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Pre-Clearing Survey of Crown Lands Application 161372, Humber Village, NL

Prepared by:



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1.0 Introduction

In November 2023, LGL Limited (LGL) was retained by Briarside Affair Limited to conduct a pre-clearing site survey for at-risk species of interest and prepare an existing conditions report related to their Crown Lands Application 161372. The proposed Crown Lands lease area (5.5 ha) is currently a forested stand which will be cleared for agricultural purpose (Project: Humber Village Forage Production; Environmental Assessment (EA) Reg. #2267).

As per Conditional Release of the Project from the EA review process (approval letter from the Minister of Environment and Climate Change of Newfoundland and Labrador, dated 27 October 2023), the Newfoundland and Labrador Department of Fisheries, Forestry and Agriculture (DFFA) Wildlife Division requested the following conditions be met by Briarside Affair Limited, specific to species at risk, avifauna, and sensitive habitat:

- 1) “Under the *Newfoundland and Labrador Endangered Species Act* (NL ESA) Black Ash has recently been listed as *Threatened*, and Blue Felt Lichen has recently been listed as *Vulnerable*. The Wildlife Division requires a pre-clearing survey for Black-Ash as well as any large (>25 cm DBH) deciduous trees on the Project site, as the Blue Felt Lichen can be found on large trees (>25 cm DBH) of any deciduous species. Survey results must be presented to the Wildlife Division for further consultation regarding potential lichen occurrences and to discuss, if needed, mitigations/requirements for black ash prior to clearing activities.”
- 2) “Vegetation clearing is not to occur within 800 metres of a bald eagle or osprey nest during the nesting season (March 15 to July 31) and within 200 metres during the remainder of the year. The 200-metre buffer also applies to all other raptor nests. The location of any raptor nest site must be reported to the Wildlife Division.”
- 3) “A minimum 30-metre undisturbed riparian buffer must be maintained from the high-water mark of all wetlands and waterbodies within and adjacent to the Project that are identified on either the 1:50,000 scale National Topographic System maps or the topographical mapping later shown in the Provincial Land Use Atlas, to protect sensitive riparian and aquatic species and their habitats.”

The aim of this existing conditions report is to document survey results of the pre-clearing site survey and address the above requirements of the DFFA as per the Department of Environment and Climate Change (DECC) Minister’s decision of EA Conditional Release.

2.0 Survey Details

Specifics of the pre-clearing survey targeting at-risk species, including surveyor experience, background site information and employed field methodology are presented below.

2.1 Species at Risk Biologist

All facets of this work were conducted by Colin Jones (B.Sc.), including GIS pre-field assessment, dedicated field survey for at-risk target species, results compilation, mapping and reporting. Colin is an experienced LGL biologist who has been involved with forest science research on arboreal lichens on the Island of Newfoundland since 2007. He is proficient in lichen species identification and has conducted numerous forest mensuration studies and dedicated rare plants surveys of woodlands, limestone barrens, montane and alpine landscapes. In addition to vegetation inventories, Colin has designed and led population surveys and field studies on avifauna, ungulates, fur bearers, and small mammals.

2.2 Survey Area

Rather than strictly surveying the boundary of Crown Lands Application 161372, a modified pre-clearing survey area (Survey Area Boundary) was employed that included additional area to the north, bounded by Bowater Road, and an eastern segment adjacent to the existing Crown Lands Lease 157256 (Figure 1). Total area enclosed by the Survey Area Boundary was 6.2 ha. It should be noted that Crown Lands Lease 157256 was previously released from the EA process (letter dated 21 May 2021; Project: Humber Village Apple Orchard [4.2 ha]; EA Reg. #2125), but was not subject to a species at risk pre-clearing survey.

Archival high-resolution aerial imagery obtained from the NL Land Use Atlas was used to assess land cover types and vegetation canopy cover. Supplemental forest stand polygons and metrics were obtained from the NL Forest Resource Inventory (FRI) product. Additionally, National Topographic System (NTS) data for the area (Map Sheet 012A/13, 1:50,000) was mapped to assess contour intervals, and land features within the survey area. Results of the pre-survey assessment are presented in Figure 2. No wetlands, waterbodies, or watercourses occur within the Survey Area Boundary at the NTS 1:50,000 scale. The nearest waterbody/watercourse is >40 m from the southwestern boundary. Two FRI polygons occur within the Survey Area Boundary. In general, distal sections of the boundary are best described as mixedwood (wByBbF), composed of paper (white) birch (*Betula papyrifera*), yellow birch (*Betula alleghaniensis*), and balsam fir (*Abies balsamea*), listed in order of dominance. Whereas the interior is predominantly coniferous (bFwS), composed primarily of balsam fir and secondarily white spruce (*Picea glauca*). The southern corner of Crown Lands Application 161372 initial proposed area was removed from the pre-clearing survey given that it will not be cleared for forage production, given its slope and proximity to existing residential property line (see Figures 1 and 2).

