

ARBORIST REPORT

Must be read in conjunction with Tree Inventory & Preservation Plan
By Baker Turner Inc., April 3, 2024

Hunsden Sideroad Residential

10249 Hunsden Sideroad
Caledon, Ontario

Prepared By

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INTRODUCTION

Site Context

The site was visited in May 2022 and visited again in August of 2023. It is located at 10249 Hunsden sideroad on the south side and just east of Mount Pleasant Road in Caledon, Ontario. The property is in a rural area with residential uses to the north and east of the property and also naturalized landscapes to the east, south and west of the property. The property has a substantial portion that is under cultivation, however some naturalized woodlots are present on the site that also extend beyond the property boundaries.



Figure 1. Context Aerial Image

Assignment

Baker Turner Inc. was retained to complete an inventory of the site/town trees and subsequently prepare an arborist report and a tree inventory & preservation plan. Trees were identified by species, measured for approximate canopy width and trunk diameter at breast height (DBH), and assessed for structural and biological condition. Please refer to the tree inventory & preservation plan for locations.

Site Description and Proposed Project

The site has both used for agricultural cultivation, residential, and naturalization. Agriculture is found throughout the centre of the site and occupies a majority of the property area. Areas of naturalization occur in the northeast corner close to the existing residential areas, along the eastern property line on both the subject site and neighbouring property. The largest area of naturalization is found in the southern third of the site. These naturalized areas are documented by the ecologist. The residential portion of the site is located in the northeast corner of the property and is largely treed surrounding the house and driveway. Also of note, there are trees within the municipal right of way. These are primarily coniferous trees.

The portion of the property subject to this development application is the area currently occupied by agricultural uses. The proposal calls for large estate residential lots. Care has been taken to set all lots back from the naturalization areas to minimize conflicts between naturalized areas and developed residential areas.



Figure 2: View of right of way looking east from other side of road on west end.

TREE INVENTORY

Table 1 shows an individualized inventory for all trees on the site including a recommended action for these trees given the construction on the site. For columns on biological health, structural condition and recommended action please refer to the legend on page seven.

Table 1: Tree Inventory Table (see legend on page 8)

Tree Number	Species	DBH (cm)	Canopy diameter (m)	Biological Health	Structural Condition	Recommended Action	Comments	Location
1a	Pinus sylvestris (Scots Pine)	33	7	H	MH	P	Multibranch node and backfilled.	M
1b	Pinus sylvestris (Scots Pine)	21	7	H	H	P	Backfilled.	M
1c	Pinus sylvestris (Scots Pine)	24	7	H	H	P	Backfilled.	M
1d	Pinus sylvestris (Scots Pine)	15, 14	5	H	M	P	Multi-leader with included bark from 0.15m-0.3m ht. and backfilled.	M
1e	Pinus sylvestris (Scots Pine)	26	7	H	H	P	Backfilled.	M
1f	Pinus sylvestris (Scots Pine)	22	6	H	H	P	Backfilled.	M
1g	Pinus sylvestris (Scots Pine)	20	6	H	H	P	Backfilled.	M
1h	Pinus sylvestris (Scots Pine)	22.5	6	H	H	P	Backfilled.	M
2	Picea glauca (White Spruce)	44	8	M	H	P	Branch tips with dieback of 30% of canopy.	M
3	Acer negundo (Manitoba Maple)	41, 33, 31	12	M	M	P	Three leaders, approx. 20 medium-sized dead branches, emerging included bark at the main union.	M
4	Pinus sylvestris (Scots Pine)	~15	n/a	D	D	P	Dead.	M
5	Pinus sylvestris (Scots Pine)	29	6	H	H	P	Backfilled.	M

