



Muncaster  
Environmental  
Planning Inc.

June 30, 2021

Mr. Russell Beach  
Senior Development Manager  
Broccolini Real Estate Group  
16766 Transcanadienne  
Suite 500  
Kirkland, Quebec  
H9H 4M7

Dear Mr. Beach:

**RE: Leikin Lands, South Merivale Business Park, Nepean  
Tree Conservation Report and Environmental Impact Statement**

This Tree Conservation Report and Environmental Impact Statement addresses the potential for Species at Risk and other natural environment features associated with a site in the northeast portion of Barrhaven. The current municipal addresses for the approximately 28.5 ha (not including former road allowances) site are 2 and 20 Leikin Drive and 99 Bill Leatham Drive. The current site plan is for 16.6 ha located in the west half of the site. The irregular shaped site is located west of Merivale Road and Leikin Drive and east of the intersection of Bill Leatham Drive and Longfields Drive (Map 1). Former road allowances associated with potential extensions of Bill Leatham Drive and Paragon Avenue bisect the site. These unopened road allowances were recently approved for reconveyance to Zena-Kinder Holdings Limited.

As shown on the Site Plan (Map 2), the proposed development consists of a light industrial use, and associated surface parking for trucks and employee vehicles. Access to the new facility will be off of the Longfields Dive and Bill Leatham Drive intersection, north from Paragon Avenue, and east through a proposed private road connecting to Leikin Drive. A stormwater management facility (detention only – dry pond) in the south-central portion of the site will control surface water.

***Site Context***

The site is designated *Urban Employment Area* on Schedule B of the City of Ottawa Official Plan. Lands that are part of the National Capital Greenbelt ('Southern Farm and Pinhey Forest Sector') and designated Agricultural are to the north and west of the site. The closest lands designated *Major Open Space*, which contain the Clarke Bellinger Environmental (Stormwater Management) Facility, are approximately 85 metres south of the southwest corner of the site. A portion of the City's Natural Heritage System, as shown on the Schedule L3 Overlay, is about 225 metres south of the site. This is also the closest Urban Natural Area, the moderately rated

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Sach's Forest (Muncaster and Brunton, 2005). The site is within the Ottawa Airport Operating Influence Zone as shown on Schedule K, with no natural environment constraints shown for the site on Schedule K. There are no Areas of Natural and Scientific Interest or Provincially Significant Wetlands in the general vicinity of the site. No unevaluated wetlands or surface water features are shown for the site on geoOttawa or RVCA mapping, with the closest channel a north-south feature approximately 60 metres west of the west site edge (labelled as a ditch on Map 1).

### ***Methodology***

This report includes an assessment of the natural heritage features, including the potential for specimen trees and Species at Risk utilization, and follows the City of Ottawa guidelines for Tree Conservation Reports and Environmental Impact Statements, with guidance from the Natural Heritage Reference Manual (OMNR, 2010).

Colour aerial photography (1976 - 2019) was used to assess the natural environment features in the general vicinity of the site. The natural environment features of the site and adjacent lands were reviewed by Shaun St. Pierre of BCH Environmental Consulting Inc. on February 10<sup>th</sup> and May 10<sup>th</sup>, 2021. The May 10<sup>th</sup> survey was completed from 08:00 to 10:30, with an air temperature of 10°C, a light breeze, and 40% cloud cover. Snow cover was extensive during the afternoon February 10<sup>th</sup> survey, which was completed under overcast skies, a light breeze, and an air temperature of -10° C.

In addition, third grassland bird surveys were completed for the south (non-cultivated) portion of the site in June, 2021 (June 11<sup>th</sup>, 18<sup>th</sup>, and 29<sup>th</sup>). The morning surveys were completed following MECP protocols, including early morning surveys (done between 07:10 and 08:25), no precipitation (partly sunny to partly cloudy skies), and light winds (light air or light breeze). The air temperatures for the three June surveys varied between 18 and 22° C. Two 10-minute point counts covered the south portion of the site (Map 1).

### ***Existing Conditions***

The site was dominated by agricultural fields until the 1990s. Some trees are between the fields, including along an east-west access road in the middle of the site. A sanitary sewer and wooden pole hydro line were constructed along an easement through the site. Since the 1990s the south portion of the site has appeared to been left fallow, with the north portion continuing to be cultivated. Footing in the south portion is very uneven indicating the area was formerly ploughed.