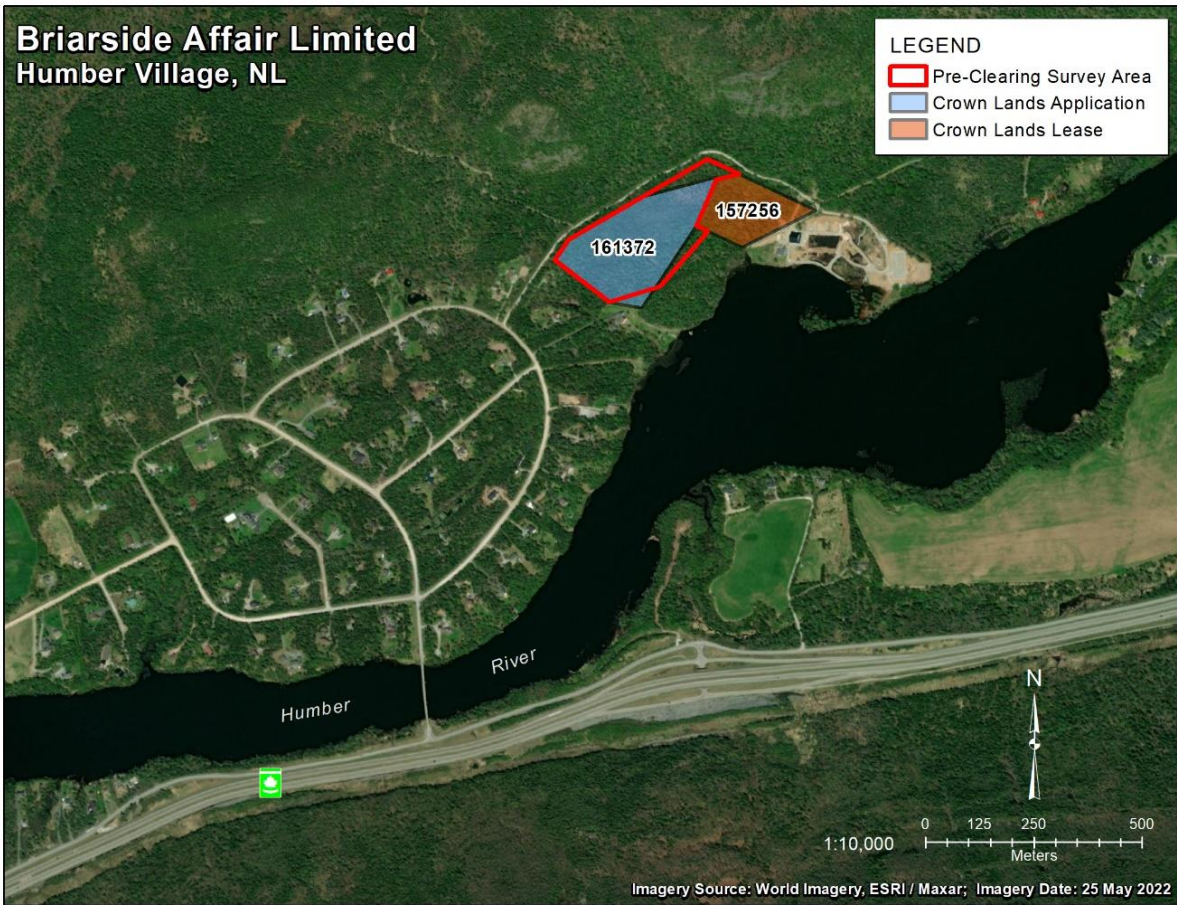


Figure 1. Location of Briarside Affair Limited Crown Lands Application 161372, and adjoining Crown Lands Lease 157256, in relation to the residential community of Humber Village, NL. [Source: ESRI / Maxar; NL Land Use Atlas]



Figure 2. Map of NL Forest Resource Inventory Polygons and NTS (1:50k) landscape features within and adjacent to the Survey Area Boundary.

2.3 Survey Methodology

A land-based survey was conducted on 5 November 2023 by an experienced LGL biologist (Colin Jones). All efforts were made to conduct the survey under best possible conditions given the late seasonal timing (e.g., sunny day, low wind, and no snow cover). The majority of leaves had fallen from deciduous trees in the Humber Village area. Overall morphology, bark characteristics, and leaf litter were used to identify mature deciduous trees. Immature trees and shrubs were identified by bark characteristics/coloration, branching pattern, twigs/winter buds, and leaf litter.

