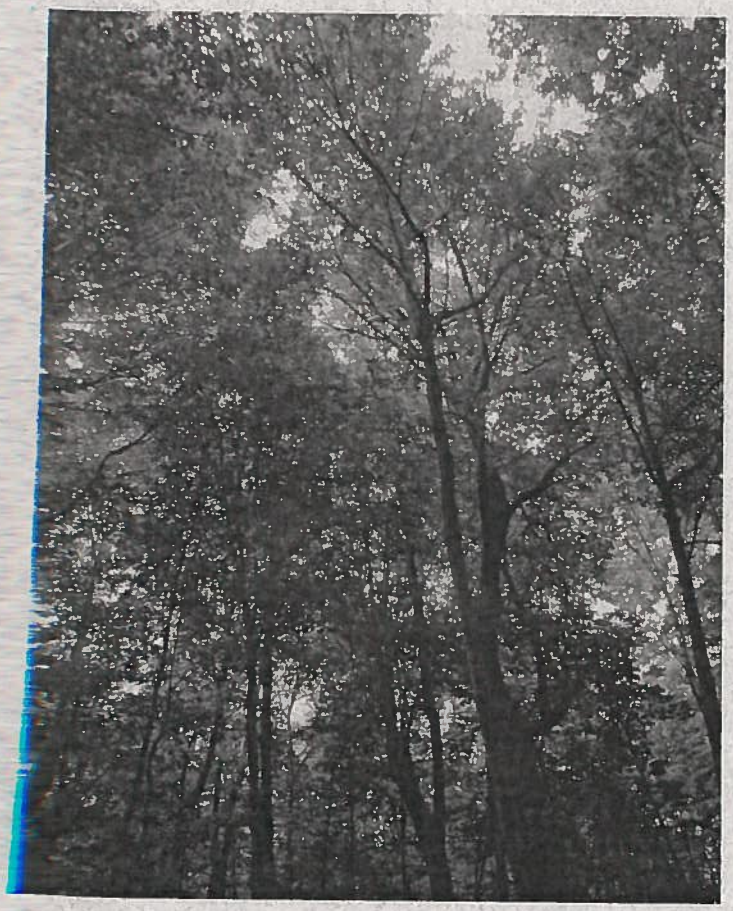

ENVIRONMENTAL IMPACT STUDY

GRANITE RIDGE
SUBDIVISION PHASE 2
TOWNSHIP OF
GALWAY-CAVENDISH & HARVEY

CONSULTING ENGINEERS AND PLANNERS

Skelton Brumwell
& ASSOCIATES INC.

er 2012

ENVIRONMENTAL IMPACT STUDY

GRANITE RIDGE SUBDIVISION PHASE 2
TOWNSHIP OF GALWAY-CAVENDISH & HARVEY

P/N 09-2361

October 2012

Prepared by: Skelton, Brumwell & Associates Inc.
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Prepared for: 1447147 Ontario Inc. - Jeff Chesher

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ENVIRONMENTAL IMPACT STUDY
GRANITE RIDGE SUBDIVISION PHASE 2
TOWNSHIP OF GALWAY-CAVENDISH & HARVEY

P/N 09-2361 October 2012

1.0 INTRODUCTION

1447147 Ontario Inc., Mr. Jeff Chesher, is the owner of 18.8 hectares of land as shown on Figure 1 – Location. The property, which comprises part of Lots 8 and 9, Concession 9 in the geographic Township of Harvey, was a gravel pit for many years. The owner's objective is to redevelop these lands as Phase 2 of his Granite Ridge Subdivision including 32 lots for single detached homes around an existing pond.

An Environmental Impact Study is required for applications for amendments to the Official Plan and Zoning By-law, and a Draft Plan of Subdivision.

Skelton Brumwell was retained to complete the Environmental Impact Study to assess the presence of natural heritage features and potential impacts of development, and make recommendations for mitigation measures required within the property as a result of the proposed development.

The site is currently vacant. Adjacent land uses include single detached residential to the north in Phase 1 of Granite Ridge, and to the south and east fronting on Adam and Eve Road.

In this report, the entire property will be referred to as the "subject property". The proposed development is shown on Figure 2.

2.0 PLANNING BACKGROUND

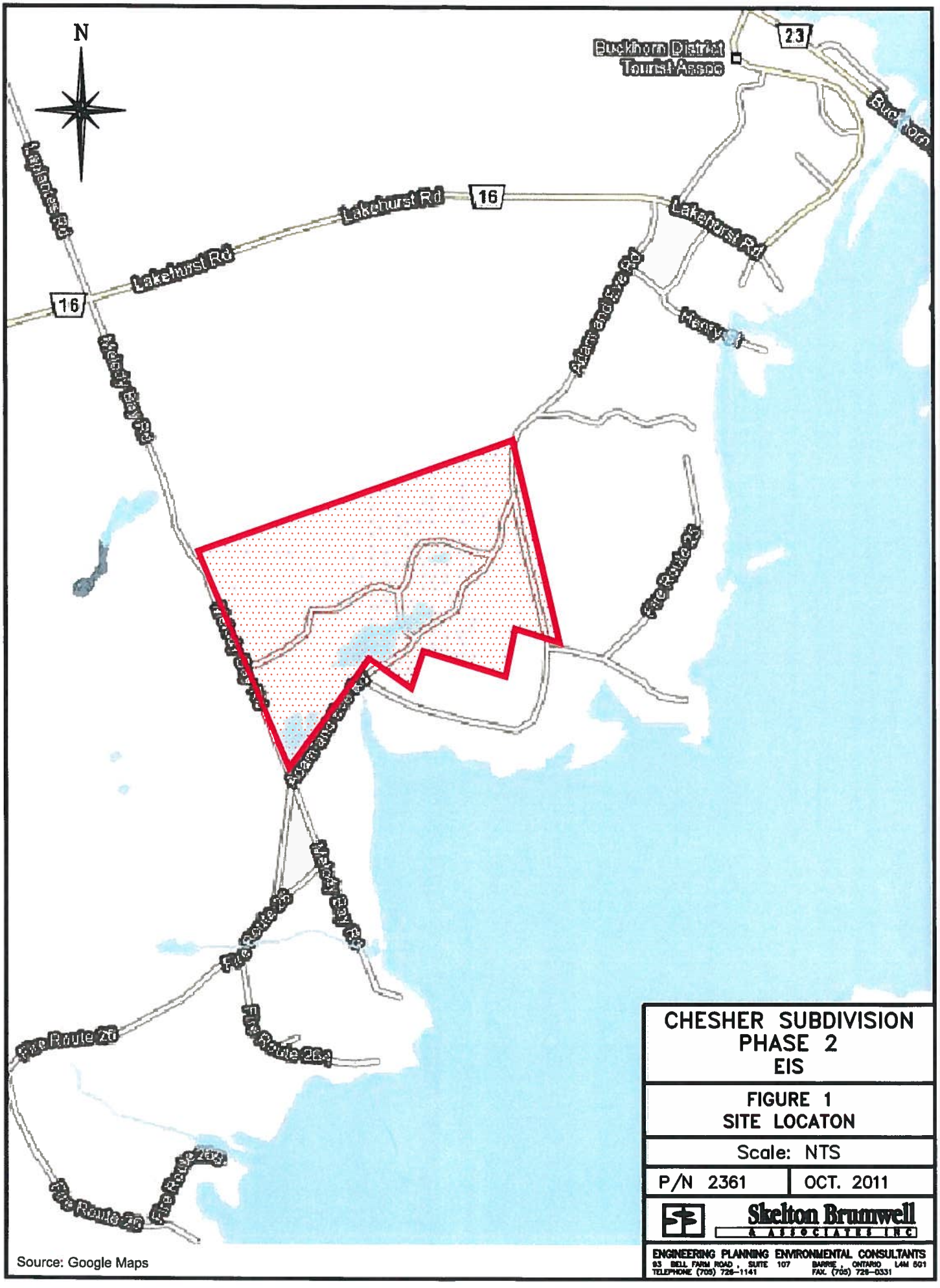
2.1 Township of Galway-Cavendish & Harvey

