

Environmental Impact Statement for a Revised Development Plan for Mitch Owens and Boundary Roads

**Revised Report
February 26, 2019**

KILGOUR & ASSOCIATES LTD.
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Project Number: TSC829



TABLE OF CONTENTS

1.0 INTRODUCTION	2
2.0 PROPERTY INFORMATION	2
3.0 SITE AND THE NATURAL ENVIRONMENT	4
3.1 SURFACE WATER, GROUNDWATER AND FISH HABITAT	4
3.2 VEGETATION AND LAND COVER	4
3.2.1 Site Trees.....	5
3.3 SPECIES AT RISK.....	6
3.4 NATURAL HERITAGE SYSTEM.....	9
4.0 PROJECT DESCRIPTION.....	9
5.0 IMPACT ASSESSMENT.....	11
5.1 IMPACTS TO SURFACE WATER AND FISH HABITAT	11
5.2 IMPACTS TO SITE TREES	11
5.3 IMPACTS TO SPECIES AT RISK.....	11
5.4 IMPACTS TO NATURAL FEATURES.....	11
6.0 MITIGATIONS	11
6.1 MITIGATIONS FOR SURFACE WATER FEATURES.....	11
6.2 MITIGATIONS FOR TREES	12
6.3 MITIGATIONS FOR SPECIES AT RISK	12
6.4 MITIGATIONS FOR NATURAL FEATURES.....	12
6.5 MITIGATIONS FOR WILDLIFE	13
7.0 SUMMARY AND RECOMMENDATIONS.....	14

List of Figures

Figure 1. Existing site conditions.....	3
Figure 2. Proposed development	10

List of Tables

Table 1. Site Trees.....	6
Table 2. Species-at-risk potential	7

List of Appendices

Appendix 1 Qualifications of Report Author	
Appendix 2 Site Grading	

1.0 INTRODUCTION

This report is a revised Environmental Impact Statement (EIS) prepared by Kilgour & Associates Ltd. (KAL) on behalf of Touchstone Contracting in relation to their proposed development on parcels located at the southwest corner of Mitch Owens Rd and Boundary Rd in the southeast end of Ottawa (hereafter “the Site”). This EIS is an update to an EIS previously prepared by KAL for the Site (submitted in December of 2018), which was an update to a report prepared in 2010 by Muncaster Environmental Planning (MEP, 2010).

The development plan and earlier version of the EIS prepared by KAL was previously approved by the City of Ottawa and was reviewed by South Nation Conservation Authority (SNC) at the time of their submission for approval. At this time, Touchstone Contracting would like to alter the existing plan to regrade the Site such that drainage supports effective stormwater management. Regrading the site requires the removal of all trees within the Site. As such, the purpose of this revised EIS is to a) evaluate the changes in impacts to the natural heritage features of the area under the modified development plan, and b) provide the associated revised mitigations.

As with the previous version of this report, the current report has been scoped to address the impact of the proposed development on adjacent forests and the potential for presence of species at risk habitat (SAR) and their habitat within 120 m of the Site. This EIS also includes a discussion of trees present on site and review of impacts to those trees, and thereby serves as the Tree Conservation Report (TCR) for the proposed development. This report provides basic mitigations required to protect natural heritage features on site.

2.0 PROPERTY INFORMATION

The proposed development site includes four parcels located in Osgoode township:

- 9460 Mitch Owens Rd (Con 11 Pt Lot 1 RP 5R-13558; Part 2 Less RP4R-8132 Parts; 1 To 4 Less RP4R-8158 Part 1, PIN: 043230074);
- 5592 Boundary Rd (Con 11 Pt Lot 1 RP 4R-8132; Part 1: PIN: 043230075);
- 5606 Boundary Rd (Con 11 Pt Lot 1 RP 4R-8132; Part 2: PIN: 043230076 and 043230078);
- 5630 Boundary Rd (Con 11 Pt Lot 1 RP 4R-8158; Part 1: PIN: 043230077);

as well as,









- an L-shaped road allowance through the centre of the area (PIN: 043230078).

The total 4.25 ha area is located in the southeast end of Ottawa. The entire parcel was cleared of trees sometime prior to 1991 (based on the 1991 geoOttawa air photo) except for a scattered line of trees left along the roadside edges. At that time, the cleared area extended 20 m beyond the western property line. Most existing site vegetation is thus less than 30 years old. The parcel is zoned RG – Rural General Industrial. As such, it is intended for light industrial development and usage.



