



Environmental Assessments & Approvals

August 19, 2022

AEC15-010

Lake Simcoe Region Conservation Authority
c/o Shawn Filson, Planner 2
120 Bayview Parkway
Newmarket, ON L3Y 3W3

Re: **Environmental Impact Study Addendum #1 to LSRCA First Submission
Natural Heritage Review, 70 Pioneer Trail - Barrie (APID: 4264223)**

Dear Mr. Filson:

Azimuth Environmental Consulting, Inc. (Azimuth) has reviewed the Lake Simcoe Region Conservation Authority (LSRCA) First Submission Natural Heritage Review for 70 Pioneer Trail - Barrie (APID: 426223) dated June 10, 2022. The response matrix received from LSRCA was prepared with regard for the Environmental Impact Study (EIS) - 70 Pioneer Trail, City of Barrie (February 2, 2022) prepared by Azimuth, the Tree Inventory, Analysis and Preservation Report (TIAP)(January 31, 2022) prepared by Landmark Environmental Group Ltd. (Landmark), and Landscape Drawing Package (LP)(January 24, 2022) also prepared by Landmark. Several comments also refer to the Grading Plan and other engineering drawings prepared by The Jones Consulting Group Ltd. (Jones).

The responses below constitute EIS Addendum #1 and should be considered in conjunction with the content of the initial EIS submission dated February 2, 2022. The responses were prepared with regard for natural heritage technical review comments pertaining to Azimuth's EIS submission (February 2, 2022). Where LSRCA comments apply to materials prepared by Jones or Landmark, responses can be found in the attached LSRCA comment matrix. Supplementary materials (*e.g.* updated Grading Plan, Edge Management Plan) referenced in Jones or Landmark responses are available under a separate cover. All updated supplementary materials pertaining to Azimuth's EIS submission (Figures 2a, 2b, 3a, 3b, 4a, and 4b) are attached to this EIS Addendum.

Azimuth Response to LSRCA Comment NHI:

Figure 2 and Figure 3 (attached) have been updated to illustrate Unevaluated Wetlands mapped by the Ministry of Natural Resources and Forestry (MNRF).



For rationale related to the proposed woodland and wetland Vegetation Protection Zones (VPZs), refer to response NH6 below.

Jones Response to LSRCA Comment NH2:

Jones response available in LSRCA Natural Heritage Review comment matrix (attached).

Azimuth Response to LSRCA Comment NH3:

Section 7.1.1 of the EIS demonstrates that removal of 38 snag trees (of 68 mapped within property boundary) are not anticipated to negatively impact potential bat roosting habitat due to the limited removal of potential habitat trees relative to the overall woodland features (392 ha). The EIS confirms that this approach is consistent with Ministry of the Environment, Conservation and Parks (MECP) direction included in Appendix C of the report, and is in accordance with Azimuth's understanding regarding the interpretation of potential impacts to bats when habitat quantity is not limiting.

The MECP has recently provided Azimuth with direction that the agency no longer issues Letters of Advice (LOAs) with respect to proposed development activities. It is the responsibility of project proponents to ensure that the proposed activity is not occurring in contravention of the ESA, including Section 9 and Section 10 that afford individual and habitat protection, respectively, to species listed as Threatened or Endangered under the Act. The roles and responsibilities of project proponents and the MECP are outlined in the Draft Client's Guide to Preliminary Screening for SAR (MECP, 2019), which advises that the client should first consider whether a proposed activity is likely to contravene the *Endangered Species Act, 2007* (ESA) prior to contacting the MECP for advice.

Preliminary consultation with MECP provided clarity regarding the appropriateness of the approach detailed above, and it is Azimuth's opinion that potential impacts to bat habitat have been suitably addressed in the EIS submission. As such, it is our opinion that it is not necessary to contact MECP for additional guidance.

Azimuth Response to LSRCA Comment NH4:

Figure 4a has been updated to show woodland interior within the overall woodland feature (392ha), occupying approximately 53.27ha within the overall feature limits. An additional figure has been prepared (Figure 4b) to illustrate where woodland interior habitat will be reduced beyond the southern property limit. Based on minor woodland removals and associated woodland interior reduction within the overall woodland feature (0.53%), Azimuth's conclusion remains unchanged that the proposed development would



not be anticipated to negatively impact the ecological function of woodland interior within the overall feature.

As shown in Figure 4b and the attached Grading Plan (prepared by Jones), reductions in woodland interior occur beyond the southern property boundary due to necessary access road improvements and widening. It is therefore not feasible to reduce the extent of the development footprint in this location due to site access requirements.

Azimuth Response to LSRCA Comment NH5:

In Azimuth's experience, Red Pine is abundant throughout the City of Barrie and County of Simcoe, noting that the species was historically planted extensively as part of reforestation efforts throughout the region due to its soil stabilizing characteristics.

Although the origin of Red Pine on the property is unknown, the tree or source population was likely planted due to its presence in a peri-urban setting. As such, in Azimuth's opinion it would not be appropriate to assign additional conservation value (e.g. regional rarity status) to Red Pine located within the study area.

Further, Azimuth notes that species designated regionally rare by LSRCA are not afforded additional protections under the Provincial Policy Statement, City of Barrie Official Plan, or other applicable planning policies.

Azimuth Response to LSRCA Comment NH6:

Development limits were determined previously during the OMB approved Official Plan Amendment and Zoning Bylaw Amendment. Through this process provisions for avoidance and minimization of impacts to natural features was considered, resulting in siting of the development footprint within and adjacent to previously disturbed lands associated with previous uses on the property. Block 116 (refer to Plan of Condominium) was further dedicated to the City of Barrie as EP lands in recognition of environmental sensitivities associated with the property.

Azimuth's EIS concludes (see Section 9.0 of the EIS for summary) that the proposed development will not result in a negative impact to Key Natural Heritage Features and their ecological functions, providing a suitable mitigation program (outlined in Section 8.0 of the EIS) is followed.

Based on the above, it is Azimuth's opinion that the proposed development has considered LSRCA's mitigation hierarchy including avoidance, minimization, and mitigation of negative environmental impacts and is therefore a suitable candidate for



compensation to achieve a net gain in natural heritage value with respect to proposed woodland removals.

As shown in Figure 3a, direct woodland removals of 2.10ha and removals within a 5m woodland VPZ of 0.31ha will be necessary to accommodate the proposed development. Note that the direct removals calculation has been revised since the previous EIS submission (February 2, 2022) due to Grading Plan revisions.