The subject lands are designated "Rural" in the Township of Galway-Cavendish and Harvey Official Plan. Redesignation to the Hamlet Residential designation is required to permit the proposed development.

Section 5.9.8.1 of the Official Plan outlines the requirements for an Environmental Impact Study which are reflected in this report.

2.2 Township of Galway-Cavendish and Harvey Zoning By-law

The subject lands are zoned R - Rural on Schedule H-040 of Township Zoning By-law B2000-73. The property is to be rezoned to the CR – Community Residential Zone to permit and regulated the residential subdivision use.



CHESHER SUBDIVISION PHASE 2 EIS

FIGURE 1 SITE LOCATON

Scale: NTS

P/N 2361 | OCT. 2011

Skelton Brumwell & Associates Inc
ENGINEERING PLANNING ENVIRONMENTAL CONSULTANTS
93 BELL FARM ROAD, SUITE 107, BARRIE, ONTARIO L4M 5G1
TELEPHONE (705) 726-1141 FAX (705) 726-0331

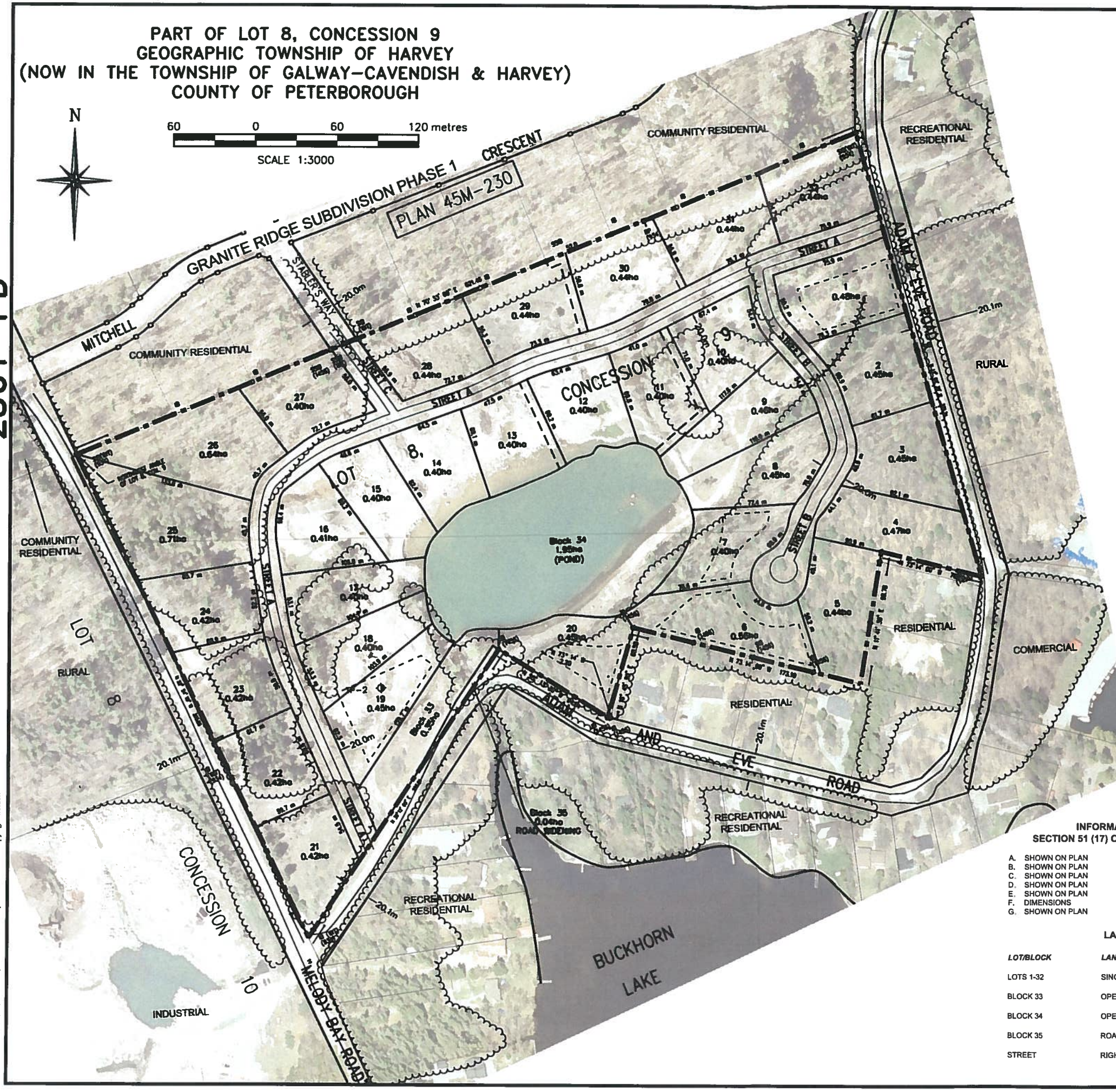
PART OF LOT 8, CONCESSION 9
GEOGRAPHIC TOWNSHIP OF HARVEY
(NOW IN THE TOWNSHIP OF GALWAY–CAVENDISH & HARVEY)
COUNTY OF PETERBOROUGH

2361–PD

N

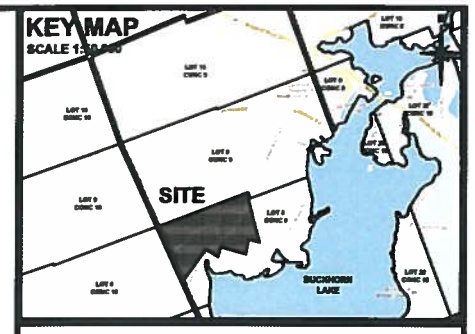
60 0 60 120 metres

SCALE 1:3000



KEY MAP

SCALE 1:50,000



LEGEND

- PROPERTY BOUNDARY
- PROPOSED LOTS
- EXISTING LOTS
- PROPOSED R.O.W.
- EXISTING R.O.W.
- EXISTING ROAD
- PROPOSED EASEMENT
- WATERS EDGE
- BUILDING ENVELOPE
- TREE LINE

