

**Tree Inventory and Preservation Plan Report
1555 18th Street East
Owen Sound, Ontario**

prepared for

**SmartCentres
Real Estate Investment Trust
3200 Highway 7
Vaughan, Ontario L4K 5Z5**

prepared by



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KUNTZ FORESTRY CONSULTING Inc. Project P3296

Introduction

Kuntz Forestry Consulting Inc. was retained by SmartCentres to prepare a Tree Inventory and Preservation Plan Report for the proposed subdivision at 1555 18th Street East in the City of Owen Sound, Ontario. The subject property is located on the corner of 10th Street East and 18th Street East.

The work plan for this tree preservation study included the following:

- Prepare inventory of the tree resources over 15cm diameter at breast height (DBH) in proximity to the proposed subdivision;
- Evaluate potential tree saving opportunities based on proposed development; and
- Document the findings in a Tree Inventory and Preservation Plan Report.

Tree resources were assessed utilizing the following parameters:

Tree # - number assigned to tree 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.

Drip Line - diameter of crown (meters).

Condition - condition of tree considering Trunk Integrity, Crown Structure, and Crown Vigor. Condition ratings include poor (P), fair (F) and good (G).

Crown Dieback - percentage dieback in live crown.

Comments - additional relevant detail.

The results of the evaluation are provided below.

Methodology

Tree inventories were conducted on 29 November 2022. Trees greater than 15cm DBH on and within six metres of the subject property were included in the tree inventory and preservation planning exercise. Individual trees were located using a handheld GPS unit (Trimble GeoExplorer® 6000 series on RTK network) accurate to ±1m. Trees inventoried were tagged with numbers 1189-1294. Individual tree locations are shown on Figure 1. See Table 1 for the results of the individual tree inventory.

Existing Site Conditions

The subject area is currently comprised of a deciduous forest stand area and an open field. A few landscaping trees exist along the northern perimeter of the subject property. Refer to Figure 1 for the existing site conditions.

Tree Resources

The tree inventory was conducted on 29 November 2022. Tree inventory documented 106 trees with the potential to be impacted by the proposed work. Refer to Table 1 for the full tree inventory and Figure 1 for the location of trees reported in the tree inventory.

A Forestry Assessment was conducted for the deciduous forest stand by KFCI dated 11 January 2021. The study concluded that the forest compartment qualified as a woodland per the definition of the Grey Country Forest Management By-Law (4341-06); however, the woodland is a homogenous stand of predominantly juvenile deciduous tree and shrub

species. The majority of the stand is dead and dying Ash (*Fraxinus* spp.) due to Emerald Ash Borer.

Tree resources were comprised of Freeman Maple (*Acer x freemanii*), Sugar Maple (*Acer saccharum*), Apple (*Malus* spp.), Ironwood (*Ostrya virginiana*), Norway Spruce (*Picea abies*), Blue Spruce (*Picea pungens*), Red Pine (*Pinus resinosa*), Sweet Cherry (*Prunus avium*), Black Cherry (*Prunus serotina*), Pear (*Pyrus* spp.), Basswood (*Tilia americana*), White Elm (*Ulmus americana*), and Siberian Elm (*Ulmus pumila*).

Proposed Development

The proposed development includes the construction of two 4-storey residential buildings, ten townhouse blocks, associated parking, and residential roads. Refer to Figure 1 for the proposed development.

Discussion

The following sections provide a discussion and analysis of tree impacts and tree preservation planning relative to the proposed works (construction of a residential subdivision) and existing conditions.

Impacts of Proposed Development / Tree Removal

The removal of 76 trees is required to accommodate the proposed development. Required tree removals include Trees 1189-1248, 1253, 1260, 1261, 1267-1274, and 1278-1282. All Ash trees on and within six metres of the subject property are dead and/or hazardous conditions and their removal is also required for the proposed development and safety concerns. Refer to Figure 1 for the locations of the proposed tree removals.