A detailed systematic botanical survey employing quadrat sampling was not performed at the site. No attempts at quantifying ground cover or percent species occurrence were made. Rather, a simplified species presence inventory targeting at-risk species of interest was conducted within the Survey Area Boundary. The survey was performed similar to a timber-cruising assessment, whereby large deciduous trees were singled out, measured for size confirmation (<25 cm DBH), identified to species and scanned for presence of Blue Felt Lichen (*Degelia plumbea*), or indicator

lichen species (i.e., foliose macro cyanolichens, particularly members of the Lobarion community). The circumference of the main stem was surveyed by eye to a height of approximately 3 m. Lichens were identified by visual cues alone, occasionally assisted with a hand lens (10x triplet model). Binocular scanning was performed to detect arboreal lichens at height, with particular focus at branch nodes. GPS waypoints were recorded for each deciduous tree ≥ 25 cm and/or indicator cyanolichen assemblage. A GPS tracklog was recorded to document survey coverage and effort. Representative photos were taken of habitat, survey conditions, and points of interest.

Wet, open-canopy areas of the survey area with localized riparian shrubs (e.g., *Alnus* spp., *Betula* spp., *Salix* spp.) were identified and survey effort was intensified based on vegetation density. Transects were employed within and at the transitional margins of alder thickets to focus on potential occurrence of Black Ash (*Fraxinus nigra*).

The canopy of mature trees (deciduous and coniferous) were also scanned for the presence of large stick nests that could potentially serve as raptor nest sites. Avifauna species were recorded during the survey with the specific aim of detecting Red Crossbill (*Loxia curvirostra perna*; NL ESA-listed, *Endangered*). Coniferous cone crop was also assessed, given that this species' nesting timing is based on cone crop availability and can occur in fall or winter (i.e., could potentially conflict with proposed vegetation clearing timing). Habitat potential and any wildlife sign of Newfoundland marten (*Martes americana atrata*; NL ESA-listed, *Threatened*) was also considered during conduct of the survey.

3.0 Survey Results

Black Ash was not encountered during the survey. This was not surprising given that this species is generally shade-intolerant and prefers moist to wet sites more associated with riparian areas. Blue Felt Lichen was not observed on any deciduous tree ≥ 25 cm DBH. The only foliose cyanolichen observed during the survey indicative of forest stand health, microclimatic regime, and light exposure comparable to Blue Felt Lichen life history requirements was the Tree Lungwort (*Lobaria pulmonaria*). The arboreal lichen assemblage within the Survey Area Boundary was typical of an immature-mature stand, and did not include diagnostic old growth indicator species (as determined from assessment of both coniferous and deciduous trees). The majority of the main stems of deciduous trees were devoid of lichens. Branches included common species: *Platismatia glauca*, *Hypogymnia physodes*, *Usnea longissima*, *Bryoria* spp.; with greater abundance occurring on conifers. In general, the provincial FRI polygon mapping was accurate in terms of dominant species composition; however, age class for both polygons were >40 years and (full foliage) canopy coverage estimated between 51-75%.

Survey conditions were ideal. Adequate lighting, a generally open understory and lack of foliage, facilitated detection of large (>25 cm DBH) deciduous trees (Figure 3). Survey timing within the boundary area occurred from ~0755 to ~1625 NST.



Figure 3. Large (≥ 25 cm DBH) deciduous trees and leaf litter: yellow birch (L) and red maple (R).

No direct observations or sign of Red Crossbill or Newfoundland marten occurred during the one-day survey. Fall/winter habitat potential for both was assessed as low, given low density cone crop on white spruce and balsam fir and the fact that marten prefer old growth forests (>80 -year age class) and tend to avoid human disturbance, including roads and residential areas.

Highlights of survey findings are provided below in point form and illustrated in Figure 4.

- No observations of Black Ash
- No observations of Blue Felt Lichen
- Lichen assemblage and forest stand characteristics are not suggestive of Blue Felt Lichen presence at the mid- to upper canopy levels.
- No stick nests or large tree cavities suitable for raptors or owls, respectively were observed.
- No observations of Red Crossbill
- No observations (or sign) of Newfoundland marten
- Total number of deciduous trees encountered ≥ 25 cm DBH = 94
 - Yellow birch = 42
 - Paper birch = 35
 - Red maple = 17
- Total number of trees with occurrence of *Lobaria pulmonaria* = 32
 - 11 of which were deciduous trees > 25 cm DBH (presence confined to interior)
 - No other Lobarion group indicator species observed (e.g., no *Lobaria scrobiculata* or *Peltigera spp.* found within Survey Area Boundary).
- Two road culverts drain into the Crown Lands Application 161372 parcel
- Prior selective cutting on Crown Land was documented:
 - ~20 m from Bowater Road (between the two culverts)
 - At back of the residential property at the corner of Balsam Street and Bowater Road
- A Common Goldeneye nest box is installed on a paper birch ~30 m from Bowater Road. Nest box is still functional.

