

Appendix I

Light Impact Assessment

Light Impact Assessment

Argentia Renewables Project

Pattern Energy

9 April 2024

→ The Power of Commitment



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1. Introduction

GHD Limited (GHD) has undertaken an analysis of the proposed lighting installations for the onshore wind generation and green hydrogen and ammonia production, storage and export facility project, as part of the Argentia Renewables Project (Project) being developed on the Argentia Peninsula of Placentia Bay in Newfoundland and Labrador (NL). The site (Site) consists of the hydrogen and ammonia plant, which will be located on the brownfield peninsula formerly used for military purposes, and the wind turbine generators (WTG), which will be located on adjacent Port of Argentia private lands locally referred to as the "Argentia Backlands". The "Argentia Backlands" are north of the communities of Dunville, Ferndale and Freshwater. The Site is in a rural area that has portions that are wooded as well as nearby the water. The impacts of the proposed activities at the Site on nearby sensitive receptors were quantified and compared with the guidelines published by The Institution of Lighting Engineers (ILE) in the document entitled "Guidance Notes for the Reduction of Obtrusive Light". There are currently no regulations in Newfoundland and Labrador related to light from industrial operations.

Definitions

Light trespass is defined as the spilling of light beyond the boundary of the property or area being lit and is primarily a concern at night. Excess obtrusive light can be a nuisance to others, wastes electricity, and indirectly results in unnecessary emissions of greenhouse gases. Light trespass, or light pollution, can also negatively impact the surrounding ecosystem by disrupting the habits of native species. As such, it is important to understand the potential light impacts from this development, and to endeavor to minimize them.

Luminous flux is the quantity of the energy of the light emitted per second in all directions. The unit of luminous flux is lumen (lm).

Illuminance refers to the amount of light that covers a surface. If Φ is the luminous flux and S is the area of the given surface then the illuminance E is determined by $E = \Phi/S$. Illumination is quantified in terms of lux. One lux is the illuminance of a 1 square metres (m^2) surface uniformly lit by 1 lm of luminous flux.

A residence that may experience an objectionable encroachment of light over the property line is referred to as a *residential receptor* or *sensitive receptor*. This undesirable light spill may include the entry of unwanted light through windows, or direct line of sight to bright light sources.

Effects of light on fauna are not well understood and are generally described qualitatively. Some insects are attracted by nighttime lighting. Bats may follow these insects into human-occupied areas in order to hunt. Nighttime lights can adversely affect birds which fly at night, and can increase the incidence of bird impacts on buildings (especially highly reflective buildings or glass buildings where interior lighting may confuse birds). Nocturnal animals may be adversely affected by excessive light in the nighttime hours.

Nocturnal animals which may be affected by nighttime light, changing their movement patterns or activities, include owls, mink, badgers, bats, coyotes, wolves, mice, opossums, raccoons, foxes, skunks, mountain lions (cougar). Deer and moose prefer dawn and dusk hours, both of which may be affected by Project lighting, but the effects of Project lighting are likely to be less significant to hunting practices than general human activity.

Deer and moose prefer to avoid people, if possible, and may modify their behavior/distribution due to the presence of the Site activities, regardless of lighting.

1.1 Purpose of this Report

The purpose of this report is to present the method of assessment, results, and best management practices of the light impact assessment for the Argentia Renewables Project.

1.2 Scope and Limitations

This report: has been prepared by GHD for Pattern Energy and may only be used and relied on by Pattern Energy for the purpose agreed between GHD and Pattern Energy as set out in section 1.1 of this report.

GHD otherwise disclaims responsibility to any person other than Pattern Energy arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

Accessibility of documents

If this report is required to be accessible in any other format, this can be provided by GHD upon request and at an additional cost if necessary.

2. Baseline Conditions

The ILE has developed an Environmental Zone classification system whereby the existing ambient light levels at a site are used to determine the recommended maximum amount of light trespass to nearby receptors. The classification for rural areas, small villages, or relatively dark urban locations is "E2 Low district brightness areas". Based upon this classification, the light trespass limit at an off-site receptor after curfew (typically considered to be 11 p.m.) is 1 lux, which is the accepted equivalent to moonlight.

Furthermore, the ILE trespass limit at an off-site receptor before curfew is 5 lux.

Project lighting will be limited to the amount necessary to ensure safe and efficient operation, with the recognition that excessive lighting can be disruptive to wild species, local residents and businesses. Light pollution will be reduced by installing downward-facing lights on buildings, WTG bases and access roads. Wherever possible, ground-level external lights on buildings and WTG bases will be pointed downward and shall use motion or heat sensors when possible and permitted by relevant codes and the authority with jurisdiction. Only direct and focused light will be used for worker safety. WTG and meteorological tower lighting levels will be at a minimum allowed by Transport Canada for aeronautical safety, and white or red strobe lights may be used with the minimum intensity and flashes per minute allowable.

Bird collisions with Project lighting and subsequent mortality are expected to be rare but if it occurs, it would not likely have significant effects on migrating bird populations. Efforts will be made to reduce the effect of lighting on migrating birds. No monitoring is being proposed.

3. Proposed Lighting

The Project involves the lighting at the hydrogen and ammonia plant and the wind turbines. Both locations have been evaluated to determine the impact on the area.

Since the exact locations of the equipment/lights are unknown, the closest location compared to the receptor was used for the purposes of the calculations. As it is unknown the specific equipment type that is going to be used throughout the program it was estimated that standard equipment would be used.

Navigation light fixtures will be installed on some wind turbines as per the requirements of Transport Canada Standard 621 - Obstruction Marking and Lighting (*Canadian Aviation Regulations*). The number of lights will be determined by Transport Canada based on the final layout and design.

4. Sensitive Receptors

For the purposes of the evaluation, the closest sensitive receptor to the turbines and the plant were selected for the evaluation. The nearest residential receptors were identified in each direction around the property and work areas.

Figure 1 provides the locations of all these receptors and the locations of the proposed Site activities.

5. Method of Assessment

GHD completed the assessment based on the equipment list that was expected based on similar projects. From known information about the power output of the installations and typical efficiencies, the luminous flux of each light source was calculated:

$$\text{Luminous Flux (lm)} = \text{Power Output (watts)} \times \text{Efficiency} \left(\frac{\text{lumens}}{\text{watt}} \right)$$

The power output of the proposed lighting was known from manufacturer information, and the efficiency was based on typical industry published values, as presented in the following table.

Type of Light	Typical Efficiency (lumens/watt)
LED	58 – 113
Compact Fluorescent	70
Linear Fluorescent	108
Incandescent	15
Halogen	20
High Pressure Sodium	100

Sample Calculation:

The expected equipment at the Hydrogen/Ammonia Facility and Wind Turbine are provided in Table 1. The number and type of lights and their power output are also provided in Table 1. The luminous flux of the Crane can be calculated as follows:

$$\text{Power Output} = 1 \text{ crane} \times 6 \frac{\text{Lights}}{\text{crane}} \times 65 \frac{\text{W}}{\text{Light}} = 390 \text{ W}$$

$$\text{Luminous Flux} = 390 \text{ W} \times 20 \frac{\text{lumens}}{\text{W}} = 7,800 \text{ lumens}$$

After determining luminous flux estimates for each light source, the impacts of the incident light at the identified sensitive receptors can be determined.

Table 1 indicates the estimated distance to the sensitive receptors from these sources. The illuminance level at a receptor is equal to the combined total from each light source. It has been conservatively assumed that 50 percent of

the incident light will not reach the receptor due to the thick tree cover at the Site and surrounding area. The following equation was used to estimate the illuminance contribution from each light source:

$$E = \frac{\phi}{d^2} \times 50\%$$

Where:

- E = illuminance (lux)
- ϕ = luminous flux (lm)
- d = distance to the receptor (m)

Sample Calculation:

The luminous flux from the equipment that will be used at the Hydrogen/Ammonia facility is estimated at 381,000 lm. The distance to the closest receptor from Argentia Green Fuels Facility is approximately 4042 m. The illuminance contribution from the Facility to the closest receptor can be estimated as follows:

$$\text{Illuminance} = \frac{381,000 \text{ lumens}}{(4,042 \text{ m})^2} \times 50\% = 1.17 \times 10^{-2} \text{ lu}$$

This method was used to determine the estimated illuminance at the closest receptor from the wind turbines as well.

The table summarizing the Facility and the turbine is provided in Table 1. This table identifies all expected sources at each location. Table 2 provides a comparison of the illuminance and the pre-curfew limit of 5 lux. Table 3 provides the comparison of the post curfew activities to the post-curfew criteria of 1 lux.

For the purposes of this assessment, pre-curfew was assumed to be before 11 PM and post-curfew was between 11 PM and 7 AM.

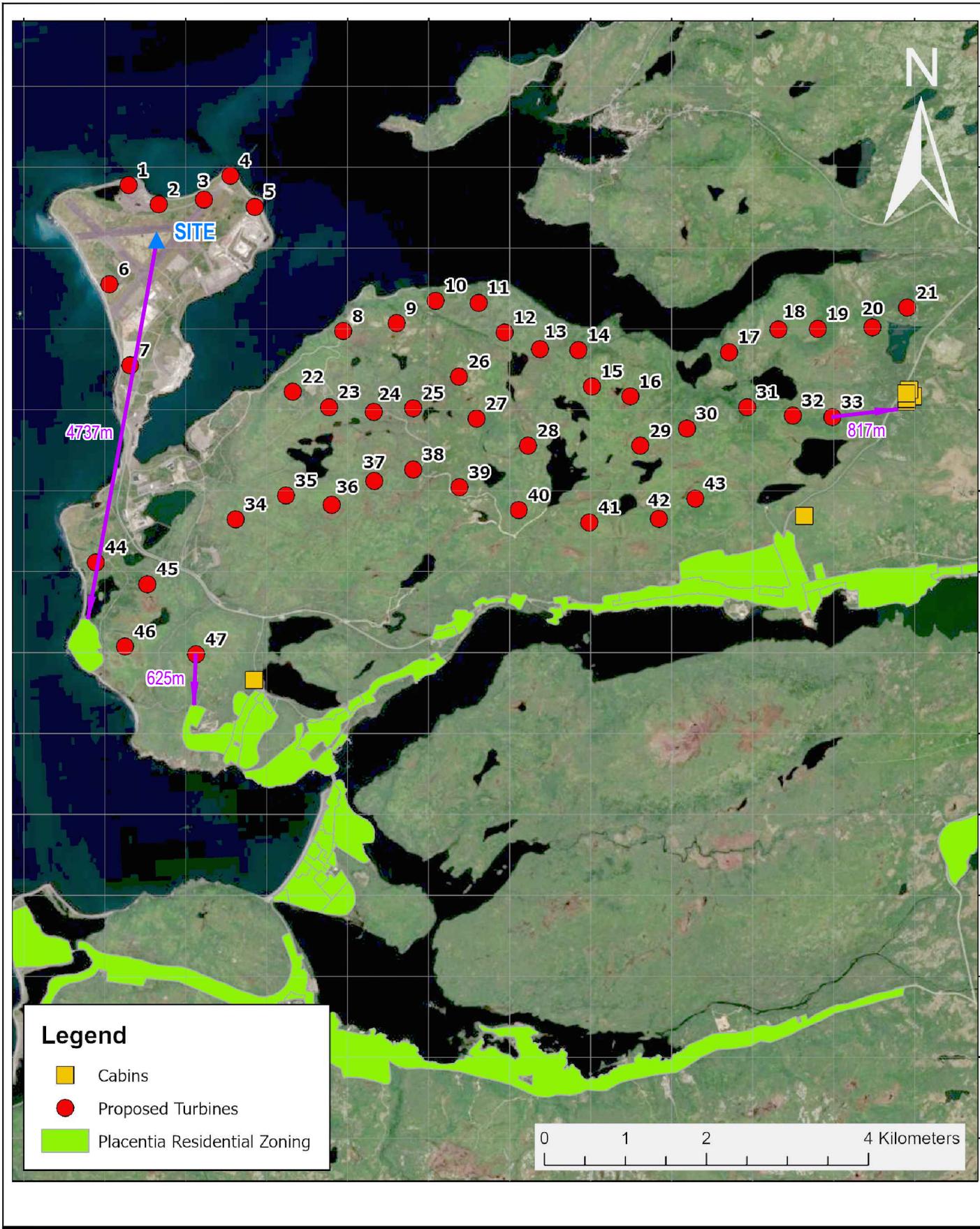
6. Results and Discussion

The calculated light levels at the identified sensitive receptors are below the limits recommended by the ILE guidelines during both post- and pre-curfew conditions, as shown in Tables 2 and 3, respectively.

The predicted illuminance levels represent the worst-case operating conditions of the Project. The assessment considers when all of the equipment is operating at the same time and at the closest location to the receptor. The areas surrounding the Site are wooded with varying topography and inhibit the spread of light. It was conservatively assumed for screening purposes that 50 percent of the light will not reach the receptors due to directionality and line of sight obstructions. In reality the amount of light blocked by the surrounding woodland and topographic changes will likely be much greater than this (>90 percent), especially during the seasons when trees are in full bloom.

7. Best Management Practices

Routine monitoring of the light levels at the Site, once constructed and operational, using a light meter will provide an opportunity to compare actual light levels with theoretical. More refined light level measurements could assist in further quantifying the effects of light sources on the sensitive receptors.



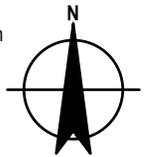
Legend

- Cabins
- Proposed Turbines
- Placentia Residential Zoning

0 650 1300 1950m

1:65000

Coordinate System:
UTM83-21



PATTERN ENERGY
ARGENTIA RENEWABLES PROJECT

SITE AND POINT OF RECEPTION
LOCATION PLAN

Project No. **12618385**
 Date **March 2024**

FIGURE 1

Table 1
Light Source Summary Tables
Pattern Energy
Argentia Renewables Project

Percentage of incident lumens assumed to reach the receptor considering directionality and line of site obstructions: **50%**

Area	Source (2)			Power (watts)	Qty	Total Power (watts)	Luminous Flux (1) (lumens)	Closest Receptor		
								Approx. Distance (m)	Illuminance (1) (lux)	
Hydrogen/Ammonia Facility	Quantity of Units	No. Of Lights per Unit	Type of Light							
	Truck	1	4	Halogen	65	4	260	5200	4737	1.16E-04
	Backhoe	2	6	Halogen	65	12	780	15600	4737	3.48E-04
	Crane	1	6	Halogen	65	6	390	7800	4737	1.74E-04
	Dump Truck	3	4	Halogen	65	12	780	15600	4737	3.48E-04
	Dozer	3	6	Halogen	65	18	1170	23400	4737	5.21E-04
	Excavator	3	6	Halogen	65	18	1170	23400	4737	5.21E-04
	Grader	2	6	Halogen	65	12	780	15600	4737	3.48E-04
	Haul Truck	2	4	Halogen	65	8	520	10400	4737	2.32E-04
	Loader	3	6	Halogen	65	18	1170	23400	4737	5.21E-04
	Roller	2	6	Halogen	65	12	780	15600	4737	3.48E-04
	Articulated Truck	1	6	Halogen	65	6	390	7800	4737	1.74E-04
	Skid Steer	2	6	Halogen	65	12	780	15600	4737	3.48E-04
	Lube Truck	2	4	Halogen	65	8	520	10400	4737	2.32E-04
	Service Truck	2	4	Halogen	65	8	520	10400	4737	2.32E-04
	Water Truck	3	4	Halogen	65	12	780	15600	4737	3.48E-04
	Vacuum Truck	1	4	Halogen	65	4	260	5200	4737	1.16E-04
	Turbine Lights (4)	1	4	LED	85	4	340	6800	625	8.70E-03
	Turbine Lights (4)	1	4	LED	85	4	340	6800	817	5.09E-03
	Flare	1	1	Flare	-	-	-	85000 (3)	4737	1.89E-03
	Mobile Floodlights	10	1	Floodlight	350	10	3500	70000	4737	1.56E-03
	Polemount Lights	60	1	LED	75	60	4500	90000	4737	2.01E-03

POST-CURFEW	Total:	2.42E-02
PRE-CURFEW	Total:	2.42E-02

Area	Source (2)			Power (watts)	Qty	Total Power (watts)	Luminous Flux (1) (lumens)	Closest Receptor		
								Approx. Distance (m)	Illuminance (1) (lux)	
Wind Turbines										
	Lube Truck	1	4	Halogen	65	4	260	5200	625	6.66E-03
	Service Truck	1	4	Halogen	65	4	260	5200	625	6.66E-03
	Haul Truck	1	4	Halogen	65	4	260	5200	625	6.66E-03
	Grader	1	6	Halogen	65	6	390	7800	625	9.98E-03
	Turbine Lights (4)	1	4	LED	85	4	340	6800	625	8.70E-03
	Turbine Lights (4)	1	4	LED	85	4	340	6800	817	5.09E-03
	Excavator	1	6	Halogen	65	6	390	7800	625	9.98E-03

POST-CURFEW	Total:	5.37E-02
PRE-CURFEW	Total:	5.37E-02

Notes:

- (1) Illuminance = Luminous Flux/square of distance travelled; therefore 1 Lux = 1 lumen/m². United States Department of Energy, Solid-State Lighting LED Basics <https://energy.gov/eere/ssl/led-basics>
- (2) Mobile equipment with headlights was assumed to be stationary for simplicity. It was assumed that each piece of equipment has 6 mounted halogen lamp lights, 65 watts each.
- (3) Estimate
- (4) The two closest turbines have been included in the evaluation. Based on the evaluation the turbines located at greater distances would have a negligible impact on the overall results and have not been included.

Table 2

**Comparison of Light Levels at Receptors - Pre-Curfew Operations
Pattern Energy
Argentina Renewables Project**

Receptor	Facility Illuminance (lux) Pre-Curfew (2)	Wind Turbine Illuminance (lux) Pre-Curfew (2)	ILE Guidance Limit (1) Pre-Curfew (2) (lux)	Percentage of Criteria (3) Pre-Curfew (%)
Closest Receptor	2.42E-02	5.37E-02	5	1.07%

Notes:

(1) Based on a classification of the area as Environmental Zone E2- Low district brightness areas (Guidance Notes for the Reduction of Obtrusive Light, The Institute of Lighting Engineers (2011)).

(2) Curfew = the time after which stricter requirements for the control of obtrusive light will apply. If not defined by the local planning authority, the ILE suggests 11:00 p.m. The Institute of Lighting Engineers (2011). Obtrusive Light, "Table 1-Obtrusive Light Limitations for Exterior Lighting Installations",)

(3) Based on conservative assumption of 50% reduced light due to directionality and line of site obstructions.

Table 3

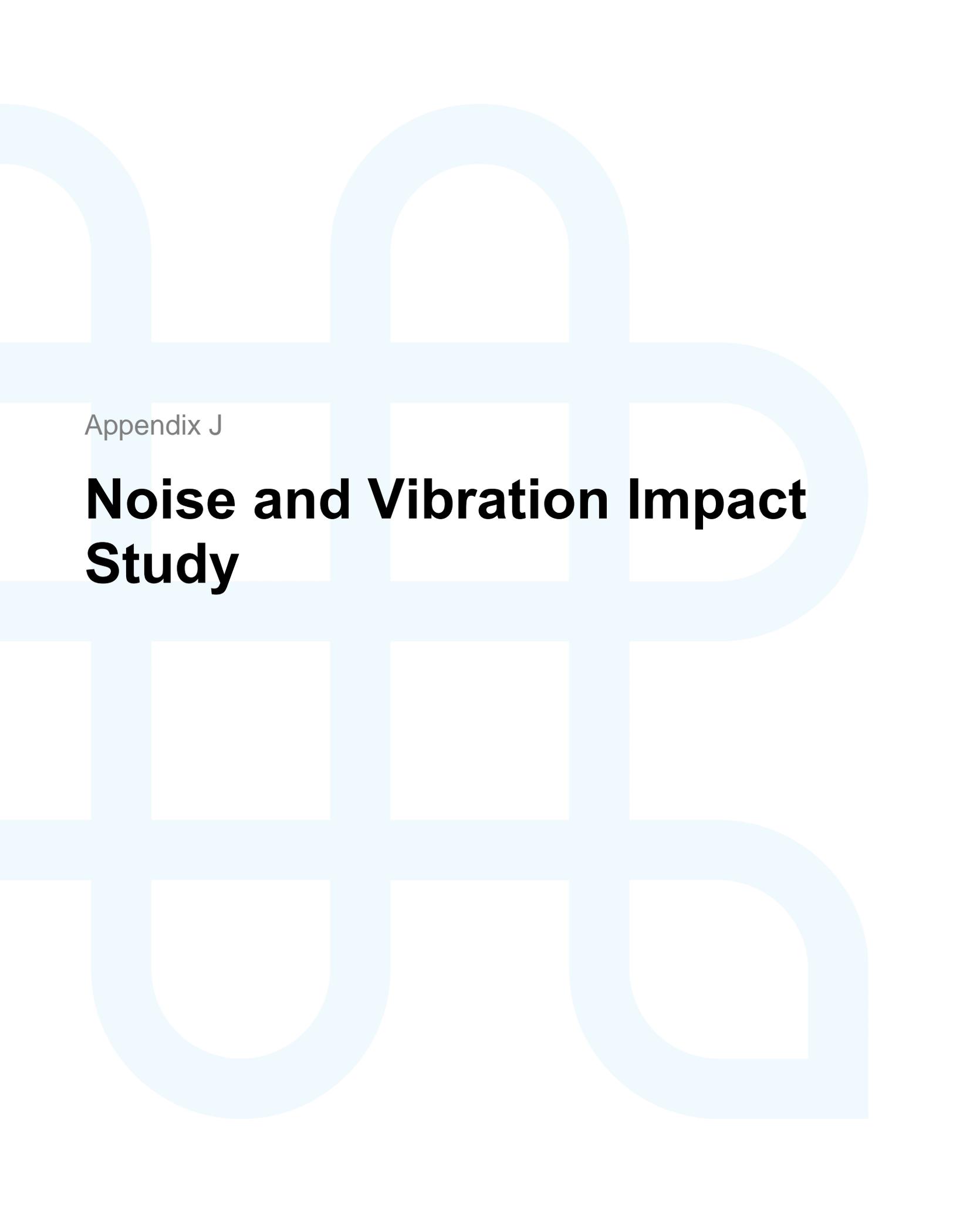
**Comparison of Light Levels at Receptors - Post-Curfew Operations
Pattern Energy
Argentia Renewables Project**

Receptor	Facility Illuminance (lux) Post -Curfew (2)	Wind Turbine Illuminance (lux) Post -Curfew (2)	ILE Guidance Limit (1) Post-Curfew (2) (lux)	Percentage of Criteria (3) Post-Curfew (%)
Closest Receptor	2.42E-02	5.37E-02	1	5.37%

Notes:

- (1) Based on a classification of the area as Environmental Zone E2- Low district brightness areas (Guidance Notes for the Reduction of Obtrusive Light, The Institute of Lighting Engineers (2011)).
- (2) Curfew = the time after which stricter requirements for the control of obtrusive light will apply. If not defined by the local planning authority, the ILE suggests 11:00 p.m. The Institute of Lighting Engineers (2011). Obtrusive Light, "Table 1-Obtrusive Light Limitations for Exterior Lighting Installations")
- (3) Based on conservative assumption of 50% reduced light due to directionality and line of site obstructions.