Tree Preservation

The preservation of the remaining 30 trees will be possible with the use of appropriate tree protection measures as indicated on Figure 1. Tree protection measures are required to be implemented prior to any grading or construction activity to ensure tree resources designated for retention are not impacted. Silt control fence will suffice as tree preservation fence. Refer to Figure 1 for the location of required tree preservation fencing and general Tree Protection Plan Notes.

Summary and Recommendations

Kuntz Forestry Consulting Inc. was retained by SmartCentres to complete a Tree Inventory and Preservation Plan in support of proposed subdivision at 1555 18th Street East in the City of Owen Sound. A tree inventory was conducted and reviewed in the context of the proposed works.

The findings of the study indicate a total of 106 trees on and within six metres of the subject property. The removal of 76 trees is required to accommodate the proposed development. The remaining 30 trees can be saved provided appropriate tree protection measures are installed prior to the development.

The following recommendations are suggested to minimize impacts to trees identified for preservation. Refer to Figure 1 for the location of required tree preservation fencing and general Tree Protection Plan Notes.

- 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 and roots 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 roots and 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,

Kuntz Forestry Consulting Inc.

Kaho Hayashi

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Limitations of Assessment

Only the tree(s) identified in this report were included in the inventory. The assessment of the trees presented in this report has been made using accepted arboricultural techniques. These may include a visual examination taken from the ground of all the above-ground parts of the tree for structural defects, scars, external indications of decay such as fungal fruiting bodies, evidence of attack by insects, discoloured foliage, the condition of any visible root structures, the degree of lean (if any), the general condition of the trees and the identification of potentially hazardous trees or recommendations for removal (if applicable). Where trees could not be directly accessed (ie. due to obstructions, and/or on neighbouring properties), trees were assessed as accurately as possible from nearby vantage points.

Locations of trees provided in the report are determined as accurately as possible based on the best information available. If official survey information is not provided, tree location in the report may not be exact. In this case, if trees occur on or near property boundaries, an official site survey may be required to determine ownership utilizing specialized survey protocol to gain precise location.

Furthermore, recommendations made in this report are based on the site plans that have been provided at the time of reporting. These recommendations may no longer be applicable should changes be made to the site plan and/or grading, servicing, or landscaping plans following report submission.

Notwithstanding the recommendations and conclusions made in this report, it must be recognized that trees are living organisms, and their health and vigor constantly change over time. They are not immune to changes in site conditions or seasonal variations in the weather conditions. Any tree will fail if the forces applied to the tree exceed the strength of the tree or its parts.

Although every effort has been made to ensure that this assessment is reasonably accurate, the trees should be re-assessed periodically. The assessment presented in this report is valid at the time of inspection.