6	Pinus sylvestris (Scots Pine)	39	7	H	M	P	Large limb of 15cm dia. Torn off with ripping wound, co-dominant leaders, and backfilled.	M
7	Pinus sylvestris (Scots Pine)	21	4	ML	M	P	Backfilled, canopy 60% dead.	M
8	Pinus sylvestris (Scots Pine)	21.5, 25	6	H	M	RC	Co-dominant leaders with included bark (10cm length), backfilled, medium branch fused with 2 leaders.	M
9	Pinus sylvestris (Scots Pine)	32	6	H	MH	RC	Large broken limb, branch stubs with ripping wound.	M
10	Acer negundo (Manitoba Maple)	25.5	7	H	M	P	Multiple limbs cut at base.	M
11	Pinus sylvestris (Scots Pine)	31.5	6	MH	H	P	Some defoliation on twigs, 1 limb broken at branch collar.	M
12	Pinus sylvestris (Scots Pine)	21	4	ML	ML	P	Unbalanced canopy to west, zig zag branch from on leader. Wound on leader with 30% trunk circumference.	M
13	Pinus sylvestris (Scots Pine)	29.5	6	H	MH	P	Co-dominant leaders.	M
14	Pinus sylvestris (Scots Pine)	46	9	H	M	P	Co-dominant leaders with included bark from 4m to 5.5m ht.	M
15	Pinus sylvestris (Scots Pine)	17	5	M	M	P		M
16	Acer saccharinum (Silver Maple)	~70	14	MH	M	P	Multiple leaders from 2m ht., included bark at 6m ht. Has wrap on trunk for pest.	N
17	Pinus nigra (Austrian Pine)	~45	7	M	M	P	Co-dominant leaders from 6m ht. with medium sized branch fused between them and browning foliage. Has wrap on trunk for pest.	N
18	Pinus nigra (Austrian Pine)	~30	5	M	M	P	Unbalanced canopy to west and browning foliage. Has wrap on trunk for pest.	N
19	Pinus nigra (Austrian Pine)	~50	7	MH	H	P	Browning foliage and has wrap on trunk for pest.	N
20	Picea glauca (White Spruce)	~25	5	H	H	P	Has wrap on trunk for pest.	N
21	Picea glauca (White Spruce)	~25	5	MH	H	P	Suppressed branches at 10 - 15m from #22 but top is in leaf. Has wrap on trunk for pest.	N

22	Eleagnus angustifolius (Russian Olive)	~25, ~20	10	ML	M	P	Co-dominant, limb/trunk leans 45° to east and to west, slower canopy has a lot of dieback (50%).	N
23	Eleagnus angustifolius (Russian Olive)	~45, ~25	11	M	M	P	Fusing branch on trunk, 3 leaders, leans 45° to north and west, and grown on stone slope.	N
24	Pinus nigra (Austrian Pine)	~60	8	MH	MH	P	Co-dominant leaders, and wrap on trunk for pest.	N
25	Picea glauca (White Spruce)	~40	6	H	H	P		N
26	Picea glauca (White Spruce)	~35	6	H	H	P		N
27	Picea glauca (White Spruce)	~35	6	H	H	P		N
28	Picea glauca (White Spruce)	~20	4	H	H	P		N
29	Picea glauca (White Spruce)	~35	5	H	H	P		N
30	Picea glauca (White Spruce)	~30	5	H	H	P		N
31	Picea glauca (White Spruce)	~20	4	M	H	P	Suppressed at top 4m.	N
32	Acer negundo (Manitoba Maple)	40.5	10	H	M	P	Unbalanced canopy to west, leans 10° to west, and included bark at main union.	N
33	Picea glauca (White Spruce)	~35	5	H	H	P	Unbalanced canopy to east.	N
34	Picea glauca (White Spruce)	~30	5	H	H	P	Unbalanced canopy to southwest.	N
35	Picea glauca (White Spruce)	~20	4	H	H	P		N
36	Picea glauca (White Spruce)	~18	4	H	H	P	Has wrap on trunk for pest.	N
37	Populus tremuloides (Trembling Aspen)	20	5	ML	ML	P	Co-dominant leaders with one leader dead, remaining leader has 25% dead branches in lower canopy.	S
38	Populus tremuloides (Trembling Aspen)	18	4	MH	MH	P	Wound with rot at 0.3m ht.	S
39	Populus tremuloides (Trembling Aspen)	20	5	MH	MH	P	One leader cut at the base with fungus fruiting bodies and 20% of canopy dead particularly in lower canopy.	S