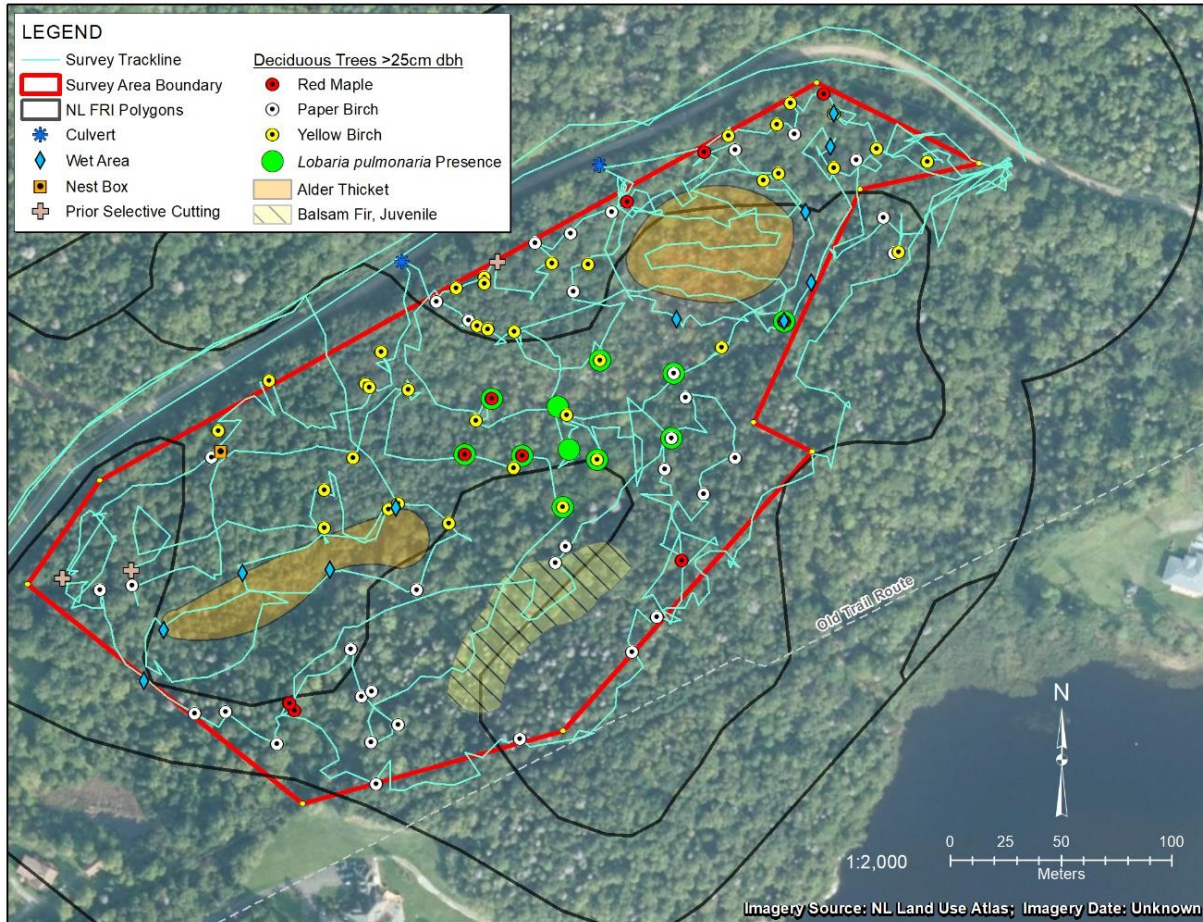


Figure 4. GPS track, deciduous trees >25 cm DBH, and points of interest recorded during the pre-clearing survey for Crown Lands Appl. 161372, 5 November 2023.

4.0 Summary

Based on the professional opinion of LGL Limited, the three separate requirements made by the DFFA Wildlife Division have been fulfilled by the results of the site investigation and pre-clearing survey conducted on 5 November 2023. Responses to specific Conditions of Release, as referenced in the DECC Minister’s letter dated 27 October 2023, and summarized here in Section 1, are as follows:

1. Neither Black Ash or Blue Felt Lichen were observed in the Survey Area Boundary. Probability of occurrence for either species in Crown Lands Application 161372 is low based on available habitat and species requirements;
2. No nest sites suitable for raptors were observed within the Survey Area Boundary; and
3. Sensitive riparian and aquatic species and their habitat is a non-issue for the Project. No wetlands and/or waterbodies (as identified by NTS 1:50K scale) occur within 30-metres of the Survey Area Boundary.