A 5m woodland VPZ has been recommended in recognition of recent anthropogenic land uses within the entirety of the VPZ and presence within an urban setting. Woodland/wetland and/or VPZ removals are not illustrated in Figure 3b associated with the watermain looping, as all works will occur beneath the existing woodland canopy on an established earthen footpath to be restored to its pre-construction state after watermain installation, and as such impacts will be temporary in nature.

It is our understanding that the proponent prefers to pursue a Cash-in-Lieu option to achieve net ecological gains in accordance with Section 3.3.3 of LSRCA's Ecological Offsetting Policy (EOS). The proponent will engage with LSRCA regarding ecological offsetting of 2.10ha of direct woodland removals + 0.31ha of 5m VPZ removals, as outlined in Appendix D of LSRCA's EOS.

Landmark Response to LSRCA Comment NH7:

Landmark response available in LSRCA Natural Heritage Review comment matrix (attached).

Landmark Response to LSRCA Comment NH8:

Landmark response available in LSRCA Natural Heritage Review comment matrix (attached).

Jones Response to LSRCA Comment NH9:

Jones response available in LSRCA Natural Heritage Review comment matrix (attached).

Jones Response to LSRCA Comment NH10:

Jones response available in LSRCA Natural Heritage Review comment matrix (attached).

Azimuth Response to LSRCA Comment NH11:

The Grading Plan has been updated to address the "existing intermittent watercourse" drainage to clarify arrows should be characterized as "direction of overland flow". The label included on the previous version was not intended to suggest a drainage feature or



associated ecological functions such as fish habitat are present. During preparation of the EIS, drainage in this area was limited to intermittent overland flow with no associated swale or channel formation.

Azimuth Response to LSRCA Comment NH12:

Section 4.9 of the EIS verifies that the mapped swale along the eastern property boundary was not identified during the field program, rather a gravel boat launch exists in this location atop a tile drainage outlet that emerges directly adjacent to the lakeshore (Photograph 1; Appendix F in EIS). A drainage swale may have historically occurred in this location, however the origin and extent of the feature were not discernible during the site investigation as the feature is entirely covered in substrate.

The mapped Unevaluated Wetland south of the site was observed to occur as an area of vernal pooling beyond the southern property boundary of limited extent (estimated 0.1ha), and was therefore treated as an inclusion within the upland woodland community in accordance with ELC protocols. The feature was observed with a limited hydroperiod, and was dry by late May during all years surveyed. During Azimuth's site investigation the feature was screened 3x (April, May, June) for calling amphibians however only 3 calling Wood Frogs were recorded during the April survey window. Due to the limited ecological function of the feature and absence of key natural heritage designations associated with the unit, it is Azimuth's opinion that further assessment beyond that outlined in the EIS report and this addendum is not warranted, as the minor feature is afforded protection as a component of the retained woodland feature.

Landmark Response to LSRCA Comment NH13:

Landmark response available in LSRCA Natural Heritage Review comment matrix (attached).

Landmark Response to LSRCA Comment NH14:

Landmark response available in LSRCA Natural Heritage Review comment matrix (attached).

Landmark Response to LSRCA Comment NH15:

Landmark response available in LSRCA Natural Heritage Review comment matrix (attached).

Landmark Response to LSRCA Comment NH16:

Landmark response available in LSRCA Natural Heritage Review comment matrix (attached).



Landmark Response to LSRCA Comment NH17:

Landmark response available in LSRCA Natural Heritage Review comment matrix (attached).

Note - Comment NH18 does not exist within the LSRCA comment matrix

Landmark Response to LSRCA Comment NH19:

Landmark response available in LSRCA Natural Heritage Review comment matrix (attached).

Azimuth Response to LSRCA Comment NH20:

Please see attached completed LSRCA comment matrix, in combination with detailed responses provided above.

Azimuth Response to LSRCA Comment NH21:

Noted.

LSRCA should note that during post-submission edge management surveys one (1) additional seedling-stage Butternut was observed in the southern portion of the property. The location of this individual has been added to Figures 2a and 3a.

A Butternut Health Assessment was carried out for the additional stem by Azimuth (Dan Stuart, Butternut Health Expert) on June 10, 2022 and a Butternut Health Assessment report was submitted to the MECP on June 10, 2022. The tree was determined to be Category 2 (“retainable”) and therefore receives protection under the provincial ESA. As per Ontario Regulation (O. Reg.) 830/21 (formerly O. Reg 242/08), removal of the tree is eligible for an ESA exemption through filing of a Notice of Butternut Impact prior to the initiation of site clearance. The proponent will be required to complete an ESA Registration and maintain the required compensatory trees, or contribute to the provincial Species at Risk Conservation Trust as detailed under O. Reg. 829/21.

CONCLUSION

Azimuth is of the opinion that the above responses and attachments adequately address LSRCA’s technical natural heritage review comments regarding Azimuth’s EIS submission for the proposed development. It is our understanding that Landmark and Jones are similarly of the opinion that updates to the TIAP/LP and Grading Plan (respectively) address LSRCA’s technical review comments included in the attached matrix.



Certainly should you have any additional questions or concerns, or wish to discuss further please do not hesitate to contact the undersigned.

Yours truly,
AZIMUTH ENVIRONMENTAL CONSULTING, INC.

Dan Stuart, M.Env.Sc.