SCHEDULE OF REVISIONS

NO.	DATE	DESCRIPTION	CHECKED

INFORMATION REQUIRED UNDER SECTION 51 (17) OF THE PLANNING ACT, R.S.O. 1990

A. SHOWN ON PLAN
B. SHOWN ON PLAN
C. SHOWN ON PLAN
D. SHOWN ON PLAN
E. SHOWN ON PLAN
F. DIMENSIONS
G. SHOWN ON PLAN
H. PRIVATE WELL WATER SUPPLY
I. SAND AND GRAVEL OVER ROCK
J. SHOWN ON PLAN
K. ROADS, ELECTRICAL POWER, AND PROTECTION SERVICES
L. SHOWN ON PLAN

LAND USE SUMMARY

LOT/BLOCK	*LAND USE*	*AREA*
LOTS 1-32	SINGLE DETACHED DWELLING	14.30 ha
BLOCK 33	OPEN SPACE (POND)	0.35 ha
BLOCK 34	OPEN SPACE	1.95 ha
BLOCK 35	ROAD WIDENING	0.04 ha
STREET	RIGHT OF WAY	2.25 ha
	TOTAL	18.89 ha

GRANITE RIDGE PHASE 2 EIS

FIGURE 2 PROPOSED DEVELOPMENT

PROJECT NO. 09–2361 | DRWG NO. 2361–PD

DATE OCTOBER 2011 | SCALE: 1:3000

DRAWN: CAP | CHECKED: | APPROVED:

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TOLL FREE (877) 726–1141

2.3 Provincial Policy Statement (PPS)

The PPS states in Section 2.1, Natural Heritage, that development and site alteration is not permitted in:

- significant wetlands in Ecoregions 5E, 6E and 7E;
- significant habitat of endangered species and threatened species; and

Development and site alteration shall not be permitted in:

- significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E;
- significant woodlands south and east of the Canadian Shield;
- significant valleylands south and east of the Canadian Shield;
- significant wildlife habitat; and
- significant areas of natural and scientific interest,

unless it can be demonstrated that there will be no negative impacts on those features or their functions.

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

Development and site alteration is also not permitted on adjacent lands to the natural heritage features listed above unless the ecological functions of the adjacent lands has been evaluated and it can be proven that there will be no negative impacts on the natural features or their functions.

3.0 METHODS

3.1 Background Research

A review of existing background information was completed to identify natural heritage features and functions previously identified on/or adjacent to the subject property and to aid in scoping field investigations. These documents included:

- the Ministry of Natural Resource's (MNR) Natural Heritage Information Centre (NHIC);
- Township of Galway-Cavendish & Harvey Official Plan; and
- Spring 2008 orthophotography.

3.2 Field Investigations

3.2.1 Vegetation

Vegetation communities were identified using the Ecological Land Classification (ELC) for Southern Ontario, First Approximation (Lee et al., 1998). Polygons were delineated using aerial photography, field sampled and classified into the most appropriate vegetation type. The polygons were identified based on vegetative cover, soils and landscape features.

The significance of the vegetation communities was assessed based on the Natural Heritage Information Centre's (NHIC) rankings where applicable.

Vascular plant surveys were completed on the subject property on June 7 and July 21, 2010 during the spring and summer which provided a good indication of the variation of flora across the growing seasons. Particular attention was paid during field investigations for rare species, and species at risk listed in the Endangered Species Act (2007).

The significance of vascular plants sampled was assessed based on the Natural Heritage Information Centre's (NHIC) rankings.

3.2.2 Wildlife

Two breeding bird surveys were completed on June 7 and June 30-2010 on the subject property using protocols in the Forest Bird Monitoring Program (Environment Canada 2004), which were adapted for use in this relatively small site. All birds observed on site, suitable for that habitat, were assumed to be breeding on the property.

Incidental observations were also made for mammals, amphibians and reptiles during field investigations through observation of physical evidence (scats, tracks) for mammals and shelter or feeding sites (e.g. beneath logs, rocks, etc.) for amphibian and reptile species.

3.2.3 Aquatic Features

A pond, which is the result of extraction below the water table as part of the previous extraction (gravel pit) operation, is present and drains to Buckhorn Lake. General observations were made for potential impacts or remedial measures associated with the proposed development.

During field investigations, observations were made for un-mapped watercourses, wetlands, groundwater discharge areas, and areas of vernal pooling.

4.0 NATURAL ENVIRONMENT

4.1 NHIC Query

A geographic query was performed on NHIC database for squares intersecting the subject property to a radius of approximately 2 km. There were no records identified during this search for endangered or threatened species, rare species or ANSI's.

4.2 Vegetation

4.2.1 Vegetation Communities

Vegetation communities were identified within the study area using ELC to the Vegetation Type shown on Figure 3 and Photo Page 1. Detailed descriptions of communities are included below.

FOD5-1: Dry-Fresh Sugar Maple Deciduous Forest Type

Dominant cover is mature hard maple (*Acer saccharum*) with associates including ironwood (*Ostrya virginiana*), red maple (*Acer rubrum*), large-toothed aspen (*Populus grandidentata*) and the occasional white pine (*Pinus strobus*). Understory and shrub cover is hard maple, ironwood and round-leaved dogwood (*Cornus rugosa*). Groundcover included Canada mayflower (*Maianthemum canadense*), bracken fern (*Pteridium aquilinum*), and rosy-twisted stalk (*Streptopus roseus*).

The NHIC identifies this vegetation community as common to Ontario (S5), and no significant features were identified.

FOM2-1: Dry-Fresh White Pine- Oak Mixed Forest Type

These woodlands exist on thin soil over granite bedrock with a dominant cover of red oak (*Quercus rubra*) and white pine. Associates include bur oak (*Quercus macrocarpa*), hard maple and ironwood. Understory and shrub cover is a mix of ironwood, basswood, hard maple, red oak saplings and round-leaved dogwood. Ground cover includes common juniper *(Juniperus communis)*, rosy twisted stalk, Canada mayflower, bracken fern, partridgeberry (*Mitchella repens*) and wild sarsaprillia (*Aralia nudicaulis*).

The NHIC identifies this vegetation community as common to Ontario (S5), and no significant features were identified.

FOD3-1: Dry-Fresh Poplar Deciduous Forest Type

Dominant cover is large-toothed aspen, trembling aspen (*Populus tremuloides*) with associates of scots pine (*Pinus sylvestris*), white ash (*Fraxinus americanus*), eastern white cedar (*Thuja occidentalis*) and hard maple. Understory and shrub cover is poplar, round-leaved dogwood, eastern hemlock and hobblebush (*Viburnum lantanoides*). Groundcover included Canada mayflower, bracken fern, large-leaved aster (*Eurybia macrophylla*), poison ivy (*Toxicodendron radicans)*, and wild sarsaprillia.

The NHIC identifies this vegetation community as common to Ontario (S5), and no significant features were identified.