40	Populus tremuloides (Trembling Aspen)	20	7	M	ML	P	Multiple leaders with included bark at base to 0.3m ht. One leader has 75% of canopy dead 2 leaders are in satisfactory health.	N
41	Acer saccharinum (Silver Maple)	~35 x1, ~30 x1, ~25 x2, ~20 x3, ~15 x3, ~10 x6	14	H	M	P	Multiple leaders with numerous points of fusing.	N
42	Picea glauca (White Spruce)	~20	4	M	M	P	Leader with dieback and new leader emerging.	N
43	Picea glauca (White Spruce)	~15	5	H	H	P		N
44	Acer platanoides (Norway Maple)	~45	9	H	H	P		N
45	Acer platanoides (Norway Maple)	~25, ~25	9	H	M	P	Co-dominant leader and included bark.	N
46	Acer platanoides (Norway Maple)	~50	9	H	H	P		N
47	Tilia americana (Basswood)	52, 28, 58	10	H	M	P	Three leaders with included bark.	S
48	Acer saccharum (Sugar Maple)	48	8	H	MH	P	Unbalanced canopy to northwest.	S
49	Acer saccharum (Sugar Maple)	25, 67	12	MH	M	RC	Co-dominant leaders with included bark. The smaller leader is hollow with wound of 25% trunk circumference and main leader leans 10° to south.	S
50	Acer saccharum (Sugar Maple)	65	9	MH	M	RC	Co-dominant leaders, with included bark at base to 4m ht and larger trunk has fallen.	S
51	Acer saccharum (Sugar Maple)	60, 51	12	M	ML	RC	One (1) leader is dead and 2 leaders remain with included bark between, a wound of 50% trunk circumference and a few large dead branches.	S
52	Prunus serotina (Black Cherry)	52	11	MH	MH	RC	Approximately 5 large dead branches.	S
53	Tilia americana (Basswood)	54, 57	10	ML	ML	RC	One (1) leader remains with five (5) large broken or fallen trunk and four (4) large dead branches.	S

54	<i>Ostrya virginiana</i> (Ironwood)	28, 27	8	H	H	RC		S
55	<i>Ostrya virginiana</i> (Ironwood)	31, 30	8	H	M	P	Co-dominant leaders with included bark.	S
56	<i>Ostrya virginiana</i> (Ironwood)	35	10	H	H	P		S
57	<i>Fraxinus</i> sp. (Ash)	~30 x4	6	D	D	R	Dead	S
58	<i>Tilia americana</i> (Basswood)	24	6	H	H	P		S
59	<i>Fraxinus</i> sp. (Ash)	65	10	L	L	R	Dying, 50% canopy is dead.	S
60	<i>Crataegus monogyna</i> (European Hawthorn)	25, 25, 30	7	M	M	P	Canopy is 50% dead, multiple leaders, and a large wound on trunk of 50% circumference.	S
61	<i>Acer saccharum</i> (Sugar Maple)	30	4	M	M	P	Leader topped and resprouted.	N
62	<i>Acer saccharum</i> (Sugar Maple)	15	5	H	H	P		S
B1	<i>Juglans cinerea</i> (Butternut)	13	5	MH	M	P	Has a wound of 30% of trunk circumference from a fallen tree, rot is apparent, but growth is showing at all branch tips.	S
B2	<i>Juglans cinerea</i> (Butternut)	18	5	H	MH	P	Fusing branch with trunk leaving wound and growth showing at all branch tips.	S

Tree Inventory Legend

DBH - Diameter of tree at breast height (1.37m) measured in centimeters.

Canopy Diameter (m) - Approximate diameter of canopy in meters.

Location - M= Municipal Right of Way; N = Neighbouring Property or Borderline; S = Subject Site.

Biological Health

H (High) - Desirable urban tree species with vigorous growth and no apparent symptoms of disease or pests.

MH (Medium-High) - Desirable urban tree species with moderate growth or minor symptoms of disease that are aesthetic only and less than 5% dieback.

