Tree Inventory and Preservation Plan Report
2650 Mayfield Road
Caledon, Ontario

prepared for

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KUNTZ FORESTRY CONSULTING Inc. Project P1347

Introduction

Kuntz Forestry Consulting Inc. was retained by Lormel Joint Venture Inc. to complete a Tree Inventory and Preservation Plan Report in support of a development application at 2650 Mayfield Road in the Town of Caledon, Ontario.

The work plan for this study included the following:

- Prepare inventory of the tree resources over 15cm on and within ten metres of the proposed development;
- Evaluate tree saving opportunities based on proposed site plans and grading (if available); and,
- Document the findings in a Tree Inventory and Preservation Plan report.

Trees included were visually assessed for condition utilizing the following parameters:

Tree # - number assigned to trees that corresponds to Figure 1.
Species - common and botanical names provided in the inventory table.
DBH - diameter (centimeters) at breast height, measured at 1.4 m above the ground.
Condition - condition of tree considering trunk integrity (TI), crown structure (CS) and crown vigor (CV). Condition ratings include poor (P), fair (F), and good (G);
Crown Die Back – Percentage of dead branches within the crown.
Drip Line - Crown radius; and
Comments – Any other relevant tree condition information.

The results of the evaluation are provided below.

Methodology

Trees measuring over 15cm DBH on and within ten metres of the proposed development were identified included in the tree inventory. Trees were located using a handheld GPS unit (Trimble GeoExplorer® 6000 series) accurate to ±1m. Trees were tagged 301 and 304-335. Trees, which were not tagged, were numbered A-L. The woodlot (aside from hazard trees) was not inventoried as it is proposed for retention and protection by a 10m buffer. Tree locations are shown on Figure 1. See Table 1 for the results of the inventory.

Existing Site Conditions

The subject property is currently occupied by farmland and forested areas in the northeast corner of the property. Tree resources exist in the form of natural generations. Refer to Figure 1 for the existing site conditions.

Individual Tree Resources

The tree inventory was conducted on 7 September 2016. The inventory documented 45 trees on and within ten metres of the proposed development. Refer to Table 1 for the full tree inventory and Figure 1 for the location of tree reported in the tree inventory.

Tree resources included in the inventory are Freeman Maple (*Acer freemanii*), Manitoba Maple (*Acer negundo*), Sugar Maple (*Acer saccharum*), White Ash (*Fraxinus americana*), Green Ash (*Fraxinus pennsylvanica*), Black Walnut (*Juglans nigra*), White Spruce (*Picea glauca*), Scots Pine

(*Pinus sylvestris*), Eastern Cottonwood (*Populus deltoides*), Trembling Aspen (*Populus tremuloides*), Bur Oak (*Quercus macrocarpa*), Willow Species (*Salix spp*.), Basswood (*Tilia americana*), and White Elm (*Ulmus americana*).

Proposed Development

The proposed development includes the construction of a multi-block residential subdivision. The property will be developed in conjunction with the surrounding properties to the north and west. Greenland on the east side of the subject property will be redesigned as Natural Heritage System. Refer to Figure 1 for the proposed development.

Discussion

The following sections provide a discussion and analysis of development impacts, tree removal requirements and tree preservation relative to the proposed development.

Development Impacts/Tree Removals

The removal of Trees 301, 305-328, 331, 334, and A (28 trees) is required to accommodate the proposed development. Preservation of Trees 305-328 is not possible due to the proposed diversion channel on the east side of the property. The removal of Trees D, and E is recommended due to the poor and/or hazardous condition of the trees. Any trees located on the property line or on the adjacent property that are proposed to be removed or pruned, will require written consent from the adjacent landowner. All correspondence is to be forwarded to the Town prior to any removals. Refer to Figure 1 for the location of the proposed tree removals.

The existing woodlot was excluded from this study as it is outside of the 10m buffer; however, dead and/or hazardous trees were identified within the woodlot and their removal is recommended at the future stage in the development process.

Tree Preservation

The preservation of remaining 15 trees will be possible with appropriate tree protection measures. The existing woodlot is assessed in *Environmental Impact Statement/Environmental Implementation Report*, dated July 2016 by Hensel Design Group. Tree preservation fencing must be installed prior to the commencement of earthworks to ensure trees identified for preservation are not impacted by the proposed development. Refer to Figure 1 for the location of prescribed tree preservation fencing, further tree preservation plan notes and the tree protection fencing detail. Sediment and erosion control fencing should suffice as tree protection fencing.