Appendix J

Noise and Vibration Impact Study

Noise and Vibration Impact Study

Argentia Renewables Project

Pattern Energy

18 March 2024

→ The Power of Commitment



Project name		SEM Pattern EA Support					
Document title		Noise and Vibration Impact Study Argentia Renewables Project					
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S4	FINAL	A. DeFaria	M. Masschaele	<i>Michael Masschaele</i>	S. Bendenia	<i>S. Bendenia</i>	Mar.18/24

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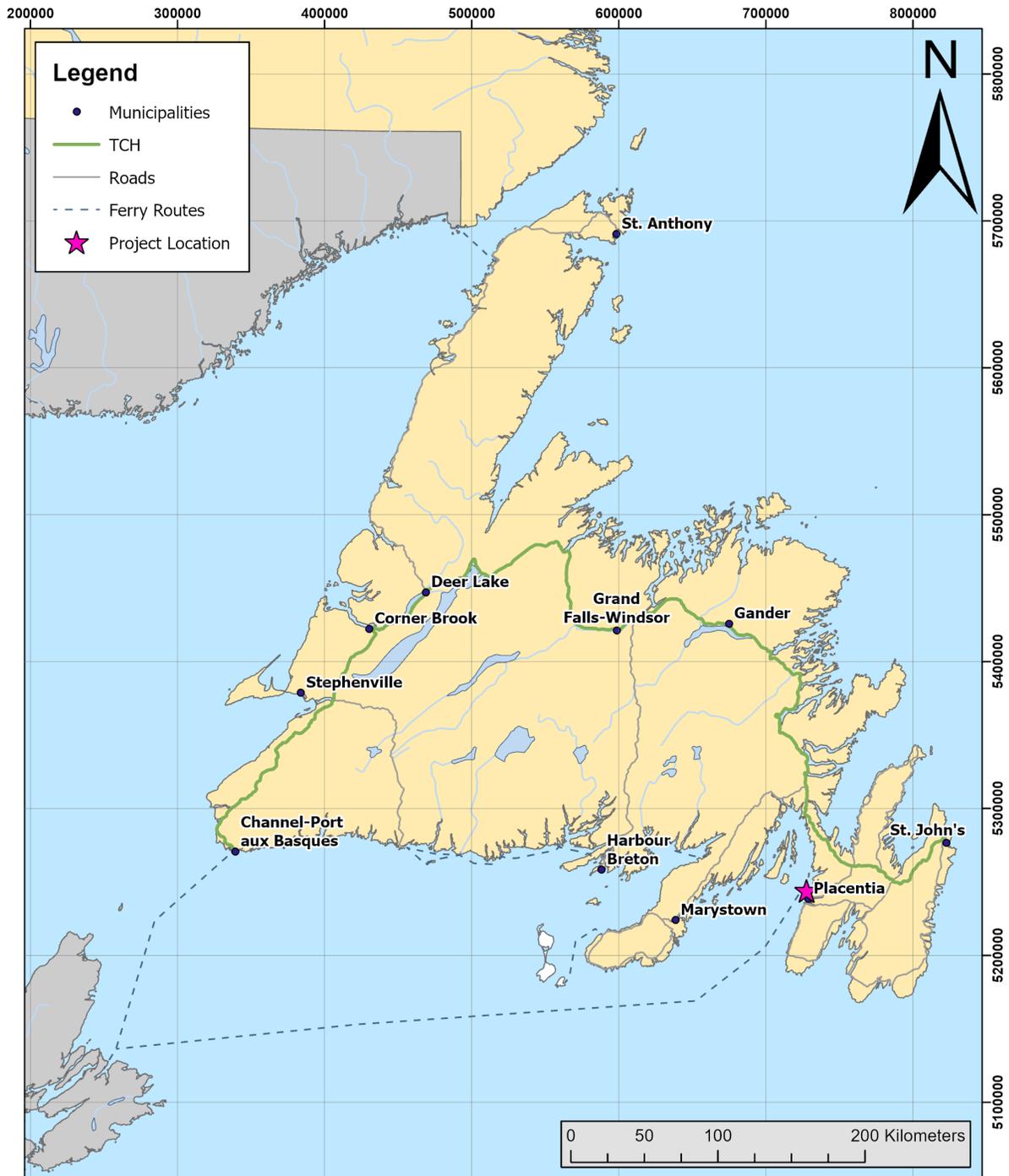
Appendices

Appendix A	Baseline Noise Monitoring Results and Location Plan
Appendix B	Project Site Plans

1. Introduction

The Argentia Renewables Project (the “Project”) as proposed by Pattern Energy Group LP (Pattern Energy) involves the development, construction, operation, maintenance, eventual decommissioning, and rehabilitation of both an onshore wind farm and a commercial-scale green hydrogen and ammonia production facility. The green hydrogen and ammonia production facility will require an anticipated 300 megawatts (MW) of energy and will be situated on brownfield private land owned by the Port of Argentia that is zoned for industrial use. The green hydrogen and ammonia production facility is to be powered by Pattern Energy’s proposed wind farm along with additional supply of low-carbon grid electricity from the Newfoundland and Labrador (NL) hydro grid when required. The location of the hydrogen and ammonia production facility (the hydrogen / ammonia plant) is on the Argentia Peninsula of Placentia Bay at 47°18'26.03"N 53°59'4.96"W (Figure 1). The locations of the wind turbine generators (WTGs) are on adjacent private lands locally referred to as the “Argentia Backlands” north of the communities of Dunville and Ferndale, as well as north of the community of Freshwater.

The hydrogen / ammonia plant will be designed to produce up to approximately 100,000 metric tonnes (t) of green hydrogen (equivalent to approximately 1.17 mega tonnes (Mt) of ammonia) annually via electrolysis. The hydrogen / ammonia plant will have an installed electrolyser capacity of 300 MW. The hydrogen produced by the Project will be converted into ammonia and exported to international markets by ship from an existing marine terminal in the Port of Argentia. The Project also includes civil works, ancillary infrastructure, and facilities associated with the wind farm, the hydrogen / ammonia plant, and the hydrogen / ammonia storage and export facilities.



	Project Location	AUTHOR: JC	PREPARED BY: 
	Argentia Renewables	COORDINATE SYSTEM: NAD 83 UTM Zone 21	DATE: 06/11/2023

Figure 1 Project Location

1.1 Purpose of this Report

GHD Limited (GHD) was retained by Pattern Energy to prepare a Noise and Vibration Impact Study (Study) for the Argentia Renewables Project (Project) located on the Argentia Peninsula of Placentia Bay, Newfoundland and Labrador (Site). This Study has been prepared in support of the Environmental Assessment of the Project.

1.2 Scope and Limitations

This report: has been prepared by GHD for Pattern Energy and may only be used and relied on by Pattern Energy for the purpose agreed between GHD and Pattern Energy as set out in Section 1.1 of this report.

GHD otherwise disclaims responsibility to any person other than Pattern Energy arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

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The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

2. Project Description

The Project includes the construction, operation/maintenance, and decommissioning of (1) an onshore wind farm, (2) a green hydrogen and ammonia production, storage, and loading facilities, and (3) associated infrastructure related to storage and linear features. The site is located at Argentia, NL on the brownfield peninsula formerly used for military purposes and extends into the “Backlands” of Placentia.

The hydrogen-ammonia facility will be constructed on the Argentia peninsula along with six (6) turbines. Four (4) turbines will be located just south of Highway 102 near Cooper Drive, and the remaining thirty-six (36) turbines will be located throughout the Backlands (Figure 2). Linear infrastructure associated with the Project will include a network of roads, transmission lines between components, and water supply pipelines. In addition, a new transmission line will parallel an existing line and link to the Long Harbour terminal station (for a proposed 10 MW of firm power and 125 MW of non-firm power).

The Project will potentially interact with the environment at various spatial scales, so three levels of “study area” were assessed: a Project Area, a Local Assessment Area, and Regional Assessment Area. Each is defined in Section 4, along with a rationale for the delineation of the boundaries of each.

3. Existing Conditions & Baseline Noise Study Results

To establish noise limits in accordance with the Health Canada criteria (described in Section 4.2.2), baseline noise levels are required to be collected. Ambient noise levels were measured in the vicinity of the Site in 2023 from July 20th to 26th, December 1st to 9th, and December 14th to 17th. These measurements were taken to determine an approximate baseline where the Project could cause new or incremental impacts to the natural environment. The results from this sampling program were obtained as a time averaged sound level (L_{eq}); a single number value that expresses the time varying sound level for the specified period (in this case, one hour) as though it were a constant

sound level with the same total sound energy as the time varying level. This data was then filtered via the historical climate data obtained from nearby climate stations; noise levels during periods of inclement weather were discarded due to their atypical nature. The remaining data was then averaged over the appropriate period to obtain the equivalent continuous A-weighted noise levels (L_{Aeq}) averaged over day and nighttime periods. The sound pressure levels measured during the baseline sound quality survey are presented in Table 1, including daytime sound level (L_d), nighttime sound level (L_n), and the day-night average sound level (L_{dn}) values.

The baseline sound quality monitoring survey was conducted in accordance with ISO 1996-2:2007 (“Acoustics – Description, measurement and assessment of environmental noise – Part 2L Determination of environmental noise levels”), as recommended by Health Canada (Health Canada 2017). Ambient sound levels were measured using Type 1 Sound Pressure Level Meters. Measurements were taken continuously over a period of between 2 to 6 days at each location. Calibration checks were undertaken throughout the monitoring survey.

Upon completion of the sound monitoring, the baseline measurements were analysed in relation to meteorological conditions during the time of monitoring, potential nearby sources of sound (both natural and anthropogenic) and the audio recordings. Further calculations were performed on the raw data to obtain the daytime sound pressure level (L_d), the nighttime sound pressure level (L_n), and the day-night average sound pressure level (L_{dn}) (Health Canada 2017).

The following table summarizes these measurements in terms of average noise levels during the day (07:00 to 23:00), and night (23:00 to 07:00):

Table 1 Noise Monitoring Collected Data Summary

Monitoring Location ID	Description	Measured Noise Levels (dBA)		
		Day L_d (7am-11pm)	Night L_n (11pm-7am)	L_{dn}
M1 ¹	Freshwater, NL	37	36	43
M2 ¹	Ferndale, NL	42	35	43
M3 ²	Dunville, NL	52	34	50
M4 ¹	Fox Harbour, NL	61	51	61

Note 1: Monitoring Data was between December 1st to December 17th as part of the second round of monitoring
 Note 2: Monitoring data was between 20 July 2023 to 26 July 2023 as part of the first round of noise monitoring

Noise levels were found to be highest for locations close to major roadways or nearer to Dunville, such as M3 and M4. Rural areas experienced less noise, including M2, and the small community within Freshwater, M1. The major contributor to sound levels during the daytime were related to vehicle traffic. The major contributor to sound levels during nighttime were related to the natural environment, including wind and wave noise and wildlife calls, as well as occasional noise emissions from vehicle traffic.

A summary of the noise monitoring results is presented in Appendix A and the monitoring locations are shown on Figure A.1.

4. Noise and Vibration Assessment Methodology

The Study presented herein provides an evaluation of the potential noise impacts from the Project generated during Construction and Operations on the sensitive receptors located nearest to the project operations, based on continuous 24-hour operations and daytime only construction.

The noise assessment of the Project is split into two components:

- Construction of Turbine and Plant Facilities and Hydro Line and Road Construction
- Operation of the Turbines, associated production facilities and infrastructure

4.1 3D Acoustical Model

DataKustik's CadnaA Acoustical Modelling Software (CadnaA) is the industry standard for environmental noise modelling in Canada. CadnaA version 2023 was used to model the potential impacts of the significant noise sources for Construction and Operations. CadnaA calculates sound level emissions based on the ISO 9613-2 standard "Acoustics – Attenuation of Sound During Propagation Outdoors", which accounts for attenuation effects due to geometric divergence, atmospheric attenuation, barriers/berms, ground absorption, and directivity. Topography for the site and surrounding environment was obtained from GHD's GIS department, and input in the 3-D acoustical model (5 metre (m) resolution for elevations).

Cadna A modelling assumptions used in this Study included:

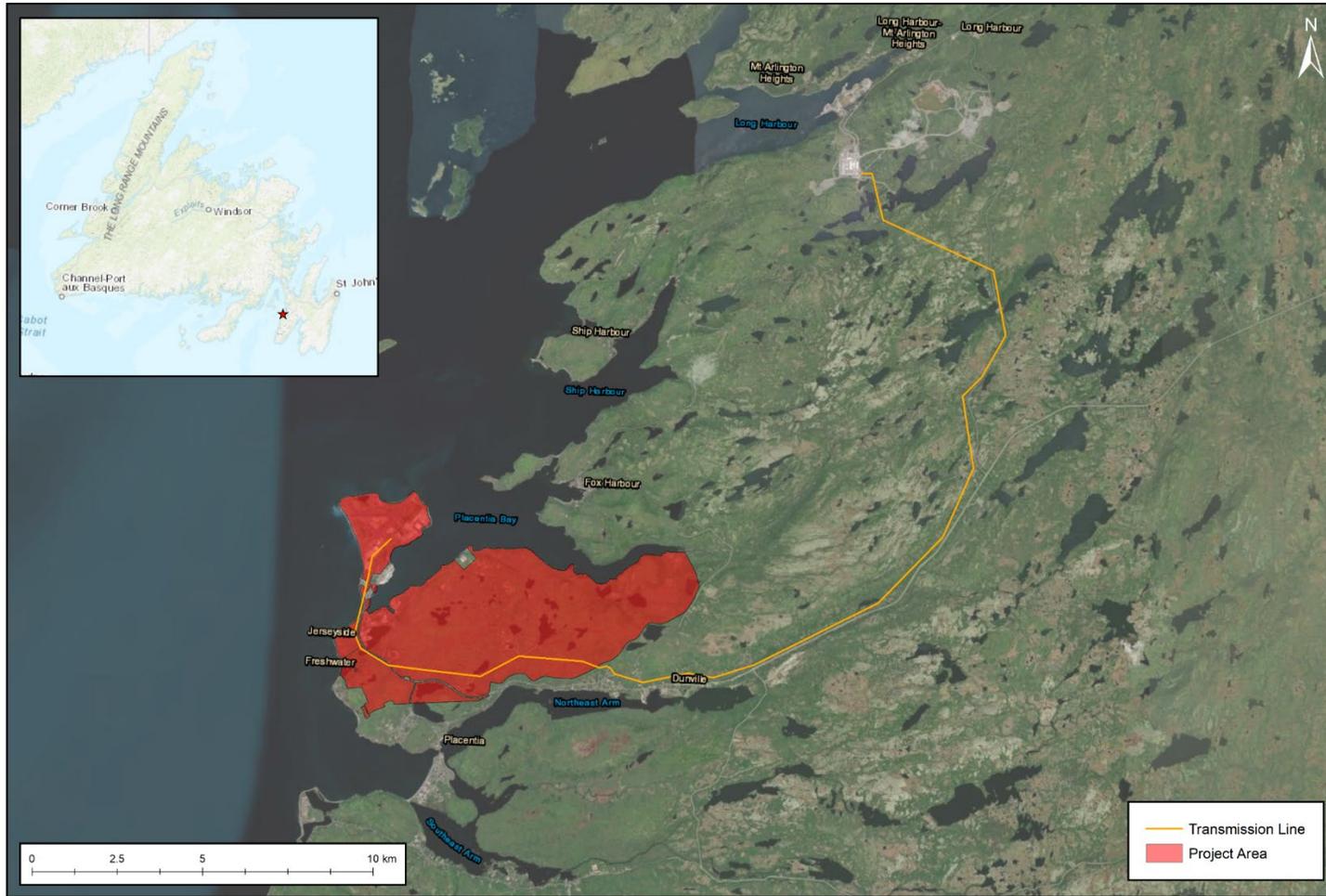
- Noise Sources: All sources were modelled using full octave band data from the reference materials.
- Reflection Order: A maximum reflection order of 1.0 was used to evaluate indirect noise impact from reflecting surfaces.
- Ground Absorption: The model included a ground absorption factor of $G = 1$ for soft ground, $G = 0.5$ was used for areas of gravel, $G=0$ for water.
- Tonality: A +5 dB adjustment was applied for tonal sources, if applicable.
- Building Surfaces: Buildings are modelled as reflective surfaces.
- Noise sources whose dimensions are small in comparison to the distance to the sensitive Points of Reception (PORs) (generators, air intakes and exhausts) are modelled as point sources in CadnaA. Noise sources with a larger area such as bay doors are modelled as vertical area sources. Noise sources extending in only one direction with small dimensions in the other two directions such as conveyor lines or trucking routes are modelled as line sources. Each of these noise source types appears in the legend provided with Figure 5 identifying the source type.
- Temperature: 10°C.
- Relative humidity: 70%.
- Wind speed: Downwind condition, wind speed of 3 m/s.
- Maximum search radius: 20,000 m.
- Noise propagation model: CadnaA version 2023 (DataKustik).
- Standard: ISO 9613.
- Terrain parameters: Digital ground terrain for the Site was incorporated.
- Foliage: The forest areas (coniferous trees) surrounding the Project were conservatively not included in the modelling.
- Plant activities are consistent throughout the day and night.
- Construction activities are limited to daytime operations only.

It should be noted that the selected meteorological parameters (temperature and relative humidity) produce the worst case (most conservative) noise prediction results using CadnaA. Noise level predictions to account for varying temperature and relative humidity throughout the year were not conducted but would produce slightly different results.

4.2 Spatial Boundaries

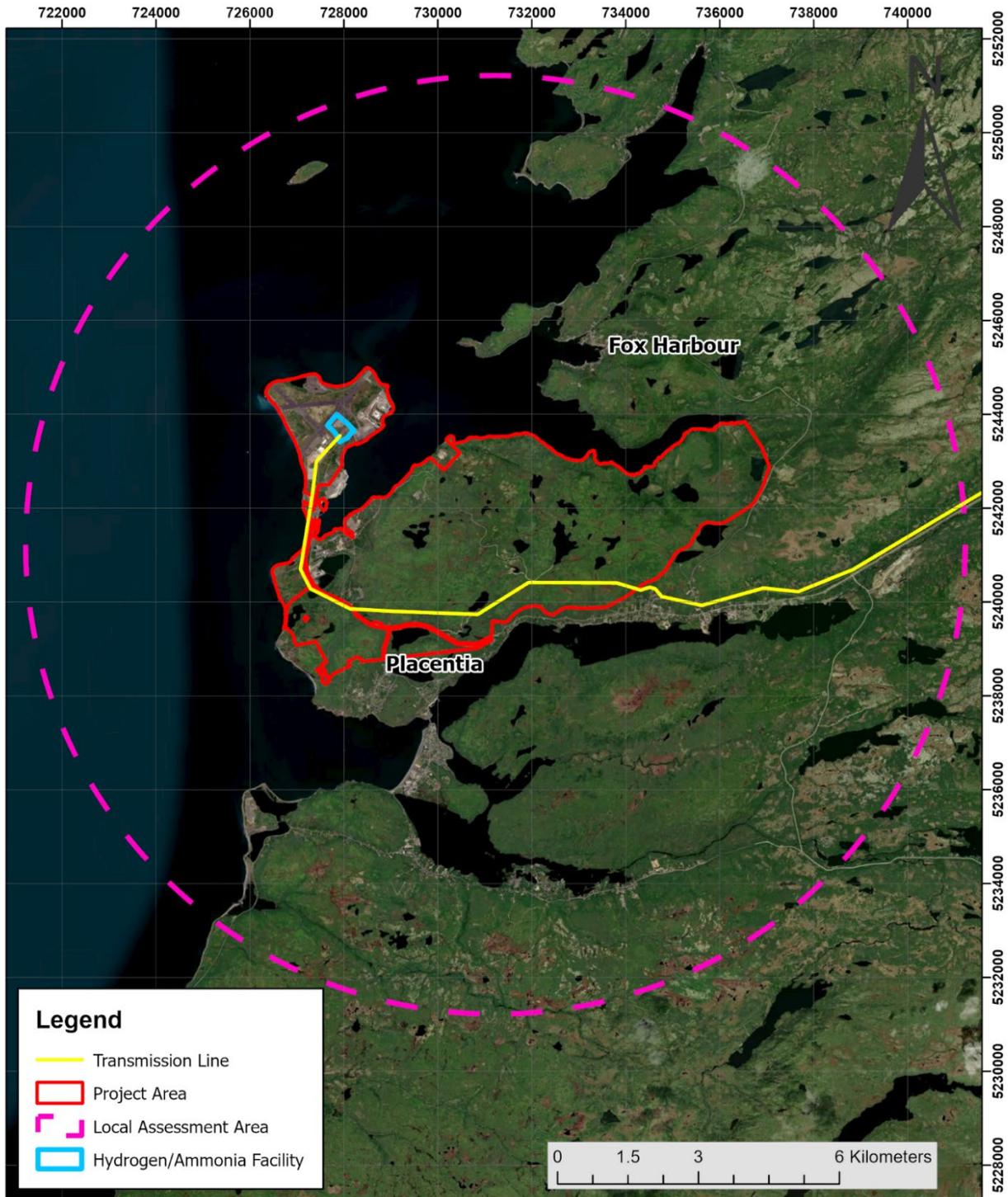
The spatial boundaries used for the assessment of effects of noise are defined below:

- The Project Area (PA) for the Argentia Renewables Project will be defined as “the area in which Project infrastructure components and activity (e.g., construction, operation, decommissioning) will occur, and within which direct environmental interactions with the Project will likely occur”. Specifically, the PA will encompass the collective spatial footprint of the wind turbines, the hydrogen-ammonia facility, ammonia storage infrastructure, electrical substation(s), turbine-interconnected transmission lines, a transmission line to the main electrical grid in Long Harbour, and all the associated roads for the aforementioned elements of the Project. A 100 m buffer was added to either side of the transmission line to Long Harbour. A diagram of the PA is provided in Figure 2.
- The Local Assessment Area (LAA) for the Project will be defined as “the area in which environmental interactions are detectable (and measurable) but which extend beyond the boundaries of the Project Area” (i.e., the interactions with the Project in the LAA are primarily indirect)”. A 10-kilometer (km) radius extending from the centre of the Project Area defined the boundary of the LAA. This distance was selected because to include all the local municipalities’ infrastructure and housing, and far enough into the marine environment to encompass any indirect interactions with the Project. 10 km would also comprise all the viewscales of the Project from afar, any noise transmission outside of the Project Area, and encompasses the inshore environment which provides habitat for various species of birds, and possibly migratory bats. A diagram of the LAA is provided in Figure 3.
- The Regional Assessment Area (RAA) boundary includes the anticipated spatial extent of potential indirect and cumulative environmental effects which may reach beyond the limits of the LAA. The RAA therefore extends an additional 15 km beyond the radius of the LAA (i.e., out to 25 km). It includes the area within which most cumulative effects would occur, such as additive industrialization to other local industrial instalments, projects, or infrastructure. In particular, the extent of the Regional Assessment Area boundary considers changes to the environment that may indirectly affect the landscape or resources for local communities or migratory wildlife species. In addition, the rationale for 25 km also included the inclusion of the entire proposed transmission line from the Project Area to the Long Harbour Terminal Station. A diagram of the RAA is provided in Figure 4.