M (Medium) – Any species with moderate growth and minor dieback of less than 20% of canopy and/or minor symptoms of disease or pests.

ML (Medium-Low) - Low vigour, with dieback of 15% - 50% of canopy and/or major symptoms of disease or pests.

L (Low) - More than 50% of the canopy is dead.

Structural Condition

H (High) - No apparent defects to root crown, trunk, leader, or major limbs.

MH (Medium-High) - Only insignificant defects to root crown or trunk and minor defects to canopy including limbs.

M (Medium) - Minor defects to root crown, trunk and major limbs.

ML (Medium-Low) – Major defects to long-term structure particularly at root crown, trunk and major limbs.

L (Low) - Major defects that have an immediate risk of failure.

Tree Quality – Hybrid Rating that combines tree condition, species and location.

H – High quality condition, desirable species, and valuable location.

M – Medium quality condition, moderately desirable species, moderately valuable location.

L – Low quality condition, low quality species, low value location.

Ratings between these categories are also used to balance a mix of ratings.

Recommended Action

P - Preserve

R - Remove for poor condition

RC - Remove for Construction

R* - Remove with Neighbours Approval

TREE IMAGES

A selection of images have been included to describe the conditions of the property and general context of trees on the site.



Figure 3: Trees of group 1.



Figure 4: Trees 2 and 3.



Figure 5: Tree 8.



Figure 6: Trees 12 and 13.



Figure 7: Tree 14



Figure 8: Trees 16 in foreground



Figure 9: Trees 21-24



Figure 10: Tree 30



Figure 11: Trees around tree 37



Figure 12: Trees 42 - 49.



Figure 13: Trees 65 to 73



Figure 14: Trees 55 to 56



Figure 15: Tree 74



Figure 16: Tree 59

RECOMMENDATIONS

The plan for subdivision aligns with the goals of tree preservation on the site. These plans respond to opportunities for tree preservation and orient development where there are fewer pressures for tree preservation. Recommendations to follow through on these goals are listed below:

1. Tree Removal

Of those trees that are over 15cm DBH on the subject site, remove trees #49, 50, 51, 52, 53 and 54 for construction as identified on the Tree Inventory & Preservation Plan. This is a total of 6 trees.

In addition trees 8 and 9 are municipal trees that would require removal in order to install the road into the subdivision.

Other trees on the subject site require removal due to poor condition. These include 57 and 59.

2. General Tree Preservation

Tree protection hoarding is the primary method of separating trees from construction activities in this project. Tree protection hoarding will follow the guidelines and details provided by the Town of Caledon. This hoarding will follow the Town of Caledon's tree preservation detail using snowfence shown below in figure 17.

Where shown on the tree inventory plan, tree protection must be present and in good condition throughout construction. Additionally, within the tree protection zone there may be no:

- Demolition, construction, replacement or alteration of permanent or temporary buildings or structures.
- Installation of large stones, boulders or additional hard surface treatment
- 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
- 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 sludge, 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 or pedestrians related to construction activities.
- 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
- Soil remediation, removal of contaminated fill
- Excavating for directional or micro-tunneling and boring