Trees F-L are located on the proposed Trail Gateway; however, the detailed plan is not provided yet. If Trees F-L conflict with the proposed Trail Gateway, including re-grading, trail, or any restoration plan, the removal of those trees may be required. If the removal of Trees F-L is required, written consent from the property owner will be required prior to their removal.

Tree Compensation Planting

The Town of Caledon requires two tree compensation plantings for every tree removal (2:1 ratio of tree plantings to tree removal). Tree compensation planting is in addition to the standard required planting. If tree compensation cannot be accommodated for in the planting design, financial compensation shall be collected at a rate (per tree) as determined by the Town of

Caledon. The removal of 28 trees is required to accommodate the proposed development. Total of 56 tree compensation plantings is required on the subject property.

The removal of Trees 305-328, 331, and 334 have been approved by the Town of Caledon upon execution of a Tree Removal Agreement. The remaining trees will be further reviewed at the detail design stage.

Summary and Recommendations

Kuntz Forestry Consulting Inc. was retained by Lormel Joint Venture Inc. to complete a Tree Inventory and Preservation Plan in support of a development application at 2650 Mayfield Road in Caledon, Ontario. A tree inventory was conducted and reviewed in the context of the proposed development plan.

The findings of the study indicate a total of 45 trees on and within ten metres of the proposed development. The removal of 28 trees is required to accommodate the proposed development. The removal of two trees is recommended due to their poor and/or hazardous condition. The preservation of remaining 15 trees and the existing woodlot will be possible with appropriate tree protection measures.

The following recommendations are suggested to minimize impacts to trees identified for preservation. Refer to Figure 1 for additional Tree Protection Plan Notes and tree preservation fence detail.

- Tree protection barriers and fencing should be erected at locations as prescribed on Figure 1. All tree protection measures should follow the guidelines as set out in the tree preservation plan notes and the tree preservation fencing detail.

- No construction activity including surface treatments, excavations of any kind, storage of materials or vehicles, unless specifically outlined above, is permitted within the area identified on Figure 1 as a tree protection zone (TPZ) at any time during or after construction.

- Branches that extend beyond prescribed tree protection zones that require pruning must be pruned by a qualified Arborist or other tree professional. All pruning of tree branches must be in accordance with Good Arboricultural Standards.

- Site visits, pre, during and post construction is recommended by either a certified consulting arborist (I.S.A.) or registered professional forester (R.P.F.) to ensure proper utilization of tree protection barriers. Trees should also be inspected for damage incurred during construction to ensure appropriate pruning or other measures are implemented.

Respectfully Submitted,
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References

Hensel Design Group. *Environmental Impact Statement/Environmental Implementation Report*. July 2016.