	Argentia Renewables	AUTHOR: CRB	PREPARED BY: 
	Project Area	COORDINATE SYSTEM: NAD83 UTM Zone 22	DATE: 21/11/2023

Figure 2 Project Area (PA)

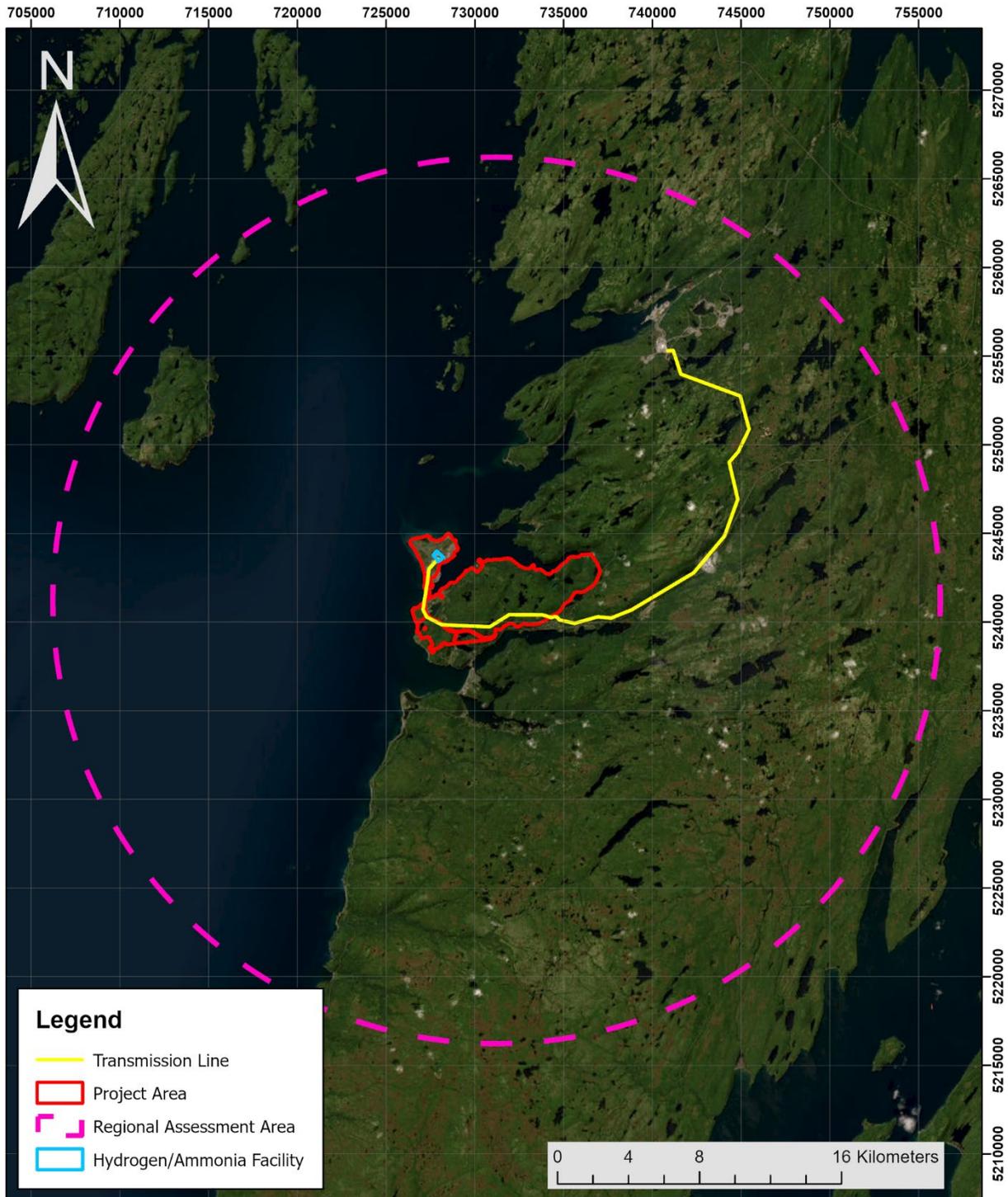


Legend

- Transmission Line
- Project Area
- Local Assessment Area
- Hydrogen/Ammonia Facility

	Argentina EA Registration	AUTHOR: JC	PREPARED BY: 
	Argentina Project Local Assessment Area	COORDINATE SYSTEM: WGS 1984 UTM Zone 21N	DATE: 15/11/2023

Figure 3 Local Assessment Area (LAA)



	Argentina EA Registration	AUTHOR: JC	PREPARED BY:
	Argentina Project Regional Assessment Area	COORDINATE SYSTEM: WGS 1984 UTM Zone 21N	DATE: 15/11/2023

Figure 4 Regional Assessment Area

4.3 Temporal Boundaries

The temporal boundaries for the assessment of potential effects on the Acoustic Environment are not known at this time, however, based on the size of the project the following assumptions have been made for the project timeline:

- Construction: Overall, the construction phase of the Project will be from Q2 2024 through Q3 2028, pending EA approval and receipt of other required permits and approvals. Early civil works are planned to start Q2 2024 through Q1 2025. Construction of the Argentia wind farm and associated infrastructure is expected to start in Q1 2025 with completion of the construction in Q3 2028. The hydrogen / ammonia plant will be constructed in phases from Q4 2025 to Q3 2027. Grid power sources are planned for hydrogen production in 2026 until March 2027, when the electrolyzer is commissioned.
- Operation and maintenance: Wind farm commissioning is anticipated to start Q1 2028 at the Argentia wind farm. The 600 MW electrolyzer expected to be commissioned in Q3 2027. The operational life of the Project is 30 years.
- Decommissioning and rehabilitation: The decommissioning phase is anticipated to take two years, occurring between 2057 and 2059. Decommissioning is anticipated to begin Q3 2057 at the Argentia wind farm, with completion in Q1 2059.

4.4 Applicable Noise and Vibration Guidelines

4.4.1 Department of Environment and Climate Change – Government of Newfoundland and Labrador

The Government of Newfoundland and Labrador have published a guideline for the assessment of environmental impacts for onshore wind and green hydrogen production projects in *Guidance for Registration of Onshore Wind Energy Generation and Green Hydrogen Product Projects* (Government of Newfoundland and Labrador, April 2023). The following guidance is identified in relation to the assessment of noise.

2.3.1 Construction Activities

Details of materials, methods, schedule, and locations of all construction activities (including permanent and temporary infrastructure related to physical features) should be described. Depending on the project components, this may include:

...

- *sources and intensity of noise, vibration and light emissions;*

...

2.3.2 Operation and Maintenance Activities

Details of the operation and maintenance of the undertaking should be described in this section of the registration document. Proponents should include detailed descriptions of the following, if applicable:

...

- *sources, decibels, duration and geographic reach of noise (including long-term, low frequency), light emissions and shadow flicker, and vibrations during operation and maintenance of wind turbines and hydrogen production facilities;*

3.1.1 Atmospheric environment

The proponent should describe the relevant components of the **atmospheric environment** in the project area, which may include the following:

...

- g) ambient light, vibration and noise level, including low frequency noise; and

4.4.2 Health Canada

In the absence of specific numerical criteria as set out in *Guidance for Registration of Onshore Wind Energy Generation and Green Hydrogen Product Projects* from the Government of Newfoundland and Labrador, guidance can be sought from Health Canada's guideline titled *Guideline for Evaluating Human Health Impacts in Environmental Assessment: Noise* (January 2017) (the Guideline). It recommends that noise from projects in their operational phase are assessed using an evaluation of the increase in Percent Highly Annoyed (%HA). This type of evaluation is also applied to a project's construction phase where it lasts more than a year in duration. In addition to the %HA evaluation, Health Canada also states that nighttime noise levels experienced indoors at sensitive receptors shall be less than 45 dBA.

4.4.2.1 Calculation of Percent Highly Annoyed

%HA is calculated based on the 16-hour daytime equivalent sound level (L_d) and the 8-hour nighttime equivalent sound level (L_n), using an equation defined in the guideline. Health Canada suggests that mitigation be implemented when noise levels during long-term construction result in greater than 6.5% increase in %HA (delta %HA) at receptors.

The calculation of %HA is as follows:

$$\%HA = \frac{100}{1 + e^{(10.4 - 0.132 \times L_{Rdn})}}$$

where L_{Rdn} is the day-night rating level, which is calculated by:

$$L_{Rdn} = 10 \log_{10} \left(\frac{(15 \times 10^{(0.1 \times L_{Rd})}) + (9 \times 10^{(0.1 \times (L_{Rn} + 10))})}{24} \right)$$

where L_{Rd} is the day rating level, and L_{Rn} is the night rating level. As discussed in Section 3, baseline noise levels in the vicinity of the Site were collected at four locations surrounding the PA to provide an accurate comparison between project noise and ambient noise levels.

The method for determining compliance with the %HA limits described in the Health Canada Guideline states that baseline %HA is to be compared to the operational %HA plus the baseline %HA, this essentially models the pre and post project annoyance levels. The difference of these values is known as the resultant delta %HA and must not exceed 6.5%. If 6.5% is exceeded, then noise mitigation should be considered to reduce the delta %HA to compliant levels.

4.4.2.2 Indoor Nighttime Noise Limits

The compliance with the nighttime limit of 45 dBA at indoor sensitive locations is to be assessed by comparing the predicted sound pressure levels indoors with the 45 dBA limit provided in the Health Canada Guideline. A reduction to the sound pressure level at the plane-of-window of 15 dBA (partially open window) is applied to provide a conservative value for worst-case indoor noise as per the Health Canada Guideline.

4.4.2.3 Low Frequency Noise

Wind turbines have the potential to emit high low-frequency noise (LFN) which could be summarized as noise in the frequency range of 16 Hz to 200 Hz. LFN is not accurately captured in A-weighted sound levels and sufficiently high LFN can cause annoyance issues even though the human ear is less sensitive to those frequencies.

To determine if a noise source is likely to generate high LFN, the difference between the C-weighted sound levels and the A-weighted sound levels of the source are calculated and compared to a limit of 20 dB. If 20 dB is exceeded, then the source is generally considered to be an LFN source. Additionally, Health Canada suggests that if the total sound pressure level of the 16 Hz, 31.5 Hz, and 63 Hz bands exceed 70 dB then mitigation measures should be explored to reduce these levels to within compliance.

4.4.3 Vibration Criteria

Ground-borne vibration is the measure of ground oscillations, usually due to industrial activities such as construction, earthworks, pile driving, or even highway traffic. The most common approach to vibration measurement is by measuring velocity measurements at ground level, where higher velocities correspond to higher levels of vibration. One way to measure and report vibration is to record the maximum vibration level at any given time, also known as the peak particle velocity (PPV). Human exposure is more sensitive to vibrations that occur over a certain period of time more so than a more sudden exposure to vibrations for a short amount of time (Caltrans, 2020). Therefore, a more common measure of vibration for human exposure is the root-mean-square (RMS) of the vibrations. The RMS approach calculates an average vibration value for a given time period (usually one second). Since the RMS value is an average of the instantaneous vibration velocity measurements, it is always a lower value than the PPV value. The PPV and RMS can be related by a crest factor. The crest factor can be as low as 1.4 but can be as high as 8 depending on the nature of the vibration source (US FTA 2018).

There are no regulations or guideline exposure limits for vibration in Newfoundland and Labrador. Guidelines related to public nuisance from vibration have been developed by the American National Standards Institute (ANSI) and the Acoustical Society of America (ASA) through ANSI/ASA S.39-1983. These guidelines have been adopted by regulatory agencies such as the United States Federal Transit Administration (US FTA) and are often used in jurisdictions across Canada for assessing vibration. The ANSI guidance gives threshold values for different types of land use. For land uses associated with residential areas or in areas where sleeping occurs, the recommended ANSI threshold is 0.1 mm/s RMS, while daytime thresholds are recommended to be 0.14 mm/s RMS.

5. Noise Source Summary

5.1 Operational Noise Sources

5.1.1 Wind Turbines

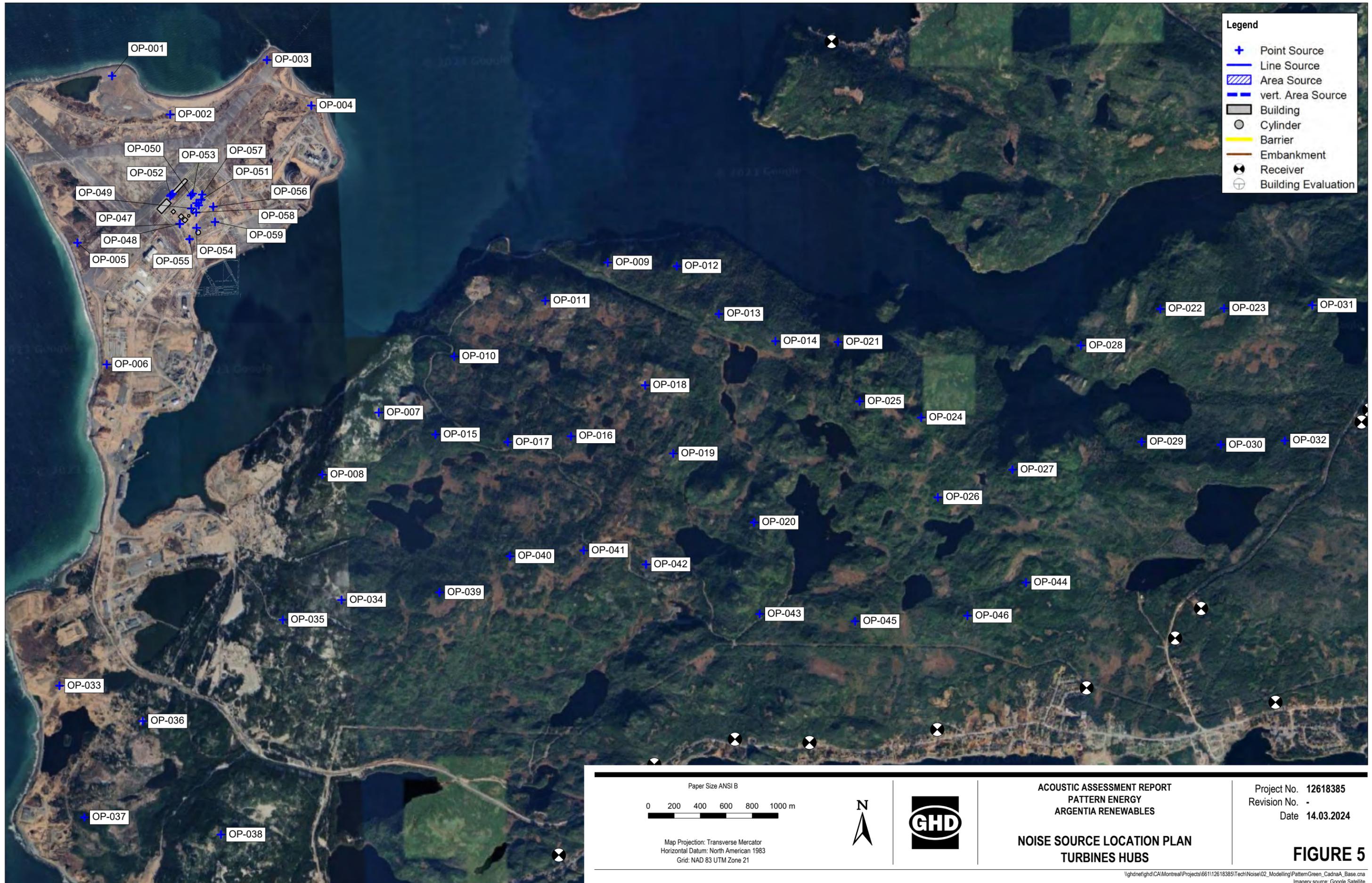
This Study focused on the noise emissions from the cumulative operation of both the wind turbines, and hydrogen and ammonia production facility. Noise emissions from wind turbines typically increase with increasing wind speed and thus, the maximum wind speed was used to be conservative. Turbine specifications have been specified in Table 2, and spectral sound data has been sourced from the previously prepared wind farm acoustic report *Navarre Green Power Hub – Wind Turbine Noise Assessment* (Marshall Day Acoustics, May 2023), where the same model wind turbine was assessed, provided below in Table 3. Noise emissions from wind turbines are dependent on a range of factors, including the turbine size, rotor diameter, blade design, power output and rotational speed. No special audible characteristics for the turbines considering low frequency, impulsiveness or tonality are identified, and have not been applied to noise level predictions in the assessment. The locations of the turbines used in the noise modelling was determined based on the site plans shown in Appendix B and is provided below in Figure 5 along with the plant source locations.

Table 2 *Wind Turbine Specifications*

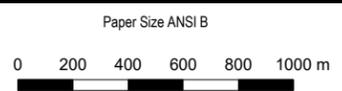
Description	Characteristic
Model	Vestas V172-7.2
Rated power	7,200 kW
Hub height	166 m
Rotor diameter	172 m
Rotor swept area	23,235 m ²
Number of blades	3
Cut-in wind speed	3 m/s
Cut-out wind speed	25 m/s
Sound power level at hub height ¹	110.1 dBA
Note 1: Assuming wind speeds are over 9 m/s without serrated trailing edge rotor blades	

Table 3 *A-Weighted Octave Band Sound Power Levels, dBA – Vestas V172-7.2*

Parameter	Sound Power Octave band centre frequency, Hz									Total dBA
	31.5	63	125	250	500	1000	2000	4000	8000	
Sound power level at hub height	81	91	99	104	105	104	100	93	83	110



- Legend**
- + Point Source
 - Line Source
 - ▨ Area Source
 - - - vert. Area Source
 - Building
 - Cylinder
 - Barrier
 - Embankment
 - + Receiver
 - + Building Evaluation



ACOUSTIC ASSESSMENT REPORT
 PATTERN ENERGY
 ARGENTIA RENEWABLES

**NOISE SOURCE LOCATION PLAN
 TURBINES HUBS**

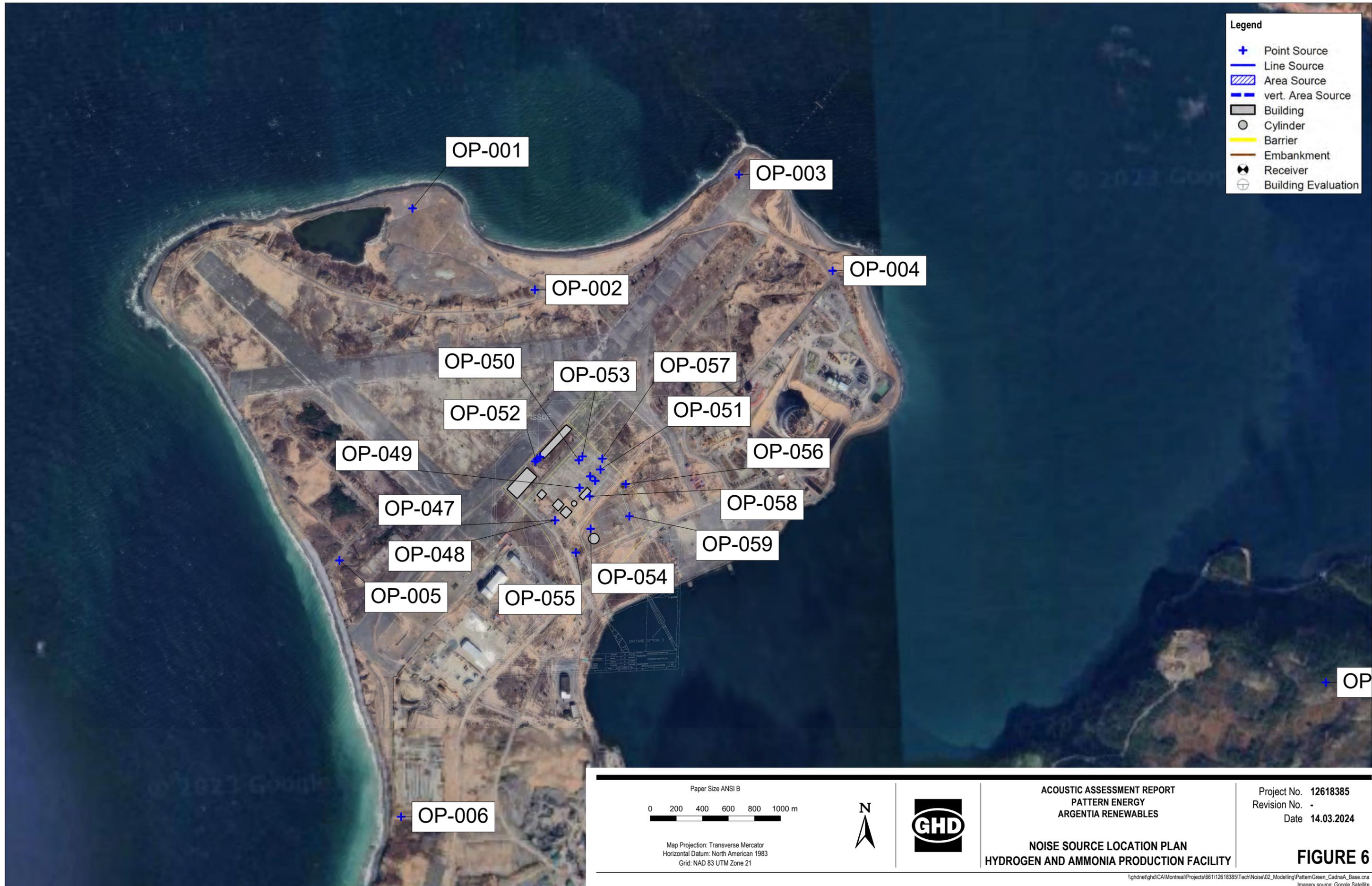
Project No. 12618385
 Revision No. -
 Date 14.03.2024

FIGURE 5

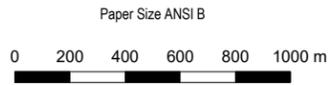
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 Imagery source: Google Satellite

5.1.2 Hydrogen and Ammonia Production Facilities

Significant noise generation is expected to occur from operations emanating from the hydrogen and ammonia production facilities. These operations will involve the operation of various types of equipment including cooling towers, compressors, air coolers, transformers, flares, chillers and diesel generators. It is expected that some equipment will be located indoors whilst others located outdoors, however the exact configuration of the facility is not yet determined at this stage. To remain conservative, all equipment associated with the facility are assumed to be operating outside. In order to predict the future worst-case noise impacts from the Project activities, representative octave band noise data was used, measured from processing equipment similar to what is noted to be required for the Project. The list of operational equipment and their spectral sound power level source data is provided below in Table 4, and the locations of these operational noise sources is provided in Figure 6.