The terrain is relatively flat with the exception of what appears to be large, now grassed, spoil piles in the cultural meadow habitat in the southwest portion. The majority of this cultural meadow is dominated by grasses, such as June meadow grass, reed canary grass, orchard grass, timothy, poverty oat grass, and common manna grass, with more broad-leaved plants such as wild carrot, wild parsnip, Canada thistle, bull thistle, wild carrot, field mustard, common ragweed, bird's-foot trefoil, common burdock, chicory, common milkweed, tufted vetch, wild parsnip, common dandelion, curled dock, red clover, and Canada and early goldenrod, appearing in the eastern portion (Photo 1). Regenerating white elm, Manitoba maple, and white ash, along

with staghorn sumac, steplebush, and slender willow shrubs are scattered in the meadow habitat.

A few white ash and Manitoba maple, as large as 30cm diameter at breast height (dbh) but most much smaller, are scattered along the north site edge. Many of the ash appeared dead. Common buckthorn, hawthorn, and willow shrubs are also in this intermittent hedgerow, noted as 'Windrow 2' on Map 1 (Photo 2). Bur oak and basswood are in the west-central portion of the site, labelled as 'Windrow 4' on Map 1 (Photo 3). The larger bur oaks are between 55cm and 80cm dbh. Smaller basswood stems and nannyberry, Japanese barberry, chokecherry, and common buckthorn shrubs are also present. A small cultural thicket inclusion composed of common buckthorn, and slender and pussy willow shrubs, is to the south of 'Windrow 4' (Photo 4). Regenerating white ash stems are also present.

A small corpse dominated by trembling aspen with bur oak common is in the southwest corner of the site. This area is shown as a bur oak/trembling aspen inclusion on Map 1. Most trees are in the 10cm – 20cm dbh range (Photo 5), with a few larger trees present including a 37cm dbh white ash with potential wildlife cavities. The ash is in poor condition due to emerald ash borer. Three larger bur oaks are between 50cm and 66cm dbh and appear to be in better condition. Smaller basswood and white elm are also present, along with willow, tartarian honeysuckle, and red raspberry shrubs. Ground cover includes June meadow grass, Canada goldenrod, and common strawberry.

Trembling aspen, white elm, white spruce, and Manitoba maple, between 10 and 30cm dbh, are in other small treed areas in the south portion of the site (Photo 6). Slender willow shrubs are also present.

Wildlife observed on and adjacent to the site included killdeer, double-crested cormorant (flying overhead), ring-billed gull, American crow, downy woodpecker, European starling, red-winged blackbird (many pairs seen and many agitated males), mourning dove, tree swallow, yellow warbler, bobolink (observation described in the Species at Risk section), Wilson's snipe, song sparrow (seen with food), chipping sparrow (seen with food and agitated and immatures observed), American robin, American goldfinch, house finch, and grey squirrel.



*Photo 1 – Cultural meadow habitat dominates the south portion of the site. View looking west*



*Photo 2 – Scattered shrubs and small trees along the north site edge.  
View looking east*



*Photo 3 – ‘Windrow’ 4 in the west-central portion of the site. View looking west*



*Photo 4 - Small area of cultural thicket in the west-central portion of the site south of ‘Windrow 4’. View looking north*



*Photo 5 – Trembling aspen and bur oak inclusion in the southwest corner of the site.  
View looking west*