**Appendix A – Survey Results:
GPS Waypoints, Deciduous Tree Info (≥ 25 cm DBH), and Photo Log**

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	WPT_ID	DATE_TIME_NST	LAT_DD	LONG_DD	East_N83_Z21	North_N83_Z2	Elev_m	Tree_Sp	Tree_Code	Trees≥25cm	Trees_Lobp	dbh_cm1	dbh_cm2	dbh_cm3	dbh_cm4
2	1	2023/11/05 7:59:15	48.99431432	-57.75068807	445086.4491	5427094.094	46.5	Betula alleghaniensis	yB	1		35			
3	2	2023/11/05 8:09:03	48.99436578	-57.75100004	445063.6848	5427100.041	39.3	Betula alleghaniensis	yB	1		42			
4	3	2023/11/05 8:14:33	48.99450584	-57.75126876	445044.1817	5427115.805	46.3	Betula alleghaniensis	yB	1		39			
5	4	2023/11/05 8:18:29	48.99458488	-57.75133188	445039.6518	5427124.637	46.7	Acer rubrum	rM	2		32	54		
6	5	2023/11/05 8:21:19	48.9945475	-57.75153665	445024.6318	5427120.63	45.3	Betula alleghaniensis	yB	1		30			
7	6	2023/11/05 8:21:56	48.99442093	-57.75150723	445026.6447	5427106.539	44.6	Betula papyrifera	wB	1		36			
8	7	2023/11/05 8:23:13	48.99445958	-57.75161552	445018.7655	5427110.912	44.1	Betula alleghaniensis	yB	1		38			
9	8	2023/11/05 8:26:28	48.99441096	-57.75191593	444996.7372	5427105.726	43.6	Betula alleghaniensis	yB	1		31			
10	9	2023/11/05 8:34:49	48.99414123	-57.75253627	444951.0619	5427076.191	41.9	Acer rubrum	rM	1		37			
11	10	2023/11/05 9:02:46	48.99409806	-57.75262722	444944.3618	5427071.459	47.5	Betula papyrifera	wB	1		26			
12	11	2023/11/05 9:05:16	48.99400963	-57.75288211	444925.6187	5427061.813	44.3	Betula papyrifera	wB	1		33			
13	12	2023/11/05 9:07:56	48.99396882	-57.75309778	444909.7977	5427057.432	43.9	Betula papyrifera	wB	1		33			
14	13	2023/11/05 9:09:36	48.99388726	-57.75299368	444917.3229	5427048.291	44.1	Betula alleghaniensis	yB	1		46			
15	14	2023/11/05 9:14:35	48.99388952	-57.75332987	444892.7323	5427048.786	45.1								
16	15	2023/11/05 9:15:50	48.9938275	-57.75340917	444886.8636	5427041.949	45.8	Betula alleghaniensis	yB	1		47			
17	16	2023/11/05 9:16:11	48.99380445	-57.75341051	444886.7401	5427039.387	44.8	Betula alleghaniensis	yB	1		38			
18	17	2023/11/05 9:17:38	48.99378433	-57.75358368	444874.0504	5427037.277	44.1	Betula alleghaniensis	yB	2		25	25		
19	18	2023/11/05 9:19:04	48.99372784	-57.75370413	444865.1772	5427031.084	44.3	Betula papyrifera	wB	1		26			
20	19	2023/11/05 9:24:41	48.99352189	-57.75404099	444840.3075	5427008.435	43.1	Betula alleghaniensis	yB	1		27			
21	20	2023/11/05 9:27:20	48.99339189	-57.75413579	444833.2293	5426994.053	44.8	Betula alleghaniensis	yB	1		45			
22	21	2023/11/05 9:28:34	48.99337898	-57.7541114	444834.9993	5426992.6	45.1	Betula alleghaniensis	yB	2		37	39		
23	22	2023/11/05 9:36:23	48.99340086	-57.75472747	444789.9571	5426995.48	36.9	Betula alleghaniensis	yB			23	23		
24	23	2023/11/05 9:39:35	48.99319709	-57.75503785	444767.0271	5426973.054	37.1	Betula alleghaniensis	yB	1		26	23		
25	24	2023/11/05 9:42:32	48.99311101	-57.75502201	444768.0907	5426963.474	40.3	Betula alleghaniensis	yB	1		28			
26	25	2023/11/05 9:44:39	48.99308972	-57.75507926	444763.8794	5426961.149	38.8	Betula papyrifera	wB	1		31			
27	26	2023/11/05 9:54:56	48.9925915	-57.75599004	444696.7029	5426906.427	43.4								
28	27	2023/11/05 9:57:41	48.99287414	-57.75584185	444707.8563	5426937.739	40.7								
29	28	2023/11/05 10:01:21	48.99254641	-57.75575711	444713.6926	5426901.245	33.1	Betula papyrifera	wB	2		35	28		
30	29	2023/11/05 10:09:25	48.99205045	-57.75516551	444756.4209	5426845.682	32.8	Betula papyrifera	wB	1		27			
31	30	2023/11/05 10:12:54	48.99205875	-57.75497742	444770.1895	5426846.468	34.0	Betula papyrifera	wB	1		28			
32	31	2023/11/05 10:15:13	48.99193126	-57.75465824	444793.3979	5426832.063	34.5	Betula papyrifera	wB	1		31			
33	32	2023/11/05 10:22:10	48.99206629	-57.75455237	444801.2913	5426846.997	35.0	Acer rubrum	rM	1		21	22	28	

