Prepared By:

372 Grey Road 21 West Parcel

Town of the Blue Mountains

Tree Inventory and Protection Plan

Project No. 04-010-2021

July 2025

23 HERRELL AVENUE, BARRIE ON L4N 6T5
WWW.BIRKSNHC.CA

23 Herrell Ave
Barrie, Ontario
L4N 6T5

July 17, 2025

Rhemm Properties, Ltd.
Box 87 Clarksburg, Ontario
N0H 1J0

Attention: John Rodgers

RE: Birks NHC File No. 04-010-2021
Tree Inventory and Protection Plan
372 Grey Rd 21 – West Parcel, Town of the Blue Mountains

Dear Mr. Rodgers,

Thank you for retaining Birks Natural Heritage Consultants, Inc. (Birks NHC) to prepare a Tree Inventory and Protection Plan for the west parcel of the property identified as 372 Grey Road 21 in the Town of the Blue Mountains. We understand that this plan is being requested in support of a development application comprised of an Official Plan Amendment, Zoning By-law Amendment and Plan of Subdivision application.

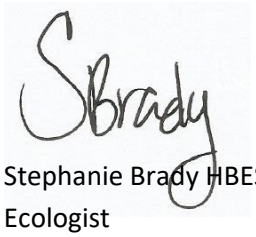
In preparation of the recommendations outlined herein, Birks NHC staff attended the property in spring 2025 to complete a tree inventory for the proposed development area. This report presents the findings of the inventory, tree protection plan, and a preliminary woodland compensation plan for those tree resources proposed for removal, in accordance with the requirements of the County of Grey and the Town of the Blue Mountains. This report has also been prepared in consideration of the tree removal requirements of the Town of Blue Mountains Municipal Tree By-Law 2010-68.

If you have any questions or concerns regarding this report, please do not hesitate to contact the undersigned.

Birks Natural Heritage Consultants Inc.

Melissa Fuller, H.B.Sc.
Ecologist
ISA Certified Arborist ON-1992A

Reviewed by:



Stephanie Brady HBES
Ecologist

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1 INTRODUCTION

Birks Natural Heritage Consultants, Inc. (Birks NHC) was retained by Rhemm Properties, Ltd to undertake the preparation of a Tree Inventory and Protection Plan (TIPP) for the West Parcel of the property identified as 372 Grey Road 21 (the property) in the Town of the Blue Mountains (Town), County of Grey (County).

The West Parcel of the property is triangular-shaped and measures approximately 7.0 hectares (ha). The property contains natural heritage features including components of the Silver Creek Provincially Significant Wetland (PSW) Complex. The property also contains several unsanctioned recreational trails. A mapped watercourse is present along the eastern property limits, which flows north-northwest along the Georgian Trail, eventually crossing the Georgian Trail and flowing north to Georgian Bay. Seasonal drainage features were documented within the property which pass through the north-eastern vegetation communities and across the north-western corner of the property.

Birks NHC completed an Environmental Impact Study (EIS) for the property (Birks NHC, 2023) to assess for potential impacts of the development to the identified natural heritage features and functions. Following submission of the EIS and pre-application review, it was determined by the Town and County that a TIPP would be required in support of a Draft Plan of Subdivision application for the proposed residential development of the property. This report has been prepared to satisfy requirements under the Town's Municipal Tree By-law 2010-68.

2 POLICY OVERVIEW

The following municipal policies are related to the protection of the tree resources of the property at both the County and Town levels, and dictate requirements for compensation and offsetting where tree removals are proposed.

2.1 COUNTY OF GREY

The proposal calls for the removal and alteration of Significant Woodland, as identified within the EIS prepared by Birks NHC (2023, updated 2025). The introduction of Section 7 of the County's Official Plan (2025) states that

> *The County, local municipalities and/or conservation authorities having jurisdiction within Grey, may choose to develop and use ecological/ecosystem offsetting (also called biodiversity offsetting) policies or procedures for private land development proposals and/or public infrastructure undertakings. Consideration for offsetting may only be applicable where it is consistent with the appropriate legislation, regulations and supporting policies and guidelines*

(Provincial Policy Statement, Provincial Plans, Official Plans, Forest Management Plans, Forest Management By-laws, Tree-Cutting By-laws, etc.).

Offsetting must follow the mitigation hierarchy of Avoid, Minimize, Mitigate, then Offset. It should only be applied after a detailed analysis has determined that avoidance, minimization, and mitigation of loss is not possible or feasible. This tool shall not replace or negate the requirements of other legislation applicable to impacts to species or ecosystems at the municipal, regional, provincial, or federal levels. Protection, and ideally restoration and improvements of existing natural systems remains the primary goal of natural heritage systems planning (as per Section 2.1 of the PPS).

Offsetting policies or procedures should target an ecological (net) gain. Where determined to not be feasible, they should ensure no-net-loss and fully replace the same level of lost ecosystem structure and function in proximity to where the loss occurs.

Where other compensation or offsetting programs exist (i.e., tree cutting by-laws that speak to tree replacement planting or funds), efforts shall be made to coordinate the separate processes to limit duplication. All programs of this nature should offer a comprehensive approach to restoring unavoidable losses.

Thus, ecological offsetting is a consideration for this development and the proposed removal of tree specimens within the area influenced by the development footprint.

2.2 Town of the Blue Mountains

Section D8.2 of the Town's Official Plan (2016) states the following regarding the protection of tree canopy within the municipality:

Supporting the protection and enhancement of tree canopies can contribute to improvements to air and water quality, reductions in greenhouse gases, the support of biodiversity, and enhancement of natural features and systems. It is a policy of the Town to:

a) encourage the planting of native or non-native non-invasive tree species and vegetation that are resilient to climate change and provide high levels of carbon sequestration, particularly through new development and on municipally-owned land;
b) implement measures to protect, enhance, and expand the tree canopy, including but not limited to:
i) requiring tree planting in areas of extensive surface parking; and,
ii) promoting development that maximizes areas for tree planting.
c) consider the establishment of a forest resource stewardship strategy and plan;
d) require reimbursement, in the form of new trees or financial compensation, for all healthy trees proposed to be removed in development applications, based on the findings of a Tree Inventory and Preservation Plan; and,

e) encourage tree planting by local residents and organizations, and educate residents about the benefits of planting trees on their property and the environmental impact of removing trees.

In additional, the Town's Tree Preservation By-law 2010-68 is applicable to the proposed application.

3 GENERAL PROPERTY DESCRIPTION

The property consists of wetlands, woodlands, thickets and several drainages. An unnamed permanent watercourse flows along the east side of the site along the Georgian Trail. No development or site alteration is proposed within the delineated limits of the wetland (Silver Creek Provincially Significant Wetland). After relocation of sanitary sewer services, a 30 m setback has been integrated into the Site Plan for both the wetland and the permanent fish habitat to protect the features from direct and indirect impacts of the residential development. An open space block of land encompasses the setback areas to the wetlands and the permanent watercourse (Figure 3). The open space is proposed to be naturalized with a trail connection to the Georgian Trail. Land uses associated with adjacent lands include woodlands to the east and south along with portions of the Silver Creek PSW. Residential development is present to the north and east of the property.

Several vegetation communities were identified on the property: cultural meadow, deciduous forest and swamp as well as deciduous shrub thicket (Figure 1). Vegetation communities were assessed using the Ecological Land Classification ('ELC') method described by Lee *et al.* (1998) as part of the Birks NHC EIS. Further details regarding the vegetation communities can be found in the November 2023 and July 2025 Birks NHC EIS reports prepared in support of the development application.

4 PROPOSED DEVELOPMENT PLAN

The proposal involves the creation and development of residential lots as part of a Draft Plan of Subdivision. The Draft Plan includes an access road from the adjacent Eden Oaks development that will cross through the property in a general north-west to south-east direction and a mix of single detached and semi-detached homes (Figure 3). An existing intermittent drainage feature (ID1) would be removed, and surface overland flow conveyed along the road to the SWM pond to the west, outleting to the unnamed permanent watercourse along Georgian Trail. Systems for quality control and quantity control prior to outleting will be in place prior to reaching the watercourse. Runoff from the northern lots will be directed towards the open space block and allowed to disperse through infiltration (Figure 3).

Servicing for the proposed development will be through public water and sewer systems, the infrastructure for which is already in place (in regard to water). Relocation of the main sanitary sewer will be required, which will occur between the proposed 30 m setbacks to Silver Creek PSW.

