



Muncaster
Environmental
Planning Inc.

January 12, 2021

Mr. Pierre Dufresne
Vice-President, Land Development
Tartan Homes Limited
237 Somerset Street West
Ottawa, Ontario
K2P 0J3

Dear Pierre:

RE: White Lake Road Site
Environmental Impact Study

This Environmental Impact Study (EIS) assesses a proposed residential development in the southwest portion of the Town of Arnprior. The 14.7 hectare site is in the Madawaska River watershed, on the east side of White Lake Road, between Van Dusen Drive to the south and Bev Shaw Parkway to the north.

For the purposes of this report, White Lake Road is considered to be in a north-south alignment.

Background and Proposed Subdivision

Land use in the vicinity of the site is variable, including residential communities to the east, commercial operations and the Highway 417 corridor to the north, a regional airport to the east, and agricultural operations to the south and southwest. No environmental protection areas are shown in the vicinity of the site on Schedule A – Map 1 of the County of Renfrew Official Plan and no natural heritage features are on or adjacent to the site, as shown on Schedule B – Map 4 of the County Official Plan. A small linear ‘wooded area’ is shown in the west portion of the site on Schedule C, Natural Hazards and Heritage Areas, of the Town of Arnprior Official Plan. No Environmental Protection Areas, Wetlands, Parks and Open Space Areas, Natural Heritage Areas, or Significant Woodlands, as defined in the Town Official Plan, are on or in the vicinity of the site.

One-hundred and thirty-eight single detached residences, 22 semis, and 112 townhouses, for a total of 272 residential units, are proposed for the site. The detached residences will be in the central and east portions of the site, with townhomes and semi-detached units proposed for the west portion, east of White Lake Road (Figure 2). The detached lots have frontages between 12 and 15.5 metres, with depths in the range of 31.5 metres. A 0.7 hectare park is proposed for the northeast portion of the site. There will be no access off White Lake Road, with a new road connecting Van Dusen Drive and Bev Shaw Parkway and internal crescents off this new road (see Draft Plan of Subdivision, shown as Figure 2 at the end of this EIS). The development will

be on full municipal services, including stormwater treated in a stormwater management pond to the east of the site (NOVATECH, 2020). The stormwater pond will provide water quantity control for all flow in excess of pre-development conditions and water quality control equivalent to an 'Enhanced' level of protection corresponding to a minimum 80% long-term total suspended sediment removal with at least 90% of the total rainfall being captured and treated, prior to releasing flows from the site. An existing dug pond for the driving range operation will be filled in.

Methodology

This EIS was prepared in accordance with Section 2.2 (23) of the County Official Plan and Section D1.10.2 of the Town Official Plan, with guidance from the Natural Heritage Reference Manual (OMNR, 2010).

The major objective of this EIS is to determine the value and sensitivity of the feature and functions of the on-site and adjacent natural environment conditions, and to assess the anticipated impacts associated with the proposed residential development on these features and functions to assess potential negative impacts and as required to develop mitigation measures to avoid or lessen the impacts. The analysis will include the potential for Species at Risk utilization on and adjacent to the site.

The following items were identified for particular attention in this EIS, recognizing that many of these issues are interrelated:

- what are the terrestrial habitat features of the site and adjacent lands and the associated sensitivities?;
- is there any aquatic habitat potential on or adjacent to the site?;
- what are the recommended areas of tree retention and other mitigation measures to ensure no unacceptable impacts on any significant natural heritage features? and,
- does the site support any other natural heritage features, including Species at Risk, that should be considered in development of the site?

Colour aerial photography (2005 - 2020) 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 on August 26th, 2020 from 10:45 to 13:05. Weather conditions during the August survey included sunny skies, a light to moderate breeze, and a temperature of 22° C.

The field survey and this report were completed by Bernie Muncaster, who has a Master's of Science in Biology and over thirty-two years of experience in completing natural environment assessments. Michelle Muncaster assisted with the field survey.

Existing Conditions

The site includes a driving range, and associated office, dug pond, and surface parking in the north half and an agricultural field in the south half, with a single-family residence and large mowed amenity area in the southwest portion of the site.

NOVATECH (2020) noted the surface elevations are between 106 and 108.6 metres above sea level, with a gentle slope to the northeast. Paterson (2020) described the soils as generally silty clay deposits below a combination of topsoil and fill up to 0.8 metres in thickness. The fill was described by Paterson (2020) as a brown sand with gravel to a silty clay with sand and/or gravel.

