIVES:
These Terms of Reference (TOR) outline the relationship between a group of graduate students enrolled in RPD 6280 (Advanced Planning Practice) at the University of Guelph and the Ontario Federation of Agriculture. The students will work collaboratively with OFA and its members to:

- Research the environmental, social and economic impact of the quarry on OFA members and provide background research and interview findings to the OFA Board of Directors.
- Meet the objectives of RPD 6280.

METHODOLOGY:
To meet the research objectives listed above, students will undertake the following process:

1. Provide background on the current provincial policies impacting the proposed quarry in Melanchon Township.
2. Conduct background research, and where appropriate, key informant interviews with the following stakeholder groups:
    a. OFA Dufferin Federation
    b. NGOs/Environment groups
    c. Aggregate sector
3. Examine other cases of large-scale quarries in both Ontario and across Canada/US and assess their impact on agricultural land, farming and rehabilitation.

DELIVERABLES:

- A final report that summarizes background research and interview findings.
- Present report to the OFA board of directors.

RESOURCES:

- University of Guelph students will provide the resources to complete the project including computers and research materials to write the report.
- The OFA will provide relevant information such as policies and member information relevant to the project

TIMELINE:

- January: Group meeting with the OFA and review of their current policies
- February: Meet with Dufferin Federation and tour sites
- February: Key informant interviews, building inventory and literature review
- March: Review and analysis of findings
- April: Presentation of final paper at OFA Board of Directors and Dufferin County Federation of Agriculture.

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