*Photo 6 - Small treed area along the east site edge. View looking north*



*Photo 7 – Watercourse to the west of the site. View looking north*

### ***Species at Risk Assessment***

No butternut or other Species at Risk were observed on or adjacent to the site. The Ministry of the Natural Resources and Forestry’s Make a Map: Natural Heritage Areas website was reviewed. This site allows for a search of Threatened and Endangered species covered by the 2008 *Endangered Species Act*, as well as other species of interest. A search was conducted on the 1 km squares including the site and adjacent areas (18VR41- 36 and - 46). Two avian Species at Risk, bobolink and eastern meadowlark, are reported for these squares. Eastern meadowlark and bobolink utilize larger grassland areas such as hayfields. Two 10-minute point counts were completed for the south portion of the site (Map 1) during early morning June surveys spaced at least one week apart. The percent of grass in the vicinity of the point counts varied between 50 and 95 percent, with grass heights between 60cm and 1.3 metres. No eastern meadowlarks were observed during the three surveys. One male bobolink was observed and heard during the June 11<sup>th</sup> survey in the southeast end of the site. This bird was chased by red-winged blackbirds and flew to the north of the site and not seen or heard again. There was no evidence that the bird was nesting on the site or that a mate was present, and bobolinks were not observed during the June 18th or 29th early morning surveys. The cultivated fields in the north portion of the site are not suitable nesting habitat for eastern meadowlark or bobolink and. The hayfield immediately to the north of the site appears large enough for potential nesting habitat for the grassland species. Development of the site is not anticipated to impact the ability of eastern meadowlark and bobolink to nest in the field to the north of the site within the Greenbelt. These species will nest in the core centre of the field rather than along the edges. We conclude that the site does not provide suitable nesting habitat for grassland Species at Risk.

Other Species at Risk identified in the Ontario Breeding Bird Atlas for the 10km square (18VR41) that includes the site and general area of this portion of Ottawa were barn swallow, bank swallow, and chimney swift. Bank swallow is a colonial nester; burrowing in eroding silt or sand banks and sand pit walls, habitat not present on or adjacent to the site. The on-site spoil piles are well vegetated and lack the exposed sand in a vertical orientation used by bank swallows. No structures are present on or adjacent to the site that may be used by barn swallow or chimney swift.

No forests are present that may be used by eastern whip-poor-will, and butternut was not observed. Blanding's turtle, and three bat species (little brown bat, eastern small-footed myotis and northern long-eared bat) are other potential Species at Risk in the region. No wetland habitat is present on or adjacent to the site that may be used by Blanding's turtle. The Clarke Bellinger Environmental (Stormwater Management) Facility is approximately 130 metres to the south of the southwest site corner but there is no wetland habitat on or to the west, north, or east of the site to which a turtle may transverse the site to reach from the reservoir. Blanding's turtle was not recorded for the overall 10 km square 18VR41 in the Ontario Reptile and Amphibian Atlas. Only one suitable cavity tree, a 37cm dbh white ash in the southwest portion of the overall site and impacted by emerald ash borer, was observed for potential bat summer maternity sites, far less than the 10 potential cavity trees per hectare required by the Ministry for additional surveys. Regardless, this tree in the southwest portion of the overall site is not proposed for removal at this time and mitigation measures are presented below if the cavity tree must be removed.

The potential Species at Risk reported for the overall City of Ottawa historically and their habitat requirements were also reviewed, including butternut, American ginseng, eastern prairie fringed-orchid, wood turtle, spiny softshell, Blanding's turtle, musk turtle, Henslow's sparrow, loggerhead shrike, eastern meadowlark, barn swallow, bobolink, whip-poor-will, bald eagle, golden eagle, least bittern, little brown bat, eastern small-footed myotis, northern long-eared bat, olive hickorynut, eastern cougar, common gray fox, lake sturgeon, cerulean warbler and American eel. The habitat requirements of these species along with those listed as special concern were reviewed. Except for butternut, eastern meadowlark, or bobolink, no specific habitat characteristics related to these potential Species at Risk were observed on or adjacent to the site. No butternut, an endangered Species at Risk but often found in many areas of eastern Ontario, was observed on or adjacent to the site.

### ***Significant Woodlands and Wildlife Habitat***

There are no forests on or contiguous with the site on adjacent lands. The closest forests that may be considered significant woodlands are approximately 110 metres to the south of the southwest site corner.

The potential for significant wildlife habitat was assessed using the guidance in OMNR (2010) and MNR (2015). No flora, fauna or ecological conditions identified in the background review or field survey that would trigger a Significant Wildlife Habitat designation with respect to the ELC communities present were observed on the site. For example, the cultural habitats do not support waterfowl stopover or staging areas, colonial nesting bird breeding habitat or other



examples of seasonal concentration areas, rare vegetation communities as noted in MNRF (2015), or rare or specialized habitats including seeps or springs.

No forest interior habitat is present and thus potential nesting of species of special concern such as wood thrush and eastern wood-pewee is not expected. No evidence of raptor wintering areas was noted and old growth forests are not present. Areas of broken and fissured rock for potential use by snakes were not observed.

