

Date: February 22, 2023

**P.E.I.
Public Forests**



Woodlot Management Plan

Property Number: 15396

Location: Kildare Capes

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Goals and Management Objectives

Forest Management on Prince Edward Island (P.E.I.) means different things to different people. Public Forest Lands are managed for a variety of reasons including timber and non- timber values, wildlife enhancement, soil and water preservation, demonstration techniques, training and recreation and aesthetics.

The primary goal for management of P.E.I. Public Forest Land is to enhance the overall forest quality. To accomplish this, it may be necessary to remove some of the lower quality trees on the property and nurture those of higher quality. This will in turn improve genetic quality, species distribution and diversity through careful tree selection and natural regeneration. Allowing acceptable growing stock the chance to thrive and provide a seed source for the surrounding areas will ensure that quality natural regeneration has an opportunity to establish. Enhancement or enrichment planting may be necessary in areas where there is inadequate or unsuitable natural regeneration. Trees native to P.E.I. that are suitable to the site conditions will be chosen for any required reforestation on the property. Prescribing treatments in some stands while leaving others untreated will provide for a range of forest types. Converting stands from a single species to multiple species is desirable. This can be accomplished by retaining some of the natural regeneration in areas that have been previously planted and by planned tree selection in stand improvement treatments. Planted and natural stands on the property will be assessed for health and growth of desired species on an on-going basis. This information will be used to determine when and where future treatments will be carried out. Through time, a favourable healthy mixture of short-lived and long-lived species will provide for an abundance of quality forest products, biodiversity, wildlife, and recreational opportunities as well as a range of ecological goods and services (such as clean air and water).

Property Overview

Location

Property #15396 is located on the Fitzpatrick Road in the community of Kildare Capes, P.E.I., (Appendix A). The total area of this property is 17.6 hectares (44 acres) and the midpoint of the property is Latitude N 46.907614 decimal degrees, Longitude W -64.011531 decimal degrees.

Past Information

Local records and previous aerial photography show that a large portion of the property was used for agricultural purposes early in the 20th century. To better illustrate this 1935 and 1968 photography can be seen in Appendix B and C respectively. Since, the property was a local dump site which has been abandoned. It is used intermittently with specific authorization.

Property Information

The information in Appendix D has been taken from the 2010 Corporate Land Use Inventory. An explanation of forestry code meanings can be seen in Appendix E. Any stands that have proposed silvicultural treatment prescriptions are to have on-ground stand assessments completed prior to any work being started. This on-ground assessment information is included in this plan as updated stand tally sheets (Appendix F) and supplements the extrapolated data where applicable. A topographic map of the property shows the general terrain profile, the ranges in elevation and the plantations currently on the property (Appendix G).

Wetland and Watercourses

There are two unnamed tributaries that run through the property: one in the northwest and one in the south east. They flow into a larger tributary that empties into Round Pond. This observation can be viewed in Appendix A. The watercourses require a 15m riparian buffer.

Property Access

The property is accessed from the Fitzpatrick Road. It is to be noted that the Fitzpatrick Road is not plowed in the winter; therefore, harvest operations are to occur when roads are open. A woods road within the property is not required.

Property Boundaries

This property is bounded on the south by the Fitzpatrick Road and the west, north and east by private land.

Fire Protection

This property is located within the jurisdiction of the Tignish Fire Department. The amount of personnel and equipment used to fight any forest fires will depend greatly upon the size and severity of the fire. Protection of our woodland from forest fire is the responsibility of the Forestry Division and our local community fire brigades. In the Western District, there is a four-wheel drive forestry fire truck housed at each of the Wellington and West Point Fire Departments. These heavy-duty trucks are available to assist the local fire department responsible for this area. Additional forestry fire trucks, off road tracked vehicles, portable pumps and specialized forest fire suppression equipment are available if needed. The streams that flows through the north west and south east sections of the property would be a suitable site to setup a portable fire pump system depending on seasonal waterflows.