- Legend**
- + Point Source
 - Line Source
 - ▨ Area Source
 - vert. Area Source
 - ▭ Building
 - Cylinder
 - Barrier
 - Embankment
 - ⊗ Receiver
 - ⊕ Building Evaluation



ACOUSTIC ASSESSMENT REPORT
 PATTERN ENERGY
 ARGENTIA RENEWABLES

NOISE SOURCE LOCATION PLAN
 HYDROGEN AND AMMONIA PRODUCTION FACILITY

Project No. 12618385
 Revision No. -
 Date 14.03.2024

FIGURE 6

Table 4 Source Sound Power Levels Used in Acoustic Model – Hydrogen and Ammonia Production Facility Equipment

Source	A-weighted sound power level (dBA) by Octave Band (Hz)									Total Sound Power Level	
	31.5	63	125	250	500	1000	2000	4000	8000	dB	dBA
Cooling Water Tower	39	52	60	77	72	77	79	79	75	89	85
Cooling Water Tower Vent	35	45	56	72	64	69	70	68	61	83	77
N2 Compressor	65	79	92	101	110	123	129	122	114	130	131
Electrolyser Compressors 1	38	52	65	74	83	96	102	95	89	103	104
Electrolyser Compressors 2	49	63	76	85	94	107	113	106	98	114	115
Ammonia Air Coolers	81	97	107	111	114	113	111	108	98	129	119
Transformers ¹	70	89	101	103	109	106	102	97	88	121	112
Boil Off Gas Compressors	46	60	73	82	92	104	110	103	95	111	112
Tank Flare	81	91	108	111	114	117	116	115	109	128	122
NH3 Flare	81	91	108	111	114	117	116	115	109	128	122
Piping Valves 1	41	53	60	69	78	93	96	99	97	103	103
Piping Valves 2	41	53	60	69	78	93	96	99	97	103	103
Piping Valves 3	41	53	60	69	78	93	96	99	97	103	103
Turbine Glycol Chiller	74	86	91	92	95	92	90	90	85	117	100
Turbine Combustion Intake	51	67	79	86	91	93	92	89	82	102	98
Diesel Generator 1	0	81	86	86	89	83	80	74	67	109	93
Diesel Generator 2	0	81	86	86	89	83	80	74	67	109	93

Note 1: Tonality was detected in the transformer sound spectrum, and thus, in accordance with the Health Canada Guidance, a +5 dBA tonal penalty has been applied

5.2 Construction Noise Sources

Noise emissions during decommissioning and rehabilitation were considered to be less than noise emissions during construction and operation, and so were assessed qualitatively.

The construction of the Project is anticipated to occur over a period of 51 months. For construction activities lasting longer than one year, Health Canada recommends a quantitative assessment of noise emissions (Health Canada 2017).

The Project construction phase noise emissions were established using the following information sources:

- Equipment lists and design data provided as part of the Project Description
- Measurement data of similar equipment
- Publications that provide reference sound power levels and sound pressure levels for construction equipment (DEFRA, 2005; DEFRA, 2006)

Earthmoving and construction activities are planned for the ammonia production facility, the main source of noise emissions during construction of the ammonia production facility and port is related to pile driving that may be required. The sound power levels assumed for pile driving activities are shown in Table 5 and include a 12 dB penalty on the blasting source as it qualifies as a highly impulsive noise source as indicated in the Health Canada Guideline. A list of equipment and quantities that are planned to be used for the construction of the wind farm is provided in Table 5 along with estimates of the sound power levels that could be emitted from the operation of the construction equipment.

Sound emissions will also result from blasting during construction. Blast energy that liberates into the atmosphere can generate air overpressure and noise. Blasting is expected to be limited to daytime hours and will follow best management practices (BMPs) outlined in guidance documents such as the Blasters Handbook (ISEE, 2016) and the Environmental Code of Practice for Metal Mines (ECCC, 2009). These guidance documents provide detailed information on designing and carrying out blasting to reduce sound emissions, and these will be consulted during blasting design.

The equipment sources related to Project construction of the wind turbines were modelled as area sources covering the wind farm locations. The vehicle traffic to/from the wind farms and transmission line construction sources were modelled as line sources.

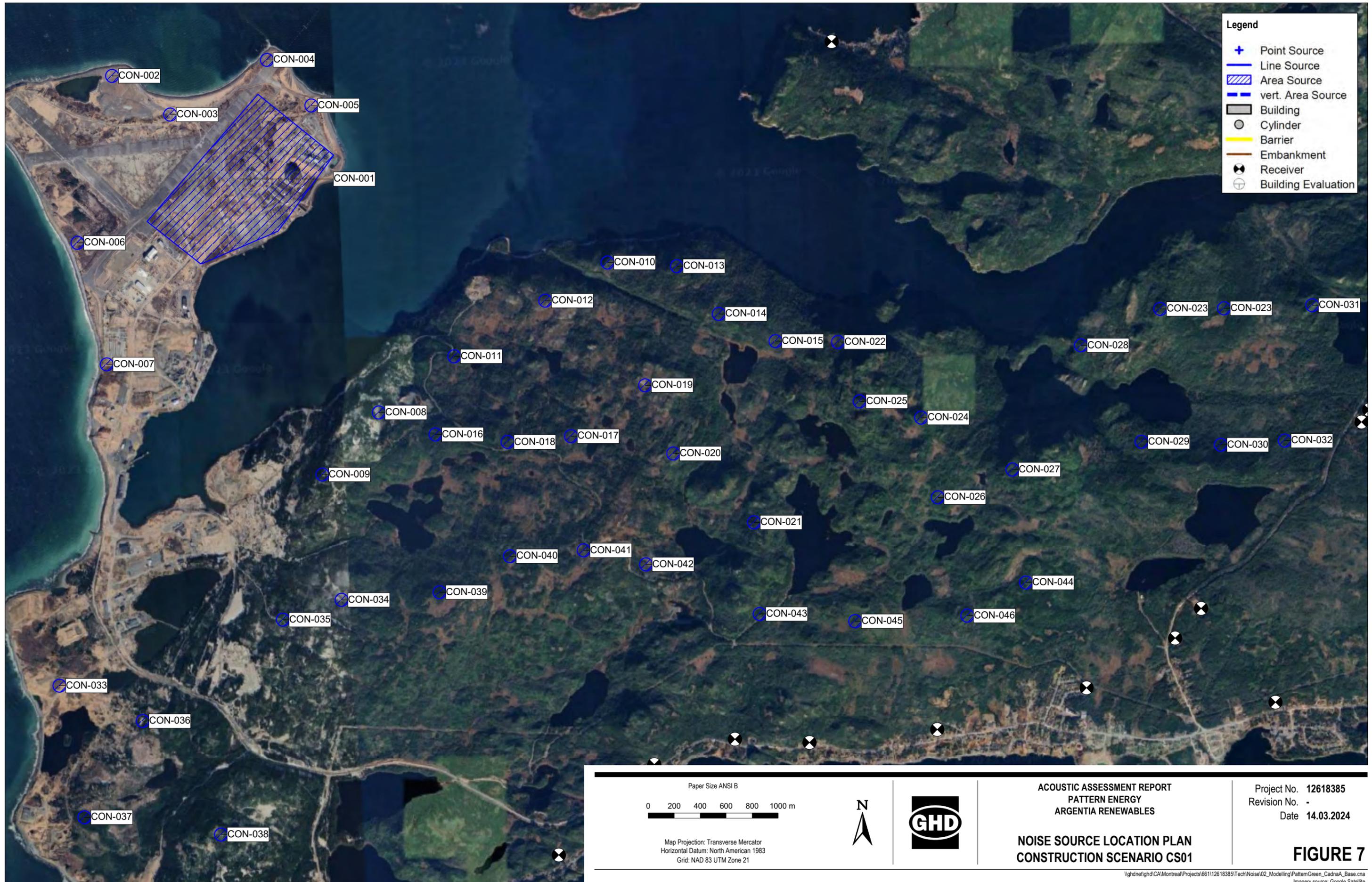
5.2.1 Construction Scenario 1 – Turbine and Plant Construction

This Study focused on noise generating pieces of construction equipment that are likely to be used during construction activities. The final list of plant and equipment needed for the Project would be determined during the construction planning phase. Anticipated construction equipment, quantities and their usage factors are provided below in Table 5.

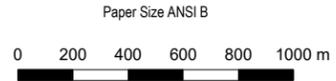
Table 5 Anticipated Construction Equipment Details CS01

Equipment	Quantity	Usage Factor	Sound Power Level (SWL) $L_{Aeq(1hr)}$, dBA	Noise Level Source
Backhoe	4	40%	112	FTA, 2018 ¹
Blasting ³	1	1%	138	FHWA, 2006 ²
Bulldozers	2	40%	117	FTA, 2018
Compactor	4	20%	114	FTA, 2018
Compressor	4	40%	112	FTA, 2018
Concrete Truck	10	40%	117	FHWA, 2006
Concrete Pump Truck	2	20%	114	FTA, 2018
Concrete Saws	2	20%	122	FHWA, 2006

Equipment	Quantity	Usage Factor	Sound Power Level (SWL) $L_{Aeq(1hr)}$, dBA	Noise Level Source
Concrete Vibrators	2	20%	108	FTA, 2018
Crane	4	16%	115	FTA, 2018
Flat Bed Truck	4	40%	116	FHWA, 2006
Fork Truck	2	40%	99	FTA, 2018
Generator	8	50%	114	FTA, 2018
Grinders / Cutters	4	20%	112	FTA, 2018
Hydraulic rock breakers	2	40%	122	FHWA, 2006
Jack hammers	4	20%	117	FHWA, 2006
Pickup truck	4	40%	87	FHWA, 2006
Manlift	2	20%	117	FHWA, 2006
Welder	4	40%	105	FHWA, 2006
Vibratory Hammers	2	20%	127	FHWA, 2006
Impact Pile Driver ³	2	1%	145	FTA, 2018
<p>Note 1: <i>Transit Noise and Vibration Impact Assessment Manual</i> (Federal Transit Administration, September 2018)</p> <p>Note 2: <i>Construction Noise Handbook</i> (Federal Highway Administration, 2006)</p> <p>Note 3: A 12 dB penalty is included to account for the highly impulsive characteristics of the activity in accordance with Health Canada</p>				



- Legend**
- + Point Source
 - Line Source
 - ▨ Area Source
 - ▬ vert. Area Source
 - ▭ Building
 - Cylinder
 - Barrier
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 - ⊕ Building Evaluation



ACOUSTIC ASSESSMENT REPORT
 PATTERN ENERGY
 ARGENTIA RENEWABLES

**NOISE SOURCE LOCATION PLAN
 CONSTRUCTION SCENARIO CS01**

Project No. 12618385
 Revision No. -
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FIGURE 7

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 Imagery source: Google Satellite

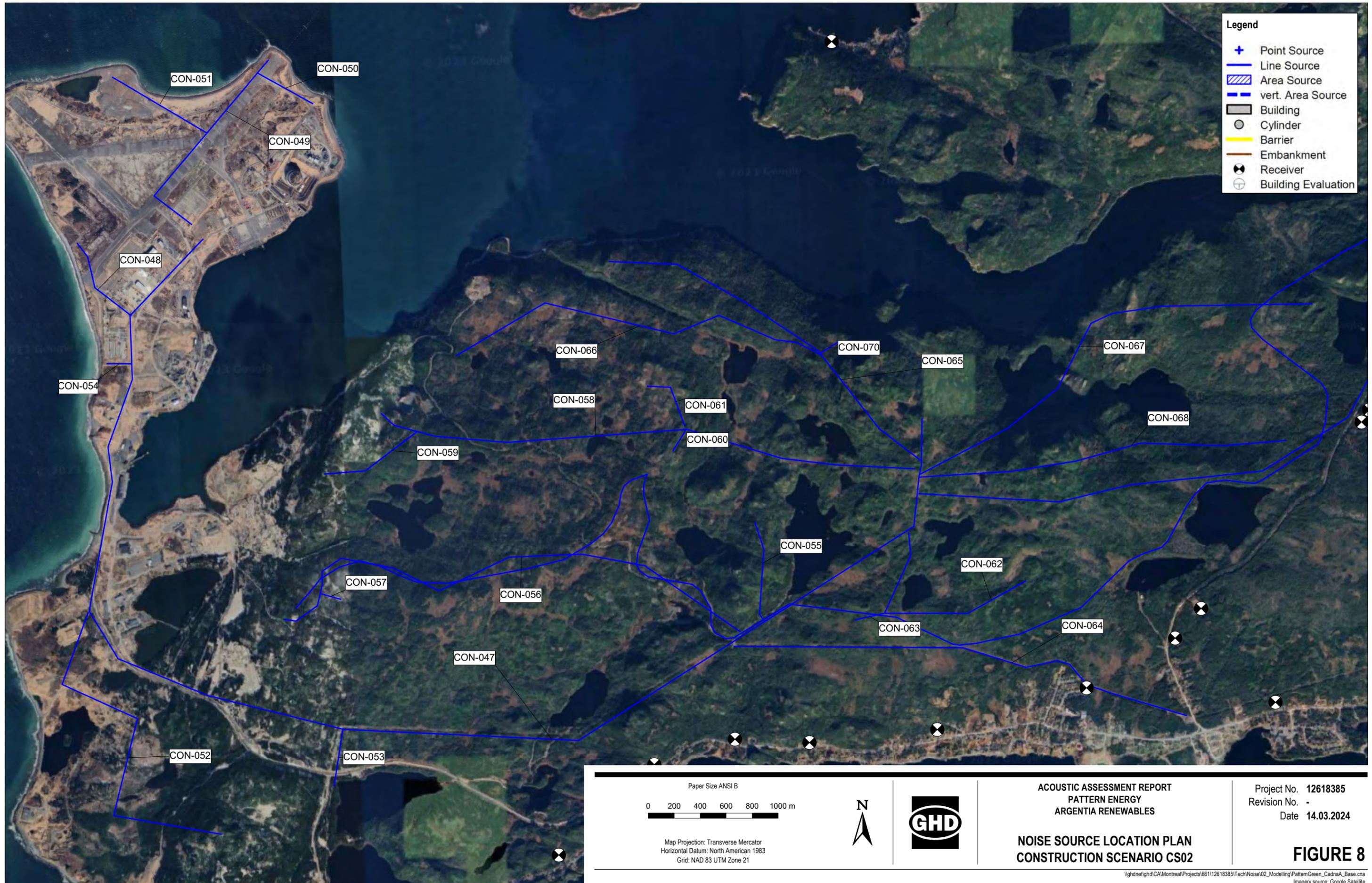
5.2.2 Construction Scenario 2 – Transmission Lines, Collector System and Road Construction

For the construction of new transmission lines, collector system, and roads, a separate equipment list was used to determine the sound levels. As with Scenario 1, the final list of plant and equipment needed for the Project would be determined during the construction planning phase. Anticipated construction equipment, quantities and their usage factors are provided below in Table 6 and displayed in Figure 8.

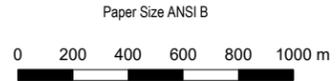
Table 6 Anticipated Construction Equipment Details CS02

Equipment	Quantity	Usage Factor	Sound Power Level (SWL) $L_{Aeq(1hr)}$, dBA	Noise level source
Compressor	1	20%	112	FTA, 2018 ¹
Crane	2	16%	115	FTA, 2018
Flat Bed Truck	2	40%	116	FTA, 2018
Pickup Truck	2	40%	87	FHWA, 2006 ²
Tamper	2	20%	94	DEFRA, 2006 ³
Mobile Drill	1	10%	117	FHWA, 2006
Compactor	1	20%	114	FTA, 2018
Concrete Truck	1	40%	117	FHWA, 2006
Concrete Pump Truck	1	20%	114	FTA, 2018
Concrete Vibrators	1	20%	108	FTA, 2018
Generator	1	50%	114	FTA, 2018
Excavator	2	50%	117	FHWA, 2006
Welder	4	40%	105	FHWA, 2006

Note 1: *Transit Noise and Vibration Impact Assessment Manual* (Federal Transit Administration, September 2018)
 Note 2: *Construction Noise Handbook* (Federal Highway Administration, 2006)
 Note 3: *Noise Database for Prediction of Noise on Construction and Open Sites* (Department for Environment, Food, and Rural Affairs, 2006)



- Legend**
- + Point Source
 - Line Source
 - ▨ Area Source
 - ▬ vert. Area Source
 - Building
 - Cylinder
 - Barrier
 - Embankment
 - ⊗ Receiver
 - ⊕ Building Evaluation



ACOUSTIC ASSESSMENT REPORT
 PATTERN ENERGY
 ARGENTIA RENEWABLES

**NOISE SOURCE LOCATION PLAN
 CONSTRUCTION SCENARIO CS02**

Project No. 12618385
 Revision No. -
 Date 14.03.2024

FIGURE 8

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 Imagery source: Google Satellite

6. Vibration Source Summary

Project operations, including operating and maintaining the wind turbines, transmission lines, ammonia generation facility, and port facilities, are not expected to generate substantial vibration emissions, and so vibration effects from these activities are not considered further in the Study due to a minimum setback to sensitive areas of 550 m.

7. Point-of-Reception Summary

A “point-of-reception” is any point on the premises of a person where sound origination from other than those premises is received. A point-of-reception may be located in areas where people normally live, work, or take part in recreation; this does not apply to the work force of a company.

The objective of this Study is to determine the predictable worst case 1-hour equivalent sound level (1-hour LEQ) at the worst-case points of reception. The worst-case points of reception are defined as the sensitive receptors with the greatest potential exposure to the Facility noise sources due to proximity and direct line of sight exposure.

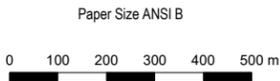
The worst-case sensitive points-of-reception (PORs) for this Study are:

- POR-01 - Identified cabin residence facade (4.5m Above Ground [AG])
- POR-02 - Identified cabin residence facade (4.5m AG)
- POR-03 - Identified cabin residence facade (4.5m AG)
- POR-04 - Ferndale Road residence facade (4.5m AG)
- POR-05 - NL-100 residence facade (4.5m AG)
- POR-06 - NL-100 residence facade (4.5m AG)
- POR-07 - NL-100 residence facade (4.5m AG)
- POR-08 - NL-100 residence facade (4.5m AG)
- POR-09 - Villa Marie Drive residence facade (4.5m AG)
- POR-10 - Fort Harbour Road residence facade (4.5m AG)
- POR-11 - NL-100 residence facade (4.5m AG)
- POR-12 - NL-100 residence facade (4.5m AG)
- POR-13 - Ferndale Road residence facade (4.5m AG)
- POR-14 - Green Road residence facade (4.5m AG)
- POR-15 - Graveyard Road residence facade (4.5m AG)
- POR-16 - Freshwater Crescent residence facade (4.5m AG)
- POR-17 - Old Settlement Hill residence facade (4.5m AG)
- POR-18 - High Road residence facade (4.5m AG)
- POR-19 - Orcan Drive residence facade (4.5m AG)

All POR locations within the RAA were considered; however, the noise impact at only the worst-case and most exposed PORs are presented herein. The locations of the worst-case PORs are identified in Figures 9 through 11.



- Legend**
- + Point Source
 - Line Source
 - ▨ Area Source
 - vert. Area Source
 - ▭ Building
 - Cylinder
 - Barrier
 - Embankment
 - ⊗ Receiver
 - ⊕ Building Evaluation



ACOUSTIC ASSESSMENT REPORT
 PATTERN ENERGY
 ARGENTIA RENEWABLES

**POINT OF RECEPTION LOCATION PLAN
 SOUTHWESTERN RECEPTORS**

Project No. 12618385
 Revision No. -
 Date 14.03.2024

FIGURE 9

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 Imagery source: Google Satellite

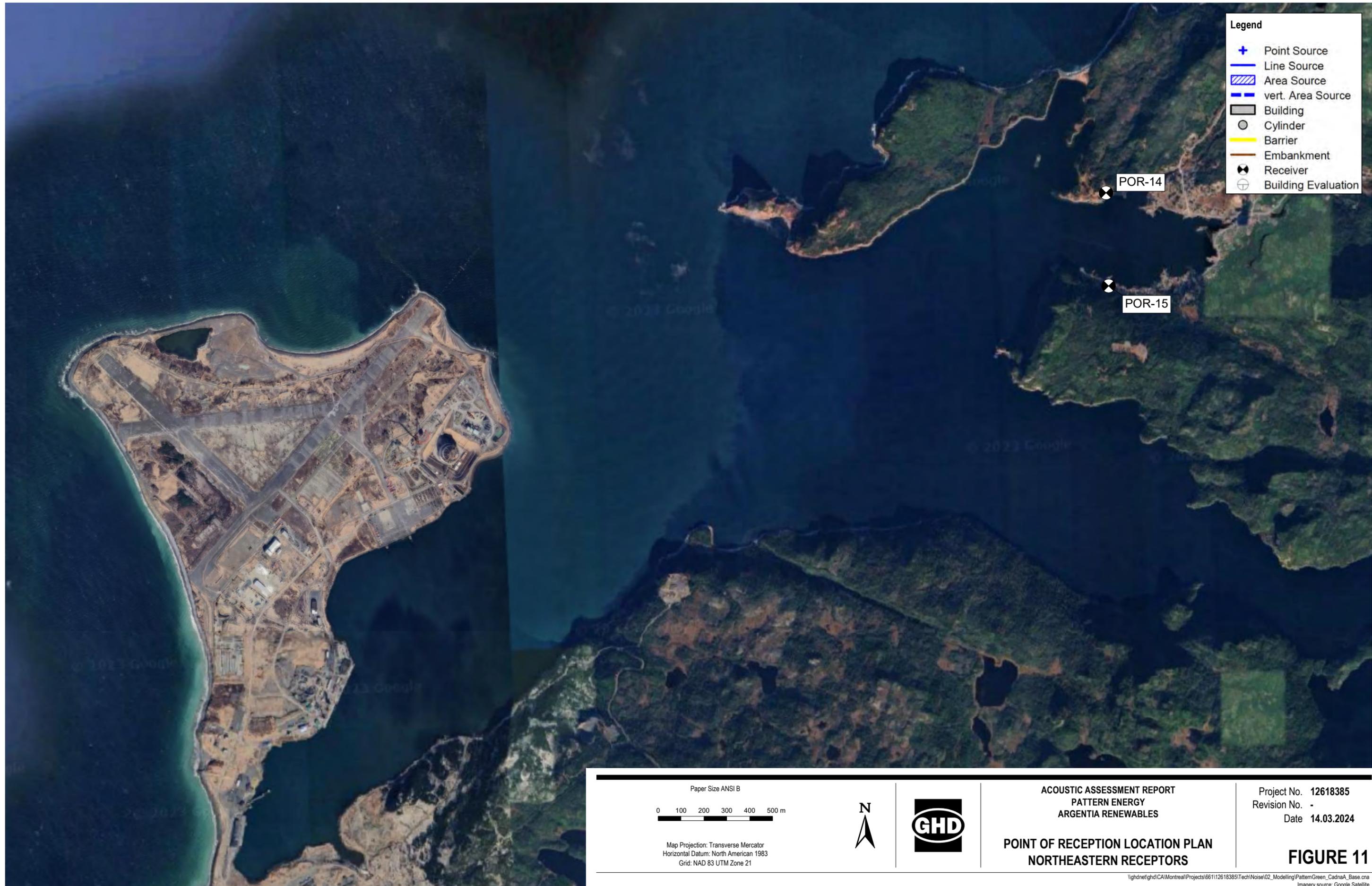


- Legend**
- + Point Source
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 - - vert. Area Source
 - Building
 - Cylinder
 - Barrier
 - Embankment
 - X Receiver
 - + Building Evaluation