Figure 1 Existing conditions

Legend

-  Site Boundary
-  ELC
-  CUM
-  CUT
-  FOD8-1
-  SWD7-1
-  SWT3-5
-  # Tree

N

0 50 m

Project: TSC829.map
 Created By: RH
 Checked By: AF
 Universal Transverse Mercator - Zone 18 (N)
 Printed on: 2018-12-11



3.0 SITE AND THE NATURAL ENVIRONMENT

Site descriptions in this report are based in part on site information within the MEP (2010) EIS for the site but have been updated based on a thorough site inspection by KAL biologist, Mr. Rob Hallett, performed on November 27, 2018. During the site visit, Mr. Hallett updated the tree list and Ecological Land Classifications for the Site. Mr. Hallett surveyed all treed areas of the Site and treed areas within 50 m of the Site to the south and west of the property. Tree survey data were recorded for trees with diameters at breast height (DBH) greater than 10 cm in support of a TCR. Tree surveys were performed with attention paid towards potential Butternut habitat (Mr. Hallett is a certified Butternut Health Assessor; BHA #546) and potential “wildlife trees”, that is, trees with visible nests or cavities that may provide nesting habitat. Properties across Boundary and Mitch Owens Roads were viewed from the roadway but could not otherwise be searched as they appeared to be privately owned.

3.1 Surface Water, Groundwater and Fish Habitat

Other than roadside ditches along the north and east edges of the property and along the gravel roadway, there are no headwater drainage features on site. There are no plans to move the ditches. Adjacent land areas to the west and south are unevaluated wetland (swamp). The nearest Provincially Significant Wetland (PSW), Mer Bleue, is ~4.5 km to the north. The roadside ditch on the north side of Mitch Owens Rd is classified as the Simpson Municipal Drain. The top-of-bank for this feature is located 22.5 m from the northern boundary of the Site, but is separated from the Site by Mitch Owens Rd. The roadside ditches contain broad-leaved cattail, bladder sedge, hard-stemmed bulrush, and slender willow (MEP, 2010).

3.2 Vegetation and Land Cover

Land use in the general area is a mixture of commercial developments to the east of the Site, including a former auto wrecking yard and parts supply operation on the east side of the intersection of Mitch Owens and Boundary Roads. Young forests on regenerating agricultural fields are located to the north, west, and south of the Site and active agricultural lands are northwest and further west of the Site (west of Blackcreek Road; MEP, 2010).

In 1991, the entire site had been cleared except for a narrow band of trees along the road edges. By 1999, there was early successional growth (saplings) across much of the western half of the Site (9460 Mitch Owens Rd) and parts of the eastern side (5606 Boundary Rd). A narrow dirt road had been built along the road allowance. In 2011, most of the Site was subject to significant groundworks and the gravel road was widened and improved. The southern portion of 5630 Boundary Rd and the northern edge of 9460 Mitch Owens Rd were the only areas to retain tree cover, other than the narrow band along Boundary Rd. These two small areas are currently the only forested sections of the Site, though the forest cover there is still relatively young.

The northern edge of 9460 Mitch Owens Rd is a 25 m wide swath of Balsam Poplar (*Populus balsamifera*) and White Birch (*Betula papyrifera*), with White Elm (*Ulmus americana*) and Red Maple (*Acer rubrum*) in the understory. This feature is a remnant finger of the wooded ecosite to the west, which itself is an expansive area of Birch - Poplar Organic Deciduous Swamp (SWD7-1). The ecosite may have previously had much higher levels of ash trees making it closer to an SWD5-5 ecosite, but ash throughout the area have generally been decimated by Emerald Ash Borer. MEP (2010) had noted ash trees in the wooded

extension across the northwest corner of the Site, but none were present there in 2018. Ash trees were still present in the swamp surrounding the Site (but were limited in numbers) as were Trembling Aspen, Red Maple, and Balsam Poplar. There was no evidence of much ground cover in the swamp and most of the area had standing water during the KAL site visit (November 27, 2018). The extension onto the northwest corner of the Site though was somewhat drier. The edges of the main portion of the swamp – generally younger than the remainder of the feature, having been cleared pre-1991 – are rife with Glossy Buckthorn (*Rhamnus frangula*). Trees through the swamp generally range in size from 25-35 cm DBH, though much larger individuals do occur occasionally (but not on the Site itself).