Paterson (2020) described the bedrock, based on available geological mapping, as marble in the west portion of the site and dolomite of the Oxford formation in the east portion. Paterson (2020) report the overburden drift thicknesses as varying from approximately ten to thirty metres deep across the site. Paterson (2020) anticipated the long-term groundwater level to be between five and six metres below ground surface.

As indicated above, a pond is on the driving range lands east of the parking lot east of White Lake Road (Photo 1). The pond is approximately 110 metres in length, with an area of about 0.25 hectares and appears to be dug, with no obvious inlet or outlet.

Potential swales supporting aquatic habitat were reviewed, including along the east edge and north site edges and an east-west channel between an agricultural field and the driving range (Photo 2). Some wetland vegetation (broad-leaved cattail, purple loosestrife, reed canary grass) was noted in the swales but the lack of a defined low flow channel or other aquatic habitat features and presence of woody vegetation and upland ground flora through the swales in areas indicates there is no direct aquatic habitat potential in the swales. Also, the east-west channel does not connect to the west-east roadside ditch on the east side of White Lake Road (Photo 3).

The roadside ditch on the east side of White Lake Road was thick with cattails in late August (Photo 4). Standing water was present in the ditch but no flow was noted and no well-defined low flow channel was observed. In the spring, flow in the ditch likely continues north towards the highway interchange but it does not appear to be connected to any aquatic features of note.

Agricultural Field

An approximately four-hectare agricultural field, ploughed in the fall of 2020 (Photo 5), dominates the south half of the site. Meadow vegetation along the field edges includes common brome grass, June meadow grass, yellow rocket, cow vetch, wild carrot, and white clover.

Cultural Meadows

The driving range appears to be continued to be mowed (Photo 6), and is dominated by ground flora such as June meadow grass, bluegrass, red clover, chicory, common yarrow, tufted vetch, common ragweed, common dandelion, wild carrot, and field sow-thistle.

Scattered trees along the east edge of the site include white elm and green ash up to 15cm diameter at breast height (dbh) and crack willow with individual stems up to 38cm dbh.

A crimson maple and white pines are in the front yard of the residence to the northeast of the intersection of White Lake Road and Van Dusen Drive. A 30cm dbh basswood and smaller apple trees are also in this open area east of White Lake Road. White pines up to 55cm dbh are

scattered around the closed driving range office (Photos 7 and 8), with smaller white spruce and Colorado spruce. Trees around the pond between the driving range field and parking lot south off White Lake Road include a mature weeping willow and smaller white ash, bur oak, Colorado spruce, and white pine. Many of the white ash were in poor condition with dead branches.

A mature (75cm dbh) eastern cottonwood (Photo 9) is in a mowed area between the north-south hedgerow described below and White Lake Road.

Deciduous Hedgerow

A deciduous hedgerow is along the south edge of the agricultural field, immediately to the north of Van Dusen Drive. Trembling aspen and bur oak are dominant in the hedgerow, with the largest trees bur oaks in the 35cm dbh range. Smaller white elm and green ash are also present. Many of the poplar and elm appeared dead or in poor condition with very little leaf-out. Hawthorn and red-osier dogwood shrubs are among the hedgerow trees, along with regenerating stems of poplar and bur oak.

A north-south deciduous hedgerow is in the southwest portion of the site, about 25 metres south of White Lake Road. Bur oak up to 40cm dbh are dominant, with white ash, white elm, and trembling aspen also present. Most of the white ash were dead or in poor condition. Hawthorn, common buckthorn, and red-osier dogwood shrubs are among these hedgerow trees, with regenerating poplar stems also noted.

Wildlife

Wildlife observed during the August field survey included ring-billed gull, sharp-shinned hawk, turkey vulture, American crow, mourning dove, American robin, American goldfinch, red-winged blackbird, and grey squirrel. A painted turtle was observed sunning on a log at the edge of the dug pond in the northwest portion of the site.



*Photo 1 – Dug pond between the driving range and White Lake Road.
View looking northeast*



*Photo 2 - Swale between the driving range and the agricultural field.
View looking west*



Photo 3 – No connection is present between the west edge of the central east-west swale and the roadside ditch on the east side of White Lake Road. View looking west to the road



*Photo 4 –Roadside ditch on the west side of White Lake Road.
View looking south from the north access to the driving range parking lot*



Photo 5 – Ploughed field in the south portion of the site. View looking northwest from the southeast corner of the field



Photo 6 – Driving range in the north portion of the site. View looking northwest from the southeast portion of the driving range



Photo 7 – A 55cm dbh white pine and smaller white spruce on the west side of the driving range office. View looking east



Photo 8 – A mature white pine in the west-central portion of the site. View looking east



*Photo 9 – A mature (75cm dbh) eastern cottonwood in a mowed area east of White Lake Road.
View looking southwest*

Species at Risk

No 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 (18UR93 – 20 and 18UR92 - 29). No Species at Risk were reported for these squares.