Planting and Silviculture

There are two plantations on the property. It is recommended that any trees planted on the property be assessed at regular intervals. These assessments will determine if the planted trees require manual maintenance or fill planting as specified in the Forest Management Standards manual (Eco-Manual). A list of all silviculture treatments completed on the property from 1991 to present is shown in Appendix G.

Proposed Treatments

The 2006 Forest Policy “Moving to Restore a Balance in Island Forests” lays out the framework for Public Land Forest management. The Eco-Manual provides details for prescribed treatments. All work completed on this property must comply with that manual. Table 1 provides a summary of the prescribed treatments on this property. This table will be updated as required when additional treatments are prescribed. For a better understanding of the treatments prescribed, a more detailed explanation is available in the ECOSYSTEM-BASED FOREST MANAGEMENT STANDARDS MANUAL (“Eco Manual”)

www.princeedwardisland.ca/sites/default/files/publications/2018_eco_manual_technical_version_-_final.pdf . Any additional information may be obtained by contacting a Provincial Forest

representative at the District Forestry Office in Wellington.

Table 1. Proposed Treatment Summary

Stand Number and Plantation Number	Treatment Type	Treatment Year	Amount Proposed	2018 Eco-Manual Reference	Comments	Goals
PN 3210010 (ST 291355, 29080) PN 3210011 (ST 29355)	Plantation Maintenance	2023+	4.1	Pg. 17	<p>The site's vegetation exploded in 2021 with mostly PO, GB, PC which is providing competition for the planted trees. Herbaceous vegetation is severe along the main road and along the west boundary. It appears planted trees may not have survived in this area.</p> <p>The trees were browsed by rabbits in winter 2021. The trees survived and are doing well. Two manual maintenances are expected.</p>	Control competing vegetation

Appendices

**PROPERTY 15396
KILDARE CAPES**

Legend:

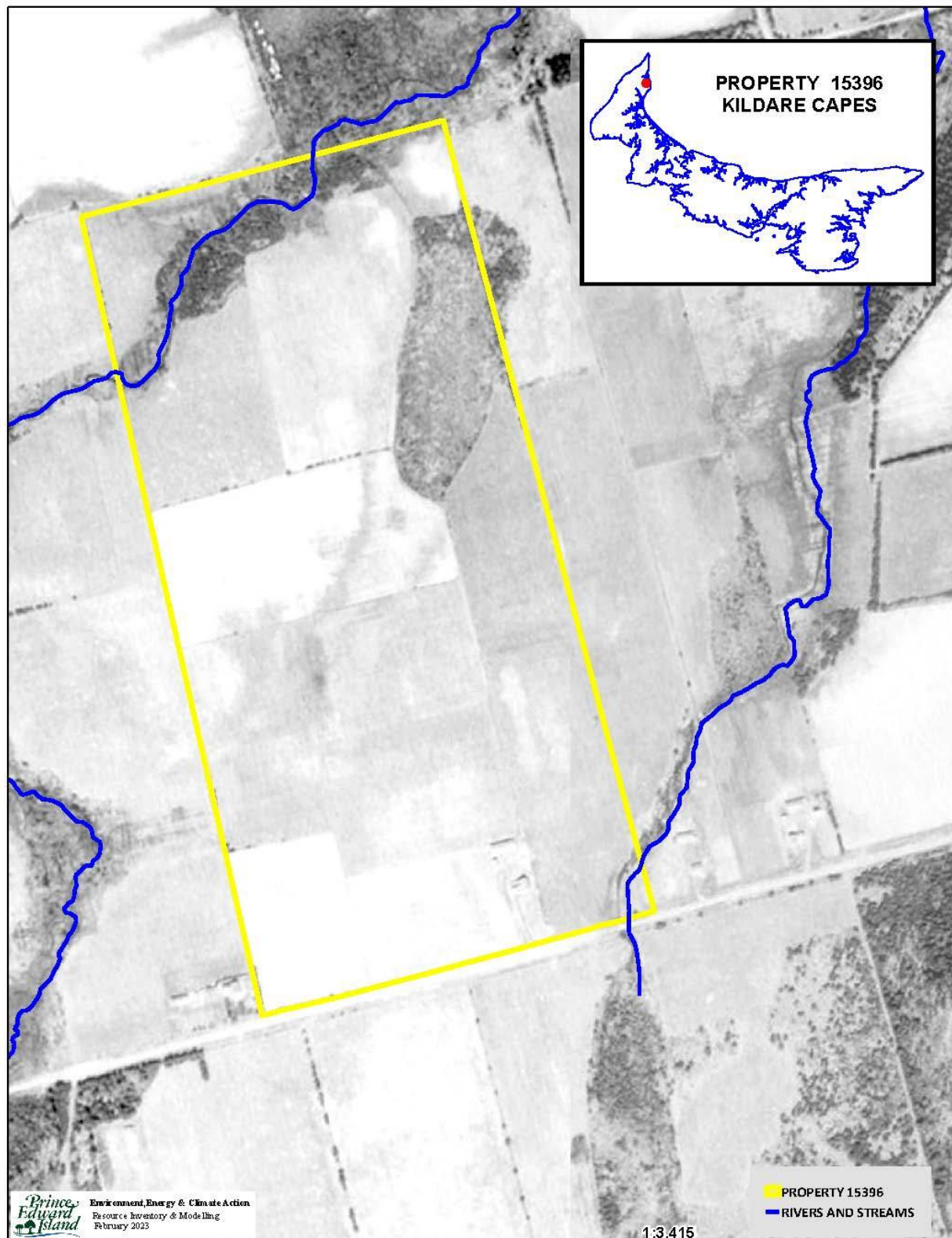
- PROPERTY 15396 (Yellow outline)
- PROPERTY (Black outline)
- WETLANDS (Blue outline)
- PEI 15 METER BUFFER (Red outline)
- CONFEDERATION TRAIL (Grey line)
- RIVERS AND STREAMS (Blue line)
- FOREST ROADS (White line)