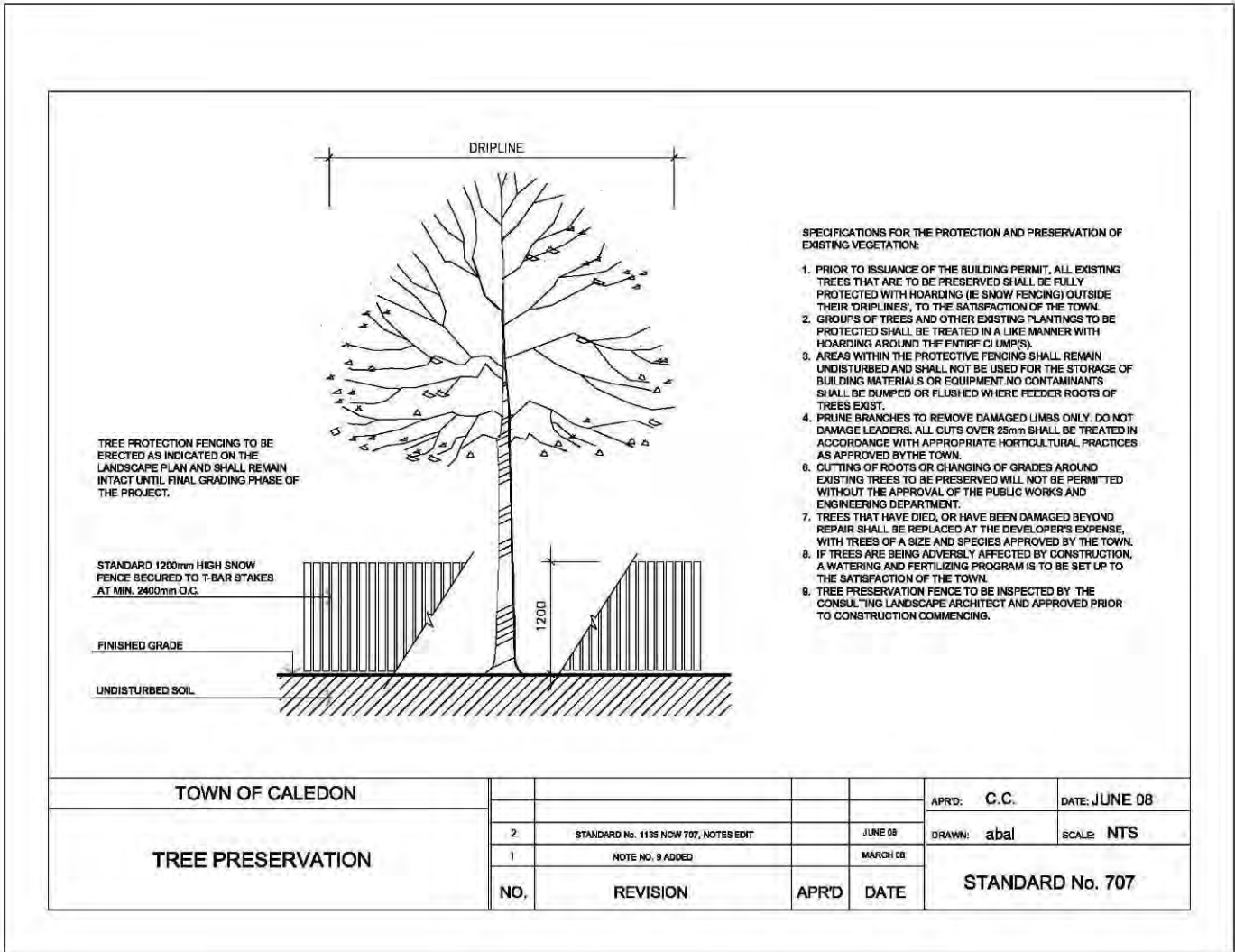


Figure 17: Tree Protection Zone Barrier

3. Tree Maintenance

Prior to construction:

When tree removals are completed for those trees that have been approved by the city, pruning should also take place to remove deadwood, broken branches in protected trees that may be unsafe during construction. Where tree branches conflict with construction activities and clearance for vehicles, pruning should be identified on site with both the contracting arborist and general contractor present.

All Pruning must be completed by a qualified arborist following standard ISA procedures and must take place prior to the start of construction.

Once construction begins:

Additional monitoring and maintenance may be required. At regular intervals during construction, at the close of construction and one year after the close of construction all preserved trees should be assessed for potential pests and signs of injuries from construction. Injuries from construction weaken trees and provide a vector for infection. A pest management approach may then be initiated where required.

Not all roots will be within the tree protection zones and many trees with extend roots well beyond their canopy diameters. For this reason, it is a certainty that roots will be encountered in the course of excavation. Any disturbed roots that have been encountered and that must be cut should be cut with a sharp tool. No pulling or tugging on roots is acceptable. Further where roots are left exposed to the air due to excavation they should be watered as soon as possible and covered with a light-coloured tarpaulin until grade can be re-established.