Six Species at Risk, chimney swift, eastern whip-poor-will, barn swallow, bank swallow, eastern meadowlark and bobolink, are identified in the Ontario Breeding Bird Atlas for the overall 10 km squares (18UR92 and 18UR93) including the site and general area. Eastern meadowlark and bobolink utilize larger grassland areas such as hayfields for nesting. The cultivated field does not represent potential nesting habitat for these grassland species, but aerial photography suggests the field was once a hayfield. Regardless, at four hectares and with no interior habitat the field is likely not suitable potential habitat even if it was being used as a hayfield (the General Habitat Description of these species indicate a minimum grassland size of five hectares for successful nesting). No structures or suitable habitat appear present on or adjacent to the site for barn swallow or bank swallow. Eastern whip-poor-will utilize rock or sand barrens with scattered trees, savannahs, old burns or other disturbed sites in a state of early to mid-forest succession, or open conifer plantations, habitat not present on or adjacent to the site.

In addition, butternut and three bat species (little brown bat, eastern small-footed myotis and northern long-eared bat), are often considered potential Species at Risk in the general area. Although found in a range of habitats in eastern Ontario no butternuts were observed on or adjacent to the site. Suitable cavity trees were also not observed for potential bat summer maternity sites. There is no adjacent wetland habitat associated with the dug pond and thus no suitable wetland habitat is considered present for Blanding's turtle.

In summary, except for butternut no specific habitat characteristics related to these potential Species at Risk were observed on or adjacent to the lands site. As indicated above, no butternut was observed on or adjacent to the site.

Significant Woodlands and Wildlife Habitat

There are no forests present on or adjacent to the site and thus there is no potential for significant woodlands.

The potential for significant wildlife habitat is assessed using the guidance in OMNR (2010) and MNRF (2015). No criteria for a significant wildlife habitat designation were observed on or adjacent to the site. For example, forests to support raptor wintering areas, old growth, and forest interior habitat are not present. Areas of broken and fissured rock for potential use by snakes are not present, along with no natural wetland habitat. The cultural habitats do not support waterfowl stopover or staging areas, colonial nesting bird breeding habitat or other examples of seasonal concentration areas. No rare vegetation communities as noted in MNRF (2015) or rare or specialized habitat including seeps or springs are on the site.

Impact Analysis and Recommendations

The site is dominated by disturbed habitat, including an agricultural field, golf driving range, a residence with a large mowed amenity area, and a parking lot and office associated with the driving range. Deciduous hedgerows, and scattered coniferous and deciduous trees are also present. No significant natural heritage features, as identified in the Provincial Policy Statement, were observed on or adjacent to the site. The features not observed include significant woodlands, significant wildlife habitat, natural direct fish and aquatic habitat, significant wetlands, significant valleylands, or Areas of Natural and Scientific Interest. Due the land use in the vicinity of the site, including residential communities to the west, commercial operations and the Highway 417 corridor to the north, a regional airport to the east, and agricultural operations to the south and southwest, there are no linkages of note to natural areas further from the site.

Where grading, drainage, and other servicing constraints permit, some tree retention should be considered for the more desirable bur oaks in better condition in portions of the west deciduous hedgerow. It is not anticipated that the trees in the west-central portion of the site can be retained due to the density of the proposed urban residential development, grading requirements, and the tree locations away from the site periphery. NOVATECH (2020) note that the elevation of the proposed outlet ditch will require significant on-site grade raises to provide adequate cover on storm sewers. This will impact the potential for on-site tree retention. Due to the adjacent roads and fields, there are no co-owned trees or adjacent trees with critical root zones extending

onto the site. Tree removal is to be minimized as much as possible, and only following the mitigation measures delineated below.

Trees and shrubs 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 trees to be retained.

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 site servicing and house construction has been completed.

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, tamarack, white spruce, white pine, red oak, basswood, native dogwoods and nannyberry are recommended.