Map details: The map shows a large property (15396) outlined in yellow, situated along the Confederation Trail. It is surrounded by various land parcels, many of which are wetlands (blue outlines) or have a 15-meter buffer (red outlines). Rivers and streams are shown in blue, and forest roads are shown in white. A north arrow is located in the top left corner, and an inset map of Prince Edward Island is in the top right corner, showing the location of the property. The map is titled 'PROPERTY 15396 KILDARE CAPES'.

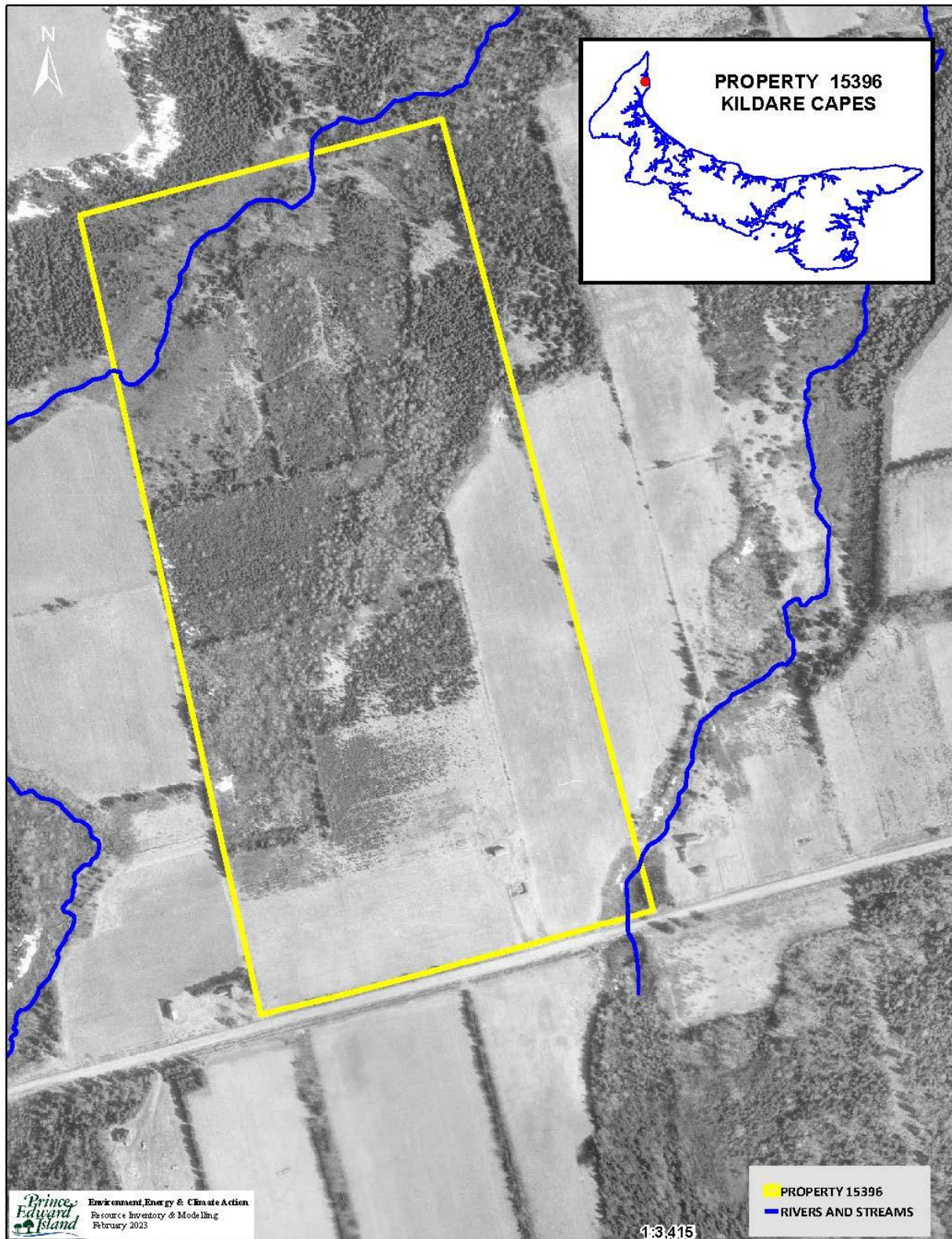
Scale: 1:3,415

Source: Prince Edward Island Environment, Energy & Climate Action Resource Inventory & Modelling February 2023

Appendix B. 1935 Aerial Photography



Appendix C. 1968 Aerial Photography



Appendix D. 2010 Corporate Land Use Inventory