Ecology Lead

Attached:

LSRCA First Submission Natural Heritage Review 70 Pioneer Trail - Barrie (APID:426223): June 10, 2022 - Updated

Figure 2a-2b (Environmental Features) - Updated

Figure 3a-3b (Proposed Development) - Updated

Figure 4a (Significant Woodland Area) - Updated

Figure 4b (Woodland Interior Lost to Development)



LSRCA FIRST SUBMISSION NATURAL HERITAGE REVIEW

70 Pioneer Trail – Barrie (APID: 426223)

June 10, 2022

#	Report/ Drawing	Section	Pg#	LSRCA COMMENT (June 10, 2022)	APPLICANT RESPONSE (DATE)
<p>Documents Reviewed: Environmental Impact Study (EIS) – 70 Pioneer Trail, City of Barrie, dated February 2, 2022, prepared by Azimuth Environmental Consulting Inc. Tree Inventory, Analysis and Preservation Report (TIAP), dated and stamped January 31, 2022, prepared by Landmark Environmental Group Ltd. Landscape Drawing Package (LP), dated January 24, 2022, prepared by Landmark Environmental Group Ltd.</p>					
NH1	EIS	General		<p>EIS figures should show unevaluated wetlands as mapped by the NDMNRF, as well as those identified/verified by Azimuth during the field investigations.</p> <p>Please include a figure that shows VPZs to the wetlands and woodlands on and adjacent to the site and watermain looping area.</p>	<p>Figure 2a-2b and Figure 3a-3b have been updated to illustrate Unevaluated Wetlands mapped by MNR.</p> <p>For rationale related to the proposed woodland and wetland VPZs, refer to response NH6 below.</p>
NH2	EIS	6.0		<p>It is unclear what purpose the proposed access road provides, when an existing lake access already exists. Please provide justification for this road and its location within the 30 m VPZ to the Lake Simcoe shoreline.</p>	<p>The access road is provided to allow access should maintenance be required to the outlet headwall and outfall channel to Lake Simcoe. The City had requested this road to allow access to the upstream channel/easement conveying flows from the upstream EP Block to the South. Note that the access road is a grassed surface underlain with granulars to facilitate maintenance activities.</p>
NH3	EIS	7.1.1		<p>It is recommended that the interpretation of impacts to SAR bat habitat and proposed mitigation be confirmed with the MECP to ensure the development does not contravene Section 10 of the Endangered Species Act.</p>	<p>Section 7.1.1 of the EIS demonstrates that removal of 38 snag trees (of 68 mapped within property boundary) are not anticipated to negatively impact potential bat roosting habitat due to the limited removal of potential habitat trees relative to the overall woodland features (392 ha). The EIS confirms that this approach is consistent with MECP direction included in Appendix C of the report, and is in accordance with Azimuth's understanding regarding the interpretation of potential</p>



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June 10, 2022

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					<p>impacts to bats when habitat quantity is not limiting.</p> <p>The MECP has recently provided Azimuth with direction that the agency no longer issues Letters of Advice (LOAs) with respect to proposed development activities. It is the responsibility of project proponents to ensure that the proposed activity is not occurring in contravention of the ESA, including Section 9 and Section 10 that afford individual and habitat protection, respectively, to species listed as Threatened or Endangered under the Act. The roles and responsibilities of project proponents and the MECP are outlined in the Draft Client’s Guide to Preliminary Screening for SAR (MECP, 2019), which advises that the client should first consider whether a proposed activity is likely to contravene the ESA prior to contacting the MECP for advice.</p> <p>Preliminary consultation with MECP provided clarity regarding the appropriateness of the approach detailed above, and it is Azimuth’s opinion that potential impacts to bat habitat have been suitably addressed in the EIS submission. As such, it is our opinion that it is not necessary to contact MECP for additional guidance.</p>
NH4	EIS	7.3.2	24	<p>Please provide a figure to show interior woodland and the anticipated decrease in interior habitat. Woodland removals on the site will result in the loss of 0.38 ha of interior habitat, or 15% of the existing interior habitat (2.49 ha) within the larger woodland. For a woodland of this size, interior woodland habitat is already quite limited, and loss of any kind may result in a negative impact to interior nesting bird species.</p>	<p>Figure 4a has been updated to show woodland interior within the overall woodland feature (392ha), occupying approximately 53.27ha within the overall feature limits. An additional figure has been prepared (Figure 4b) to illustrate where woodland interior habitat will be reduced beyond the southern property limit. Based on minor woodland removals and associated woodland interior reduction within the overall woodland feature</p>



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				Please identify whether opportunities exist to reduce the extent of removals to reduce impacts to interior woodland habitat.	<p>(0.53%), Azimuth’s conclusion remains unchanged that the proposed development would not be anticipated to negatively impact the ecological function of woodland interior within the overall feature.</p> <p>As shown in Figure 4b and the Grading Plan (prepared by Jones), reductions in woodland interior occur beyond the southern property boundary due to necessary access road improvements and widening. It is therefore not feasible to reduce the extent of the development footprint in this location due to site access requirements.</p>
NH5	EIS	7.3.6		Red Pine was noted within the study area and is also listed a regionally rare within the Lake Simcoe Watershed. Please provide additional comment on the impacts anticipated to this species in the context of the site and wider landscape.	<p>In Azimuth’s experience, Red Pine is abundant throughout the City of Barrie and County of Simcoe, noting that the species was historically planted extensively as part of reforestation efforts throughout the region due to its soil stabilizing characteristics.</p> <p>Although the origin of Red Pine on the property is unknown, the tree or source population was likely planted due to its presence in a peri-urban setting. As such, in Azimuth’s opinion it would not be appropriate to assign additional conservation value (e.g. regional rarity status) to Red Pine located within the study area.</p> <p>Further, Azimuth notes that species designated regionally rare by LSRCA are not afforded additional protections under the Provincial Policy Statement, City of Barrie Official Plan, or other applicable planning policies.</p>
NH6	EIS	8.6	32	An Ecological Offsetting Strategy (EOS) is to be completed to the satisfaction of the LSRCA. This includes	Development limits were determined previously during the OMB approved Official Plan Amendment and Zoning



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				<p>demonstrating how the prerequisites for ecological offsetting have been met (e.g., mitigation hierarchy has been followed). The EOS is to employ a 2:1 replacement ratio for woodlands, 3:1 for wetlands, and 1:1 replacement ratio for minimum VPZs to either feature.</p> <p>A supporting figure is required that shows the feature limits, respective VPZs (as per applicable policies), and proposed encroachments into both. Please use the 2021 LSRCA Ecological Offsetting Policy as a guideline for calculating feature replacement and cash-in-lieu requirements.</p>	<p>Bylaw Amendment. Through this process provisions for avoidance and minimization of impacts to natural features was considered, resulting in siting of the development footprint within and adjacent to previously disturbed lands associated with previous uses on the property. Block 116 (refer to Plan of Condominium) was further dedicated to the City of Barrie as EP lands in recognition of environmental sensitivities associated with the property.</p> <p>Azimuth’s EIS concludes (see Section 9.0 of the EIS for summary) that the proposed development will not result in a negative impact to Key Natural Heritage Features and their ecological functions, providing a suitable mitigation program (outlined in Section 8.0 of the EIS) is followed.</p> <p>Based on the above, it is Azimuth’s opinion that the proposed development has considered LSRCA’s mitigation hierarchy including avoidance, minimization, and mitigation of negative environmental impacts and is therefore a suitable candidate for compensation to achieve a net gain in natural heritage value with respect to proposed woodland removals.</p> <p>As shown in Figure 3a, direct woodland removals of 2.10ha and removals within a 5m woodland VPZ of 0.31ha will be necessary to accommodate the proposed development. Note that the direct removals calculation has been revised since the previous EIS submission (February 2, 2022) due to Grading Plan revisions.</p>