N

DIST

DIST

FOD5-1

FOM2-1

FOC4-1

POND

FOD3-1

OUTLET

DIST

Source: MMAP by First Base Solutions

GRANITE RIDGE PHASE 2
EIS

FIGURE 3
ECOLOGICAL LAND CLASSIFICATION

Scale 1:3000

P/N 2361 | OCT. 2011

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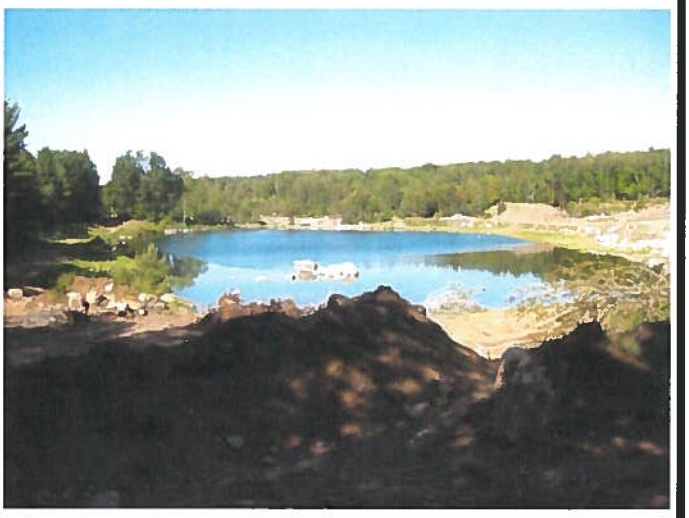
FOD5-1: Dry-Fresh Sugar Maple Deciduous Forest Type

FOD3-1: Dry-Fresh Poplar Deciduous Forest Type

FOC4-1: Fresh-Moist White Cedar Coniferous Forest Type



Pond

Example of Disturbed Area

SOURCE: Site photos taken by Kyle Fleming (SBA).

Chesher Subdivision
Phase 2
EIS

Photo Page 1

P/N 2361	October 2011

Skelton Brumwell & Associates Inc.
ENGINEERING PLANNING ENVIRONMENTAL CONSULTANTS
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FOC4-1: Fresh-Moist White Cedar Coniferous Forest Type

Dominant cover is eastern white cedar with associates of trembling and large-toothed aspen, hard maple and white birch (*Betula papyrifera*). Understory and shrub cover is sparse, with eastern hemlock, green ash (*Fraxinus pennsylvanica*) and cedar. Groundcover included common helleborine (*Epipactis helleborine*), white trillium (*Trillium grandiflorum*) and spinulose wood fern (*Dryopteris carthusiana*).

The NHIC identifies this vegetation community as common to Ontario (S5), and no significant features were identified.

DIST: Disturbed

Disturbed areas on the property were not classified. They are the result of previous aggregate extraction (gravel pit) and during site visits disturbed areas were being utilized. Small areas of natural succession/regeneration have occurred, resulting in small communities of poplar woodland, cultural staghorn sumac (*Rhus typhina*) thickets and old field cultural meadow.

Along the existing groundwater fed pond, wetland and shoreline vegetation has become established with species such as cattail (*Typha latifolia*), scouring rush (*Equisetum hymale*), fowl mana grass (*Glyceria striata*), hard-stemmed bulrush (*Scirpus acutus*) and species of willow (*Salix* sp.). This vegetation is sporadic along the shoreline and may become more prevalent once site alterations are complete along the edge of the pond.

4.2.2 Vascular Plants

4.2.2.1 Field Investigation

A total of 95 plant species were identified within mainly undisturbed areas of the property.

Three butternut (*Juglans cinerea*) trees were found within vegetation community FOD3-1 during summer field visits. These butternut trees were assessed using standard protocols established by the MNR under Endangered Species Act (2007). The trees were found to be "non-retainable" and correspondence was subsequently sent to the MNR District Species at Risk Biologist informing them of the results of the assessment. No audit was performed by the MNR, therefore the butternut are no longer protected under the Endangered Species Act (2007). They can be removed or development can occur within their habitat. A copy of the letter sent to the MNR is included as Appendix D.

All other species detected on the property are common to habitats found in Ontario. No species of concern, threatened or endangered species found.

A list of vascular plants and their status in Ontario observed during the field investigations is included in Appendix B.

4.3 Wildlife

4.3.1 Field Investigations

In total, 19 bird species were detected during surveys within the subject property and immediate adjacent lands. A list of birds found on the site is provided in Appendix C.

There were no observations of endangered, threatened or species of concern made during site visits. Species observed are common in Ontario.

4.4 Aquatic Features

Seepage and channelled runoff was observed within the northwest corner of the property (vegetation community FOC4-1) from overland flow originating north of the property and from open ditches along Melody Bay Road. This drainage generally infiltrates into underlying soils or is captured on site within existing roadsides ditches or ponding areas on site.

An existing groundwater fed pond is present near the centre of the site (see Figure 2 & 3). This pond is the result of extraction below the water table during previous use of the site as a gravel pit. The pond drains through a drainage channel (see Photo Page 1) to a culvert which crosses Adam and Eve Road and then outlets to Buckhorn Lake.

No other aquatic features, such as wetlands or groundwater discharges were observed during field investigations within the subject property.

4.5 Natural Heritage Analysis

One natural heritage feature, contribution to fish habitat, has been identified based on field investigations.

An impact assessment and development recommendations for the proposed development relative to contributions to fish habitat are provided in Section 5.0.

5.0 IMPACT ASSESSMENT & DEVELOPMENT RECOMMENDATIONS

5.1 Proposed Development

As discussed, a 32-lot subdivision is planned for the site which will incorporate the existing pond as a feature in the development. The site will be accessed by the subdivision to the north and two entrances from Adam and Eve Road. The proposed draft plan of subdivision is shown on Figure 2.

5.2 Potential Impacts

Potential impacts as a result of development on contribution to fish habitat include:

- Sedimentation and contamination due to construction activities; and
- Contamination from on-site activities of future residents.

5.3 Mitigation Measures and Development Recommendations

The proposed zone CR- Community Residential requires a 21.5 metre setback from any waterbody. This setback should be sufficient to provide protection for the pond as it relates to contribution to fish habitat from the pond.

A minimum 5-metre undisturbed vegetated buffer is further recommended within the 21.5 metre setback at the rear of any proposed lot abutting the pond. This buffer will act as a filter strip to filter overland flow from the residential property and provide a natural vegetated buffer for the protection of water quality entering Lake Buckhorn. There should be no disturbance of this buffer except for construction of a single porous path/walkway to the shore.

Where the 5-metre buffer has been cleared or disturbed, the buffer should be reinstated with native species endemic to the area. This should be in the form of grassed/herbaceous cover.

A Preliminary Stormwater Management Report (SBA 2011) has been prepared for the proposed development. This report outlines stormwater quality and quantity controls during construction and post development. Recommendations from this report include sediment and erosion controls during construction and the installation of a rock check dam at the outlet of the pond.

It is recommended that the outlet channel to the culvert crossing Adam & Eve Road be re-vegetated with native tree and shrub species to aid in shading discharged water and stabilize the banks of the outlet channel.

These recommendations provide protection of water contributing to Buckhorn Lake. No further recommendations regarding these items are warranted.

6.0 CONCLUSIONS

Skelton, Brumwell & Associates Inc. was retained by 1447147 Ontario Inc. to prepare this Environmental Impact Study to assess potential impacts to natural heritage features within the property and adjacent lands as a result of the proposed subdivision.