FIELDID	COV1	PER1	COV2	PER2	COV3	PER3	COV4	PER4	COV5	PER5	HT(m)	HECTARES
029737	DT	3	LA	2	WS	2	PO	2	BF	1	15	2.30
029355	WS	8	LA	2		0		0		0	15	1.35
0292030	WS	3	PO	3	LA	2	RM	2		0	14	0.19
0291355	WS	8	PO	1	BF	1		0		0	18	3.05
029704	NS	8	AL	2		0		0		0	4	2.57
029764	WS	8	DT	1	LA	1		0		0	17	0.61
029715	LA	8	WP	1	PO	1		0		0	10	2.23
029080	WS	6	LA	2	PO	2		0		0	14	0.79
0291905	AL	9	WS	1		0		0		0	4	0.51
029082	AL	9	WS	1		0		0		0	4	0.20

Appendix E. Forest Inventory Codes

EXPLANATION OF FOREST CODES; SPECIES

WS	White Spruce	JL	Japanese Larch	WB	White Birch
BF	Balsam Fir	EL	European Larch	PO	Poplar
HE	Hemlock	NS	Norway Spruce	RM	Red Maple
WP	White Pine	PC	Pin Cherry	RO	Red Oak
RP	Red Pine	MA	Apple	WA	White Ash
JP	Jack Pine	SP	Scots Pine	EM	Elm
CE	Cedar	AP	Austrian Pine	GB	Gray Birch
LA	Larch	YB	Yellow Birch	AL	Alders
BS	Black Spruce	SM	Sugar Maple	LI	Linden
RS	Red Spruce	BE	Beech		

