

## **Appendix B: WindPRO v4.0, Shadow Module Calculation Results**

## SHADOW - Main Result

Calculation: CR Shadow 18Tc N163-7 RC  
Assumptions for shadow calculations

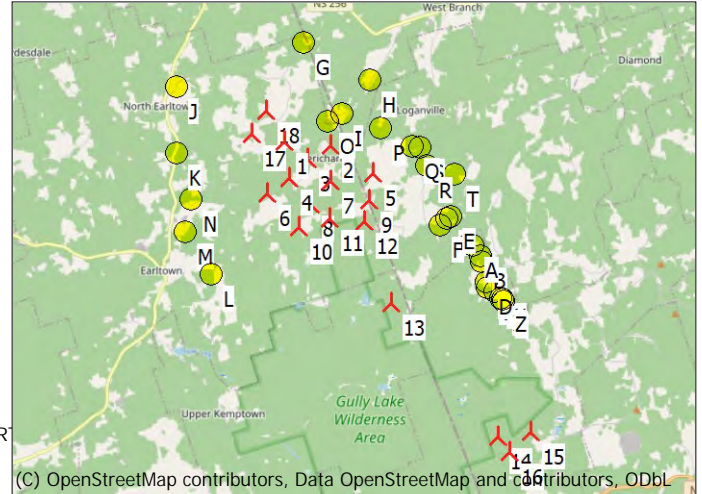
Maximum distance for influence  
Calculate only when more than 20 % of sun is covered by the blade  
Please look in WTG table

Minimum sun height over horizon for influence 3 °  
Day step for calculation 1 days  
Time step for calculation 1 minutes

Sunshine probability S (Average daily sunshine hours) [CHARLOTTETOWN]  
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec  
3.37 4.18 4.42 5.04 6.34 7.54 7.95 7.19 5.76 3.98 2.63 2.31

No operational time reduction. It is assumed the WTGs are always running with worst case wind direction.  
A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:  
Height contours used: Project Wizard Elevation Data Grid (NASADEM (Successor of SRTM))  
Receptor grid resolution: 1.0 m

All coordinates are in  
UTM (north)-NAD83 (US+CA) Zone: 20



(C) OpenStreetMap contributors, Data OpenStreetMap and contributors, ODbL  
Scale 1:200,000  
New WTG Shadow receptor

### WTGs

Easting	Northing	Z	Row data/Description	WTG type			Shadow data				
				Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Calculation distance [m]	RPM
1	492,498	5,050,553	289.5 NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (...)	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	118.0	1,788	10.7
2	493,729	5,050,460	300.0 NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (...)	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	118.0	1,788	10.7
3	493,114	5,050,100	307.8 NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (...)	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	118.0	1,788	10.7
4	492,622	5,049,587	306.8 NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (...)	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	118.0	1,788	10.7
5	494,865	5,049,716	278.9 NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (...)	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	118.0	1,788	10.7
6	492,032	5,049,185	307.8 NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (...)	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	118.0	1,788	10.7
7	493,738	5,049,526	303.3 NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (...)	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	118.0	1,788	10.7
8	493,204	5,048,895	309.0 NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (...)	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	118.0	1,788	10.7
9	494,739	5,049,014	277.0 NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (...)	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	118.0	1,788	10.7
10	492,894	5,048,278	307.3 NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (...)	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	118.0	1,788	10.7
11	493,690	5,048,524	316.9 NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (...)	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	118.0	1,788	10.7
12	494,621	5,048,435	285.7 NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (...)	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	118.0	1,788	10.7
13	495,344	5,046,296	250.7 NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (...)	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	118.0	1,788	10.7
14	498,171	5,042,768	301.5 NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (...)	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	118.0	1,788	10.7
15	499,025	5,042,890	292.6 NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (...)	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	118.0	1,788	10.7
16	498,463	5,042,355	292.2 NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (...)	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	118.0	1,788	10.7
17	491,641	5,050,782	278.7 NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (...)	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	118.0	1,788	10.7
18	492,017	5,051,347	281.0 NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (...)	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	118.0	1,788	10.7

### Shadow receptor-Input

No.	Easting	Northing	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
	[m]	[m]	[m]	[m]	[m]	[m]	[°]		[m]
A	497,492	5,047,816	145.7	3.0	3.0	1.0	90.0	"Green house mode"	4.0
B	497,679	5,047,529	156.7	3.0	3.0	1.0	90.0	"Green house mode"	4.0
C	497,710	5,047,387	156.2	3.0	3.0	1.0	90.0	"Green house mode"	4.0
D	497,842	5,046,845	159.8	3.0	3.0	1.0	90.0	"Green house mode"	4.0
E	496,911	5,048,580	123.7	3.0	3.0	1.0	90.0	"Green house mode"	4.0
F	496,629	5,048,337	130.5	3.0	3.0	1.0	90.0	"Green house mode"	4.0
G	493,018	5,053,158	159.6	3.0	3.0	1.0	90.0	"Green house mode"	4.0
H	494,783	5,052,174	131.8	3.0	3.0	1.0	90.0	"Green house mode"	4.0
I	494,025	5,051,304	196.8	3.0	3.0	1.0	90.0	"Green house mode"	4.0
J	489,674	5,052,003	131.8	3.0	3.0	1.0	90.0	"Green house mode"	4.0
K	489,663	5,050,265	154.2	3.0	3.0	1.0	90.0	"Green house mode"	4.0
L	490,579	5,047,076	212.8	3.0	3.0	1.0	90.0	"Green house mode"	4.0
M	489,869	5,048,193	158.0	3.0	3.0	1.0	90.0	"Green house mode"	4.0
N	490,035	5,049,052	170.3	3.0	3.0	1.0	90.0	"Green house mode"	4.0

To be continued on next page...

## SHADOW - Main Result

Calculation: CR Shadow 18Tc N163-7 RC

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No.	Easting	Northing	Z	Width	Height	Elevation	Slope of	Direction mode	Eye height
			[m]	[m]	[m]	a.g.l.	window		(ZVI) a.g.l.
						[m]	[°]		[m]
O	493,652	5,051,082	235.5	3.0	3.0	1.0	90.0	"Green house mode"	4.0
P	495,032	5,050,890	149.3	3.0	3.0	1.0	90.0	"Green house mode"	4.0
Q	495,911	5,050,424	182.3	3.0	3.0	1.0	90.0	"Green house mode"	4.0
R	496,278	5,049,910	142.8	3.0	3.0	1.0	90.0	"Green house mode"	4.0
S	496,075	5,050,406	165.2	3.0	3.0	1.0	90.0	"Green house mode"	4.0
T	497,034	5,049,689	99.3	3.0	3.0	1.0	90.0	"Green house mode"	4.0
U	496,813	5,048,518	124.2	3.0	3.0	1.0	90.0	"Green house mode"	4.0
V	497,889	5,046,691	159.3	3.0	3.0	1.0	90.0	"Green house mode"	4.0
W	498,091	5,046,592	167.4	3.0	3.0	1.0	90.0	"Green house mode"	4.0
X	498,238	5,046,413	167.0	3.0	3.0	1.0	90.0	"Green house mode"	4.0
Y	498,309	5,046,338	168.0	3.0	3.0	1.0	90.0	"Green house mode"	4.0
Z	498,280	5,046,392	166.5	3.0	3.0	1.0	90.0	"Green house mode"	4.0

## Calculation Results

Shadow receptor

Shadow, expected values

No. Shadow hours

per year

[h/year]

A	0:00
B	0:00
C	0:00
D	0:00
E	0:00
F	0:00
G	0:00
H	0:00
I	4:31
J	0:00
K	0:00
L	0:00
M	0:00
N	0:00
O	19:50
P	4:41
Q	6:53
R	4:46
S	5:23
T	0:00
U	0:00
V	0:00
W	0:00
X	0:00
Y	0:00
Z	0:00

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Expected [h/year]
1	NORDEX N163/6.X 7000 163.0 IO! hub: 118.0 m (TOT: 199.5 m) (1)	6:50
2	NORDEX N163/6.X 7000 163.0 IO! hub: 118.0 m (TOT: 199.5 m) (2)	14:40
3	NORDEX N163/6.X 7000 163.0 IO! hub: 118.0 m (TOT: 199.5 m) (3)	0:05
4	NORDEX N163/6.X 7000 163.0 IO! hub: 118.0 m (TOT: 199.5 m) (4)	0:00
5	NORDEX N163/6.X 7000 163.0 IO! hub: 118.0 m (TOT: 199.5 m) (5)	15:22
6	NORDEX N163/6.X 7000 163.0 IO! hub: 118.0 m (TOT: 199.5 m) (6)	0:00
7	NORDEX N163/6.X 7000 163.0 IO! hub: 118.0 m (TOT: 199.5 m) (7)	0:00
8	NORDEX N163/6.X 7000 163.0 IO! hub: 118.0 m (TOT: 199.5 m) (8)	0:00
9	NORDEX N163/6.X 7000 163.0 IO! hub: 118.0 m (TOT: 199.5 m) (9)	0:00
10	NORDEX N163/6.X 7000 163.0 IO! hub: 118.0 m (TOT: 199.5 m) (10)	0:00
11	NORDEX N163/6.X 7000 163.0 IO! hub: 118.0 m (TOT: 199.5 m) (11)	0:00
12	NORDEX N163/6.X 7000 163.0 IO! hub: 118.0 m (TOT: 199.5 m) (12)	0:00
13	NORDEX N163/6.X 7000 163.0 IO! hub: 118.0 m (TOT: 199.5 m) (13)	0:00

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## SHADOW - Main Result

Calculation: CR Shadow 18Tc N163-7 RC

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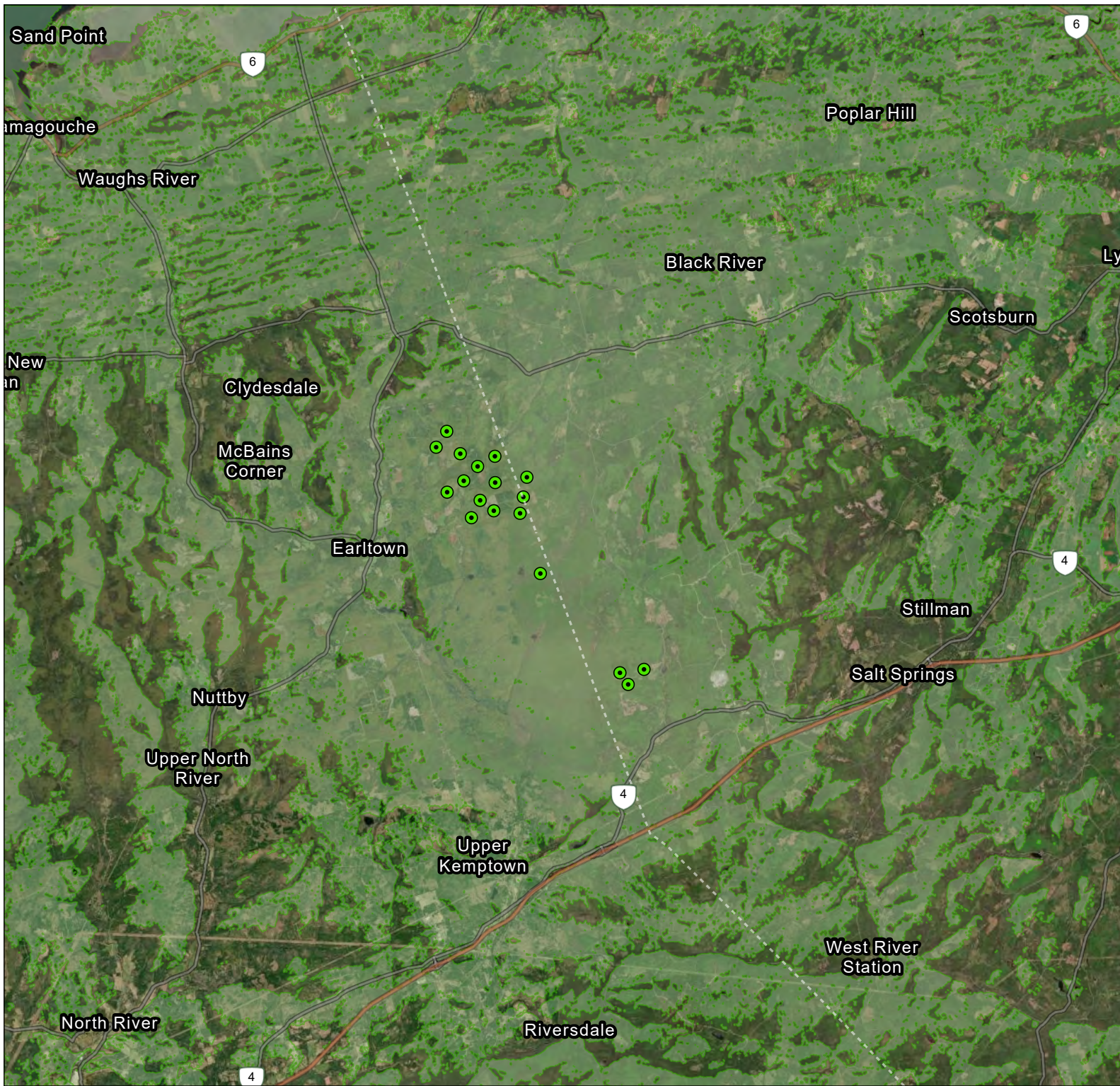
No.	Name	Expected [h/year]
14	NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (TOT: 199.5 m) (14)	0:00
15	NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (TOT: 199.5 m) (15)	0:00
16	NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (TOT: 199.5 m) (16)	0:00
17	NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (TOT: 199.5 m) (17)	0:00
18	NORDEX N163/6.X 7000 163.0 !O! hub: 118.0 m (TOT: 199.5 m) (18)	4:16

Total times in Receptor wise and WTG wise tables can differ, as a WTG can lead to flicker at 2 or more receptors simultaneously and/or receptors may receive flicker from 2 or more WTGs simultaneously.

The calculation of the total expected values for a given receptor assumes a weighted average directional reduction for all WTGs contributing to shadow flicker within the same day. In the case where shadow flicker from different WTGs is not concurrent within the day, the total expected time at a given receptor may deviate marginally from the individual flicker time caused by each turbine separately.



**Appendix C: WindPRO v4.0, Zone of Visual Influence  
Assessment Results**



**Clydesdale Ridge Wind Project**

**Zone of Visual Influence**



**Legend**

- Proposed Turbine Locations

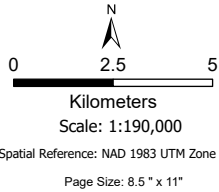
**Zone of Visual Influence**

- 1-18 Turbines Visible

**Notes**

1. Turbine markers not to scale.
2. The ZVI assessment does not consider factors such as weather conditions, vegetation cover, existing buildings, or other screening objects, but exclusively considers the location of turbines with respect to topographical features. Therefore, this assessment represents a conservative approach.

**Sources**  
 Basemap: ESRI World Topo Map



Production Date: Jul 5, 2024      Prepared by: KD



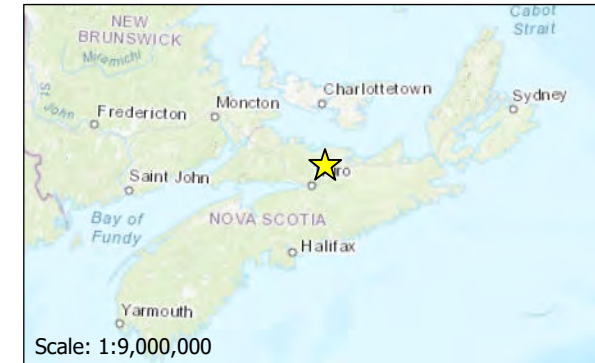
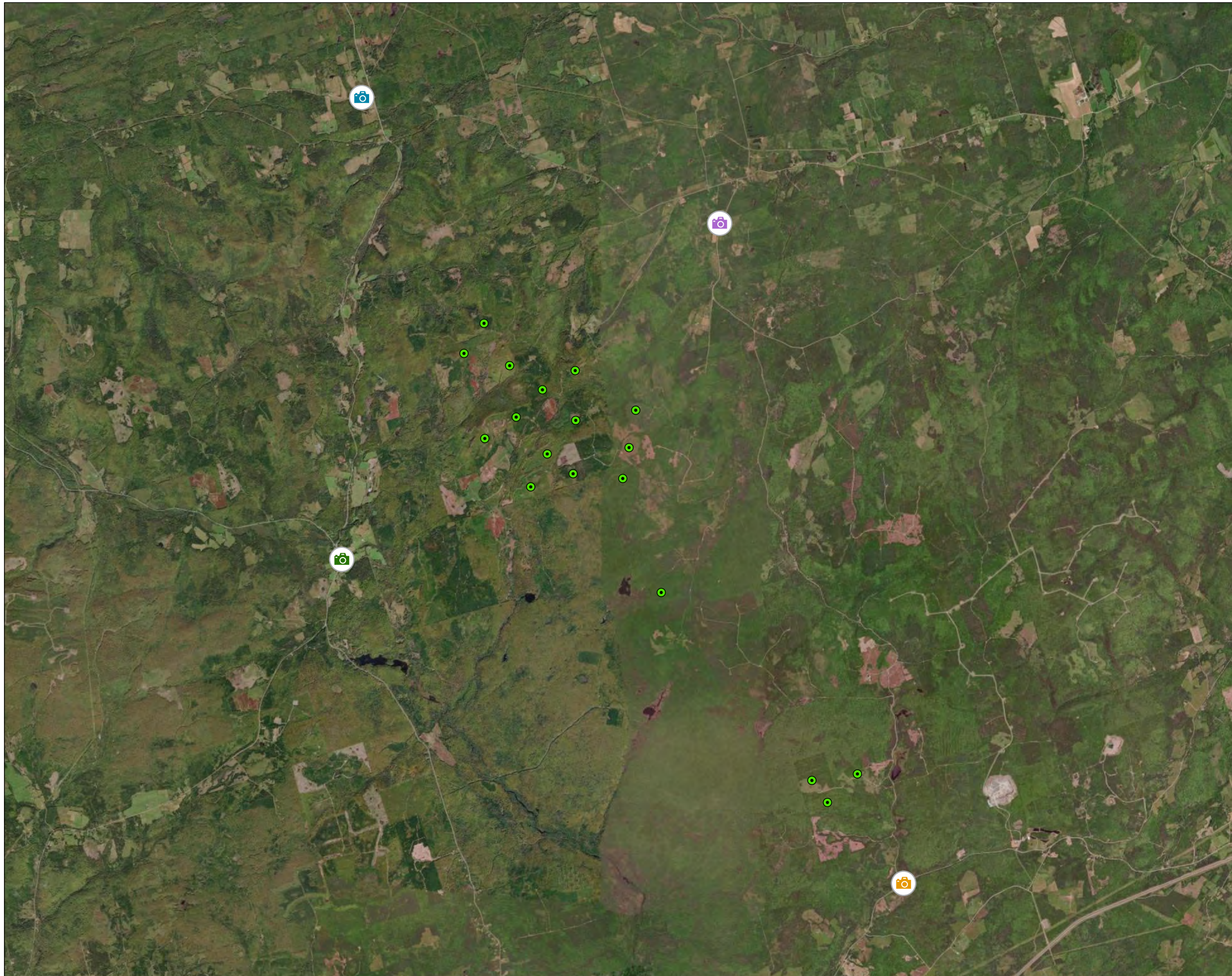


## **Appendix D: WindPRO v.4.0, Photomontages and Photo Locations**



# Clydesdale Ridge Wind Project

## Photomontage Locations



### Legend

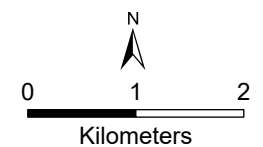
- Proposed Turbine Locations
- Balmoral Road
- Glen Road and HWY4
- Near Earltown Community Centre (NS-311)
- Loganville Road

### Notes

- Turbine markers not to scale.

### Sources

Basemap: ESRI World Topo Map



Scale: 1:70,000

Spatial Reference: NAD 1983 UTM Zone 20N

Page Size: 11" x 17"

Production Date: Jun 27, 2024

Prepared by: KD





Photomontage Location: Near Earltown Community Centre





Photomontage Location: Loganville Road





Photomontage Location: Balmoral Road





Photomontage Location: Glen Road





APPENDIX M  
RADIOCOMMUNICATION SYSTEM IMPACT STUDY

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# **RADIOCOMMUNICATION SYSTEM IMPACT STUDY**

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## Overview

Natural Forces (the Proponent) is proposing to develop a wind energy project located on the border that separates Colchester and Pictou County, roughly 7 km northwest of the existing Dalhousie Mountain Wind Farm. The Clydesdale Ridge Wind Project (the Project), consisting of up to 18 turbines the Project has a nameplate capacity of nearly 70 MW. The purpose of this report is to determine any potential impacts the Project may have on nearby radiocommunication and radar systems.

## Background

This study follows the methodology described in the Radio Advisory Board of Canada and CanWEA's (RABC-CanWEA) "Technical Information and Coordination Between Wind Turbines and Radiocommunication and Radar Systems"(2020). Wind turbines have the capacity to have a negative effect on neighbouring radiocommunication and radar systems through interference. By conducting this study early on in the development of the Project, these impacts can be better understood and effectively avoided.

The RABC-CanWEA guidelines (2020) provide the recommended consultation areas for each type of tower. The consultation zone is the area within which a project Proponent must consult with the radiocommunication service provider to ensure appropriate mitigation of any potential interference impacts. In addition to consultation zones around each tower, these guidelines also provide information on point-to-point (PTP) communication towers, which require more complex consultation zones along the PTP link according to the distance between towers and their frequencies.

The location of the radiocommunication towers near the Project site can be determined by using innovation, Science, and Economic Development's (ISED, previously Industry Canada) Spectrum Direct tool, which provides the geographic coordinates of all radiocommunication and radar systems in the country. This tool provides all of the information that is relevant and necessary for conducting this interference study.

The following are the steps recommended by RABC-CanWEA guidelines:

1. The wind proponent develops a map showing the location of the proposed wind farm, to the extent that this information is available at that time. The proponent obtains and provides preliminary information for the proposed project, including project area coordinates, representative machine and proposed number of wind turbines.
2. The proponent sends notices of consultation with the proposed wind farm location and preliminary project information to all mandatory contacts operation non-disclosed systems. These mandatory contact agencies will respond in a timely fashion, no more than 21 days after initial contact. The proponent determines whether any of the consultation zones for disclosed systems overlap/intersect the proposed project area, as described by these guidelines.

In the event that the guidelines or mandatory consultation contacts indicate that a given installation is located within a consultation zone, the proponent contacts the applicable authority/owner of the disclosed or non-disclosed systems to determine if, in fact, further investigation is warranted. The owners of disclosed or non-disclosed systems will respond to the proponent in a timely fashion, no more than 60 days from when the proponent first contacts the owners of respective disclosed or non-disclosed systems.

3. The proponent and applicable authority/owner of the disclosed or non-disclosed systems undertake the necessary studies and identify mitigation measures to resolve the issue to the satisfaction of both parties. The wind project proponent develops a map showing the location of the proposed wind farm and all the wind turbines within it. (RABC-CanWEA 2020).

In this study, Natural Forces followed these recommended steps. The methodology that was employed can be found detailed below, along with the findings of this internal study.

## Methodology

The following steps were conducted for the radiocommunication system impact analysis:

1. Preliminary site and turbine locations were determined. All relevant federal agencies (Navigation Canada, Transport Canada, Department of National Defence, Environment and Climate Change Canada, the Royal Canadian Mounted Police, and the Canadian Coast Guard) were contacted to consult the proposed turbine locations and confirm that interference from the project would be minimal.
2. Using the ISED website, the location of all nearby radiocommunication and radio towers were downloaded. This was done by inputting coordinates from the centre of the site and setting the frequency range from 1-1,000,000 MHz. The resulting list is attached in Appendix A.
3. The various radiocommunication systems that could be near the Project were selected. Additional data was collected for the analysis (Tower ID, Frequency, Channel type, Height above ground level, Latitude/Longitude, Station location, In-service date and Licensee name).
4. The data collected was then turned into a geospatial dataset and allowed for display of the data.
5. As PTP Towers communicate to one another, the pairs must be identified to create PTP-Links. These pairs were matched by Frequency, Licensee Name, and their type (Transmit or Receive). Once pairs were found, the towers were connected and consultation zones were determined using the method provided by RABC-CanWEA (discussed later-on). All consultation zones were mapped along their respective 'Link'.
6. For all of the other tower types, consultation zones were taken from the RABC-CanWEA guidelines.
7. Once all towers and their consultation zones have been mapped, the proposed turbine sites are mapped as well. It can then be determined which turbines, if any, are found in any of the consultation zones.

## Inputs

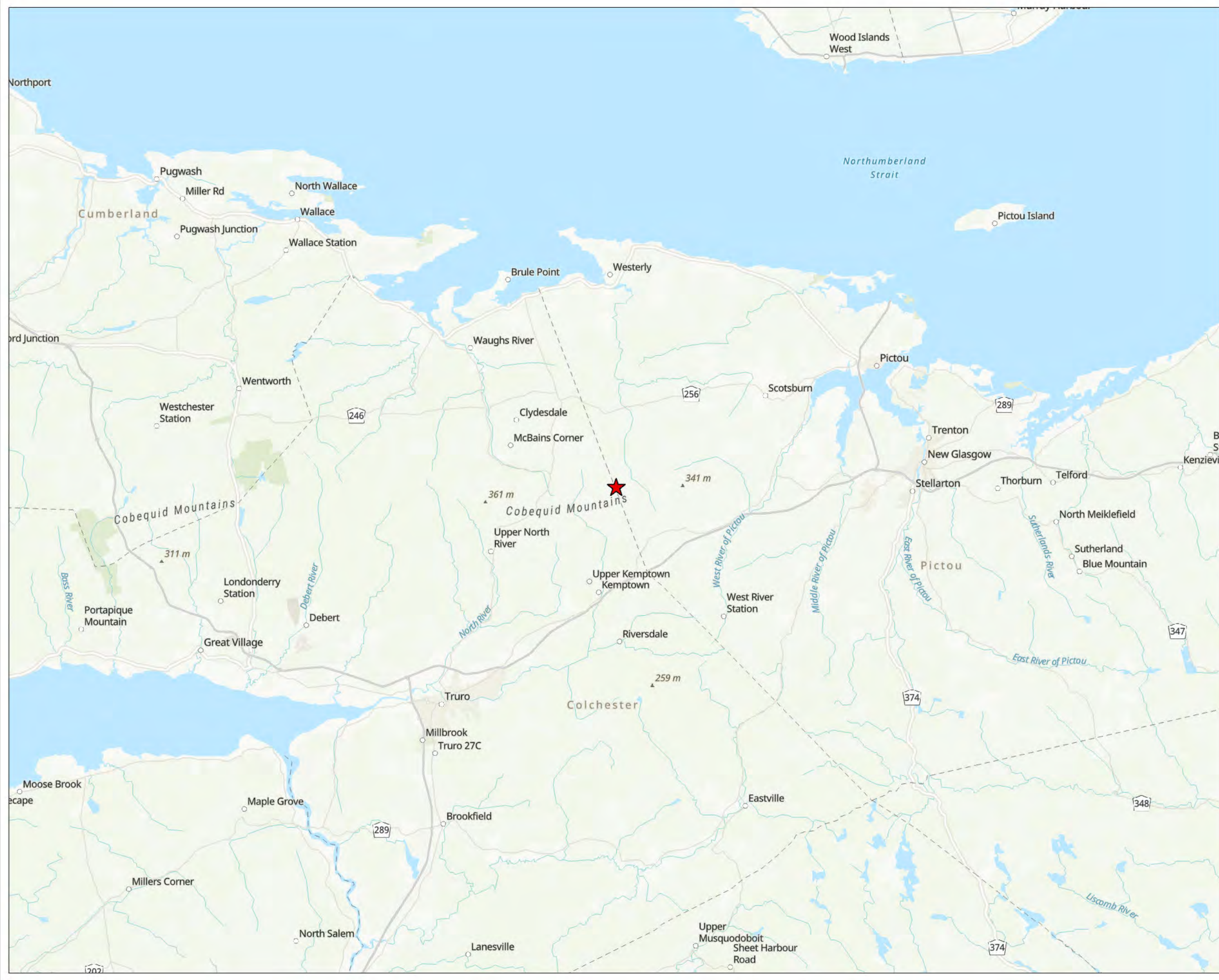
The characteristics of the wind turbine models under consideration can be found in table 1. However, this study will only use the N163 due to the longer blades having a greater range of effect on the surrounding radiocommunications systems, compared to the smaller E138.

**TABLE 1: CHARACTERISTICS OF PROPOSED TURBINE MODELS.**

<b>Characteristic</b>	<b>Nordex N163</b>	<b>Enercon E138</b>
Hub Height (m)	120	111
Rotor Diameter (m)	163	138
Ground to blade tip height (m)	202	180



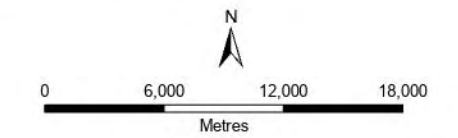
Figure 1: Proposed Project Location



Legend  
★ Proposed Project Location

Notes

Sources  
- Base data provided by the Province of Nova Scotia  
- Basemap: ESRI World Topo Map



Scale: 1:380,000  
Spatial Reference: NAD 1983 UTM Zone 20N

Page Size: 11" x 17"

Production Date: Apr 17, 2024 | Prepared By: Eric Fleet





Figure 2: Preliminary Project Layout and Boundaries



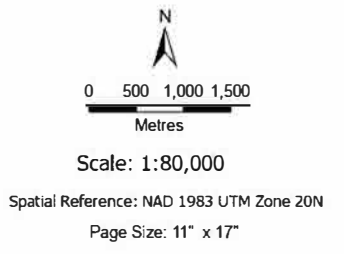
- Legend**
- Clydesdale Substation
  - Proposed Turbines
  - Roads
  - 138 kV Line
  - 230 kV Line

**Notes**

1. Turbine markers are not to scale

**Sources**

- Base data provided by the Province of Nova Scotia
- Basemap: ESRI World Topo Map



Production Date: Apr 17, 2024 | Prepared By: Eric Fleet





# Findings and Analysis

## Consultation with Federal Agencies

Following the RABC/CanWEA guidelines (2020), the necessary federal agencies were consulted for the Project. All of the contacts have provided the necessary approvals, as shown in Table 2.

The formal approval letters from NavCan and the Department of National defense are attached in Appendix B. The completed Transport Canada assessment form requiring day and night marking/lighting protection is attached in Appendix C.

**TABLE 2: SUMMARY OF FEDERAL AGENCIES CONSULTED AND STATUS OF APPROVAL.**

<b>Agency</b>	<b>Approval Required</b>	<b>Status</b>
<b>Transport Canada</b>	Aeronautical Assessment Approval	Approved April 2023
<b>Navigation Canada</b>	Land Use Approval	Approved January 2024
<b>Department of National Defense</b>	Letter of non-objection	Approved September 2023
<b>Royal Canadian Mounted Police</b>	Letter of non-objection	Approved August 2023
<b>Canadian Coast Guard</b>	Notice of Approval	Approved August 2023
<b>Environment and Climate Change Canada</b>	Letter of non-objection	Approved August 2023

## Point-to-Point Systems

According to RABC/CanWEA guidelines (2020), the consultation zones for both the transmitting and receiving towers is 1 km. For the link that connects the Towers, the consultation zone was calculated using the following equation:

$$L_c = R + 52 \sqrt{\frac{D}{F}}$$

Where:

L<sub>c</sub> = diameter of the consultation zone (m)

R = rotor diameter of wind turbine (m)

D = distance between transmit and receive towers (km)

F = frequency of communications between transmit and receive towers (GHz).