Table 1. Tree Inventory

Location: 1555 18th Street East, Owen Sound

Date: 29 November 2022

Surveyors: KH

Tree #	Common Name	Scientific Name	DBH	TI	CS	CV	CDB	DL	Comments	Action
1189	White Elm	<i>Ulmus americana</i>	25.5	G	G	G		2		Remove
1190	White Elm	<i>Ulmus americana</i>	28	FG	G	G		2.5	Co-dominance at 4m	Remove
1191	Apple	<i>Malus spp.</i>	17	FG	G	FG		2	Co-dominance at 1.8m, crook (L)	Remove
1192	Basswood	<i>Tilia americana</i>	22.5	FG	FG	G		2	Lean (L), asymmetrical crown (M)	Remove
1193	Apple	<i>Malus spp.</i>	20.5	FG	G	G		2	Co-dominance at 3m	Remove
1194	Basswood	<i>Tilia americana</i>	16.5	F	G	G		1.5	Sweep (L), stem wound (M) at base	Remove
1195	Basswood	<i>Tilia americana</i>	15.5	G	G	F		1.5		Remove
1196	Basswood	<i>Tilia americana</i>	22	G	G	G		1.5		Remove
1197	Basswood	<i>Tilia americana</i>	27	G	G	G		2		Remove
1198	Basswood	<i>Tilia americana</i>	30.5	G	G	G		2.5		Remove
1199	Basswood	<i>Tilia americana</i>	20.5	FG	G	G		2	Co-dominance in crown	Remove
1200	Basswood	<i>Tilia americana</i>	28.5	G	G	G		2.5		Remove
1201	Pear	<i>Pyrus spp.</i>	16, 11	F	F	F		2.5	Union at base, crook (M)	Remove
1202	Ironwood	<i>Ostrya virginiana</i>	30, 21, 20, 13	P	FG	P		3.5	Union at base, fruiting bodies (H) on all stems	Remove
1203	Black Cherry	<i>Prunus serotina</i>	19	G	G	G		2		Remove
1204	Sugar Maple	<i>Acer saccharum</i>	38, 34, 33, 18.5	FG	G	FG		4	Union at base, deadwood	Remove
1205	Black Cherry	<i>Prunus serotina</i>	16	FG	G	G		1.5	Crook (M)	Remove
1206	Apple	<i>Malus spp.</i>	19.5	FG	G	FG		2.5	Co-dominance at 1.8m, crook (M)	Remove
1207	Apple	<i>Malus spp.</i>	17	F	G	G		2.5	Lean (L), crook (M), union at 1.8m	Remove
1208	Pear	<i>Pyrus spp.</i>	21.5	G	G	G		1.5	Stem wounds (L)	Remove
1209	Sweet Cherry	<i>Prunus avium</i>	27	FG	G	G		2	Sweep (L)	Remove
1210	Sugar Maple	<i>Acer saccharum</i>	27.5	F	G	G		3	Seam (L) - closed, spiral stem	Remove
1211	White Elm	<i>Ulmus americana</i>	27.5	FG	G	G		3	Co-dominance at 3m, sweep (L), crook (L)	Remove
1212	White Elm	<i>Ulmus americana</i>	24.5	G	G	G		3		Remove
1213	White Elm	<i>Ulmus americana</i>	20.5	G	G	G		2	Epicormic branches (M)	Remove
1214	White Elm	<i>Ulmus americana</i>	24.5	FG	G	G		2.5	Co-dominance at 4.5m	Remove
1215	Apple	<i>Malus spp.</i>	16, 15	F	FG	P	60	2	Co-dominance at 0.6m with included bark (M), dead leader, only lower branches alive	Remove
1216	White Elm	<i>Ulmus americana</i>	16	G	G	F		1.5	Epicormic branches (M)	Remove
1217	Red Pine	<i>Pinus resinosa</i>	24.5	G	G	G		2	Sap oozing	Remove