	A	P	Q	R	S	T	U	V
1	WPT_ID	dbh_cm5	Photo1	Photo2	Photo3	Photo4	Map_Label	Comments
2	1		80226					
3	2		80815					
4	3		81651				Wet	wet area from
5	4		81806	81816				
6	5							
7	6							
8	7		82525					pic looking NW
9	8		82824	82842				<20m from roa
10	9		83623					pic looking W;
11	10		90347					pic looking SW
12	11		90657	90711				pic looking SW;
13	12							
14	13							
15	14		91119				Selective Cutt	pic looking SE;
16	15		91334					
17	16							
18	17							twinned trees
19	18							
20	19							
21	20							
22	21		92644					twinned trees
23	22							twinned trees
24	23							twinned trees
25	24		94400				Nest Box	pic looking W;
26	25							
27	26		95051	95138			Selective Cutt	prior selective
28	27		95524				Plot Corner	approx. corner
29	28							twinned trees
30	29							on assumed pr
31	30							
32	31							
33	32		101953	102002	102011			pic looking N; p

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	WPT_ID	DATE_TIME_NST	LAT_DD	LONG_DD	East_N83_Z21	North_N83_Z2	Elev_m	Tree_Sp	Tree_Code	Trees≥25cm	Trees_Lobp	dbh_cm1	dbh_cm2	dbh_cm3	dbh_cm4
34	33	2023/11/05 10:22:30	48.99209496	-57.75458355	444799.0421	5426850.206	35.9	Acer rubrum	rM	4		38	33	29	27
35	34	2023/11/05 10:26:02	48.99182431	-57.75439899	444812.2449	5426819.985	32.3								
36	35	2023/11/05 10:29:26	48.99177225	-57.75404334	444838.2041	5426813.941	33.3	Betula papyrifera	wB	1		30			
37	36	2023/11/05 10:37:51	48.99196034	-57.75316324	444902.7941	5426834.21	40.5	Betula papyrifera	wB	1		27			
38	37	2023/11/05 10:41:52	48.99196118	-57.75284565	444926.0278	5426834.073	42.2								
39	38	2023/11/05 10:47:39	48.99231708	-57.75247609	444953.4544	5426873.368	43.4	Betula papyrifera	wB	1		26			
40	39	2023/11/05 10:51:56	48.99246099	-57.75232539	444964.6375	5426889.257	44.3	Betula papyrifera	wB	1		29			
41	40	2023/11/05 11:07:18	48.99313725	-57.7514053	445032.688	5426963.765	31.8								
42	41	2023/11/05 11:12:21	48.99335266	-57.75116022	445050.8535	5426987.534	27.5								
43	42	2023/11/05 11:54:17	48.9939435	-57.75088714	445071.4794	5427053.016	26.6	Betula papyrifera	wB	1		29			
44	43	2023/11/05 11:57:21	48.99394769	-57.7508578	445073.63	5427053.461	26.8	Betula alleghaniensis	yB	1		28			
45	44	2023/11/05 12:00:41	48.99408599	-57.75095453	445066.7064	5427068.905	38.1	Betula papyrifera	wB	1		30			
46	45	2023/11/05 12:03:14	48.99389665	-57.75127698	445042.9107	5427048.09	38.8								
47	46	2023/11/05 12:08:23	48.99431809	-57.75112552	445054.4537	5427094.83	26.6	Betula papyrifera	wB	1		28			
48	47	2023/11/05 12:10:03	48.99428481	-57.75126499	445044.2145	5427091.231	31.4	Betula alleghaniensis	yB	1		40			
49	48	2023/11/05 12:13:17	48.9943709	-57.75128586	445042.7825	5427100.816	33.1								
50	49	2023/11/05 12:18:32	48.9938187	-57.75139541	445034.1612	5427039.51	32.1								
51	50	2023/11/05 12:21:37	48.99366162	-57.7515597	445021.9708	5427022.168	32.8	Acer rubrum	rM	3	5	26	25	25	24
52	51	2023/11/05 12:30:06	48.99366505	-57.75222329	444973.432	5427023.031	32.8								
53	52	2023/11/05 12:33:56	48.99374284	-57.75250392	444952.9897	5427031.881	32.8								
54	53	2023/11/05 12:49:00	48.99431708	-57.7520767	444984.8739	5427095.407	40.7								
55	54	2023/11/05 12:50:50	48.99434516	-57.75206253	444985.9411	5427098.518	41.5	Acer rubrum	rM	1		26			
56	55	2023/11/05 12:53:52	48.9943553	-57.75187285	444999.8274	5427099.508	41.5	Betula papyrifera	wB	1		25			
57	56	2023/11/05 12:55:09	48.99426126	-57.75160454	445019.3504	5427088.859	41.0	Betula alleghaniensis	yB	1		33	23		
58	57	2023/11/05 12:55:59	48.99423184	-57.75169565	445012.6533	5427085.655	41.2	Betula alleghaniensis	yB	1		30			
59	58	2023/11/05 12:57:15	48.99410418	-57.75143355	445031.6856	5427071.274	44.3								
60	59	2023/11/05 13:02:12	48.9935555	-57.75194476	444993.6861	5427010.651	32.1	Betula alleghaniensis	yB	1		25			
61	60	2023/11/05 13:03:50	48.99344863	-57.75223838	444972.0899	5426998.984	34.0	Betula papyrifera	wB		1	7			
62	61	2023/11/05 13:07:14	48.99327513	-57.75289251	444924.0488	5426980.17	36.2	Betula alleghaniensis	yB	1		25			
63	62	2023/11/05 13:09:08	48.99330824	-57.75294883	444919.9649	5426983.892	35.7				4				
64	63	2023/11/05 13:14:57	48.99313507	-57.75287951	444924.8447	5426964.591	36.7				2				
65	64	2023/11/05 13:16:36	48.9932478	-57.75345091	444883.1706	5426977.538	33.8	Betula alleghaniensis	yB	2		57	39		