No development or site alteration is proposed within the delineated limits of Silver Creek PSW. After relocation of the sanitary sewer, a 30 m setback has been integrated into the Site Plan for both the PSW and permanent fish habitat to protect the features from direct and indirect impacts of the residential development. Hazard lands designation is present, associated with floodplain and wetland setbacks. Open Space/Park is proposed within the north-western corner of the property, outside of the hazard and wetland land designation. A 3 m wide allocation to Open Space/Park is provided along the length of the western property limit, to allow for the creation of a trail connection between Georgian Trail and The Town of the Blue Mountains Resort area, which will be an undertaking of the Town.

Compensation for the loss of 0.67 ha of woodland habitat, including invasive species management and tree planting, is provided within the retained lands in the northern portion of the property.

5 TREE INVENTORY

Birks NHC undertook a field inventory in the area of the proposed disturbance and extending a minimum of 6 metres (m) from the proposed limits of disturbance, as understood at the time of survey (April 10 and May 13, 2025). The surveyed area was densely forested and random plots (12.0 m diameter) within the forested areas were identified and inventoried to record:

- Species and species abundance;
- Condition of the trees; and,
- The number of trees within each of the plots. The trees were categorized into five different size categories, with minimum diameter at breast height ('DBH') recorded being 10 centimeters (cm). The size categories were assigned as follows:
    - 10 cm -15.9 cm DBH
    - 16 cm -20.9 cm DBH
    - 21 cm -25.9 cm DBH
    - >26 cm DBH

The location of the surveyed plots is provided in Figure 2.

Where individual tree specimens were identified within meadow communities, along the property limits and within the servicing easement, individual trees and/or tree groupings were documented where the following information was recorded:

- Location of the individual trees or groupings, as recorded with handheld GPS (3 m accuracy);
- Diameter of tree at 1.4m (DBH) above ground surface;
- Canopy size;
- Health, including but not limited to structural integrity, percent deadwood, crown vigor, pathogenical concerns, decay and potential for failure;
- Individual trees were assigned a unique identifier utilizing aluminum tags with an etched number.

The location of the inventoried trees and surveyed plots is provided in Figure 1.

The methodology outlined above was confirmed to be acceptable by the County, who will be reviewing this report on behalf of the Town. Confirmation of the accepted Terms of Reference is provided in Appendix A.

5.1 RESULTS

5.1.1 Forested Areas

The tree inventory was conducted on April 10 and May 13, 2025. In total, 24 plots were surveyed, with 373 trees recorded within the plots. In addition, 1 tree grouping was identified; all tree individuals within this small grouping was tallied as well. Trees within the plots and groupings were assigned to size categories based on DBH, with the majority (61%) of the trees being 10 cm – 15 cm DBH in size (Table 1).

Table 1. Tree Size Representation within Forested Areas and Tree Groupings

	DBH (cm)			
	10 – 15.9	**16 – 20.9**	**21 – 25.9**	**> 26 – 30.9**
Number of Trees	226 (61%)	83 (22%)	42 (11%)	22 (6%)

The majority of trees documented within forested communities and tree groupings were American Elm, with the species being present in 88% of the surveyed plots and representing 26% of the total trees inventoried (Table 2). Common Buckthorn (an invasive exotic) was also widely distributed through the property (present in 64% of the plots). Also widely distributed were American Basswood (52% of plots), Balsam Poplar (44%) and White Ash (40%). The remainder of the tree species were found in 32% of the surveyed plots or less, however the species were observed in low numbers, each only representing 12% or less of the trees found on the property, in forested areas. A full list of species observed within each of the survey plots and tree groupings is provided in Figure 1.

5.1.2 Open Areas

Within the open areas of the property, tree specimens were largely represented by White Birch and American Elm (Table 3). The remainder of the trees were primarily deciduous trees, with Balsam Poplar, American Basswood and Manitoba Maple representing the highest species presence. The full inventory and tree location is presented in Figure 1.

Overall, the trees were considered to be in good health, with the exception of Ash trees which were frequently dead and/or dying throughout the inventoried area, a result of Emerald Ash Borer activity.

Table 2. Species Representation Within Forested Areas

Species	Number of Plots Containing the Species	% of Plots and Tree Grouping	Total Number of trees recorded	% trees
Apple (*Malus* sp.)	8	32%	10	3%
Balsam poplar (*Populus balsamifera*)	10	44%	69	14%
American Basswood (*Tilia americana*)	13	52%	37	11%
Black Cherry (*Prunus serotina*)	3	12%	5	1%
Red Oak (*Quercus rubra*)	4	16%	8	2%
Common Buckthorn (*Rhamnus cathartica*)	16	64%	60	17%
Green Ash (*Fraxinus pennsylvanica*)	6	24%	5	1%
Paper Birch (*Betula papyrifera*)	2	8%	5	1%
Sugar Maple (*Acer saccharum*)	3	12%	5	1%
White Ash (*Fraxinus americana*)	10	40%	19	6%
American Elm (*Ulmus americana*)	22	88%	100	26%
Crack Willow (*Salix fragilis*)	3	12%	7	2%
Birch (*Betula* sp.)	1	4%	2	1%
Trembling Aspen (*Populus tremuloides*)	7	28%	41	12%
Yellow Birch (*Betula alleghaniensis*)	1	4%	1	0%
TOTAL	**22**		**374**	

Table 3. Species Representation Along Property Limit and Open Grown Areas (Individually Plotted Trees)

Species	Number of Trees	Percentage
Apple (*Malus* sp.)	3	2.94%
American Elm (*Ulmus americana*)	24	23.53%
Manitoba Maple (*Acer negundo*)	8	7.84%
Eastern White Cedar (*Thuja occidentalis*)	3	2.94%
Balsam Poplar (*Populus balsamifera*)	14	13.73%
American Basswood (*Tilia americana*)	7	6.86%
Trembling Aspen (*Populus tremuloides*)	6	5.88%
White Birch (*Betula papyrifera*)	31	30.39%
Crack Willow (*Salix fragilis*)	4	3.92%
Red Oak (*Quercus rubra*)	2	1.92%
TOTAL	**104**	100

6 TREE COMPENSATION AND REPLACEMENT

The tree inventory documents the tree resources present on the property, the species composition, the stem density of the forested areas, and the health of the species, all of which are considerations when determining compensation for tree removals.

For this property, there are invasive species (Common Buckthorn), exotic species (apple trees, Manitoba Maple) and failing trees (Green Ash, White Ash) that would not warrant replacement. Thus, our compensation and replacement calculations consider these factors in calculating the number of stems to be replaced. Of the 104 individual trees surveyed, only 91 of the specimens would be suitable for replacement.

Within the wooded areas, the vegetation communities identified for stem compensation include THDM6-2, FODM3-1, and FODM7-2. The areas to be removed, stem density per ELC community and maximum stem compensation is presented in Table 4 below.

Table 4. Forest Compensation Calculations

ELC Community	Area to be Removed (ha)	Stem Density (stems/ha)[1]	Total Stem Compensation
THDM6-2	3	212	637
FODM3-1	0.57	555	316
FODM7-2	0.09	180	16
TOTAL	**3.66**		**969**

[1] Density calculations exclude European Buckthorn, Apple sp., White Ash and Green Ash.

6.1 TREE PRESERVATION AND PROTECTION PLAN

Protective barriers prevent physical harm to the trunk, canopy, and root zone of a tree or other vegetation that may result from site alteration, construction, and demolition activities and prevent access to an established protection zone. All areas located outside of the development footprint are considered to comprise this protection zone.

Any activity which could result in injury or destruction of a protected tree or natural feature, or alteration of grade is prohibited within the protected areas including, but not limited to, any of the following examples:

- Demolition, construction, replacement or alteration of permanent or temporary buildings or structures, parking pads, driveways, sidewalks, dog runs, pools, retaining walls, patios, decks, terraces, sheds or raised gardens;
- Installation of large stones or boulders;

- Altering grade by adding or removing soil or fill, excavating, trenching, topsoil or fill scraping, compacting soil or fill, dumping or disturbance of any kind (excluding activities associated with future natural feature compensation initiatives);
- Storage of construction materials, equipment, wood, branches, leaves, soil or fill, construction waste or debris of any sort;
- Application, discharge or disposal of any substance or chemical that may adversely affect the health of a tree (*e.g.* concrete sluice, gas, oil, paint, pool water or backwash water from a swimming pool);
- Causing or allowing water or discharge, to flow over slopes or through natural areas;
- Access, parking or movement of vehicles, equipment (excluding those associated with future natural feature compensation initiatives);
- Cutting, breaking, tearing, crushing, exposing or stripping tree's roots, trunk and branches;
- Nailing or stapling into a tree, including attachment of fences, electrical wires or signs;
- Stringing of cables or installing lights on trees;
- Oil remediation, removal of contaminated fill; and
- Excavating for directional or micro-tunnelling and boring entering shafts.