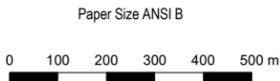
POR-05

<p>Paper Size ANSI B</p> <p>0 100 200 300 400 500 m</p> <p>Map Projection: Transverse Mercator Horizontal Datum: North American 1983 Grid: NAD 83 UTM Zone 21</p>			<p>ACOUSTIC ASSESSMENT REPORT PATTERN ENERGY ARGENTIA RENEWABLES</p> <p>POINT OF RECEPTION LOCATION PLAN SOUTHEASTERN RECEPTORS</p>	<p>Project No. 12618385 Revision No. - Date 14.03.2024</p>
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FIGURE 10



- Legend**
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 - Line Source
 - ▨ Area Source
 - vert. Area Source
 - Building
 - Cylinder
 - Barrier
 - Embankment
 - Receiver
 - Building Evaluation



ACOUSTIC ASSESSMENT REPORT
PATTERN ENERGY
ARGENTIA RENEWABLES

POINT OF RECEPTION LOCATION PLAN
NORTHEASTERN RECEPTORS

Project No. **12618385**
 Revision No. **-**
 Date **14.03.2024**

FIGURE 11

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Imagery source: Google Satellite

8. Noise Impact Assessment Results

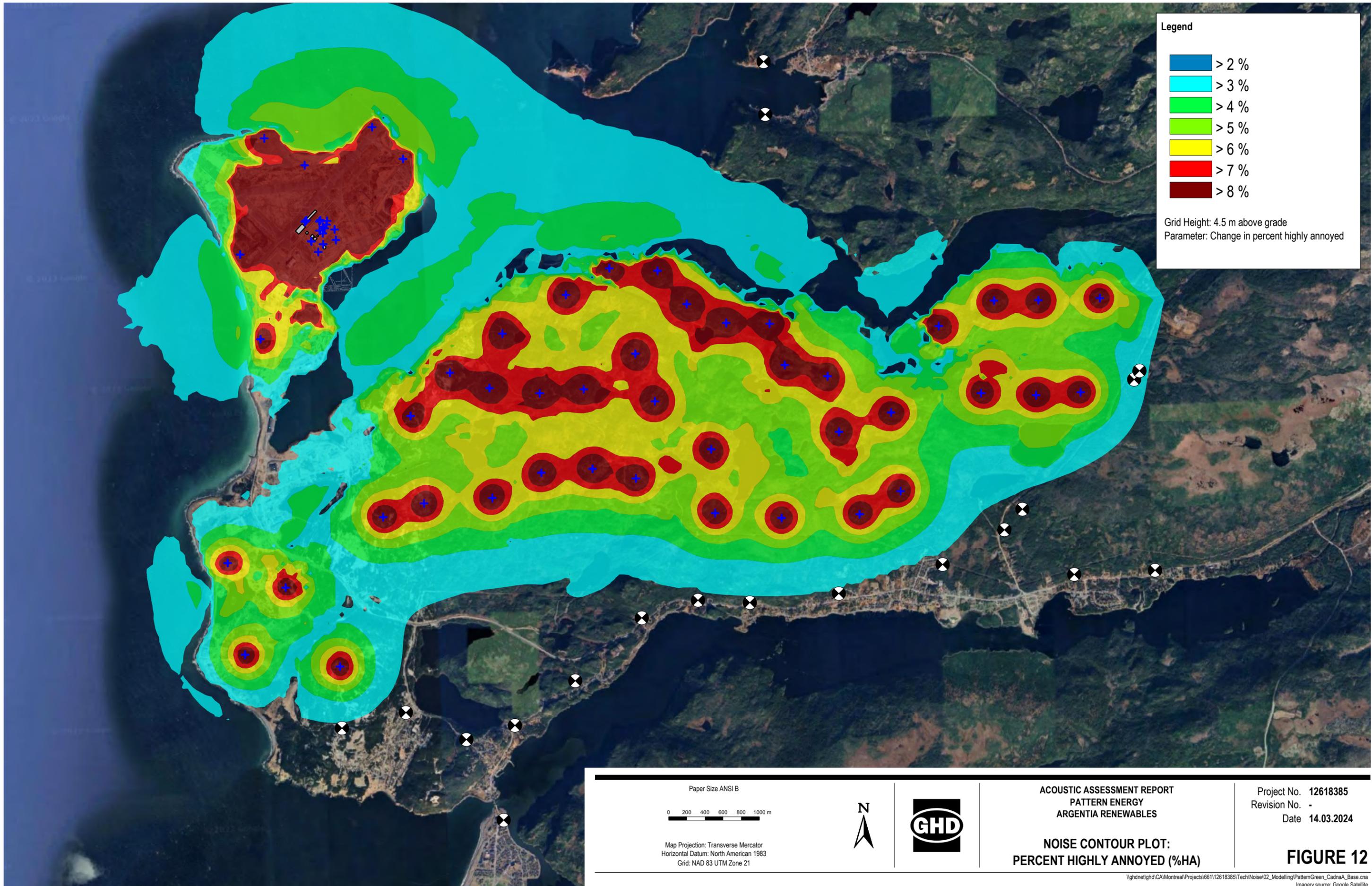
8.1 Operational Noise

8.1.1 %HA Assessment

The predicted project-related daytime and nighttime sound levels for the operational phase of the project are shown below in Table 7. The predicted daytime (L_d), night (L_n) and day-night average sound levels (L_{dn}) at the receptors result in a difference in %HA levels that are lower than the limit of 6.5%. Therefore, noise mitigation measures are not required for operational noise with respect to the %HA criteria. A contour plot can be found in Figure 12 which displays the %HA levels in relation to the sensitive receptors.

Table 7 Modelling Results, Operational Phase – Day-Night Rating Sound Levels L_{dn} and % Highly Annoyed %HA at Points of Reception

Receptor	Monitoring Location	Baseline		Project Predicted L_{dn} (dBA)	Total (Baseline plus Project)		Delta %HA (Between Total and Baseline)	Compliance with Limits?
		L_{dn} (dBA)	%HA		L_{dn} (dBA)*	%HA		
POR1	M3	50	2.2	48	52	2.9	0.7	Yes
POR2	M3	50	2.2	51	53	3.4	1.2	Yes
POR3	M3	50	2.2	50	53	3.3	1.0	Yes
POR4	M1	43	0.8	36	43	0.9	0.1	Yes
POR5	M2	43	0.9	33	43	0.9	0.0	Yes
POR06	M2	43	0.9	38	44	1.0	0.1	Yes
POR07	M2	43	0.9	30	43	0.9	0.0	Yes
POR08	M2	43	0.9	31	43	0.9	0.0	Yes
POR09	M3	50	2.2	50	53	3.3	1.1	Yes
POR10	M3	50	2.2	48	52	2.9	0.6	Yes
POR11	M3	50	2.2	25	50	2.3	0.0	Yes
POR12	M3	50	2.2	20	50	2.2	0.0	Yes
POR13	M1	43	0.8	37	44	0.9	0.1	Yes
POR14	M4	61	8.7	42	61	8.8	0.1	Yes
POR15	M4	61	8.7	30	61	8.7	0.0	Yes
POR16	M1	43	0.8	41	45	1.1	0.3	Yes
POR17	M1	43	0.8	49	50	2.1	1.2	Yes
POR18	M1	43	0.8	44	46	1.3	0.5	Yes
POR19	M1	43	0.8	38	44	1.0	0.2	Yes



Legend

- > 2 %
- > 3 %
- > 4 %
- > 5 %
- > 6 %
- > 7 %
- > 8 %

Grid Height: 4.5 m above grade
 Parameter: Change in percent highly annoyed

<p>Paper Size ANSI B</p> <p>0 200 400 600 800 1000 m</p> <p>Map Projection: Transverse Mercator Horizontal Datum: North American 1983 Grid: NAD 83 UTM Zone 21</p>			<p>ACOUSTIC ASSESSMENT REPORT PATTERN ENERGY ARGENTIA RENEWABLES</p> <p>NOISE CONTOUR PLOT: PERCENT HIGHLY ANNOYED (%HA)</p>	<p>Project No. 12618385 Revision No. - Date 14.03.2024</p> <p>FIGURE 12</p>
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8.1.2 Indoor Nighttime Noise Assessment

The predicted project-related indoor nighttime sound levels for the operational phase of the project are shown below in Table 8. As per the Health Canada Guideline, 15 dBA was conservatively subtracted from the outdoor project noise at the plane of window of the sensitive receptors to obtain the predicted indoor noise levels. The predicted indoor nighttime levels at all receptors are within 45 dBA, and thus, noise mitigation measures are not required for operational noise with respect to the nighttime noise criteria.

Table 8 Modelling Results, Operational Phase – Indoor Nighttime Sound Levels at Points of Reception

Receptor	Project Predicted Nighttime Leq (dBA)	Predicted Indoor Noise Levels	Health Canada Indoor Noise Limits	Compliance with Limits?
POR1	42	27	45	Yes
POR2	44	29	45	Yes
POR3	44	29	45	Yes
POR4	29	14	45	Yes
POR5	26	11	45	Yes
POR06	31	16	45	Yes
POR07	23	8	45	Yes
POR08	24	9	45	Yes
POR09	44	29	45	Yes
POR10	41	26	45	Yes
POR11	19	4	45	Yes
POR12	14	0	45	Yes
POR13	30	15	45	Yes
POR14	35	20	45	Yes
POR15	24	9	45	Yes
POR16	35	20	45	Yes
POR17	42	27	45	Yes
POR18	37	22	45	Yes
POR19	32	17	45	Yes

8.1.3 Low-Frequency Noise Assessment

Wind turbines have been assessed for the potential to emit high LFN. The difference between the C-weighted sound levels and the A-weighted sound levels of the wind turbines were calculated and found to be 12 dB. This difference is much lower than the 20 dB limit, and thus, the wind turbines are likely not LFN sources. Additionally, the total sound pressure level of the 16 Hz, 31.5 Hz, and 63 Hz bands at the worst-case sensitive receptor were 63 dB which is well below the limit of 70 dB. Therefore, LFN is not anticipated to be an issue at the surrounding receptors; no mitigation measures are required to achieve compliance.

8.2 Construction Noise

The predicted project-relative daytime and nighttime sound levels for the construction phase of the project are provided below in Table 9 for construction scenario CS01 (Turbine and Plant Construction), and Table 10 for construction scenario CS02 (Transmission Lines, Collector System, and Road Construction).

Table 9 *Modelling Results, Construction Phase CS01 (Turbine and Plant Construction) – Day-Night Rating Sound Levels Ldn and % Highly Annoyed %HA at Points of Reception*

Receptor	Monitoring location	Baseline		Project Predicted Ldn (dBA)	Total (Baseline plus Project)		Delta %HA (Between Total and Baseline)	Compliance with Limits?
		Ldn (dBA)	%HA		Ldn (dBA)*	%HA		
POR1	M3	50	2.2	52	54	3.7	1.5	Yes
POR2	M3	50	2.2	60	61	8.3	6.0	Yes
POR3	M3	50	2.2	59	59	7.0	4.7	Yes
POR4	M1	43	0.8	29	43	0.9	0.0	Yes
POR5	M2	43	0.9	29	43	0.9	0.0	Yes
POR6	M2	43	0.9	36	44	1.0	0.1	Yes
POR7	M2	43	0.9	30	43	0.9	0.0	Yes
POR8	M2	43	0.9	32	43	0.9	0.0	Yes
POR9	M3	50	2.2	49	53	3.1	0.8	Yes
POR10	M3	50	2.2	51	54	3.6	1.3	Yes
POR11	M3	50	2.2	22	50	2.2	0.0	Yes
POR12	M3	50	2.2	21	50	2.2	0.0	Yes
POR13	M1	43	0.8	33	43	0.9	0.0	Yes
POR14	M4	61	8.7	38	61	8.8	0.0	Yes
POR15	M4	61	8.7	30	61	8.7	0.0	Yes
POR16	M1	43	0.8	38	44	1.0	0.2	Yes
POR17	M1	43	0.8	59	59	6.7	5.9	Yes
POR18	M1	43	0.8	44	46	1.3	0.5	Yes
POR19	M1	43	0.8	31	43	0.9	0.0	Yes

Table 10 Modelling Results, Construction Phase CS02 (Transmission Lines, Collector System, and Roads) - Day-Night Rating Sound Levels Ldn And % Highly Annoyed %HA At Points of Reception

Receptor	Monitoring location	Baseline		Project Predicted Ldn (dBA)	Total (Baseline plus Project)		Delta %HA (Between Total and Baseline)	Compliance with Limits?
		Ldn (dBA)	%HA		Ldn (dBA)*	%HA		
POR1	M3	50	2.2	50	53	3.2	1.0	Yes
POR2	M3	50	2.2	57	57	5.7	3.4	Yes
POR3	M3	50	2.2	56	57	5.3	3.1	Yes
POR4	M1	43	0.8	20	43	0.8	0.0	Yes
POR5	M2	43	0.9	23	43	0.9	0.0	Yes
POR6	M2	43	0.9	27	43	0.9	0.0	Yes
POR7	M2	43	0.9	20	43	0.9	0.0	Yes
POR8	M2	43	0.9	24	43	0.9	0.0	Yes
POR9	M3	50	2.2	70	70	23.2	20.9	No
POR10	M3	50	2.2	44	51	2.5	0.3	Yes
POR11	M3	50	2.2	16	50	2.2	0.0	Yes
POR12	M3	50	2.2	14	50	2.2	0.0	Yes
POR13	M1	43	0.8	20	43	0.8	0.0	Yes
POR14	M4	61	8.7	23	61	8.7	0.0	Yes
POR15	M4	61	8.7	22	61	8.7	0.0	Yes
POR16	M1	43	0.8	31	43	0.9	0.0	Yes
POR17	M1	43	0.8	38	44	1.0	0.1	Yes
POR18	M1	43	0.8	32	43	0.9	0.0	Yes
POR19	M1	43	0.8	23	43	0.8	0.0	Yes

As shown in Table 10, the %HA level at POR-9 (27 Power Street, Dunville) is greater than the limit of 6.5% due to the close proximity to the construction. Thus, mitigation in the form of temporary barrier/hoarding is recommended in order to attenuate the sound to acceptable levels (this recommendation is included in Section 9.1, Table 11 under Path Controls). The expected %HA after the inclusion of noise mitigation in the form of noise barriers/hoarding is 5.6% which is below the limit of 6.5 %HA.

9. General Noise Mitigation Measures and Best Practices

9.1 On-Site Best Practices for Construction Noise

General recommendations to assist in minimizing noise impacts during the construction phase of the project are provided below Table 11.

Table 11 Construction Noise and Vibration Mitigation Measures

Action Required	Details
Management Measures	
Implement community consultation measures	Notification detailing work activities, dates and hours, impacts and mitigation measures, any operational noise benefits from the works (where applicable) and contact telephone number.
Site inductions	All employees, contractors and subcontractors are to receive an environmental induction. The induction must at least include: <ul style="list-style-type: none"> – All relevant project specific and standard noise and vibration mitigation measures – Relevant licence and approval conditions – Permissible hours of work – Any limitations on high noise generating activities – Location of nearest sensitive receivers – Construction employee parking areas – Designated loading/ unloading areas and procedures – Construction traffic routes – Site opening/closing times (including deliveries) – Environmental incident procedures.
Behavioural practices	No swearing or unnecessary shouting or loud stereos/radios on site. No dropping of materials from height, throwing of metal items and slamming of doors.
Monitoring	A noise monitoring program may be carried out for the duration of the works in accordance with a prepared Construction Noise and Vibration Management Plan, and any approval and licence conditions.
Attended vibration measurement	Attended vibration measurements are required at the commencement of vibration generating activities to confirm that vibration levels are within the acceptable range to prevent cosmetic building damage.
Building condition surveys	Undertake building dilapidation surveys on all buildings located within the buffer zone prior to commencement of activities with the potential to cause property damage
Blasting Noise and Vibration Mitigation	Blasting activities (if required) will be included under a contract service agreement with the explosives supplier and who will have a valid blasters certificate issued by Newfoundland and Labrador Environment and Climate Change (NLDECC). An Explosives and Blasting Management Plan will be developed by the blasting contractor to provide direction for the safe storage, handling and use of explosives and explosive components at the Project site, to address the safety of the public and Project personnel, and protection of both the environment and Project components. Blasting patterns and procedures will be used to reduce shock or instantaneous peak noise levels, in accordance with a Blast Management Plan that will be developed for the Project. Blasts should be designed by the blasting contractor to meet the required noise and vibration limits. Blast sound and vibration levels can be controlled by adjusting various parameters such as hole spacing, explosive charge weight, and the time delay between rows.

Action Required	Details
Source Controls	
Construction hours and scheduling	<p>Where reasonable and feasible, construction should be carried out during the standard daytime working hours. Work generating high noise and/or vibration levels should be scheduled during less sensitive time periods.</p> <p>Further to this, it is recommended that the use of mulchers, jack hammers, concrete saws, rock breakers, compaction or other equipment used in very close proximity to the receivers should be limited where feasible and reasonable to the standard construction hours.</p>
Equipment selection	Use quieter and less vibration emitting construction methods where reasonable and feasible.
Use and siting of plant	The offset distance between noisy plant and adjacent sensitive receptors is to be maximised. Plant used intermittently to be throttled down or shut down. Noise-emitting plant to be directed away from sensitive receivers. Only have necessary equipment on site
Plan worksites and activities to minimise noise and vibration	<p>Locate compounds away from sensitive receivers and discourage access from local roads. Plan traffic flow, parking and loading/unloading areas to minimise reversing movements within the site.</p> <p>Where additional activities or plant may only result in a marginal noise increase and speed up works, consider limiting duration of impact by concentrating noisy activities at one location and move to another as quickly as possible.</p> <p>Very noisy activities should be scheduled for normal working hours. If the work cannot be undertaken during the day, it should be completed before 11:00 pm.</p>
Non-tonal reversing alarms	Non-tonal reversing beepers (or an equivalent mechanism) must be fitted and used on all construction vehicles and mobile plant regularly used on site and for any out of hours work.
Reduced equipment power	Use only the necessary size and power
Minimise disturbance arising from delivery of goods to construction sites	<p>Loading and unloading of materials/deliveries is to occur as far as possible from sensitive receivers.</p> <p>Select site access points and roads as far as possible away from sensitive receivers.</p> <p>Dedicated loading/unloading areas to be shielded if close to sensitive receivers.</p> <p>Delivery vehicles to be fitted with straps rather than chains for unloading, wherever possible.</p> <p>Avoid or minimise these out of hours movements where possible.</p>
Path Controls	
Shield stationary noise sources such as pumps, compressors, fans etc.	Stationary noise sources should be enclosed or shielded whilst ensuring that the occupational health and safety of workers is maintained.
Shield sensitive receivers from noisy activities	<p>Use structures to shield residential receivers from noise such as site shed placement; earth bunds; fencing; erection of operational stage noise barriers (where practicable) and consideration of site topography when siting plant.</p> <p>In particular, 27 Power Street, Dunville, NL requires temporary hoarding to adhere to the Health Canada Noise Guideline.</p>

9.2 On-Site Best Practices for Operational Noise

General recommendations to assist in minimizing noise impacts during the operational phase of the project are provided below Table 11.

Table 12 Operational Noise and Vibration Mitigation Measures

Action Required	Details
Management Measures	
Site inductions	All employees, contractors and subcontractors are to receive an environmental induction. The induction must at least include: <ul style="list-style-type: none"> – All relevant project specific and standard noise and vibration mitigation measures – Relevant licence and approval conditions – Permissible hours of work – Any limitations on high noise generating activities – Location of nearest sensitive receivers – Employee parking areas – Designated loading/ unloading areas and procedures – Operational traffic routes – Site opening/closing times (including deliveries) – Environmental incident procedures
Behavioural practices	No swearing or unnecessary shouting or loud stereos/radios on site. No dropping of materials from height, throwing of metal items and slamming of doors.
Source Controls	
Equipment selection	Use quieter and less vibration emitting equipment where reasonable and feasible.
Use and siting of plant	The offset distance between noisy plant and adjacent sensitive receptors is to be maximised. Plant used intermittently to be throttled down or shut down. Noise-emitting plant to be directed away from sensitive receivers. Only have necessary equipment on site
Plan worksites and activities to minimise noise and vibration	Locate compounds away from sensitive receivers and discourage access from local roads. Plan traffic flow, parking and loading/unloading areas to minimise reversing movements within the site. Where additional activities or plant may only result in a marginal noise increase and speed up works, consider limiting duration of impact by concentrating noisy activities at one location and move to another as quickly as possible. Very noisy activities should be scheduled for normal working hours. If the work cannot be undertaken during the day, it should be completed before 11:00 pm.
Non-tonal reversing alarms	Non-tonal reversing beepers (or an equivalent mechanism) must be fitted and used on all construction vehicles and mobile plant regularly used on site and for any out of hours work.
Reduced equipment power	Use only the necessary size and power

Action Required	Details
Minimise disturbance arising from delivery of goods to facility	<p>Loading and unloading of materials/deliveries is to occur as far as possible from sensitive receivers.</p> <p>Select site access points and roads as far as possible away from sensitive receivers.</p> <p>Dedicated loading/unloading areas to be shielded if close to sensitive receivers.</p> <p>Delivery vehicles to be fitted with straps rather than chains for unloading, wherever possible.</p> <p>Avoid or minimise these out of hours movements where possible.</p>
Path Controls	
Shield stationary noise sources such as pumps, compressors, fans etc.	Stationary noise sources should be enclosed or shielded whilst ensuring that the occupational health and safety of workers is maintained.

10. Conclusions

In general, facility operations and construction often produce elevated noise levels that have the potential to impact the surrounding environment. Thus, noise levels produced by equipment at the proposed Argentia Renewables Project have been assessed at the identified worst-case receptors and property lines to determine the future impact on residents of the nearest communities. This is not intended to preclude residents at farther distances but rather is presented to document those sensitive receptors (i.e., human receptors – seasonal and permanent dwellings) that are closest and represent a worst-case scenario.

10.1 Noise Compliance at Receptors

The predicted noise levels produced by worst-case activities during the Construction and Operation of the Project, including noise emissions from the Argentia Renewables Project are within the applicable guideline limits for all identified receptors provided that temporary construction noise mitigation in the form of barriers/hoarding is constructed during the erection of power lines near 27 Power Street, Dunville. Based on these predictions, noise levels at nearby sensitive receptors are expected to be within the Health Canada %HA noise level limits.