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					<p>A 5m woodland VPZ has been recommended in recognition of recent anthropogenic land uses within the entirety of the VPZ and presence within an urban setting. Woodland/wetland and/or VPZ removals are not illustrated in Figure 3b associated with the watermain looping, as all works will occur beneath the existing woodland canopy on an established earthen footpath to be restored to its pre-construction state after watermain installation, and as such impacts will be temporary in nature.</p> <p>It is our understanding that the proponent prefers to pursue a Cash-in-Lieu option to achieve net ecological gains in accordance with Section 3.3.3 of LSRCA's EOS. The proponent will engage with LSRCA regarding ecological offsetting of 2.10ha of direct woodland removals + 0.31ha of 5m VPZ removals, as outlined in Appendix D of LSRCA's EOS.</p>
NH7	EIS	8.6 / 8.7		<p>The proposed woodland removals will result in the creation of a new woodland edge. An edge management plan / restoration plan consisting of native trees and shrubs is required to mitigate impacts to trees along the new edge. These plantings should be provided within the proposed 5 m buffer.</p>	<p>Addressed.</p> <p>Please refer to L-5, Edge Management Planting Plan & Plant List and see LD-2 for sapling planting detail.</p>
NH8	EIS	8.8		<p>Please demonstrate how LSPP 6.4-DP, 6.33-DP and LSPP 6.34-DP have been satisfied.</p> <p>Plantings are to be provided within the 30 m VPZ to Lake Simcoe to enhance the buffer area and address existing erosion as noted in Section 4.9 and shown in Photograph 6 (Appendix F).</p>	<p>Addressed.</p> <p>Native tree & shrub plantings are proposed in the 30m VPZ. For the existing erosion area, hydroseeding with native grass seed (#OSC 8215) combined with native shrub planting (dogwoods & willow species) has been proposed. Please refer to L-1 & L-3 planting plan.</p>



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NH9	EIS	Section 8		Recommendations in Section 8 are to be implemented. Please demonstrate how these recommendations have been included in the detailed design drawings.	The recommendations in Section 8 have been incorporated on the engineering drawings where applicable. A note has also been added on Drawing GN-1, referencing the Environmental Impact Study and noting that the recommendations are to be adhered to. In addition, specific recommendations relating to sediment and erosion measures have been added to ESC-2.
NH10	EIS	Appendix G – Grading Plan		The headwall should be placed outside of the 30 m VPZ to Lake Simcoe.	Headwall has been relocated to be located outside the 30m VPZ to Lake Simcoe.
NH11	EIS	Appendix G – Grading Plan (The grading plan shows a proposed drainage channel to convey flows from an ‘existing intermittent watercourse’ at the western limit of the property and proposes culverts under the extension of Pioneer Trail to direct flows to that channel. The EIS needs to describe this drainage feature and its functions, and consider potential impacts associated with its construction and potential changes to drainage patterns.	The Grading Plan has been updated to address the “existing intermittent watercourse” drainage to clarify arrows should be characterized as “direction of overland flow”. The label included on the previous version was not intended to suggest a drainage feature or associated ecological functions such as fish habitat are present. During preparation of the EIS, drainage in this area was limited to intermittent overland flow with no associated swale or channel formation.
NH12	EIS	Appendix G – Grading Plan		<p>Please provide additional detail about the swale along the east property boundary, the associated easement and the origin of this channel beyond the south boundary of the site.</p> <p>An unevaluated wetland is mapped to the south of the site in the vicinity of Lots 15 and 18, but is not reflected on any figures or drawings for the proposed development.</p> <p>The EIS needs to confirm that there will be no negative impacts to the wetland or retained woodland areas due to changes to drainage patterns as a result of the</p>	<p>Section 4.9 of the EIS verifies that the mapped swale along the eastern property boundary was not identified during the field program, rather a gravel boat launch exists in this location atop a tile drainage outlet that emerges directly adjacent to the lakeshore (Photograph 1; Appendix F). A drainage swale may have historically occurred in this location, however the origin and extent of the feature were not discernible during the site investigation as the feature is entirely covered in substrate.</p> <p>The mapped Unevaluated Wetland south of the site was observed to occur as an area of vernal pooling</p>



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				proposed development.	beyond the southern property boundary of limited extent (estimated 0.1ha), and was therefore treated as an inclusion within the upland woodland community in accordance with ELC protocols. The feature was observed with a limited hydroperiod, and was dry by late May during all years surveyed. During Azimuth’s site investigation the feature was screened 3x (April, May, June) for calling amphibians however only 3 calling Wood Frogs were recorded during the April survey window. Due to the limited ecological function of the feature and absence of key natural heritage designations associated with the unit, it is Azimuth’s opinion that further assessment beyond that outlined in the EIS report and this reponse is not warranted, as the minor feature is afforded protection as a component of the retained woodland feature.
NH13	TIAP, TP-1 and TP-2	6.0		<p>Please confirm that permission from adjacent landowners (i.e., municipalities) has been obtained for removal of perimeter trees and/or trees located on their properties.</p> <p>The 5 m average tree preservation line does not follow standard arboricultural practices. Rather, it is typical to see tree protection zones (TPZs) based on individual driplines or diameter at breast height. Where encroachment into individual TPZs is unavoidable, an assessment is typically undertaken to determine the percentage of the TPZ that will be impacted to determine whether the tree is likely to require specific treatment methods or if removal is the only alternative.</p> <p>In this instance, encroachment associated with grading</p>	<p>Addressed. City owned trees recommended for removal are to be confirmed with respective staff. Adjacent land owned by applicant. (PART 38, PLAN 51R-30521)</p> <p>5m average tree preservation line has been removed and protection is now shown at the dripline of retained trees.</p>