The southern portion of 5630 Boundary Rd is a 0.8 ha Fresh – Moist Poplar Deciduous Forest (FOD8-1) ecosite. Consisting primarily of Trembling Aspen (*Populus tremuloides*) and Balsam Poplar (DBH ranging from 25-30 cm) with smaller Red Maple and White Elm through the understory, with some Glossy Buckthorn, especially along the edges. The eastern edge of the ecosite includes the largest Balsam Poplars from the original line of trees. This line extends most of the way up the Site along Boundary Rd. The groundcover flora (MEP, 2010) suggests drier conditions here relative to the swamplier area, with Bracken Fern, Helleborine, Wild Strawberry, and Wild Sarsaparilla. Sensitive Fern and Poison Ivy were also present in the understory, along with Red Raspberry and Glossy Buckthorn.

The northeast corner of the Site progresses from nearly open ground at the north edge to dense thicket edging up to the FOD8 ecosite. Land cover here is best described as Cultural Thicket (CUT), with Willow, Buckthorn, and saplings of Balsam Poplar nearing, but rarely exceeding, 10 cm DBH. Ground cover (MEP, 2010) is consistent with previously cleared areas and includes Sensitive Fern, Black Medic, Common Dandelion, Common Plantain, Lamb's Quarter, Reed Canary Grass, Eastern Bracken, Wild Carrot, Field Mustard, Wormseed Mustard, Tufted Vetch, Flowering Dogbane, Yellow Hawkweed, Tall Goldenrod, Virginia Creeper, Fringed Sedge, Bladder Sedge, and Bladder Campion.

Most of the western half of the Site was cleared and regraded in 2011. This portion of the Site is a cultural meadow (CUM) with grasses and Goldenrod. The central portion of the west side though does not appear to have been regraded or filled. Thicket Swamp (SWT3-5) there consists entirely of Red Osier Dogwood with Reed Canary Grass and *Phragmites* around the periphery.

3.2.1 Site Trees

The tree inventory survey was performed on November 27, 2018 by Mr. Rob Hallett. Table 1 describes site trees located outside of ecosites having high tree density. Trees located within forested ecosites are too densely distributed to meaningfully map individually. Table 1, however, does also include individual trees within these wood areas that are especially notable (i.e., particularly large or of other significance).

Table 1. Site Trees

Tree Number	Species	Mainstem DBH (cm)			
1	Red Maple	30	26	Balsam Poplar	15
2	Red Maple	25	27	Balsam Poplar	12
3	Red Maple	25	28	Balsam Poplar	12
4	Balsam Poplar	15 (multistem)	29	Balsam Poplar	15
5	Balsam Poplar	20	30	Balsam Poplar	15
6	Balsam Poplar	20	31	Balsam Poplar	20
7	Balsam Poplar	25	32	Balsam Poplar	20
8	Balsam Poplar	20	33	Balsam Poplar	25
9	Balsam Poplar	15	34	Balsam Poplar	20
10	Balsam Poplar	20	35	White Birch	20
11	Balsam Poplar	115	36	Red Maple	15
12	Balsam Poplar	10	37	Balsam Poplar	25
13	Balsam Poplar	15	38	Balsam Poplar	20
14	Balsam Poplar	20	39	White Birch	25
15	Balsam Poplar	25	40	Balsam Poplar	30
16	Balsam Poplar	25	41	Balsam Poplar	20
17	Balsam Poplar	25	42	Balsam Poplar	20
18	Balsam Poplar	25	43	Balsam Poplar	20
19	Balsam Poplar	25	44	Balsam Poplar	20
20	Balsam Poplar	20	45	Balsam Poplar	20
21	Balsam Poplar	20	46*	Balsam Poplar	25
22	Balsam Poplar	20	47*	Balsam Poplar	15
23	Balsam Poplar	20	48	Balsam Poplar	15
24	Balsam Poplar	20	49	Balsam Poplar	45
25	Balsam Poplar	15	50	Red Maple	50

* Tree to be removed

3.3 Species at Risk

KAL has filed an info-request with the Kemptville office of the MNRF for a review of their Natural Heritage Information Centre (NHIC) database and internal records, but the response was not yet available at the time of writing this report.