10.2 Vibration Compliance at Receptors

Vibration levels experienced at sensitive receptors located closest to construction and facility operations are not anticipated to exceed applicable limits. This is because the equipment with the highest potential to emit high vibration levels is in operation at locations that are as close as 550 metres from sensitive receptors. This offers significant setback and, as a result, the zone of influence created by the equipment usage will not overlap with sensitive receptors.

10.3 Follow-Up and Monitoring

Follow-up and monitoring are intended to verify the accuracy of predictions made during the Study, to assess the implementation and effectiveness of mitigation, and to manage adaptively, if required. Compliance monitoring, where required by permitting or regulations, will be conducted to confirm that mitigation measures are properly implemented. Should an unexpected deterioration of the environment be observed as part of follow-up and/or monitoring, intervention mechanisms may include the application of noise mitigation measures to address it.

Based on the results of the Noise and Vibration Impact Study, follow-up and monitoring are not planned at this time.

11. References

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Appendices

Appendix A

**Baseline Noise Monitoring Results and
Location Plan**

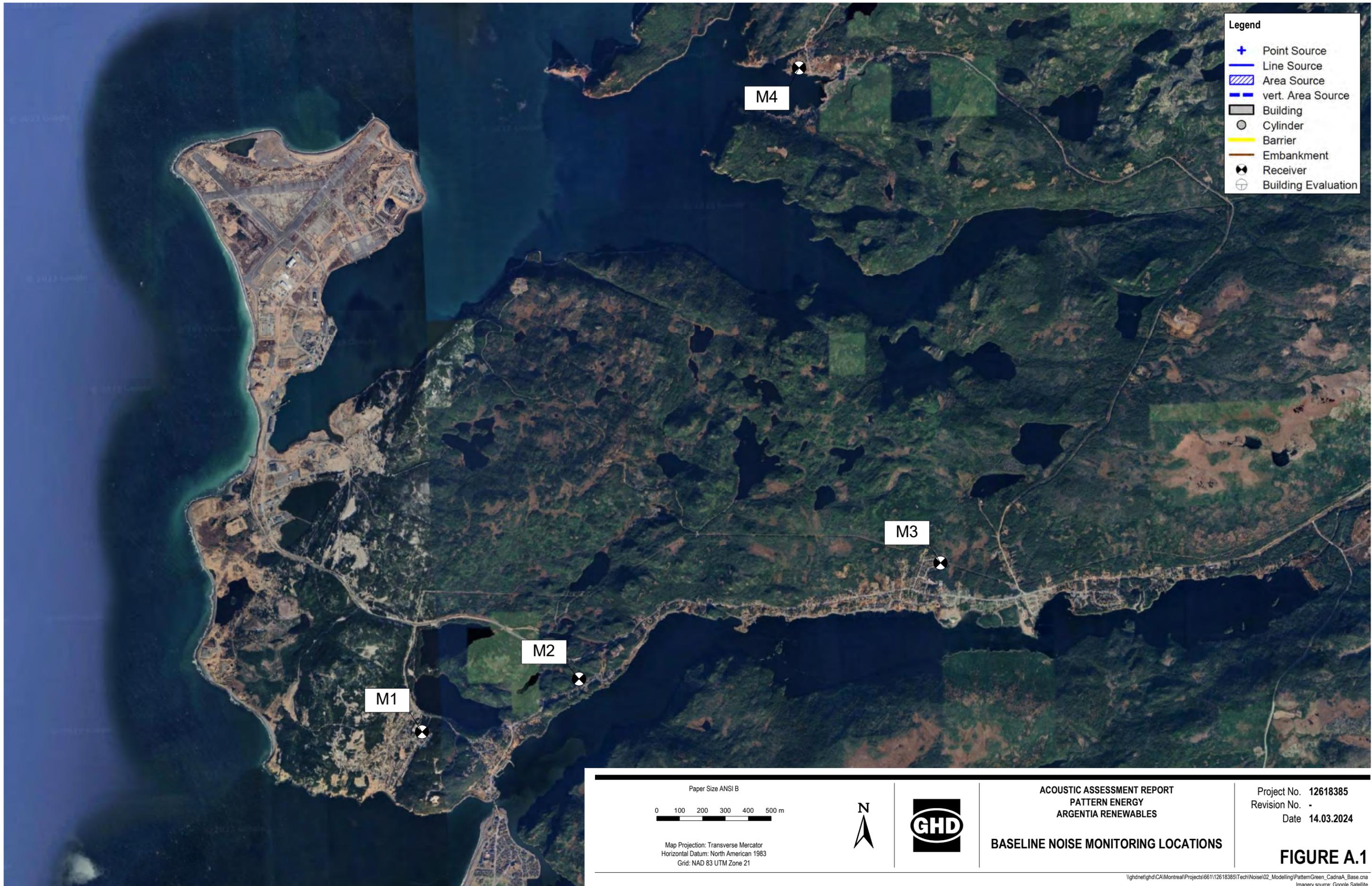


Table A.1

**Environmental Sound Level Measurements, LEQ - Ambient Background Baseline Measurements - M1
 Pattern Green Renewables Project
 Latitude: 47°15'28.01"N, Longitude: 53°58'21.35"W
 Freshwater, Newfoundland and Labrador**

Date	Time	Leq ^{(2), (3)}	Wind Spd (km/h) ⁽¹⁾	Temperature (°C)	Precipitation (mm)	Weather
2023-12-01	2:14:18 PM	36.7	23	2.5	0	
2023-12-01	3:00:00 PM	37.9	26	3.2	0	
2023-12-01	4:00:00 PM	41.5	30	3.9	0	
2023-12-01	5:00:00 PM	43.3	38	4.4	0	
2023-12-01	6:00:00 PM	41.5	34	4.8	0	
2023-12-01	7:00:00 PM	42.2	38	5	0	
2023-12-01	8:00:00 PM	41.2	40	5.5	0	Discarded - Wind Speed > 38 km/h
2023-12-01	9:00:00 PM	40.8	34	5.7	0	
2023-12-01	10:00:00 PM	48.6	40	6.2	0	Discarded - Wind Speed > 38 km/h
2023-12-01	11:00:00 PM	41.1	34	6.1	0	
2023-12-01	12:00:00 AM	39.8	32	6.3	0	
2023-12-01	1:00:00 AM	36.1	28	6.1	0	
2023-12-01	2:00:00 AM	35.1	25	5.7	0	
2023-12-01	3:00:00 AM	34.4	21	5.6	0	
2023-12-02	4:00:00 AM	33.6	16	5.4	0	
2023-12-02	5:00:00 AM	32.1	13	5.4	0	
2023-12-02	6:00:00 AM	32.7	16	5.2	0	
2023-12-02	7:00:00 AM	32.3	18	4.8	0	
2023-12-02	8:00:00 AM	32.8	15	4.6	0	
2023-12-02	9:00:00 AM	32.9	9	4.8	0	
2023-12-02	10:00:00 AM	31.9	9	4.9	0	
2023-12-02	11:00:00 AM	33.6	7	4.9	0	
2023-12-02	12:00:00 PM	33.4	8	4.7	0	
2023-12-02	1:00:00 PM	33.5	5	4.9	0	
2023-12-02	2:00:00 PM	35.1	3	5.1	0	
2023-12-02	3:00:00 PM	34.4	4	5.1	0	
2023-12-02	4:00:00 PM	34	8	4.7	0	
2023-12-02	5:00:00 PM	31.8	12	4.4	0	
2023-12-02	6:00:00 PM	32.3	12	4.1	0	
2023-12-02	7:00:00 PM	32.3	10	3.9	0	
2023-12-02	8:00:00 PM	29	11	3.5	0	

Table A.1

Environmental Sound Level Measurements, LEQ - Ambient Background Baseline Measurements - M1
Pattern Green Renewables Project
Latitude: 47°15'28.01"N, Longitude: 53°58'21.35"W
Freshwater, Newfoundland and Labrador

Date	Time	Leq ^{(2), (3)}	Wind Spd (km/h) ⁽¹⁾	Temperature (°C)	Precipitation (mm)	Weather
2023-12-02	9:00:00 PM	28.8	14	3.3	0	
2023-12-02	10:00:00 PM	28.4	8	2.5	0	
2023-12-02	11:00:00 PM	28.1	13	2.6	0	
2023-12-03	12:00:00 AM	27.2	19	2.6	0	

	Sound Level (dBA)	# Inclement Weather Hours	Total Hours Recorded	Inclement Weather Hours
Daytime 16h Leq (Ld) (07:00 - 23:00)	37	2	35	2.0
Nighttime 8h Leq (Ln) (23:00 - 07:00)	36	0		

Sound Level (dBA)
Ldn 43

Value (%)
%HA 0.83

Notes:

- (1) Weather data provided by Environment Canada's Argentia Climate Station.
- (2) Measurements recorded during inclement weather (winds speeds greater than 38 km/h and/or rain) were disregarded.
- (3) Bolded data represents the lowest measured Leq during the respective monitoring time period.

Legend

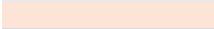
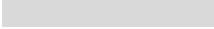
Day Time Hours	
Evening Time Hours	
Night Time Hours	

Table A.2

Environmental Sound Level Measurements, LEQ - Ambient Background Baseline Measurements - M2
Pattern Green Renewables Project
Latitude: 47°15'44.90"N, Longitude: 53°56'58.71"W
Ferndale, Newfoundland and Labrador

Date	Time	Leq ^{(2), (3)}	Wind Spd (km/h) ⁽¹⁾	Temperature (°C)	Precipitation (mm)	Weather
2023-12-04	3:21:24 PM	44.2	25	0.5	0.1	Discarded - Precipitation > 0 mm
2023-12-04	4:00:00 PM	43.3	28	0.8	1.5	Discarded - Precipitation > 0 mm
2023-12-04	5:00:00 PM	40.5	28	0.9	0	
2023-12-04	6:00:00 PM	39.6	33	1.1	0	
2023-12-04	7:00:00 PM	41.2	29	0.8	0	
2023-12-04	8:00:00 PM	41.3	24	0.7	0.2	Discarded - Precipitation > 0 mm
2023-12-04	9:00:00 PM	39.8	25	1	0.4	Discarded - Precipitation > 0 mm
2023-12-04	10:00:00 PM	41.5	22	1	0	
2023-12-04	11:00:00 PM	34.9	19	1	0	
2023-12-04	12:00:00 AM	38.8	27	0.9	0.8	Discarded - Precipitation > 0 mm
2023-12-04	1:00:00 AM	42	25	0.9	0.5	Discarded - Precipitation > 0 mm
2023-12-04	2:00:00 AM	36.9	31	0.6	0	
2023-12-04	3:00:00 AM	40.5	30	0.6	0	
2023-12-04	4:00:00 AM	38.5	29	0.6	0	
2023-12-04	5:00:00 AM	38.5	29	0.4	0	
2023-12-05	6:00:00 AM	41.5	24	0.4	0	
2023-12-05	7:00:00 AM	37.5	21	0.5	0	
2023-12-05	8:00:00 AM	39.5	20	0.6	0	
2023-12-05	9:00:00 AM	39	7	0.6	0	
2023-12-05	10:00:00 AM	40.4	14	1.2	0	
2023-12-05	11:00:00 AM	41.6	13	0.9	0	
2023-12-05	12:00:00 PM	45.1	12	1	0	
2023-12-05	1:00:00 PM	45.9	18	0.7	0	
2023-12-05	2:00:00 PM	39.9	21	0.4	0	
2023-12-05	3:00:00 PM	40.2	22	0.8	0	
2023-12-05	4:00:00 PM	45.9	16	0.5	0	
2023-12-05	5:00:00 PM	38.9	17	0.6	0	
2023-12-05	6:00:00 PM	39	16	0.5	0	
2023-12-05	7:00:00 PM	41.8	16	0.2	0	
2023-12-05	8:00:00 PM	45	12	0.4	0	
2023-12-05	9:00:00 PM	39.4	9	-0.2	0	
2023-12-05	10:00:00 PM	35.5	2	-1.6	0	
2023-12-05	11:00:00 PM	36.1	4	-1.2	0	
2023-12-05	12:00:00 AM	29.2	5	-2	0	
2023-12-05	1:00:00 AM	28.3	6	-2.1	0	
2023-12-05	2:00:00 AM	23.3	11	-2.1	0	

Table A.2

Environmental Sound Level Measurements, LEQ - Ambient Background Baseline Measurements - M2
Pattern Green Renewables Project
Latitude: 47°15'44.90"N, Longitude: 53°56'58.71"W
Ferndale, Newfoundland and Labrador

Date	Time	Leq ^{(2), (3)}	Wind Spd (km/h) ⁽¹⁾	Temperature (°C)	Precipitation (mm)	Weather
2023-12-05	3:00:00 AM	23.2	12	-1.4	0	
2023-12-05	4:00:00 AM	22.3	13	-1.6	1	Discarded - Precipitation > 0 mm
2023-12-05	5:00:00 AM	28.2	34	1.2	1.3	Discarded - Precipitation > 0 mm
2023-12-06	6:00:00 AM	27.7	35	-0.1	0	
2023-12-06	7:00:00 AM	31.5	42	-0.5	0	Discarded - Wind Speed > 38 km/h
2023-12-06	8:00:00 AM	32.3	37	-0.8	0	
2023-12-06	9:00:00 AM	38.4	31	-1	0	
2023-12-06	10:00:00 AM	35.2	30	-1.3	0	
2023-12-06	11:00:00 AM	38.2	27	-1.5	0	
2023-12-06	12:00:00 PM	39.4	22	-1.7	0	
2023-12-06	1:00:00 PM	40.9	22	-1.3	0	
2023-12-06	2:00:00 PM	41.5	27	-1.1	0	
2023-12-06	3:00:00 PM	42.2	21	-1.3	0	
2023-12-06	4:00:00 PM	41.5	22	-0.8	0	
2023-12-06	5:00:00 PM	45.1	26	0	0	
2023-12-06	6:00:00 PM	40	30	0.2	0	
2023-12-06	7:00:00 PM	38.1	24	0.1	0	
2023-12-06	8:00:00 PM	42.1	19	0.1	0	
2023-12-06	9:00:00 PM	42.2	18	0	0	
2023-12-06	10:00:00 PM	41.5	20	0.3	0	
2023-12-06	11:00:00 PM	36.7	22	0.5	0	
2023-12-06	12:00:00 AM	30.9	22	0.2	0	
2023-12-06	1:00:00 AM	28.7	18	-1.4	0	
2023-12-06	2:00:00 AM	27	24	-2	0	
2023-12-06	3:00:00 AM	25.4	20	-2.8	0	
2023-12-06	4:00:00 AM	32.2	22	-2.6	0	
2023-12-06	5:00:00 AM	28.7	23	-2.5	0	
2023-12-07	6:00:00 AM	29.5	25	-2.6	0	
2023-12-07	7:00:00 AM	32.9	30	-2.7	0	
2023-12-07	8:00:00 AM	34	33	-2.9	0	
2023-12-07	9:00:00 AM	32.9	33	-3.5	0	
2023-12-07	10:00:00 AM	35.7	32	-3.1	0	
2023-12-07	11:00:00 AM	37.4	32	-3.1	0	
2023-12-07	12:00:00 PM	38.7	32	-2.7	0	
2023-12-07	1:00:00 PM	39.7	28	-2.7	0	
2023-12-07	2:00:00 PM	41.1	28	-2.7	0	

Table A.2

Environmental Sound Level Measurements, LEQ - Ambient Background Baseline Measurements - M2
Pattern Green Renewables Project
Latitude: 47°15'44.90"N, Longitude: 53°56'58.71"W
Ferndale, Newfoundland and Labrador

Date	Time	Leq ^{(2), (3)}	Wind Spd (km/h) ⁽¹⁾	Temperature (°C)	Precipitation (mm)	Weather
2023-12-07	3:00:00 PM	44.3	28	-2.7	0	
2023-12-07	4:00:00 PM	42.7	31	-1.9	0	
2023-12-07	5:00:00 PM	38.8	36	-1.1	0	
2023-12-07	6:00:00 PM	42.4	38	-1.1	0	
2023-12-07	7:00:00 PM	39.9	37	-1.3	0	
2023-12-07	8:00:00 PM	39.3	36	-1.2	0	
2023-12-07	9:00:00 PM	40.6	34	-1.6	0	
2023-12-07	10:00:00 PM	49.9	33	-1.3	0	
2023-12-07	11:00:00 PM	37.5	40	-1.2	0	Discarded - Wind Speed > 38 km/h
2023-12-07	12:00:00 AM	32.1	49	-1.6	0	Discarded - Wind Speed > 38 km/h
2023-12-07	1:00:00 AM	30.5	41	-1.9	0	Discarded - Wind Speed > 38 km/h
2023-12-07	2:00:00 AM	31.4	48	-1.5	0	Discarded - Wind Speed > 38 km/h
2023-12-07	3:00:00 AM	30.5	50	-1.2	0	Discarded - Wind Speed > 38 km/h
2023-12-07	4:00:00 AM	40.2	54	-0.4	0	Discarded - Wind Speed > 38 km/h
2023-12-07	5:00:00 AM	34.7	53	0.2	0	Discarded - Wind Speed > 38 km/h
2023-12-08	6:00:00 AM	35.6	55	0.3	0	Discarded - Wind Speed > 38 km/h
2023-12-08	7:00:00 AM	41.7	56	0.5	0	Discarded - Wind Speed > 38 km/h
2023-12-08	8:00:00 AM	49.2	56	0.5	0	Discarded - Wind Speed > 38 km/h
2023-12-08	9:00:00 AM	51.1	54	0.8	0	Discarded - Wind Speed > 38 km/h
2023-12-08	10:00:00 AM	50	52	1.2	0	Discarded - Wind Speed > 38 km/h
2023-12-08	11:00:00 AM	48.3	54	1.3	0	Discarded - Wind Speed > 38 km/h
2023-12-08	12:00:00 PM	44.5	50	1.2	0	Discarded - Wind Speed > 38 km/h
2023-12-08	1:00:00 PM	42	44	1.3	0	Discarded - Wind Speed > 38 km/h
2023-12-08	2:00:00 PM	42.3	42	1.6	0	Discarded - Wind Speed > 38 km/h
2023-12-08	3:00:00 PM	42.1	39	1.6	0	Discarded - Wind Speed > 38 km/h
2023-12-08	4:00:00 PM	41.2	37	1.7	0	
2023-12-08	5:00:00 PM	43.2	36	1.9	0	
2023-12-08	6:00:00 PM	42.2	37	2	0	
2023-12-08	7:00:00 PM	44.1	34	2	0	
2023-12-08	8:00:00 PM	39.1	35	2	0	
2023-12-08	9:00:00 PM	40.6	35	2.3	0	
2023-12-08	10:00:00 PM	39.2	35	2.6	0	
2023-12-08	11:00:00 PM	36.2	32	2.8	0	
2023-12-08	12:00:00 AM	32.3	33	3.1	0	
2023-12-08	1:00:00 AM	30.7	34	3.2	0	
2023-12-08	2:00:00 AM	29.7	35	3.7	0	

Table A.2

Environmental Sound Level Measurements, LEQ - Ambient Background Baseline Measurements - M2
Pattern Green Renewables Project
Latitude: 47°15'44.90"N, Longitude: 53°56'58.71"W
Ferndale, Newfoundland and Labrador

Date	Time	Leq ^{(2), (3)}	Wind Spd (km/h) ⁽¹⁾	Temperature (°C)	Precipitation (mm)	Weather
2023-12-08	3:00:00 AM	26.1	37	3.5	0	
2023-12-08	4:00:00 AM	28.9	42	3.6	0	Discarded - Wind Speed > 38 km/h
2023-12-08	5:00:00 AM	34	41	3.8	0	Discarded - Wind Speed > 38 km/h
2023-12-09	6:00:00 AM	26.6	38	4	0	
2023-12-09	7:00:00 AM	33.9	40	3.7	0	Discarded - Wind Speed > 38 km/h
2023-12-09	8:00:00 AM	42.4	42	4	0	Discarded - Wind Speed > 38 km/h
2023-12-09	9:00:00 AM	50.1	38	4.2	0	
2023-12-09	10:00:00 AM	43.4	35	4.5	0	
2023-12-09	11:00:00 AM	37.3	33	4.8	0	
2023-12-09	12:00:00 PM	39.8	34	5	0	
2023-12-09	1:00:00 PM	42.1	37	4.8	0	
2023-12-09	2:00:00 PM	44.4	39	4.5	0	Discarded - Wind Speed > 38 km/h

	Sound Level (dBA)	# Inclement Weather Hours	Total Hours Recorded	Inclement Weather Hours
Daytime 16h Leq (Ld) (07:00 - 23:00)	42	17	120	31.0
Nighttime 8h Leq (Ln) (23:00 - 07:00)	35	14		

Sound Level (dBA)
Ldn 43

Value (%)
%HA 0.89

Notes:

- (1) Weather data provided by Environment Canada's Argentic Climate Station.
- (2) Measurements recorded during inclement weather (winds speeds greater than 38 km/h and/or rain) were disregarded.
- (3) Bolded data represents the lowest measured Leq during the respective monitoring time period.