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				<p>is proposed into the TPZs of numerous perimeter trees. Where possible, grading should be revised to avoid the TPZs of perimeter trees. If it cannot be avoided, appropriate mitigation measures need to be provided (e.g., root pruning) as per the City of Barrie Tree Protection Manual to minimize impacts and promote longevity.</p> <p>Please note that averaged vegetation protection zones are only supported by the LSRCA where these zones are applied to the <i>dripline</i> of a woodland, not trunks of individual trees.</p>	
NH14	TIAP, TP-1 and TP-2	General		<p>Please explain why a tree inventory and preservation plan has not been completed for the trees adjacent to the proposed watermain looping. While no trees are proposed for removal, it is expected that trenching will impact the critical root zone of trees along either side of the alignment. Mitigation to minimize and/or mitigate impacts to trees within this area are required. Measures may include requirements for tree protection fencing, limbing, root pruning, restoration of disturbed areas, etc.</p>	<p>Addressed. Tree inventory and preservation plan has been completed for the proposed watermain looping, see TP-4 in Arbor & Landscape Package.</p>
NH15	TIAP, TP-1 and TP-2	General		<p>Revise the vegetation clearing note to avoid the bat active window as well. To avoid impacts to species at risk bats and other day-roosting bats, trees are not to be removed between April 1 and September 30 of any given year.</p>	<p>Addressed. Vegetation clearing note updated to avoid clearing between April 1 and September 30 on Arbor Plans.</p>
NH16	TIAP, TP-1 and TP-2			<p>TP-1 and TP-2 show that a tree at the northeast corner of the site is to be removed (either tree 139, 140 or 141), but this tree is not identified for removal in the TIAP. Please clarify if removal is required.</p>	<p>Addressed. Tree has been updated to Tree no. 136 in the northeast corner which is a dead White Ash and is recommended for removal.</p>



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June 10, 2022

#	Report/ Drawing	Section	Pg#	LSRCA COMMENT (June 10, 2022)	APPLICANT RESPONSE (DATE)
NH17	LP	General		<p>Plantings of native trees and shrubs are required within the 30 m VPZ to the Lake Simcoe shoreline and within the 5 m buffer to the retained woodland. Woodland buffer plantings are to follow edge management principles to reduce impacts to trees along the new woodland edge.</p> <p>Seeding within the woodland VPZ should be a native seed mix that is appropriate for use within woodland edges. For example Woodland Native Seed Mix (8275) by OSC should be considered. Native seed mixes should be applied at a rate of 22 – 25 kg /ha and are to be accompanied by a nurse crop. The nurse crop should be sown at a rate of 22 kg/ha.</p> <p>Where plantings are proposed along the woodland edges and soils have been compacted through grading activities, a minimum of 450 mm of topsoil is to be applied prior to planting and seeding. If soils are not compacted 300 mm of topsoil would be acceptable.</p> <p>Trees and native shrubs should be appropriate for the site conditions and are to emulate a forest edge. A minimum of 4 to 5 tree species and 4 to 5 shrub species should be used. Woodland planting density of 5 - 10 trees / 100 m² and 4 to 5 shrubs per tree. Please provide an estimate of the area to be planted to facilitate calculation of planting density.</p> <p>A monitoring plan is to be provided to ensure that plantings are successful and are providing the intended function.</p>	<p>Addressed.</p> <p>Please refer to L-1, L-3 & L-5 for native tree & shrub planting plan and native grass seed mix details. All disturbed areas within the woodland VPZ are to be terra-seeded with Woodland Native Seed Mix (8275) by OSC, at a rate of 22 – 25 kg /ha and are to be accompanied by a nurse crop. The nurse crop is to be sown at a rate of 22 kg/ha.</p> <p>Regarding topsoil requirements, as the proposed edge management planting is located within natural woodlot area, any type of planting site preparation including soil amendment and tilling is not recommended to avoid unnecessary introduction of invasive species and disturbance of existing roots. It is recommended all native trees & shrubs to be planted manually on as-is site condition as per the applicable details (LD-2). For the woodland planting density of 5 - 10 trees / 100 m² and 4 to 5 shrubs per tree, total planting area is to be 2,736 sq.m and minimum tree planting is to be 137 whereas 210 of tree planting has been proposed.</p> <p>If we go by 4 shrubs per tree, minimum shrub planting of 546 shrubs. Landmark recommends that 135 of shrubs in addition to the new trees are sufficient for purposes of edge management remediation and most of shrub planting is concentrated in the area close to the road & residential areas. Edge management planting plan (L-5) has been prepared based on ELC data and tree species in the adjacent woodlots will make seamless blending over the time.</p>



LSRCA FIRST SUBMISSION NATURAL HERITAGE REVIEW

70 Pioneer Trail – Barrie (APID: 426223)

June 10, 2022

#	Report/ Drawing	Section	Pg#	LSRCA COMMENT (June 10, 2022)	APPLICANT RESPONSE (DATE)
					Post-planting care & monitoring plan is included as a note in L-5.
NH19	LP	General		Details are required for stabilization of all disturbed areas, including those along the proposed watermain.	Addressed. Please refer to L-1, L-3 & L-5 for native tree & shrub planting plan and seed mix details.
NH20		General		Please ensure that a complete response to each comment is provided outlining how each comment has been addressed with the next submission. Noting where in the text of the report / drawings the comment has been addressed would be appreciated.	Refer to the above responses.
NH21		General		Additional information has been requested to advance LSRCA’s review of the proposed development limit. Once this information has been provided, additional comments may be forthcoming.	Noted. LSRCA should note that during post-submission Edge Management surveys one (1) additional seedling-stage Butternut was observed in the southern portion of the property. The location of this individual has been added to Figures 2a and 3a. A Butternut Health Assessment was carried out for the additional stem by Azimuth (Dan Stuart, Butternut Health Expert) on June 10, 2022 and a Butternut Health Assessment report was submitted to the MECP on June 10, 2022. The tree was determined to be Category 2 (“retainable”) and therefore receives protection under the provincial ESA. As per Ontario Regulation (O. Reg.) 830/21 (formerly O. Reg 242/08), removal of the tree is eligible for an ESA exemption through filing of a Notice of Butternut Impact prior to the initiation of site clearance. The proponent will be required to complete an ESA Registration and maintain the required compensatory trees, or contribute to the provincial



LSRCA FIRST SUBMISSION NATURAL HERITAGE REVIEW

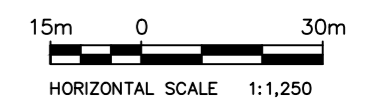
70 Pioneer Trail – Barrie (APID: 426223)

June 10, 2022

#	Report/ Drawing	Section	Pg#	LSRCA COMMENT (June 10, 2022)	APPLICANT RESPONSE (DATE)
					Species at Risk Conservation Trust as detailed under O. Reg. 829/21.