For full due diligence, Table 2 indicates the habitat requirements of SAR known to be potentially present within the broader area and whether the property may provide significant habitat. This list is based on publicly available NHIC records for areas within 3 km of the Site, MNRF SAR range maps, and knowledge gained from EIS work conducted on other properties in the vicinity.

Table 2. Species-at-risk potential

Species Name	Provincial (ESA) Status	Habitat Requirement	Habitat on Site	Project Concerns Associated with Habitat on Site
Birds				
Bank Swallow (<i>Riparia riparia</i>)	Threatened	Nest in banks or earthen walls cut by meandering streams and rivers, but artificial banks created by mining may also be used. Foraging occurs over fields, streams, wetlands, farmlands, and still water.	No suitable habitat is located on site or adjacent to the Site.	Negligible potential for presence. Not a concern for this project.
Barn Swallow (<i>Hirundo rustica</i>)	Threatened	Terrestrial open and anthropogenic structures for nesting; near open areas for feeding.	No suitable nesting structures occur on or adjacent to the Site. The limited open areas do not provide suitable feeding habitat.	Negligible potential for presence. Not a concern for this project.
Bobolink (<i>Dolichonyx oryzivorus</i>)	Threatened	Periodically mown, dry meadow for nesting. Habitat (meadow) should be > 10 ha, and preferably > 30 ha before Bobolink are attracted to the Site. Not near tall trees.	No suitable habitat on or adjacent to the Site.	Negligible potential for presence. Not a concern for this project.
Chimney Swift (<i>Chaetura pelagica</i>)	Threatened	Nests in open chimneys and sometimes in tree hollows (tree > 60 cm dbh). Tend to forage close to water as this is where the flying insects they eat congregate.	No suitable trees or chimney structures on or near the Site.	Negligible potential for presence. Not a concern for this project.
Common Nighthawk (<i>Chordeiles minor</i>)	Special Concern	Nests in wide variety of open sites, including beaches, fields, and gravel rooftops.	No suitable habitat on or adjacent to the Site.	Negligible potential for presence. Not a concern for this project.
Eastern Meadowlark (<i>Sturnella magna</i>)	Threatened	Periodically mown, dry meadow for nesting. Habitat (meadow) should be > 10 ha, and preferably > 30 ha before Eastern Meadowlark are attracted to the Site. Not near tall trees	No suitable habitat on or adjacent to the Site.	Negligible potential for presence. Not a concern for this project.
Eastern Wood-pewee (<i>Contopus virens</i>)	Special Concern	Woodland species, often found near clearings and edges.	The FOD8 ecosite is too small to support this species. The SWD-7 site is suboptimal but could support the species.	The species could be present adjacent to the Site. This area will remain fully intact. The species dwells in forest edge habitat and is reasonably tolerant of disturbance beyond the edge. Minor industrial usage of the Site itself is unlikely to negatively impact the species if present. Not a concern for this project.
Least Bittern (<i>Ixobrychus exilis</i>)	Threatened	Found in large quiet marshes and usually near cattails.	No suitable habitat on or adjacent to site.	Negligible potential for presence. Not a concern for this project.

Species Name	Provincial (ESA) Status	Habitat Requirement	Habitat on Site	Project Concerns Associated with Habitat on Site
Wood Thrush (<i>Hylocichla mustelina</i>)	Special Concern	Deciduous or mixed woodlands.	The FOD8 ecosite is too small to support species. The SWD-7 site is generally unsuitable.	Unlikely to be present, but habitat would be retained regardless. Not a concern for this project.
Mammals				
Little Brown Bat (<i>Myotis lucifuga</i>)	Endangered	Widespread, roosting in trees and buildings. Hibernate in caves or abandoned mines.	Trees in the FOD8 ecosite provides very limited habitat suitability (area and stems are both too small). Portions of the SWD 7 ecosite could offer some site suitability. If present, the species would feed along the SWD7 edges, regardless of usage on the Site itself.	Very unlikely to be present. Feeding potential along swamp edges would remain. Not a concern for this project other than a prohibition on on-site tree clearing during maternal roosting season (i.e. June).
Northern Long-eared Bat (<i>Myotis septentrionalis</i>)	Endangered	Associated with boreal forests, choosing to roost under loose bark and in the cavities of trees. Hibernate in caves or abandoned mines.	No suitable habitat on or adjacent to site.	Negligible potential for presence. Not a concern for this project.
Eastern Small-footed Bat (<i>Myotis leibii</i>)	Endangered	Coniferous forest in hilly country. Hibernate in smaller caves. Subject to air movement.	No suitable habitat on or adjacent to site.	Negligible potential for presence. Not a concern for this project.
Eastern Pipistrelle (<i>Pipistrellus subflavus</i>)	Endangered	Forage over water courses or open fields with large trees nearby. They never forage in deep woods. Hibernate in caves or abandoned mines.	Trees in the FOD8 ecosite provides very limited habitat suitability (area and stems are both too small). Portions of the SWD 7 ecosite could offer some site suitability. If present, the species would feed along the SWD7 edges, regardless of usage on the Site itself.	Very unlikely to be present. Feeding potential along swamp edges would remain. Not a concern for this project other than a prohibition on on-site tree clearing during maternal roosting season (i.e. June).
Vascular Plants				
Butternut (<i>Juglans cinerea</i>)	Endangered	Variable but typically on well-drained soils.	The SWD7 ecosite is unsuitable. No individuals were observed within 50 m of the Site.	Negligible potential for presence. Not a concern for this project.