The following considerations are pertinent to the protection of the retained trees and vegetation communities:

- Protective fencing surrounding the perimeter of the development is to remain in place until all site works have been completed and the risk of damage is no longer a concern.
- Protective fencing shall be provided in a continuous manner at the edge of the development limit.
- Sediment and erosion controls along the limits of the protection zone are be installed prior to all construction activities.
- All fencing is to remain in good condition throughout construction and until vegetation is established post-construction.
- Signs are to be mounted on the construction side of the tree protection fencing for the duration of the project to identify the development limits and vegetation protection areas.
- Where the roots of retained trees are exposed within the grade alteration areas, root cuts should be completed quickly and efficiently, completed under the supervision of a qualified professional as per recommendations in Figure 2., attached.
- Root cutting, canopy trimming, limb pruning, tree structure enhancement of retained trees is to be monitored by a Certified Arborist.

7 TREE REMOVALS TIMING

Migratory birds, nests, and eggs are protected by the *Migratory Birds Convention Act*, 1994 and the *Fish and Wildlife Conservation Act*, 1997. Environment Canada outlines dates when activities in any region have potential to impact nests at the Environment Canada Website (https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds.html). In addition, tree removal on the property shall consider the active season for bats, in order to ensure that Endangered Bat Species are not incidentally harmed during removals, in accordance with the *Endangered Species Act*, 2007. Therefore, tree removal should occur between November 30 and March 31 of the following year. No tree removals should occur outside that period, unless proceeded by inspection by a qualified Ecologist knowledgeable in bat and avian behaviour.

8 DUMPING POLICIES

Section 5 of Ontario Regulation 151/06 under the *Conservation Authority Act*, 1990 states:

> *"no person shall straighten, change, divert or interfere in any way with the existing channel of a river, creek, stream or watercourse or change or interfere in any way with a wetland."*

Additionally, Section 2 of by-law 99-10 for the Town of Blue Mountains states:

> *"No person shall place or cause to be placed by any action or inaction litter or debris within the Town of The Blue Mountains."*

Therefore, no dumping of yard waste, garbage or other unwanted debris of any kind shall occur within the retained Significant Woodland or Silver Creek PSW going forward. These materials can pose a significant risk to the ecological integrity and function of these features by introducing various pollutants that can severely impact water quality and the overall health of wildlife and other organisms.

Yard waste, garbage, and unwanted debris should be disposed in a manner that conforms to municipal guidelines and regulations. For information on how to dispose of unwanted debris, please contact the Town of Blue Mountains' Operations Department at 519-599-3131 ext. 276 or visit their website at https://www.thebluemountains.ca/resident-services/garbage-recycling-waste.

9 CONCLUSION

This TIPP was prepared in accordance with the Town of the Blue Mountains Municipal Tree By-law and in consultation with the County of Grey. The TIPP aims to identify compensation requirements for tree removals and measures to protect retained specimen. The report includes a summary site description, a tree inventory, and tree protection plan.

Should the plan presented herein be initiated and followed through, it is expected that the potential impacts associated with the tree removal and grade alteration will be offset.

We trust that this restoration plan meets the requirements of local land-use authorities, including the Town of the Blue Mountains and County of Grey.

10 REFERENCES

Birks Natural Heritage Consultants, Inc. (Birks NHC). 2025. Environmental Impact Study Update – 372 Grey Road 21, Town of the Blue Mountains. June 2025

County of Grey. 2025. Recolour Grey County of Grey Official Plan. Adopted by Grey County Council October 25, 2018. Office Consolidation May 6, 2025.

Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig and S. McMurray. 1998. Ecological Land Classification for Southern Ontario: First Approximation and Its Application.

Town of the Blue Mountains. 2010. Town of the Blue Mountains Official Plan. Tree Preservation By-Law 2010-68

Town of the Blue Mountains. 2016. Town of the Blue Mountains Official Plan. https://www.thebluemountains.ca/planning-building-construction/land-use-planning/official-plan