- LEGEND:**
- Approx. Property Boundary
 - ⊕ Dawn/Evening Breeding Bird Point Count Station
 - ⊕ Amphibian Point Count Station (white)
 - Category 1 Butternut Locations
 - Category 2 Butternut Location
 - Candidate Bat Snag Locations
 - Existing Boat Launch
 - ⊕ Tile Drain Outlet
 - ▭ Unevaluated Wetland (MNR, 2022)
 - Vegetation Communities
- FOC2-2 Dry-Fresh White Cedar Coniferous Forest
 FOD5-8 Dry-Fresh Sugar Maple-White Ash Deciduous Forest
 FOM4 Dry-Fresh White Cedar Mixed Forest
 MEMM3 Dry-Fresh Mixed Meadow

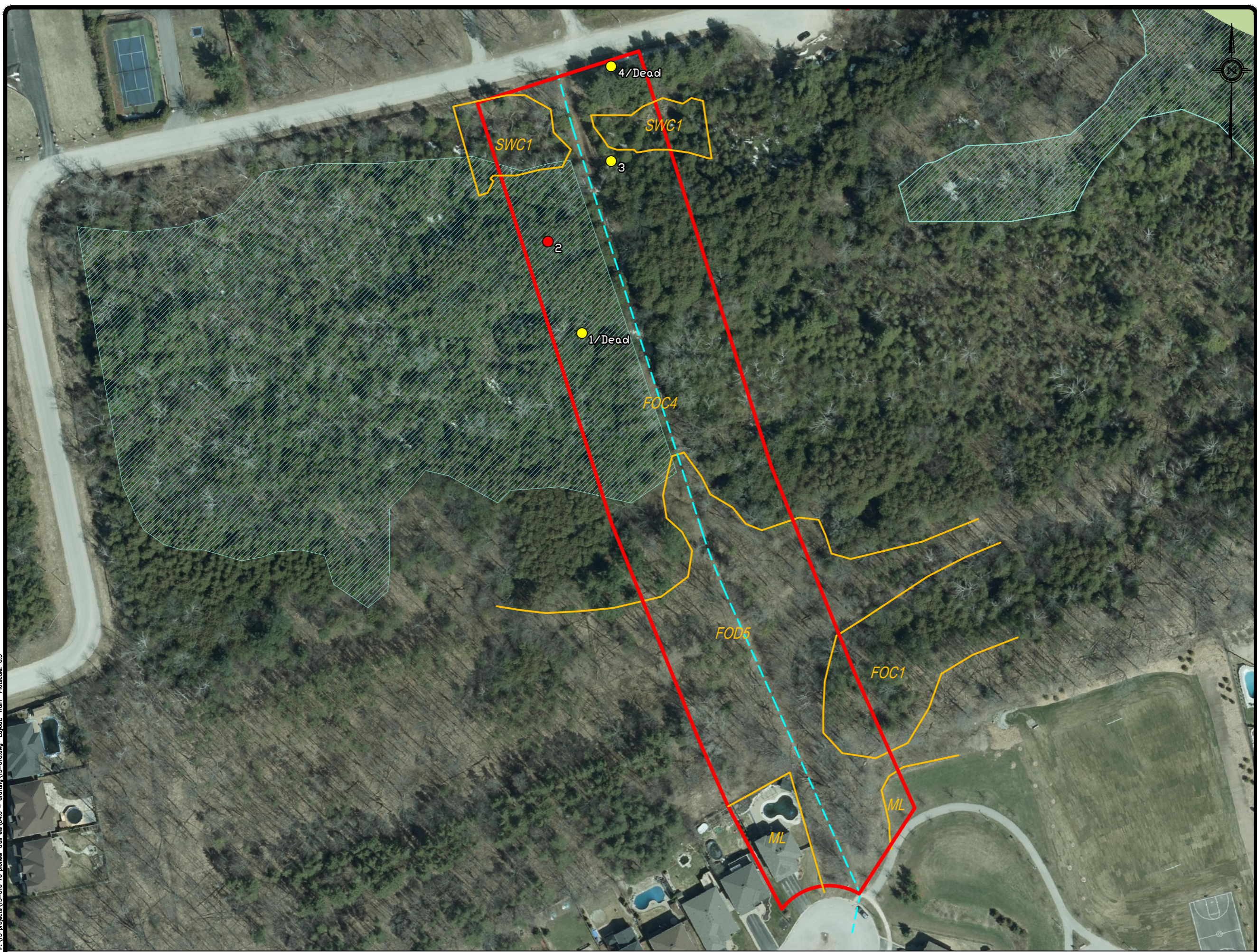


Environmental Features

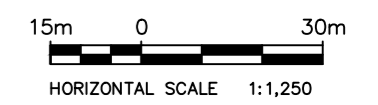
70 Pioneer Trail,
Barrie, ON

DATE ISSUED:	August 2022	Figure No.
CREATED BY:	JLM	2a
PROJECT NO.:	15-010	
REFERENCE:	Simcoe County	

Plotted by: ALJ on August 18, 2022 at 9:55am
 File: P:\15_projects\15-010_70_pioneer_trail_eis\04.0 - drafting\15-010.dwg Layout: EIS2 PlotScale: 0.5
 DAYSTAMP: M:\15 Projects\15-010 70 Pioneer Trail EIS\04.0 - Drafting\15-010.dwg



- LEGEND:**
- Approx. Study Area
 - Category 1 Butternut Locations
 - Category 3 Butternut Locations
 - Unevaluated Wetland (MNRF, 2022)
 - Vegetation Communities
 - FOC1 Dry-Fresh Pine Coniferous Forest
 - FOC4 Fresh-Moist White Cedar Coniferous Forest
 - FOD5 Dry-Fresh Sugar Maple Deciduous Forest
 - ML Maintained Lands
 - SWC1 Mineral White Cedar Coniferous Swamp