PERCENT

0	1 - 9%
1	10 - 19%
2	20 - 29 %
3	30 - 39 %
4	40 - 49 %
5	50 - 59 %
6	60 - 69 %
7	70 - 79 %
8	80 - 89 %
9	90 - 100 %

CROWN CLOSURE

A	91 % - 100%
B	81 % - 90 %
C	71 % - 80 %
D	61 % - 70 %
E	51 % - 60 %
F	41 % - 50 %
G	31 % - 40 %
H	21 % - 30 %
I	11 % - 20 %
J	0 % - 10 %

ORIGIN AND HISTORY

BR	Burn	DI	Disease-Insect
WF	Wind Fall	OF	Old Field
PC	Partial Cut	PN	Plantation
CC	Clear Cut	HR	Hedgerow
TH	Thinning	EP	Excavation Pit

SAMPLE DESCRIPTIONS

FOREST STAND DESCRIPTIONS

75401 – Stand No.

SM5RM4 – Sugar Maple 50%, Red Maple40%

WS1 12A – White Spruce 10%, Height, Crown Closure

OF – Origin History Old Field

Stand Numbering relates to the position of the stand within a 100 X 100 grid cell over lay with the minimum values in the southwest corner and the maximum values in the northeast corner.

A stand labeled 75 40 1 would be positioned within easting grid 75 and northing grid 40 and would be the first stand within that grid cell.

NON-FOREST LAND TYPES

BO	Bog	AL	Alders
CL	Clear Land	FL	Flowerage
SO	Swamps – Open	AG	Agricultural Land
EP	Excavation Pit	SD	Sand Dune
PL	Power Line	UR	Urban
C	Cemetery	WW	Water

FOREST GROUND CONDITION

SW	Wet – Swampy
ST	Steep
SY	Sandy

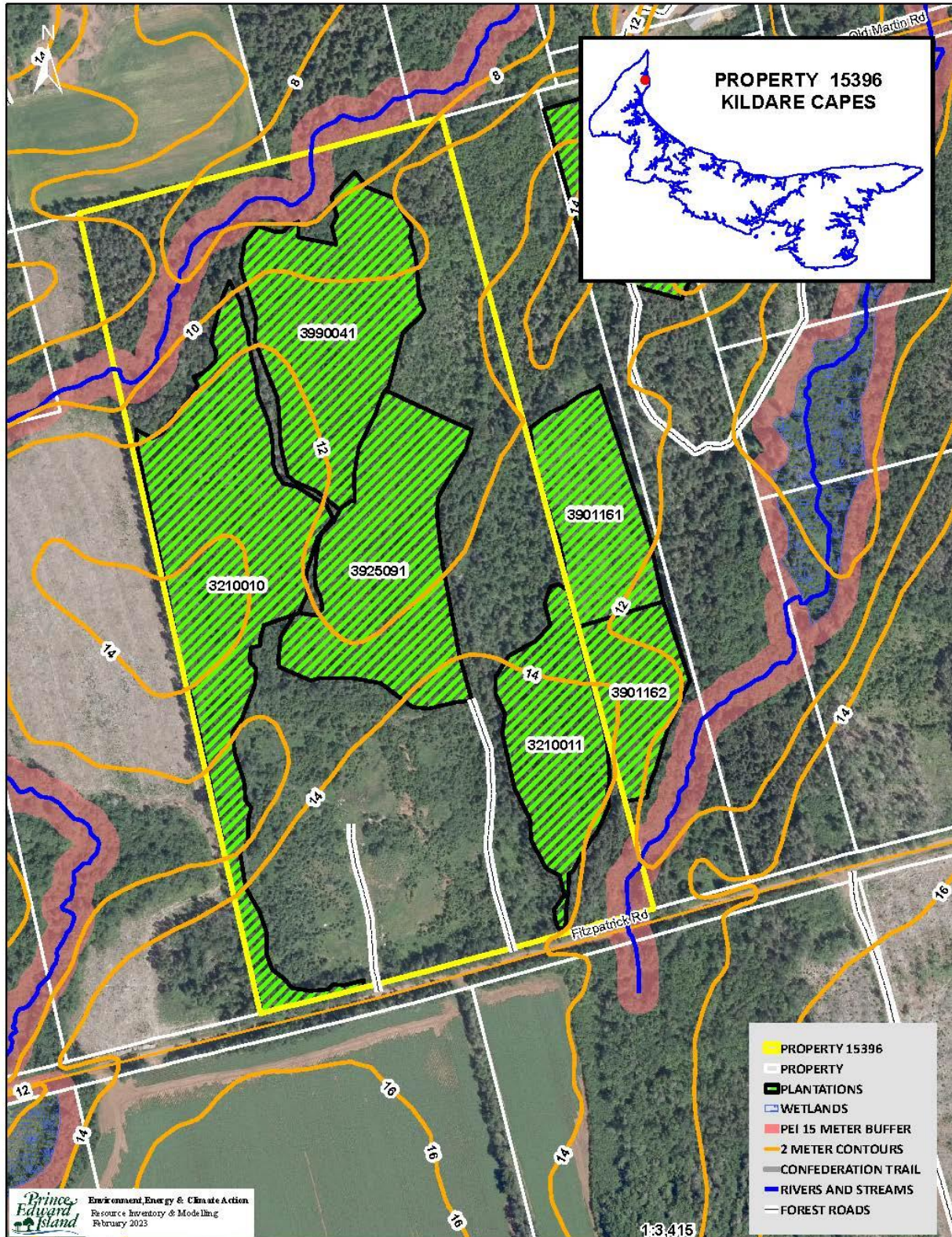
Appendix F. Stand Tally Sheets from on the Ground Assessment