3.4 Natural Heritage System

The Site is located ~880 m southeast of an expansive forest feature described as NESS Site 83 (Brownell and Blayney, 1997). No other Natural Heritage System elements are otherwise specifically named or described on or adjacent to the Site. There are no Provincially Significant Wetlands, Significant Valleylands or Life Science Areas of Natural and Scientific Interest nearby.

The Site is located outside of the urban boundary. Significant Woodland status there is therefore assessed following the MNR's Natural Heritage Reference Manual. With over 30% forest coverage in the broader catchment area, the FOD8-1 ecosite is far too small (i.e. < 50 ha) to be deemed significant based on size alone. The feature has no interior forest space, has no appreciable proximity to other wooded areas or Natural Heritage System elements, neither provides nor is connected to wildlife corridors, is not contiguous with any water features, has very low diversity – a young, early successional feature - has no rare or unique species present, provides no economic benefit (relative to much more extensively wooded areas nearby and occurring entirely on industrial property), and does not appear to provide cultural importance as it is isolated on private property. The feature does not constitute Significant Woodland. Moreover, it's small size, generally small trees, and relatively dry ground likely preclude the feature from providing significant wildlife habitat for any birds, bats, or frogs.

The SWD7 ecosite extends for ~26 ha and has no interior forest (i.e., is too small to be considered significant on size alone). The wooded area, however, is roughly contiguous with similar habitat to the north west (across Mitch Owens Rd) and to the southeast (across Boundary Rd). As such, it likely provides some linkage functionality. This, along with its wetland character as a swamp, should designate the feature as a Significant Woodland. This feature is also extensive enough, wet enough, and includes large enough trees that it could provide significant wildlife habitat for birds, frogs, and/or bats. In 1991, though, the swamp was generally cut back to 20 m beyond the current property edge. The swamp edge immediately adjacent to the Site is thus much younger (and more disturbed given the abundance of buckthorn there) than the remainder of the swamp.

4.0 PROJECT DESCRIPTION

The project addressed by this EIS is the preparation of the Site for future light industrial usage and the construction of a large, single-storey building near the center of the site (over the existing gravel road) with parking and vehicular access over much of the remainder of the site. The entire site will be cleared and regraded. No trees on site will be retained. Grubbing and ground works are planned to begin in early 2019.