For this assessment, 163 meters was used for R to reflect the longest considered blade length. The consultation zone radius was calculated and applied to the PTP tower links that have been identified. The links that crossed or came near the project were noted and mapped with the preliminary turbine locations, as shown in **Figure 3 and 4**. The following Table shows the calculated radii of the consultation zones for these PTP links.

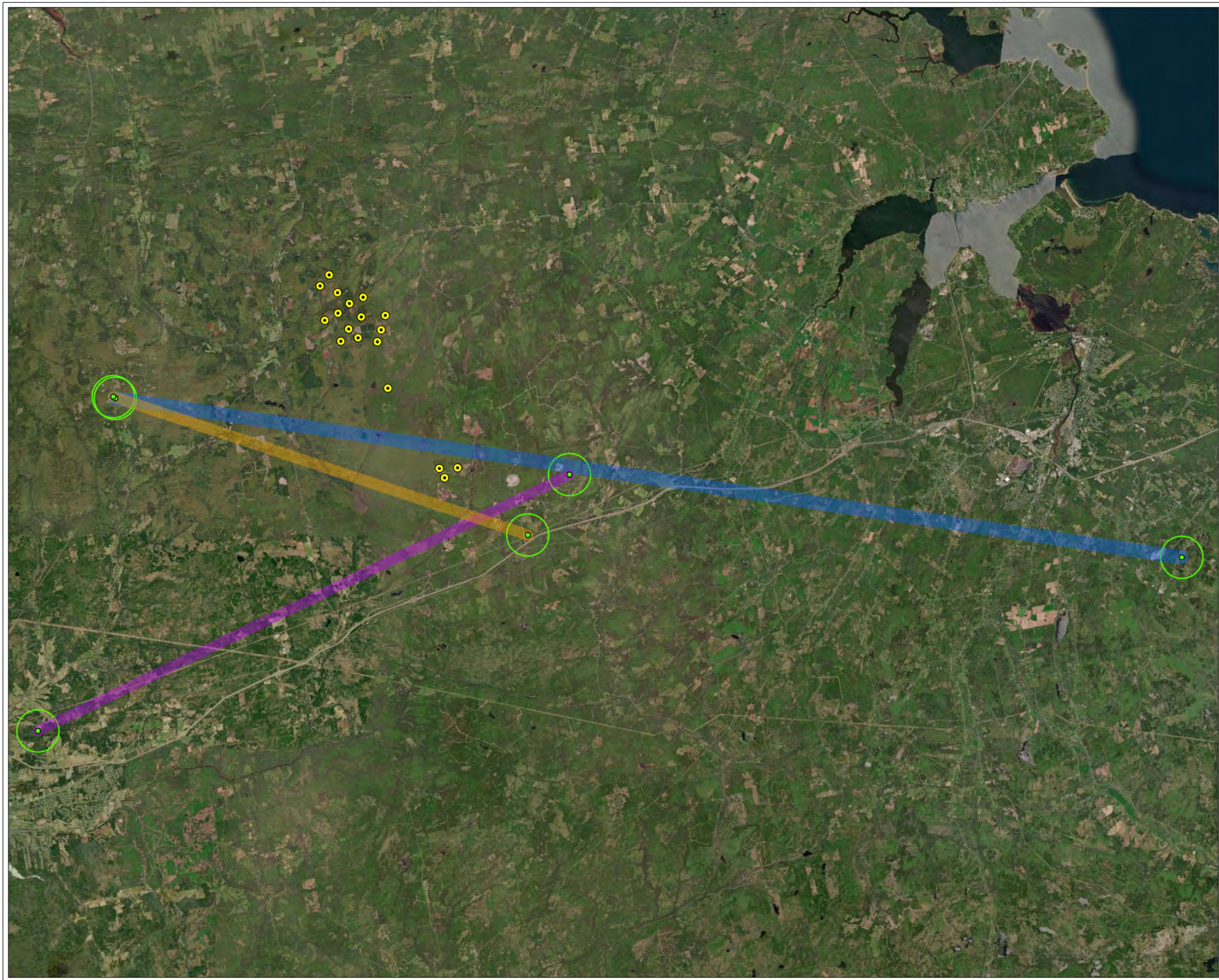
**TABLE 3: THE CALCULATED RADII OF THE CONSULTATION ZONES FOR THESE PTP LINKS.**

Station location	Owner	Frequency (GHz)	Path Length (km)	Consultation Zone Radius (N163)
McLellans Mountain, NS. Nuttby, NS.	NS Department of Service Delivery and Public Safety Communications	4.980	51.23	329.8
LWR MT Thom, NS. Nuttby Mountain, NS.	Nova Scotia Power Inc.	7.638	20.72	248.6
Brookland, NS. Penny Mountain, NS.	Rogers Communications Canada Inc	6.785	27.98	268.6

All turbines are outside PTP Tower consultation zones. A PTP link can be found crossing through the site. However, none of the proposed turbines are found within the consultation zones.



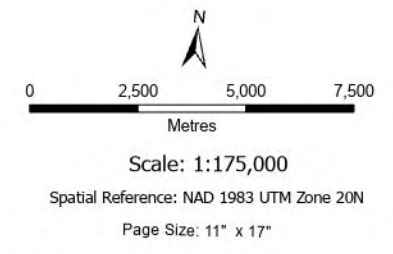
Figure 3: Consultation Zones for Point-to-Point (PTP) Towers Crossing or Near Project Site



- Legend
- Mapped PTP Towers
  - Fresnel Zone 3
  - Fresnel Zone 2
  - Fresnel Zone 1
  - PTP Towers Buffer
  - Proposed Turbines

- Notes
1. Turbine markers are not to scale
  2. All buffer distances for E138 were smaller than their N163 counterparts.
  3. Buffer distances are listed later in Document

- Sources
- Base data provided by the Province of Nova Scotia
  - Basemap: ESRI World Topo Map

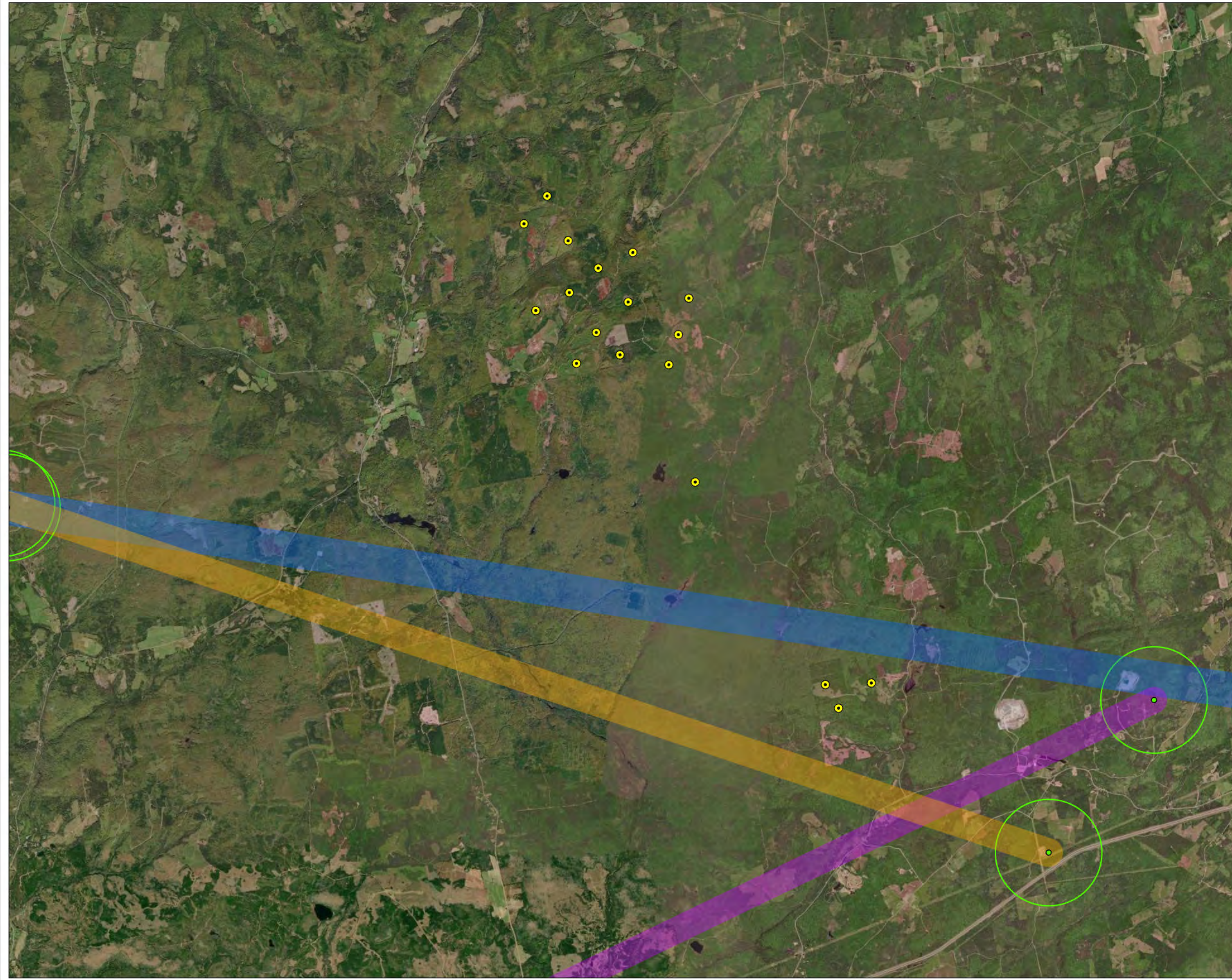


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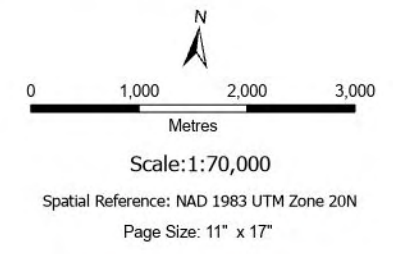
**Figure 4: Closer Inspection of PTP Links and Consultation Zones**



- Legend**
- Mapped PTP Towers
  - Fresnel Zone 3
  - Fresnel Zone 2
  - Fresnel Zone 1
  - PTP Towers Buffer
  - Proposed Turbines

- Notes**
1. Turbine markers are not to scale
  2. All buffer distances for E138 were smaller than their N163 counterparts.
  3. Buffer distances are listed later in Document

**Sources**  
- Base data provided by the Province of Nova Scotia  
- Basemap: ESRI World Topo Map



Production Date: Apr 17, 2024 | Prepared By: Eric Fleet





## Broadcast and Land Mobile Towers Cellular Towers

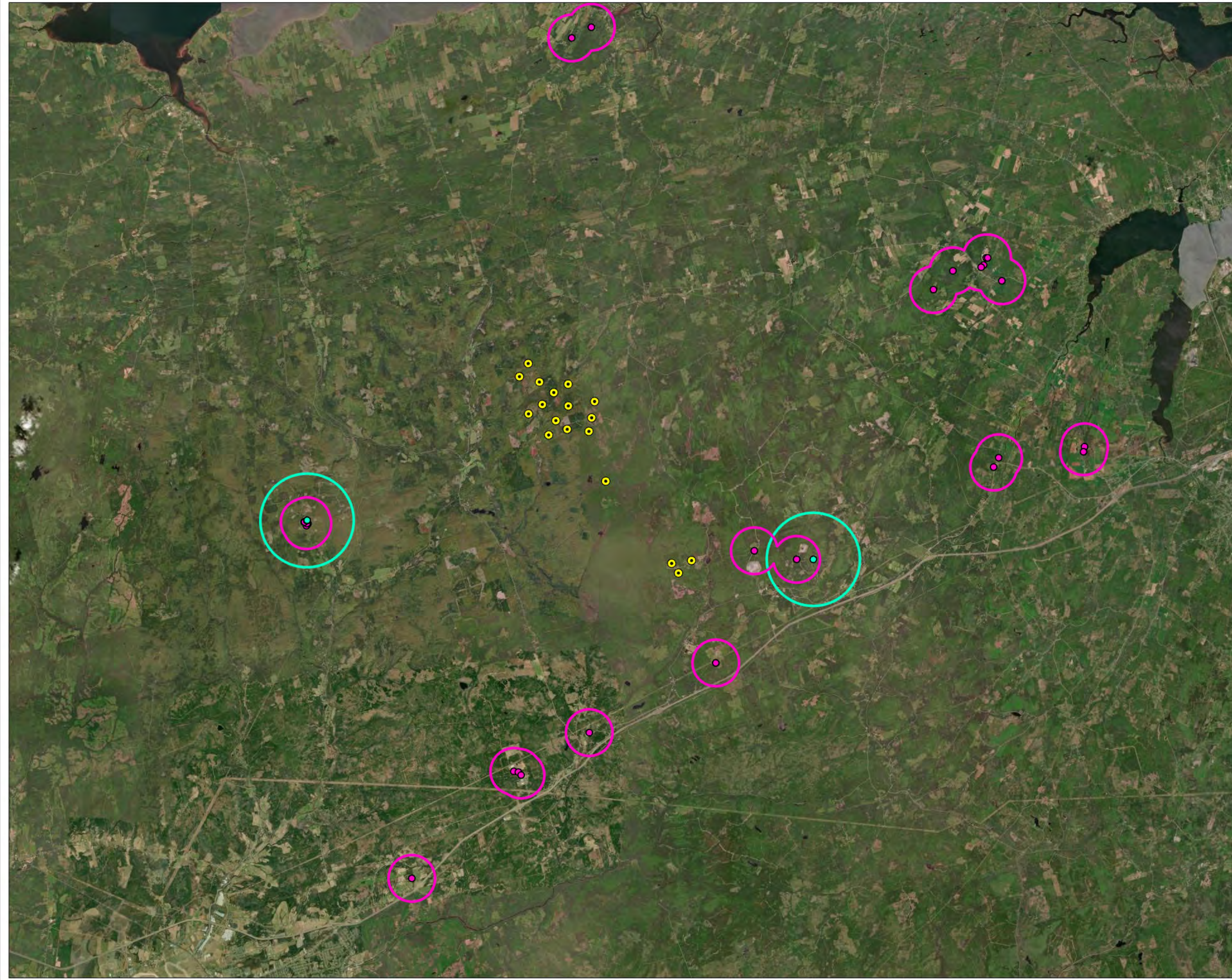
The RABC/CanWEA guidelines (2020) recommend 1 km consultation zone around land mobile towers and a 2 km consultation zone around broadcast towers. The closest Broadcast and land mobile towers are shown in **figure 5**.

Wind Turbines that are outside the consultation zones are not expected to negatively impact the Project. Since no turbines are sited within these consultation zones, no interference is anticipated, and no additional consultation is required.

■



Figure 5: Consultation Zones for Broadcast Towers and Land Mobile Towers Near the Project Site



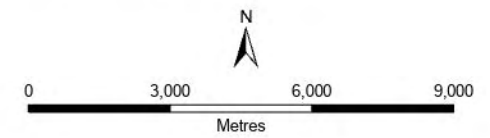
- Legend**
- Proposed Turbines
  - Nearby Broadcast Towers
  - Nearby Land Mobile Towers
  - Land Mobile Tower Buffer
  - Broadcast Towers Buffer

**Notes**

1. Turbine markers are not to scale

**Sources**

- Base data provided by the Province of Nova Scotia
- Basemap: ESRI World Topo Map



Scale: 1:160,000  
Spatial Reference: NAD 1983 UTM Zone 20N  
Page Size: 11" x 17"

Production Date: Apr 17, 2024 | Prepared By: Eric Fleet





## **Closure**

The results from this study indicate that no interference will result from the proposed Project. This analysis was done in consultation with the RABC/CanWEA guidelines on electromagnetic interference. Additionally, all of the federal agencies contacted have confirmed that the Project is expected to have no negative impacts on these radiocommunication and radar systems. These findings will be regularly consulted throughout the development and construction of the Project to continually ensure that the Project does not have any negative impacts on radiocommunication and radar systems.



## References

Innovation, Science, and Economic Development (ISED) Canada. (2021, September 02).

*Spectrum Management System - Geographical Search*. From Government of Canada:

<https://sms-sgs.ic.gc.ca/frequencySearch/searchByGeographicArea?execution=e1s1>

Radio Advisory Board of Canada (RABC) and Canadian Wind Energy Association (CanWEA).

(2020). *Technical Information and Coordination Process Between Wind Turbines and Radiocommunication Radar Systems*. RABC and CanWEA.

## **Appendix A: List of all nearby radiocommunication and radar systems**

## Fixed (Point-to-Point) Towers

Channel Type	Frequency [MHz]	Channel	Height above	Latitude (WGS84)	Longitude (WGS84)	In-service date	Licensee name
TX_RES : null	933.2	E4	15	45.37177778	-63.26263889	2018-02-01T00:00:00-05:00	NOVA SCOTIA POWER INC
RX_RES : null	933.2	E4	50	45.40033611	-63.30431111	2018-02-01T00:00:00-05:00	NOVA SCOTIA POWER INC
TX_RES : null	933.8		45	45.53333333	-62.56472222	2021-10-29T00:00:00-04:00	NOVA SCOTIA POWER INC
RX_RES : null	933.8	0	61	45.62083333	-62.64722222	2021-10-29T00:00:00-04:00	NOVA SCOTIA POWER INC
TX_RES : null	942.2	E4'	50	45.40033611	-63.30431111	2018-02-01T00:00:00-05:00	NOVA SCOTIA POWER INC
RX_RES : null	942.2	E4'	15	45.37177778	-63.26263889	2018-02-01T00:00:00-05:00	NOVA SCOTIA POWER INC
TX_RES : null	942.8		61	45.62083333	-62.64722222	2021-10-29T00:00:00-04:00	NOVA SCOTIA POWER INC
RX_RES : null	942.8	0	45	45.53333333	-62.56472222	2021-10-29T00:00:00-04:00	NOVA SCOTIA POWER INC
TX_RES : null	959		15	45.57805556	-62.64027778	2021-07-07T00:00:00-04:00	Stingray Radio Inc.
RX_RES : null	959	0	106	45.53972222	-62.94638889	2021-07-07T00:00:00-04:00	Stingray Radio Inc.
TX_RES	959.75		7	45.34861111	-63.28944444	2001-06-05T00:00:00-04:00	BELL MEDIA RADIO ATLANTIC INC.
RX_RES	959.75	0	12	45.55444444	-63.22305556	2001-06-05T00:00:00-04:00	BELL MEDIA RADIO ATLANTIC INC.
TX_RES	1432.25		8	45.67361111	-62.67555556	1985-09-16T00:00:00-04:00	Bell Canada
RX_RES	1481.25	0	8	45.67361111	-62.67555556	1985-09-16T00:00:00-04:00	Bell Canada
RX_RES : null	4950	0	26.5	45.33760556	-63.20232778	2015-10-26T00:00:00-04:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
TX_RES : null	4950		26.5	45.33760556	-63.20232778	2015-10-26T00:00:00-04:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
RX_RES : null	4950	0	18.1	45.31	-63.33305556	2016-07-25T00:00:00-04:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
TX_RES : null	4950		18.1	45.31	-63.33305556	2016-07-25T00:00:00-04:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
TX_RES : null	4950		45	45.41616667	-62.8125	2017-02-17T00:00:00-05:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
RX_RES : null	4950	0	45	45.41616667	-62.8125	2017-02-17T00:00:00-05:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
RX_RES : null	4950	0	58.8	45.53333333	-62.56472222	2020-04-30T00:00:00-04:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
TX_RES : null	4950		58.8	45.53333333	-62.56472222	2020-04-30T00:00:00-04:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
RX_RES : null	4960	0	46	45.31	-63.33305556	2016-07-25T00:00:00-04:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
TX_RES : null	4960		46	45.31	-63.33305556	2016-07-25T00:00:00-04:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
TX_RES : null	4960		17.7	45.33760556	-63.20232778	2016-07-25T00:00:00-04:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
RX_RES : null	4960	0	18.5	45.55355556	-63.22361111	2016-07-25T00:00:00-04:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
TX_RES : null	4960		18.5	45.55355556	-63.22361111	2016-07-25T00:00:00-04:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
RX_RES : null	4960	0	17.7	45.33760556	-63.20232778	2016-07-25T00:00:00-04:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
TX_RES : null	4960		21	45.41616667	-62.8125	2017-02-17T00:00:00-05:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
RX_RES : null	4960	0	28	45.53305556	-62.56947222	2017-02-17T00:00:00-05:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
TX_RES : null	4960		28	45.53305556	-62.56947222	2017-02-17T00:00:00-05:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
RX_RES : null	4960	0	21	45.41616667	-62.8125	2017-02-17T00:00:00-05:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
TX_RES : null	4980		30	45.31	-63.33305556	2016-07-25T00:00:00-04:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
RX_RES : null	4980	0	30	45.31	-63.33305556	2016-07-25T00:00:00-04:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
TX_RES : null	4980		20.4	45.33760556	-63.20232778	2016-07-25T00:00:00-04:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
TX_RES : null	4980		65	45.53305556	-62.56947222	2016-07-25T00:00:00-04:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
RX_RES : null	4980	0	20.4	45.33760556	-63.20232778	2016-07-25T00:00:00-04:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
TX_RES : null	4980		19	45.55355556	-63.22361111	2017-02-17T00:00:00-05:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
RX_RES : null	4980	0	65	45.53305556	-62.56947222	2016-07-25T00:00:00-04:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
TX_RES : null	4980		35	45.41616667	-62.8125	2017-02-17T00:00:00-05:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
RX_RES : null	4980	0	35	45.41616667	-62.8125	2017-02-17T00:00:00-05:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
RX_RES : null	4980	0	19	45.55355556	-63.22361111	2017-02-17T00:00:00-05:00	NS Dept. of Int. Service Delivery Public Safety Field Comm. Office
TX_RES : null	6063.8	A5	35.6	45.6925	-62.70333333	2022-09-06T00:00:00-04:00	Rogers Communications Canada Inc.

RX_RES : null	6063.8	A5	28.55	45.54138889	-62.94305556	2022-09-06T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	6093.45	A6	35.6	45.6925	-62.70333333	2022-09-06T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	6093.45	A6	28.55	45.54138889	-62.94305556	2022-09-06T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	6315.84	A5'	28.55	45.54138889	-62.94305556	2022-09-06T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	6315.84	A5'	35.6	45.6925	-62.70333333	2022-09-06T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	6345.49	A6'	28.55	45.54138889	-62.94305556	2022-09-06T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	6345.49	A6'	35.6	45.6925	-62.70333333	2022-09-06T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	6445	A1	87.4	45.40888889	-63.24861111	2016-09-15T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	6445	A1	54	45.54166667	-62.94444444	2016-09-15T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	6535	C11	78	45.41083333	-63.24972222	2013-06-01T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	6535	C11	56	45.52388889	-63.51638889	2013-06-01T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	6535	C11	54	45.53722222	-62.56083333	2005-08-01T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	6785	A1'	54	45.54166667	-62.94444444	2016-09-15T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	6785	A1'	87.4	45.40888889	-63.24861111	2016-09-15T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	6875	C11'	56	45.52388889	-63.51638889	2013-06-01T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	6875	C11'	78	45.41083333	-63.24972222	2013-06-01T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	6875	C11'	54	45.53722222	-62.56083333	2005-08-01T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	7130	C1	58.35	45.53305556	-62.56944444	2016-11-21T00:00:00-05:00	NOVA SCOTIA POWER INC
RX_RES : null	7130	C1	28.5	45.51416667	-62.96583333	2016-11-21T00:00:00-05:00	NOVA SCOTIA POWER INC
TX_RES : null	7130	C1	48	45.55416667	-63.225	2018-06-18T00:00:00-04:00	NOVA SCOTIA POWER INC
RX_RES : null	7130	C1	60	45.40033611	-63.30431111	2018-06-18T00:00:00-04:00	NOVA SCOTIA POWER INC
TX_RES : null	7150	C3	44	45.53333333	-62.56472222	2021-10-29T00:00:00-04:00	NOVA SCOTIA POWER INC
RX_RES : null	7150	C3	67	45.62083333	-62.64722222	2021-10-29T00:00:00-04:00	NOVA SCOTIA POWER INC
TX_RES : null	7170	C5	48	45.55416667	-63.225	2016-07-29T00:00:00-04:00	NOVA SCOTIA POWER INC
TX_RES : null	7190	C7	65	45.62083333	-62.64722222	2017-12-04T00:00:00-05:00	NOVA SCOTIA POWER INC
TX_RES	7208.75		35	45.55416667	-63.225	2010-11-16T00:00:00-05:00	NOVA SCOTIA POWER INC
RX_RES : null	7208.75	D11	30	45.51416667	-62.96583333	2010-11-16T00:00:00-05:00	NOVA SCOTIA POWER INC
TX_RES : null	7305	C1'	28.5	45.51416667	-62.96583333	2016-11-21T00:00:00-05:00	NOVA SCOTIA POWER INC
RX_RES : null	7305	C1'	58.35	45.53305556	-62.56944444	2016-11-21T00:00:00-05:00	NOVA SCOTIA POWER INC
TX_RES : null	7305	C1'	60	45.40033611	-63.30431111	2018-06-18T00:00:00-04:00	NOVA SCOTIA POWER INC
RX_RES : null	7305	C1'	48	45.55416667	-63.225	2018-06-18T00:00:00-04:00	NOVA SCOTIA POWER INC
TX_RES : null	7325	C3'	67	45.62083333	-62.64722222	2021-10-29T00:00:00-04:00	NOVA SCOTIA POWER INC
RX_RES : null	7325	C3'	44	45.53333333	-62.56472222	2021-10-29T00:00:00-04:00	NOVA SCOTIA POWER INC
RX_RES : null	7345	C5'	48	45.55416667	-63.225	2016-07-29T00:00:00-04:00	NOVA SCOTIA POWER INC
RX_RES : null	7365	C7'	65	45.62083333	-62.64722222	2017-12-04T00:00:00-05:00	NOVA SCOTIA POWER INC
TX_RES : null	7383.75	D11'	30	45.51416667	-62.96583333	2010-11-16T00:00:00-05:00	NOVA SCOTIA POWER INC
RX_RES	7383.75	D11'	35	45.55416667	-63.225	2010-11-16T00:00:00-05:00	NOVA SCOTIA POWER INC
TX_RES : null	7430	C13	58.35	45.53305556	-62.56944444	2016-11-21T00:00:00-05:00	NOVA SCOTIA POWER INC
RX_RES : null	7430	C13	28.5	45.51416667	-62.96583333	2016-11-21T00:00:00-05:00	NOVA SCOTIA POWER INC
TX_RES : null	7430	C13	48	45.55416667	-63.225	2018-06-18T00:00:00-04:00	NOVA SCOTIA POWER INC
RX_RES : null	7430	C13	60	45.40033611	-63.30431111	2018-06-18T00:00:00-04:00	NOVA SCOTIA POWER INC
TX_RES : null	7450	C15	44	45.53333333	-62.56472222	2021-10-29T00:00:00-04:00	NOVA SCOTIA POWER INC
RX_RES : null	7450	C15	67	45.62083333	-62.64722222	2021-10-29T00:00:00-04:00	NOVA SCOTIA POWER INC
TX_RES : null	7470	C17	48	45.55416667	-63.225	2016-07-29T00:00:00-04:00	NOVA SCOTIA POWER INC
TX_RES : null	7490	C19	65	45.62083333	-62.64722222	2017-12-04T00:00:00-05:00	NOVA SCOTIA POWER INC
TX_RES : null	7533.75	D31	35	45.55416667	-63.225	2010-11-16T00:00:00-05:00	NOVA SCOTIA POWER INC
RX_RES : null	7533.75	D31	30	45.51416667	-62.96583333	2010-11-16T00:00:00-05:00	NOVA SCOTIA POWER INC
TX_RES : null	7580	C13'	28.5	45.51416667	-62.96583333	2016-11-21T00:00:00-05:00	NOVA SCOTIA POWER INC

RX_RES : null	7580	C13'	58.35	45.53305556	-62.56944444	2016-11-21T00:00:00-05:00	NOVA SCOTIA POWER INC
TX_RES : null	7580	C13'	60	45.40033611	-63.30431111	2018-06-18T00:00:00-04:00	NOVA SCOTIA POWER INC
RX_RES : null	7580	C13'	48	45.55416667	-63.225	2018-06-18T00:00:00-04:00	NOVA SCOTIA POWER INC
TX_RES : null	7600	C15'	67	45.62083333	-62.64722222	2021-10-29T00:00:00-04:00	NOVA SCOTIA POWER INC
RX_RES : null	7600	C15'	44	45.53333333	-62.56472222	2021-10-29T00:00:00-04:00	NOVA SCOTIA POWER INC
RX_RES : null	7620	C17'	48	45.55416667	-63.225	2016-07-29T00:00:00-04:00	NOVA SCOTIA POWER INC
RX_RES : null	7640	C19'	65	45.62083333	-62.64722222	2017-12-04T00:00:00-05:00	NOVA SCOTIA POWER INC
TX_RES : null	7683.75	D31'	30	45.51416667	-62.96583333	2010-11-16T00:00:00-05:00	NOVA SCOTIA POWER INC
RX_RES : null	7683.75	D31'	35	45.55416667	-63.225	2010-11-16T00:00:00-05:00	NOVA SCOTIA POWER INC
TX_RES : null	10552.5	A1	35	45.53722222	-62.56083333	2005-08-01T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	10617.5	A1'	35	45.53722222	-62.56083333	2005-08-01T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	10725	C1	24	45.40888889	-63.24861111	2017-02-22T00:00:00-05:00	Rogers Communications Canada Inc.
RX_RES : null	10725	C1	5	45.36555556	-63.32888889	2017-02-22T00:00:00-05:00	Rogers Communications Canada Inc.
RX_RES : null	10725	C1	62	45.53305	-62.56945	2022-07-01T00:00:00-04:00	Municipality of the County of Pictou
TX_RES : null	10735	D1	45	45.58944444	-62.71277778	2011-03-01T00:00:00-05:00	Rogers Communications Canada Inc.
RX_RES : null	10735	D1	76	45.54138889	-62.94305556	2011-03-01T00:00:00-05:00	Rogers Communications Canada Inc.
TX_RES : null	10735	D1	50	45.52388889	-63.51638889	2016-11-01T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	10735	D1	29	45.31	-63.33305556	2022-07-01T00:00:00-04:00	Xplore Inc.
TX_RES : null	10735	D1	77	45.53722222	-62.56083333	2023-06-29T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	10735	D1	31	45.58416667	-62.64638889	2023-06-29T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	10740	E1	35	45.33761111	-63.20229722	2023-02-01T00:00:00-05:00	Xplore Inc.
RX_RES : null	10740	E1	29	45.30996389	-63.33300556	2023-10-01T00:00:00-04:00	Xplore Inc.
TX_RES : null	10755	F1	26	45.6831	-62.73455556	2022-07-01T00:00:00-04:00	Municipality of the County of Pictou
RX_RES : null	10755	F1	25	45.53305	-62.56945	2022-07-01T00:00:00-04:00	Municipality of the County of Pictou
TX_RES : null	10755	F1	30	45.74038889	-63.07847222	2023-10-02T00:00:00-04:00	Municipality of the County of Pictou
RX_RES : null	10755	F1	20	45.66925	-62.82951389	2023-10-02T00:00:00-04:00	Municipality of the County of Pictou
RX_RES : null	10775	D2	29	45.31	-63.33305556	2022-07-01T00:00:00-04:00	Xplore Inc.
TX_RES : null	10835	F2	27	45.57984444	-62.79145278	2020-06-30T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	10835	F2	27	45.64098333	-62.88423333	2020-06-30T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	10835	F2	40	45.53305	-62.56945	2023-06-01T00:00:00-04:00	Municipality of the County of Pictou
TX_RES : null	10845	C5	34	45.40416667	-63.43083333	2012-08-01T00:00:00-04:00	Bell Mobility Inc.
TX_RES : null	10860	E3	30	45.6831	-62.73455556	2022-07-01T00:00:00-04:00	Municipality of the County of Pictou
RX_RES : null	10860	E3	30	45.53969722	-62.94635	2022-07-01T00:00:00-04:00	Municipality of the County of Pictou
TX_RES : null	10860	E3	33	45.33761111	-63.20229722	2023-07-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	10860	E3	43	45.449825	-63.289825	2023-07-01T00:00:00-04:00	Xplore Inc.
TX_RES : null	10895	D5	44.6	45.40888889	-63.24861111	2022-08-18T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	10895	D5	40	45.43083333	-63.44027778	2022-08-18T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	10895	D5	57	45.40888889	-63.24861111	2023-01-03T00:00:00-05:00	Rogers Communications Canada Inc.
RX_RES : null	10895	D5	46.7	45.30916667	-63.26611111	2023-01-03T00:00:00-05:00	Rogers Communications Canada Inc.
TX_RES : null	10915	F3	27	45.57984444	-62.79145278	2020-06-30T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	10915	F3	35	45.44170833	-62.63756389	2020-06-30T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	10915	F3	26	45.6831	-62.73455556	2022-07-01T00:00:00-04:00	Municipality of the County of Pictou
RX_RES : null	10915	F3	25	45.53305	-62.56945	2022-07-01T00:00:00-04:00	Municipality of the County of Pictou
TX_RES : null	10915	F3	46	45.53305	-62.56945	2023-03-01T00:00:00-05:00	Municipality of the County of Pictou
TX_RES : null	10920	E4	33	45.33761111	-63.20229722	2023-07-01T00:00:00-04:00	Xplore Inc.