Table 1a. Individual Tree Inventory

Date	Tree Identification Number	Species		Canopy (diameter in	DBH (cm)	% Live Crown	Notes	Recommendation	Rationale
		Common Name	Latin Name						
2025-05-13	503	White Birch	*Betula papyrifera*	4	13	100	Good condition	Retain	Boundary tree - no impacts
2025-05-13	519	White Birch	*Betula papyrifera*	4	10	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	550	Trembling Aspen	*Populus tremuloides*	4	11	100	Good condition	Retain	No impacts
2025-04-10	554	American Elm	*Ulmus americana*	4	15	100	Good condition	Remove	Within sanitary easement footprint
2025-04-10	570	American Elm	*Ulmus americana*	6	13	100	Good condition	Remove	Within development footprint
2025-04-10	572	American Elm	*Ulmus americana*	5	23	100	Good condition	Remove	Within development footprint
2025-04-10	593	White Birch	*Betula papyrifera*	4	13	100	Good condition	Remove	Within development footprint
2025-04-10	696	White Birch	*Betula papyrifera*	4	10,11	100	2 stems, good	Remove	Within development footprint
2025-05-13	701	White Birch	*Betula papyrifera*	6	12.5	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	702	Balsam Poplar	*Populus balsamifera*	4	13	90	Good condition	Remove	Within development footprint
2025-05-13	703	White Birch	*Betula papyrifera*	2	11	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	704	Basswood	*Tilia americana*	5	20.5	100	Good condition	Remove	Within development footprint
2025-05-13	705	White Birch	*Betula papyrifera*	3	11	100	leaning into easment	Remove	Within sanitary easement footprint
2025-05-13	706	White Birch	*Betula papyrifera*	2	10.5	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	707	White Cedar	*Thuja occidentalis*	4	13, 12, 13	100	3 stems, good condition	Remove	Within sanitary easement footprint
2025-05-13	708	Red Oak	*Quercus rubra*	6	10, 12	100	2 stems, good condition	Remove	Within development footprint
2025-05-13	709	White Birch	*Betula papyrifera*	3	11.5	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	710	White Birch	*Betula papyrifera*	4	11	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	711	White Birch	*Betula papyrifera*	4	10	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	712	White Birch	*Betula papyrifera*	4	11.5	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	713	American Elm	*Ulmus americana*	4	13.5	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	714	White Birch	*Betula papyrifera*	3	18	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	715	White Cedar	*Thuja occidentalis*	3	11	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	716	American Elm	*Ulmus americana*	6	15	60	Poor health	Remove	Within sanitary easement footprint
2025-05-13	717	White Birch	*Betula papyrifera*	4	13	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	718	Balsam Poplar	*Populus balsamifera*	4	11	70	Fair condition	Remove	Within sanitary easement footprint
2025-05-13	720	Trembling Aspen	*Populus tremuloides*	5	12.5	100	Good condition	Retain	No impacts
2025-05-13	721	White Birch	*Betula papyrifera*	5	11	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	722	White Birch	*Betula papyrifera*	6	10.5	70	Fair condition	Remove	Within sanitary easement footprint
2025-05-13	723	White Birch	*Betula papyrifera*	7	13	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	724	White Birch	*Betula papyrifera*	8	16.5,12.5	100	2 stems, good condition	Remove	Within sanitary easement footprint
2025-05-13	726	White Birch	*Betula papyrifera*	7	14.5, 13, 11	100	3 stems, good condition	Remove	Within sanitary easement footprint
2025-05-13	727	American Elm	*Ulmus americana*	3	12.5	100	Good condition	Retain	No impacts
2025-05-13	728	White Birch	*Betula papyrifera*	3	11	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	729	White Birch	*Betula papyrifera*	8	12, 14.5, 11.5	100	3 stems, good condition	Remove	Within sanitary easement footprint
2025-05-13	730	American Elm	*Ulmus americana*	3	13	100	Good condition	Remove	Within development footprint
2025-05-13	731	White Birch	*Betula papyrifera*	4	11.5	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	732	American Elm	*Ulmus americana*	4	20	100	Good condition	Remove	Within development footprint
2025-05-13	733	Trembling Aspen	*Populus tremuloides*	5	14	100	Good condition	Remove	Within development footprint
2025-05-13	734	Crack Willow	*Salix fragila*	4	12.5	100	Good condition	Retain	No impacts
2025-05-13	735	Manitoba Maple	*Acer negundo*	7	14	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	736	White Birch	*Betula papyrifera*	3	12	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	737	White Birch	*Betula papyrifera*	2	10	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	738	White Birch	*Betula papyrifera*	2	12	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	739	Apple	*Malus* sp.	8	11.5	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	740	American Elm	*Ulmus americana*	4	16	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	741	White Birch	*Betula papyrifera*	4	14.5	100	Good condition	Retain	Boundary tree - no impacts
2025-05-13	742	White Birch	*Betula papyrifera*	3	11	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	743	White Birch	*Betula papyrifera*	4	11	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	744	White Birch	*Betula papyrifera*	7	15,16	100	2 stems, good condition	Remove	Impact to root zone - sanitary easement
2025-05-13	745	Trembling Aspen	*Populus tremuloides*	5	22.5	100	Good condition	Remove	Within development footprint
2025-05-13	746	American Elm	*Ulmus americana*	6	14.5	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	747	Balsam Poplar	*Populus balsamifera*	7	15	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	748	White Cedar	*Thuja occidentalis*	6	10, 14.5	100	2 stems, good condition	Remove	Within sanitary easement footprint
2025-05-13	749	White Birch	*Betula papyrifera*	2	11	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	752	Manitoba Maple	*Acer negundo*	5	13	90	Good condition	Remove	Species known to deteriorate quickly
2025-05-13	755	American Elm	*Ulmus americana*	6	15	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	800	White Birch	*Betula papyrifera*	6	12, 14	100	2 stems, good condition	Retain	Boundary tree - no impacts
2025-04-10	970	American Elm	*Ulmus americana*	5	17	100	Good condition	Remove	Within development footprint
2025-04-10	976	American Elm	*Ulmus americana*	6	22	100	Good condition	Remove	Within development footprint
2025-04-10	978	American Elm	*Ulmus americana*	4	15	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	979	Trembling Aspen	*Populus tremuloides*	2	16	100	Good condition	Remove	Within development footprint
2025-04-10	981	White Birch	*Betula papyrifera*	2	10	100	Good condition	Remove	Within development footprint
2025-04-10	982	American Elm	*Ulmus americana*	5	19	100	Good condition	Remove	Within development footprint
2025-04-10	988	American Elm	*Ulmus americana*	2	10	100	Good condition	Remove	Within sanitary easement footprint
2025-05-13	992	Balsam Poplar	*Populus balsamifera*	6	12.5, 10.5	100	2 stems, good condition	Remove	Within sanitary easement footprint
2025-05-13	994	American Elm	*Ulmus americana*	8	36	100	Good condition	Retain	No impacts
2025-05-13	995	American Elm	*Ulmus americana*	7	21.5	100	Good condition	Retain	No impacts
2025-04-10	999	Apple	*Malus* sp.	7	12	100	Good condition	Remove	Within development footprint
2025-04-10	3801	Red Oak	*Quercus rubra*	6	18	80	Good condition	Retain	Boundary tree - no impacts
2025-04-10	3802	American Elm	*Ulmus americana*	10	32	100	Good condition	Retain	Boundary tree - no impacts
2025-04-10	3803	American Elm	*Ulmus americana*	8	31	100	Good condition	Retain	Boundary tree - monitor for hazard conditons due to impact to root zone
2025-04-10	3804	Manitoba Maple	*Acer negundo*	4	10	100	Good condition	Retain	Boundary tree - no impacts
2025-04-10	3804	Manitoba Maple	*Acer negundo*	4	18	100	Good condition	Retain	Boundary tree - no impacts
2025-04-10	3806	Basswood	*Tilia americana*	20	35	100	Good condition	Remove	Within development footprint
2025-04-10	3807	Basswood	*Tilia americana*	20	48,42,33,40	100	4 stems same tree, good condition	Remove	Boundary tree - remove due to impacts to root zone
2025-04-10	3808	Basswood	*Tilia americana*	6	23	70	fair condition	Remove	Within development footprint
2025-04-10	3809	Basswood	*Tilia americana*	20	43,29,29,28,30	90	5 stems same tree - poor health	Remove	Boundary tree - remove due to impacts to root zone
2025-04-10	3812	Crack Willow	*Salix fragila*	20	43	100	Good condition	Remove	Boundary tree - remove due to impacts to root zone
2025-04-10	3813	Crack Willow	*Salix fragila*	30	40, 36	90	2 stems, good condition	Remove	Boundary tree - remove due to impacts to root zone
2025-04-10	3815	Crack Willow	*Salix fragila*	20	64	50	Poor health	Remove	Within development footprint
2025-04-10	3816	American Elm	*Ulmus americana*	12	51	100	Good condition	Remove	Within development footprint
2025-05-13	3937	Trembling Aspen	*Populus tremuloides*	2	18	100	Good condition	Retain	Boundary tree - no impacts
2025-05-13	3938	Basswood	*Tilia americana*	8	24.5	100	Good condition	Remove	Within development footprint
2025-05-13	3939	American Elm	*Ulmus americana*	4	13	100	Good condition	Remove	Within development footprint
2025-05-13	3940	Balsam Poplar	*Populus balsamifera*	3	11	100	Good condition	Retain	Boundary tree - no impacts
2025-05-13	3941	Balsam Poplar	*Populus balsamifera*	5	18	100	Good condition	Remove	Within development footprint
2025-05-13	3942	Balsam Poplar	*Populus balsamifera*	4	13	70	Fair Health	Remove	Within development footprint
2025-05-13	3943	Balsam Poplar	*Populus balsamifera*	5	14.5	100	Good condition	Remove	Within development footprint
2025-05-13	3944	Basswood	*Tilia americana*	3	20	100	Good condition	Remove	Within development footprint
2025-05-13	3945	Balsam Poplar	*Populus balsamifera*	2	11	100	Good condition	Remove	Within development footprint
2025-05-13	3946	Balsam Poplar	*Populus balsamifera*	4	17.5	80	Good condition	Retain	Boundary tree - no impacts
2025-05-13	3947	Balsam Poplar	*Populus balsamifera*	6	24.5	100	Good condition	Remove	Within development footprint
2025-05-13	3948	Balsam Poplar	*Populus balsamifera*	4	17	100	Good condition	Remove	Within development footprint
2025-05-13	3949	American Elm	*Ulmus americana*	16	57	100	Good condition	Retain	Boundary tree - no impacts
2025-05-13	3950	Apple	*Malus* sp.	5	11, 15, 16	80	3 stems, fair condition	Remove	Boundary tree - remove due to impacts to root zone
2025-05-13	3951	Balsam Poplar	*Populus balsamifera*	4	28	80	Fair condition	Remove	Within development footprint
2025-05-13	3952	Manitoba Maple	*Acer negundo*	4	21.5	100	Good condition	Remove	Within development footprint
2025-05-13	3953	Balsam Poplar	*Populus balsamifera*	6	36	80	Fair condition	Remove	Boundary tree - remove due to impacts to root zone
2025-05-13	3954	Manitoba Maple	*Acer negundo*	16	42.5	100	Good condition	Remove	Boundary tree - remove due to impacts to root zone
2025-05-13	3955	Manitoba Maple	*Acer negundo*	8	18	100	Fair condition	Remove	Within development footprint
2025-05-13	3956	American Elm	*Ulmus americana*	15	35	100	Fair condition	Retain	Retain - monitor for hazard conditons due to impacts to root zone
2025-05-13	3957	American Elm	*Ulmus americana*	10	33.5	100	Good condition	Retain	Retain - monitor for hazard conditons due to impacts to root zone
2025-05-13	3958	Manitoba Maple	*Acer negundo*	5	13	100	Fair condition	Retain	Boundary tree - no impacts