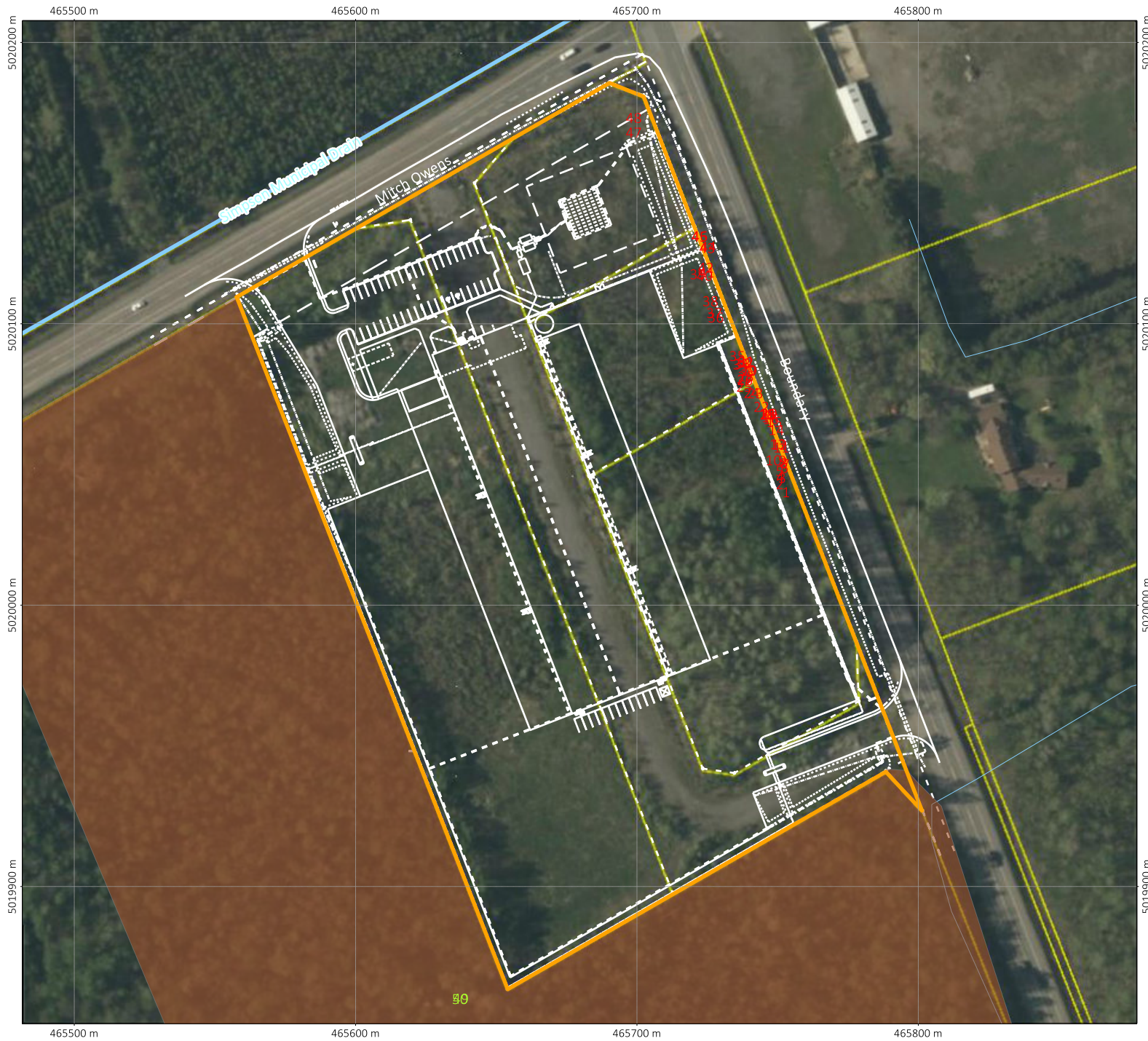


Figure 2 Proposed development

Legend

-  Site Boundary
- ELC
-  CUT
-  FOD8-1
-  SWD7-1
- Trees
-  Retained Tree
-  Removed Tree

N

0 50 m

Project: TSC829-2.map
 Created By: RH
 Checked By: AF
 Universal Transverse Mercator - Zone 18 (N)
 Printed on: 2019-02-26



5.0 IMPACT ASSESSMENT

5.1 Impacts to Surface Water and Fish Habitat

No channelized surface water features exist on or immediately adjacent to the Site other than roadside ditches, which will be retained regardless. Site development and usage are not anticipated to affect the Simpson Municipal Drain beyond the impacts it would already receive from heavy traffic along Mitch Owens Rd, which separates the Site from the drain. No negative impacts are thus expected to the surface water features and/or fish habitat.

5.2 Impacts to Site Trees

The entire site will be cleared and no trees on site will be retained.

5.3 Impacts to Species at Risk

MEP (2010) did not identify any SAR on or adjacent to site. Section 3.3 of this report reviewed that report and adds consideration of species subsequently protected under the *ESA*. No SAR are currently expected to occur on or near the Site. No negative impacts are thus expected to SAR.