Legend

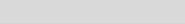
Day Time Hours	
Evening Time Hours	
Night Time Hours	

Table A.3

Environmental Sound Level Measurements, LEQ - Ambient Background Baseline Measurements - M3
Pattern Green Renewables Project
Latitude: 47°15'44.90"N, Longitude: 53°56'58.71"W
Dunville, Newfoundland and Labrador

Date	Time	Leq ^{(2), (3)}	Wind Spd (km/h) ⁽¹⁾	Temperature (°C)	Precipitation (mm)	Weather
2023-07-20	2:00:00 PM	44.2	22	17.6	0	
2023-07-20	3:00:00 PM	43.3	30	19	0	
2023-07-20	4:00:00 PM	40.5	26	18.9	0	
2023-07-20	5:00:00 PM	39.6	6	19.5	0	
2023-07-20	6:00:00 PM	41.2	18	21.9	0	
2023-07-20	7:00:00 PM	41.3	12	22.5	0	
2023-07-20	8:00:00 PM	39.8	18	21.6	0	
2023-07-20	9:00:00 PM	41.5	24	21.5	0	
2023-07-20	10:00:00 PM	34.9	29	20.3	0	
2023-07-20	11:00:00 PM	38.8	26	19.1	0	
2023-07-20	12:00:00 AM	42	35	17.1	0	
2023-07-21	1:00:00 AM	36.9	45	16.5	0	Discarded - Wind Speed > 38 km/h
2023-07-21	2:00:00 AM	40.5	42	15.9	0	Discarded - Wind Speed > 38 km/h
2023-07-21	3:00:00 AM	38.5	43	15.2	0	Discarded - Wind Speed > 38 km/h
2023-07-21	4:00:00 AM	38.5	36	15.1	0	
2023-07-21	5:00:00 AM	41.5	34	15.5	0	
2023-07-21	6:00:00 AM	37.5	29	15.5	0	
2023-07-21	7:00:00 AM	39.5	26	15.5	0	
2023-07-21	8:00:00 AM	39	25	15.8	0	
2023-07-21	9:00:00 AM	40.4	25	15.9	0	
2023-07-21	10:00:00 AM	41.6	24	16.3	0	
2023-07-21	11:00:00 AM	45.1	22	17.3	0	
2023-07-21	12:00:00 PM	45.9	21	17.9	0	
2023-07-21	1:00:00 PM	39.9	14	17.6	0	
2023-07-21	2:00:00 PM	40.2	14	18.2	0	
2023-07-21	3:00:00 PM	45.9	13	16.9	0	
2023-07-21	4:00:00 PM	38.9	7	16.6	0	
2023-07-21	5:00:00 PM	39	9	16.3	0	
2023-07-21	6:00:00 PM	41.8	7	15.8	0	
2023-07-21	7:00:00 PM	45	14	16.2	0	
2023-07-21	8:00:00 PM	39.4	12	16.5	0	
2023-07-21	9:00:00 PM	35.5	5	16.8	0	
2023-07-21	10:00:00 PM	36.1	1	16.8	0	
2023-07-21	11:00:00 PM	29.2	2	16.7	0	

Table A.3

Environmental Sound Level Measurements, LEQ - Ambient Background Baseline Measurements - M3
Pattern Green Renewables Project
Latitude: 47°15'44.90"N, Longitude: 53°56'58.71"W
Dunville, Newfoundland and Labrador

Date	Time	Leq ^{(2), (3)}	Wind Spd (km/h) ⁽¹⁾	Temperature (°C)	Precipitation (mm)	Weather
2023-07-21	12:00:00 AM	28.3	5	17	0	
2023-07-22	1:00:00 AM	23.3	6	17.4	0	
2023-07-22	2:00:00 AM	23.2	8	17.3	0	
2023-07-22	3:00:00 AM	22.3	8	17.5	0	
2023-07-22	4:00:00 AM	28.2	2	17.5	0	
2023-07-22	5:00:00 AM	27.7	4	19.2	0	
2023-07-22	6:00:00 AM	31.5	7	20.2	0	
2023-07-22	7:00:00 AM	32.3	7	20.7	0	
2023-07-22	8:00:00 AM	38.4	7	20.3	0	
2023-07-22	9:00:00 AM	35.2	6	21.7	0	
2023-07-22	10:00:00 AM	38.2	8	21.3	0	
2023-07-22	11:00:00 AM	39.4	18	20.6	0	
2023-07-22	12:00:00 PM	40.9	14	22	0	
2023-07-22	1:00:00 PM	41.5	23	25.6	0	
2023-07-22	2:00:00 PM	42.2	17	20.9	0	
2023-07-22	3:00:00 PM	41.5	10	20.9	0	
2023-07-22	4:00:00 PM	45.1	14	21.8	0	
2023-07-22	5:00:00 PM	40	22	23.6	0	
2023-07-22	6:00:00 PM	38.1	16	22.7	0	
2023-07-22	7:00:00 PM	42.1	16	21	0	
2023-07-22	8:00:00 PM	42.2	21	19.6	0	
2023-07-22	9:00:00 PM	41.5	18	19.9	0	
2023-07-22	10:00:00 PM	36.7	22	20.1	0	
2023-07-22	11:00:00 PM	30.9	18	19.9	0	
2023-07-22	12:00:00 AM	28.7	20	20.2	0	
2023-07-23	1:00:00 AM	27	17	20.2	0	
2023-07-23	2:00:00 AM	25.4	13	19.9	0	
2023-07-23	3:00:00 AM	32.2	7	19.5	0	
2023-07-23	4:00:00 AM	28.7	11	20.3	0	
2023-07-23	5:00:00 AM	29.5	8	20.3	0	
2023-07-23	6:00:00 AM	32.9	4	20.6	0	
2023-07-23	7:00:00 AM	34	6	22.4	0	
2023-07-23	8:00:00 AM	32.9	7	20.2	0	
2023-07-23	9:00:00 AM	35.7	6	19.8	0	

Table A.3
Environmental Sound Level Measurements, LEQ - Ambient Background Baseline Measurements - M3
Pattern Green Renewables Project
Latitude: 47°15'44.90"N, Longitude: 53°56'58.71"W
Dunville, Newfoundland and Labrador

Date	Time	Leq ^{(2), (3)}	Wind Spd (km/h) ⁽¹⁾	Temperature (°C)	Precipitation (mm)	Weather
2023-07-23	10:00:00 AM	37.4	7	20.7	0	
2023-07-23	11:00:00 AM	38.7	5	21.3	0	
2023-07-23	12:00:00 PM	39.7	7	21.6	0.4	Discarded - Precipitation > 0 mm
2023-07-23	1:00:00 PM	41.1	10	21.6	0	
2023-07-23	2:00:00 PM	44.3	28	22.1	0	
2023-07-23	3:00:00 PM	42.7	13	20.2	0	
2023-07-23	4:00:00 PM	38.8	13	19.7	0	
2023-07-23	5:00:00 PM	42.4	11	19.8	0	
2023-07-23	6:00:00 PM	39.9	10	20.6	0	
2023-07-23	7:00:00 PM	39.3	19	21.9	0	
2023-07-23	8:00:00 PM	40.6	20	22.3	0	
2023-07-23	9:00:00 PM	49.9	24	21.8	1.1	Discarded - Precipitation > 0 mm
2023-07-23	10:00:00 PM	37.5	22	21.5	0	
2023-07-23	11:00:00 PM	32.1	23	21.5	0	
2023-07-23	12:00:00 AM	30.5	24	21.5	0.2	Discarded - Precipitation > 0 mm
2023-07-24	1:00:00 AM	31.4	23	21.8	1.9	Discarded - Precipitation > 0 mm
2023-07-24	2:00:00 AM	30.5	24	21.8	1.2	Discarded - Precipitation > 0 mm
2023-07-24	3:00:00 AM	40.2	29	22.1	0	
2023-07-24	4:00:00 AM	34.7	30	21.6	0.3	Discarded - Precipitation > 0 mm
2023-07-24	5:00:00 AM	35.6	48	21.7	3.1	Discarded - Precipitation > 0 mm
2023-07-24	6:00:00 AM	41.7	46	20.4	1.8	Discarded - Precipitation > 0 mm
2023-07-24	7:00:00 AM	49.2	46	18.6	0.9	Discarded - Precipitation > 0 mm
2023-07-24	8:00:00 AM	51.1	38	17.8	0	
2023-07-24	9:00:00 AM	50	33	17.5	0	
2023-07-24	10:00:00 AM	48.3	32	18	0	
2023-07-24	11:00:00 AM	44.5	35	17.8	0	
2023-07-24	12:00:00 PM	42	33	17.6	0	
2023-07-24	1:00:00 PM	42.3	31	17.4	0	
2023-07-24	2:00:00 PM	42.1	33	17.7	0	
2023-07-24	3:00:00 PM	41.2	32	17.8	0	
2023-07-24	4:00:00 PM	43.2	26	17.6	0	
2023-07-24	5:00:00 PM	42.2	30	17.4	0	
2023-07-24	6:00:00 PM	44.1	28	17.1	0	
2023-07-24	7:00:00 PM	39.1	30	16.5	0	

Table A.3

**Environmental Sound Level Measurements, LEQ - Ambient Background Baseline Measurements - M3
 Pattern Green Renewables Project
 Latitude: 47°15'44.90"N, Longitude: 53°56'58.71"W
 Dunville, Newfoundland and Labrador**

Date	Time	Leq ^{(2), (3)}	Wind Spd (km/h) ⁽¹⁾	Temperature (°C)	Precipitation (mm)	Weather
2023-07-24	8:00:00 PM	40.6	30	16.2	0	
2023-07-24	9:00:00 PM	39.2	31	15.9	0	
2023-07-24	10:00:00 PM	36.2	29	15.7	0	
2023-07-24	11:00:00 PM	32.3	25	15.7	0	
2023-07-24	12:00:00 AM	30.7	28	16.1	0	
2023-07-25	1:00:00 AM	29.7	22	16.3	0	
2023-07-25	2:00:00 AM	26.1	21	16.2	0	
2023-07-25	3:00:00 AM	28.9	22	16.1	0	
2023-07-25	4:00:00 AM	34	21	16.1	0	
2023-07-25	5:00:00 AM	26.6	20	16.2	0	
2023-07-25	6:00:00 AM	33.9	22	16.3	0	
2023-07-25	7:00:00 AM	42.4	21	16.3	0	
2023-07-25	8:00:00 AM	50.1	20	16.4	0	
2023-07-25	9:00:00 AM	43.4	18	16.6	0	
2023-07-25	10:00:00 AM	37.3	6	18.7	0	
2023-07-25	11:00:00 AM	39.8	5	19.7	0	
2023-07-25	12:00:00 PM	42.1	3	19.8	0	
2023-07-25	1:00:00 PM	44.4	9	19.4	0	
2023-07-25	2:00:00 PM	63.1	6	19.7	0	
2023-07-25	3:00:00 PM	69.4	29	18.1	0	
2023-07-25	4:00:00 PM	44	27	19.4	0	
2023-07-25	5:00:00 PM	42.7	25	19.2	0	
2023-07-25	6:00:00 PM	44.3	25	18.6	0	
2023-07-25	7:00:00 PM	58.7	18	18	0	
2023-07-25	8:00:00 PM	40	16	17.6	0	
2023-07-25	9:00:00 PM	39.6	16	18.1	0	
2023-07-25	10:00:00 PM	38	16	17.9	0	
2023-07-25	11:00:00 PM	34.7	21	17	0	
2023-07-25	12:00:00 AM	34.3	19	16.9	0	
2023-07-26	1:00:00 AM	32.3	18	16.6	0	
2023-07-26	2:00:00 AM	27.3	25	16	0	
2023-07-26	3:00:00 AM	27.8	24	15.9	0	
2023-07-26	4:00:00 AM	33.6	15	15.6	0	
2023-07-26	5:00:00 AM	29.2	18	15.3	0	

Table A.3

**Environmental Sound Level Measurements, LEQ - Ambient Background Baseline Measurements - M3
 Pattern Green Renewables Project
 Latitude: 47°15'44.90"N, Longitude: 53°56'58.71"W
 Dunville, Newfoundland and Labrador**

Date	Time	Leq ^{(2), (3)}	Wind Spd (km/h) ⁽¹⁾	Temperature (°C)	Precipitation (mm)	Weather
2023-07-26	6:00:00 AM	35.3	22	15.6	0	
2023-07-26	7:00:00 AM	40.6	22	15.2	0	
2023-07-26	8:00:00 AM	44.2	24	15.4	0	
2023-07-26	9:00:00 AM	37.3	22	15.9	0	
2023-07-26	10:00:00 AM	56.4	19	16.5	0	
2023-07-26	11:00:00 AM	56.1	17	16.5	0	

	Sound Level (dBA)	# Inclement Weather Hours	Total Hours Recorded	Inclement Weather Hours
Daytime 16h Leq (Ld) (07:00 - 23:00)	52	3	142	12.0
Nighttime 8h Leq (Ln) (23:00 - 07:00)	34	9		

Sound Level (dBA)
Ldn 50

Value (%)
%HA 2.25

Notes:

- (1) Weather data provided by Environment Canada's Argentia Climate Station.
- (2) Measurements recorded during inclement weather (winds speeds greater than 38 km/h and/or rain) were disregarded.
- (3) Bolded data represents the lowest measured Leq during the respective monitoring time period.

Legend

Day Time Hours	
Evening Time Hours	
Night Time Hours	

Table A.4

**Environmental Sound Level Measurements, LEQ - Ambient Background Baseline Measurements - M4
 Pattern Green Renewables Project
 Latitude: 47°19'18.05"N, Longitude: 53°54'51.42"W
 Fox Harbour, Newfoundland and Labrador**

Date	Time	Leq ^{(2), (3)}	Wind Spd (km/h) ⁽¹⁾	Temperature (°C)	Precipitation (mm)	Weather
2023-12-14	11:00:00 AM	58.5	30	-2.8	0	
2023-12-14	12:00:00 PM	61.9	30	-3	0	
2023-12-14	1:00:00 PM	68	29	-1.9	0	
2023-12-14	2:00:00 PM	62.5	40	-1.6	0	Discarded - Wind Speed > 38 km/h
2023-12-14	3:00:00 PM	64.8	40	-1.8	0	Discarded - Wind Speed > 38 km/h
2023-12-14	4:00:00 PM	64.4	35	-2.1	0	
2023-12-14	5:00:00 PM	67.1	37	-2.3	0	
2023-12-14	6:00:00 PM	63.5	37	-2.5	0	
2023-12-14	7:01:00 PM	64.1	37	-3	0	
2023-12-14	8:00:00 PM	64.3	33	-3.3	0	
2023-12-14	9:00:00 PM	59	33	-3.6	0	
2023-12-14	10:00:00 PM	57	29	-3.9	0	
2023-12-14	11:00:00 PM	54.2	26	-4	0	
2023-12-14	12:00:00 AM	51.3	23	-4.3	0	
2023-12-15	1:00:00 AM	54.4	23	-4.5	0	
2023-12-15	2:00:00 AM	52.9	24	-3.9	0	
2023-12-15	3:00:00 AM	48.5	32	-3.4	0	
2023-12-15	4:00:00 AM	45.9	33	-2.9	0	
2023-12-15	5:00:00 AM	52.6	28	-3.1	0	
2023-12-15	6:00:00 AM	49.5	29	-2.6	0	
2023-12-15	7:00:00 AM	52.3	27	-2.2	0	
2023-12-15	8:00:00 AM	52.8	25	-1.3	0	
2023-12-15	9:00:00 AM	55.2	38	-0.3	0	
2023-12-15	10:00:00 AM	61.4	44	0.4	0	Discarded - Wind Speed > 38 km/h
2023-12-15	11:00:00 AM	61.6	49	0.9	0	Discarded - Wind Speed > 38 km/h
2023-12-15	12:00:00 PM	60.4	57	1.2	0	Discarded - Wind Speed > 38 km/h
2023-12-15	1:00:00 PM	60	59	1.7	0	Discarded - Wind Speed > 38 km/h
2023-12-15	2:00:00 PM	60	62	2.1	0	Discarded - Wind Speed > 38 km/h
2023-12-15	3:00:00 PM	59	64	2.4	0	Discarded - Wind Speed > 38 km/h
2023-12-15	4:00:00 PM	57.9	74	2.9	0	Discarded - Wind Speed > 38 km/h
2023-12-15	5:00:00 PM	58.7	65	3.2	0	Discarded - Wind Speed > 38 km/h

Table A.4

**Environmental Sound Level Measurements, LEQ - Ambient Background Baseline Measurements - M4
 Pattern Green Renewables Project
 Latitude: 47°19'18.05"N, Longitude: 53°54'51.42"W
 Fox Harbour, Newfoundland and Labrador**

Date	Time	Leq ^{(2), (3)}	Wind Spd (km/h) ⁽¹⁾	Temperature (°C)	Precipitation (mm)	Weather
2023-12-15	6:00:00 PM	62.5	62	3.5	0	Discarded - Wind Speed > 38 km/h
2023-12-15	7:01:00 PM	64	58	3.5	0	Discarded - Wind Speed > 38 km/h
2023-12-15	8:00:00 PM	63.1	53	2.9	0	Discarded - Wind Speed > 38 km/h
2023-12-15	9:00:00 PM	57.9	50	3.6	0	Discarded - Wind Speed > 38 km/h
2023-12-15	10:00:00 PM	59.6	52	4	0	Discarded - Wind Speed > 38 km/h
2023-12-15	11:00:00 PM	61.6	39	3.2	0	Discarded - Wind Speed > 38 km/h
2023-12-15	12:00:00 AM	53.1	35	3.3	0	
2023-12-16	1:00:00 AM	52.3	35	2.8	0	
2023-12-16	2:00:00 AM	53	39	2.8	0	Discarded - Wind Speed > 38 km/h
2023-12-16	3:00:00 AM	51.9	33	2.7	0	
2023-12-16	4:00:00 AM	56.2	34	2.9	0	
2023-12-16	5:00:00 AM	49.8	36	3	0	
2023-12-16	6:00:00 AM	42.5	35	3.2	0	
2023-12-16	7:00:00 AM	46.9	36	3.5	0	
2023-12-16	8:00:00 AM	38.4	41	3.5	0	Discarded - Wind Speed > 38 km/h
2023-12-16	9:00:00 AM	49.8	38	3.6	0	
2023-12-16	10:00:00 AM	43.5	43	3.8	0	Discarded - Wind Speed > 38 km/h
2023-12-16	11:00:00 AM	45.4	35	3.6	0	
2023-12-16	12:00:00 PM	46.8	40	3.7	0	Discarded - Wind Speed > 38 km/h
2023-12-16	1:00:00 PM	46.1	41	3.2	0	Discarded - Wind Speed > 38 km/h
2023-12-16	2:00:00 PM	47.8	29	1.9	0	
2023-12-16	3:00:00 PM	51.1	39	1.1	0	Discarded - Wind Speed > 38 km/h
2023-12-16	4:00:00 PM	50.5	36	0.4	0	
2023-12-16	5:00:00 PM	50.6	46	-0.2	0	Discarded - Wind Speed > 38 km/h
2023-12-16	6:00:00 PM	52.3	43	-0.7	0	Discarded - Wind Speed > 38 km/h
2023-12-16	7:01:00 PM	50.6	42	-2.3	0	Discarded - Wind Speed > 38 km/h
2023-12-16	8:00:00 PM	49.9	40	-2.9	0	Discarded - Wind Speed > 38 km/h
2023-12-16	9:00:00 PM	49.4	43	-3.2	0	Discarded - Wind Speed > 38 km/h
2023-12-16	10:00:00 PM	47	42	-3.5	0	Discarded - Wind Speed > 38 km/h
2023-12-16	11:00:00 PM	49.6	44	-4	0	Discarded - Wind Speed > 38 km/h
2023-12-16	12:00:00 AM	49.9	45	-4.5	0	Discarded - Wind Speed > 38 km/h

Table A.4

**Environmental Sound Level Measurements, LEQ - Ambient Background Baseline Measurements - M4
Pattern Green Renewables Project
Latitude: 47°19'18.05"N, Longitude: 53°54'51.42"W
Fox Harbour, Newfoundland and Labrador**

Date	Time	Leq ^{(2), (3)}	Wind Spd (km/h) ⁽¹⁾	Temperature (°C)	Precipitation (mm)	Weather
2023-12-17	1:00:00 AM	47.1	43	-4.6	0	Discarded - Wind Speed > 38 km/h
2023-12-17	2:00:00 AM	43.9	34	-5.1	0	
2023-12-17	3:00:00 AM	44	32	-5.2	0	
2023-12-17	4:00:00 AM	40.2	30	-5.2	0	
2023-12-17	5:00:00 AM	38.4	26	-5	0	
2023-12-17	6:00:00 AM	38.9	23	-4.9	0	
2023-12-17	7:00:00 AM	46.3	22	-4.9	0	
2023-12-17	8:00:00 AM	46.7	11	-4.2	0	
2023-12-17	9:00:00 AM	48	16	-2.5	0	
2023-12-17	10:00:00 AM	45.7	23	-1.8	0	
2023-12-17	11:00:00 AM	53.7	25	-0.9	0	
2023-12-17	12:00:00 PM	65.7	30	-0.2	0	

	Sound Level (dBA)	# Inclement Weather Hours	Total Hours Recorded	Inclement Weather Hours
Daytime 16h Leq (Ld) (07:00 - 23:00)	61	26	74	31.0
Nighttime 8h Leq (Ln) (23:00 - 07:00)	51	5		

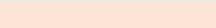
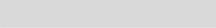
Sound Level (dBA)
Ldn 61

Value (%)
%HA 8.74

Notes:

- (1) Weather data provided by Environment Canada's Argentia Climate Station.
- (2) Measurements recorded during inclement weather (winds speeds greater than 38 km/h and/or rain) were disregarded.
- (3) Bolded data represents the lowest measured Leq during the respective monitoring time period.