Trees have not been marked with aluminum tag

Table 1b. Woodland Plot Data

Location	ELC Community	Species		Diameter at Breast Height (DBH) Tally				Total	Notes
		Common Name	Latin Name	10 - 15 cm	16 - 20 cm	21 - 25 cm	>25		
2092	THDM2-6	Common Apple	*Malus*	1				1	Trees in fair to good condition
		Balsam Poplar	*Populus balsamifera*	2	2	1		5	
		American Elm	*Ulmus americana*	2	1			3	
		White Ash	*Fraxinus americana*	5	1	1		7	
		Basswood	*Tilia Americana*	3	1	1	1	6	
		Trembling Aspen	*Populus tremuloides*				1	1	
2093	FODM3-1/ FODM7-2	Basswood	*Tilia Americana*		1	1		2	Many dead white ash
		Trembling Aspen	*Populus americana*	2				2	
		Balsam Poplar	*Populus balsamifera*		2			1	
		Common Apple	*Malus*	1				1	
		White Ash	*Fraxinus americana*	2				2	
		American Elm	*Ulmus americana*		1			1	
2090	THDM2-6	American Elm	*Ulmus americana*	2	2	1		5	Many dead white ash
		Balsam Poplar	*Populus balsamifera*	1	1			2	
		White Ash	*Fraxinus americana*	1				1	
		Common Apple	*Malus*	1				1	
		Common Buckthorn	*Rhamnus cathartica*	2				2	
		Yellow Birch	*Betula alleghaniensis*	1				1	
		Red Oak	*Quercus rubra*		1	1		2	
		Basswood	*Tilia Americana*	1				1	
		Trembling Aspen	*Popuus Tremuloides*	1				1	
2094	THDM2-6	Common Apple	*Malus*	2				2	Trees in fair to good condition
		American Elm	*Ulmus americana*	2	2			4	
		Sugar Maple	*Acer saccharum*	1				1	
		Basswood	*Tilia Americana*	1	1			2	
		Red Oak ?	*Quercus rubra*	2				2	
2089	THDM2-6	Balsam Poplar	*Populus balsamifera*	4				4	Trees in fair to good condition
		Common Buckthorn	*Rhamnus cathartica*	4				4	
2083	THDM2-6	Balsam Poplar	*Populus balsamifera*	4	2			6	Trees in fair to good condition
		Common Apple	*Malus*	1				1	
		Common Buckthorn	*Rhamnus cathartica*	1				1	
		Red Oak	*Quercus rubra*		1			1	
		American Elm	*Ulmus americana*	2			1	3	
		Basswood	*Tilia Americana*	2			1	3	
		White Ash	*Fraxinus americana*		1			1	
2082	THDM2-6	Red Oak	*Quercus rubra*	2				2	Trees in fair to good condition
		Basswood	*Tilia Americana*		1			1	
		American Elm	*Ulmus americana*		1			1	
		Balsam Poplar	*Populus balsamifera*	1				1	
		Common Apple	*Malus*	1				1	
2080	THDM2-6	Common Buckthorn	*Rhamnus cathartica*	5	1			6	Trees in fair to good condition
		Basswood	*Tilia Americana*				2	2	
		White Ash	*Fraxinus americana*		1			1	
		Green Ash	*Fraxinus pennsylvanica*	1				1	
2074	THDM2-6	Crack Willow	*Salix fragilis*		2	1		3	Many dead ash
		American Elm	*Ulmus americana*	4	2			6	
		Green Ash	*Fraxinus pennsylvanica*	1		1		2	
		Common Buckthorn	*Rhamnus cathartica*	1				1	
		White Birch	*Betula papyrifera*	1	1			2	
2073	THDM2-6	Sugar Maple	*Acer saccharum*	1				1	Trees in fair to good condition
		American Elm	*Ulmus americana*	5				5	
		White Birch	*Betula papyrifera*	2				2	
		Crack Willow	*Salix fragilis*				1	1	
2076	THDM2-6	Common Buckthorn	*Rhamnus cathartica*	9				9	Many dead ash
		American Elm	*Ulmus americana*	1	1	1		3	
		Basswood	*Tilia Americana*			1		1	
2085	THDM2-6	Common Buckthorn	*Rhamnus cathartica*	10	2			12	Trees in fair to good condition
		Balsam Poplar	*Populus balsamifera*	10	9	1		20	
		American Elm	*Ulmus americana*	4	4	2		10	
2095	THDM2-6	Balsam Poplar	*Populus balsamifera*	10	9	1		20	Trees in fair to good condition
		American Elm	*Ulmus americana*	4	4	2		10	
2096	FODM3-1	Sugar Maple	*Acer saccharum*	3				3	Trees in fair to good condition
		Trembling Aspen	*Populus tremuloides*	6	3	2	1	12	
		Balsam Poplar	*Populus balsamifera*	2				2	
		Common Buckthorn	*Rhamnus cathartica*	4				4	
		Basswood	*Rhamnus cathartica*	2	1	1		4	
		Green Ash	*Fraxinus pennsylvanica*		1			1	
		American Elm	*Ulmus americana*				1	1	
2087	THDM2-6	Basswood	*Tilia Americana*	3			1	4	Trees in fair to good condition
		American Elm	*Ulmus americana*	3	3	3		9	
		Balsam Poplar	*Poplus balsamifera*	3	1			4	
		Common Buckthorn	*Rhamnus cathartica*	1				1	
		White Ash	*Fraxinus americana*		1			1	
2078	THDM2-6	American Elm	*Ulmus americana*	4	4	2		10	Many dead ash
		Common Buckthorn	*Rhamnus cathartica*	5				5	
2077	THDM2-6	American Elm	*Ulmus americana*	3	2			5	Trees in fair to good condition
		White Ash	*Fraxinus americana*	1				1	
		Common Buckthorn	*Rhamnus cathartica*	1				1	
2072	THDM2-6	American Elm	*Ulmus americana*	4				4	Trees in fair to good condition
2097	THDM2-6	Balsam Poplar	*Populus balsamifera*	3				3	Trees in fair to good condition
		Common Buckthorn	*Rhamnus cathartica*	4				4	
		American Elm	*Ulmus americana*		1	1		2	
		Basswood	*Tilia Americana*	1	3			4	
		Crack Willow	*Salix fragilis*				3	3	
		Black Cherry	*Prunus virginiana*	2				2	
		White Ash	*Fraxinus americana*	1				1	
		Birch ?	*Betula*	2				2	
2098	THDM2-6	American Elm	*Ulmus americana*		3	1		4	Trees in fair to good condition
		Trembling Aspen	*Populus tremuloides*	3	1	2		6	
		Red Oak	*Quercus rubra*	1				1	
		Common Apple	*Malus*			2		2	
2107	FODM3-1	Trembling Aspen	*Populus tremuloides*		1	6	8	15	Trees in fair to good condition
		Green Ash	*Fraxinus americana*	1				1	
		American Elm	*Ulmus americana*	1				1	
		Common Buckthorn	*Rhamnus cathartica*	2				2	
		Basswood	*Tilia Americana*				1	1	
3817	THDM2-6	Common Buckthorn	*Rhamnus cathartica*	4				4	Many dead ash
3818	THDM2-6	American Elm	*Ulmus americana*	2				2	Trees in fair to good condition
		White Ash	*Fraxinus americana*	3				3	
		Common Buckthorn	*Rhamnus cathartica*	1				1	
		Black Cherry	*Prunus serotna*	1				1	
		Common Apple	*Malus*	1				1	
3819	THDM2-6	American Elm	*Ulmus americana*	5				5	Many dead ash
		Trembling Aspen	*Populus tremuloides*	3		1		3	
		Common Buckthorn	*Rhamnus cathartica*	3				3	
		Black Cherry	*Prunus serotna*	1		1		2	
Tree Grouping 1	MEGM4-1	Basswood	*Tilia americana*	3		3		6	Trees in fair to good condition
		White Ash	*Fraxinus americana*	1				1	
		American Elm	*Ulmus americana*	5		1		6	

372 Grey Road 21 - West Parcel

Town of the Blue Mountains

Figure 1. Tree Inventory

- Property Limit
- Wetland Limit (Birks NHC/Tatham)
- Watercourse (Birks NHC/Ontario GeoHub)

Tree Inventory
- Canopy (m)
- Tagged Tree
- GPS Tree
- Tree Inventory Plots
- Tree Grouping

Vegetation Communities
- 1) MEGM4-1/Cultural Open Graminoid Meadow
- 2) FODM7-2 Fresh-Moist Green Ash-Hardwood Lowland Deciduous Forest
- 3) SWDM2-2 Green Ash Mineral Deciduous Swamp
- 4) SWDM4-5 Poplar Deciduous Swamp
- 5) THDM2-6 Buckthorn Deciduous Shrub Thicket
- 7) FODM3-1 Dry-Fresh Poplar Deciduous Forest
- 6) FODM8-1 Fresh-Moist Poplar Deciduous Forest