STAND TALLY SHEET															
CRUISER		S. Rankin			STAND # 291355, 29080, 29355			PLANTATION # PN 3210010, 3210011							
PROPERTY #		15396			AREA 4.1 ha			Date			12, 8 / 2022				
											D M Y				
SAMPLE TREE INFORMATION															
TREE #	SPP.	AGE	D.B.H.	HEIGHT		TREE #	SPP.	AGE	D.B.H.	HEIGHT					
1	WS	2	1	15 cm		4									
2						5									
3						6									
STAND INFORMATION															
Stand Basal Area		SW		M ² /Ha		SWSL		M ² /Ha		HW		M ² /Ha		HWSL	
Species and (%)		WS3		%		PO3		%		GB3		%		PCRMWB1	
Even-aged X		Uneven-aged												Biomass	
Slope level		% Aspect													
Stand Origin:		Old Field		X		Partial Cut				Burn				Unploughed	
		Windfall				Non Forest								Ploughed	
		Clear Cut				Unknown									
Stand Maturity Class:		Regeneration		X		Immature				Mature				Over-mature	
Stand Stocking:		Understocked				Fully Stocked				Overstocked		X		Patchy	
Density:		SW 1800		HW 15,000											
Advanced Regeneration:		Understocked				Fully Stocked				Overstocked				Patchy	
Regeneration:		1. Spp.				Height				2. Spp.				Height	
		3. Spp.				Height				4. Spp.				Height	
GROUND OBSERVATIONS															
Ground Vegetation Species Present:		raspberry, red osier dogwood, ferns, herbaceous. Mostly POGB.													
Ground Hemlock		Y / N		X											
Invasive Species Present		Y / N				If yes then what species:									
Site Indicators		Y / N				If yes then what species:									
ENVIRONMENTAL OBSERVATIONS															
Water Course		Y		Bog		N		Pond		N		Stream		Y	
Drainage:		Poor		X		Moderate		X		Good		Excellent			
Snag Trees:		Adequate		X		Inadequate									
Coarse Woody Material:		Adequate		X		Inadequate									
Dens		N		Nests (Raptors, songbirds, etc.)		N									
Wildlife Observed		None observed													
Comments		A 15 m+ riparian was retained along the watercourses during harvest.													
STAND PRESCRIPTION															
No Treatment				Regeneration Cut				Crop Tree Release				Block Cut			
Shelterwood Cut				Selection Cut				Patch Cut				Strip Cut			
Commercial Thinning				Afforestation				Site Preparation							
Pre-commercial Thinning				Reforestation				Riparian Zone Mgmt							
Pln. Maint.		X		Y / N		Stems/Ha									
Comments:		This is a WS plantation. There was rabbit browse on seedlings in 2021 which stunted their growth.													
		The site exploded with PO, GB, PC and other woody stems along with herbaceous vegetation in 2021.													
		Herbaceous vegetation is severe on the narrow strip along the Fitzpatrick Rd and west boundary.													
		Planted trees died here. The remainder of the PN was OK. The PN needs a maintenance right away.													