Table 1. Tree Inventory

Location: 2650 Mayfield Road, Caledon Date: 7 September 2016 Surveyors: KH

Tree#	Common Name	Scientific Name	DBH	TI	CS	CV	CDB	DL	Comments	Action
301	Trembling Aspen	*Populus tremuloides*	15.5	F/G	G	G		4	Crook (L)	Remove
304	Green Ash	*Fraxinus pennsylvanica*	15-25	F	P/F	P	20	4	Union at base (3 stems), stem wounds (M), epicormic branches (H)	Preserve
305	Scots Pine	*Pinus sylvestris*	25.5	F/G	P/F	P/F		3	Crook (L), sparse crown (M)	Remove
306	Scots Pine	*Pinus sylvestris*	33	F	F	P/F		5	Crook (M), lean (L), sparse crown (M)	Remove
307	Scots Pine	*Pinus sylvestris*	36.5	F/G	G	F		6	Sweep (L), exposed roots (H)	Remove
308	Willow Species	*Salix spp.*	21, 15	P/F	F	F		5	Union at base, crook (M), bow (M), epicormic branches (H)	Remove
309	Willow Species	*Salix spp.*	15-35	P/F	F	F		6	Union at base (4 stems) but 1 stem lost leader at 2m, crook (L), epicormic branches (M)	Remove
310	Freeman Maple	*Acer freemanii*	5-18 (ave 10)	P/F	G	F/G		6	Union at base (6 stems), epicormic branches (H)	Remove
311	White Spruce	*Picea glauca*	33	F/G	G	F/G		6	Exposed roots (M)	Remove
312	Willow Species	*Salix spp.*	27	F	F/G	F		4	Sweep (M), epicormic branches (M)	Remove
313	White Spruce	*Picea glauca*	51.5	F/G	G	F/G		6	Sweep (L)	Remove
314	White Spruce	*Picea glauca*	33.5	G	G	G		5		Remove
315	White Spruce	*Picea glauca*	31	P	F	F		6	Stem wounds (H), asymmetrical crown (H)	Remove
NT316	White Spruce	*Picea glauca*	~16	G	G	G		4		Remove
317	White Spruce	*Picea glauca*	28	G	G	G		4		Remove
318	White Spruce	*Picea glauca*	30.5	G	G	G		5		Remove
319	White Elm	*Ulmus americana*	~45, 15	F/G	F/G	F/G		10	Union at base, bow (L)	Remove
320	White Elm	*Ulmus americana*	47, 23	F/G	G	F/G		10	Union at base	Remove
321	White Spruce	*Picea glauca*	36	G	G	G		6		Remove
322	White Spruce	*Picea glauca*	27	G	G	G		5		Remove
323	White Spruce	*Picea glauca*	23	P	P/F	P	80	5	Exposed roots (H), lean (M)	Remove
324	Manitoba Maple	*Acer negundo*	15	P/F	F/G	F		5	Lean (M), crook (L), sparse crown (L)	Remove
325	Scots Pine	*Pinus sylvestris*	32	F/G	F/G	F		5	Crook (L), sparse crown (L)	Remove
326	Scots Pine	*Pinus sylvestris*	27	F	F/G	F		5	Union at 2m with included bark (H)	Remove
327	Eastern Cottonwood	*Populus deltoides*	26	G	G	F/G		4	Epicormic branches (L)	Remove
328	Eastern Cottonwood	*Populus deltoides*	16	G	G	G		3		Remove
329	Eastern Cottonwood	*Populus deltoides*	12-18 (ave 14)	F	G	F/G		4	Union at base (3 stems), sweep (M)	Preserve
330	Eastern Cottonwood	*Populus deltoides*	17, 13	F/G	G	G		3	Union at 0.5m with included bark (H), crook (L)	Preserve
331	Eastern Cottonwood	*Populus deltoides*	20	G	G	G		3		Remove
332	Eastern Cottonwood	*Populus deltoides*	55	G	G	G		5		Preserve
333	Eastern Cottonwood	*Populus deltoides*	17	G	G	G		3		Preserve
334	Eastern Cottonwood	*Populus deltoides*	17	G	G	G		3		Remove
NT335	Scots Pine	*Pinus sylvestris*	~18	F/G	G	G		3	Crook (L)	Preserve
A	Black Walnut	*Juglans nigra*	23	G	G	G		6		Remove
B	White Spruce	*Picea glauca*	~40	G	G	G		5		Preserve
C	White Spruce	*Picea glauca*	~35	G	G	G		5		Preserve
D	Basswood	*Tilia americana*	~20-45	P/F	F/G	F		8	Union at base (7 stems), large cavity at base with rot ==> hazard	Remove (condition)
E	White Ash	*Fraxinus americana*	~70	P	P/F	P	95	3	Almost dead	Remove (condition)
F	Bur Oak	*Quercus macrocarpa*	~100	G	G	G		10		Preserve
G	Bur Oak	*Quercus macrocarpa*	~25	G	F/G	F/G		6	Epicormic branches (M), asymmetrical crown (L)	Preserve
H	Bur Oak	*Quercus macrocarpa*	~22	G	F/G	F/G		6	Asymmetrical crown (L)	Preserve
I	Sugar Maple	*Acer saccharum*	~30, 20	F	F/G	F/G		6	Union at 0.3m, epicormic branches (L)	Preserve
J	Bur Oak	*Quercus macrocarpa*	15.5	G	G	G		5		Preserve
K	Bur Oak	*Quercus macrocarpa*	~15	G	G	G		6		Preserve
L	Bur Oak	*Quercus macrocarpa*	~35	G	G	G		6		Preserve

Codes		
DBH	Diameter at Breast	(cm)
TI	Trunk Integrity	(G, F, P)
CS	Crown Structure	(G, F, P)
CV	Crown Vigor	(G, F, P)
CDB	Crown Die Back	(%)
DL	Dripline	(m)
~ = estimate; (L) = light; (M) = moderate; (H) = heavy		