BIRKS NATURAL HERITAGE CONSULTANTS

105 0 10 20 30 40 Meters

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY: ESRI CANADA

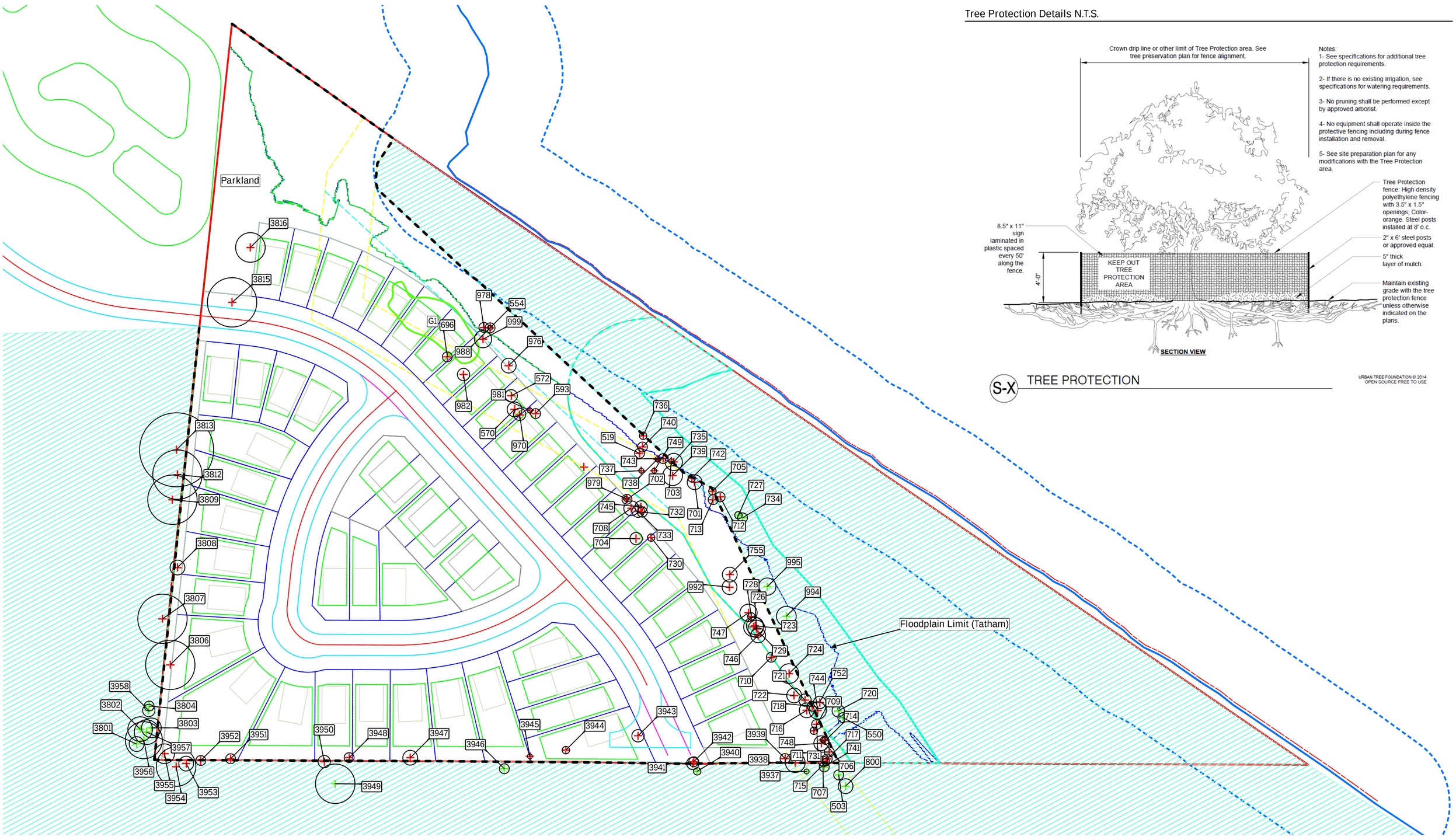
MAP CREATED BY: SB
MAP CHECKED BY: MF
MAP PROJECTION: NAD 1983 UTM ZONE 17N

FILE LOCATION:
Path: C:\Users\S_Brady\BirksNHC\Birks NHC Team for all - Documents\Project Folders\04 - SBrady Projects\ArcGIS - Projects here\Projects - here\372GreyRoad21West

PROJECT: 04-010-2021 STATUS: DRAFT DATE: 18/06/2025

Tree Protection Details N.T.S.

S-X TREE PROTECTION



Tree Protection Notes

1.1 MULCH
A. Mulch shall be coarse, ground, from tree and woody brush sources. The minimum range of fne partcles shall be 3/8 inch or less in size and a maximum size of individual pieces shall be approximately 1 to 1-1/2 inch in diameter and maximum length of approximately 4 to 8 inches. No more that 25% of the total volume shall be fne partcles and no more than 20% of total volume be large pieces.
1. It is understood that Mulch quality will vary signifcantly from supplier to supplier and region to region. The above requirements may be modifed to conform to the source material from locally reliable suppliers as approved by the Owner's Representatve.

1.2 WOOD CHIPS:
A. Wood Chips from an arborist chipping operaton with less than 20% by volume green leaves. Chips stockpiled from the tree removal process may be used.

1.3 TREE PROTECTION FENCING:
A. PLASTIC MESH FENCE: Heavy - duty orange plastc mesh fencing fabric 48 inches wide. Fencing shall be atached to metal "U" or "T" post driven into the ground of sufcient depth to hold the fabric solidly in place with out sagging. The fabric shall be atached to the post using atachment tes of sufcient number and strength to hold up the fabric without sagging. The Owner's Representatve may request, at any tme, additonal post, deeper post depths and or additonal fabric atachments if the fabric begins to sag, lean or otherwise not present a sufcient barrier to access. Should sediment and erosion control fence also be installed in the same alignment as the Tree Proteton Fencing, sediment and erosion control fencing may be utlized instead, under the guidance of a qualifed individual.

1.4 TREE PROTECTION SIGN:
A. Heavy-duty cardboard signs, 8.5 inches x 11 inches, white colored background with black 2 inch high or larger letters block letters. The signs shall be atached to the tree protecton fence every 50 feet o.c. The tree protecton sign shall read "Tree and Plant Protecton Area- Keep Out".

1.5 TREE AND PLANT PROTECTION AREA: The Tree and Plant Protecton Area is defned as all areas indicated on the tree protecton plan. Where no limit of the Tree and Plant Protecton area is defned on the drawings, the limit shall be the drip line (outer edge of the branch crown) of each tree.

1.6 PREPARATION:
A. All trees identfed for removal on lands adjacent to the subject property require landowner notfcaton and permission for removal prior to taking of those specimens.
B. Prior to the preconstructon meetng, layout the limits of the Tree and Plant Protecton Area and then alignments of required Tree and Plant Protecton Fencing and root pruning. Obtain the Owner's Representative's approval of the limits of the protecton area and the alignment of all fencing and root pruning.
C. Hazardous trees within the Tree Protecton Area should be identfed by a qualifed professional and removed prior to installaton of Tree Protecton Fencing.
D. Flag all trees and shrubs to be removed by wrapping orange plastc ribbon around the trunk and obtain the Owner's Representative's approval of all trees and shrubs to be removed prior to the start of tree and shrub removal. Afer approval, mark all trees and shrubs to be removed with orange paint in a band completely around the base of the tree or shrub 1.5 m above the ground.
E. Prior to any construcon actvity at the site including utlity work, grading, storage of materials, or installaton of temporary construcon facilites, install all tree protecton fencing, Filter Fabric, silt fence, tree protecton signs, as shown on the drawings.

1.7 ROOT PRUNING:
A. Prior to any excavatng into the existng soil grade within 7.5 m of the limit of the Tree and Plant Protecton Area or trees to remain, root prune all existng trees to a depth of 24 inches below existng grade in alignments following the edges of the Tree and Plant Protecton Area or as directed by the Owner's Representative. Root pruning shall be in conformance with ANSI A300 (part 8) latest editon.
1. Using a rock saw, chain trencher or similar trenching device, make a vertcal cut within 2 feet of the limit of grading.
2. Afer compleon of the cut, make clean cuts with a lopper, saw or pruner to remove all torn root ends on the tree side of the excavaton, and backfll the trench immediately with existng soil, flling all voids.

1.8 INSTALLATION OF GEOGRIDS, FILTER FABRIC, MATTING, WOOD CHIPS AND OR MULCH
A. Install Geogrids, Filter Fabric, mat ng, Wood Chips and or Mulch in areas and depths shown on the plans and details or as directed by the Owner's representative. In general it is the intent of this specifcaton to provide the following levels of protecton:
1. Areas where foot trafc or storage of lightweight materials is antcipated to be unavoidable provide a layer of Filter Fabric under the 5 inches of Wood Chips or Mulch.
2. Areas where occasional light vehicle trafc is antcipated to be unavoidable provide a layer of Geogrids under 8 inches of Wood Chips or Mulch.
3. Areas where heavy vehicle trafc is unavoidable provide a layer of Geogrids under 8 - 12 inches of Wood Chips or Mulch and a layer of mat ng over the Wood Chips or Mulch.
B. The Owner's Representative shall approve the appropriate level of protecton.
C. In the above requirements, light vehicle is defned as a track skid steer with a ground pressure of 4 psi or lighter. A heavy vehicle is any vehicle with a tre or track pressure of greater than 4 psi. Lightweight materials are any packaged materials that can be physically moved by hand into the locaton. Bulk materials such as soil, or aggregate shall never be stored within the Tree and Plant Protecton Area.