5.4 Impacts to Natural Features

The adjacent swamp could provide habitat for bat species not listed under the *ESA*, Eastern Wood Pewee, and/or significant numbers of frogs. The presence of any of these would render the swamp Significant Wildlife Habitat. Regardless, as the swamp will remain fully intact, and its mature section is currently separated from the development by about 20 m, no negative impacts would be anticipated to its utility as Significant Wildlife habitat for those taxa if they were found to be present, or as Significant Woodland. No other significant natural features occur on site or within 120 m of the Site. Therefore, we predict no impacts to natural features from the proposed development.

The clearing of the thicket swamp (SWT3-5) in the central portion of the west side of the Site may result in the spread of invasive *Phragmites* to other areas of the Site or to areas off the Site through the transfer of seeds or underground rhizomes via construction equipment. Thus, control measures are required to prevent this (see section 6.4 below for mitigations).

6.0 MITIGATIONS

6.1 Mitigations for surface water features

To protect surface water features in the broader vicinity of the project, standard erosion and sediment control measures must be implemented on site during construction to limit the potential for sediment deposition off site by either surface water flows or by wind erosion. Details of the erosion and sediment control mitigation measures must be included in either the environmental management plan or servicing plan for the Site.

6.2 Mitigations for Trees

To minimize impacts to trees located adjacent to the development area, the following protection measures are indicated as necessary during construction:

- Erect a fence beyond the critical root zone (CRZ, i.e., 10x the trunk diameter at breast height) of trees adjacent to site. The fence should be highly visible (e.g., orange construction fence) and paired with erosion control fencing. Pruning of branches of trees adjacent to the Site is recommended in areas of potential conflict with construction equipment;
- Do not place any material or equipment within the CRZ of trees adjacent to the Site;
- Do not attach any signs, notices or posters to any trees adjacent to the Site;
- Do not raise or lower the existing grade within the CRZ of trees adjacent to the Site without approval;
- Tunnel or bore when digging within the CRZ of trees adjacent to the Site;
- Do not damage the root system, trunk or branches of any trees adjacent to the Site; and
- Ensure that exhaust fumes from all equipment are NOT directed towards any canopies of trees adjacent to the Site.
- The *Migratory Bird Convention Act* (Canada, 1994) protects the nests and young of migratory breeding birds in Canada. The City of Ottawa guidelines stipulate no clearing of trees or vegetation between April 1 and August 15, unless a qualified biologist has determined that no nesting is occurring within 5 days prior to the clearing.

A single row of well-spaced, primarily deciduous trees will be planted along the eastern edge of the site. The final planting plan will be established within landscape plan for the site, with the understanding that tree selection and location must, for safety purposes, permit effective sight lines for truck traffic entering and leaving the facility.

6.3 Mitigations for Species at Risk

As the potential for occurrence of most SAR on or adjacent to the Site is negligible, SAR specific mitigations are not generally required. The potential however, for a transient presence of SAR bats – while very unlikely – cannot be dismissed completely. It is therefore recommended that no tree clearing occur on site between May and August inclusive without first confirming the absence of bats. Trees should not be cleared within the month of June at all.

6.4 Mitigations for Natural Features

As per standard tree protection measures indicated in Section 6.2, construction fencing should be run along the south and west edges of the Site between planned construction work and the swamp, along with silt fencing (well keyed in) during the development period to prevent incursion of sediment or work

activity into that feature. As no other significant natural features occur on site or within 120 m of the Site, no other specific mitigations are required.

The thicket-swamp (SWT3-5) in the central portion of the west side of the Site requires control measures to prevent the spread of invasive *Phragmites* as the proposed development involves clearing this area. The MNRF recognizes an Integrated Pest Management Plan which comprises two or more methods in order to effectively control the regrowth and spread of *Phragmites* (MNRF, 2011). Two options are recommended here in order to effectively control *Phragmites* (MNRF, 2011):