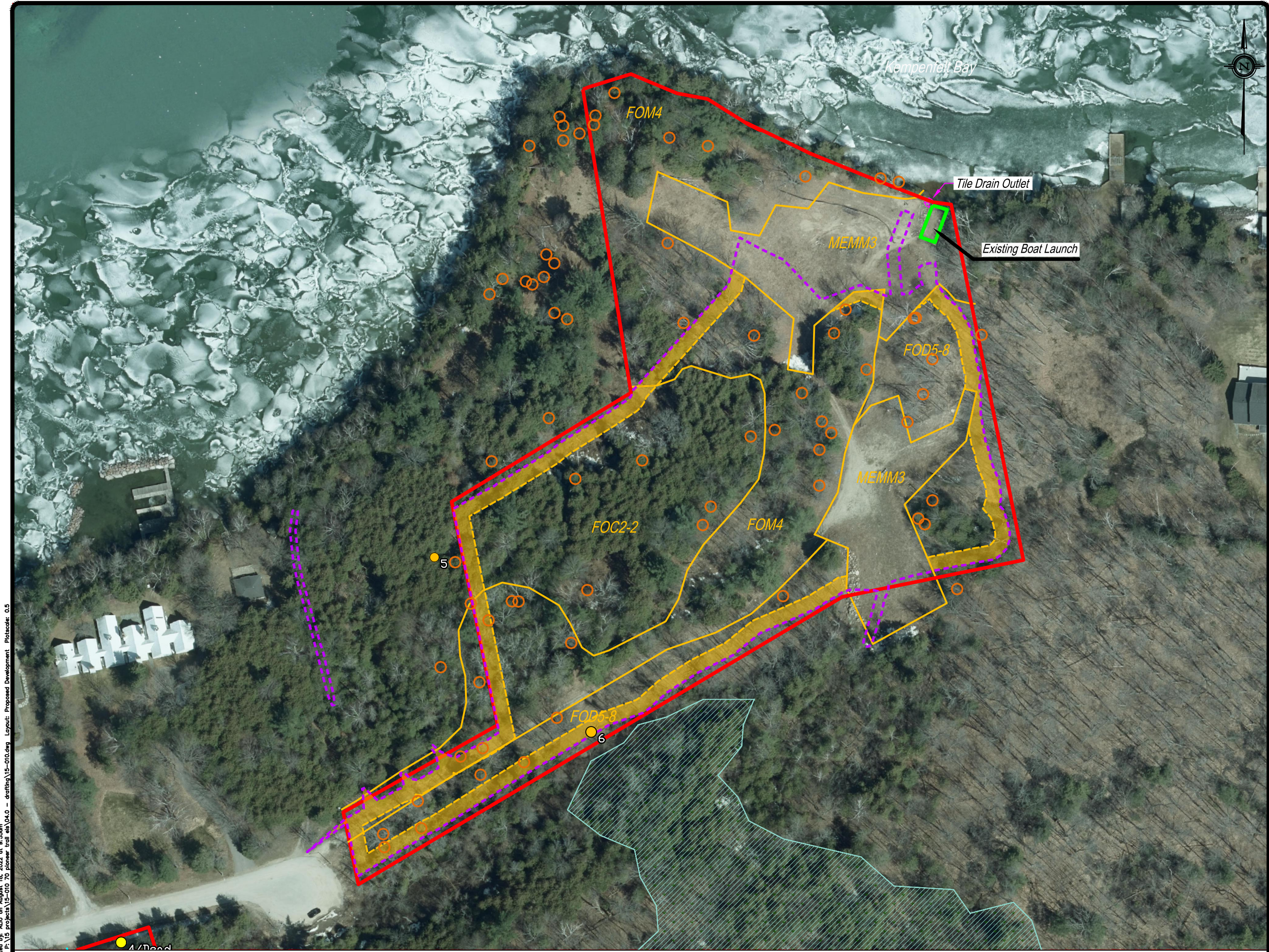


Environmental Features

70 Pioneer Trail,
Barrie, ON

DATE ISSUED:	August 2022	Figure No.
CREATED BY:	JLM	2b
PROJECT NO.:	15-010	
REFERENCE:	Simcoe County	

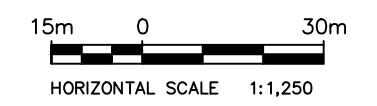
Plotted by: ALJ on August 17, 2022 at 8:53am
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 Layout: Trail Plotscale: 0.5
 DAYSTAMP: M:\15 Projects\15-010 70 Pioneer Trail EIS\04.0 - Drafting\15-010.dwg



LEGEND:

- Approx. Property Boundary
- Category 2 Butternut Location
- Candidate Bat Snag Locations
- Existing Boat Launch
- ⊕ Tile Drain Outlet
- Unevaluated Wetland (MNR, 2022)
- Vegetation Communities
- - - Limit of Grading
- Vegetation Protection Zone Setback

FOC2-2 Dry-Fresh White Cedar Coniferous Forest
 FOD5-8 Dry-Fresh Sugar Maple-White Ash Deciduous Forest
 FOM4 Dry-Fresh White Cedar Mixed Forest
 MEMM3 Dry-Fresh Mixed Meadow