Only one natural heritage feature, contribution to fish habitat, was identified within the property. Clearing of trees in existing vegetation communities, will involve species that are common in the area and the province.

The following recommendations provided are intended to identify development standards for proposed new dwellings and to address potential impacts as a result of development.

1. Removal of trees for subdivision development should be minimized to the extent possible.

2. A 5-metre undisturbed vegetated buffer is recommended at the rear of any proposed lot abutting the pond. No structures, grading or other development will occur within the vegetated buffer with the exception of one permeable surface walkway.

3. Where the 5-metre buffer has been cleared and/or disturbed, it is to be planted with grassed/herbaceous cover containing native species endemic to the area.

4. The outlet channel from the pond to the culvert crossing Adam & Eve Road is to be rehabilitated with native shrub and tree species.

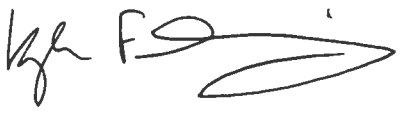
5. The recommendations of the Preliminary Stormwater Report are to be implemented.

Provided that development occurs in accordance with these recommendations, there are no anticipated negative impacts to contributions to fish habitat within Lake Buckhorn.

All of which is respectfully submitted,

SKELTON, BRUMWELL & ASSOCIATES INC.

per:



Kyle Fleming, BSc (Wildlife)
Ecologist

REFERENCES

Government of Ontario. 2005. Provincial Policy Statement. Queen's Printer for Ontario. ISBN 0-7794-7484-8.

Lee, H. T., W.D. Bakowsky, J. Riley, J. Bowles, Mr. Puddister, P. Uhlig and S. McMurray. 1998. Ecological Land Classification for Southern Ontario: First Approximation and Its Application. Ontario Ministry of Natural Resources, Southern Section, Science Development and Transfer Branch. SCSS Field Guide FG-02.

Ministry of Natural Resources- Natural Heritage Information Centre (NHIC) Database. 2005. Provincial Status of Plants, Wildlife and Vegetation Communities Database. Ministry of Natural Resources, Peterborough.

Newmaster, S.G., A. Lehela, P.W.C. Uhlig, S. McMurray and M.J. Oldham. 1998. Ontario Plant List.

Skelton, Brumwell & Associates (SBA). 2011. Preliminary Stormwater Management Report. Chesher Subdivision- Phase 2. 12p. + appendices.

APPENDIX A

CV of Kyle Fleming

Skelton Brumwell & Associates Inc.

ENGINEERING PLANNING ENVIRONMENTAL CONSULTANTS

Kyle Fleming, B.Sc. (Wildlife), Dip. Fish and Wildlife Tech.
Ecologist

EDUCATION

Bachelor of Science in Wildlife Biology (2002)
University of Northern British Columbia

Diploma in Fish and Wildlife Technology (1998)
Sir Sandford Fleming College

PROFESSIONAL BACKGROUND

Skelton Brumwell & Associates Inc. (Barrie, ON)
Ecologist- May 2004-present

Kyle has over 10 years experience conducting field inventories of flora and fauna in wetland and terrestrial environments and identifying natural heritage features and functions. He is a Qualified Wetland Evaluator by the MNR, is trained and experienced in the use of Ecological Land Classification (ELC), and has been qualified as an expert at the Ontario Municipal Board.

Kyle has completed studies throughout Central and Southern Ontario, and the United States; including projects on the Oak Ridges Moraine, Niagara Escarpment, for Species at Risk and within Provincially Significant Wetlands. His work is readily accepted by municipalities and conservation authorities, and he is very familiar with their requirements and procedures. He is also well versed in municipal, provincial and federal policies and legislation.

Hamer Environmental L.P. (Mt. Vernon, WA, USA)
Project Supervisor/Field Biologist- April-August 2003
Responsible for supervising and managing a threatened seabird monitoring project on state lands.

Aqua Terre Solutions Inc. (Toronto, ON)
Environmental Technician- November-January 2002-2003.

Hamer Environmental L.P. (Mt. Vernon, WA, USA)
Field Biologist- April-August 2002.
Conducted threatened seabird surveys on state lands to determine presence/absence relative to forestry activities.

University of Washington (Seattle, WA., USA)
Field Technician- June-August 2001.
Research project on nest predation of threatened seabirds and impacts of forestry practices on nesting sites.

City of Barrie, Environmental Services. (Barrie, ON)
Junior Environmental Officer- May-August 2000.
Water sampling, investigations of pollution concerns and public consultation.

Kyle Fleming, B.Sc. (Wildlife), Dip. Fish and Wildlife Tech.
Ecologist

CERTIFICATIONS

Ontario Wetland Evaluation Training Course, 2004.

Ecological Land Classification for Southern Ontario Training Course, 2005.

Ministry of Natural Resources (MNR) Butternut Assessment Course, 2009.

OPPI- The Planner at the Ontario Municipal Board Seminar, 2006

KEY PROJECTS (AGGREGATES)

Miller Paving Ltd.- Natural Environment Report (NER) Level I & II (Township of Minden Hills)

NER was prepared in accordance with the Aggregate Resources Act (ARA) for a wayside quarry adjacent to an existing licensed pit. Natural heritage features included Provincially Significant Wetlands (PSW), Significant Wildlife Habitat and Significant Woodlands. Mitigation measures were recommended to avoid impacts to these features and their related ecological functions.

Robinson-Kovacs Pit- Natural Heritage Evaluation (Oak Ridges Moraine)

A natural heritage evaluation was prepared in accordance with the Oak Ridges Moraine Conservation Plan for an amendment to the Site Plan of an existing gravel pit.

Miller Paving Ltd.- Natural Environment Report Level I & II (Township of McNab-Braeside)

NER completed in support of major site plan amendment for expansion of quarry under ARA. Significant Wildlife Habitat was identified which included provincially rare plant species, amphibian woodland ponds, area sensitive bird habitat and deer wintering habitat.

Earth Resources Ltd.- Natural Environment Report Level I & II (Township of Galway-Harvey- Cavendish)

NER completed in support of new aggregate pit within Crown Land permit. Significant Wildlife Habitat (Great Blue Heron nesting site) and significant wetlands were identified and mitigation measures recommended for their protection.

Kyle Fleming, B.Sc. (Wildlife), Dip. Fish and Wildlife Tech.
Ecologist

KEY PROJECTS (AGGREGATES) cont'd.

Universal Sand & Gravel- Natural Environment Report Level I & II (Township of Garafraxa)

Natural Environment Report completed in support of a major site plan amendment for a small woodlot which had remain undisturbed. Field investigations were focused on this woodlot and identified butternut trees. The butternut trees were assessed using standard protocols.

Hillway Equipment Ltd- Butternut Assessment (Township of Oro Medonte)

An assessment was completed to Ministry of Natural Resource' standards for endangered butternut trees found within an existing pit.

Miller Paving Ltd.- Species at Risk Assessment (All of Ontario)

A species at risk assessment was completed for 64 aggregate properties in Ontario to determine potential for habitat of endangered or threatened species listed in the *Endangered Species Act* (2007). An exemption agreement with the MNR was completed each site identified as having potential habitat. These agreements included conducting surveys for species, exclusion fencing, timing of certain operations and training of site staff.