The site is isolated from an environmental perspective by the adjacent industrial development and agricultural lands. An existing residential development is to the east, with the Rideau River corridor further to the east, about 550 metres from the east site edge.

### ***Impact Analysis and Recommendations***

#### Species at Risk and other Significant Natural Heritage Features

The Species at Risk with the potential to utilize the habitat on or adjacent to the site are butternut, with bobolink and eastern meadowlark to the north. No butternuts were observed on or within 50 metres of the site. Eastern meadowlark and bobolink may utilize the hayfield to the north for nesting. Lands to the north of the site will not be impacted and thus the construction and operation associated with site development will not impact the ability of these grassland birds to nest to the north of the site. No nesting of these avian grassland Species at Risk was observed in the south portion of the site.

No significant natural heritage features, as defined in the Provincial Policy Statement, were observed on the site. The channel approximately 60 metres to the west of the site leads to the Clarke Bellingier Environmental (Stormwater Management) Facility and likely supports direct fish habitat. The maximum required setback distance from the channel would be 30 metres, with the site a greater distance to the east.

The site is dominated by a cultivated field in the north portion and former agricultural lands in the south. A few small treed areas are present, with a handful of older bur oak present in the southwest site edge.

#### Tree Retention

Due to the adjacent roads and fields there are no adjacent trees with critical root zones that would extend onto the site. Where possible tree retention should be considered for healthy trees of desirable species such as bur oak and basswood along and adjacent to the site perimeter and Map 2 shows trees that will be retained at this time. Some of these trees may be removed in the future if additional development occurs on the site.

#### Schedule of Proposed Works

It is proposed to remove the trees not identified for retention at this time later in 2021 after the bird nesting period. A Tree Cut Permit will be required for all tree removal greater than 10cm dbh. No City owned or co-owned trees are anticipated to be removed or impacted.

The following mitigation will protect the limited natural heritage features on the site and adjacent lands and the environment in general.

1. Trees to be retained are to be protected with sturdy temporary fencing at least 1.3 metres in height installed from the tree trunk a minimum distance of ten times the retained tree diameter (the critical root zone). Signs, notices or posters are not to be attached to any tree. No grading, heavy machinery traffic, stockpiling of material, machinery maintenance and refueling or other activities that may cause soil compaction to occur within five metres of the critical root zone of the trees to be retained and protected. The root system, trunk or branches of the trees to be retained are to be protected and not damaged. If any roots of trees to be retained are exposed during site alterations, the roots shall be immediately reburied with soil or covered with filter cloth, burlap or woodchips and kept moist until the roots can be buried permanently. A covering of plastic should be used to retain moisture during an extended period when watering may not be possible. Any roots that must be cut are to be cut cleanly to facilitate healing and as far from the tree as possible. Exhaust fumes from all equipment during construction will not be directed towards the canopy of retained trees.

All of the supports and bracing for the protective fencing should be placed outside of the protected area and should be installed in such a way as to minimize root damage. Also, since the desired effect of the barrier is to prevent construction traffic from entering the trees critical root zone, the barrier should be kept in place until all construction has been completed. Where lower branches of retained trees may be damaged by construction, the branches are to be removed by a qualified arborist prior to construction.

2. To protect breeding birds, no tree or shrub removal should occur between April 15<sup>th</sup> and August 15<sup>th</sup>, unless a breeding bird survey conducted by a qualified biologist within five days of the woody vegetation removal identifies no active nests in the trees or shrubs. No stick nests or other evidence of raptor utilization was observed on or adjacent to the site. In addition, if the ash tree with potential wildlife cavities in the southwest corner of the site is to be removed, the tree should be removed in April or late August to end of October to ensure wildlife that may be using the cavities are not impacted;
3. The City's Bird-Safe Design Guidelines (City of Ottawa, 2020) are to be incorporated into the building design and also be addressed during the construction, and operational phases of this project. This will involve treating glass to make it more visible as a barrier to birds through minimizing the transparency and reflectivity of glazing, eliminating design traps such as glass passageways or corners that are invisible to birds, designing landscaping to reduce the risk of collisions, designing and managing exterior lighting to minimize impacts on night migrating or nocturnal birds, and turning off or minimizing interior lighting, especially during spring and fall migration periods (City of Ottawa, 2020). The site's location in the general vicinity of the Rideau River corridor may increase the potential for bird strikes;