1218	Apple	<i>Malus spp.</i>	15.5	FG	G	G		2.5	Co-dominance at 1.8m, crook (M)	Remove
1219	White Elm	<i>Ulmus americana</i>	18	G	G	G		1.5		Remove
1220	Apple	<i>Malus spp.</i>	15.5	FG	G	G		2	Co-dominance at 3.5m	Remove
1221	Apple	<i>Malus spp.</i>	18	G	G	FG		2	Epicormic branches (H)	Remove
1222	White Elm	<i>Ulmus americana</i>	21	F	FG	FG		2	Crook (M), sweep (L), asymmetrical crown (M)	Remove
1223	White Elm	<i>Ulmus americana</i>	20.5, 14	FG	G	G		2.5	Co-dominance at base	Remove
1224	Basswood	<i>Tilia americana</i>	15-30 (avg. 26)	FG	G	G		4.5	Union at base with 6 stems	Remove
1225	White Elm	<i>Ulmus americana</i>	21.5	FG	G	F		2	Bow (L)	Remove
1226	White Elm	<i>Ulmus americana</i>	17.5	G	G	G		1.5		Remove
1227	Sugar Maple	<i>Acer saccharum</i>	17.5	G	G	G		1.5		Remove
1228	White Elm	<i>Ulmus americana</i>	29.5, 19	F	G	F		3	Union at base, crook (M), bow (L)	Remove
1229	Basswood	<i>Tilia americana</i>	52, 44, 38	PF	FG	FG		5	Union at base, sweep (M), cavity, crook (M)	Remove
1230	Sugar Maple	<i>Acer saccharum</i>	31, 20	F	G	FG		2.5	Union at base, cavity at base, hollow stem	Remove
1231	Basswood	<i>Tilia americana</i>	46, 44	F	FG	FG		5	Union at base, sweep (M), cavities on both stems	Remove
1232	Sugar Maple	<i>Acer saccharum</i>	23.5	P	P	P	85	1.5	Lost leader at 4m, epicormic branches (L)	Remove
1233	Basswood	<i>Tilia americana</i>	23.5, 18.5	FG	G	G		3	Union at base, sweep (L)	Remove
1234	White Elm	<i>Ulmus americana</i>	27.5	FG	G	G		2.5	Co-dominance at 4.5m	Remove
1235	White Elm	<i>Ulmus americana</i>	21	FG	G	G		1.5	Co-dominance in crown, epicormic branches (L)	Remove
1236	White Elm	<i>Ulmus americana</i>	~30	FG	G	G		2.5	Lean (L), co-dominance at 5m	Remove
1237	Siberian Elm	<i>Ulmus pumila</i>	21.5	FG	G	G		3	Co-dominance at 1.4m with included bark (M)	Remove
1238	Siberian Elm	<i>Ulmus pumila</i>	20.5	FG	G	G		2	Co-dominance at 2m	Remove
1239	Siberian Elm	<i>Ulmus pumila</i>	23.5	G	G	FG		2		Remove
1240	Basswood	<i>Tilia americana</i>	23	G	G	G		2.5		Remove
1241	White Elm	<i>Ulmus americana</i>	20	G	G	G		2		Remove
1242	White Elm	<i>Ulmus americana</i>	19	G	G	G		1.5		Remove
1243	Pear	<i>Pyrus spp.</i>	17.5, 14.5	FG	G	G		1.5	Co-dominance at 0.3m	Remove
1244	Pear	<i>Pyrus spp.</i>	24.5	FG	G	G		2	Co-dominance at 2.5m	Remove
1245	Pear	<i>Pyrus spp.</i>	23	G	G	G		1.5	Sap sucker damage (L)	Remove
1246	Sweet Cherry	<i>Prunus avium</i>	21	FG	G	FG		2	Lean (L), sweep (L), stem wounds (L) near base	Remove