RX_RES : null	10920	E4	26	45.53969722	-62.94635	2022-07-01T00:00:00-04:00	Municipality of the County of Pictou
RX_RES : null	10920	E4	43	45.449825	-63.289825	2023-07-01T00:00:00-04:00	Xplore Inc.
TX_RES : null	10935	D6	50	45.52388889	-63.51638889	2016-11-01T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	10935	D6	5	45.36555556	-63.32888889	2017-02-22T00:00:00-05:00	Rogers Communications Canada Inc.
TX_RES : null	10935	D6	24	45.40888889	-63.24861111	2017-02-22T00:00:00-05:00	Rogers Communications Canada Inc.
TX_RES : null	10980	E5	35	45.78440556	-63.42173611	2022-09-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	10980	E5	35	45.64472222	-63.51777778	2022-09-01T00:00:00-04:00	Xplore Inc.
TX_RES : null	10995	F4	28	45.3728	-63.26056667	2020-08-17T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	10995	F4	25	45.39456667	-63.48486667	2020-08-17T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	11015	A31	52	45.41083333	-63.24972222	2013-06-01T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	11015	A31	60	45.43583333	-63.10472222	2013-06-01T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	11015	D8	44.6	45.40888889	-63.24861111	2022-08-18T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	11015	D8	40	45.43083333	-63.44027778	2022-08-18T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	11015	D8	57	45.40888889	-63.24861111	2023-01-03T00:00:00-05:00	Rogers Communications Canada Inc.
RX_RES : null	11015	D8	46.7	45.30916667	-63.26611111	2023-01-03T00:00:00-05:00	Rogers Communications Canada Inc.
TX_RES : null	11040	E6	35	45.78440556	-63.42173611	2022-09-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	11040	E6	35	45.64472222	-63.51777778	2022-09-01T00:00:00-04:00	Xplore Inc.
TX_RES : null	11055	C12	10	45.59972222	-62.605	2024-02-07T00:00:00-05:00	Atlantic Television System
TX_RES : null	11215	C1'	5	45.36555556	-63.32888889	2017-02-22T00:00:00-05:00	Rogers Communications Canada Inc.
RX_RES : null	11215	C1'	24	45.40888889	-63.24861111	2017-02-22T00:00:00-05:00	Rogers Communications Canada Inc.
TX_RES : null	11215	C1'	62	45.53305	-62.56945	2022-07-01T00:00:00-04:00	Municipality of the County of Pictou
TX_RES : null	11225	D1'	76	45.54138889	-62.94305556	2011-03-01T00:00:00-05:00	Rogers Communications Canada Inc.
RX_RES : null	11225	D1'	45	45.58944444	-62.71277778	2011-03-01T00:00:00-05:00	Rogers Communications Canada Inc.
TX_RES : null	11225	D1'	29	45.31	-63.33305556	2022-07-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	11225	D1'	50	45.52388889	-63.51638889	2016-11-01T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	11225	D1'	31	45.58416667	-62.64638889	2023-06-29T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	11225	D1'	77	45.53722222	-62.56083333	2023-06-29T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	11230	E1'	29	45.30996389	-63.33300556	2023-10-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	11230	E1'	35	45.33761111	-63.20229722	2023-02-01T00:00:00-05:00	Xplore Inc.
TX_RES : null	11245	F1'	25	45.53305	-62.56945	2022-07-01T00:00:00-04:00	Municipality of the County of Pictou
RX_RES : null	11245	F1'	26	45.6831	-62.73455556	2022-07-01T00:00:00-04:00	Municipality of the County of Pictou
TX_RES : null	11245	F1'	20	45.66925	-62.82951389	2023-10-02T00:00:00-04:00	Municipality of the County of Pictou
RX_RES : null	11245	F1'	30	45.74038889	-63.07847222	2023-10-02T00:00:00-04:00	Municipality of the County of Pictou
TX_RES : null	11265	D2'	29	45.31	-63.33305556	2022-07-01T00:00:00-04:00	Xplore Inc.
TX_RES : null	11325	F2'	27	45.64098333	-62.88423333	2020-06-30T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	11325	F2'	27	45.57984444	-62.79145278	2020-06-30T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	11325	F2'	40	45.53305	-62.56945	2023-06-01T00:00:00-04:00	Municipality of the County of Pictou
RX_RES : null	11335	C5'	34	45.40416667	-63.43083333	2012-08-01T00:00:00-04:00	Bell Mobility Inc.
TX_RES : null	11350	E3'	30	45.53969722	-62.94635	2022-07-01T00:00:00-04:00	Municipality of the County of Pictou
RX_RES : null	11350	E3'	30	45.6831	-62.73455556	2022-07-01T00:00:00-04:00	Municipality of the County of Pictou
TX_RES : null	11350	E3'	43	45.449825	-63.289825	2023-07-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	11350	E3'	33	45.33761111	-63.20229722	2023-07-01T00:00:00-04:00	Xplore Inc.
TX_RES : null	11385	D5'	40	45.43083333	-63.44027778	2022-08-18T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	11385	D5'	44.6	45.40888889	-63.24861111	2022-08-18T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	11385	D5'	46.7	45.30916667	-63.26611111	2023-01-03T00:00:00-05:00	Rogers Communications Canada Inc.
RX_RES : null	11385	D5'	57	45.40888889	-63.24861111	2023-01-03T00:00:00-05:00	Rogers Communications Canada Inc.
TX_RES : null	11405	F3'	35	45.44170833	-62.63756389	2020-06-30T00:00:00-04:00	Rogers Communications Canada Inc.

RX_RES : null	11405	F3'	27	45.57984444	-62.79145278	2020-06-30T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	11405	F3'	25	45.53305	-62.56945	2022-07-01T00:00:00-04:00	Municipality of the County of Pictou
RX_RES : null	11405	F3'	26	45.6831	-62.73455556	2022-07-01T00:00:00-04:00	Municipality of the County of Pictou
RX_RES : null	11405	F3'	46	45.53305	-62.56945	2023-03-01T00:00:00-05:00	Municipality of the County of Pictou
TX_RES : null	11410	E4'	26	45.53969722	-62.94635	2022-07-01T00:00:00-04:00	Municipality of the County of Pictou
TX_RES : null	11410	E4'	43	45.449825	-63.289825	2023-07-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	11410	E4'	33	45.33761111	-63.20229722	2023-07-01T00:00:00-04:00	Xplore Inc.
TX_RES : null	11425	D6'	5	45.36555556	-63.32888889	2017-02-22T00:00:00-05:00	Rogers Communications Canada Inc.
RX_RES : null	11425	D6'	50	45.52388889	-63.51638889	2016-11-01T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	11425	D6'	5	45.36555556	-63.32888889	2017-02-22T00:00:00-05:00	Rogers Communications Canada Inc.
RX_RES : null	11425	D6'	24	45.40888889	-63.24861111	2017-02-22T00:00:00-05:00	Rogers Communications Canada Inc.
TX_RES : null	11470	E5'	35	45.64472222	-63.51777778	2022-09-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	11470	E5'	35	45.78440556	-63.42173611	2022-09-01T00:00:00-04:00	Xplore Inc.
TX_RES : null	11485	F4'	25	45.39456667	-63.48486667	2020-08-17T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	11485	F4'	28	45.3728	-63.26056667	2020-08-17T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	11505	A31'	60	45.43583333	-63.10472222	2013-06-01T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	11505	A31'	52	45.41083333	-63.24972222	2013-06-01T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	11505	D8'	40	45.43083333	-63.44027778	2022-08-18T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	11505	D8'	44.6	45.40888889	-63.24861111	2022-08-18T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	11505	D8'	46.7	45.30916667	-63.26611111	2023-01-03T00:00:00-05:00	Rogers Communications Canada Inc.
RX_RES : null	11505	D8'	57	45.40888889	-63.24861111	2023-01-03T00:00:00-05:00	Rogers Communications Canada Inc.
TX_RES : null	11530	E6'	35	45.64472222	-63.51777778	2022-09-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	11530	E6'	35	45.78440556	-63.42173611	2022-09-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	11545	C12'	10	45.59972222	-62.605	2024-02-07T00:00:00-05:00	Atlantic Television System
TX_RES : null	14520	E1	44.4	45.40877778	-63.24861111	2022-01-01T00:00:00-05:00	Rogers Communications Canada Inc.
RX_RES : null	14520	E1	34	45.36166667	-63.27611111	2022-01-01T00:00:00-05:00	Rogers Communications Canada Inc.
TX_RES : null	14520	E1	79	45.53722222	-62.56083333	2023-06-29T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	14520	E1	30.75	45.58416667	-62.64638889	2023-06-29T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	14525	F1	30	45.45433333	-63.10723611	2021-08-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	14525	F1	30	45.44972222	-63.289825	2021-08-01T00:00:00-04:00	Xplore Inc.
TX_RES : null	14525	F1	35	45.70916667	-63.30193889	2023-08-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	14525	F1	30	45.78430833	-63.42185833	2023-01-01T00:00:00-05:00	Xplore Inc.
TX_RES : null	14525	F1	35	45.70916667	-63.30193889	2023-08-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	14525	F1	35	45.78430833	-63.42185833	2023-08-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	14575	F2	30	45.30941667	-63.33195	2018-09-17T00:00:00-04:00	North Nova Cable Limited
TX_RES : null	14640	E4	44.4	45.40877778	-63.24861111	2022-01-01T00:00:00-05:00	Rogers Communications Canada Inc.
RX_RES : null	14640	E4	34	45.36166667	-63.27611111	2022-01-01T00:00:00-05:00	Rogers Communications Canada Inc.
TX_RES : null	14640	E4	79	45.53722222	-62.56083333	2023-06-29T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	14640	E4	30.75	45.58416667	-62.64638889	2023-06-29T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	14995	E1'	34	45.36166667	-63.27611111	2022-01-01T00:00:00-05:00	Rogers Communications Canada Inc.
RX_RES : null	14995	E1'	44.4	45.40877778	-63.24861111	2022-01-01T00:00:00-05:00	Rogers Communications Canada Inc.
TX_RES : null	14995	E1'	30.75	45.58416667	-62.64638889	2023-06-29T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	14995	E1'	79	45.53722222	-62.56083333	2023-06-29T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	15000	F1'	30	45.44972222	-63.289825	2021-08-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	15000	F1'	30	45.45433333	-63.10723611	2021-08-01T00:00:00-04:00	Xplore Inc.
TX_RES : null	15000	F1'	30	45.78430833	-63.42185833	2023-01-01T00:00:00-05:00	Xplore Inc.
TX_RES : null	15000	F1'	35	45.78430833	-63.42185833	2023-08-01T00:00:00-04:00	Xplore Inc.



RX_RES : null	15000	F1'	35	45.70916667	-63.30193889	2023-08-01T00:00:00-04:00	Xplore Inc.
TX_RES : null	15050	F2'	30	45.30941667	-63.33195	2018-09-17T00:00:00-04:00	North Nova Cable Limited
TX_RES : null	15115	E4'	34	45.36166667	-63.27611111	2022-01-01T00:00:00-05:00	Rogers Communications Canada Inc.
RX_RES : null	15115	E4'	44.4	45.40877778	-63.24861111	2022-01-01T00:00:00-05:00	Rogers Communications Canada Inc.
TX_RES : null	15115	E4'	30.75	45.58416667	-62.64638889	2023-06-29T00:00:00-04:00	Rogers Communications Canada Inc.
RX_RES : null	15115	E4'	79	45.53722222	-62.56083333	2023-06-29T00:00:00-04:00	Rogers Communications Canada Inc.
TX_RES : null	17815	G1	20	45.43672222	-62.62163889	2023-06-01T00:00:00-04:00	Municipality of the County of Pictou
TX_RES : null	17865	A1	35	45.43158333	-63.44480556	2020-10-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	17865	A1	46	45.44972222	-63.289825	2020-10-01T00:00:00-04:00	Xplore Inc.
TX_RES : null	17865	A1	20	45.4962	-62.6583	2022-08-01T00:00:00-04:00	Municipality of the County of Pictou
RX_RES : null	17865	A1	40	45.53305	-62.56945	2022-08-01T00:00:00-04:00	Municipality of the County of Pictou
TX_RES : null	17865	A1	15	45.66925	-62.82951389	2023-10-02T00:00:00-04:00	Municipality of the County of Pictou
RX_RES : null	17865	A1	30	45.70638889	-62.91375	2023-10-02T00:00:00-04:00	Municipality of the County of Pictou
TX_RES : null	17915	A2	30	45.31	-63.33305556	2022-06-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	17915	A2	33	45.449825	-63.289825	2022-06-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	17960	D4	21	45.42194444	-63.54	2016-02-10T00:00:00-05:00	Bragg Communications Inc.
RX_RES : null	17960	D4	32	45.78363056	-63.42228056	2017-05-29T00:00:00-04:00	Bragg Communications Inc.
TX_RES : null	18065	A5	38.7	45.55360556	-63.22377778	2021-11-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	18065	A5	50	45.44972222	-63.289825	2021-11-01T00:00:00-04:00	Xplore Inc.
TX_RES : null	18065	A5	30	45.31	-63.33305556	2022-06-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	18065	A5	33	45.449825	-63.289825	2022-06-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	19375	G1'	20	45.43672222	-62.62163889	2023-06-01T00:00:00-04:00	Municipality of the County of Pictou
TX_RES : null	19425	A1'	46	45.44972222	-63.289825	2020-10-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	19425	A1'	35	45.43158333	-63.44480556	2020-10-01T00:00:00-04:00	Xplore Inc.
TX_RES : null	19425	A1'	40	45.53305	-62.56945	2022-08-01T00:00:00-04:00	Municipality of the County of Pictou
RX_RES : null	19425	A1'	20	45.4962	-62.6583	2022-08-01T00:00:00-04:00	Municipality of the County of Pictou
TX_RES : null	19425	A1'	30	45.70638889	-62.91375	2023-10-02T00:00:00-04:00	Municipality of the County of Pictou
RX_RES : null	19425	A1'	15	45.66925	-62.82951389	2023-10-02T00:00:00-04:00	Municipality of the County of Pictou
TX_RES : null	19475	A2'	33	45.449825	-63.289825	2022-06-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	19475	A2'	30	45.31	-63.33305556	2022-06-01T00:00:00-04:00	Xplore Inc.
TX_RES : null	19520	D4'	21	45.42194444	-63.54	2016-02-10T00:00:00-05:00	Bragg Communications Inc.
TX_RES : null	19520	D4'	32	45.78363056	-63.42228056	2017-05-29T00:00:00-04:00	Bragg Communications Inc.
TX_RES : null	19625	A5'	50	45.44972222	-63.289825	2021-11-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	19625	A5'	38.7	45.55360556	-63.22377778	2021-11-01T00:00:00-04:00	Xplore Inc.
TX_RES : null	19625	A5'	33	45.449825	-63.289825	2022-06-01T00:00:00-04:00	Xplore Inc.
RX_RES : null	19625	A5'	30	45.31	-63.33305556	2022-06-01T00:00:00-04:00	Xplore Inc.

## Broadcast Towers

Channel Type	Frequency [MHz]	Channel	Height a	Latitude (WGS84)	Longitude (WGS84)	In-service date	Licensee name
TX_RES	94.1	231	86	45.54	-62.94555556	2012-09-01T00:00:00-04:00	Stingray Radio Inc
TX_RES	97.9	250	99.9	45.54	-62.94555556	2015-11-10T00:00:00-05:00	Stingray Radio Inc
TX_RES	99.5	258	48.5	45.55472222	-63.22388889	2014-09-01T00:00:00-04:00	Bell Media Radio Atlantic Inc.
TX_RES	100.9	265	67	45.55491667	-63.22377778	2018-08-17T00:00:00-04:00	Bell Media Radio Atlantic Inc.
TX_RES	100.9	265	67	45.55491667	-63.22377778	2018-08-17T00:00:00-04:00	Bell Media Radio Atlantic Inc.



## Land Mobile Towers

Channel Type	Frequency [MHz]	Channel	Height al	Latitude (WGS84)	Longitude (WGS84)	In-service date	Licensee name
RX_RES : null	138.015	B1	43	45.55361111	-63.22388889	2011-06-15T00:00:00-04:00	CHIGNECTO CENTRAL REGIONAL SCHOOL BOARD
TX_RES : null	138.015	B1	0	45.55361111	-63.22388889	2011-06-15T00:00:00-04:00	CHIGNECTO CENTRAL REGIONAL SCHOOL BOARD
TX_RES : null	138.63		31.5	45.55361111	-63.22333333	2018-04-01T00:00:00-04:00	Nova Communications
RX_RES : null	138.63	0	2	45.55361111	-63.22333333	2018-04-01T00:00:00-04:00	Nova Communications
TX_RES : null	138.915	B61	0	45.55361111	-63.22388889	2014-07-03T00:00:00-04:00	CHIGNECTO CENTRAL REGIONAL SCHOOL BOARD
RX_RES : null	138.915	B61	61	45.55361111	-63.22388889	2014-07-03T00:00:00-04:00	CHIGNECTO CENTRAL REGIONAL SCHOOL BOARD
RX_RES : null	142.005	B1'	0	45.55361111	-63.22388889	2011-06-15T00:00:00-04:00	CHIGNECTO CENTRAL REGIONAL SCHOOL BOARD
TX_RES : null	142.005	B1'	43	45.55361111	-63.22388889	2011-06-15T00:00:00-04:00	CHIGNECTO CENTRAL REGIONAL SCHOOL BOARD
TX_RES : null	142.62		2	45.55361111	-63.22333333	2018-04-01T00:00:00-04:00	Nova Communications
RX_RES : null	142.62	0	31.5	45.55361111	-63.22333333	2018-04-01T00:00:00-04:00	Nova Communications
TX_RES : null	142.905	B61'	61	45.55361111	-63.22388889	2014-07-03T00:00:00-04:00	CHIGNECTO CENTRAL REGIONAL SCHOOL BOARD
RX_RES : null	142.905	B61'	0	45.55361111	-63.22388889	2014-07-03T00:00:00-04:00	CHIGNECTO CENTRAL REGIONAL SCHOOL BOARD
TX_RES : null	143.715		45	45.55361111	-63.22388889	2011-04-21T00:00:00-04:00	NS Dept. of Internal Services Public Safety & Field C
RX_RES : null	143.715	0	0	45.55361111	-63.22388889	2011-04-21T00:00:00-04:00	NS Dept. of Internal Services Public Safety & Field C
TX_RES : null	143.835	A195	15	45.55416667	-63.22522222	2021-08-30T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
RX_RES : null	143.835	A195	0	45.55416667	-63.22333333	1998-06-24T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
RX_RES : null	143.835	A195	0	45.55416667	-63.22522222	2021-08-30T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
TX_RES : null	143.97		0	45.55361111	-63.22333333	1998-06-24T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
TX_RES : null	143.97	B398	30	45.55416667	-63.22522222	2021-08-30T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
RX_RES : null	143.97	0	0	45.55361111	-63.22333333	1998-06-24T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
RX_RES : null	143.97	0	0	45.55361111	-63.22333333	1998-06-24T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
RX_RES : null	143.97	B398	0	45.55416667	-63.22522222	2021-08-30T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
RX_RES : null	148.675	0	45	45.55361111	-63.22388889	2011-04-21T00:00:00-04:00	NS Dept. of Internal Services Public Safety & Field C
TX_RES : null	148.675		0	45.55361111	-63.22388889	2011-04-21T00:00:00-04:00	NS Dept. of Internal Services Public Safety & Field C
TX_RES : null	148.825	A195'	0	45.55416667	-63.22522222	2021-08-30T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
TX_RES : null	148.825	A195'	0	45.55361111	-63.22333333	1998-06-24T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
RX_RES : null	148.825	A195'	15	45.55416667	-63.22522222	2021-08-30T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
RX_RES : null	148.96	B398'	30	45.55416667	-63.22522222	2021-08-30T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
TX_RES : null	148.96		0	45.55361111	-63.22333333	1998-06-24T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
TX_RES : null	148.96	B398'	0	45.55416667	-63.22522222	2021-08-30T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
TX_RES : null	150.275	B540	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	150.275	B540	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	150.38	B547	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
TX_RES : null	150.38	B547	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
TX_RES : null	150.575	B560	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	150.575	B560	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
TX_RES : null	150.665	B566	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	150.665	B566	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	151.34	0	8	45.65138889	-62.86861111	1992-04-28T00:00:00-04:00	SCOTSBURN FIRE DEPARTMENT

TX_RES : null	151.34		0	45.65138889	-62.86861111	1992-04-28T00:00:00-04:00	SCOTSBURN FIRE DEPARTMENT
RX_RES : null	151.34	0	0	45.65138889	-62.86861111	1992-04-28T00:00:00-04:00	SCOTSBURN FIRE DEPARTMENT
TX_RES : null	152		30	45.74138889	-63.07861111	2022-07-11T00:00:00-04:00	RIVER JOHN FIRE DEPARTMENT
RX_RES : null	152.03	0	0	45.55361111	-63.22388889	2011-04-21T00:00:00-04:00	NS Dept. of Internal Services Public Safety & Field C
TX_RES : null	152.03		0	45.47305556	-63.06861111	2001-06-28T00:00:00-04:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
TX_RES : null	152.03		45	45.55361111	-63.22388889	2011-04-21T00:00:00-04:00	NS Dept. of Internal Services Public Safety & Field C
TX_RES : null	152.03		0	45.57555556	-62.84638889	1999-06-30T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
RX_RES : null	152.03	0	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	152.03	B657	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	152.03	0	20	45.47305556	-63.06861111	2001-06-28T00:00:00-04:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	152.03	0	15	45.57555556	-62.84638889	1999-06-30T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
TX_RES : null	152.03	B657	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	152.03	0	0	45.58333333	-62.79638889	1999-06-29T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
TX_RES : null	152.21		0	45.65138889	-62.86861111	1992-04-28T00:00:00-04:00	SCOTSBURN FIRE DEPARTMENT
RX_RES : null	152.21	0	8	45.65138889	-62.86861111	1992-04-28T00:00:00-04:00	SCOTSBURN FIRE DEPARTMENT
RX_RES : null	152.21	0	0	45.58333333	-62.79638889	1999-06-29T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
RX_RES : null	152.21	0	15	45.57555556	-62.84638889	1999-06-30T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
RX_RES : null	152.21	0	0	45.65138889	-62.86861111	1992-04-28T00:00:00-04:00	SCOTSBURN FIRE DEPARTMENT
TX_RES : null	152.21		0	45.57555556	-62.84638889	1999-06-30T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
TX_RES : null	152.42		37	45.55416667	-63.225	2010-11-16T00:00:00-05:00	NOVA SCOTIA POWER
RX_RES : null	152.42	0	0	45.55416667	-63.225	2010-11-16T00:00:00-05:00	NOVA SCOTIA POWER
RX_RES : null	152.525	A346	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
TX_RES : null	152.525	A346	45	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	MUNICIPALITY OF THE COUNTY OF COLCHESTER (F
RX_RES : null	152.525	A346	0	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	MUNICIPALITY OF THE COUNTY OF COLCHESTER (F
TX_RES : null	152.57	B693	20	45.64416667	-62.879325	2019-03-14T00:00:00-04:00	CARIBOU FIRE DEPARTMENT
TX_RES : null	152.705	B702	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	152.705	B702	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
TX_RES : null	153.545		0	45.45805556	-63.11	2001-06-28T00:00:00-04:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	153.545	0	21	45.45805556	-63.11	2001-06-28T00:00:00-04:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
TX_RES : null	153.545		0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
TX_RES : null	153.545		20	45.47305556	-63.06861111	2001-06-28T00:00:00-04:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	153.545	0	0	45.47305556	-63.06861111	2001-06-28T00:00:00-04:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
TX_RES : null	153.74		0	45.55416667	-63.225	2010-11-16T00:00:00-05:00	NOVA SCOTIA POWER
RX_RES : null	153.74	0	37	45.55416667	-63.225	2010-11-16T00:00:00-05:00	NOVA SCOTIA POWER
RX_RES : null	153.785	0	20	45.57555556	-62.84638889	1999-06-30T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
TX_RES : null	153.785	A388	0	45.57916667	-62.84361111	1999-02-24T00:00:00-05:00	MUNICIPALITY OF PICTOU COUNTY WORKS DEPT.
RX_RES : null	153.785	0	0	45.58333333	-62.79638889	1999-06-29T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
TX_RES : null	153.785		0	45.57555556	-62.84638889	1999-06-30T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
TX_RES : null	153.785		14	45.58333333	-62.79638889	1999-06-29T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
RX_RES : null	153.785	A388	0	45.57916667	-62.84361111	1999-02-24T00:00:00-05:00	MUNICIPALITY OF PICTOU COUNTY WORKS DEPT.
RX_RES : null	153.785	0	0	45.58333333	-62.79638889	1999-06-29T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
TX_RES : null	153.83		0	45.58333333	-62.79638889	1999-06-29T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
RX_RES : null	153.83	0	8	45.65138889	-62.86861111	1992-04-28T00:00:00-04:00	SCOTSBURN FIRE DEPARTMENT
RX_RES : null	153.83	0	0	45.57916667	-62.84361111	1999-02-24T00:00:00-05:00	MUNICIPALITY OF PICTOU COUNTY WORKS DEPT.