STAND TALLY SHEET														
CRUISER		S. Rankin			STAND #		29462			PLANTATION #				
PROPERTY #		15396			AREA		4.3 ha			Date		12, 8 / 2022		
										D		M Y		
SAMPLE TREE INFORMATION														
TREE #	SPP.	AGE	D.B.H.	HEIGHT		TREE #	SPP.	AGE	D.B.H.	HEIGHT				
1	abandoned dump					4								
2						5								
3						6								
STAND INFORMATION														
Stand Basal Area	SW		M ² /Ha	SWSL		M ² /Ha	HW		M ² /Ha	HWSL		M ² /Ha		
Species and (%)	WS8	%	BF1	%	GBRM1	%								
Even-aged	X		Uneven-aged									Biomass		
Slope		%	Aspect											
Stand Origin:	Old Field	X	Partial Cut		Burn		Unploughed							
	Windfall		Non Forest				Ploughed							
	Clear Cut		Unknown											
Stand Maturity Class:	Regeneration	X	Immature		Mature		Over-mature							
Stand Stocking:	Understocked	X	Fully Stocked		Overstocked		Patchy	X						
Density:	SW	400	HW											
Advanced Regeneration:	Understocked		Fully Stocked		Overstocked		Patchy	X						
Regeneration:	1. Spp.	WS	Height	0.5-3.5m	2. Spp.		Height							
	3. Spp.		Height		4. Spp.		Height							
GROUND OBSERVATIONS														
Ground Vegetation Species Present:		grasses												
Ground Hemlock		Y / N	X											
Invasive Species Present		Y / N			If yes then what species:									
Site Indicators		Y / N			If yes then what species:									
ENVIRONMENTAL OBSERVATIONS														
Water Course	N	Bog	N	Pond	N	Stream	N	Seeps	N		Beaver Present	N	Y / N	
Drainage:	Poor		Moderate		Good	X	Excellent			Erosion Control Required	N	Y / N		
Snag Trees:	Adequate		Inadequate	X										
Coarse Woody Material:	Adequate		Inadequate	X										
Dens	N	Nests (Raptors, songbirds, etc.)	N											
Wildlife Observed	none													
Comments														
STAND PRESCRIPTION														
No Treatment			X	Regeneration Cut		Crop Tree Release		Block Cut						
Shelterwood Cut				Selection Cut		Patch Cut		Strip Cut						
Commercial Thinning				Afforestation		Site Preparation								
Pre-commercial Thinning				Reforestation		Riparian Zone Mgmt								
Pln. Maint.	Y / N		Stems/Ha											
Comments:	This is an old dump site that has been filled in and abandoned. There is intermittent use with special authorization. Natural ingress of WS is occurring with a minor component of BF, GB and RM.													
	No work is recommended for this site at this time. There are piezometers on-site for monitoring purposes.													