Summary of Mitigation Measures

The following is a summary of all recommendations and conditions to implement the mitigative measures:

1. 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;
2. 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;

3. Prior to filling in the dug pond associated with the driving range, water is to be mostly drained from the pond and any fish, turtles or other sensitive wildlife in the pond relocated by qualified biologist to the Madawaska River corridor to the east. It is important that the screening on any dewatering pumps is fine enough to prevent fish from being sucked into the pumps. A fish collector's permit will be required from MNRF for the relocation of stranded fish. A minimum of three weeks should be allowed to obtain this permit;
4. The contractor is to be aware of potential Species at Risk in the vicinity of the site including butternut. The project biologist is Bernie Muncaster (613-748-3753). Any Species at Risk sightings are to be immediately reported to him and the Ministry of the Environment, Conservation and Parks and activities modified to avoid impacts until further direction is provided by the Ministry;
5. To protect breeding birds, no tree or shrub removal should occur between May 1st and July 31st, 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 on the site was observed;
6. Trees and shrubs 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, also known as the critical root zone. Additional tree protection measures are provided above;
7. To discourage wildlife from entering the work areas 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 areas;
8. 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; and,
9. 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.

Cumulative Effects and Conclusion

An urban residential development of 138 single detached residences, 22 semis, and 112 townhouses, for a total of 272 residential units, is proposed for the site.

No significant natural heritage features, as identified in the Provincial Policy Statement, were observed on or adjacent to the site, and none are mapped on Schedule B – Map 4 of the County of Renfrew Official Plan. No environmental protection areas are shown in the vicinity of the site on Schedule A – Map 1 of the County Official Plan. No Environmental Protection Areas,

Wetlands, Parks and Open Space Areas, Natural Heritage Areas, or Significant Woodlands, as defined in the Town Official Plan, are on or in the vicinity of the site.

The site is currently disturbed from a natural heritage perspective by a driving range and associated surface parking and office in the north portion and an agricultural field and residence with a large mowed amenity area in the south half. Due to the disturbed site and lack of connection between the site and natural areas, no significant cumulative effects on the regional landscape are anticipated in association with development of the site as proposed.

Some tree cover is along the south site edge and in the west-central portion. Where grading, drainage, and other servicing requirements permit, consideration should be given to retaining a representative of these trees in better condition and of more desirable species such as the oaks and conifers. Planting of native trees of local stock in the park and other areas will also assist in replacing the loss of local wildlife habitat, and aesthetic, natural appreciation, and climate benefits associated with the existing trees.

This Environmental Impact Study concludes that the proposed urban residential development will avoid negative impacts, as defined in the Provincial Policy Statement, on significant natural heritage features and functions. Important mitigation and avoidance measures are provided in the report to protect the on-site and adjacent features and functions and the environment in general. This EIS further concludes that the net impacts of the proposed development and associated site alterations, following proper implementation of the recommended mitigation measures, are not anticipated to be negative, and the development proposal is consistent with the intent of the Provincial Policy Statement and the policies in the County and Town Official Plans.

References

County of Renfrew. 2020. County of Renfrew Official Plan. March 26, 2020. 207 pp & Schedules

Ontario Ministry of Natural Resources. 2010. Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005. 2nd 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.

NOVATECH. 2020. Serviceability & Stormwater Management Report. Proposed Residential Development - 640 White Lake Road and Van Dusen Drive, Arnprior, ON. Report No.: R-2020-144, Novatech File No. 120051. December 14, 2020. 13 pp & append.

Paterson Group. 2020. Preliminary Geotechnical Investigation, Proposed Residential Development White Lake Road Lands, Arnprior, Ontario. August 26, 2020. Report: PG5429-1. 17 pp & append.

Town of Arnprior. 2017. Town of Arnprior Official Plan. June 16, 2017. 103 pp & Schedules

Please call if you have any questions on this Environmental Impact Study.

Yours Sincerely,
MUNCASTER ENVIRONMENTAL PLANNING INC.



Bernie Muncaster, M.Sc.
Principal





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Legend

-  Site
-  Vegetation Communities

Vegetation Communities

-  Cultural meadow
-  Cultural meadow (driving range)
-  Agricultural field
-  Deciduous hedgerow



Approx. Scale 1:3,800



Figure 1

FILE: 20 - 25

September 4, 2020

NATURAL ENVIRONMENT FEATURES

**White Lake Road Site
Arnprior, County of Renfrew**

Prepared for: Tartan Homes Limited

Prepared by:



Muncaster
Environmental
Planning Inc.

FIGURE 2 – DRAFT PLAN of SUBDIVISION