1247	Sweet Cherry	<i>Prunus avium</i>	21, 19	PF	G	FG		2.5	Co-dominance at 1m with included bark (H), fence inclusion (H)	Remove
1248	Pear	<i>Pyrus spp.</i>	21	G	G	G		2		Remove
1249	Freeman Maple	<i>Acer x freemanii</i>	13.5, 11	FG	G	G		2	Union at 1m	Preserve
1250	Freeman Maple	<i>Acer x freemanii</i>	8.5, 8	FG	G	G		2	Union at 1m	Preserve
1251	Freeman Maple	<i>Acer x freemanii</i>	12	G	G	G		2		Preserve
1252	Norway Spruce	<i>Picea abies</i>	~20	G	G	G		3		Preserve
1253	Norway Spruce	<i>Picea abies</i>	~23	G	G	G		2		Remove
1254	Freeman Maple	<i>Acer x freemanii</i>	23	G	G	G		3		Preserve
1255	Freeman Maple	<i>Acer x freemanii</i>	22.5	PF	F	FG	15	3	Lost leader at 3m	Preserve
1256	Freeman Maple	<i>Acer x freemanii</i>	25.5	FG	G	G		3	Crack with rot	Preserve
1257	Freeman Maple	<i>Acer x freemanii</i>	23, 14, 13	FG	G	G		3.5	Union at 1m	Preserve
1258	Freeman Maple	<i>Acer x freemanii</i>	21	PF	F	FG	10	3	Lost leader at 2.5m	Preserve
1259	Freeman Maple	<i>Acer x freemanii</i>	24	G	G	G		3.5		Preserve
1260	Norway Spruce	<i>Picea abies</i>	23	G	G	FG		2.5		Remove
1261	Norway Spruce	<i>Picea abies</i>	~22	G	G	FG		2.5		Remove
1262	Norway Spruce	<i>Picea abies</i>	~20	G	G	FG		2.5		Preserve
1263	Norway Spruce	<i>Picea abies</i>	~26	G	G	FG		3		Preserve
1264	Norway Spruce	<i>Picea abies</i>	~23	G	G	FG		2		Preserve
1265	Norway Spruce	<i>Picea abies</i>	~22	G	G	FG		3		Preserve
1266	Norway Spruce	<i>Picea abies</i>	23	G	G	FG		2.5		Preserve
1267	Norway Spruce	<i>Picea abies</i>	22	G	G	FG		2.5		Remove
1268	Norway Spruce	<i>Picea abies</i>	23	G	G	FG		2.5		Remove
1269	Norway Spruce	<i>Picea abies</i>	20	G	G	FG		2.5		Remove
1270	Norway Spruce	<i>Picea abies</i>	28	G	G	FG		3		Remove
1271	Norway Spruce	<i>Picea abies</i>	18	G	G	FG		2		Remove
1272	Norway Spruce	<i>Picea abies</i>	~22	G	G	FG		2.5		Remove
1273	Norway Spruce	<i>Picea abies</i>	26	G	G	P	80	2	Dead leader	Remove
1274	Norway Spruce	<i>Picea abies</i>	14	G	G	PF	30	1.5	Sparse crown (H)	Remove
1275	Freeman Maple	<i>Acer x freemanii</i>	27.5	G	G	G		3.5		Preserve
1276	Freeman Maple	<i>Acer x freemanii</i>	18	FG	G	G		3	Coppice growth (H) at base	Preserve
1277	Freeman Maple	<i>Acer x freemanii</i>	29.5	G	G	G		3.5		Preserve
1278	Norway Spruce	<i>Picea abies</i>	~22	G	G	F		2	Sparse crown (M)	Remove
1279	Norway Spruce	<i>Picea abies</i>	16.5	G	G	F		2	Sparse crown (M)	Remove
1280	Norway Spruce	<i>Picea abies</i>	19	G	G	F		2	Sparse crown (M)	Remove
1281	Norway Spruce	<i>Picea abies</i>	13	G	G	PF	40	2	Sparse crown (H)	Remove
1282	Norway Spruce	<i>Picea abies</i>	~20	G	G	F	20	2.5	Sparse crown (M)	Remove
1283	Blue Spruce	<i>Picea pungens</i>	13	G	G	P	97	1	Almost dead	Preserve
1284	Blue Spruce	<i>Picea pungens</i>	17	FG	G	PF	20	1.5	Co-dominance at 1.5m, lean (L), dead branches (M)	Preserve
1285	Blue Spruce	<i>Picea pungens</i>	~18	G	G	PF	40	1.5		Preserve
1286	Freeman Maple	<i>Acer x freemanii</i>	29	FG	G	G		3	Stem wounds (L0 at base with rot)	Preserve
1287	Freeman Maple	<i>Acer x freemanii</i>	~24	FG	G	G		3	Coppice growth (H) at base	Preserve
1288	Freeman Maple	<i>Acer x freemanii</i>	33	FG	G	G		3.5	Union at 1.5m and 1.8m	Preserve
1289	Blue Spruce	<i>Picea pungens</i>	~20	F	G	F	25	1.5	Sweep (M), sparse crown (M)	Preserve
1290	Blue Spruce	<i>Picea pungens</i>	19	FG	G	PF	40	1.5	Lean (L), sparse crown (H)	Preserve
1291	Blue Spruce	<i>Picea pungens</i>	16	G	G	P	80	1.5		Preserve
1292	Blue Spruce	<i>Picea pungens</i>	~23	G	G	F		2	Sweep (L), sparse crown (L)	Preserve
1293	Blue Spruce	<i>Picea pungens</i>	15	FG	G	PF	30	1.5	Co-dominance at 1.5m, sweep (L), sparse crown (M)	Preserve
1294	Blue Spruce	<i>Picea pungens</i>	13	FG		PF	30	1.5	Sweep (L), sparse crown (M)	Preserve

Codes		
DBH	Diameter at Breast Height	(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), as measured from centre of stem
~ = estimate; (L) = light; (M) = moderate; (H) = heavy		