STAND TALLY SHEET														
CRUISER		S. Rankin			STAND #		29704			PLANTATION #				
PROPERTY #		15396			AREA		0.5 ha			Date		12, 8 / 2022		
										D		M Y		
SAMPLE TREE INFORMATION														
TREE #	SPP.	AGE	D.B.H.	HEIGHT		TREE #	SPP.	AGE	D.B.H.	HEIGHT				
1						4								
2						5								
3						6								
STAND INFORMATION														
Stand Basal Area	SW		M ² /Ha	SWSL		M ² /Ha	HW		M ² /Ha	HWSL		M ² /Ha		
Species and (%)	AL3	%	RM2	%	LA2	%	GB1	%	PO2					
Even-aged	Uneven-aged			X						Biomass				
Slope	depres	%	Aspect											
Stand Origin:	Old Field		Partial Cut		Burn		Unploughed							
	Windfall	X	Non Forest				Ploughed							
	Clear Cut		Unknown											
Stand Maturity Class:	Regeneration				Immature		Mature		Over-mature					
Stand Stocking:	Understocked			X	Fully Stocked		Overstocked		Patchy	X				
Density:	SW		HW											
Advanced Regeneration:	Understocked				Fully Stocked		Overstocked		Patchy					
Regeneration:	1. Spp.		Height		2. Spp.		Height							
	3. Spp.		Height		4. Spp.		Height							
GROUND OBSERVATIONS														
Ground Vegetation Species Present:					sphagnum									
Ground Hemlock					Y / N									
Invasive Species Present					Y / N If yes then what species:									
Site Indicators					Y / N If yes then what species:									
ENVIRONMENTAL OBSERVATIONS														
Water Course	N	Bog	N	Pond	N	Stream	N	Seeps	N	Beaver Present	N	Y / N		
Drainage:	VPoor	X	Moderate		Good		Excellent		Erosion Control Required	N	Y / N			
Snag Trees:	Adequate	X	Inadequate											
Coarse Woody Material:	Adequate	X	Inadequate											
Dens	N	Nests (Raptors, songbirds, etc.)	N											
Wildlife Observed	none													
Comments	standing water													
STAND PRESCRIPTION														
No Treatment		X	Regeneration Cut		Crop Tree Release		Block Cut							
Shelterwood Cut			Selection Cut		Patch Cut		Strip Cut							
Commercial Thinning			Afforestation		Site Preparation									
Pre-commercial Thinning			Reforestation		Riparian Zone Mgmt									
Pln. Maint.	Y / N		Stems/Ha											
Comments:	This site borders the east edge of PN 3990041. It is a very wet site. There is no wood of any type to harvest now or ever. Leave this stand as it will serve as a WTP.													

Appendix G. Plantation Map with Contour Lines



Appendix H. Work Completed

Activity Number	Treatment Code	Amount Completed	Treatment Date	Treatment Description
	170	0.6	2/13/2021	Salvage
3925091	23B	1.77	9/5/1991	Rhome Disc Double Pass - Per Ha
3990041	29	2.14	12/11/1998	Raking Crawler Tractor-Root Rake:per Ha
3210010	30B	4963	6/10/2021	Manual Site Preparation per Site (Hawk)
3210011	30B	1906	6/10/2021	Manual Site Preparation per Site (Hawk)
3990041	38A	2.14	3/29/1999	Slash Pile Burn Less Than 4 Ha.
3210010	55W	4914	6/10/2021	WHITE SPRUCE - WESTERN
3210011	55W	1890	6/10/2021	WHITE SPRUCE - WESTERN
3925095	56W	1168	6/15/1992	WHITE PINE - WESTERN
3210010	56W	49	6/10/2021	WHITE PINE - WESTERN
3210011	56W	16	6/10/2021	WHITE PINE - WESTERN
3925071	59W	3645	6/15/1992	EASTERN LARCH - WESTERN
3990041	67W	6036	8/13/1999	NORWAY SPRUCE - WESTERN
3990041	82B	2.03	10/17/2001	Herbicide:Broadcast : 1st Treatment
3200520	92	3.7	2/15/2021	Clearcut Block