	A	P	Q	R	S	T	U	V
1	WPT_ID	dbh_cm5	Photo1	Photo2	Photo3	Photo4	Map_Label	Comments
34	33		102339	102354				pic of clustered
35	34						Plot Corner	approx. corner
36	35							
37	36							on assumed pr
38	37		104358	104427			Plot Corner	approx. corner
39	38							apex of slope; c
40	39							
41	40							common lichen
42	41						Fence	existing orchar
43	42		115625				Lichen, comm	pic toward SE,
44	43		115949					on BA planned
45	44							
46	45		120328	120349			Ferns	reddish area of
47	46							
48	47							
49	48						Wet	wet area (road,
50	49		121957	122007			Wet	flow toward or
51	50	22	122336	122348			Wet	along flow; clus
52	51						Wet	alder thicket, w
53	52							alder transition
54	53		124743	124824				moss pics
55	54		125158	125213	125221			pic of trunk
56	55							
57	56							twinned trees
58	57							
59	58						Wet	start of primary
60	59							>25cm yB DS sr
61	60		130438					DS snag with Lc
62	61		130950	131006				pic looking SE;
63	62		130846	130850				Lobaria pulmor
64	63		131125	131250	131302	131320		parkland-like o
65	64							triad, 2 trees tv

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	WPT_ID	DATE_TIME_NST	LAT_DD	LONG_DD	East_N83_Z21	North_N83_Z2	Elev_m	Tree_Sp	Tree_Code	Trees≥25cm	Trees_Lobp	dbh_cm1	dbh_cm2	dbh_cm3	dbh_cm4
66	65	2023/11/05 13:18:57	48.99333774	-57.75335779	444890.0819	5426987.468	34.5	Acer rubrum	rM		3				
67	66	2023/11/05 13:27:04	48.99365449	-57.75350497	444879.6645	5427022.787	39.5	Betula papyrifera	wB	1		26			
68	67	2023/11/05 13:28:04	48.99363195	-57.75345317	444883.4289	5427020.243	40.0	Betula alleghaniensis	yB	1		63			
69	68	2023/11/05 13:29:53	48.99361929	-57.7533836	444888.504	5427018.785	36.7	Betula alleghaniensis	yB	1		29			
70	69	2023/11/05 13:32:24	48.99360999	-57.7532215	444900.352	5427017.633	34.3	Betula alleghaniensis	yB	1		35			
71	70	2023/11/05 13:37:32	48.99349683	-57.75269092	444939.0393	5427004.669	29.4	Betula alleghaniensis	yB	1	3	29	19	17	
72	71	2023/11/05 13:40:45	48.99377503	-57.75286057	444926.9359	5427035.718	27.0	Betula papyrifera	wB	1		28	23		
73	72	2023/11/05 13:42:57	48.993885	-57.75276988	444933.6913	5427047.877	30.2	Betula alleghaniensis	yB	1		52			
74	73	2023/11/05 13:59:16	48.99378073	-57.7524564	444956.5079	5427036.058	28.0								
75	74	2023/11/05 14:11:21	48.99309509	-57.75270375	444937.6584	5426960.019	22.5	Betula alleghaniensis	yB	1	1	40			
76	75a	2023/11/05 14:16:08	48.99318385	-57.75224819	444971.081	5426969.556	26.8	Acer rubrum	rM	2	3	26	25		
77	75b	2023/11/05 14:16:08	48.99318385	-57.75224819	444971.081	5426969.556	26.8	Betula papyrifera	wB	1		25			
78	76	2023/11/05 14:17:45	48.9932271	-57.75215431	444977.9959	5426974.296	27.0								
79	77	2023/11/05 14:19:50	48.99335099	-57.75216227	444977.5498	5426988.074	26.1	Betula papyrifera	wB	1		25			
80	78	2023/11/05 14:21:25	48.99310774	-57.7518534	444999.8765	5426960.81	23.7	Betula papyrifera	wB	1		26			
81	79	2023/11/05 14:22:21	48.99304546	-57.75208466	444982.8911	5426954.054	27.5								
82	80	2023/11/05 14:23:26	48.99296072	-57.75204568	444985.6489	5426944.606	29.9	Betula papyrifera	wB	1		27			
83	81	2023/11/05 14:25:17	48.99284966	-57.75212715	444979.5668	5426932.319	28.7								
84	82	2023/11/05 14:27:45	48.99268974	-57.75217862	444975.6259	5426914.578	31.1	Acer rubrum	rM	1		30			