Earth Resources Ltd.- Natural Environment Report Level I & II (Township of Galway-Harvey- Cavendish)

A Natural Environment Report was completed for a proposed limestone quarry on 246 acres. Consultation with the Ministry of Natural Resources, field investigations and analysis identified the potential for habitat of a threatened species and significant wildlife habitat. Mitigation measures were recommended to ensure no negative impacts which included unique progressive and final rehabilitation requirements.

KEY PROJECTS (URBAN AND RURAL DEVELOPMENT)

Environmental Impact Study (EIS)- Rural Severances (Township of Oro- Medonte)

An EIS was prepared as part of a rezoning and official plan amendment to sever seven residential lots. Fieldwork identified the presence of Significant Wildlife Habitat (Species of Conservation Concern) within the property. Habitat was delineated and avoided as part of the conditions of the severance.

EIS- Rural Severance (Township of Clearview)

As part of a condition for severance of a large rural lot, an EIS was prepared. The EIS identified wildlife corridors functions, area sensitive habitat and locally significant wetland.

Kyle Fleming, B.Sc. (Wildlife), Dip. Fish and Wildlife Tech.
Ecologist

KEY PROJECTS (URBAN AND RURAL DEVELOPMENT) cont'd.

EIS- Rezoning (Township of Essa)

An EIS was prepared as part of an application for rezoning of a rural residential property to institutional use (church). Wetlands, significant woodlands and a cold-water stream were identified and setbacks established for protection of these features.

EIS- Building Permit (Township of Oro-Medonte)

In conjunction with the landowner and NVCA, development of a rural property was completed to avoid any impacts to significant woodlands and the habitat of endangered species.

Rare Species Surveys- Southshore Woods (Town of Innisfil)

Rare species surveys were conducted as part of Site Plan Control for 3 residential lots in the Town of Innisfil. The purpose of the surveys was to locate any populations of these rare species and avoid any impacts through proper placement of buildings and associated services.

Environmental Review Update and Tree Preservation Plan- Subdivision (Township of Severn)

An update to a previously completed Review for a residential subdivision along the Severn River was completed as part of Draft Plan conditions. Mitigation measures were recommended to avoid impacts to sensitive habitat. In addition, a tree preservation plan was developed to retain portions of wildlife habitat on the property and the rural aesthetics of the area.

Scoped EIS and Wetland Delineation- Skyline Development Inc. (Township of Tay)

Skelton Brumwell assisted with the completion of a Scoped EIS as required for clearance of Draft Plan conditions for waterfront redevelopment in the Town of Port McNicoll. Further to this work, SBA also assisted with the development of a Shoreline Buffer & Management Plan and completed wetland delineation of Provincially Significant Coastal Wetlands to the satisfaction of the Ministry of Natural Resources.

Natural Heritage Evaluation- Lakeridge Ski Resort (Town of Uxbridge and the Oak Ridges Moraine)

Required as part of rezoning application to permit four-season recreation use, a Natural Heritage Evaluation was completed per policies of the Official Plan and Oak Ridges Moraine Conservation Plan. The Evaluation was scoped to areas of new recreation uses.

Kyle Fleming, B.Sc. (Wildlife), Dip. Fish and Wildlife Tech.
Ecologist

KEY PROJECTS (URBAN AND RURAL DEVELOPMENT) cont'd.

Preliminary Species at Risk Assessment- Rural Development (District of Muskoka)

Due to the potential presence of the habitat of a threatened species, a Preliminary Species at Risk Assessment was completed for four rural severances. Potential habitat was identified and setbacks recommended for its protection.

EIS Update- Senior's Centre (Township of Severn)

Prior to final development of a site plan for a senior's centre in the town of Severn Falls, an update to a previously completed EIS was required. The EIS update found the presence of a threatened species. The habitat of this species was delineated and all development was located outside this area. Further mitigation measures were recommended to ensure no impacts to this species.

Environmental Evaluation- Shoreline Residential Severances (Township of Georgian Bay)

An evaluation was completed in support of an application to sever two shoreline residential lots. Field investigations and analysis identified appropriate setbacks and mitigation measures for the protection of fish habitat and water quality.

Tree Inventory and Butternut Assessment (Town of Innisfil)

A tree inventory was required for development of commercial site in the Town of Innisfil. The inventory provided a detailed account of tree species, size and health relative to areas proposed to be disturbed. During the surveys, endangered butternut trees were found and assessed using standardized protocols.

Natural Heritage Development Review- Big Chute (Crown Lands)

Field investigations and a review of background documentation was completed to determine the opportunities and constraints for construction of a cottage road through Crown Lands. Recommendations for placement of the road were made to avoid impacts to sensitive natural features.

APPENDIX B

Vascular Plant List

2361- Vascular Plant List 2010

FAMILY	*MAIN LATIN NAME*	*ENLISH NAMES*	*SRANK*	*GRANK*
Aceraceae	Acer pensylvanicum L.	Moose Maple Striped Maple	S5	G5
Aceraceae	Acer rubrum L.	Soft Maple Red Maple	S5	G5
Aceraceae	Acer saccharum Marshall ssp. saccharum	Sugar Maple Hard Maple	S5	G5T?
Anacardiaceae	Rhus radicans L. ssp. negundo	Climbing Poison-ivy Poison-ivy	S5	G5T
Anacardiaceae	Rhus typhina L.	Staghorn Sumac Velvet Sumac	S5	G5
Apiaceae	Daucus carota L.	Wild Carrot Queen Anne's Lace	SE5	G?
Araliaceae	Aralia nudicaulis L.	Virginian Sarsaparilla Wild Sarsaparilla	S5	G5
Asclepiadaceae	Asclepias syriaca L.	Common Milkweed Silkweed	S5	G5
Asteraceae	Aster macrophyllus L.	Large-leaved Aster	S5	G5
Asteraceae	Chrysanthemum leucanthemum L.	Whiteweed Ox-eye Daisy	SE5	G?
Asteraceae	Solidago canadensis L.	Rock Goldenrod Canada Goldenrod	S5	G5
Asteraceae	Taraxacum officinale G. Weber	Blowball Common Dandelion	SE5	G5
Balsaminaceae	Impatiens capensis Meerb.	Spotted Jewel-weed Spotted Touch-me-not	S5	G5