RX_RES : null	153.83	0	15	45.47305556	-63.06861111	2001-06-28T00:00:00-04:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	153.83	0	0	45.57555556	-62.84638889	1999-06-30T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
TX_RES : null	153.83	B777	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	153.83	0	15	45.57555556	-62.84638889	1999-06-30T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
TX_RES : null	153.83		15	45.47305556	-63.06861111	2001-06-28T00:00:00-04:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	153.83	0	0	45.47305556	-63.06861111	2001-06-28T00:00:00-04:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
TX_RES : null	153.83		0	45.47305556	-63.06861111	2001-06-28T00:00:00-04:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
TX_RES : null	153.83		15	45.57555556	-62.84638889	1999-06-30T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
TX_RES : null	153.83		0	45.57555556	-62.84638889	1999-06-30T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
TX_RES : null	153.83		0	45.57916667	-62.84361111	1999-02-24T00:00:00-05:00	MUNICIPALITY OF PICTOU COUNTY WORKS DEPT.
TX_RES : null	153.83		8	45.65138889	-62.86861111	1992-04-28T00:00:00-04:00	SCOTSBURN FIRE DEPARTMENT
RX_RES : null	153.83	B777	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	153.83	0	0	45.65138889	-62.86861111	1992-04-28T00:00:00-04:00	SCOTSBURN FIRE DEPARTMENT
RX_RES : null	153.83	0	0	45.65138889	-62.86861111	1992-04-28T00:00:00-04:00	SCOTSBURN FIRE DEPARTMENT
TX_RES : null	153.83		0	45.65138889	-62.86861111	1992-04-28T00:00:00-04:00	SCOTSBURN FIRE DEPARTMENT
TX_RES : null	153.83		0	45.65138889	-62.86861111	1992-04-28T00:00:00-04:00	SCOTSBURN FIRE DEPARTMENT
RX_RES : null	153.83	0	0	45.58333333	-62.79638889	1999-06-29T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
RX_RES : null	153.875	0	0	45.65138889	-62.86861111	1992-04-28T00:00:00-04:00	SCOTSBURN FIRE DEPARTMENT
TX_RES : null	153.875		0	45.65138889	-62.86861111	1992-04-28T00:00:00-04:00	SCOTSBURN FIRE DEPARTMENT
TX_RES : null	153.875		8	45.65138889	-62.86861111	1992-04-28T00:00:00-04:00	SCOTSBURN FIRE DEPARTMENT
RX_RES : null	154.19	0	45	45.55361111	-63.22388889	2011-04-21T00:00:00-04:00	NS Dept. of Internal Services Public Safety & Field C
RX_RES : null	154.19	0	0	45.47305556	-63.06861111	2001-06-28T00:00:00-04:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	154.19	0	0	45.57555556	-62.84638889	1999-06-30T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
TX_RES : null	154.19		0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
TX_RES : null	154.19		20	45.47305556	-63.06861111	2001-06-28T00:00:00-04:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
TX_RES : null	154.19		15	45.57555556	-62.84638889	1999-06-30T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
TX_RES : null	154.19		0	45.58333333	-62.79638889	1999-06-29T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
TX_RES : null	154.19		0	45.55361111	-63.22388889	2011-04-21T00:00:00-04:00	NS Dept. of Internal Services Public Safety & Field C
RX_RES : null	154.22	0	0	45.57555556	-62.84638889	1999-06-30T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
RX_RES : null	154.22	0	0	45.65138889	-62.86861111	1992-04-28T00:00:00-04:00	SCOTSBURN FIRE DEPARTMENT
TX_RES : null	154.22		15	45.57555556	-62.84638889	1999-06-30T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
TX_RES : null	154.22		8	45.65138889	-62.86861111	1992-04-28T00:00:00-04:00	SCOTSBURN FIRE DEPARTMENT
TX_RES : null	154.22		0	45.65138889	-62.86861111	1992-04-28T00:00:00-04:00	SCOTSBURN FIRE DEPARTMENT
TX_RES : null	154.22		0	45.58333333	-62.79638889	1999-06-29T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
RX_RES : null	154.4	B815	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
TX_RES : null	154.4	B815	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	154.65	C1665	0	45.57916667	-62.84361111	1999-02-24T00:00:00-05:00	MUNICIPALITY OF PICTOU COUNTY WORKS DEPT.
TX_RES : null	154.65	C1665	0	45.57916667	-62.84361111	1999-02-24T00:00:00-05:00	MUNICIPALITY OF PICTOU COUNTY WORKS DEPT.
RX_RES : null	154.68	C1669	2	45.55416667	-63.22416667	2016-05-16T00:00:00-04:00	NOVA CONSTRUCTION CO LTD
TX_RES : null	154.68	C1669	2	45.55416667	-63.22416667	2016-05-16T00:00:00-04:00	NOVA CONSTRUCTION CO LTD
TX_RES : null	154.74	C1677	2	45.55416667	-63.22416667	2016-05-16T00:00:00-04:00	NOVA CONSTRUCTION CO LTD
RX_RES : null	154.74	C1677	2	45.55416667	-63.22416667	2016-05-16T00:00:00-04:00	NOVA CONSTRUCTION CO LTD
RX_RES : null	154.77	B839	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF

RX_RES : null	154.77	0	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	154.77	0	20	45.47305556	-63.06861111	2001-06-28T00:00:00-04:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	154.77	0	0	45.45805556	-63.11	2001-06-28T00:00:00-04:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
TX_RES : null	154.77		0	45.47305556	-63.06861111	2001-06-28T00:00:00-04:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
TX_RES : null	154.77	B839	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
TX_RES : null	154.77		21	45.45805556	-63.11	2001-06-28T00:00:00-04:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	154.86	C1693	2	45.55416667	-63.22416667	2016-05-16T00:00:00-04:00	NOVA CONSTRUCTION CO LTD
TX_RES : null	154.86	C1693	2	45.55416667	-63.22416667	2016-05-16T00:00:00-04:00	NOVA CONSTRUCTION CO LTD
RX_RES : null	157.575	0	30	45.74138889	-63.07861111	2022-07-11T00:00:00-04:00	RIVER JOHN FIRE DEPARTMENT
TX_RES : null	157.665		0	45.55277778	-63.22416667	1999-04-01T00:00:00-05:00	CUMBERLAND PAVING & CONTRACTING LTD
RX_RES : null	157.665	0	0	45.55277778	-63.22416667	1999-04-01T00:00:00-05:00	CUMBERLAND PAVING & CONTRACTING LTD
RX_RES : null	158.1	A346'	45	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	MUNICIPALITY OF THE COUNTY OF COLCHESTER (F
TX_RES : null	158.1	A346'	0	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	MUNICIPALITY OF THE COUNTY OF COLCHESTER (F
TX_RES : null	158.1	A346'	0	45.41666667	-63.16583333	2008-12-24T00:00:00-05:00	VALLEY KEMPTOWN & DIST. FIRE DEPT. MUNIC. OF
RX_RES : null	158.145	B693'	20	45.64416667	-62.879325	2019-03-14T00:00:00-04:00	CARIBOU FIRE DEPARTMENT
RX_RES : null	158.37	0	2	45.55427778	-63.22540278	2020-06-01T00:00:00-04:00	NOVA SCOTIA POWER
TX_RES : null	158.37		51.8	45.55427778	-63.22540278	2020-06-01T00:00:00-04:00	NOVA SCOTIA POWER
RX_RES : null	158.805	0	14	45.58333333	-62.79638889	1999-06-29T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
RX_RES : null	158.805	0	0	45.57555556	-62.84638889	1999-06-30T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
TX_RES : null	158.805		20	45.57555556	-62.84638889	1999-06-30T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
TX_RES : null	158.805		0	45.58333333	-62.79638889	1999-06-29T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
TX_RES : null	158.805		0	45.58333333	-62.79638889	1999-06-29T00:00:00-04:00	WEST RIVER FIRE DEPARTMENT
RX_RES : null	159.555	0	0	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	CUMBERLAND PAVING & CONTRACTING LTD
TX_RES : null	159.555		20	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	CUMBERLAND PAVING & CONTRACTING LTD
RX_RES : null	159.555	0	0	45.55277778	-63.22416667	1999-04-01T00:00:00-05:00	CUMBERLAND PAVING & CONTRACTING LTD
RX_RES : null	162.075	C2705	51.8	45.55427778	-63.22540278	2020-06-01T00:00:00-04:00	NOVA SCOTIA POWER
TX_RES : null	162.075	C2705	2	45.55427778	-63.22540278	2020-06-01T00:00:00-04:00	NOVA SCOTIA POWER
TX_RES : null	162.4		54	45.55444444	-63.22444444	2012-03-07T00:00:00-05:00	Environment Canada
RX_RES : null	162.4	0	0	45.55444444	-63.22444444	2012-03-07T00:00:00-05:00	Environment Canada
TX_RES : null	163.05	A697	5	45.65361111	-62.85166667	2014-04-07T00:00:00-04:00	Scotsburn Lumber Ltd.
RX_RES : null	163.05	A697	5	45.65361111	-62.85166667	2014-04-07T00:00:00-04:00	Scotsburn Lumber Ltd.
RX_RES : null	163.05	B1391	0	45.65638889	-62.85027778	2013-10-09T00:00:00-04:00	Scotsburn Lumber Ltd.
RX_RES : null	163.05	A697	0	45.65361111	-62.85166667	2014-04-07T00:00:00-04:00	Scotsburn Lumber Ltd.
TX_RES : null	163.05	B1391	10	45.65638889	-62.85027778	2013-10-09T00:00:00-04:00	Scotsburn Lumber Ltd.
TX_RES : null	163.05	A697	0	45.65361111	-62.85166667	2014-04-07T00:00:00-04:00	Scotsburn Lumber Ltd.
RX_RES : null	163.05	A697	5	45.65361111	-62.85166667	2014-04-07T00:00:00-04:00	Scotsburn Lumber Ltd.
TX_RES : null	163.05	A697	0	45.65361111	-62.85166667	2014-04-07T00:00:00-04:00	Scotsburn Lumber Ltd.
TX_RES : null	163.125		0	45.55277778	-63.22416667	1999-04-01T00:00:00-05:00	CUMBERLAND PAVING & CONTRACTING LTD
RX_RES : null	163.125	0	20	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	CUMBERLAND PAVING & CONTRACTING LTD
TX_RES : null	163.125		0	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	CUMBERLAND PAVING & CONTRACTING LTD
TX_RES : null	163.185	B1400	84	45.54333333	-62.978	2018-01-16T00:00:00-05:00	RMS Energy
RX_RES : null	163.185	B1400	2	45.54333333	-62.978	2018-01-16T00:00:00-05:00	RMS Energy
TX_RES : null	163.635		16	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	HITECH COMMUNICATIONS LIMITED
RX_RES : null	163.635	0	0	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	HITECH COMMUNICATIONS LIMITED

RX_RES : null	163.935	0	0	45.45777778	-63.1075	2018-07-31T00:00:00-04:00	MUNICIPALITY OF THE COUNTY OF COLCHESTER
RX_RES : null	163.935	0	10	45.45777778	-63.1075	2018-07-31T00:00:00-04:00	MUNICIPALITY OF THE COUNTY OF COLCHESTER
TX_RES : null	163.935		0	45.45777778	-63.1075	2018-07-31T00:00:00-04:00	MUNICIPALITY OF THE COUNTY OF COLCHESTER
TX_RES : null	163.935		10	45.45777778	-63.1075	2018-07-31T00:00:00-04:00	MUNICIPALITY OF THE COUNTY OF COLCHESTER
RX_RES : null	164.4	0	0	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	HITECH COMMUNICATIONS LIMITED
TX_RES : null	164.4		45	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	HITECH COMMUNICATIONS LIMITED
RX_RES : null	164.445	B1484	0	45.45662778	-63.10598889	2023-09-01T00:00:00-04:00	MUNICIPALITY OF THE COUNTY OF COLCHESTER
TX_RES : null	164.445	B1484	12	45.45662778	-63.10598889	2023-09-01T00:00:00-04:00	MUNICIPALITY OF THE COUNTY OF COLCHESTER
RX_RES : null	167.415	0	16	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	HITECH COMMUNICATIONS LIMITED
TX_RES : null	167.415		0	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	HITECH COMMUNICATIONS LIMITED
TX_RES : null	168.03	B1391'	0	45.65638889	-62.85027778	2013-10-09T00:00:00-04:00	Scotsburn Lumber Ltd.
RX_RES : null	168.03	B1391'	10	45.65638889	-62.85027778	2013-10-09T00:00:00-04:00	Scotsburn Lumber Ltd.
TX_RES : null	168.03	A697'	5	45.65361111	-62.85166667	2014-04-07T00:00:00-04:00	Scotsburn Lumber Ltd.
RX_RES : null	168.03	A697'	0	45.65361111	-62.85166667	2014-04-07T00:00:00-04:00	Scotsburn Lumber Ltd.
TX_RES : null	168.165	B1400'	2	45.54333333	-62.978	2018-01-16T00:00:00-05:00	RMS Energy
RX_RES : null	168.165	B1400'	84	45.54333333	-62.978	2018-01-16T00:00:00-05:00	RMS Energy
RX_RES : null	168.27	0	2	45.55427778	-63.22540278	2020-06-01T00:00:00-04:00	NOVA SCOTIA POWER
TX_RES : null	168.27		51.8	45.55427778	-63.22540278	2020-06-01T00:00:00-04:00	NOVA SCOTIA POWER
RX_RES : null	168.42	0	45	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	HITECH COMMUNICATIONS LIMITED
TX_RES : null	168.42		0	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	HITECH COMMUNICATIONS LIMITED
TX_RES : null	168.66		10	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	WILL-KARE PAVING & CONTRACTING LTD.
RX_RES : null	168.66	0	0	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	WILL-KARE PAVING & CONTRACTING LTD.
RX_RES : null	169.02	0	19	45.58138889	-62.79694444	1997-09-15T00:00:00-04:00	BUNRICH TRUCKING LTD
TX_RES : null	169.08		2	45.55427778	-63.22540278	2020-06-01T00:00:00-04:00	NOVA SCOTIA POWER
RX_RES : null	169.08	0	51.8	45.55427778	-63.22540278	2020-06-01T00:00:00-04:00	NOVA SCOTIA POWER
RX_RES : null	169.425	B1484'	12	45.45662778	-63.10598889	2023-09-01T00:00:00-04:00	MUNICIPALITY OF THE COUNTY OF COLCHESTER
TX_RES : null	169.425	B1484'	0	45.45662778	-63.10598889	2023-09-01T00:00:00-04:00	MUNICIPALITY OF THE COUNTY OF COLCHESTER
TX_RES : null	169.965		0	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	N R KENNEY LOGGING LTD
RX_RES : null	169.965	0	30	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	N R KENNEY LOGGING LTD
TX_RES : null	170.595		19	45.58138889	-62.79694444	1997-09-15T00:00:00-04:00	BUNRICH TRUCKING LTD
TX_RES : null	173.295		0	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	WILL-KARE PAVING & CONTRACTING LTD.
RX_RES : null	173.295	0	10	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	WILL-KARE PAVING & CONTRACTING LTD.
TX_RES : null	173.97		30	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	N R KENNEY LOGGING LTD
RX_RES : null	173.97	0	0	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	N R KENNEY LOGGING LTD
RX_RES : null	408.1875	A84	0	45.55416667	-63.22522222	2021-08-30T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
TX_RES : null	408.1875	A84	15	45.55416667	-63.22522222	2021-08-30T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
TX_RES : null	408.1875	A84	0	45.55416667	-63.22522222	2021-08-30T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
RX_RES : null	408.1875	A84	15	45.55416667	-63.22522222	2021-08-30T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
TX_RES : null	410.0375	A158	45	45.55444444	-63.22444444	2015-02-06T00:00:00-05:00	Environment Canada
RX_RES : null	410.0375	A158	14	45.55444444	-63.22444444	2015-02-06T00:00:00-05:00	Environment Canada
TX_RES : null	414.425	B666	30	45.55416667	-63.22522222	2021-09-01T00:00:00-04:00	J. D. IRVING LIMITED (Woodlands Division)
TX_RES : null	414.5		7	45.74555556	-63.06777778	1998-04-06T00:00:00-04:00	MUNICIPALITY OF PICTOU COUNTY WORKS DEPT.
TX_RES : null	414.5		3	45.65277778	-62.85305556	1998-04-06T00:00:00-04:00	MUNICIPALITY OF PICTOU COUNTY WORKS DEPT.



RX_RES : null	414.5	0	3	45.65277778	-62.85305556	1998-04-06T00:00:00-04:00	MUNICIPALITY OF PICTOU COUNTY WORKS DEPT.
RX_RES : null	414.5	0	7	45.74555556	-63.06777778	1998-04-06T00:00:00-04:00	MUNICIPALITY OF PICTOU COUNTY WORKS DEPT.
TX_RES : null	414.5		5	45.6475	-62.84166667	1998-04-06T00:00:00-04:00	MUNICIPALITY OF PICTOU COUNTY WORKS DEPT.
RX_RES : null	414.5	0	5	45.6475	-62.84166667	1998-04-06T00:00:00-04:00	MUNICIPALITY OF PICTOU COUNTY WORKS DEPT.
TX_RES : null	414.6625	A343	15	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	CUMBERLAND PAVING & CONTRACTING LTD
RX_RES : null	419.425	B666'	30	45.55416667	-63.22522222	2021-09-01T00:00:00-04:00	J. D. IRVING LIMITED (Woodlands Division)
RX_RES : null	419.6625	A343'	15	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	CUMBERLAND PAVING & CONTRACTING LTD
RX_RES : null	440.2875	0	0	45.5	-62.99916667	2014-01-09T00:00:00-05:00	NS DEPARTMENT OF AGRICULTURE & FISHERIES
RX_RES : null	440.3125	0	0	45.5	-62.99916667	2014-01-09T00:00:00-05:00	NS DEPARTMENT OF AGRICULTURE & FISHERIES
RX_RES : null	440.3375	0	0	45.5	-62.99916667	2014-01-09T00:00:00-05:00	NS DEPARTMENT OF AGRICULTURE & FISHERIES
RX_RES : null	440.35	0	0	45.5	-62.99916667	2014-01-09T00:00:00-05:00	NS DEPARTMENT OF AGRICULTURE & FISHERIES
RX_RES : null	440.375	0	0	45.5	-62.99916667	2014-01-09T00:00:00-05:00	NS DEPARTMENT OF AGRICULTURE & FISHERIES
RX_RES : null	440.4	0	0	45.5	-62.99916667	2014-01-09T00:00:00-05:00	NS DEPARTMENT OF AGRICULTURE & FISHERIES
RX_RES : null	440.425	0	0	45.5	-62.99916667	2014-01-09T00:00:00-05:00	NS DEPARTMENT OF AGRICULTURE & FISHERIES
RX_RES : null	440.45	0	0	45.5	-62.99916667	2014-01-09T00:00:00-05:00	NS DEPARTMENT OF AGRICULTURE & FISHERIES
RX_RES : null	440.475	0	0	45.5	-62.99916667	2014-01-09T00:00:00-05:00	NS DEPARTMENT OF AGRICULTURE & FISHERIES
RX_RES : null	440.5	0	0	45.5	-62.99916667	2014-01-09T00:00:00-05:00	NS DEPARTMENT OF AGRICULTURE & FISHERIES
TX_RES : null	445.2875		0	45.5	-62.99916667	2014-01-09T00:00:00-05:00	NS DEPARTMENT OF AGRICULTURE & FISHERIES
TX_RES : null	445.3125		0	45.5	-62.99916667	2014-01-09T00:00:00-05:00	NS DEPARTMENT OF AGRICULTURE & FISHERIES
TX_RES : null	445.3375		0	45.5	-62.99916667	2014-01-09T00:00:00-05:00	NS DEPARTMENT OF AGRICULTURE & FISHERIES
TX_RES : null	445.35		0	45.5	-62.99916667	2014-01-09T00:00:00-05:00	NS DEPARTMENT OF AGRICULTURE & FISHERIES
TX_RES : null	445.375		0	45.5	-62.99916667	2014-01-09T00:00:00-05:00	NS DEPARTMENT OF AGRICULTURE & FISHERIES
TX_RES : null	445.4		0	45.5	-62.99916667	2014-01-09T00:00:00-05:00	NS DEPARTMENT OF AGRICULTURE & FISHERIES
TX_RES : null	445.425		0	45.5	-62.99916667	2014-01-09T00:00:00-05:00	NS DEPARTMENT OF AGRICULTURE & FISHERIES
TX_RES : null	445.45		0	45.5	-62.99916667	2014-01-09T00:00:00-05:00	NS DEPARTMENT OF AGRICULTURE & FISHERIES
TX_RES : null	445.475		0	45.5	-62.99916667	2014-01-09T00:00:00-05:00	NS DEPARTMENT OF AGRICULTURE & FISHERIES
TX_RES : null	445.5		0	45.5	-62.99916667	2014-01-09T00:00:00-05:00	NS DEPARTMENT OF AGRICULTURE & FISHERIES
RX_RES : null	453.6125	D145	8	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	N R KENNEY LOGGING LTD
TX_RES : null	453.6125	D145	8	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	N R KENNEY LOGGING LTD
TX_RES : null	458.8125	D352	30	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	MUNICIPALITY OF THE COUNTY OF COLCHESTER
RX_RES : null	458.8125	D352	30	45.55361111	-63.22388889	2010-11-16T00:00:00-05:00	MUNICIPALITY OF THE COUNTY OF COLCHESTER
TX_RES : null	469.1125	D763	15	45.55416667	-63.22522222	2021-08-30T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
TX_RES : null	469.1125	D763	0	45.55416667	-63.22522222	2021-08-30T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
RX_RES : null	469.1125	D763	15	45.55416667	-63.22522222	2021-08-30T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
RX_RES : null	469.1125	D763	0	45.55416667	-63.22522222	2021-08-30T00:00:00-04:00	J.D. IRVING LIMITED - Woodlands Division
TX_RES : null	770.53125	AB123	23	45.54	-62.95472222	2017-08-18T00:00:00-04:00	NS Dept. of Internal Services Public Safety & Field C
RX_RES : null	770.53125	AB123	0	45.54	-62.95472222	2017-08-18T00:00:00-04:00	NS Dept. of Internal Services Public Safety & Field C
TX_RES : null	770.78125	AB143	23	45.54	-62.95472222	2017-08-18T00:00:00-04:00	NS Dept. of Internal Services Public Safety & Field C
RX_RES : null	770.78125	AB143	0	45.54	-62.95472222	2017-08-18T00:00:00-04:00	NS Dept. of Internal Services Public Safety & Field C
RX_RES : null	770.96875	AB158	0	45.55472222	-63.22388889	2017-08-22T00:00:00-04:00	NS Dept. of Internal Services Public Safety & Field C
TX_RES : null	770.96875	AB158	48	45.55472222	-63.22388889	2017-08-22T00:00:00-04:00	NS Dept. of Internal Services Public Safety & Field C
TX_RES : null	771.03125	AB163	23	45.54	-62.95472222	2017-08-18T00:00:00-04:00	NS Dept. of Internal Services Public Safety & Field C



## **Appendix B: Formal Approvals from NavCan and DND**





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 Au service d'un  
 monde en mouvement  
 navcanada.ca

January 3, 2024

Your file  
 Clydesdale Ridge Wind Project - 180 Gunshot Rd  
 Our file  
 23-3235

Mrs. Jessica Pitman  
 Natural Forces Developments LP  
 1200-1701 Hollis Street  
 Halifax, NS  
 B3J 3N4

**RE: Wind Structures: Wind Turbine(s) - Dalhousie Settlement, NS  
 (See attached document(s))**

Mrs. Pitman,

NAV CANADA has evaluated the captioned proposal and has no objection to the project as submitted, provided that the following is adhered to:

- In the interest of aviation safety, it is incumbent on NAV CANADA to maintain up-to-date aeronautical publications and issue NOTAM as required. To assist us in that end, we ask that you notify us at least 90 business days prior to the start of construction. This notification requirement can be satisfactorily met by returning a completed, signed copy of the attached form and an Excel copy of the attached spreadsheet by email at [landuse@navcanada.ca](mailto:landuse@navcanada.ca) or fax at 613-248-4094. If you should decide not to proceed with this project or if the structure is dismantled, please advise us accordingly so that we may formally close the file.

Here are the impacts that were identified by our assessment:

- Instrument Flight Procedures: CZQM Airspace
  - Area Minimum Altitude (AMA): NW (N46 W64) SW (N44 W64) NE (N46 W60) SE (N44 W60)
    - AMA to be raised from 2,600 feet to 2,700 feet.
    - This impact would be removed if all turbines were under 1,600 feet ASL.
- All turbines are visible on the HALIFAX Radar. Any changes to this proposal would need to be re-assessed for possible impact.

The nature and magnitude of electronic interference to NAV CANADA ground-based navigation aids, including RADAR, due to wind turbines depends on the location, configuration, number, and size of turbines; all turbines must be considered together for analysis. The interference of wind turbines to certain navigation aids is cumulative and while initial turbines may be approved, continued development may not always be possible.

Our assessment does not constitute an approval and/or permit from other agencies. If you have any questions, contact the Land Use Department by email at [landuse@navcanada.ca](mailto:landuse@navcanada.ca).

**NAV CANADA's land use evaluation is based on information known as of the date of this letter and is valid for a period of 18 months, subject to any legislative changes impacting land use submissions. Our assessment is limited to the impact of the proposed physical structure on the air navigation system and installations; it neither constitutes nor replaces any approvals or permits required by Transport Canada, other Federal Government departments, Provincial or Municipal land use authorities or any other agency from which approval is required. Innovation, Science and Economic Development Canada addresses any spectrum management issues that may arise from your proposal and consults with NAV CANADA engineering as deemed necessary.**

This document contains information proprietary to NAV CANADA. Any disclosure or use of this information or any reproduction of this document for other than the specific purpose for which it is intended is expressly prohibited except as NAV CANADA may otherwise agree in writing.

Regards,

Land Use Office  
 NAV CANADA

cc ATLR - Atlantic Region, Transport Canada





National Défense  
Defence nationale

1 Canadian Air Division HQ  
PO BOX 17000 STN Forces  
Winnipeg, MB R3J 3Y5

Date of Electronic Signature

Mrs. Jessica Pitman  
Natural Forces  
1801 Holis Street, Suite 1205  
Halifax, NS, B3J 3N4

### LETTER OF NON-OBJECTION FOR NATURAL FORCES

Dear Mrs. Pitman,

Thank you for your patience on this matter and for considering DND radar, airport facilities, and radio-communication systems in your project development process. We have completed the detailed analysis of your proposed site, referenced in NAVCAN Land Use file# 23-3235 the Clydesdale Range wind project near Earltown, NS. The results of the detailed analysis and subsequent technical and operational impact assessments have confirmed there is likely to be minimal or no interference with DND radar, flight operations, and radio-communication systems. Therefore, as a result of these findings we have no objections with your project as submitted. If however, the layout were to change/move, please re-submit that proposal for another assessment.

The concurrence for this site is valid for 24 months from date of this correspondence. If the project should be cancelled or delayed during this timeframe please advise the point of contact. It should be noted that each submission is assessed on a case by case basis and as such, concurrence on this submission in no way constitutes a concurrence for similar projects in the same area, nor does it indicate that similar concurrence might be offered in another region. The issuance of this Letter of Non-Objection shall not constitute a waiver or alienation of any existing or future legal rights of the DND/CAF nor shall it be construed to create any exemptions, indemnification, approvals, rights, acceptances in favour of Natural Forces.

DND/CAF expressly reserves its rights to take legal action or seek remedy for any and all liability, loss, harm, degradation of services or equipment, litigation costs, damages, judgements or expenses that arise from the adverse effects, whether incidental, indirect or causal, of the referenced NAVCAN Land Use file# 23-3235 the Clydesdale Range wind energy project near Earltown, NS upon the DND/CAF radars, equipment and its provision of Air Traffic Services.

Canada

At present DND is working with Transport Canada to make obstruction lighting compliance with Night Vision Goggles (NVG) mandatory. At present DND cannot stipulate that proponents of wind turbine farms utilize NVG compliant lighting. However, as you can imagine, the safety of our aircrews is a top priority, and as such, we ask that you consider lighting your turbines with NVG compliant lighting so that they are visible to pilots during NVG operations.

I trust that you will find this satisfactory. If you have any technical questions or concerns regarding any aspect of this investigation, please contact the undersigned.

Kind regards.

**MCKILLOP,**  
**DONALD 794**

Digitally signed by  
MCKILLOP, DONALD 794  
Date: 2023.09.05 12:10:25  
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*D.J. McKillop*  
Lieutenant-Colonel  
Senior Staff Officer Aerospace  
Capabilities and Readiness



**Appendix C: Completed Assessment Form from  
Transport Canada**



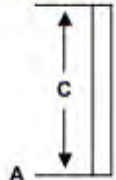
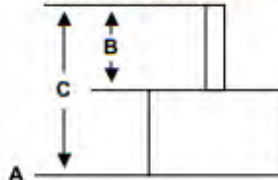
Transport Canada number
Applicant number

## AERONAUTICAL ASSESSMENT FORM for obstacle notice and assessment

<b>Owner (company name)</b> Natural Forces Developments LP		
City Halifax	Province/Territory Nova Scotia	Postal code (A1A 1A1) B3J 3N4
Telephone number (999-999-9999) 902-422-9663	Email Address jpitman@naturalforces.ca	

<b>Applicant (company name)</b> Natural Forces Developments LP		
City Halifax	Province/State Nova Scotia	Postal code (A1A 1A1) B3J 3N4
Telephone number (999-999-9999) 902-422-9663	Email Address jpitman@naturalforces.ca	

Geographic Coordinates  NAD83  NAD27  WGS84      N Latitude deg \_\_\_\_\_ min \_\_\_\_\_ sec \_\_\_\_\_  
 For extensive structures submit geographical coordinates separately (e.g. windturbines, transmission lines, building corners).      W Longitude deg \_\_\_\_\_ min \_\_\_\_\_ sec \_\_\_\_\_

HEIGHTS	Feet	Metres	Structure alone	Structure with an addition
<b>A</b> Ground Elevation (AMSL)				
<b>B</b> Height of an addition to a structure				
<b>C</b> Total structure height including B (AGL)				
Overall height (A plus C) (AMSL)				

Is the location on lands affected by **Airport Zoning Regulations (AZRs)**?  Yes  No  
 Where the object is on lands affected by **AZRs**, a legal survey attesting conformance is required.

Nearest Aerodrome Union Centre Airport	Have you contacted the aerodrome? <input type="radio"/> Yes <input checked="" type="radio"/> No
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Description of Project (or attached)  
 16 large scale wind turbine generators with 120 m hub height and 163 m rotor diameter. Natural Forces is seeking Transport Canada approval of these 16 possible turbine sites.

Notice of <input checked="" type="radio"/> New Structure <input type="radio"/> Change to existing structure	Duration <input type="radio"/> Permanent <input checked="" type="radio"/> Temporary
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Proposed Construction Date: From (yyyy-mm-dd): 2024-09-01 To (yyyy-mm-dd): 2024-09-01

Applicant Name Jessica Pitman	Telephone (999-999-9999) 902-422-9663	Date (yyyy-mm-dd) 2023-08-08
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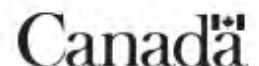
**TRANSPORT CANADA ASSESSMENT (Transport Canada use only)**

Marking and lighting required (as per Standard 621)  
 Night Protection  Day Protection  Temporary Lighting  No protection required

Completion of this form does not constitute authorization for construction nor replace other approvals or permits.

Transport Canada Civil Aviation Inspector Name	Date (yyyy-mm-dd)
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Note 1: This assessment expires 18 months from the date of assessment unless extended, revised, or terminated by the issuing office.  
 Note 2: If there is a change to the intended installation, a new submittal is required.





## INSTRUCTIONS FOR COMPLETING FORM

**Submittal:** An Aeronautical Assessment Form (AAF) is submitted, if requested by Transport Canada or if there is intent for installation of the following types of construction or alteration, including any appurtenance of more than 12m in height:

- (a) of an overall height that exceeds 90 m AGL at the site;
- (b) of a height that exceeds an airport OIS (obstacle identification surface) or OLS (obstacle limitation surface) as specified in *Aerodrome Standards and Recommended Practices - TP312*;
- (c) for aerodromes (including airports), of a height that exceeds an imaginary surface extending outward and upward at a slope of 2%, from the nearest point of the nearest runway for a horizontal distance of 4500 m and thereafter exceeds a 90m height out to 6km;
- (d) for water aerodromes, as (c) except a slope of 4% with the start of the imaginary surface taken as the GPS location published in the Canada Water Aerodromes Supplement (CWAS);
- (e) for a heliport, of a height that exceeds an imaginary surface extending outward and upward at a slope of 4%, from the nearest point of the nearest landing and takeoff area, for a horizontal distance of 2250 m and thereafter exceeds a 90 m height out to 6 km;
- (f) for catenaries and similar crossings (e.g. bridges), of a height such that any portion of the object exceeds 60 m AGL above the crossed river or valley bottom; or
- (g) on lands affected by an Airport Zoning Regulation (AZR) a legal land survey is required with the submittal proving conformance to the AZR.

Completed applications are to be forwarded to the applicable Transport Canada Regional office listed in Standard 621, Appendix A.

**Nav Canada:** A separate submittal is made to NAV CANADA. Refer NAV CANADA Land Use Program website <http://www.navcanada.ca/EN/products-and-services/Pages/land-use-program.aspx>

**Note:** Transport Canada and NAV CANADA Land Use are notified, if the proposed construction does not take place.

**Geographic Coordinates:** Provide GPS coordinates [in degrees, minutes and seconds] of the object. For extensive objects (e.g. windfarms), provide a separate listing of GPS coordinates for each element of the object (e.g. each windturbine). For buildings, provide coordinates for each corner, and coordinates of the dominant structure on the roof.

**Heights:** Provide height of the ground elevation Above Mean Sea Level (AMSL), the total structure height Above Ground Level (AGL) and the combined overall height AMSL. For extensive obstacles composed of several objects, provide a separate listing of heights corresponding to GPS coordinates.

**Description of Project:**

- (a) Indicate the type of structure. (e.g. antenna, crane, building, power line, landfill, water tank, wind farm, moored balloon, kite, catenary/cable crossing, etc.)
- (b) For catenaries [e.g. electrical power transmission line crossings], include a drawing of the configuration of the wires and the supporting structures with their heights. Indicate the placement of marking/lighting [if used] on the wires.
- (c) For existing structures, explain the reason for notifying Transport Canada (e.g. corrections, request for new assessment, etc.).
- (d) If the object is on lands affected by Airport Zoning Regulations (AZRs), provide a legal land survey indicating conformance to AZR surfaces.
- (e) For a wind farm, include a spreadsheet with individual turbine identification numbers [ID], geographic coordinates [in minutes, degrees and seconds], ground elevation AMSL and the overall height of the object AGL. Identify those windturbines which will have lighting.
- (f) Indicate what obstacle marking, lighting and monitoring will be applied. It is the responsibility of the owner to apply the appropriate lighting/marketing/monitoring in accordance with Standard 621.

**Nearest Aerodrome:** Identify the nearest aerodrome. Certified / registered land aerodromes/heliports are contained in the Canada Flight Supplement (CFS) and certified / registered water aerodromes in the Canada Water Aerodrome Supplement (CWAS); both available directly from NAV CANADA.

This form does not constitute authority for construction. Nor does this form replace any approvals, permits or assessments required by NAV CANADA, Industry Canada, other Federal Government departments, Provincial or Municipal landuse authorities or any other agency from which approval/assessment is required.