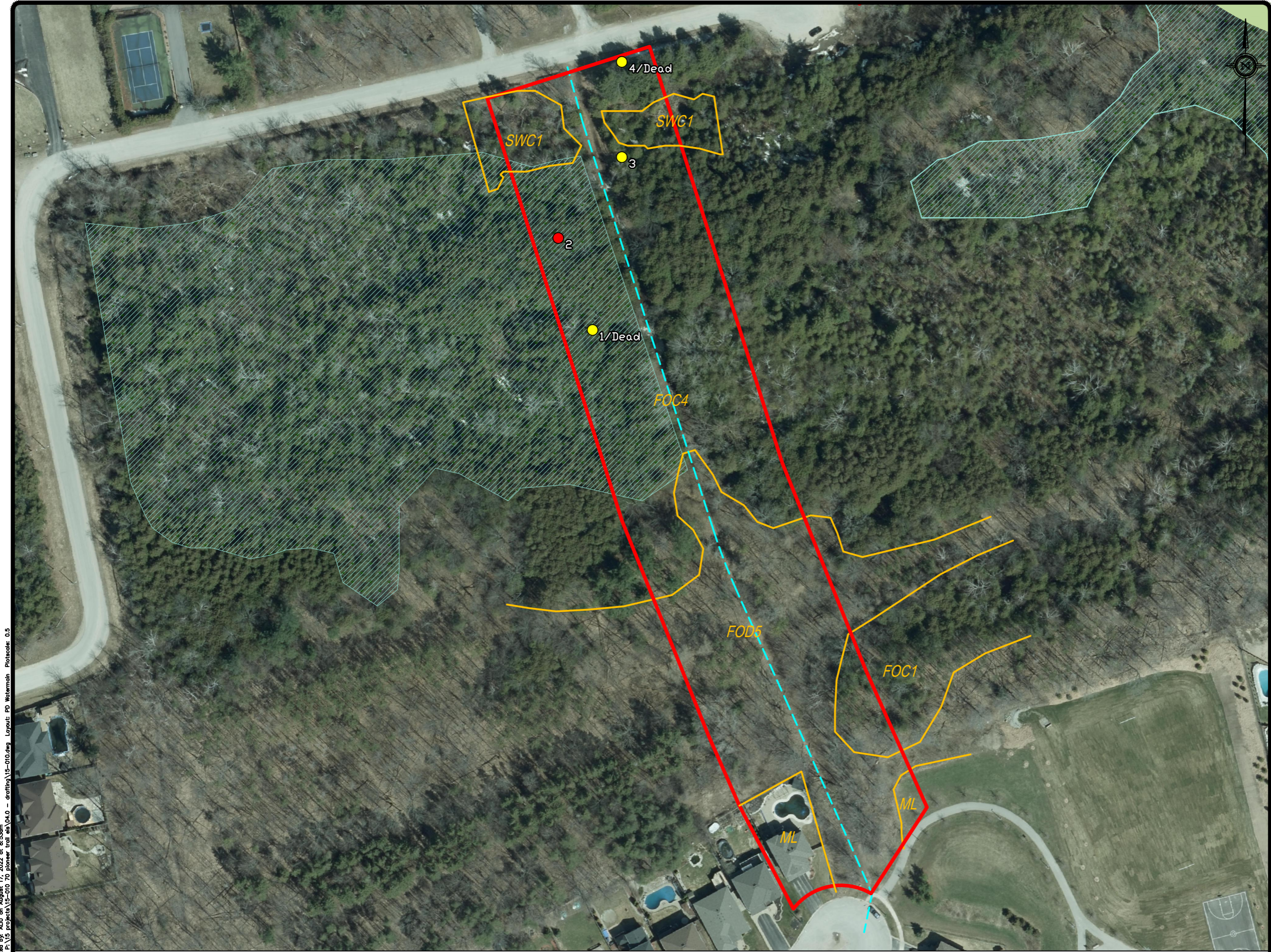


Proposed Development

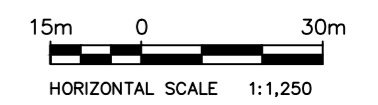
70 Pioneer Trail,
Barrie, ON

DATE ISSUED: August 2022	Figure No.
CREATED BY: JLM	3a
PROJECT NO.: 15-010	
REFERENCE: Simcoe County	

Plotted by ALU on August 18, 2022 at 9:55am
 File: P:\15_projects\15-010_70_pioneer_trail_eis\04.dwg - Drafting\15-010.dwg Layout: Proposed Development PlotScale: 0.5
 DAYSTAMP: M:\15 Projects\15-010 70 Pioneer Trail EIS\04.0 - Drafting\15-010.dwg



- LEGEND:**
- Approx. Study Area
 - - - Watermain Corridor
 - Category 1 Butternut Locations
 - Category 3 Butternut Locations
 - Unevaluated Wetland (MNRF, 2022)
 - Vegetation Communities
 - FOC1 Dry-Fresh Pine Coniferous Forest
 - FOC4 Fresh-Moist White Cedar Coniferous Forest
 - FOD5 Dry-Fresh Sugar Maple Deciduous Forest
 - ML Maintained Lands
 - SWC1 Mineral White Cedar Coniferous Swamp



Proposed Development

70 Pioneer Trail,
Barrie, ON

DATE ISSUED:	August 2022	Figure No.
CREATED BY:	JLM	3b
PROJECT NO.:	15-010	
REFERENCE:	Simcoe County	

Plotted by: ALJ on August 17, 2022 at 8:53am
 File: P:\15 projects\15-010 70 Pioneer Trail.dwg
 Layout: PD Watermain_PlotScale: 0.5
 M:\15 Projects\15-010 70 Pioneer Trail EIS\04.0 - Drafting\15-010.dwg



LEGEND:

- *Approx. Property Boundary*
- *Pioneer Woodland*
- Woodland Interior (53.27ha)*
- Woodland Removed (2.10ha)*

Woodland Size = 392ha
45.8ha within the City of Barrie Limit



Significant Woodland Area

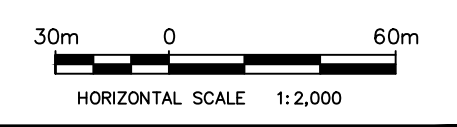
70 Pioneer Trail,
Barrie, ON

DATE ISSUED:	August 2022	Figure No. 4a
CREATED BY:	JLM	
PROJECT NO.:	15-010	
REFERENCE:	Simcoe County	

Plotted by ALJ on August 18, 2022 at 8:59am
 File: P:\15 projects\15-010_70_pioneer_trail_eis\04.0 - drafting\15-010.dwg Layout: EISA PlotScale: 0.5



- LEGEND:**
- Approx. Property Boundary
 - Vegetation Communities
 - FOC2-2 Dry-Fresh White Cedar Coniferous Forest
 - FOD5-8 Dry-Fresh Sugar Maple-White Ash Deciduous Forest
 - FOM4 Dry-Fresh White Cedar Mixed Forest
 - MEMM3 Dry-Fresh Mixed Meadow
 - - - Limit of Grading
 - - - Woodland Interior (Before)
 - - - Woodland Interior (After)
 - Woodland Interior Reduction (0.28ha)



Woodland Interior Lost to Development

70 Pioneer Trail,
Barrie, ON

DATE ISSUED:	August 2022	Figure No.
CREATED BY:	JLM	3a
PROJECT NO.:	15-010	
REFERENCE:	Simcoe County	

Plotted by: ALU on August 17, 2022 at 11:56am
 File: P:\15_projects\15-010_70_pioneer_trail_eis\04.0 - drafting\15-010.dwg Layout: EIS6 PlotScale: 0.5
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