FAMILY	MAIN LATIN NAME	ENLISH NAMES	SRANK	GRANK
Betulaceae	Betula alleghaniensis Britton	Southern Yellow Birch Yellow Birch	S5	G5
Betulaceae	Betula papyrifera Marshall	White Birch Paper Birch	S5	G5
Betulaceae	Corylus cornuta Marshall ssp. cornuta	Beaked Hazelnut Beaked Hazel	S5	G5T
Betulaceae	Ostrya virginiana (Miller) K. Koch	Ironwood Hop Hornbeam	S5	G5
Boraginaceae	Echium vulgare L.	Blueweed Viper's Bugloss	SE5	G?
Caprifoliaceae	Lonicera canadensis Bartram	Fly Honeysuckle American Fly Honeysuckle	S5	G5
Caprifoliaceae	Sambucus canadensis L.	Canada Elderberry Common Elderberry	S5	G5
Caprifoliaceae	Symphoricarpos albus (L.) S.F. Blake	Thin-leaved Snowberry Snowberry	S5	G5
Caprifoliaceae	Viburnum acerifolium L.	Dockmackie Maple-leaved Viburnum	S5	G5
Caprifoliaceae	Viburnum lantanoides Michx.	American Wayfaring Tree Hobblebush	S5	G5
Caryophyllaceae	Cerastium arvense L. ssp. arvense	Meadow Chickweed Field Chickweed	SE4	G5T?
Chenopodiaceae	Chenopodium capitatum (L.) Asch.	Spinach Strawberry-blite	S5	G5
Cornaceae	Cornus alternifolia L. f.	Pagoda Dogwood Alternate-leaved Dogwood	S5	G5
Cornaceae	Cornus stolonifera Michx.	Red-osier Dogwood Red-osier Cornel	S5	G5
Cupressaceae	Juniperus communis L.	Common Juniper	S5	G5

FAMILY	MAIN LATIN NAME	ENLISH NAMES	SRANK	GRANK
Cupressaceae	Juniperus communis L.	Eastern Red Cedar	S5	G5
Cupressaceae	Thuja occidentalis L.	Arbor-vitae Eastern White Cedar	S5	G5
Cyperaceae	Carex arctata Boott	Compressed Sedge Drooping Wood Sedge	S5	G5?
Cyperaceae	Carex communis L.H. Bailey	Common Beech Sedge Fibrous Rooted Sedge	S5	G5
Cyperaceae	Carex umbellata Schkuhr ex Willd.	Early Oak Sedge Umbel-like Sedge	S5	G5
Dennstaedtiaceae	Pteridium aquilinum (L.) Kuhn var.	Eastern Bracken-fern Bracken	S5	G5T
Dryopteridaceae	Dryopteris carthusiana (Vill.) H.P. Fuchs	Spinulose Wood Fern Spinulose Shield Fern	S5	G5
Dryopteridaceae	Onoclea sensibilis L.	Sensitive Fern	S5	G5
Elaeagnaceae	Shepherdia canadensis (L.) Nutt.	Rabbit-berry Canada Soapberry	S5	G5
Equisetaceae	Equisetum pratense Ehrh.	Meadow Horsetail Thicket Horsetail	S5	G5
Ericaceae	Vaccinium angustifolium Aiton	Low Sweet Blueberry Lowbush Blueberry	S5	G5
Fabaceae	Melilotus alba Medik.	White Sweet-clover White Melilot	SE5	G?
Fabaceae	Trifolium repens L.	White Clover Dutch Clover	SE5	G?
Fagaceae	Fagus grandifolia Ehrh.	American Beech Common Beech	S5	G5
Fagaceae	Quercus alba L.	White Oak Stave Oak	S5	G5

FAMILY	MAIN LATIN NAME	ENLISH NAMES	SRANK	GRANK
Fagaceae	Quercus macrocarpa Michx.	Mossy-cup Oak Bur Oak	S5	G5
Fagaceae	Quercus rubra L.	Northern Red Oak Red Oak	S5	G5
Juglandaceae	Juglans cinerea L.	White Walnut Butternut	S4	G4
Juglandaceae	Juglans nigra L.	Black Walnut American Walnut	S4	G5
Liliaceae	Maianthemum canadense Desf.	False Lily-of-the-valley Wild Lily-of-the-valley	S5	G5
Liliaceae	Maianthemum stellatum (L.) Link	Star-flowered Solomon's Seal Lily-of-the-valley	S5	G5
Liliaceae	Streptopus roseus Michx.	Sessile-leaved Twisted-stalk Rose Twisted-stalk	S5	G5
Liliaceae	Trillium cernuum L.	Nodding Wake-robin Nodding Trillium	S5	G5
Liliaceae	Trillium erectum L.	Ill-scented Wake-robin Purple Trillium	S5	G5
Liliaceae	Trillium grandiflorum (Michx.) Salisb.	White Trillium Large-flowered Trillium	S5	G5
Monotropaceae	Monotropa uniflora L.	Indian-pipe One-flowered Indian-pipe	S5	G5
Myricaceae	Comptonia peregrina (L.) J.M. Coult.	Sweetfern Fern-gale	S5	G5
Myricaceae	Myrica gale L.	Sweet Gale	S5	G5
Oleaceae	Fraxinus americana L.	White Ash Cane Ash	S5	G5
Oleaceae	Fraxinus pennsylvanica Marshall	Red Ash Green Ash	S5	G5

FAMILY	MAIN LATIN NAME	ENLISH NAMES	SRANK	GRANK
Onagraceae	Epilobium angustifolium L.	Spiked Willow-herb Fireweed	S5	G5
Orchidaceae	Epipactis helleborine (L.) Crantz	Common Helleborine Bastard Hellebore	SE5	G?
Oxalidaceae	Oxalis stricta L.	European Wood-sorrel Upright Yellow Wood-sorrel	S5	G5
Pinaceae	Larix laricina (Du Roi) K. Koch	American Larch Tamarack	S5	G5
Pinaceae	Pinus strobus L.	Eastern White Pine Weymouth Pine	S5	G5
Pinaceae	Pinus sylvestris L.	Scotch Pine Scotch Fir	SE5	G?
Pinaceae	Tsuga canadensis (L.) Carrière	Eastern Hemlock	S5	G5
Plantaginaceae	Plantago major L.	Common Plantain Broad-leaved Plantain	SE5	G5
Poaceae	Bromus ciliatus L.	Wood Chess Fringed Brome	S5	G5
Poaceae	Calamagrostis canadensis (Michx.) P.	Canada Blue-joint Blue-joint Grass	S5	G5
Poaceae	Phleum pratense L.	Timothy Common Timothy	SE5	G?
Poaceae	Poa pratensis L. ssp. pratensis	Kentucky Bluegrass	S5	G5T
Primulaceae	Trientalis borealis Raf. ssp. borealis	Star-flower Chickweed Wintergreen	S5	G5T?
Pyrolaceae	Chimaphila maculata (L.) Pursh var.	Spotted Wintergreen Mottled Pipsissewa	S1	G5T?
Ranunculaceae	Actaea rubra (Aiton) Willd.	Red Baneberry	S5	G5
Ranunculaceae	Anemone acutiloba (DC.) G. Lawson	Sharp-lobed Liver-leaf	S5	G5