APPENDIX N  
COMPLETE PLANT LIST

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Common Name	Scientific Name	COSEWIC, SARA, ESA	S-Rank
<b>Vascular Flora</b>			
Alleghaney blackberry	<i>Rubus allegheniensis</i>	---	S5
American beech	<i>Fagus grandifolia</i>	---	S3S4
American golden saxifrage	<i>Chrysosplenium americanum</i>	---	S5
American mountain ash	<i>Sorbus americana</i>	---	S5
American witch-hazel	<i>Hamamelis virginiana</i>	---	S5
Azure bluet	<i>Houstonia caerulea</i>	---	S5
Balsam fir	<i>Abies balsamea</i>	---	S5
Bebb's willow	<i>Salix bebbiana</i>	---	S5
Bittersweet nightshade	<i>Solanum dulcamara</i>	---	SNA
Black chokeberry	<i>Aronia melanocarpa</i>	---	S5
Black huckleberry	<i>Gaylussacia baccata</i>	---	S5
Black sedge	<i>Carex arctata</i>	---	S5
Black spruce	<i>Picea mariana</i>	---	S5
Bladder sedge	<i>Carex intumescens</i>		S5
Bluejoint reed grass	<i>Calamagrostis canadensis</i>	---	S5
Bog aster	<i>Oclemena nemoralis</i>	---	S5
Bog rosemary	<i>Andromeda polifolia</i>	---	S5
Bracken fern	<i>Pteridium aquilinum</i>	---	S5
Bristly black currant	<i>Ribes lacustre</i>		S5
Bristly dewberry	<i>Rubus hispidus</i>	---	S5
Bristly sarsaparilla	<i>Aralia hispida</i>	---	S5
Bristly-stalked sedge	<i>Carex leptalea</i>	---	S5
Broad-leaved cattail	<i>Typha latifolia</i>	---	S5
Broad-leaved helleborine	<i>Epipactis helleborine</i>		SNA
Broom sedge	<i>Carex scoparia</i>	---	S5
Brown beakrush	<i>Rhynchospora fusca</i>		S4
Bunchberry	<i>Cornus canadensis</i>	---	S5
Calico aster	<i>Symphotrichum lateriflorum</i>	---	S5
Canada fly honeysuckle	<i>Lonicera canadensis</i>	---	S5
Canada goldenrod	<i>Solidago canadensis</i>	---	S4S5
Canada manna Grass	<i>Glyceria canadensis</i>		S5
Canada rush	<i>Juncus canadensis</i>	---	S5
Christmas fern	<i>Polystichum acrostichoides</i>	---	S5
Cinnamon fern	<i>Osmundastrum cinnamomeum</i>	---	S5
Coltsfoot	<i>Tussilago farfara</i>	---	SNA
Common boneset	<i>Eupatorium perfoliatum</i>	---	S5
Common dandelion	<i>Taraxacum officinale</i>	---	SNA
Common hawkweed	<i>Hieracium lachenalii</i>	---	SNA



Common Name	Scientific Name	COSEWIC, SARA, ESA	S-Rank
Common labrador tea	<i>Rhododendron groenlandicum</i>	---	S5
Common oak fern	<i>Gymnocarpium dryopteris</i>	---	S5
Common plantain	<i>Plantago major</i>	---	S5
Common ragwort	<i>Senecio vulgaris</i>	---	SNA
Common silverweed	<i>Potentilla anserina ssp. anserina</i>	---	S5
Common speedwell	<i>Veronica officinalis</i>	---	S5
Common St. John's-wort	<i>Hypericum perforatum</i>	---	SNA
Common water parsnip	<i>Sium suave</i>	---	S5
Common winterberry	<i>Ilex verticillata</i>	---	S5
Common wood sorrel	<i>Oxalis montana</i>	---	S5
Common woolly bulrush	<i>Scirpus cyperinus</i>	---	S5
Creeping buttercup	<i>Ranunculus repens</i>	---	SNA
Convulsion-root	<i>Monotropa uniflora</i>	---	S5
Creeping snowberry	<i>Gaultheria hispidula</i>	---	S5
Crested wood fern	<i>Dryopteris cristata</i>	---	S5
Creeping buttercup	<i>Ranunculus repens</i>	---	SNA
Creeping yellow loosestrife	<i>Lysimachia nummularia</i>	---	SNA
Cucumber root	<i>Medeola virginiana</i>	---	S5
Dwarf red raspberry	<i>Rubus pubescens</i>	---	S5
Eastern hay-scented fern	<i>Dennstaedtia punctilobula</i>	---	S5
Eastern hemlock	<i>Tsuga canadensis</i>	---	S4
Eastern teaberry	<i>Gaultheria procumbens</i>	---	S5
Eastern white pine	<i>Pinus strobus</i>	---	S5
European columbine	<i>Aquilegia vulgaris</i>	---	SNA
Evergreen wood fern	<i>Dryopteris intermedia</i>	---	S5
Field horsetail	<i>Equisetum arvense</i>	---	S5
Fireweed	<i>Chamaenerion angustifolium</i>	---	SNA
Fowl manna grass	<i>Glyceria striata</i>	---	S5
Fraser's St. John's-wort	<i>Hypericum fraseri</i>	---	S5
Fringed sedge	<i>Carex crinita</i>	---	S5
Garlic mustard	<i>Alliaria petiolata</i>	---	SNA
Glossy buckthorn	<i>Frangula alnus</i>	---	SNA
Goldthread	<i>Coptis trifolia</i>	---	S5
Graceful sedge	<i>Carex gracillima</i>	---	S5
Grass-leaved goldenrod	<i>Euthamia graminifolia</i>	---	S5
Gray birch	<i>Betula populifolia</i>	---	S5
Hairy flat-top white aster	<i>Doellingeria umbellata</i>	---	S5
Harlequin blue flag	<i>Iris versicolor</i>	---	S5
Hobblebush	<i>Viburnum lantana</i>	---	SNA
Interrupted fern	<i>Claytosmunda claytoniana</i>	---	S5

Common Name	Scientific Name	COSEWIC, SARA, ESA	S-Rank
Large cranberry	<i>Vaccinium macrocarpon</i>	---	S5
Large false solomon's seal	<i>Maianthemum racemosum</i>	---	S4S5
Large-toothed aspen	<i>Populus grandidentata</i>	---	S5
Late lowbush blueberry	<i>Vaccinium angustifolium</i>	---	S5
Leatherleaf	<i>Chamaedaphne calyculata</i>	---	S5
Marsh blue violet	<i>Viola cucullata</i>	---	S5
Marsh skullcap	<i>Scutellaria galericulata</i>	---	S5
Mountain holly	<i>Ilex mucronata</i>	---	S5
Mountain maple	<i>Acer spicatum</i>	---	S5
Multiflora rose	<i>Rosa multiflora</i>	---	SNA
New York fern	<i>Parathelypteris noveboracensis</i>	---	S5
Nodding sedge	<i>Carex gynandra</i>	---	S5
Northern bayberry	<i>Morella pensylvanica</i>	---	S5
Northern beech fern	<i>Phegopteris connectilis</i>	---	S5
Northern bog goldenrod	<i>Solidago uliginosa</i>	---	S5
Northern bush honeysuckle	<i>Diervilla lonicera</i>	---	S5
Northern long sedge	<i>Carex folliculata</i>	---	S5
Northern pitcher plant	<i>Sarracenia purpurea</i>	---	S5
Northern red oak	<i>Quercus rubra</i>	---	S5
Northern starflower	<i>Lysimachia borealis</i>	---	S5
Northern wild raisin	<i>Viburnum nudum</i>	---	S5
Norway spruce	<i>Picea abies</i>	---	S5
Orange hawkweed	<i>Pilosella aurantiaca</i>	---	SNA
Oxeye daisy	<i>Leucanthemum vulgare</i>	---	SNA
Painted trillium	<i>Trillium undulatum</i>	---	S5
Pale bog laurel	<i>Kalmia polifolia</i>	---	S5
Paper birch	<i>Betula papyrifera</i>	---	S5
Partridgeberry	<i>Mitchella repens</i>	---	S5
Pearly everlasting	<i>Anaphalis margaritacea</i>	---	S5
Pennsylvania bittercress	<i>Cardamine pensylvanica</i>	---	S5
Pin cherry	<i>Prunus pensylvanica</i>	---	S5
Pink lady's-slipper	<i>Cypripedium acaule</i>	---	S5
Pussy willow	<i>Salix discolor</i>	---	S5
Red elderberry	<i>Sambucus racemosa</i>	---	S5
Red maple	<i>Acer rubrum</i>	---	S5
Red osier dogwood	<i>Cornus sericea</i>	---	S5
Red raspberry	<i>Rubus idaeus</i>	---	S5
Red spruce	<i>Picea rubens</i>		S5
Rhodora	<i>Rhododendron canadense</i>	---	S5
Rock polypody	<i>Polypodium virginianum</i>	---	S5



Common Name	Scientific Name	COSEWIC, SARA, ESA	S-Rank
Rose twisted-stalk	<i>Streptopus lanceolatus</i>	---	S5
Rough bedstraw	<i>Galium asprellum</i>	---	S5
Rough-stemmed goldenrod	<i>Solidago rugosa</i>	---	S5
Royal fern	<i>Osmunda regalis</i>	---	S5
Running clubmoss	<i>Lycopodium clavatum</i>	---	S5
Sallow sedge	<i>Carex lurida</i>	---	S5
Sensitive fern	<i>Onoclea sensibilis</i>	---	S5
Shinleaf	<i>Pyrola elliptica</i>		S5
Sheep laurel	<i>Kalmia angustifolia</i>	---	S5
Skunk currant	<i>Ribes glandulosum</i>		S5
Small cranberry	<i>Vaccinium oxycoccos</i>	---	S5
Smooth blackberry	<i>Rubus canadensis</i>	---	S5
Smooth serviceberry	<i>Amelanchier laevis</i>	---	S5
Soft rush	<i>Juncus effusus</i>	---	S5
Speckled alder	<i>Alnus incana</i>	---	S5
Spinulose wood fern	<i>Dryopteris carthusiana</i>	---	S5
Spotted jewelweed	<i>Impatiens capensis</i>	---	S5
Spreading dogbane	<i>Apocynum androsaemifolium</i>	---	S5
Star sedge	<i>Carex echinata</i>	---	S5
Steeplebush	<i>Spiraea tomentosa</i>	---	S5
Stiff clubmoss	<i>Lycopodium annotinum</i>	---	S5
Striped maple	<i>Acer pensylvanicum</i>	---	S5
Stoloniferous foamflower	<i>Tiarella stolonifera</i>	---	S2S3
Sugar maple	<i>Acer saccharum</i>	---	S4
Swamp yellow loosestrife	<i>Lysimachia terrestris</i>	---	S5
Sweet-fern	<i>Comptonia peregrina</i>	---	S5
Sweet gale	<i>Myrica gale</i>	---	S5
Tall meadow-rue	<i>Thalictrum pubescens</i>	---	S5
Tall rattlesnakeroot	<i>Nabalus altissimus</i>	---	S5
Tamarack	<i>Larix laricina</i>	---	S5
Tawny cottongrass	<i>Eriophorum virginicum</i>	---	S5
Three-leaved rattlesnakeroot	<i>Nabalus trifoliolatus</i>	---	S5
Three-seeded sedge	<i>Carex trisperma</i>	---	S5
Three-way sedge	<i>Dulichium arundinaceum</i>	---	S5
Trailing arbutus	<i>Epigaea repens</i>	---	S5
Trembling aspen	<i>Populus tremuloides</i>	---	S5
Tussock sedge	<i>Carex stricta</i>	---	S5
Twinflower	<i>Linnaea borealis</i>	---	S5
Two-seeded sedge	<i>Carex disperma</i>	---	S5
Umbellate hawkweed	<i>Hieracium umbellatum</i>	---	S5

Common Name	Scientific Name	COSEWIC, SARA, ESA	S-Rank
Variegated pond-lily	<i>Nuphar variegata</i>	---	S5
Velvet-leaved blueberry	<i>Vaccinium myrtilloides</i>	---	S5
Virginia St. John's-wort	<i>Hypericum virginicum</i>	---	S5
Water avens	<i>Geum rivale</i>	---	S5
White clover	<i>Trifolium repens</i>	---	SNA
White meadowsweet	<i>Spiraea alba</i>	---	S5
White spruce	<i>Picea glauca</i>	---	S5
Whorled wood aster	<i>Oclemena acuminata</i>	---	S5
Wild lily-of-the-valley	<i>Maianthemum canadense</i>	---	S5
Wild sarsaparilla	<i>Aralia nudicaulis</i>	---	S5
Wild strawberry	<i>Fragaria virginiana</i>	---	S5
White ash	<i>Fraxinus americana</i>	---	S4
Woodland horsetail	<i>Equisetum sylvaticum</i>	---	S5
Yellow birch	<i>Betula alleghaniensis</i>	---	S5
Yellow bluebead lily	<i>Clintonia borealis</i>	---	S5
Yellow trout lily	<i>Erythronium americanum</i>	---	S4S5
<b>Lichens</b>			
A Lichen	<i>Fuscopannaria soredata</i>	---	S2S3
A Lichen	<i>Chaenotheca hispidula</i>	---	S2S3
A Lichen	<i>Bacidia schweinitzii</i>	---	S5
A Lichen	<i>Graphis scripta</i>	---	S5
A Lichen	<i>Lepra amara</i>	---	S5
A Lichen	<i>Loxospora ochrophaea</i>	---	SU
Appressed Jellyskin Lichen	<i>Scytinium subtile</i>	---	S3S4
Black-bordered Shingles Lichen	<i>Parmeliella triptophylla</i>	---	S5
Blistered Tarpaper Lichen	<i>Collema furfuraceum</i>	---	S5
Bloody Heart Lichen	<i>Mycoblastus sanguinarius</i>	---	SU
Blue Jellyskin Lichen	<i>Leptogium cyanescens</i>	---	S5
Boral Oakmoss Lichen	<i>Evernia mesomorpha</i>	---	S5
Bottlebrush Frost Lichen	<i>Physconia detersa</i>	---	S4
British Soldiers Lichen	<i>Cladonia cristatella</i>	---	S5
Bushy Beard Lichen	<i>Usnea strigose</i>	---	S5
Common Freckle Pelt Lichen	<i>Peltigera aphthosa</i>	---	S5
Crabseye Lichen	<i>Ochrolechia androgyna</i>	---	S5
Dog Lichen	<i>Peltigera canina</i>	---	S5
Dragon Lichen	<i>Cladonia squamosa</i>	---	S5
Eastern Waterfan	<i>Peltigera hydrothyria</i>	SARA, COSEWIC, ESA Threatened	S1
Finger Foam Lichen	<i>Stereocaulon dactylophyllum</i>	---	S5
Fishbone Beard Lichen	<i>Usnea dasopoga</i>	---	S5



Common Name	Scientific Name	COSEWIC, SARA, ESA	S-Rank
Fishnet Lichen	<i>Cladonia boryi</i>	---	S5
Frayed Ramalina lichen	<i>Ramalina roeseleri</i>	---	S5
Freckled Tube Lichen	<i>Hypogymnia krogiae</i>	---	S5
Fringed Wrinkle Lichen	<i>Tuckermanopsis americana</i>	---	S5
Frosted Glass Whiskers	<i>Sclerophora peronella</i>	COSEWIC & SARA Special Concern	S3S4
Granular Soil Foam Lichen	<i>Stereocaulon condensatum</i>	---	S2S3
Gray Reindeer Lichen	<i>Cladonia rangiferina</i>	---	S5
Ladder Lichen	<i>Cladonia verticillate</i>	---	S5
Lipstick Powderhorn Lichen	<i>Cladonia macilenta</i>	---	S4S5
Mealy Shadow Lichen	<i>Phaeophyscia orbicularis</i>	---	S4?
Methuselah's Beard	<i>Dolichousnea longissima</i>	---	S4
Mustard Lichen	<i>Pyxine sorediata</i>	---	S5
Orange-cored Shadow Lichen	<i>Phaeophyscia rubropulchra</i>	---	S5
Orangepipe lichen	<i>Cladonia crispate</i>	---	S5
Peppered Pelt Lichen	<i>Peltigera evansiana</i>	---	S4S5
Peppered Rocktripe Lichen	<i>Umbilicaria deusta</i>	---	S4?
Pink Earth Lichen	<i>Dibaeis baeomyces</i>	---	S5
Plated Rock Tripe	<i>Umbilicaria muhlenbergii</i>	---	S5
Polished Camouflage lichen	<i>Melanelixia glabratula</i>	---	S4S5
Pompom-tipped Shadow Lichen	<i>Phaeophyscia pusilloides</i>	---	S3
Powdered Fringe Lichen	<i>Heterodermia speciosa</i>	---	S3S4
Powder-headed Tube Lichen	<i>Hypogymnia tubulosa</i>	---	S5
Punctured Ramalina lichen	<i>Ramalina dilacerate</i>	---	S5
Rimmed Elf-ear Lichen	<i>Normandina pulchellum</i>	---	S4
Rough Speckleback Lichen	<i>Punctelia rudecta</i>	---	S5
Salted Ruffle Lichen	<i>Parmotrema crinitum</i>	---	S5
Shaggy Fringed Lichen	<i>Anaptychia palmulata</i>	---	S3S4
Sinewed Ramalina lichen	<i>Ramalina americana</i>	---	S5
Slender Monk's Hood Lichen	<i>Hypogymnia vittate</i>	---	S4
Smooth Rocktripe Lichen	<i>Umbilicaria mammulata</i>	---	S5
Smooth-footed Powderhorn Lichen	<i>Cladonia ochrochlora</i>	---	S5
Thorn Lichen	<i>Cladonia uncialis</i>	---	S5
Variable Wrinkle Lichen	<i>Tuckermanopsis orbata</i>	---	S5
Varied Rag Lichen	<i>Platismatia glauca</i>	---	S5
Wand Lichen	<i>Cladonia rei</i>	---	S5
Yellow specklebelly Lichen	<i>Pseudocyphellaria crocata</i>	---	S5
Bryophytes			
Crisped pincushion moss	<i>Ulotia crispa</i>	---	S5

Common Name	Scientific Name	COSEWIC, SARA, ESA	S-Rank
Common haircap moss	<i>Polytrichum commune</i>	---	S5
Northern peatmoss	<i>Sphagnum capillifolium</i>		S5
Red-stemmed feather moss	<i>Pleurozium schreberi</i> (Schreber's moss)	---	S5
Round-branched tree-clubmoss	<i>Dendrolycopodium dendroideum</i>	---	S5
Stairstep moss	<i>Hylocomium splendens</i>	---	S5
Three-lobed whipwort	<i>Bazzania tribolata</i>	---	S5



APPENDIX O  
COMPLAINT RESOLUTION PLAN

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# COMPLAINT RESOLUTION PLAN

Clydesdale Ridge Wind Project

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Clydesdale Holdings Ltd.  
1701 Hollis St Suite 1200  
Halifax, NS B3J 3M8  
[naturalforces.ca](http://naturalforces.ca)



## Overview

The Clydesdale Ridge Wind Project (the Project) is being developed by Clydesdale Holdings Ltd. (the Proponent). The Proponent represents a partnership between Natural Forces Developments Limited Partnership (Natural Forces) and Dalhousie Mountain Wind Energy Inc. The Proponent is further partnering with Mi'kmaq bands in Nova Scotia to ultimately develop, construct, own, and operate the Project.

The Project consists of up to 18 wind turbine generators (WTGs) and is situated adjacent to the operational Dalhousie Mountain Wind Farm, which is owned and operated by an affiliate of Dalhousie Mountain Wind Energy Inc. The Project is located near Mount Thom, Earltown, Loganville, and Berichan in both Colchester County and Pictou County. The proposed WTG locations and associated infrastructure are predominantly on privately-owned lands owned by multiple landowners, with a portion of the access road and collector lines traversing provincial Crown land. The private lands are secured under Lease, Option to Lease, and Easement. The Proponent has an active application for an Easement over the provincial Crown land.

## Purpose

The purpose of this plan is to ensure all public concerns are addressed consistently and effectively. The Proponent aims to:

- Manage concerns and complaints openly, promptly and properly;
- Resolve concerns and complaints as soon as possible; and
- Learn from the issues and minimize any impacts the Project has on the community.

## Scope

This plan details how concerns can be reported to the Proponent regarding the Project, and how the Proponent will address those concerns.

## Procedure

All concerns or complaints related to the Project can be directed to the communications phone line:

Natural Forces  
Address: 1701 Hollis Street, Suite 1200, Halifax, NS, B3J 3M8  
Phone: 902-483-9592

The complainant will be notified upon receipt of the complaint, which will be recorded in a Complaint Log maintained by the Proponent person of contact. The Proponent will start the review process for complaints within 5 business days of the concern or complaint being received. The Proponent will then conduct an investigation into the complaint in

collaboration with relevant parties. Once the investigation is completed, the complainant will be notified of how the concern was or will be addressed.

The Complaint Log will be kept on file, along with records of communication, discussions and correspondence with the complainant. The Complaint Log will include the following information:

- Manage concerns and complaints openly, promptly and properly;
- Resolve concerns and complaints as soon as possible; and
- Learn from the issues and minimize any impacts the Project has on the community.
- Date and time that the complaint was received;
- Date and time that the complaint incident occurred;
- Complainant's name and contact information;
- Location and nature of complaint (e.g., sound levels, dust, shadow flicker, traffic, vibrations, etc.);
- Procedure and result of any investigation or follow-up; and,
- Weather conditions and meteorological measurements at the time of the complaint (in most cases, these conditions could be used to better understand and address the complaint).

## **Sound Levels and Shadow Flicker**

Complaints regarding sound levels and shadow flicker will be assessed on a case-by-case basis. The Proponent will follow the steps listed below in resolving the issue:

- 1) Conduct an investigation to understand the conditions under which elevated sound levels or shadow flicker issues are experienced. The specific date, time, location of observed shadow flicker, and local weather conditions (including wind direction and wind speed) will be noted for each incident of elevated sound levels or shadow flicker, as well as the duration of the event.
- 2) If it is determined from the investigation that the shadow flicker was caused by the Project, the Operations Team for the Project will work to identify the best mitigation based on the circumstances, such as screening using vegetation.
- 3) The Operations Team will track any such events along with the supporting data, and will track the success of any mitigation measures employed in consultation with the complainant, which will inform future resolutions.

The complainant will also be asked to record any additional incidents or occurrences.

If several occurrences of issues regarding sound levels and/or shadow flicker that arise from the Project, an assessment of the causes of the impacts will be conducted and a monitoring program will be developed and implemented in consultation with the complainant.

Mitigation measures to reduce sound levels and shadow flicker have been described in the Environmental Impact Assessment.



## **Construction and Operation**

Complaints regarding construction and operation activities will be discussed with workers or contractors involved.

Solutions to the complaints will be established with worker(s) and contractor(s), and complainants will be informed of how issues are addressed.

If complaints persist, then worker(s) and contractor(s) may be dismissed.

## **Closure**

This plan acts as a guidance document to result in the resolution of any complaints communicated to the Proponent about the Project. Ultimately, the situation of the individual complaints will more specifically inform the procedure followed to address them.

If the complainant is not satisfied with the response from the Proponent in addressing their complaint, the complaint will be referred to a higher authority within the company to further resolve the issue.

APPENDIX P  
CONTINGENCY PLAN

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# **CONTINGENCY PLAN**

## **Clydesdale Ridge Wind Project**

**07.04.2023**

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Clydesdale Holdings Ltd.  
1701 Hollis St Suite 1200  
Halifax, NS B3J 3M8  
[naturalforces.ca](http://naturalforces.ca)

## Introduction

The Clydesdale Ridge Wind Project (the Project) is being developed by Clydesdale Holdings Ltd. (the Proponent). The Proponent represents a partnership between Natural Forces Developments Limited Partnership (Natural Forces) and Dalhousie Mountain Wind Energy Inc. The Proponent is further partnering with Mi'kmaq bands in Nova Scotia to ultimately develop, construct, own, and operate the Project.

The Project consists of up to 18 wind turbine generators (WTGs) and is situated adjacent to the operational Dalhousie Mountain Wind Farm, which is owned and operated by an affiliate of Dalhousie Mountain Wind Energy Inc. The Project is located near Mount Thom, Earltown, Loganville, and Berichan in both Colchester County and Pictou County. The proposed WTG locations and associated infrastructure are predominantly on privately-owned lands owned by multiple landowners, with a portion of the access road and collector lines traversing provincial Crown land. The private lands are secured under Lease, Option to Lease, and Easement. The Proponent has an active application for an Easement over the provincial Crown land.

This document outlines the Contingency Plan that will be implemented during the construction, operation and decommissioning of the Project. This program has been developed in consultation with Nova Scotia Environment and Climate Change (NSECC) and it follows NSECC's *Contingency Planning Guidelines*. It serves to fulfill the terms and conditions of approval determined by the Minister, and all measures have been integrated into the Environmental Management and Protection Plan (EMPP). The Canadian Standards Association publication, *Emergency Preparedness and Response*, was also used in developing this plan, aiming to contain spills should they occur despite using the approaches discussed in this EMPP.

## Objectives

This contingency plan reflects on potential accidents and malfunctions during project work. The Canadian Standards Association publication, *Emergency Preparedness and Response*, was used in developing this plan that will aim to contain spills should they occur despite using the approaches discussed below. The plan provides preventative measures and addresses accidental occurrences including spills of hydrocarbons or other hazardous materials, erosion and sediment control measures, fires, and vehicular collisions.

## Mitigation measures

### Spills

Exposure or accidental spillage of hazardous materials or wastes might affect employee health and safety, contaminate soils, surface and groundwater, and endanger vegetation and wildlife. The objective is to avoid hazardous material disposal into the environment and manage their impact if they are released into



the surrounding area. Possible hazardous materials present on site are:

- Fuel;
- Waste concrete;
- Lubricants and oils;
- Paints and solvents;
- Hydraulic fluids; and
- Sewage.

The mitigation procedures below are modelled on the *Workplace Hazardous Materials Information System* program, which outlines best management strategies in proper handling, storage, disposal and control of hazardous materials.

Hazardous materials (e.g., fuels, lubricants, hydraulic oil) and wastes (e.g., sewage, waste oil) will be managed to minimize the risk of chronic and/or accidental releases. Hazardous petroleum wastes are classified as deleterious and their disposal into the environment and water is illegal. The contractors will ensure that the following efforts are taken to minimize and mitigate potential impacts from accidental waste spillage:

- Equipment will be kept in good working order and maintained so as to reduce risk of spills/leaks and to avoid water contamination;
- Spill response kits will be readily available for each piece of equipment, on site workers are required to be knowledgeable on emergency spill response protocols and initiate corrective measures immediately to minimize any impacts to the surrounding environment;
- If contaminated soil is encountered, it will be reported to NSECC and managed utilizing the Nova Scotia Contaminated Site Regulations.
- Refueling, oiling, and maintenance of equipment will be completed in specifically designated areas located at least 30 m away from any watercourse, wetland, or well to minimize potential effects that could arise in the event of a spill;
- Frequent inspection of equipment will minimize the likelihood of fluids leaking into wetlands;
- Chemicals and petroleum products will be managed in accordance to manufacturer specifications and stored more than 30 m from a watercourse or wetland;
- Where applicable, secondary containment and limited quantities of chemicals and fuels required to be stored on site will be in an area away from the surrounding terrestrial environment, or direct pathways (i.e., ditches) to the surrounding environment, all chemicals and fuels will be stored in appropriate containers designed for the reduction of potential spills or leaks;

- Oily rags will be stored in adequate receptacles and disposed of in adequate waste facilities;
- If fuel storage is required onsite, double walled fuel storage tanks will be required;
- All potentially hazardous materials present on site will be handled, labeled, and stored responsibly to avoid any spillage or contamination;
- Work entailing use of toxic or hazardous materials, chemicals, or otherwise creating hazard to life, safety of health, will be conducted in accordance with National Fire Code of Canada to minimize the potential for spills or fires;
- Portable toilets will be located at least 30m away from any watercourses, wetlands or environmentally sensitive areas, and the sewage will be disposed of at an approved facility;
- Waste and excess concrete will be disposed of as per environmentally accepted industry standards;
- Used oil filters, grease cartridge containers and other products associated with equipment maintenance will be collected and disposed of in accordance with regulatory guidelines; and
- Fuel and hydraulic systems on all equipment will be inspected daily to ensure there are no leaks. All leaks discovered will be repaired as soon as practically possible.

#### Spill Response Procedure

Contractors will prepare contingency responses and have associated equipment available on site. They will ensure spill kits accompany each piece of heavy equipment / machinery and that there are adequate supplies in each kit to address the scenario in which a spill occurs on the ground, in surface water or in groundwater. All spills or leaks such as those from machinery or storage tanks must be promptly contained, cleaned up and reported. Within a week of the accidental spill or leakage, a report will be submitted to Nova Scotia Environment by the Proponent. As demonstrated in the spill response report form included as **Appendix A**, the report will outline:

- The cause of the release;
- Adequacy of the response to the release by the persons responsible;
- Plans to remediate land that was directly impacted;
- Manners of collection and dispose of the contaminant; and;
- Plans to prevent a reoccurrence of the unauthorized release.



## Emergency contact

If a spill occurs, corrective measures will be implemented immediately and reported in accordance with Environmental Emergency Regulations. All accidental spills and leaks will be reported to Nova Scotia Environment local offices (Colchester: Truro at 902-893-0282) and (Pictou: Granton at 902-396-4194) during business hours and the Emergency Response line at 1-800-565-1633 at any time.

More detailed emergency contact information is provided at the end of this document.

## **Erosion and sediment control**

The Proponent acknowledges that proper erosion and sedimentation control is necessary to maintain water quality and reduce environmental impact on the Project area. The mitigation measures will be implemented based on industry best practices. Measures are intended to minimize the impacts erosion and sedimentation have on the nearby watercourses, wetlands and on the species that live within them.

### Erosion control

Contractors will comply with the following best management practices on erosion control.

- Erosion and sediment control measures will be installed and checked regularly during the construction phase and prior to, and after, storm events to confirm they are continuing to operate properly to minimize potential effects to adjacent habitat;
- A plan for handling fill and construction materials for the site will be communicated to contractors (i.e., if stockpiling is required, materials will be stored away from any watercourse) with an intent to minimize soil stockpiled;
- Exposed soils will be stabilized as soon as practical to minimize emissions of fine particulate matter and soil erosion;
- Fill and excavated materials will not be stockpiled for long periods of time to reduce the likelihood of sedimentation.
- Fill/excavation material piles will be at low angles, if left standing for long durations;
- Weather will be monitored and additional erosion control measures such as the installation of hay bales and check dams/silt fences will be employed, as appropriate, should stockpiled fill be present in unexpected

heavy rain events;

- Work during storm events will be avoided if possible to meet Project timeline;
- Clearing will take place in the winter months on frozen ground where possible to meet Project timeline;
- Geotechnical studies have been carried out to assess the composition of the ground and bedrock;
- Steep slopes and erodible soils near watercourses or wet areas will be seeded and dry- mulched as soon as practically possible after excavation to reduce the velocity of surface runoff and increase stabilization. Native seed mixes will be used and if not available, it will be ensured that the seed mix does not contain invasive species;
- Areas susceptible to erosion will be stabilized and erosion will be minimized through the use of control measures (i.e., haybales, coco mats etc.);
- Excavations will be timed with weather forecasts to minimize open excavations during wet periods to the extent possible, which minimizes the possibility of erosion and sedimentation;
- Topsoil stockpile locations will be prepared and used as soon as available;
- A speed limit on site access roads will be enforced to help reduce soil loss;
- Existing culvert passages will be maintained;
- Slope grades will be minimized during construction. Unprotected cut or fill slopes will be stabilized by gravel or geo-textile fabric if they are deemed likely to erode;
- Clean gravel will be applied periodically to cover muddy areas along access roads; and
- Upon completion of grading activity, all lot drainage easements will be seeded and mulched. Topsoil and seed will be placed on all areas not finished with asphalt, concrete, gravel, rock, or sod.