1. The preferred option - Topsoil and non-woody plant material stripped from this area can be collected and stockpiled on site under a tarps to solarize propagules, which will eventually kill them via heat. Before tarping the removed material, the *Phragmites* plants must be cut to less than 10 cm in height. Black plastic tarp or geotextile sheets will then be anchored over the stockpiled area using weights or stakes. The tarps should cover a large buffer area beyond the perimeter of the stockpile and the stockpile should be in an area that receives direct sunlight. The plastic tarp must stay in place for a minimum of six months to achieve complete suppression of the plants. This method is cost effective and not labour intensive but requires continual and frequent monitoring along the perimeter of tarps to ensure runners are not growing out from beneath the tarp. After the six-month period, the solarized soil can be re-used on site as long as the stockpiled area is capped and the areas where solarized soil is used is frequently mowed (at least once per season; second method of option 1). Caution should be taken to avoid spreading any cut material of *Phragmites* to other locations off site by maintaining and washing any equipment that may be handling soils that contain *Phragmites* (including seeds, roots, and shoots).
2. An alternative option - Topsoil and non-woody plant material stripped from this area may be disposed at a receiver specifically qualified to handle the reception of soil containing the propagules of invasive plant species. This approach is more expensive but ensures the propagules are effectively removed from the area and duly treated. If using this method, equipment used to dig up the area should still be maintained and washed accordingly to prevent any further spread of *Phragmites*.

6.5 Mitigations for Wildlife


Wildlife is generally anticipated to be absent from the immediate development area if ground works begin during the winter of 2019. Some common, urban-tolerant wildlife however may occur within areas near the Site and could, on occasion, traverse development area. The following mitigation measures must be implemented on site during construction of the project:

- Do not harm, feed, or unnecessarily harass wildlife.
- Keep food wastes and other such garbage be in secured in wildlife-proof containers, and promptly removal this material from the Site (especially in warm weather).
- Drive slowly and avoid hitting wildlife where possible.
- Avoid providing unintended wildlife shelters. Effective mitigation measures include:
 - Covering or containing piles of soil, fill, brush, rocks and other loose materials;
 - Capping ends of pipes where necessary to keep wildlife out;

- Ensuring that trailers, bins, boxes, and vacant buildings are secured at the end of each work day to prevent access by wildlife.
- Check the work site (including previously cleared areas) for wildlife, prior to beginning work each day.
- Inspect protective fencing or other installed measures daily and after each rain event to ensure their integrity and continued function.
- Monitor construction activities to ensure compliance with the project-specific protocol (where applicable) or any other requirements.

7.0 SUMMARY AND RECOMMENDATIONS

It is my professional opinion that no negative impacts are anticipated to listed SAR or other natural heritage features under the proposed property development.



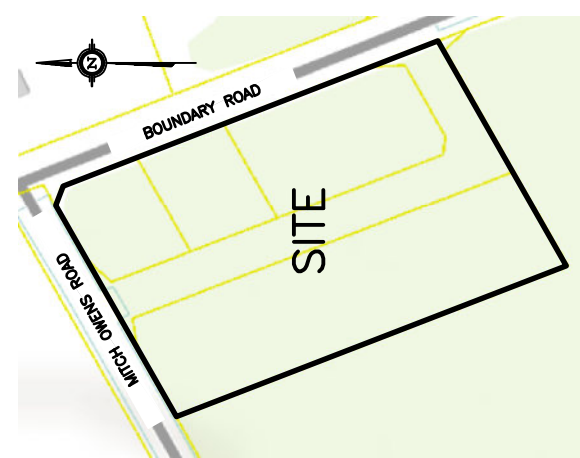
Anthony Francis, PhD
KILGOUR & ASSOCIATES LTD.

Appendix 1
Qualifications of Report Author

Anthony Francis, PhD

Dr. Francis is an ecologist with over 18 years of experience in both terrestrial and aquatic projects. His doctoral thesis work on global plant diversity patterns included conducting tree surveys across North America. As a consulting ecologist he has worked on diverse ecological projects including literature reviews of forestry management and species-at-risk; environmental studies of contaminants (metals and suspended particulates); geomatic and statistical analyses for federal and provincial ministries as well as for private industry; and aquatic and terrestrial species inventories. He has contributed to environmental impact statements and federal environmental screening assessments for creek realignments and other infrastructure projects across Ontario.

Appendix 2
Site Grading



D. B. GRAY ENGINEERING INC.
Sewerwater Management - Grading & Drainage - Storm & Sanitary Sewers - Watermain
700 Long Point Circle
Ottawa, Ontario K1T 4E9
Tel: 613-425-8044
dbgray@rogers.com

GRADING PLAN

Drawn	D.B.G.
Hor. Scale	1:400
Vert. Scale	
Date	JUN 9-18
Job No.	18029

Drawing No.	C-1
	of 6

Engineer's Seal

NOT VALID UNLESS
SIGNED & DATED