1.9 PROTECTION:
A. Protect the Tree and Plant Protecton Area at all tmes from compacton of the soil; damage of any kind to trunks, bark, branches, leaves and roots of all plants; and contaminaton of the soil, bark or leaves with construcon materials, debris, silt, fuels, oils, and any chemicals substance. Notfy the Owner's Representative of any spills, compacton or damage and take correctve acton immediately using methods approved by the Owner's Representative.

1.10 GENERAL REQUIREMENTS AND LIMITATIONS FOR OPERATIONS WITHIN THE TREE AND PLANT PROTECTION AREA:
A. The Contractor shall not engage in any construcon actvity within the Tree and Plant Protecton Area without the approval of the Owner's Representative including: operatng, moving or storing equipment; storing supplies or materials; locatng temporary facilites including trailers or portable toilets and shall not permit employees to traverse the area to access adjacent areas of the project or use the area for lunch or any other work breaks. Permited actvity, if any, within the Tree and Plant Protecton Area maybe indicated on the drawings along with any required remedial actvity as listed below.
B. In the event that construcon actvity is unavoidable within the Tree and Plant Protecton Area, notfy the Owner's Representative and submit a detailed writen plan of acton for approval. The plan shall include: a statement detailing the reason for the actvity including why other areas are not suited; a descripton of the proposed actvity; the tme period for the actvity, and a list of remedial actons that will reduce the impact on the Tree and Plant Protecton Area from the actvity. Remedial actons shall include but shall not be limited to the following:
1. In general, demoliton and excavaton within the drip line of trees and shrubs shall proceed with extreme care either by the use of hand tools, directonal boring and or Air Knife excavaton where indicated or with other low impact equipment that will not cause damage to the tree, roots or soil.
2. When encountered, exposed roots, 1 inches and larger in diameter shall be worked around in a manner that does not break the outer layer of the root surface (bark). These roots shall be covered in Wood Chips and shall be maintained above permanent wilt point at all tmes. Roots one inch and larger in diameter shall not be cut with out the approval of the owners representative. Excavaton shall be tunneled under these roots without cuting them. In the areas where roots are encountered, work shall be performed and scheduled to close excavatons as quickly as possible over exposed roots.
3. Tree branches that interfere with the construcon may be ted back or pruned to clear only to the point necessary to complete the work. Other branches shall only be removed when specifcally indicated by the Owner's Representative. Tying back or trimming of all branches and the cuting of roots shall be in accordance with accepted arboricultural practces (ANSI A300, part 8) and be performed under supervision of the arborist.
4. Mating: Install temporary mating over the Wood Chips or Mulch to the extent indicated. Do not permit foot trafc, scafolding or the storage of materials within the Tree and Plant Protecton Area to occur of of the temporary mating.
5. Air Excavaton Tool: If excavaton for footngs or utlites is required within the Tree and Plant Protecton Area, air excavaton tool techniques shall be used where practcal or as designed on the drawings.
a. Remove the Wood Chips from an area approximately 18 inches beyond the limits of the hole or trench to be excavated. Cover the Wood Chips for a distance of not less than 15 feet around the limit of the excavaton area with Filter Fabric or plastc sheetng to protect the Wood Chips from silt. Mound the Wood Chips so that the plastc slopes towards the excavaton.
b. Using a sprinkler or soaker hose, apply water slowly to the area of the excavaton for a period of at least 4 hours, approximately 12 hours prior to the work so that the ground water level is at or near feld capacity at the beginning of the work. For excavatons that go beyond the damp soil, rewet the soil as necessary to keep soil moisture near feld capacity.
c. Using an air excavaton tool specifcally designed and manufactured for the intended purpose, and at pressures recommended by the manufacturer of the equipment, fracture the existng soil to the shape and the depths required. Work at rates and using techniques that do not harm tree roots. Air pressure shall be a maximum of 90-100 psi.
1.) The air excavaton tool shall be "Air-Spade" as manufactured by Concept Engineering Group, Inc., Verona, PA (412) 826-8800, or Air Knife as manufactured by Easy Use Air Tools, Inc. Allison Park, Pa (866) 328-5723 or approved equal.
d. Using a commercial, high-powered vacuum truck if required, remove the soil from the excavaton produced by the Air Knife excavaton. The vacuum truck should generally operate simultaneously with the hose operator, such that the soil produced is picked up from the excavaton hole, and the exposed roots can be observed and not damaged by the ongoing operaton. Do not drive the vacuum truck into the Tree and Plant Protecton Area unless the area is protected from compacton as approved in advance by the Owner's Representative.
e. Remove all excavated soil and excavated Wood Chips, and contaminated soil at the end of the excavaton.
f. Schedule the work so that foundatons or utlity work is completed immediately afer the excavaton. Do not let the roots dry out. Mist the roots several tmes during the day. If the excavated area must remain open over night, mist the roots and cover the excavaton with black plastc.
g. Dispose of all soil in a manner that meets local laws and regulatons.
h. Restore soil within the trench as soon as the work is completed. Utlize soil of similar texture to the removed soil and lightly compact with hand tools. Leave soil mounded over the trench to a height of approximately 10% of the trench depth to account for setlement.
i. Restore any Geogrids, Filter Fabric, Wood Chips or Mulch and or mating that was previously required for the area.

1.11 TREE REMOVAL:
A. Remove all trees indicated by the drawings and specifcatons, as requiring removal, in a manner that will not damage adjacent trees or structures or compacts the soil.
B. Remove trees that are adjacent to trees or structures to remain, in sectons, to limit the opportunity of damage to adjacent crowns, trunks, ground plane elements and structures.
C. Do not drop trees with a single cut unless the tree will fall in an area not included in the Tree and Plant Protecton Area. No tree to be removed within 15 feet of the Tree and Plant Protecton Area shall be pushed over or up-rooted using a piece of grading equipment.
D. Protect adjacent paving, soil, trees, shrubs, ground cover plantngs and understory plants to remain from damage during all tree removal operatons, and from construcon operatons. Protecton shall include the root system, trunk, limbs, and crown from breakage or scarring, and the soil from compacton.
E. Remove stumps and immediate root plate from existng trees to be removed. Grind trunk bases and large butress roots to a depth of the largest butress root or at least 18 inches below the top most roots which ever is less and over the area of three tmes the diameter of the trunk (DBH).
1. For trees where the stump will fall under new paved areas, grind roots to a total depth of 18 inches below the existng grade. If the sides of the stump hole stll have greater than approximately 20% wood visible, contnue grinding operaton deeper and or wider untl the resultng hole has less than 20% wood. Remove all wood chips produced by the grinding operaton and backfll in 8 inch layers with controlled fll of a quality acceptable to the site engineer for fll material under structures, compacted to 95% of the maximum dry density standard proctor. The Owner's Representative shall approve each hole at the end of the grinding operaton.
2. In areas where the tree locaton is to be a plantng bed or lawn, remove all woodchips and backfll stump holes with plantng soil as defned in Specifcaton Secton Plantng Soil, in maximum of 12 inch layers and compact to 80 - 85% of the maximum dry density standard proctor.

1.12 PRUNING:
A. Within six months of the estmated date of substantal compleon, prune all dead or hazardous branches larger than 2 inch in diameter from all trees to remain.
B. Pruning should be undertaken by a qualifed arborist.
C. Prune any low, hanging branches and vines from existng trees and shrubs that overhang walks, streets and drives, or parking areas as follows:
1. Walks - within 2.4 m vertcally of the proposed walk elevaton.
2. Parking areas - within 3.7 m vertcally of the proposed parking surface elevaton.
3. Streets and drives - within 4.3 m vertcally of the proposed driving surface elevaton.
D. All pruning shall be done in accordance with ANSI A300 (part 1), ISA BMP Tree Pruning (latest editon, and the "Structural Pruning: A Guide for the Green Industry", Edward Gilman, Brian Kempf, Nelda Matheny and Jim Clark, 2013 Urban Tree Foundaton, Visalia CA.
E. Perform other pruning task as indicated on the drawings or requested by the Owner's Representative.
F. Where tree specifc disease vectors require, sterilize all pruning tools between the work in individual trees.