#### Sediment control

While Erosion control measures are inherent in the design of the works and will be employed in the construction as a priority, the sediment control measures outlined here will be employed at the Project site. Contractors will be responsible and ensure that these control measures are followed. These control measures include the following:



- Contractors will perform weekly inspections of sediment control measures and make repairs as needed. Additional inspection and repair to be carried out before and after any rainfall exceeding 10mm. A log of each inspection and repair is to be kept along with a weekly report of exposed areas.
- To minimize exposed soil during construction, once excavation has begun, all work in a given area will be completed before disturbing additional soil;
- Contractor will be aware of current weather forecasts and plan soil stabilization accordingly;
- Ditches have been designed to take off water at low velocities and redirect it to vegetated areas;
- Outflows from ditches will cross dispersion berms at ~1% grade to keep flow slow;
- Culverts and ditches will be aligned to follow existing natural drainage;
- Culvert outflows will feed into stone rip rap aprons at willow grades to minimize erosion;
- Silt fences will to be employed along edges of excavations in areas where onward drainage is possible. A wood chip berm may be used in rocky areas where silt fence cannot be installed;
- Damaged erosion and sediment control measures (ex. fallen fences) will be repaired immediately;
- Accumulated sediment will be cleaned out at regular intervals after heavy rain falls;
- Straw-bale barriers, loose hay/mulch and silt curtains will be used in ditches where necessary to provide a barrier to silt movement;
- Exposed surfaces to be covered with hay, mulch, or wood chips to limit sediment runoff;
- If it is deemed necessary to limit surface run-off during construction, sediment pools will be installed and maintained. Any water with large sediment concentrations will be directed to such basins and released when appropriate;
- Contractors will ensure that all erosion and sediment control measures are in place prior to site disturbance;
- The erosion and sediment control measures will be maintained during the construction phase of the Project;

- The installation of any erosion protection materials is to be carried out by starting on the upstream side of a watercourse and progressing downstream, using clean, durable, non-ore bearing and non-toxic materials obtained from a non-watercourse source;
- Sedimentation berms and ponds will remain in service during the construction phase;
- Sedimentation berms will be removed by first leveling off berms, followed by seeding and covering exposed areas with hay before filling in ponds.

#### Monitoring program

The Environmental Monitor will inspect all sediment control barriers each week and after heavy rain events to ensure they are working as intended and fix or modify any ineffective barriers as soon as practical. During rain events, contractors will monitor culvert outflow to ensure that the rainwater does not bring excess sediment and take corrective actions, as necessary.

## Fires

The objective of this section is to reduce the risk that fires (started on site by project activities) will propagate to the surrounding vegetation and environments during the construction, operation, maintenance and decommissioning of the Project.

The mitigation measures below will help address the potential risk of fire propagation during the construction and decommissioning phases of the Project:

- Contractors and/or workers will not build or use campfires on site;
- Heavy equipment operators will be outfitted with fire suppressant equipment;
- Fire suppressant equipment will be located on site at all times during the construction phase of the project; and,

To mitigate the risk of fire propagation during the operation and maintenance phases of the Project, fire suppressant will be located inside the turbines at all times.

## Vehicular collisions

The objective of this section is to remove or reduce the risk of accidents involving vehicles on site. The mitigation measures below will help address the potential risk of vehicular collisions at the Project site:

- Vehicles and equipment will be kept in good working order;



- Workers on-site will be competent to operate their vehicles and carry out daily maintenance;
- A speed limit will be enforced to enhance safety;
- Contractor carpooling will be encouraged to reduce the number of vehicles on site;
- Vehicle idling will be discouraged;
- Vehicle traffic routes will be wide enough for the types and quantity of vehicles, and road surfaces will be kept in good condition;
- Obstructions on the road will be removed;
- If loads are being moved, they will be checked to ensure even distribution and no visibility obstruction from the driving position;
- All vehicles and machinery will be used efficiently, reducing distances travelled when possible.

## Emergency contacts

The following provides contact numbers in the case of emergencies involving worker safety, public safety and environmental emergencies.

	Contact Number	Email
<b>Natural Forces</b>		
Construction Manager	902.422.9663	abradshaw@naturalforces.ca
Senior Wind Technician	902.925-9463	jim@rmsenergy.ca
Environmental Inquires	902.422.9663	environment@naturalforces.ca
<b>Local Emergency</b>		
Fire Department	911	
Ambulance	911	
RCMP Police	911	
Colchester RCMP	902.893.6824	
Pictou RCMP	902.485.5441	
Colchester East Hants Health Centre	902.893.4321	
Aberdeen Hospital	902.752.7600	
Nova Scotia Environment - Truro Office	902.893.5880	
Nova Scotia Environment - Granton Office	902.396.4194	
Canadian Coastguard Environmental Emergencies (24-hrs Environmental Emergencies)	1.800.565.1633	
Canadian Wildlife Services	1.800.668.6767	
Special Places Program (Archaeology, Heritage)	902.424.6475	john.cormier@novascotia.ca



## **Appendix A: Spill Response Report Form**

# Spill Response Reporting Form

General information	
Date (dd/mm/yyyy)	
Contact person	
Consultant or Contractor	
Address	
City	
Postal Code	
Tel	
Email	
Details of incident	
Date of spill (dd/mm/yyyy)	
Time of spill (hh:mm)	
Weather conditions at the time of the spill	
Name of person who reported the spill	
Name of person who responded to the spill	
Type of contaminant spilled	
Description of spill (size, location, environment, source of spill, extent of contamination, etc.)	
Cause of spill	
Response to the spill (in detail)	



Names of organization, departments or local authority contacted	
Adequacy of the response (by person responsible)	
Are further steps required to remediate the land (y/n)	
If yes, describe the future plans to remediate the land that was impacted	
How was the containment collected and disposed	
Describe the steps or approach that will be implemented to prevent a reoccurrence of this incident	
Additional detail	

APPENDIX Q  
DRAFT EROSION AND SEDIMENT CONTROL PLAN

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# **DRAFT EROSION AND SEDIMENT CONTROL PLAN**

## **Clydesdale Ridge Wind Project**

**July 2024**

Clydesdale Holdings Ltd.  
1701 Hollis St Suite 1200  
Halifax, NS B3J 3M8  
[naturalforces.ca](http://naturalforces.ca)



## Introduction

The Clydesdale Ridge Wind Project (the Project) is being developed by Clydesdale Holdings Ltd. (the Proponent). The Proponent represents a partnership between Natural Forces Developments Limited Partnership (Natural Forces) and Dalhousie Mountain Wind Energy Inc. The Proponent is further partnering with Mi'kmaq bands in Nova Scotia to ultimately develop, construct, own, and operate the Project.

The Project consists of up to 18 wind turbine generators (WTGs) and is situated adjacent to the operational Dalhousie Mountain Wind Farm, which is owned and operated by an affiliate of Dalhousie Mountain Wind Energy Inc. The Project is located near Mount Thom, Earltown, Loganville, and Berichan in both Colchester County and Pictou County. The proposed WTG locations and associated infrastructure are predominantly on privately-owned lands owned by multiple landowners, with a portion of the access road and collector lines traversing provincial Crown land. The private lands are secured under Lease, Option to Lease, and Easement. The Proponent has an active application for an Easement over the provincial Crown land. Due to the rated capacity of the Project, a provincial Class 1 Environmental Assessment (EA) is required.

This document outlines the Erosion and Sediment Control Plan (ESCP or the Plan) that will be implemented during the construction and decommissioning of the Project. The finalized plan will be developed in consultation with Nova Scotia Environment and Climate Change (NSECC).

## Objective

The objective of the erosion and sediment control plan is to mitigate quantity and duration of exposed or transferred soil, as well as to mitigate potential impacts on nearby water quality. In order to deliver the finalized Plan, the Proponent will engage qualified engineers to deliver the finalized site-specific erosion and sediment control designs.

## Summary of Plan Figures

The following summary serves to provide detail to the attached drawings and the design to be finalized prior to construction.

The finalized Erosion and Sediment Control Plan will show the locations of key features of the Project and erosion and sediment control measures. This will include the turbines, turbine pads, associated roads, drainage culverts, and silt fencing design. Project-specific drawings will be provided prior to construction.

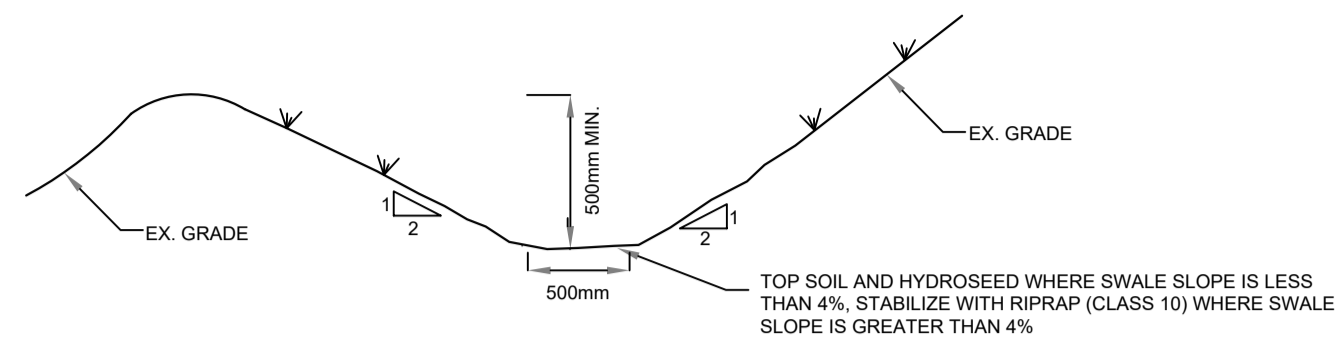
To manage surface water and prevent erosion at the site, drainage culverts will be built. These culverts will be constructed along the access roads and will direct the water into nearby streams or retention ponds. The culverts will be designed to withstand heavy rainfalls to prevent flooding.

Additionally, silt fencing will be installed. The silt fence will be placed along the project site where required to prevent sediment from entering nearby waterways during construction. The fence will be monitored regularly to ensure that it remains in good condition and is effective in containing sediment. In rocky areas, where silt fencing cannot be installed, woodchip berms will be used instead. Woodchip berms will use materials collected from vegetation clearing on site.

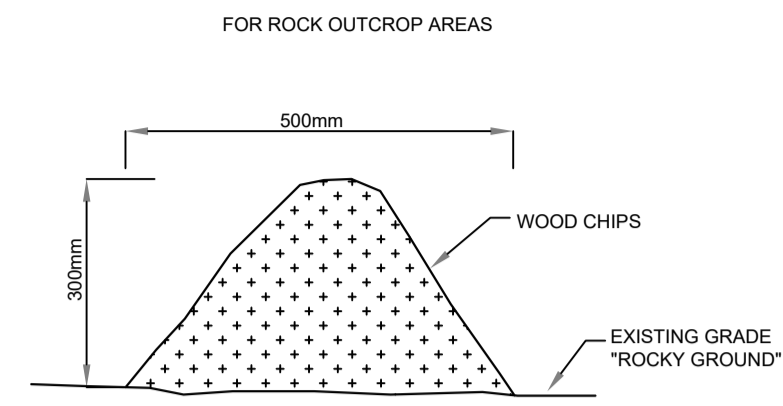
The provided drawing (ESC-02, Erosion and Sedimentation) contains detailed diagrams of erosion and sediment control strategies, culvert installation, as well as notes on general erosion and sediment control procedures.

The diagrams of erosion and sediment control strategies provide specifications for typical culverts, swales, berms, ditches and silt fencing. These designs are in accordance with NSECC requirements and will be adhered to as stringently as feasible while accounting for the terrain and topography. Project-specific drawings will be provided prior to construction.

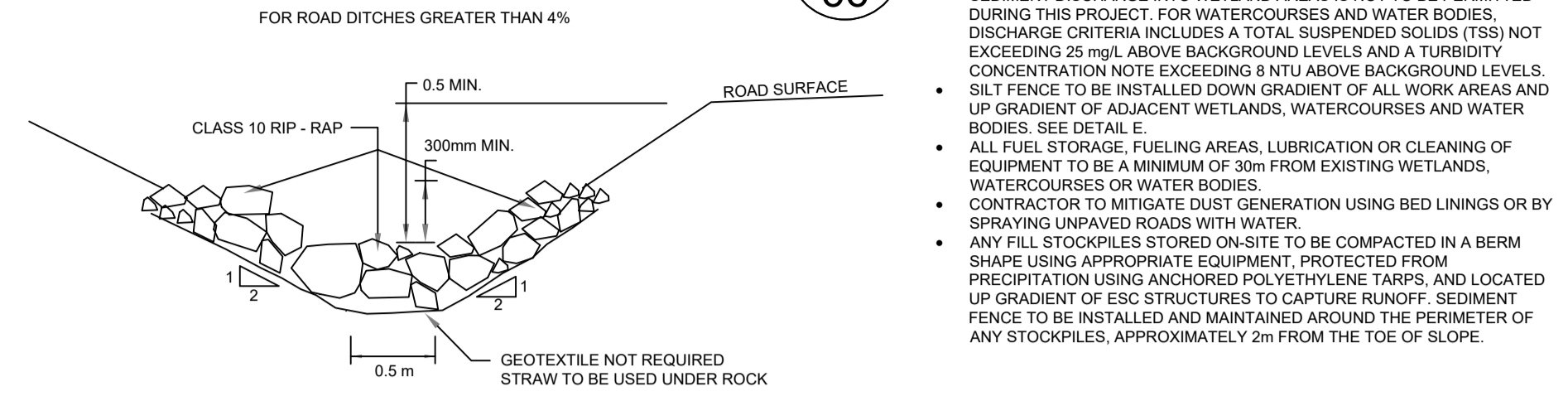
### TURBINE PAD DRAINAGE SWALE A 66



### TYPICAL WOODCHIP BERM B 66



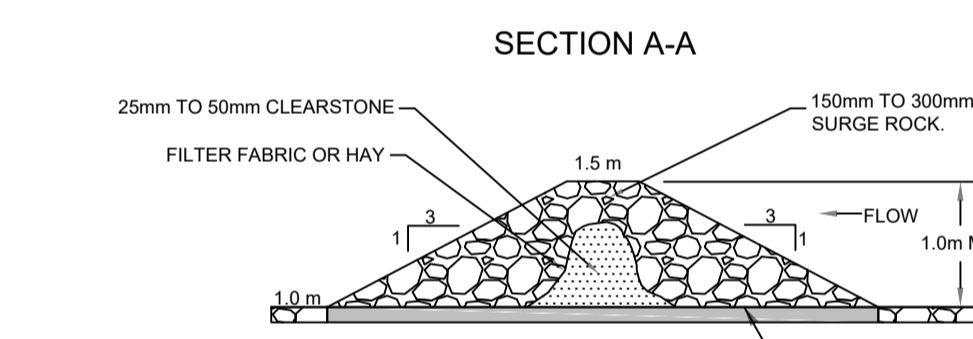
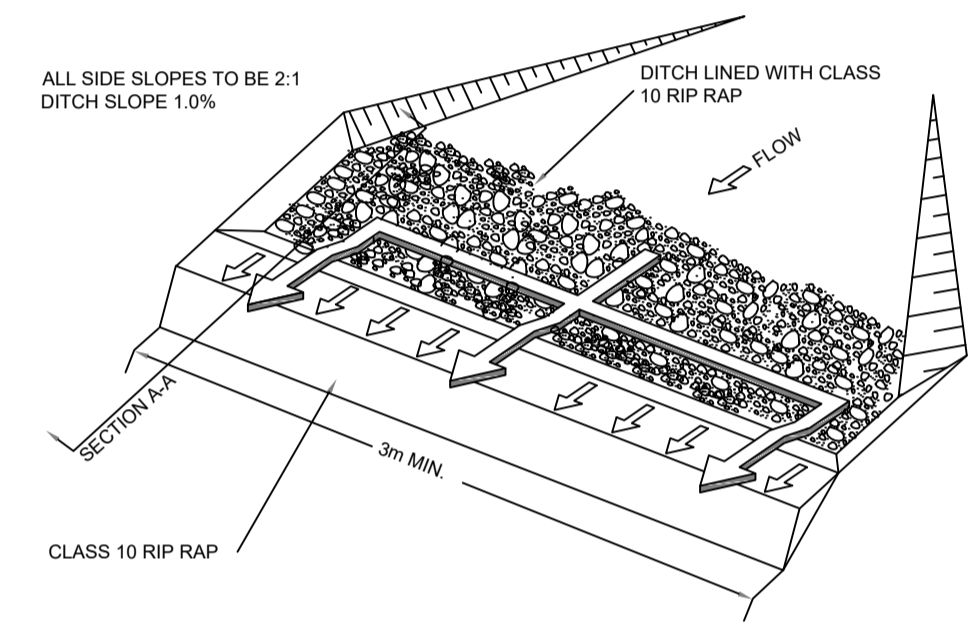
### ROCKLINED DITCH DETAIL C 66



- NOTES:**
- SEDIMENT DISCHARGE INTO WETLAND AREAS IS NOT TO BE PERMITTED DURING THIS PROJECT FOR WATERCOURSES AND WATER BODIES. DISCHARGE CRITERIA INCLUDES A TOTAL SUSPENDED SOLIDS (TSS) NOT EXCEEDING 25 mg/L ABOVE BACKGROUND LEVELS AND A TURBIDITY CONCENTRATION NOTE EXCEEDING 8 NTU ABOVE BACKGROUND LEVELS.
  - SILT FENCE TO BE INSTALLED DOWN GRADIENT OF ALL WORK AREAS AND UP GRADIENT OF ADJACENT WETLANDS, WATERCOURSES AND WATER BODIES. SEE DETAIL E.
  - ALL FUEL STORAGE, FUELING AREAS, LUBRICATION OR CLEANING OF EQUIPMENT TO BE A MINIMUM OF 30m FROM EXISTING WETLANDS, WATERCOURSES OR WATER BODIES.
  - CONTRACTOR TO MITIGATE DUST GENERATION USING BED LININGS OR BY SPRAYING UNPAVED ROADS WITH WATER.
  - ANY FILL STOCKPILES STORED ON-SITE TO BE COMPACTED IN A BERM SHAPE USING APPROPRIATE EQUIPMENT, PROTECTED FROM PRECIPITATION USING ANCHORED POLYETHYLENE TARP, AND LOCATED UP GRADIENT OF ESC STRUCTURES TO CAPTURE RUNOFF. SEDIMENT FENCE TO BE INSTALLED AND MAINTAINED AROUND THE PERIMETER OF ANY STOCKPILES, APPROXIMATELY 2m FROM THE TOE OF SLOPE.

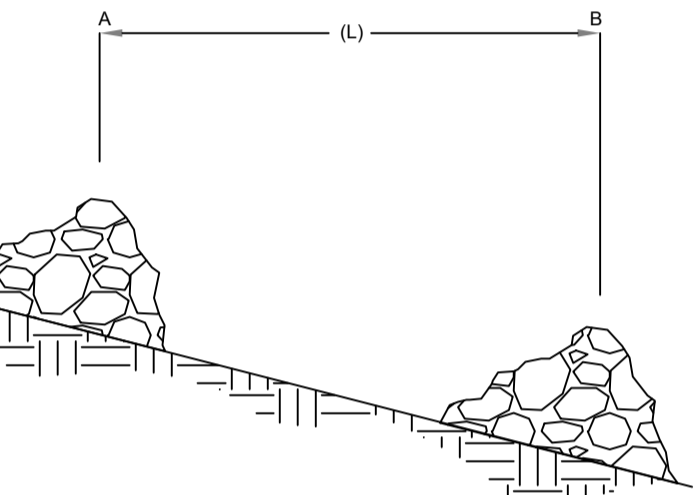
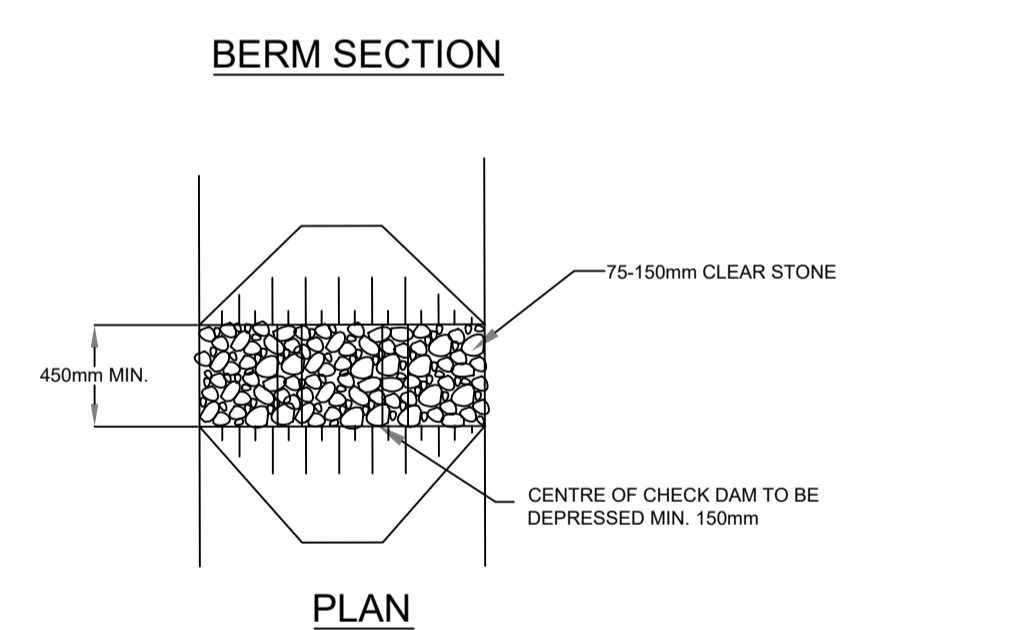
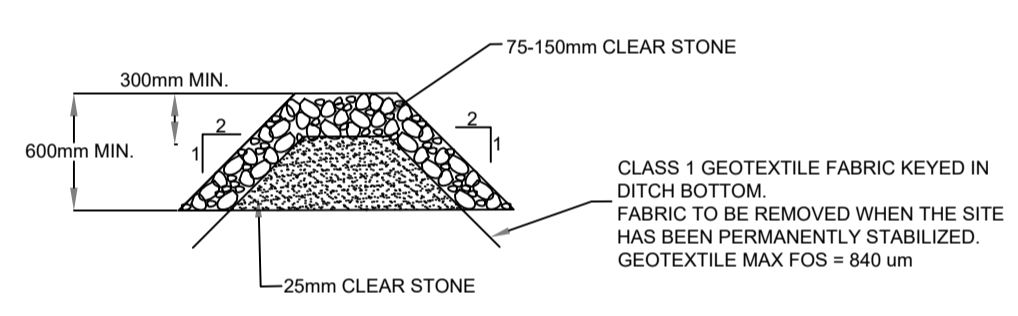
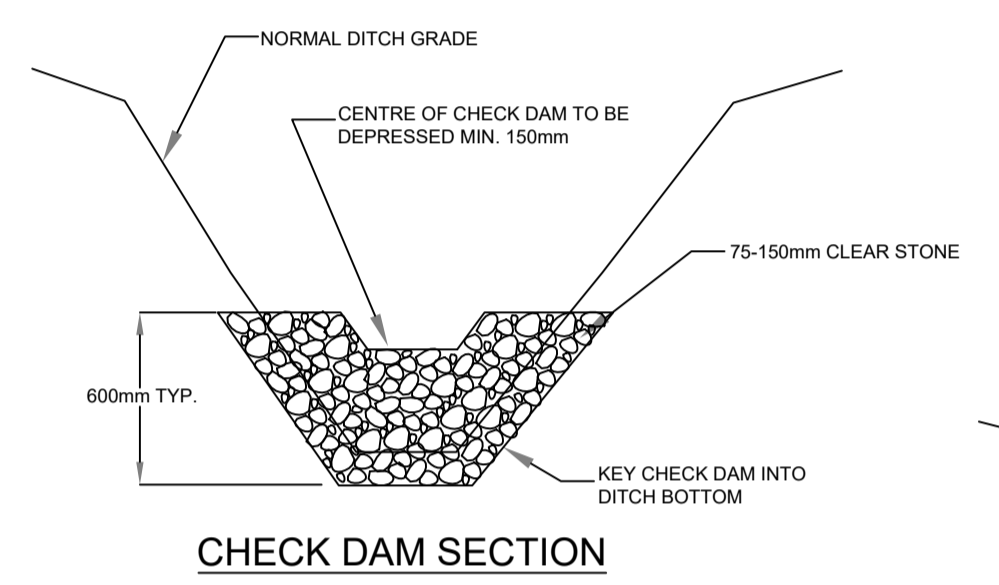
LEGEND		
EXISTING		PROPOSED
-10	MAJOR CONTOUR	-10
-10	MINOR CONTOUR	-10
- - - -	EASEMENT	- - - -
- - - -	RIGHT OF WAY	- - - -
- - - -	LOT LINE	- - - -
- - - -	SILT FENCE	- - - -
- - - -	DIVERSION DITCH	- - - -
- - - -	RUMBLE STRIP	- - - -

### DISPERSION BERM DETAIL D 66



IMPERMEABLE ON-SITE MATERIAL COMPACTED TO CREATE IMPERMEABLE BARRIER. BERM SURFACE TO BE STABILIZED IMMEDIATELY AFTER CONSTRUCTION WITH HYDROSEED AND MULCH.

### FILTER FABRIC BERM AND CHECK DAM DETAIL E 66

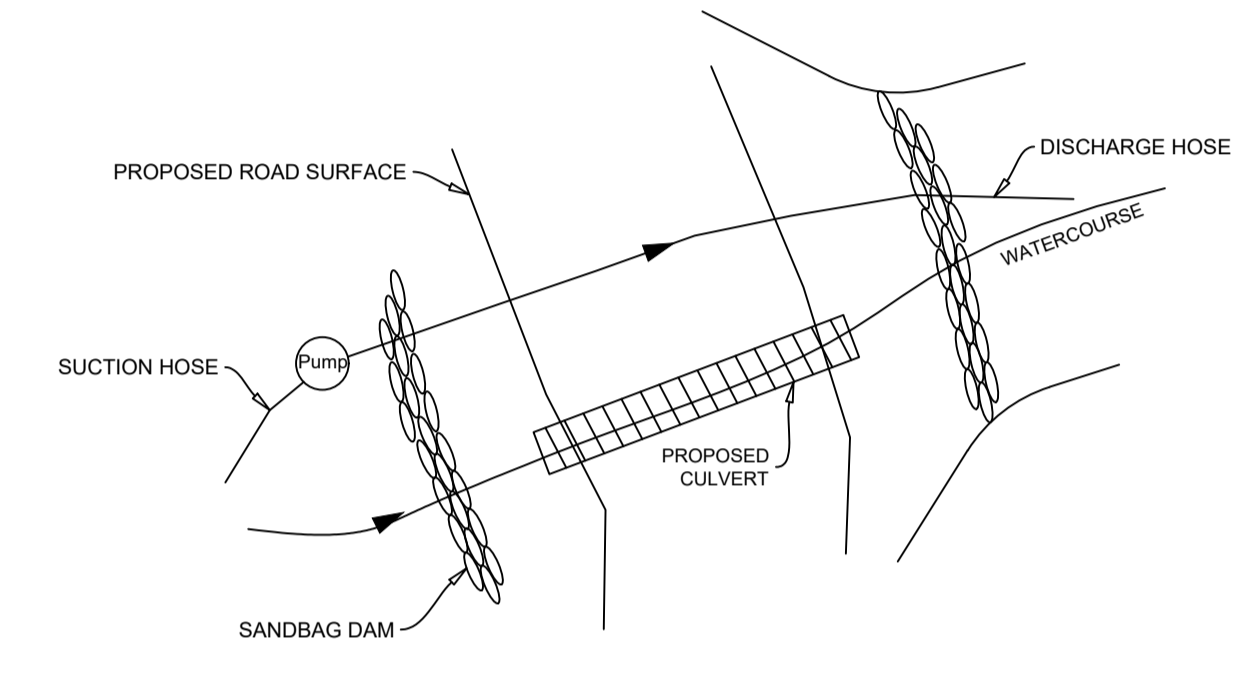


**SPACING BETWEEN CHECK DAMS**  
 DEFINITION - SMALL DAM CONSTRUCTED ACROSS A SWALE OR DRAINAGE DITCH.  
 PURPOSE - TO REDUCE THE VELOCITY OF STORM WATER FLOWS AND EROSION OF THE SWALE OR DITCH.