FAMILY	MAIN LATIN NAME	ENLISH NAMES	SRANK	GRANK
Ranunculaceae	Anemone acutiloba (DC.) G. Lawson	Sharp-lobed Hepatica	S5	G5
Ranunculaceae	Anemone americana (DC.) H. Hara	Round-lobed Hepatica American Liver-leaf	S5	G?
Ranunculaceae	Clematis virginiana L.	Leather-flower Virgin's-bower	S5	G5
Rosaceae	Amelanchier alnifolia (Nutt.) Nutt. ex R.	Saskatoon Berry Northwestern Serviceberry	S4?	G5
Rosaceae	Fragaria virginiana Miller ssp. virginiana	Scarlet Strawberry Virginia Strawberry	SU	G5T?
Rosaceae	Potentilla simplex Michx.	Decumbent Five-finger Old-field Cinquefoil	S5	G5
Rosaceae	Prunus pensylvanica L. f.	Pin Cherry Bird Cherry	S5	G5
Rosaceae	Prunus serotina Ehrh.	Black Cherry Wild Black Cherry	S5	G5
Rosaceae	Rosa acicularis Lindl. ssp. sayi	Bristly Rose Prickly Rose	S5	G5TU
Rosaceae	Rubus allegheniensis Porter	Alleghany Blackberry High-bush Blackberry	S5	G5
Rosaceae	Rubus idaeus L. ssp. idaeus	Red Raspberry	SE1	G5T5
Rosaceae	Rubus parviflorus Nutt.	Sparse-flowered Thimbleberry White-flowering Raspberry	S4	G5
Rubiaceae	Galium boreale L.	Northern Bedstraw	S5	G5
Rubiaceae	Mitchella repens L.	Creeping Partridge-berry Twinberry	S5	G5
Salicaceae	Populus balsamifera L. ssp. balsamifera	Balsam Poplar Tacamahac	S5	G5T?
Salicaceae	Populus grandidentata Michx.	Large-tooth Aspen	S5	G5

FAMILY	MAIN LATIN NAME	ENLISH NAMES	SRANK	GRANK
Salicaceae	Populus tremuloides Michx.	Quiver-leaf Trembling Aspen	S5	G5
Salicaceae	Salix discolor Muhlenb.	Glaucous Willow Pussy Willow	S5	G5
Salicaceae	Salix lucida Muhlenb.	Shining Willow Glossy Willow	S5	G5
Salicaceae	Salix nigra Marshall	Swamp Willow Black Willow	S4?	G5
Salicaceae	Salix petiolaris Sm.	Slender Willow Meadow Willow	S5	G4
Saxifragaceae	Mitella nuda L.	Naked Mitrewort Naked Bishop's Cap	S5	G5
Scrophulariaceae	Verbascum thapsus L.	Velvet Mullein Common Mullein	SE5	G?
Tiliaceae	Tilia americana L.	White-wood American Basswood	S5	G5

APPENDIX C

Breeding Birds

Incidental Wildlife Observations

P/N 2361- Granite Ridge Subdivision Phase II

Breeding Bird List (2010 Observations)

Scientific Name	English Name	S-rank	SARO Status	Notes
Melospiza melodia	Song Sparrow	S5B		
Turdus migratorius	American Robin	S5B		
Corvus brachyrhynchos	American Crow	S5B		
Corvus corax	Common Raven	S5B		
Poecile atricapillus	Black-capped chickadee	S5		
Sitta canadensis	Red-breasted Nuthatch	S5B		
Vireo olivaceus	Red-eyed vireo	S5B		
Cyanocitta cristata	Blue Jay	S5		
Dendroica petechia	Yellow Warbler	S5B		
Carduelis tristis	American Goldfinch	S5B		
Dryocopus pileatus	Pileated Woodpecker	S5		
Empidonax alnorum	Alder Flycatcher	S5B		
Tachycineta bicolor	Tree Swallow	S4B		
Spizella passerina	Chipping Sparrow	S5B		
Vireo solitarius	Solitary Vireo	S5B		
Ceryle alcyon	Belted Kingfisher	S4B		
Tyrannus tyrannus	Eastern Kingbird	S4B		
Agelaius phoeniceus	Red-Winged Blackbird	S4		
Dumetella carolinensis	Grey Catbird	S4B		
Troglodytes troglodytes	Winter Wren	S5B		

P/N 2361- Granite Ridge Subdivision Phase II

Incidental Wildlife Observations

Scientific Name	English Name	S-rank	SARO Status	Notes
Odocoileus virginianus	White-tailed Deer	S5		
Tamias striatus	Eastern Chipmunk	S5		
Sciurus carolinensis	Eastern Gray Squirrel	S5		
Lithobates pipiens	Northern Leopard Frog	S5		

APPENDIX D

Correspondence on Butternut Assessment

Skelton Brumwell
& ASSOCIATES INC.

93 BELL FARM ROAD
SUITE 107
BARRIE ONTARIO
L4M 5G1

TELEPHONE:
(705) 726-1141

FAX:
(705) 726-0331

CONSULTING
ENGINEERS
AND
PLANNERS

October 12, 2010

Buckhorn Sand & Gravel
754 Melody Bay Road
Buckhorn, ON K0L 1J0

Attention: Jeff Chesher

Dear Jeff:

Re: Butternut Assessment
Granite Ridge Subdivision
Lot 8, Concession 9
Geographic Township of Galway-Cavendish & Harvey
Our File: P/N 09-2361

This letter is in regard to my assessment of the Butternut trees on your property and is being copied to the Species at Risk Biologist of the Ontario Ministry of Natural Resources (MNR) (Bancroft) District Office.

MNR may contact you regarding the need for audit of my assessment within 3 weeks of receiving a copy of this letter. It is requested that no trees (including those assessed to be non-retainable) be harmed or removed for 3 weeks to allow MNR a chance to notify you about a potential audit on the assessment. If MNR has not contacted you within 3 weeks of the reporting of this assessment, you may proceed with activities as per the assessment. Retainable Butternut are protected and cannot be removed without an authorization under the Endangered Species Act 2007 (eg: a permit or an agreement). Non-retainable trees are not protected and may be removed provided there are no municipal bylaws or other legislation prohibiting this.

As a qualified Butternut Health Assessor (BHA), I am providing the following comments about the Butternut trees I located and assessed at the above noted property during the site visit on September 10 & 29, 2010.

These trees were numbered sequentially with white paint so they can be identified as retainable, non-retainable or as a hybrid.

Non-retainable tree(s)

The following tree(s):

1, 2 & 3

are not retainable. They do not meet the retention guidelines based on the crown vigour assessment and the levels of cankers on the root flare and/or stem. These trees *can be removed provided there are no municipal bylaws or other legislation prohibiting their removal.* Please note the Ontario Recovery Team encourages that all Butternut trees be conserved and removal of diseased trees is not an objective of the Recovery Strategy.

Other Butternut not located during this assessment:
Please be advised that Butternut trees other than noted here, that are located or are naturally regenerating on this property must also be assessed by a BHA if their removal is being considered.

Please retain this letter as proof of a Butternut Health Assessment performed on the above noted property and any other documentation you may receive from the MNR should an audit of the assessment occur.

If you have any questions, please do not hesitate to contact the undersigned Butternut Health Assessor, or the MNR District Species at Risk Biologist. www.mnr.gov.on.ca

See the attached information sheet for more information on Butternut and the Endangered Species Act (ESA, 2007).

Yours truly,

SKELTON, BRUMWELL & ASSOCIATES INC.

Per:

Kyle Fleming, BSc. (Wildlife)
Environmental Planner/Biologist
BHA #097

Attach.

JKF/bal

C-10-257

cc: Graham Cameron - MNR