85	83	2023/11/05 14:39:28	48.99255755	-57.75236059	444962.1686	5426900.016	34.0								
86	84	2023/11/05 14:41:58	48.9929137	-57.75227183	444969.0543	5426939.543	38.3								
87	85	2023/11/05 14:44:04	48.99305862	-57.75228515	444968.239	5426955.663	40.7	Betula papyrifera	wB	1		30			
88	86	2023/11/05 14:46:06	48.99299442	-57.75246059	444955.335	5426948.652	42.4								
89	87	2023/11/05 14:49:11	48.99291823	-57.75258363	444946.25	5426940.272	42.4								
90	88	2023/11/05 14:51:31	48.99274263	-57.75289209	444923.4924	5426920.975	41.9	Betula papyrifera	wB	1		27	18		
91	89	2023/11/05 14:52:35	48.99267616	-57.75295403	444918.8878	5426913.631	42.2	Betula papyrifera	wB	1		29			
92	90	2023/11/05 14:54:23	48.99245638	-57.75314153	444904.9292	5426889.336	41.7								
93	91	2023/11/05 14:56:03	48.99258312	-57.75338201	444887.4775	5426903.599	41.9								
94	92	2023/11/05 14:57:49	48.99232001	-57.75431852	444818.6788	5426875.031	39.8								
95	93	2023/11/05 14:59:05	48.99213024	-57.75455506	444801.1658	5426854.108	39.5								
96	94	2023/11/05 15:02:43	48.99231825	-57.75420846	444826.7277	5426874.756	34.0	Betula papyrifera	wB	1		28	23		
97	95	2023/11/05 15:04:32	48.99212714	-57.75413881	444831.612	5426853.461	33.1	Betula papyrifera	wB	1		27			

	A	P	Q	R	S	T	U	V
1	WPT_ID	dbh_cm5	Photo1	Photo2	Photo3	Photo4	Map_Label	Comments
66	65		131930					all <25cm dbh
67	66							
68	67		132916					twinned trees;
69	68							
70	69							
71	70							twinned; Lobar
72	71							twinned trees;
73	72		134403					DS snag; spilt o
74	73		135932				Moose Brow	pic moose sign
75	74							Lobaria pulmon
76	75a		141354					pic of adjacent
77	75b							
78	76						Outcrop	large outcrops
79	77							devoid of lichen
80	78						Outcrop	exposed rock o
81	79						Outcrop	large outcrop, s
82	80							
83	81						Outcrop	large outcrop, s
84	82		142918					pic looking NW
85	83						Moose Brow	juvenile sapling
86	84							numerous wB c
87	85							N-facing slope;
88	86		144726	144733	144743	144751		large outcrop, s
89	87							large outcrop, s
90	88							twinned trees
91	89						Thick bF	from here bF re
92	90						Thick bF	thick-stocked p
93	91						Thick bF	trail head; thick
94	92						Outcrop	rock outcrop, 2
95	93							trail end; open
96	94							twinned trees
97	95							

	A	P	Q	R	S	T	U	V
1	WPT_ID	dbh_cm5	Photo1	Photo2	Photo3	Photo4	Map_Label	Comments
98	96							
99	97							Platismatia gla
100	98							Platismatia gla
101	99						Thick bF	thick-stocked p
102	100		151650					twinned trees;
103	101		151956					twinned trees;
104	102							
105	103		152309					6 stems (all <25
106	104							moss-covered l
107	105							split
108	106							primary bF star
109	107							
110	108		153732				Selective Cutt	pic looking N; r
111	109		154331					twinned trees;
112	110							twinned trees
113	111		155042					pic of WPT 111
114	112		155042					pic of WPT 111
115	113		155109					large trunk cav
116	114							
117	115						Wet	start of alder th
118	116						Wet	track from 115
119	117						Moose Brow	alternate 'Ravir
120	118						Wet	other (N) side c
121	119						Wet	end of alder po
122	120							end survey
123	121						Plot Corner	approx. corner
124	Culvert1						Culvert	
125	Culvert2						Culvert	
126	RavineFlow						Wet	
127	Road-X							Road intersecti