4. Contractors are to be aware of potential Species at Risk in the vicinity of the site including bobolink, eastern meadowlark, and butternut. Appendix 1 of City of Ottawa (2015) describes these species. Any Species at Risk sightings are to be immediately reported to the project manager, project biologist (Bernie Muncaster (613-748-3753)), and the Ministry of the Environment, Conservation and Parks. Activities are to be modified to avoid impacts on the species and its habitat until further direction is received from the Ministry;
5. As recommended in City of Ottawa (2015), prior to beginning work each day, vulnerable wildlife is to be checked for by conducting a thorough visual inspection of the work space and immediate surroundings. See Section 2.5 of City of Ottawa (2015) for additional recommendations on construction site management with respect to wildlife. Any turtles, snakes, or other sensitive wildlife in the work area are to be relocated to the south of the site, south of Bill Leatham Drive. Animals should be moved only far enough to ensure their immediate safety. Species at Risk can only be relocated by trained staff. See Appendix 1 and the links in Section 4 of City of Ottawa (2015) for suggestions on how to effectively relocate turtles and snakes;
6. The extent of exposed soils shall be kept to a minimum at all times. Re-vegetation of exposed, non-developed areas shall be achieved as soon as possible. Tree removal is to be minimized as much as possible;
7. The objective with respect to erosion and sediment controls will be to ensure that the surface water runoff leaving the site is not degraded with respect to water quantity or quality. Erosion and sediment control will focus on best management practices such as grassed swales with a reduced slope and direction of roof and rear yard runoff to the vegetated rear of the lots. During construction many sediment and erosion control measures will be implemented including filtering of any groundwater pumped prior to release to the environment, properly installed and maintained silt fencing, seepage barriers deployed in any temporary drainage ditches, and filter clothes on open surface structures until these structures are fully functional. These control measures must be properly maintained, including repair of broken panels and removal of accumulated sediment, to maximize their function during construction. All silt fencing must be removed once construction is complete and the site is stabilized;
8. To discourage wildlife from entering the work area during construction, the site should be kept clear of food wastes and other garbage, and proper drainage provided to avoid accumulation of standing water, which could attract amphibians, birds, and other wildlife to the work area;
9. Municipal by-laws and provincial regulations for noise will be followed and utilities will be located as required in the vicinity of the site prior to construction;
10. Waste will be managed in accordance with provincial regulations. The contractor will have a spill kit on-hand at all times in case of spills or other accidents; and,

11. Tree and shrub plantings are to be native and of local origin and seed stock to give the best opportunity for success. A mix of coniferous and deciduous species such as sugar maple, red maple, white spruce, white pine, red oak, basswood, native dogwoods, and nannyberry are recommended. Tree planting should be emphasized in the west and south adjacent lands of parking areas and buildings to maximizing shading. If clay soils are present, tree planting should be limited to trees with low water demand. Tree species to avoid in this situation include poplars, willows, and Manitoba maple.

### ***Conclusion***

The site is dominated by existing and former agricultural fields with no Species at Risk utilization or other significant natural heritage features, as identified in the Provincial Policy Statement, observed. Scattered trees are along portions of the site periphery and in the southwest portion. At this time the vast majority of trees will be retained. No co-owned or adjacent trees were observed.

This report concludes that there are no significant natural heritage features on the site and providing the above important mitigation measures are properly implemented, no negative impacts, as defined in the Provincial Policy Statement, will occur on the local natural environment as a result of the proposed development.

### ***References***

City of Ottawa. 2015. Protocol for Wildlife Protection during Construction. August, 2015. 14 pp & Append.

City of Ottawa. 2020. Bird-Safe Design Guidelines. September, 2020. 24 pp & Append

Muncaster, B.W. and D.F. Brunton. 2005. Urban Natural Areas Environmental Evaluation Study. Prepared for the City of Ottawa.

Ontario Ministry of Natural Resources. 2010. Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005. 2<sup>nd</sup> Edition. March 2010. 233 pp.

Ontario Ministry of Natural Resources and Forestry. 2015. Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E. January, 2015. 38 pp.

Please call if you have any questions on this TCR and EIS.