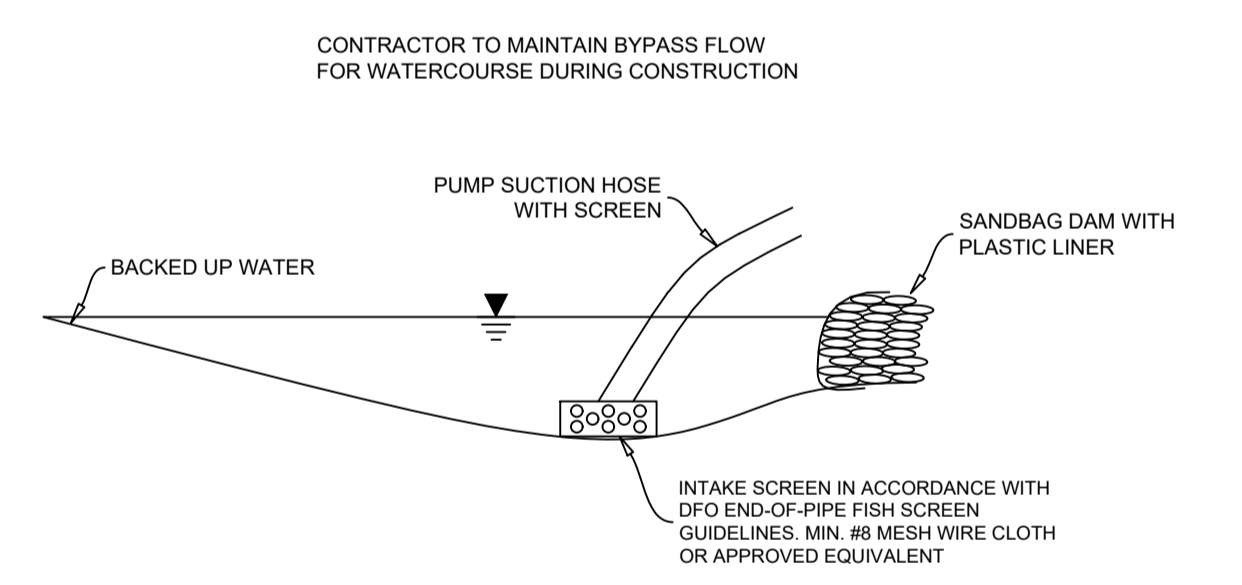
GRADE (%)	L (M)
0 - 7	40
7 - 9	20
9 - 11	10
11 - 21*	6

\* SLOPES GREATER THAN 14% MAY UTILIZE A RIP RAP LINED CHANNEL AS AN ALTERNATIVE TO CHECK DAMS

### CULVERT INSTALLATION DETAIL F 66

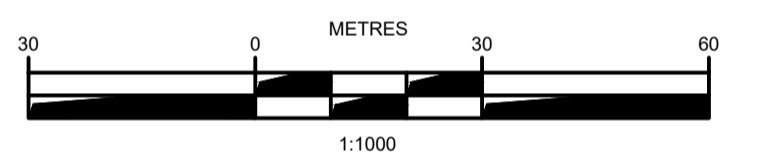


### PUMP INTAKE DETAIL G 66



CONTRACTOR TO MAINTAIN BYPASS FLOW FOR WATERCOURSE DURING CONSTRUCTION

**DRAFT**  
NOT FOR CONSTRUCTION



ISSUE	DATE	DESCRIPTION
1	MAR. 06, 2023	ISSUED FOR REVIEW

**DESIGNPOINT**  
engineering • surveying • solutions

902.832.5597 designpoint.ca



CLIENT

**natural forces**  
Delivering renewable energy for communities

PROJECT DESCRIPTION

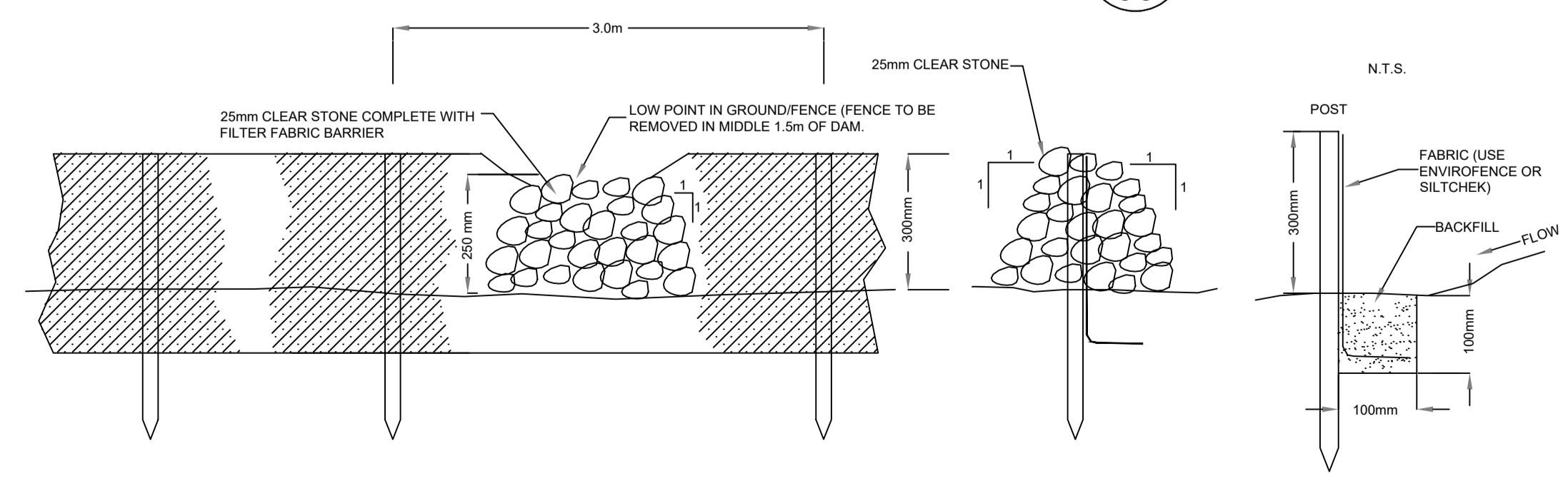
WINDFARM

BENJAMINS MILL, NOVA SCOTIA  
SHEET DESCRIPTION

EROSION AND SEDIMENTATION

Drawn J. MORRISSEY	Engineer N. FOUGERE	Project No. 22-411	Drawing No. ESC-02
Scale AS NOTED	Filename 22-411_ESC.dwg		66 of 67

### TYPICAL SILT FENCE DETAIL H 66



#### GENERAL EROSION AND SEDIMENT CONTROL NOTES

- EXPOSED SOIL TO BE MINIMIZED AT ALL TIMES DURING CONSTRUCTION TO LIMIT SEDIMENT LADEN RUNOFF. THIS IS TO BE ACCOMPLISHED BY COMPLETING ALL WORK IN A GIVEN AREA ONCE EXCAVATION HAS BEGUN BEFORE DISTURBING ADDITIONAL SOIL. CONTRACTOR IS TO BE AWARE OF CURRENT WEATHER FORECASTS AND PLAN SOIL STABILIZATION ACCORDINGLY.
- ALL WORKS TO BE IN ACCORDANCE WITH NOVA SCOTIA DEPARTMENT OF ENVIRONMENT REQUIREMENTS.
- CONTRACTOR TO ACQUIRE ALL PERMITS REQUIRED TO PERFORM WORK AND TO COMPLY WITH ALL PERMIT REQUIREMENTS DURING CONSTRUCTION.
- CONTRACTOR TO PROTECT NATURAL WATERCOURSES FROM SILT LADEN RUNOFF FROM CONSTRUCTION SITE. CONSTRUCTION PROCEDURES CAN BE FOUND IN THE CURRENT EDITION OF "EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR CONSTRUCTION SITES" BY THE NOVA SCOTIA DEPARTMENT OF ENVIRONMENT.
- CONTRACTOR TO ENSURE THAT ALL EXPOSED AREAS ARE STABILIZED PRIOR TO RAINFALL EVENTS BY CHECKING ENVIRONMENT CANADA FORECASTS ([https://weather.gc.ca/canada\\_e.html](https://weather.gc.ca/canada_e.html)).
- CONTRACTOR TO PERFORM WEEKLY INSPECTIONS OF SEDIMENT CONTROL MEASURES AND MAKE REPAIRS AS NEEDED. ADDITIONAL INSPECTION AND REPAIR TO BE CARRIED OUT BEFORE AND AFTER ANY RAINFALL EXCEEDING 10mm. A LOG OF EACH INSPECTION AND REPAIR IS TO BE KEPT ALONG WITH A WEEKLY REPORT OF EXPOSED AREAS.
- TRIBUTARY STORM RUNOFF FROM SITE TO BE DIRECTED INTO SEDIMENT CONTROL DEVICES DURING CONSTRUCTION.
- CONTRACTOR TO CONSTRUCT AND MAINTAIN DIVERSION DITCHES THROUGH AND AROUND THE SITE TO MINIMIZE CONTAMINATION OF CLEAN WATER.
- CONTRACTOR TO HAVE ADDITIONAL SEDIMENT CONTROL MEASURES ON SITE INCLUDING SILT FENCE, BALED HAY, AND LOOSE HAY/MULCH TO MAINTAIN OR INSTALL CONTROL MEASURES AS REQUIRED.
- EXPOSED SURFACES TO BE COVERED WITH HAY, MULCH, OR WOOD CHIPS TO LIMIT SEDIMENT RUNOFF.
- CONTRACTOR MAY SUBSTITUTE WOOD CHIP BERM FOR SILT FENCE IN ROCKY AREAS WHERE SILT FENCE CANNOT BE INSTALLED.
- SEDIMENTATION BERMS AND PONDS TO REMAIN IN SERVICE UNTIL PROJECT ENGINEER OR THE MUNICIPALITY REQUESTS THEIR REMOVAL. THIS WILL ONLY OCCUR AFTER LOT AND BUILDING CONSTRUCTION IS COMPLETE.
- SEDIMENTATION BERMS AND PONDS TO BE REMOVED IN THE FOLLOWING ORDER. LEVEL OFF BERMS, HYDROSEED AND COVER ALL EXPOSED AREAS WITH HAY, THEN FILL IN PONDS.
- UPON COMPLETION OF GRADING ACTIVITY, ALL LOT DRAINAGE EASEMENTS ARE TO BE HYDROSEED AND MULCHED.
- TOPSOIL AND HYDROSEED TO BE PLACED ON ALL AREAS NOT FINISHED WITH ASPHALT, CONCRETE, GRAVEL, OR SOD.
- ACCESS ROADS TO SITE ARE TO BE MAINTAINED WITH CLEAN GRAVEL APPLIED PERIODICALLY TO COVER MUDDY AREAS. CLEANING OF ADJACENT STREETS IS THE RESPONSIBILITY OF THE CONTRACTOR AS DIRECTED BY THE ENGINEER.
- VEHICLE ACCESS TO CONSTRUCTION SITE TO BE RESTRICTED.
- STABILIZE ON-SITE STOCKPILES USING APPROPRIATE MEASURES (SILT FENCE, HAY, TARPS, ETC.)
- SITE ACTIVITY TO ADHERE TO REQUIREMENTS OF HALIFAX REGIONAL MUNICIPALITY GRADE ALTERATION BY-LAW.
- ALL SEDIMENT CONTROL MEASURES TO BE OPERATIONAL OVER ENTIRE CONSTRUCTION PERIOD.
- SEDIMENTATION AND EROSION CONTROL MEASURES ARE SUBJECT TO CHANGE. ADDITIONAL MEASURES MAY BE REQUIRED DEPENDING ON SITE CONDITIONS DURING CONSTRUCTION.



APPENDIX R  
ENVIRONMENTAL MANAGEMENT AND PROTECTION PLAN

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# ENVIRONMENTAL MANAGEMENT AND PROTECTION PLAN

Clydesdale Ridge Wind Project

—

July 9, 2024

—

Clydesdale Holdings Ltd.  
1701 Hollis St Suite 1200  
Halifax, NS B3J 3M8  
[naturalforces.ca](http://naturalforces.ca)

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## Appendices

Appendix A: Spill Response Report Form

Appendix B: Complaint Resolution Plan

# 1 Introduction

The Clydesdale Ridge Wind Project (the Project) is being developed by Clydesdale Holdings Ltd. (the Proponent). The Proponent represents a partnership between Natural Forces Developments Limited Partnership (Natural Forces) and Dalhousie Mountain Wind Energy Inc. The Proponent is further partnering with Mi'kmaq bands in Nova Scotia to ultimately develop, construct, own, and operate the Project.

The Project consists of up to 18 wind turbine generators (WTGs) and is situated adjacent to the operational Dalhousie Mountain Wind Farm, which is owned and operated by an affiliate of Dalhousie Mountain Wind Energy Inc. The Project is located near Mount Thom, Earltown, Loganville, and Berichan in both Colchester County and Pictou County. The proposed WTG locations and associated infrastructure are predominantly on privately-owned lands owned by multiple landowners, with a portion of the access road and collector lines traversing provincial Crown land. The private lands are secured under Lease, Option to Lease, and Easement. The Proponent has an active application for an Easement over the provincial Crown land.

This document details the Environmental Management and Protection Plan (EMPP) for the construction, operation, maintenance, and decommissioning of the Project. The Proponent aims to address potential impacts that the Project may have on valued ecological components.

This EMPP specifically includes management plans and mitigation measures for:

- i. Air quality;
- ii. Fire management;
- iii. Domestic waste management;
- iv. Hazardous waste management;
- v. Spill contingency;
- vi. Wetland protection;
- vii. Watercourse and water quality protection;
- viii. Erosion and sedimentation control;
- ix. Wildlife interactions;
- x. Invasive Species Management
- xi. Sound management;
- xii. Visual impacts;
- xiii. Archaeological Resources and,
- xiv. Emergency Response.



The EMPP is produced by the Proponent for the Project. Any amendments will be issued by the Proponent, which will be responsible for providing amendments to all contractors.

## **1.1 Environmental Management and Protection Plan Objective**

This EMPP serves to guide all contractors during the construction phase of the Project to avoid and/or minimize potential environmental impacts associated with the proposed works. It is the contractors' responsibility to familiarize themselves with the document and ensure that all works are undertaken in an environmentally safe and responsible manner, in compliance with all relevant Provincial, Federal, and Municipal laws, bylaws and regulations. The EMPP also serves as a guide to avoid and/or minimize environmental impacts throughout the operation, maintenance, and decommissioning phases of the Project.

## **1.2 Project Description**

The Project being developed by the Proponent consists of:

- Up to 18 wind turbine generators
- Upgrades to existing access roads;
- New access roads;
- An overhead electrical collection system;

## **1.3 Scope of Work**

The scope of the EMPP includes the construction, operation, maintenance and decommissioning of the Project. Activities proposed for these four phases are further described in the sections below.

### **1.3.1 Construction work**

The construction of the Project consists of the installation of up to 18 WTGs, WTG foundations, 34.5 kV overhead electrical system, access roads, equipment laydown areas, crane pads, on-site substation, and an interconnection line.

There will be five main work packages for the construction of this Project:

1. The tree clearing works will include the following:
  - a. Surveying and staking roads and areas for tree clearing;
  - b. Clearing all trees from desired roadways, crane pads, laydown areas, component assembly areas, crane assembly areas, substation footprint; and
  - c. Proper management of removed vegetation.
2. The civil works will mainly consist of the following:

- a. Construction of site roads, crane pads, and component assembly areas, which may require blasting;
  - b. Excavation, sand placement and backfilling of cable trenching (in cooperation with the Electrical BOP Contractor); and
  - c. Reinstatement of all excavated areas using reserved topsoil, hay and native vegetation species where necessary.
3. The wind turbine foundation works will include the following:
    - a. Design of wind turbine foundations (design and construction done by separate contractors);
    - b. Excavation works for turbine foundations;
    - c. Construction of turbine foundations, which may require a concrete batch plant on site; and
    - d. Backfilling post construction of reinforced concrete turbine foundations.
  4. The WTG works will include the following:
    - a. Pre-assembly works;
    - b. Erection of WTG towers; and
    - c. Install and commission the wind turbines and SCADA system.
  5. The electrical works will consist of the following:
    - a. Design of the electrical works;
    - b. Installation of site cabling including the overhead 34.5kV collection system, WTG and trench grounding, and placing and terminating all the cables; and,
    - c. Connection to existing site substation and interconnection to existing grid, and commissioning of the electrical works.

### **1.3.2 Operation & Maintenance work**

Once the Project is commissioned, minimal vehicle activity will be required. The access road will be used for periodic maintenance and safety checks. A comprehensive SCADA system will be installed for remote monitoring and control of the WTGs, which will minimize the need for on-site personnel. The SCADA system ensures safe and efficient operation of the WTGs.

Scheduled maintenance work will be carried out several times each year throughout the operational phase as well as routine site visits. Unscheduled maintenance is minimal as the SCADA system allows 24-hour monitoring of the Project by the manufacturer and the operations team at Natural Forces. Maintenance procedures may require use of small or large cranes for brief periods of time for replacement of blades or other turbine components.

### 1.3.3 Decommissioning work

The Project will be in operation for approximately 25 years. The lifetime is based on the duration of the Power Purchase Agreement (PPA) signed between Nova Scotia Power and the Proponent.

Decommissioning will commence within six to twelve months after the PPA has been terminated unless otherwise decided by the Proponent. Should the operational phase of the Project extend past 25 years, applicable permits will be obtained at that time.

Similar traffic movements to those experienced during the delivery of the turbine components are anticipated during this phase; however, overall decommissioning will require considerably lower vehicle support than during the construction phase. The following four steps are anticipated:

1. The WTGs will be dismantled and removed from the site for scrap or resale. Based on landowner agreements, the foundation may be removed to below plough depth and/or covered over with overburden. The stockpiled topsoil will be releveled so that the land may be returned to its former use. The substation will be dismantled and removed from the site for scrap or resale.
2. The internal site roads and site entrance may be removed if required. After removal, they will be returned to its former use.
3. The underground cables will be below plough depth and contain no harmful substances. They may be recovered if economically valuable or left in the ground. Terminal connections will be cut back below plough depth.
4. All other equipment, including overhead collector lines and the substation, will be dismantled and removed, and the land will be returned to its former use.

## 1.4 Project Timeline

The timeline for the construction of the Project is outlined in the table below. This schedule is subject to change as necessary to account for unforeseeable events, weather, and delays.



Phase	Activity Start Date
<b>Planning, Site Preparation and Construction, Site Restoration</b>	
Clearing and Grubbing	Q1 2025
Access Road and Laydown Area	Q3 2025
Crane Pad Construction	Q1 2026
Turbine Foundation	Q2 2026
Electrical Infrastructure	Q2 2026
Turbine Installation	Q3 2026
Commissioning	Q3 2027
Removal of Temporary Works and Site Restoration	Q4 2027
<b>Operation and Maintenance</b> - Turbine Operation - Inspection and Maintenance	<b>Q4 2027 - Operations end (estimated 25+ years after commissioning)</b>
<b>Decommissioning, Infrastructure Removal and Site Reclamation</b>	<b>Estimated 25+ years after commissioning</b>

## 2 Potential Environmental Impacts and Mitigation

The following section addresses the potential impacts on different valued environmental components relevant to the construction, operation, maintenance and decommissioning of the Project. From the list of potential impacts, mitigation measures were identified to avoid and/or minimize the impacts on the valued environmental components. All staff and contractors on site will be familiarized with the potential impacts and mitigation measures outlined in this document.

### 2.1 Air quality

#### 2.1.1 Potential Impacts

Air quality can have a detrimental effect on the environment by posing the potential risk of creating difficult breathing conditions, coating the vegetation with dust and being ingested by wildlife.

#### 2.1.2 Objective

The objective of this section of the EMPP is to reduce the amount of fugitive dust, primarily total suspended particles, created during the construction, operation, maintenance and decommissioning of the Project.

## **2.1.3 Management and Mitigation Measures**

The mitigation measures below will help address the potential risk of a reduction in air quality surrounding the site. Following these measures will also reduce the risk of accidents involving vehicles on site:

- Vehicles and equipment will be kept in good working order;
- Workers on-site will be competent to operate their vehicles and carry out daily maintenance;
- The contractor will enforce a speed limit to reduce unnecessary emissions and enhance safety;
- Contractor carpooling will be encouraged to reduce the number of vehicles on site;
- All vehicles and machinery will comply with current emission standards and will be used efficiently, reducing distances travelled when possible;
- Vehicle idling will be discouraged;
- Vehicle traffic routes will be wide enough for the types and quantity of vehicles, and road surfaces will be kept in good condition;
- Obstructions on the road will be removed when possible;
- If loads are being moved, they will be checked to ensure even distribution and no visibility obstruction from the driving position;
- Low sulphur fuel will be used in combustion engines, when possible; and,
- The contractor will mitigate dust generation using bed linings or by spraying unpaved roads with water or an environmentally benign alternative.

## **2.2 Fire management**

### **2.2.1 Potential Impacts**

Fire hazards may occur on site and can have a detrimental effect on the vegetation and wildlife that surround the Project site.

### **2.2.2 Objective**

The objective of this section is to reduce the risk that fires (started on site by project activities) will propagate to the surrounding vegetation and environments during the construction, operation, maintenance and decommissioning of the Project.

### **2.2.3 Mitigation Measures**

The mitigation measures below will help address the potential risk of fire propagation during the construction and decommissioning phases of the Project:

- Contractors and/or workers will not build or use campfires on site;
- Heavy equipment operators will be outfitted with fire suppressant equipment;
- Fire suppressant equipment will be located on site at all times during the construction phase of the project; and,
- To mitigate the risk of fire propagation during the operation and maintenance phases of the Project, fire suppressant will be located inside the WTGs at all times.

## **2.3 Domestic Waste Management**

### **2.3.1 Potential Impacts**

Domestic waste can have a detrimental effect on the environment by posing the potential risk of being ingested by wildlife, polluting watercourses and wetlands, and attracting wildlife to the site.

Domestic waste will be defined as waste generated during the construction, operation, maintenance and decommissioning of the Project and may include:

- Day-to-day waste (ex. paper, cardboard, plastics, food); and
- Construction activities waste (scrap steel, scrap cable, metals, wood debris, surplus concrete and excess soils from cleared areas).

### **2.3.2 Objective**

The objective of this section of the EMPP is to reduce the amount of domestic waste found at the site during the construction, operation, maintenance and decommissioning of the Project and ensure it is properly disposed.

### **2.3.3 Management and Mitigation Measures**

The mitigation measures below will help address the potential risk of domestic waste on site throughout all phases of the Project.

- Contractors will ensure that the Project area remains clear of waste, and that adequate waste and disposal facilities are provided;
- All waste bins will be kept securely closed to not attract rodents, bugs or other wildlife;
- The collection and disposal of waste will be carried out on an appropriate frequency to keep pace with waste generation;
- Limbs and timber will be chipped and/or crushed and disposed of at the site;
- Non-combustible material, such as overburden and rock, will be disposed of where their use as fill material is impractical; and,
- Waste disposal areas, in accordance with regulatory guidelines, will be located away from rivers, watercourses or wetlands.



## 2.4 Hazardous Material and Waste Management

### 2.4.1 Potential impacts

Exposure or accidental spillage of hazardous materials or wastes might affect employee health and safety, contaminate soils, surface and groundwater, and endanger vegetation and wildlife.

### 2.4.2 Objective

The objective is to avoid hazardous material disposal into the environment and manage their impact if they are released into the surrounding area. Possible hazardous materials present on site are:

- Fuel;
- Waste concrete;
- Lubricants and oils;
- Paints and solvents;
- Hydraulic fluids; and
- Sewage.

### 2.4.3 Mitigation Measures

The mitigation procedures below are modelled on the *Workplace Hazardous Materials Information System (WHMIS)* program, which outlines best management strategies in proper handling, storage, disposal and control of hazardous materials.

Hazardous materials (e.g., fuels, lubricants, hydraulic oil) and Hazardous wastes (e.g., sewage, waste oil) will be managed to minimize the risk of chronic and/or accidental releases.

Hazardous petroleum wastes are classified as deleterious and their disposal into the environment and water is illegal. The contractors will ensure that the following efforts are taken to minimize and mitigate potential impacts from accidental waste spillage:

- Equipment will be kept in good working order and maintained so as to reduce risk of spills/leaks and to avoid water contamination;
- Spill response kits will be readily available for each piece of equipment, on site workers are required to be knowledgeable on emergency spill response protocols and initiate corrective measures immediately to minimize any impacts to the surrounding environment;
- If contaminated soil is encountered, it will be reported to Nova Scotia Environment and Climate Change (NSECC) and managed utilizing the Nova Scotia Contaminated Site Regulations.

- Refueling, oiling, and maintenance of equipment will be completed in specifically designated areas located at least 30 m away from any watercourse, wetland, or well to minimize potential effects that could arise in the event of a spill;
- Frequent inspection of equipment will minimize the likelihood of fluids leaking into wetlands;
- Chemicals and petroleum products will be managed in accordance to manufacturer specifications and stored more than 30 m from a watercourse or wetland;
- Where applicable, secondary containment and limited quantities of chemicals and fuels required to be stored on site will be in an area away from the surrounding terrestrial environment, or direct pathways (i.e., ditches) to the surrounding environment, all chemicals and fuels will be stored in appropriate containers designed for the reduction of potential spills or leaks;
- Oily rags will be stored in adequate receptacles and disposed of in adequate waste facilities;
- If fuel storage is required onsite, double walled fuel storage tanks will be required;
- All potentially hazardous materials present on site will be handled, labeled, and stored responsibly to avoid any spillage or contamination;
- Work entailing use of toxic or hazardous materials, chemicals, or otherwise creating hazard to life, safety of health, will be conducted in accordance with National Fire Code of Canada to minimize the potential for spills or fires;
- Portable toilets will be located at least 30m away from any watercourses, wetlands or environmentally sensitive areas, and the sewage will be disposed of at an approved facility;
- Waste and excess concrete will be disposed of as per environmentally accepted industry standards;
- Used oil filters, grease cartridge containers and other products associated with equipment maintenance will be collected and disposed of in accordance with regulatory guidelines;and
- Fuel and hydraulic systems on all equipment will be inspected daily to ensure there are no leaks. All leaks discovered will be repaired as soon as practically possible.

## 2.5 Spill Contingency Planning

### 2.5.1 Potential Impacts

Potential impacts to soil, surface water and ground water could occur during the construction, operation, maintenance and decommissioning of the Project due to spills.

### 2.5.2 Objective

This contingency plan reflects on potential accidents and malfunctions during project work. The Canadian Standards Association publication, *Emergency Preparedness and Response*, was used in developing this plan that will aim to contain spills should they occur despite using the approaches discussed in this EMPP. This plan was also developed following Nova Scotia Environment and Climate Change's *Contingency Planning Guidelines*.

### 2.5.3 Spill Response Procedures

Contractors will prepare contingency responses and have associated equipment available on site. They will ensure spill kits accompany each piece of heavy equipment / machinery and that there are adequate supplies in each kit to address any spills that could occur on the ground, in surface water or in groundwater. All spills or leaks such as those from machinery or storage tanks must be promptly contained, cleaned up and reported. Spill reporting thresholds will follow the Nova Scotia Environmental Emergency Regulations under the Environment Act . Within a week of the accidental spill or leakage, a report will be submitted to Nova Scotia Environment by the Proponent, if required. As demonstrated in the spill response report form included as **Appendix A**, the report will outline:

- The cause of the release;
- Adequacy of the response to the release by the persons responsible;
- Plans to remediate land that was directly impacted;
- Manners of collection and dispose of the contaminant; and
- Plans to prevent a reoccurrence of the unauthorized release.

### 2.5.4 Emergency contacts

If a spill occurs, corrective measures will be implemented immediately and reported in accordance with Environmental Emergency Regulations. All accidental spills and leaks that require reporting will be reported to Nova Scotia Environment local office (Colchester: Truro) at 902-893-5880 or (Pictou: Ganton) at 902-396-4194 during business hours and the Emergency Response line at 1-800-565-1633 at any time.



## **2.6 Wetland Protection**

### **2.6.1 Potential Impacts**

Impact to wetlands would potentially occur during clearing, grubbing and excavation activities. Such activities might induce silt run-off, alter flow into the wetlands or see them become repositories of significantly increased water flow, nutrients, or sediments.

### **2.6.2 Objective**

Wetlands have been mapped by a certified wetland specialist, and the Project has been carefully designed to minimize impact to the extent possible. The objective is to protect wetlands from potential impacts.

### **2.6.3 Mitigation Measures**

During construction of the roads, the contractor shall employ all mitigation measures shown in this EMPP to ensure ditches direct surface water from the road away from the wetlands, maintain a silt fence between the wetland and any disturbance areas, and install effective drainage structures. Contractors must adhere to the conditions of required wetland alteration permit conditions.

- Through the site selection process, the Project footprint has been sited predominantly in areas previously disturbed via clear cutting through forestry activities, creating a highly fragmented habitat and the project footprint is limited, to the extent possible, in areas of undisturbed habitat;
- Field assessments have been completed to ensure unmapped wetlands are delineated;
- The Project footprint will be limited to that which is necessary to enable the Project to be carried out;
- A wetland alteration permit will be applied for and obtained for work in any wetland, noting that work within wetlands has been avoided or minimized to the extent possible during the Project design phase;
- Appropriate sediment erosion and run-off control measures (described in Section 3.8) will be implemented, following best management practices, to prevent sediment from leaving the site at all times;
- A silt fence will be installed down gradient of all work areas and up gradient of adjacent wetlands, watercourses and waterbodies;
- Upon completion of construction, modification, or maintenance work in wetlands, all debris resulting from the work will be removed from the work site;
- Sediment discharge into wetland areas is not to be permitted during this project. For watercourses and water bodies, discharge criteria includes a total suspended solids (TSS) not exceeding 25 mg/l above background

levels and a turbidity concentration note exceeding 8 ntu above background levels; and

- Natural regeneration of the site will be promoted to aid in storm water retention and reduce run-off.

## **2.7 Watercourse and Water Quality Protection**

### **2.7.1 Potential Impacts**

Improper water crossings can result in permanent diversion restriction or blockage of natural drainage, or have the potential to impact surface water quality, quantities, or flow.

### **2.7.2 Watercourses**

Watercourses have been delineated and assessment by a certified watercourse specialist, and the Project has been designed to minimize impact in these areas.

### **2.7.3 Mitigation Measures**

Contractors will comply with the following best management practices on watercourse and water quality protection and must adhere to the conditions of required watercourse alteration permit conditions.

- Construction activities near watercourses will comply with the applicable regulations and guidelines such as the Fisheries Act and will be carried out strictly in accordance with NSECC and DFO Approvals, Terms and Conditions, and Letters of Advice;
- The following activities will take place at a minimum distance of 30 metres from a watercourse or wetland in an area such that a release will not enter a surface watercourse or wetland: Fuel storage, refueling, and/or lubrication of equipment; Washing of machinery or equipment; and Storage of equipment, excavated material, and potential contaminants.
- If sulphide bearing materials are encountered during construction, it will be reported in accordance with Environmental Emergency Regulations. Sulphide encounters will be reported to Nova Scotia Environment local office (Colchester: Truro) at 902-893-5880 or (Pictou: Ganton) at 902-396-4194 during business hours and the Emergency Response line at 1-800-565-1633 at any time. If required, a management plan for sulphide bearing material will be developed and implemented in consultation with NSECC;
- Access roads upgrades have been designed to minimize impact to the local hydrological environment;

- Drainage culverts will be built to manage surface water and prevent erosion on site, being constructed along the access roads and will direct the water into the nearby streams or retention ponds;
- The contractor will construct and maintain diversion ditches through and around the site to minimize contamination of clean water.
- A setback distance of 30 m between the site works and wetlands or watercourses will be implemented unless required by the design of the Project;
- Work in streams and riparian areas will follow industry best practices, as well as follow any conditions established through watercourse permit approvals;
- Vehicle and equipment cleaning will occur away from any watercourse or wetland; and
- Where water must be pumped out of excavation pits, it will not be discharged into a wetland, watercourse or defined channel. If pumped water contains total suspended solids the water will be pumped to vegetated land with gentle slope to allow sediment to filter, or the water will be filtered before release with a filter bag.

## **2.8 Erosion and Sediment Control**

### **2.8.1 Potential Impacts**

The mitigation measures below are to minimize the quantity and duration of exposed or transferred soil, as well as to mitigate potential impacts on nearby water quality.

### **2.8.2 Objective**

The Proponent acknowledges that proper erosion and sedimentation control is necessary to maintain water quality and reduce environmental impact on the Project area. The mitigation measures will be implemented based on industry best practices. Measures are intended to minimize the impacts erosion and sedimentation have on the nearby watercourses, wetlands and on the species that live within them. While erosion control measures are inherent in the design of the works and will be employed in the construction as a priority, the sediment control measures outlined here will be employed at the Project site.