Supplemental irrigation may be required throughout construction. Irrigate tree roots during drought conditions by deep root watering once every two weeks throughout the growing season and the following year after work has been completed. All applications of water should be a minimum of 2.5cm applied over the protected root zone. Watering must be done slowly to ensure that water does not run away from the root zone and to ensure soil around the root system of the tree is well saturated. Additional supplemental watering is required for some trees and detailed in the tree maintenance recommendations.

However, before watering ensure that soil is not already overly saturated by removing a handful of soil from 5cm below grade within the root zone. If the soil has a sour smell, do not water in that area and check any irrigation system that may be overwatering the area. When taking soil, bear in mind micro variations in the root zone such as depressions where water may be settling. Multiple samples may be required to gauge the need for additional watering.

After Construction is Complete:

Supplements of fertilizer may be helpful after activities to supplement deficiencies however it should not be considered a cure-all. At times fertilizer may spur growth at the expense of tree functions that are defensive in nature. Fertilizer should not be applied to preserved trees from the start of construction activities to one year after the close of construction. One year after the close of construction trees must be re-assessed and soil tested. In cases where soil tests indicate a nutrient deficiency, a fertilizer regime may be required.

4. Compensation

Trees on private property that are greater than 10cm caliper must be replaced by trees following a compensation ratio identified by the town (see table 2).

Table 2: Compensation Ratio

Diameter at Breast Height (cm)	Compensation Ratio
<10	Not Applicable
10-20	1:1
21-35	2:1
36-50	3:1
51-65	4:1
>65	5:1

Only healthy and sound trees that are over 10cm DBH that are proposed for removal have been tallied for compensation. Those trees that are in poor condition have not been included in this tally. Multi-trunk trees have been included in this tally based on the largest DBH measured among the trunks.

Table 3: Tree Compensation Table

Size Categories of Trees for Compensation	Numbers of Individuals	Number of Trees Required for Planting
10-20cm DBH	0	0
21-35cm DBH	1	2
36-50cm DBH	0	0
51-65cm DBH	4	16
>65cm DBH	1	5
TOTAL	6	23

Compensation planting is identified on the landscape plan. It is expected that all compensation plantings will be accommodated on the site. In the event that there is insufficient space a payment of cash-in-lieu of planting will be required in consultation with the town.

5. Summary of Recommendations

Sum of trees proposed for removal due to construction: 6 private trees, 2 public trees.

Sum of trees proposed for removal due to poor health or structure: 2 private trees.

Sum of trees to be planted as compensation: 23 trees

Sum of trees proposed for planting on landscape plan: 88 trees.

LIMITING CONDITIONS

This tree inventory was derived from data gathered on the site using accepted arboricultural practices. This includes a visual examination of all above ground parts of the tree for structural defects and signs of health and vigour. All examination took place from the ground plane and no trees were cored, probed or climbed. There was also no detailed inspection of the root crown where excavation would have been required.

This inventory describes the health, structural stability and identifies potential hazards of the trees to a reasonable extent. Where dead branches or other are identified in the notes it is the owner's responsibility to take action. This inventory does not provide or imply a guarantee that these trees or branches will remain standing intact. The stability of any tree or branches of a tree cannot be predicted with absolute certainty under all circumstances.

There is, likewise, no guarantee of survival for those trees to be preserved during construction but which are subject to injury. Tree preservation guidelines that are provided in this report are generally suitable for the tree as determined by the visual assessment. However, there is no guarantee that these guidelines will be followed throughout construction unless an arborist is retained for complete supervision of the site at all times. Even with complete supervision, roots in an urban environment are unpredictable. Guidelines that suppose an even distribution of roots may not be effective in cases where roots have clustered in small areas.

The assessment in this inventory is valid only at the time of inspection.

All field data was collected and report prepared by Jon Woodside, ISA Certified Arborist.



A handwritten signature in blue ink, appearing to read "JW".

Jon Woodside
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