Yours Sincerely,  
**MUNCASTER ENVIRONMENTAL PLANNING INC.**

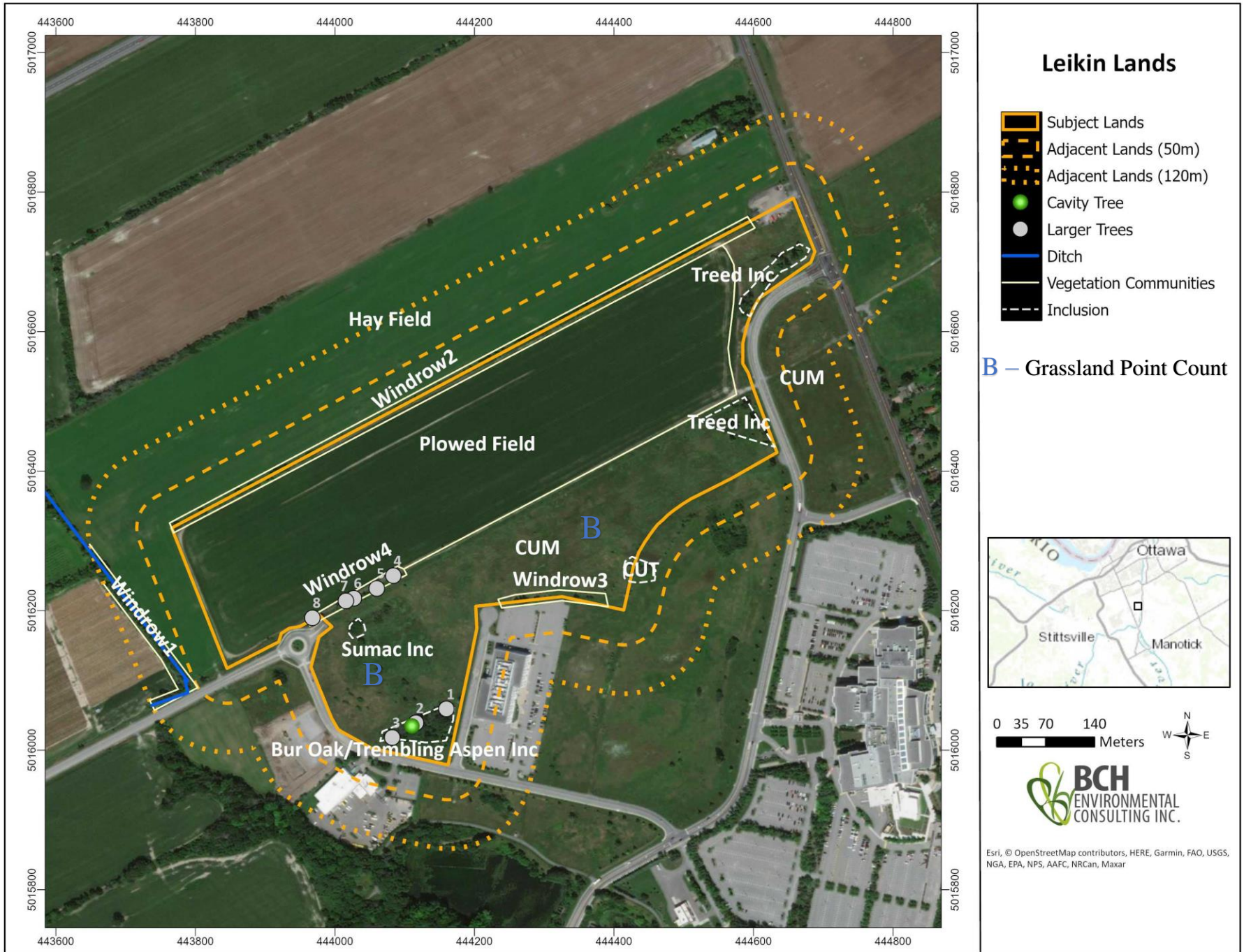


Bernie Muncaster, M.Sc.

Principal

\\Leikin EIS TCR

# MAP 1 – SITE and ADJACENT LANDS –NATURAL ENVIRONMENT FEATURES



MAP 2 – SITE PLAN and INITIAL POTENTIAL TREE RETENTION



 Potential Tree Retention  
(at this time)