### **2.8.3 Mitigation Measures**

Contractors will be responsible and ensure that these control measures are followed. These control measures include the following:

- Contractor to acquire all permits required to perform work and to comply with all permit requirements during construction;



- Site activity will adhere to municipal by-laws and requirements in Colchester and Pictou counties;
- Any silted water pumped from work areas will be directed to vegetated areas, settling ponds, or other treatment devices that mitigate the risk of release of sediment to a water resource;
- Geotechnical studies will be carried out to assess the composition of the ground and bedrock;
- The contractor will protect natural watercourses from silt laden runoff from construction site. Construction procedures can be found in the current edition of "Erosion and Sedimentation Control Handbook for Construction Sites" by NSECC;
- Road design and drainage will be designed to minimize water ponding on roads;
- The contractor will perform weekly inspections of sediment control measures and make repairs as needed. Additional inspection and repair will be carried out before and after any rainfall exceeding 10mm. A log of each inspection and repair will be kept along with a weekly report of exposed areas;
- All sediment control measures to be operational over entire construction period;
- Stockpiles on-site will be stabilize using appropriate measures (e.g., silt fence, hay, tarps, etc.);
- A plan for handling fill and construction materials for the site will be communicated to contractors (i.e., if stockpiling is required, materials will be stored away from any watercourse) with an intent to minimize soil stockpiled;
- Exposed soils will be stabilized as soon as practical to minimize emissions of fine particulate matter and soil erosion;
- Fill and excavated materials will not be stockpiled for long periods of time (one month) to reduce the likelihood of sedimentation and will be at low angles if left standing for long durations;
- The contractor will be aware of current weather forecasts and plan soil stabilization accordingly;
- The contractor will ensure that all exposed areas are stabilized prior to rainfall events by checking Environment Canada forecasts ([https://weather.gc.ca/canada\\_e.html](https://weather.gc.ca/canada_e.html));
- Work during storm events will be avoided if possible to meet Project timeline;
- Tributary storm runoff from site to be directed into sediment control devices during construction;
- Where possible, clearing will take place in the winter months on frozen ground;
- Exposed surfaces to be covered with hay, mulch, or wood chips to limit sediment runoff;

- Upon completion of grading activity, all lot drainage easements are to be seeded and mulched;
- Topsoil and seed to be placed on all areas not finished with asphalt, concrete, gravel, rock or sod. Native seed mixes will be used if possible. If not possible, it will be ensured that the seed mix does not contain invasive species;
- Contractor to have additional sediment control measures on site including silt fence, baled hay, and loose hay/mulch to maintain or install control measures as required.
- Silt fencing will be placed to prevent sediment from entering nearby waterways during construction. The fence will be monitored regularly to ensure that it remains in good condition and is effective in containing any sediment.
- In rocky areas where silt fencing cannot be installed, woodchip berms will be used instead. Woodchip berms will use materials collected from vegetation clearing on site;
- Exposed soil will be minimized at all times during construction to limit sediment laden runoff. This will be accomplished by completing all work in a given area once excavation has begun before disturbing additional soil;
- Sedimentation berms and ponds will remain in service until project engineer or the municipality requests their removal. This will only occur after lot and turbine construction is complete. Sedimentation berms and ponds will be removed in the following order: level off berms, seed and cover all exposed areas with hay, then fill in ponds;
- Excavations will be timed with weather forecasts to minimize open excavations during wet periods to the extent possible, which minimizes the possibility of erosion and sedimentation;
- A speed limit on access roads and restricted vehicle access to construction site will be enforced to help reduce soil loss;
- Any fill stockpiles stored on-site to be compacted in a berm shape using appropriate equipment, protected from precipitation using anchored polyethylene tarps, and located up gradient of ESC structures to capture runoff. Sediment fence to be installed and maintained around the perimeter of any stockpiles, approximately 2m from the toe of slope.
- To minimize exposed soil during construction, once excavation has begun, all work in a given area will be completed before disturbing additional soil;
- Ditches have been designed to take off water at low velocities and redirect it to vegetated areas;
- Outflows from ditches will cross dispersion berms at ~1% grade to keep flow slow;
- Culverts and ditches will be aligned to follow existing natural drainage;

- Culvert outflows will feed into stone rip rap aprons at willow grades to minimize erosion;
- Silt fences will to be employed along edges of excavations in areas where onward drainage is possible;
- Damaged erosion and sediment control measures (ex. fallen fences) will be repaired immediately;
- Accumulated sediment will be cleaned out at regular intervals after heavy rain falls; and
- Sedimentation and erosion control measures are subject to change. Additional measures may be required depending on site conditions during construction.

## **2.8.4 Monitoring Program**

The Environmental Monitor will inspect all sediment control barriers each week and after heavy rain events to ensure they are working as intended and fix or modify any ineffective barriers as soon as practical. During rain events, contractors will monitor culvert outflow to ensure that the rainwater does not bring excess sediment and take corrective actions, as necessary.

The Environmental Monitor will conduct a round each of pre, during and post construction sampling at representative locations determined by qualified professionals. Sampling results will be reviewed by a qualified professional who will determine appropriate measures should there be an exceedance of water quality limits.

## **2.9 Wildlife Interactions**

### **2.9.1 Potential Impacts**

Terrestrial wildlife may be disturbed throughout the construction phase, but it is likely the wildlife will return to the site during operation. The wind turbines may also present a hazard to avian and bat populations in the area through collision or barotrauma (for bats).

A post-construction monitoring plan will be developed and implemented by a third-party consultant in consultation with the NSECC, Nova Scotia Department of Natural Resources and Renewables (NSNRR), Canadian Wildlife Services (CWS), and the Mi'kmaq in Nova Scotia and will follow the most current and relevant Post-Construction Bat and Bird Mortality Survey Guidelines available at the time of the studies.

### **2.9.2 Objective**

The objective of the wildlife interaction plan is to reduce the unanticipated hazards to avian and bat species as well as terrestrial wildlife on site.



### 2.9.3 Mitigation Measures

Mitigation measures that will be implemented include the following:

- The Project footprint will be limited to that which is necessary to enable the Project to be carried out;
- Existing roads and trails will be utilized to limit disturbance outside the Project footprint and minimize the interactions with wildlife and wildlife habitat;
- To maintain wildlife habitat, vegetation will be retained in areas where clearing is not essential for the construction or operation of the Project;
- To minimize disturbance by vehicles, a speed limit of 40 km/h will be enforced throughout the site and a speed limit of 15 km/h will be enforced in high-traffic areas (e.g., at and near turbine locations);
- The contractor will mitigate dust generation using bed linings or by spraying unpaved roads with water or an environmentally benign alternative;
- Lighting restrictions (further described below in specific measures for birds and bird habitat) will be implemented to reduce effects on wildlife within the Project footprint;
- To minimize wildlife encounters, the site and working areas will be kept clean of food scraps, garbage will be removed from the site routinely and traffic will be limited to roadways;
- In the case of wildlife encounters, the following will be implemented: (1) no attempt will be made by any worker at the Project site to chase, catch, divert, follow or otherwise harass wildlife by vehicle or on foot; (2) equipment and vehicles will yield the right-of-way to wildlife; and (3) if a species at risk (SAR) or a nest of any bird is encountered during activities, work around the SAR or nest (and structure housing the nest) will cease until a biologist is dispatched to assess the situation and appropriate mitigation is applied;
- To minimize disruptions to wildlife activity at night, the Project construction activities will be limited to daylight hours. Some construction activities (e.g., critical lifts, concrete pours, and other long duration activities) can only be done safely during the calm weather conditions that may only occur at night. In these cases, construction activities will be conducted at night;
- All workers will be familiarized and will adhere to the provincial Nova Scotia *Endangered Species Act* and federal *Species at Risk Act*.
- Workers will be familiarized with the SAR/species of conservation concern (SoCC) that were identified as having the potential to occur on site through both field and desktop analysis prior to work commencing. Observed SAR will be reported to NSNRR;

- Any possible or confirmed nesting of turtles in the Project footprint will be immediately reported to NSNRR;
- Post-construction monitoring will help identify the impact of the Project on birds and bats. Should significant mortality occur during operation, CWS and NSNRR will be consulted to determine the best course of action.

Should a mortality of an individual migratory bird SAR, or 10 or more migratory birds in one night, CWS will be contacted within 24 hours (Environmental Emergencies 1-800-565-1633).

### 2.9.3.1 **Birds/Bat and Bird/Bat Habitat**

The following mitigations will be employed focused for birds and bird habitat:

- Existing roads and trails will be utilized to limit disturbance outside the Project footprint and minimize the interactions with birds and bird habitat;
- The Proponent will endeavor to conduct construction activities such as clearing and grubbing outside of the time periods in which breeding birds would be in the area;
- Tree and vegetation clearing will not be undertaken during the breeding bird season (April 15<sup>th</sup> to August 30<sup>th</sup>). Should clearing during the breeding bird season be required due to unforeseen circumstances, the proponent will consult with CWS and NRR for appropriate mitigation measures and approval;
- Should a nesting migratory bird be identified within the work area, CWS and NSNRR will be notified and an appropriate no-work buffer zone (in consultation with CWS and NSNRR) will be applied around the nest until the nest has been fledged. No flagging of the nest will occur to minimize chances of predation;
- Stockpiling of fill and excavated materials will be minimized to deter the potential for nesting by bank swallows or other ground nesting species (e.g., common nighthawk). To lessen the likelihood of bank swallow nesting, stockpiles will be kept at or below a 70 degree slope and will be covered by a tarp if left for an extended period of time (1 month);
- All workers will adhere to the provincial Wildlife Act, the Migratory Birds Convention Act, 1994 and the Migratory Birds Regulations;
- All workers will adhere to the provincial Nova Scotia *Endangered Species Act* and federal *Species at Risk Act*;
- To minimize disruptions to wildlife activity at night, the Project construction activities will be limited to daylight hours. Some construction activities (e.g., critical lifts, concrete pours, and other long duration activities) can only be done safely during the calm weather conditions that may only occur at night. In these cases, construction activities will be conducted at night;

- Instruction will be given to maintenance staff to ensure all work lights are turned off upon leaving the site particularly during foul weather events;
- Lighting requirements will meet, but not exceed, Transport Canada standards to minimize the potential impacts to migratory birds;
- Only the minimum amount of pilot warning and obstruction avoidance lighting will be used;
- Only lights with short flash durations and the ability to emit no light during the 'off phase' of the flash (i.e., as allowed by strobes and modern LED lights) will be installed on tall structures;
- Lights will operate at the minimum intensity and minimum number of flashes per minute (longest duration between flashes) allowable by Transport Canada;
- Environment and Climate Change Canada climate database will be consulted to predict the rate of fog occurrence;
- Post-construction monitoring will help identify the impact of the Project on birds and bats. The Proponent will develop an Adaptive Management Plan in consultation with NSNRR and CWS for bird and bat mortality, including a follow up bat mortality survey to be conducted after the Project commissioning, and appropriate actions to be taken should there be a significant negative impact to bats.
- Annual reports to regulators will be submitted and, if required, any necessary mitigation action (e.g., increasing cut-in speed, and other operational adjustments) will be determined through consultation; and
- The Proponent will submit post-construction data to the Wind Energy Bird and Bat Monitoring Database to support national efforts to better understand wind turbine effects on birds and bats.

### 2.9.3.2 **Watercourses and fish habitat**

Mitigations for watercourses and fish habitat are detailed below:

- Construction activities near watercourses will comply with the applicable regulations and guidelines such as the *Fisheries Act* and will be carried out strictly in accordance with NSECC and DFO Approvals, Terms and Conditions, and Letters of Advice;
- Efforts will be made to build watercourse crossings in areas that exhibit a stable soil type and where grades approaching the crossings will not be too steep. Crossings will span the watercourse;
- In-stream work will be timed to occur in the dry season and not during significant rainfall. Culverts will be designed and installed to prevent the creation of barriers to fish movement and maintain bankfull channel functions and habitat functions to the maximum extent that can be achieved based on resources and ability; and,



- Any fish isolated in the work area will be transferred (using appropriate capture, handling and release techniques to prevent harm and minimize stress) downstream or away from the construction area prior to the commencement of work. Intakes of pumps and hoses for de-watering of in-water work areas (if required) will be screened to avoid impingement and/or entrainment of fish.

## 2.10 Vegetation Management

### 2.10.1 Objective

The objective of the vegetation management plan is to protect, reintroduce, and manage the vegetation on site.

### 2.10.2 Mitigation Measures

Contractors will comply with the following best management practices for vegetation management:

- Through the site selection process, the Project footprint has been sited predominantly in areas previously disturbed via clear cutting through forestry activities, creating a highly fragmented habitat and limiting the footprint, to the extent possible, to areas of undisturbed habitat;
- The Project footprint will be limited to that which is necessary to enable the Project to be carried out;
- Following the construction and decommissioning phases of the Project, revegetation with native species will be promoted in consultation with the landowner;
- Existing roads and trails will be utilized to limit disturbance outside the Project footprint and minimize the amount of flora to be cleared;
- Heavy equipment will be properly cleaned and visually inspected prior to mobilizing to site to avoid potential introduction of invasive species;
- Vegetation control measures during the operational phase will be minimized to the extent possible;
- During Project activities, should a SAR/SoCC be identified, a buffer will be maintained, and additional mitigation will be developed in consultation with NSNRR;
- The locations of SAR plants will be avoided by adjusting utility pole alignment to buffer these species;
- The locations of SoCC plants will be avoided by adjusting utility pole alignment or spanning their locations by utility poles and refraining from clearing vegetation in their vicinity; and
- All workers will be familiarized and will adhere to the Nova Scotia *Endangered Species Act* and the federal *Species at Risk Act*.

## 2.11 Invasive Species Management

### 2.11.1 Objective

The objective of the invasive species management plan is to reduce the risk of introducing invasive species on site.

### 2.11.2 Mitigation Measures

During the construction phase, invasive species importation will be mitigated by ensuring that vehicles and construction equipment are cleaned prior to transportation and use.

Vehicle cleaning will occur prior to arriving or leaving the site to ensure invasive species are not potentially spread to other areas. All cleaning activities will occur away from any watercourse or wetland.

## 2.12 Sound Level Management

During the construction, maintenance, and decommissioning phases of the Project the ambient sound level will be elevated as a result of the use of equipment and machinery such as excavators, dump trucks and bulldozers. Elevated sound levels can disturb fauna and local residents. To address elevated sound level impacts during the operational phase, the turbines have been sited to minimize the sound level impacts on residences and local businesses surrounding the Project. Should a community member have any concerns regarding the sound level emissions from the turbines during the operation of the Project, their complaint will be addressed following the Complaint Resolution Plan (**Appendix B**).

To mitigate the risk of annoyance due to the elevated construction and equipment sound, the following mitigative measures will be applied:

- A sound level impact assessment has been conducted showing that sound levels anticipated at nearby dwellings are below provincial guidelines of 40 dB(A);
- Per industry standards, turbines have been sited minimum 1 km away from residences;
- Infrasound from wind turbines is not anticipated to be a concern based on the project modeling and given the distance the wind turbines are located relative to dwellings;
- Events with particularly high sound levels, such as blasting, will be communicated to local residents adequately and with ample time;
- A blasting plan will be submitted to NSECC prior to any blasting, which will include pre-blast surveys for structures within 800 m of the point of

blast. A detailed blast monitoring plan and a blast damage response policy will also be provided;

- Blasting will be conducted by a certified contractor and will be limited to that which is necessary to enable the Project to be carried out;
- To minimize disruptions by activity at night, the Project construction activities will be limited to daylight hours. Some construction activities (e.g., critical lifts, concrete pours, and other long duration activities) can only be done safely during the calm weather conditions that may only occur at night. In these cases, construction activities will be conducted at night;
- A complaint resolution plan has been developed to address sound level concerns (**Appendix B**);
- The wind turbine model selected for the Project will incorporate sound reduction technologies to mitigate sound levels generated by the moving blades, if resources and ability permit;
- Clearing of flora on the Project site will be minimized to aid in attenuation of sound levels;
- Equipment, vehicle and haul trucks will be maintained in good working order and equipped with appropriate mufflers to reduce noise.

## 2.13 Visual Impacts

A Visual Impact Assessment has been completed to help understand the impacts on the community members and existing landscape. In addition to this assessment, the following mitigations will be implemented to reduce the visual impacts of the Project:

- LED lighting will be used to minimize light throw;
- Only the minimum amount of pilot warning and obstruction avoidance lighting will be used;
- Only lights with short flash durations and the ability to emit no light during the 'off phase' of the flash (i.e. as allowed by strobes and modern LED lights) will be installed on turbine structures;
- Lights will operate at the minimum intensity and minimum number of flashes per minute (longest duration between flashes) allowable by Transport Canada;
- Exterior turbine maintenance lights will be turned off prior to maintenance staff leaving the site;
- The potential negative effect of shadow flicker has been mitigated at the design stage through responsible turbine siting;
- A shadow flicker assessment has been completed for dwellings and public areas within 2 km of the proposed turbines;



- Compliance with industry standard guidelines on shadow flicker has been achieved. All dwellings will experience less than 30 hours of shadow flicker per year and 30 minutes of shadow flicker on the worst day;
- If shadow flicker occurrences during operation are found to be exceeding guidelines and annoying to surrounding houses and buildings, screening receptors may be considered;
- A Compliant Resolution Plan (**Appendix B**) has been developed for residents to refer to if they have concerns about any shadow flicker observed during operation;
- To minimize disruptions at night, the Project construction activities will be limited to daylight hours. It is noted that the turbines may be erected during the evening as the activity must be completed when the wind is less than 4 m/s as a safety measure. These conditions are commonly seen in the early evening;
- Foundation concrete pours will begin early in the morning to ensure they do not carry too long into the night, as they can take upwards of 15 hours;
- The paint on the turbines will be selected such that it does not contrast sharply with the environment and minimizes blade glint; and,
- Policies regarding responsible siting of wind turbines were followed to minimize the potential impact on the landscape aesthetics during siting.

## 2.14 Archaeological Resources

### 2.14.1 Objective

The objective of the archaeological resource plan is to prevent and reduce any impacts to archaeological and cultural resources at the site.

### 2.14.2 Mitigation Measures

Avoidance is the preferred method of mitigation in all instances where archaeological resources are present. To prevent impacts to archaeological resources, the following mitigation measures will be implemented:

- If the proposed infrastructure alignments should deviate from the areas assessed in the Archaeological Resources Impact Assessments (ARIA), additional studies will be undertaken, as the surrounding study area retains archaeological potential;
- Ground intrusive work activities will not exceed the predefined Project areas;
- Site workers will be informed on the high potential for archaeological resources in the area, what to look for and proper processes for anything found;

- Staff working within 80 m of a watercourse will be advised of the higher potential for archaeological resources in these areas;
- Contingency and emergency response procedures will be developed and implemented;
- If bones or human remains are found, work in the area will cease, and the RCMP will be immediately notified;
- If archaeological deposits or human remains are encountered during construction activity within the study area, all work in the associated area(s) will halt and immediate contact will be made with the Special Places Program (John Cormier: 902- 424-6475);
- No one will disturb, move or rebury any uncovered human remains. If the discovered resources are related to Indigenous culture the Nova Scotia Office of L'nu Affairs will be contacted to determine how best to proceed with respect to repatriation of the resources;
- Until a qualified archaeologist arrives at the scene, no one will disturb, move or re-bury any uncovered artifact;
- Activities at the site will only resume when authorized by Archaeological Services and once mitigation measures have been completed; and
- The Nova Scotia Museum of Natural History will be notified at (902) 424-7353, should fossils be encountered during the ground intrusive work.

### 3 Emergency Response

The following provides contact numbers in the case of emergencies involving worker safety, public safety and environmental emergencies.

#### 3.1.1 Emergency Contact List

	Contact Number	Email
<b>Natural Forces</b>		
Construction Manager	902.422.9663	abradshaw@naturalforces.ca
Senior Wind Technician	902.925.9463	jim@rmsenergy.ca
Environmental Inquiries	902.422.9663	environment@naturalforces.ca
<b>Local Emergency</b>		
Fire Department	911	
Ambulance	911	
RCMP Police	911	
Colchester RCMP	902.893.6824	
Pictou RCMP	902.485.5441	
Colchester East Hants Health Centre	902.893.4321	
Aberdeen Hospital	902.752.7600	
Nova Scotia Environment - Truro Office	902.893.5880	
Nova Scotia Environment - Ganton Office	902.396.4194	
24-hrs Environmental Emergencies	1.800.565.1633	
Canadian Wildlife Services	1.800.668.6767	
Special Places Program (Archaeology, Heritage)	902.424.6475	john.cormier@novascotia.ca



## Appendix A: Spill Response Report Form

# Spill Response Reporting Form

General information	
Date (dd/mm/yyyy)	
Contact person	
Consultant or Contractor	
Address	
City	
Postal Code	
Tel	
Email	
Details of incident	
Date of spill (dd/mm/yyyy)	
Time of spill (hh:mm)	
Weather conditions at the time of the spill	
Name of person who reported the spill	
Name of person who responded to the spill	
Type of contaminant spilled	
Description of spill (size, location, environment, source of spill, extent of contamination, etc.)	
Cause of spill	
Response to the spill (in detail)	

<p>Names of organization, departments or local authority contacted</p>	
<p>Adequacy of the response (by person responsible)</p>	
<p>Are further steps required to remediate the land (y/n)</p>	
<p>If yes, describe the future plans to remediate the land that was impacted</p>	
<p>How was the containment collected and disposed</p>	
<p>Describe the steps or approach that will be implemented to prevent a reoccurrence of this incident</p>	
<p>Additional detail</p>	



## Appendix B: Complaint Resolution Plan



# COMPLAINT RESOLUTION PLAN

Clydesdale Ridge Wind Project

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Clydesdale Holdings Ltd.  
1701 Hollis St Suite 1200  
Halifax, NS B3J 3M8  
[naturalforces.ca](http://naturalforces.ca)

## Overview

The Clydesdale Ridge Wind Project (the Project) is being developed by Clydesdale Holdings Ltd. (the Proponent). The Proponent represents a partnership between Natural Forces Developments Limited Partnership (Natural Forces) and Dalhousie Mountain Wind Energy Inc. The Proponent is further partnering with Mi'kmaq bands in Nova Scotia to ultimately develop, construct, own, and operate the Project.

The Project consists of up to 18 wind turbine generators (WTGs) and is situated adjacent to the operational Dalhousie Mountain Wind Farm, which is owned and operated by an affiliate of Dalhousie Mountain Wind Energy Inc. The Project is located near Mount Thom, Earltown, Loganville, and Berichan in both Colchester County and Pictou County. The proposed WTG locations and associated infrastructure are predominantly on privately-owned lands owned by multiple landowners, with a portion of the access road and collector lines traversing provincial Crown land. The private lands are secured under Lease, Option to Lease, and Easement. The Proponent has an active application for an Easement over the provincial Crown land.

## Purpose

The purpose of this plan is to ensure all public concerns are addressed consistently and effectively. The Proponent aims to:

- Manage concerns and complaints openly, promptly and properly;
- Resolve concerns and complaints as soon as possible; and
- Learn from the issues and minimize any impacts the Project has on the community.

## Scope

This plan details how concerns can be reported to the Proponent regarding the Project, and how the Proponent will address those concerns.

## Procedure

All concerns or complaints related to the Project can be directed to the communications phone line:

Natural Forces  
Address: 1701 Hollis Street, Suite 1200, Halifax, NS, B3J 3M8  
Phone: 902-483-9592

The complainant will be notified upon receipt of the complaint, which will be recorded in a Complaint Log maintained by the Proponent person of contact. The Proponent will start the review process for complaints within 5 business days of the concern or complaint being received. The Proponent will then conduct an investigation into the complaint in



collaboration with relevant parties. Once the investigation is completed, the complainant will be notified of how the concern was or will be addressed.

The Complaint Log will be kept on file, along with records of communication, discussions and correspondence with the complainant. The Complaint Log will include the following information:

- Manage concerns and complaints openly, promptly and properly;
- Resolve concerns and complaints as soon as possible; and
- Learn from the issues and minimize any impacts the Project has on the community.
- Date and time that the complaint was received;
- Date and time that the complaint incident occurred;
- Complainant's name and contact information;
- Location and nature of complaint (e.g., sound levels, dust, shadow flicker, traffic, vibrations, etc.);
- Procedure and result of any investigation or follow-up; and,
- Weather conditions and meteorological measurements at the time of the complaint (in most cases, these conditions could be used to better understand and address the complaint).

## **Sound Levels and Shadow Flicker**

Complaints regarding sound levels and shadow flicker will be assessed on a case-by-case basis. The Proponent will follow the steps listed below in resolving the issue:

- 1) Conduct an investigation to understand the conditions under which elevated sound levels or shadow flicker issues are experienced. The specific date, time, location of observed shadow flicker, and local weather conditions (including wind direction and wind speed) will be noted for each incident of elevated sound levels or shadow flicker, as well as the duration of the event.
- 2) If it is determined from the investigation that the shadow flicker was caused by the Project, the Operations Team for the Project will work to identify the best mitigation based on the circumstances, such as screening using vegetation.
- 3) The Operations Team will track any such events along with the supporting data, and will track the success of any mitigation measures employed in consultation with the complainant, which will inform future resolutions.

The complainant will also be asked to record any additional incidents or occurrences.

If several occurrences of issues regarding sound levels and/or shadow flicker that arise from the Project, an assessment of the causes of the impacts will be conducted and a monitoring program will be developed and implemented in consultation with the complainant.

Mitigation measures to reduce sound levels and shadow flicker have been described in the Environmental Impact Assessment.

## **Construction and Operation**

Complaints regarding construction and operation activities will be discussed with workers or contractors involved.

Solutions to the complaints will be established with worker(s) and contractor(s), and complainants will be informed of how issues are addressed.

If complaints persist, then worker(s) and contractor(s) may be dismissed.

## **Closure**

This plan acts as a guidance document to result in the resolution of any complaints communicated to the Proponent about the Project. Ultimately, the situation of the individual complaints will more specifically inform the procedure followed to address them.

If the complainant is not satisfied with the response from the Proponent in addressing their complaint, the complaint will be referred to a higher authority within the company to further resolve the issue.

APPENDIX S  
DRAFT MAINLAND MOOSE MONITORING PLAN

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# **DRAFT MAINLAND MOOSE MONITORING PLAN**

## **Clydesdale Ridge Wind Project**

**July 2024**

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Clydesdale Holdings Ltd.  
1701 Hollis St Suite 1200  
Halifax, NS B3J 3M8  
[naturalforces.ca](http://naturalforces.ca)

## Introduction

The Clydesdale Ridge Wind Project (the Project) is being developed by Clydesdale Holdings Ltd. (the Proponent). The Proponent represents a partnership between Natural Forces Developments Limited Partnership (Natural Forces) and Dalhousie Mountain Wind Energy Inc. The Proponent is further partnering with Mi'kmaq bands in Nova Scotia to ultimately develop, construct, own, and operate the Project.

The Project consists of up to 18 wind turbine generators (WTGs) and is situated adjacent to the operational Dalhousie Mountain Wind Farm, which is owned and operated by an affiliate of Dalhousie Mountain Wind Energy Inc. The Project is located near Mount Thom, Earltown, Loganville, and Berichan in both Colchester County and Pictou County. The proposed WTG locations and associated infrastructure are predominantly on privately-owned lands owned by multiple landowners, with a portion of the access road and collector lines traversing provincial Crown land. The private lands are secured under Lease, Option to Lease, and Easement. The Proponent has an active application for an Easement over the provincial Crown land. Due to the rated capacity of the Project, a provincial Class 1 Environmental Assessment (EA) is required. As part of the EA, the Proponent is proposing an Adaptive Management Plan to address issues that may arise during the post-construction monitoring efforts related to birds and bats at the turbine locations.

This document outlines the post-construction monitoring program for Mainland moose (*Alces alces americana*) for the Project. This program has been developed in consultation with Nova Scotia Environment and Climate Change (NSECC) and Nova Scotia Department of Natural Resources and Renewables (NSDNRR).

## Background

The population of mainland moose in Nova Scotia are listed as Endangered by the Nova Scotia Endangered Species Act (NS ESA) and ranked as S1 by the Atlantic Canada Conservation Data Centre (AC CDC) for Critically Imperiled in the province. Mainland moose have complex spatial and temporal habitat requirements that include a mosaic of woodland and wetland habitat types. They require an abundance of mature forest for security and thermal cover, as well as areas of interspersed young deciduous trees and shrubs for browsing (NSDNRR 2021).

The Project falls within a mainland moose concentration area and core habitat. Mainland moose concentration areas were identified using maps of observation records, preferred habitat, and occupied range from 1999 to 2011 to pinpoint areas of potential occupancy (NSDNR 2012; NSDNRR 2021). Concentration areas provide occupancy and distribution information; however, they do not necessarily reflect the most suitable mainland moose habitat. Core habitat refers to areas that meet moose seasonal (summer, winter, calving) requirements and are considered essential for the long-term survival and recovery of mainland moose.

Mainland moose were also reported in a site-specific AC CDC report as being observed within 30 km of the Project Area. In the 2012 EA, evidence of mainland moose was observed within

the Study Area in the form of one observation of scat believed to belong to moose. Targeted Pellet Group Inventory (PGI) and winter track surveys were conducted as part of the 2024 EA, utilizing methodology determined in consultation with NSDNRR. No observations of mainland moose or evidence thereof were identified during these surveys and no incidental observations were made during the 2023-2024 field survey program.

In 2021, NSDNRR released a recovery plan for mainland moose. Among other recovery measures, the plan states that baseline surveys of mainland moose's current distribution and abundance are needed to provide information to support monitoring, habitat assessments, and direct where specific actions should occur in the province (NSDNRR 2021). Results of the mainland Moose Monitoring Plan could help support *Recovery Measure 2.2: Augment existing knowledge of the distribution and abundance of Mainland moose*. Natural Forces aims to assist with efforts to determine the population of moose and their distribution across the landscape.

## Purpose

The purpose of this monitoring program is to provide NSECC and NSDNRR with the Proponent's plan to assess the presence of mainland moose at the Clydesdale Ridge Wind Project site, and to assess potential effects of disturbance associated with wind farms. The Mainland Moose Monitoring Plan will:

1. improve the understanding of interaction between utility scale wind projects and large migratory terrestrial species using evidence-based monitoring results in the field; and
2. support science-based management of the Project to ensure wildlife and habitat impacts resulting from the Project are avoided, minimized, or offset.

## Methods

Attempting to obtain direct observations of moose can be impractical. Therefore, to determine the presence and distribution of moose near the Project, indirect signs are sufficient. Winter track surveys, supplemented with spring Pellet Group Inventory surveys will be conducted.

In alignment with the baseline surveys conducted, survey methodology will be based on NSDNRR protocols, the Mainland Moose Recovery Plan, and experienced biologists' expertise. Transect routing and timing of surveys will align with the baseline surveys conducted as part of the 2023 EA to the extent feasible while accounting for weather and site conditions, unless otherwise advised by NSDNRR.

Track surveys will be performed by experienced wildlife biologists and/or field technologists who are skilled at identifying signs of Mainland Moose presence, including tracks. Each transect will be traversed using a compass and recorded using GPS. Any evidence of moose will be documented via GPS and photos. Evidence to be recorded includes, but is not limited to:

- incidental sightings;

- tracks;
- antler shed;
- rubbings/hookings;
- fecal pellets;
- carcasses; and
- evidence of browsing and trails.

In addition to the surveys methods, should any incidental mainland moose sightings occur on site by anyone using the site on behalf of the Proponent, these observations will be reported to the following groups:

<b>Organization</b>	<b>Contact Number</b>	<b>Email</b>
Natural Forces	902.422.9663	environment@naturalforces.ca
Nova Scotia Department of Natural Resources and Renewables	-	biodiversity@novascotia.ca
Atlantic Canada Conservation Data Centre	-	<a href="http://ACCDC.com/en/contribute.html">http://ACCDC.com/en/contribute.html</a>

Track surveys will be performed by two experienced wildlife biologists and/or field technologists who are skilled at identifying signs of Mainland Moose presence, including tracks and pellets. Each transect will be walked using a compass and recorded using GPS. Any evidence of moose will be documented via GPS and photos. Evidence to be recorded includes, but is not limited to:

- incidental sightings;
- tracks;
- antler shed;
- rubbings/hookings;
- fecal pellets;
- carcasses; and
- evidence of browsing and trails.

## **Reports and Communications**

Natural Forces will stay in regular contact with the assigned contacts at NSECC and NSDNRR. Mainland moose monitoring will carry on for two years after the Project’s commissioning. An annual report of occurrences will be prepared and submitted to NSNDRR and any other applicable parties.

If a significant number of moose (determined in consultation with NSECC and NSDNRR) are observed during the monitoring program, further consultation will be undertaken with NSECC and NSDNRR regarding the interpretation of results and appropriate next steps for monitoring.



## Participation in recovery programs

As part of the Mainland Moose Monitoring Plan, the Proponent will support regional and local stewardship through working with guardian groups and programs. Natural Forces will seek to participate in or fund Mi'kmaq-run mainland moose recovery programs. The Proponent has been in contact with CMM to discuss participation in their recovery program (i.e., Mainland Moose Guardians). Natural Forces has committed to providing support to CMM to keep the Mainland Moose Guardian Program active. Efforts such as these are important to moving forward and lend well to the Mainland Moose Recovery Plan (NSNRR 2021).

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