1.13 INSECT AND DISEASE CONTROL:
A. Monitor all plants to remain for disease and insect infestatons during the entre construcon period. Provide all disease and insect control required to keep the plants in a healthy state using the principles of Integrated Plant Management (IPM). All pestcides shall be applied by a certfed pestcide applicator.

1.14 REMOVAL OF FENCING AND OTHER TREE AND PLANT PROTECTION:
A. At the end of the construcon period or when requested by the Owner's Representative remove all fencing, Wood Chips or Mulch,

1.15 DAMAGE OR LOSS TO EXISTING PLANTS TO REMAIN:
A. All trees identfed for retenton on adjacent lands require landowner notfcaton should failure of the trees be observed.
B. Any trees or plants designated to remain and which are damaged shall be replaced in kind. Trees shall be replaced with a tree of similar species, with size selecton to occur in consideraton of that of the injured specimen.
1. All trees and plants shall be installed per the requirements of Specifcaton Secton Plantng per the requirements of the Town of the Blue Mountains.
C. Plants that are damaged shall be considered as requiring replacement or appraisal in the event that the damage afects more than 25 % of the crown, 25% of the trunk circumference, or root protecton area, or the tree is damaged in such a manner that the tree could develop into a potental hazard.
D. Any tree that is determined to be dead, damaged or potentally hazardous by the Owner's arborist and upon the request of the Owner's Representative shall be immediately removed. Tree removal shall include all clean up of all wood parts and grinding of the stump to a depth sufcient to plant the replacement tree or plant, removal of all chips from the stump site and flling the resultng hole with topsoil.
E. Remedial work may extend up to two years following the compleon of construcon to allow for any requirements of multple applicatons or the need to undertake applicatons at required seasons of the year.

372 Grey Road 21 - West Parcel

Town of the Blue Mountains

Figure 2. Tree Protection Plan

- Property Limit
- Wetland Limit (Birks NHC/Tatham)
- Watercourse (Birks NHC/Ontario GeoHub)
- 30m Wetland Setback
- 30m Watercourse Setback

Tree Inventory
- Canopy (m)
- Tree Grouping

Tree Impacts
- Retained
- Removed

- Tree Protection Fencing
- Tree Protection Area

BIRKS NATURAL HERITAGE CONSULTANTS

10 5 0 10 20 30 40 Meters

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY: ESRI CANADA

MAP CREATED BY: SB
MAP CHECKED BY: MF
MAP PROJECTION: NAD 1983 UTM ZONE 17N

FILE LOCATION:
Path: C:\Users\S_Brady\BirksNHC\Birks NHC Team for all - Documents\Project Folders\04 - SBrady Projects\ArcGIS - Projects here\Projects - here\372GreyRoad21West

PROJECT: 04-010-2021 STATUS: DRAFT DATE: 20/06/2025

APPENDIX A

County of Grey Terms of Reference

From: Michael Cook
To: Stephanie Brady
Subject: RE: 372 Grey Road 21, West - TIPP Terms of Reference
Date: March 13, 2025 2:33:09 PM
Attachments: image002.png

Hi Stephanie,

Any native tree 10 cm at dbh or greater within the significant woodland's designation should be included in the compensation plan.

If you have/provide justification as to why a tree may not be part of a significant woodland, and should not be compensated for, feel free to provide that rational in the plan's notes.

Some CA's have tree planting programs, and they can receive monetary compensation to conduct planting works on the developer behalf. They seem to all operate differently, and I believe GSCA only plants for people if they have lands to plant on.

Hope this helps,

Michael Cook
Planning Ecologist
Grey County

Grey County

From: Stephanie Brady <sbrady@birksnhc.ca>
Sent: March 13, 2025 2:10 PM
To: Michael Cook <michael.cook@grey.ca>
Subject: RE: 372 Grey Road 21, West - TIPP Terms of Reference

[EXTERNAL EMAIL]

Hi Michael,

Thanks for reviewing the terms of reference on this. To confirm, if there are native trees present, but outside of the significant woodland area (i.e., in a THD community, do those individual trees still require compensation?

We have not specifically worked with any third party organizations, however I wanted to keep this as an option should we find a partnership with an organization that undertakes tree planting in the Town of the Blue Mountains/Grey County. Do you know of any specific programs the CA could benefit from monetary compensation for tree planting?

Thanks!

Stephanie Brady, HBES/Ecologist
Birks Natural Heritage Consultants, Inc.
c. (705)305-9102
w. www.birksnhc.ca
a. 23 Herrell Avenue, Barrie L4N 6T5

From: Michael Cook <michael.cook@grey.ca>
Sent: March 11, 2025 8:56 AM
To: Stephanie Brady <sbrady@birksnhc.ca>
Subject: RE: 372 Grey Road 21, West - TIPP Terms of Reference

Hi Stephanie,

Thanks for the info.

Invasive species (such as buckthorn) do not need to be compensated for. There may be a few native trees in the community that are above 10 cm dbh that should be compensated for.

As for 2 b) – has Birks worked with a 3rd party organization who does tree planting? Usually, the municipality prefers the trees replanted in the same municipality – but they can be somewhat flexible in this requirement. I have sometimes got a CA to work with us, but unsure if you guys work with someone else who could do this on behalf of the developer.

The rest of the ToR is acceptable.

Thank you,

Michael Cook
Planning Ecologist
Grey County

Grey County

From: Stephanie Brady <sbrady@birksnhc.ca>
Sent: March 7, 2025 11:28 AM
To: Michael Cook <michael.cook@grey.ca>
Subject: 372 Grey Road 21, West - TIPP Terms of Reference

[EXTERNAL EMAIL]

Michael Cook, Planning Ecologist, Grey County

Good morning Michael,

Thanks for the call and discussion the other week regarding the Tree Inventory and Preservation Plan (TIPP) as well as the woodland compensation requirements for this project. I will be providing formal responses to the County's comments on the file, however I wanted to clarify the woodland size discrepancies you were noting. The EIS identified an area of 0.66 ha of woodland loss on the property, which is contiguous with a larger significant woodland feature. The 0.66 ha was based on the ELC mapping completed as part of the EIS, which excluded the larger THDM2-6 community (see figure attached; polygons 7 & 2). We will clarify this discrepancy in our response but wanted to provide clarification to you sooner as it will guide the TIPP scope of work and woodland compensation requirements.

As per our discussions, we propose the following Terms of Reference for the TIPP and Woodland Compensation Plan:

1. TIPP:
    a. Site Assessment
        - Undertake a field inventory to identify/assess all trees [>10 centimeters at breast height (DBH)] within 6 meters (m) of the proposed limit of work. Individual inventory will be limited to open areas of the proposed footprint. The trees will be assessed to define the following:
            - Approximate location using GPS handheld device;
            - Species;
            - Diameter of tree at 1.4m (DBH) above ground surface for all trees greater than 10 cm at DBH;
            - Health, including but not limited to structural integrity, percent deadwood, crown vigor, pathogenical concerns, decay and potential for failure (as conditions allow);
        - Within heavily forested areas, the communities will be surveyed utilizing a 12 m radius plots will be identified and surveyed as above, to obtain a representation of the treed communities (woodlands, forests). All trees >10 cm DBH within

the plots will be inventoried.
    - Within open areas the individual trees will be assigned a unique identifier and their location as well as canopy will be plotted on aerial photography.

b. One Tree Inventory and Preservation Plan will be completed which will include the following:
    - The scope of development, where the proposed extent of alteration (grading, excavation, site alteration, clearing) will be illustrated, including any trees proposed for removal;
    - The existing conditions, relevant mapping, and information regarding inventoried specimens as obtained during the field studies;
    - Recommendations for preservation of those trees identified for retention;
    - Mitigation measures including tree removal restrictions relative to Species at Risk and Migratory Birds;
    - Preparation of one digital copy of the TIPP for circulation.

2. Woodland Compensation Plan:
    a. Confirm compensation numbers/area, based on the results of the Tree Inventory data;
    b. Discuss the preferred method to meet the compensation target, including whether the subject property can accommodate any replacement plantings or whether the project team will work with third party organizations;
    c. Discuss the proposed replacement planting stock, which will be suitable to the subject woodland feature; and
    d. Provide mapping illustrating the compensation plan in relation to the woodland area lost.

Please review and provide any comments regarding the proposed scope of work for this study. Don't hesitate to contact me should you have any questions.

Thank you,

Stephanie Brady, HBES/Ecologist
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w. www.birksnhc.ca
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