Legend

Day Time Hours	
Evening Time Hours	
Night Time Hours	

Appendix B

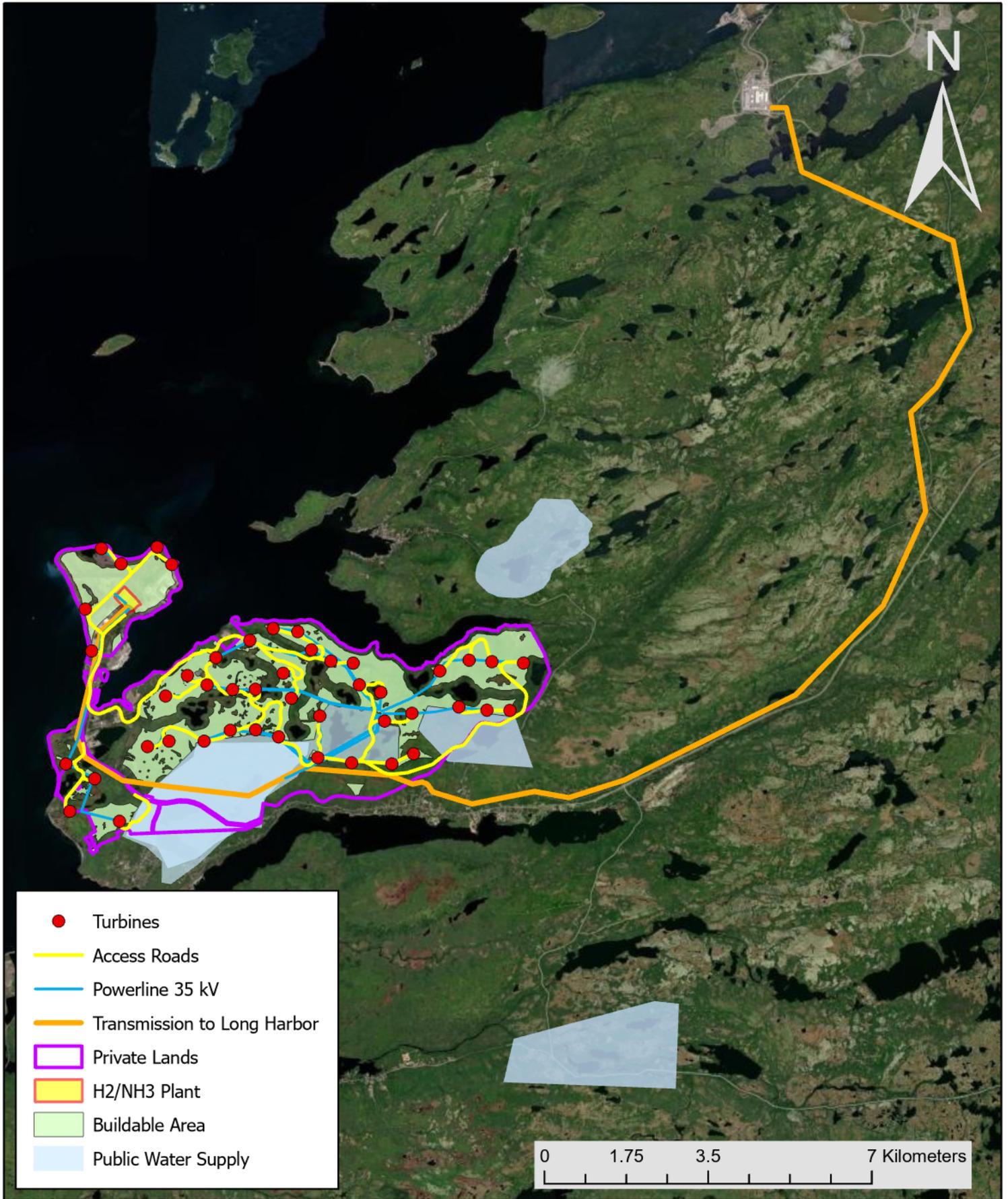
Project Site Plans

DRAFT ISSUE



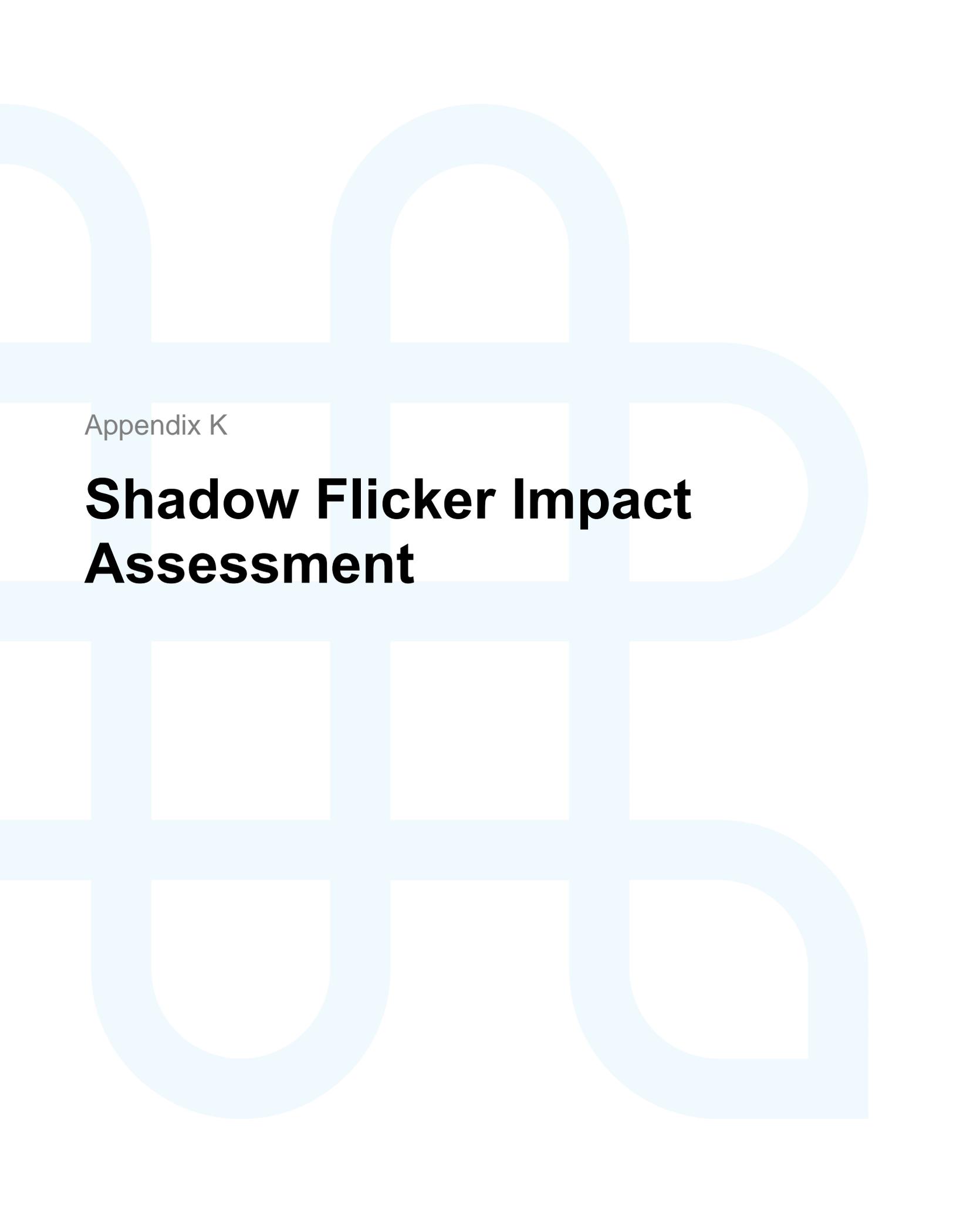
OFFTAKE OPTION 3

CONSULTANT 				CLIENT 				PREPARED JS 13.10.2023 DRAWN TS 13.10.2023 CHECKED BH 13.10.2023 APPROVED CN 13.10.2023 SCALE 1:1000 FORMAT B1		PROJECT Argentia Renewables - Feasibility Study DRAWING TITLE CONCEPT PLOT PLAN DRAWING NUMBER SNC-XX-XX-DDRW-Z-0002 REV 00	
THIS DRAWING IS THE PROPERTY OF ATKINSRÉALIS. AND THE USE AND COPYING THEREOF IS SUBJECT TO THE TERMS OF THE AGREEMENT UNDER WHICH IT WAS PREPARED. THIS DRAWING MAY NOT BE COPIED EXCEPT AS EXPRESSLY PROVIDED THEREIN.				PATTERN ENERGY. 119 Spadina Avenue, Suite 403 Toronto, Canada, ON M5V 2L1.							
00	13.10.23	ISSUED FOR REVIEW	TS	BH	CN						
REV	DATE	REVISION DESCRIPTION	DRN	CHK	APP						



	Argentia Renewable Project	AUTHOR:	DP	PREPARED BY:	Pattern
		COORDINATE SYSTEM:	NAD83(CSRS)v7 UTM Zone 22N	DATE:	12/19/2023





Appendix K

Shadow Flicker Impact Assessment



DIN EN ISO 9001
REG.-NR. Q1 0116050

ISO 9001: 2015

Report Num. SFA-240424-1183-0001-KS

Shadow Flicker Analysis

For the

Argentia Renewables Project

(Newfoundland, Canada)

Prepared By:

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Dipl. Inf. Carsten Albrecht
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Client:

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A1B 4N2
Canada

Großheide, April 24, 2024



SFA-240424-1183-0001-KS

In October of 2023, SEM Ltd. commissioned AL-PRO GmbH & Co. KG to carry out this shadow flicker analysis for the proposed Argentia Renewables Project. This report was prepared as an independent third party using the most current project data and methods.

The Department of Environment and Climate Change require that proposed wind farm project applicants provide detailed descriptions of how light emissions and shadow flicker impact the project area. In the absence of specific provincial regulations, most jurisdictions in Canada follow the standards established in Germany which limit shadow flicker to a maximum of 30 hours per year and/or 30 minutes per day at dwellings.

SEM Ltd. shall indemnify and save harmless AL PRO, its officers, employees and agents from and against all claims, demands, losses, costs, damages, actions, suits or other proceedings of any kind based upon injury, including death, to any person, or damage to or loss of property arising from any wilful or negligent act, omission or delay caused by interpretation of the results summarized in this report.

The distribution, publication, or duplication of this report to any third party, except for distribution to authorizing agencies as well as to the financial institutions and utilities, are only permitted with the exclusive written agreement of AL-PRO GmbH & Co. KG.

New Glasgow, April 24, 2024

Calculated and Written By:

Reviewed By:

Wind-, Schall-, Schatten- und Turbulenzgutachten, LIDAR-Messungen



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(Technical Manager)



SFA-240424-1183-0001-KS

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SFA-240424-1183-0001-KS

2 Summary of Results

The aim of this analysis was to determine the extent and duration of shadow flicker caused by moving shadows cast by the construction of 46 wind turbines at the Argentia Renewables Project site. The project will consist of Vestas V172-7.2 turbines with a hub height of 166 m. There are no existing wind turbines within the project area.

The shadow flicker limit of 30 hours per year was exceeded at one receptor when the realistic case was considered. It is recommended that the wind farm developer create a remediation plan to ensure that the incidence of shadow flicker is reduced at this receptor.



3 Methodology

The shadow flicker analysis was completed using WindPro 4.0.540 which provides a comprehensive suite of wind farm design and modeling software.

The locations and details of the of the 46 proposed turbines are summarized in Table 1. The turbines have a maximum power output of 7.2 MW each. A map showing the turbine layout and associated buildings is shown in Appendix A. The turbines were modeled without any operational power curtailment.

Table 1: Proposed Turbine Positions

ID	Model	Easting*	Northing*	Hub Height (m)	Rotor Diameter (m)
1	V172-7.2	727,294	5,244,774	166	172
2	V172-7.2	727,738	5,244,479	166	172
3	V172-7.2	728,479	5,244,896	166	172
4	V172-7.2	728,819	5,244,548	166	172
5	V172-7.2	727,029	5,243,499	166	172
6	V172-7.2	727,252	5,242,570	166	172
7	V172-7.2	729,335	5,242,202	166	172
8	V172-7.2	728,904	5,241,728	166	172
9	V172-7.2	731,087	5,243,348	166	172
10	V172-7.2	729,913	5,242,631	166	172
11	V172-7.2	730,610	5,243,057	166	172
12	V172-7.2	731,617	5,243,320	166	172
13	V172-7.2	731,939	5,242,955	166	172
14	V172-7.2	732,373	5,242,747	166	172
15	V172-7.2	729,770	5,242,034	166	172
16	V172-7.2	730,807	5,242,021	166	172
17	V172-7.2	730,322	5,241,977	166	172
18	V172-7.2	731,375	5,242,410	166	172
19	V172-7.2	731,590	5,241,889	166	172
20	V172-7.2	732,208	5,241,363	166	172
21	V172-7.2	732,852	5,242,741	166	172
22	V172-7.2	735,319	5,242,993	166	172
23	V172-7.2	735,807	5,242,998	166	172
24	V172-7.2	733,488	5,242,163	166	172
25	V172-7.2	733,017	5,242,287	166	172
26	V172-7.2	733,615	5,241,554	166	172
27	V172-7.2	734,186	5,241,766	166	172
28	V172-7.2	734,711	5,242,715	166	172
29	V172-7.2	735,176	5,241,978	166	172



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ID	Model	Easting*	Northing*	Hub Height (m)	Rotor Diameter (m)
30	V172-7.2	735,781	5,241,956	166	172
31	V172-7.2	736,482	5,243,022	166	172
32	V172-7.2	736,272	5,241,987	166	172
33	V172-7.2	726,891	5,240,115	166	172
34	V172-7.2	729,051	5,240,771	166	172
35	V172-7.2	728,601	5,240,619	166	172
36	V172-7.2	727,528	5,239,845	166	172
37	V172-7.2	727,083	5,239,109	166	172
38	V172-7.2	728,127	5,238,977	166	172
39	V172-7.2	729,801	5,240,829	166	172
40	V172-7.2	730,340	5,241,104	166	172
41	V172-7.2	730,904	5,241,149	166	172
42	V172-7.2	731,381	5,241,042	166	172
43	V172-7.2	732,251	5,240,663	166	172
44	V172-7.2	734,291	5,240,903	166	172
45	V172-7.2	732,983	5,240,608	166	172
46	V172-7.2	733,841	5,240,650	166	172

* UTM, NAD83 (CSRS), Zone 21



4 Site Description and Analysis

The proposed Argentia Wind Farm is located on the northwestern corner of the Avalon Peninsula in southeastern Newfoundland. The proposed wind farm is planned to be located north of Highway 100 between Argentia and Fox Harbour Road (Route 102).

The terrain can be characterized as hilly with elevations that extend from sea level to 200 m.

The vegetation within the project area consists of a natural coastal forest characterized with short, low-density softwood stands. There are also several shrub-dominated barrens within the project area as well.

The digital elevation model (DEM) derived from the Aerial Lidar database [1] was used as the terrain model for the analysis. The modeled receptors were selected from the Government of Canada database which extracted building polygons from aerial lidar data. All buildings within 3.5 km of the proposed turbines were included and the receptor heights were extracted from the DEM. The building database was edited to remove industrial buildings identified by SEM Ltd. and the resulting data were used in the model.

The forest stand polygon data from the Newfoundland & Labrador Department of Fisheries, Forestry and Agriculture [4] were used to determine the spatial extent of existing forest stands within the project area. The canopy height model was calculated from the aerial lidar database [1] and the mean height for each of the forest stand polygons were subsequently calculated. The forest stand polygons and associated height data were used as obstacles within the model.

4.1 Climate Data

Monthly sunshine data were used to provide a realistic condition for calculating shadow flicker. The realistic scenario was modeled using site specific wind conditions and monthly sunshine probabilities obtained from the closest coastal observatory at St. Johns, NL. The monthly daily sunshine hours used in the analysis are shown in Table 2. The average long term wind direction frequency at hub height (166 m) data was provided by the project developer and are summarised in Table 3.

Table 2: Monthly Average Sunshine Hours for St Johns, Newfoundland.

Month	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Average Daily Sunshine Hours	2.39	3.16	3.33	3.84	5.23	6.23	7.65	6.13	4.66	3.46	2.47	1.97

Table 3: Long Term Wind Directional Hub Height Frequency Above 3 m/s at the Project Location.

Direction (Deg)	0	30	60	90	120	150	180	210	240	270	300	330	Total
Average Hours per Year	201	344	265	520	556	672	1,674	1,813	1,107	632	507	468	8,759



4.2 Shadow Receptors

A total of 2,492 receptors were identified and modeled in this analysis. The map contained within Appendix A shows the project area with the existing wind turbines, proposed wind turbines and the receptors. The individual receptor coordinates and modeling results are summarized in Appendix B. Each building was assumed to have windows facing in all directions. This modeling approach is referred to as 'greenhouse mode' and ensures that the orientation of individual receptor windows is not a factor in estimating shadow flicker. Each receptor is modeled with a vertical window which is 1 m x 1 m in size, the bottom is located 1 m a.g.l and eye level is 2 m a.g.l. The hypothetical windows are arranged at 90 degrees to the ground.

4.3 Impact range of wind turbines

The area of influence within which a wind turbine leads to significant shadow flicker is determined by the specifications [5],[6] and is defined as the distance at which the rotor blade covers at least 20% of the sun's surface. Since the blade depth is not constant over the entire length of the blade, a representative model consists of a rectangular rotor blade whose width is calculated as follows:

$$\text{Mean blade depth} = \frac{\text{max.Blade Depth} + \text{Blade Depth at 90\% of Blade Radius}}{2}$$

The blade geometry of the new turbines is specified by the manufacturer and referenced within the system catalogue contained in WindPRO [7]. Table 4 summarizes the blade geometries and total shadow distances used in the model.

Table 4: Turbine Specific Blade Geometry and Resulting Maximum Blade Shadow Distance.

Turbine	Hub Height (m)	Max. Blade Width (m)	90% Blade Width (m)	Shadow Distance (m)
V172-7.2	166	4.35	1.26	1,904



5 Results and discussion

There are no federal or provincial regulations that specifically define criteria or maximum limits of shadow flicker from wind projects. A generally accepted guideline which originates from Europe is that shadow flicker exposure should be limited to a maximum of 30 hours per year and 30 minutes per day using obstacle data such as forest stand heights [5][6].

Two scenarios are compared, the worst case model is based on the astronomic model using the following assumptions:

- The sun shines every day (no clouds),
- The turbines are always operating,
- The turbines operate at 90 degrees towards the sun throughout the day,
- Shadow flicker occurs when the sun is more than 3° above the horizon,
- The existing forest obstacles were included.

The real case was calculated by using forest obstacles, sunshine probabilities and long-term directional wind frequencies. In Newfoundland and Labrador, as well as other Canadian provinces, developers are required to demonstrate that receptors located near a proposed project will not receive greater than 30 minutes per day, and/or 30 hours per year of shadow flicker.

The results of the worst case are shown in Appendix B. The values for each receptor in the theoretical columns represent a maximum which provides a basis for comparison with the real case values. The real case, which incorporates real sunshine probabilities, long-term directional wind statistics and forest obstacles provides a closer approximation of the shadow flicker levels that will be experienced at each receptor. When modeling shadow flicker using real case statistics, the maximum minutes per day cannot be calculated since the sunshine probabilities are monthly climate averages and the wind directional distribution is based on annual values.

The maximum number of shadow hours using the real case is 35 hours, 24 minutes per year which exceeds the recommended maximum level.



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6 Summary, evaluation and recommendation

In this report, 2,492 receptors were modeled. The total number of hours of shadow flicker per year were calculated for each receptor using a real case scenario, which includes long term wind directional data as well as monthly sunshine probabilities.

The results can be summarized as follows:

2,492 receptor points were modeled.

The valid limit values for shadow flicker of 30 hours per year was exceeded at one receptor (DY) when the real case was considered. The wind farm developer will be expected to work with the dwelling owner to reduce the incidence of shadow flicker to meet the 30-hour threshold. Turbines 29, 30 and 32 cast the shadows on this receptor and a turbine specific curtailment schedule is recommended.

The shadow calendar for receptor DY is shown in Appendix C. Shadow impacts start on March 29 and continuously progress throughout the summer until September 14. A turbine specific curtailment schedule is recommended for turbines 29, 30 and 32 to minimize the total duration of shadow flicker impacts on receptor DY. The specific curtailment schedules can be developed from the calendar shown in Appendix C.



7 Sources and Software

7.1 Sources

- [1] Government of Canada. 2020. Point Clouds. accessed on April 5, 2024. https://download-telecharger.services.geo.ca/pub/elevation/pointclouds_nuagespoints/NRCAN/St_Johns_2020_2/.
- [2] Government of Canada. 2023. Automatically Extracted Buildings. accessed November 1, 2023. https://ftp.mapscanada.ca/pub/nrcan_rncan/extraction/auto_building/shp/.
- [3] Newfoundland and Labrador. 2023. Environmental Assessment, Guidance for Registration of Onshore Wind Energy Generation and Green Hydrogen Productions Projects. Department of Environment and Climate Change. DOC-2022-1022.
- [4] FFA. 2024. Land Cover – Newfoundland - Forest. accessed April 5, 2024. <https://geohub-gnl.hub.arcgis.com/datasets/GNL::ffa-land-cover-newfoundland/explore?layer=6>.
- [5] Abgestimmte Randbedingungen und Basisgrößen für die Erstellung von Immissionsprognosen bezüglich des bewegten Schattenwurfs von im Land Schleswig-Holstein geplanten Windenergieanlagen; Staatliches Umweltamt Schleswig; 19.11.1999.
- [6] Hinweise zur Ermittlung und Beurteilung der optischen Immissionen von Windkraftanlagen, Aktualisierung 2019, (WKA-Schattenwurfhinweise), Länderausschuss für Immissionsschutz, 23.01.2020.

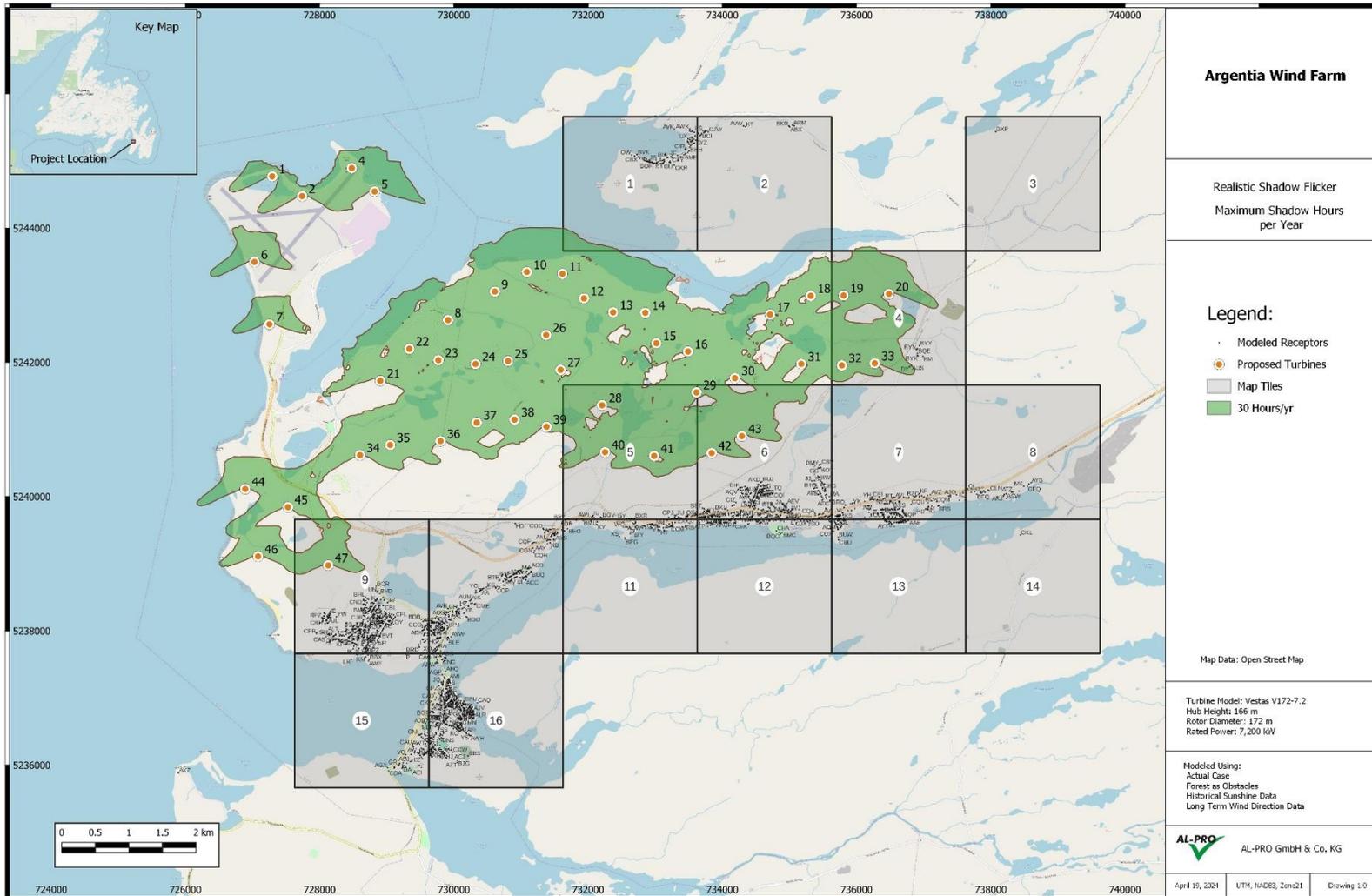
7.2 Software Utilized

- [7] WindPRO, Version 4.0.540, 2024, EMD International A/S
- [8] Microsoft 365 Excel 2024, Microsoft Corporation
- [9] Microsoft 365 Word 2024, Microsoft Corporation



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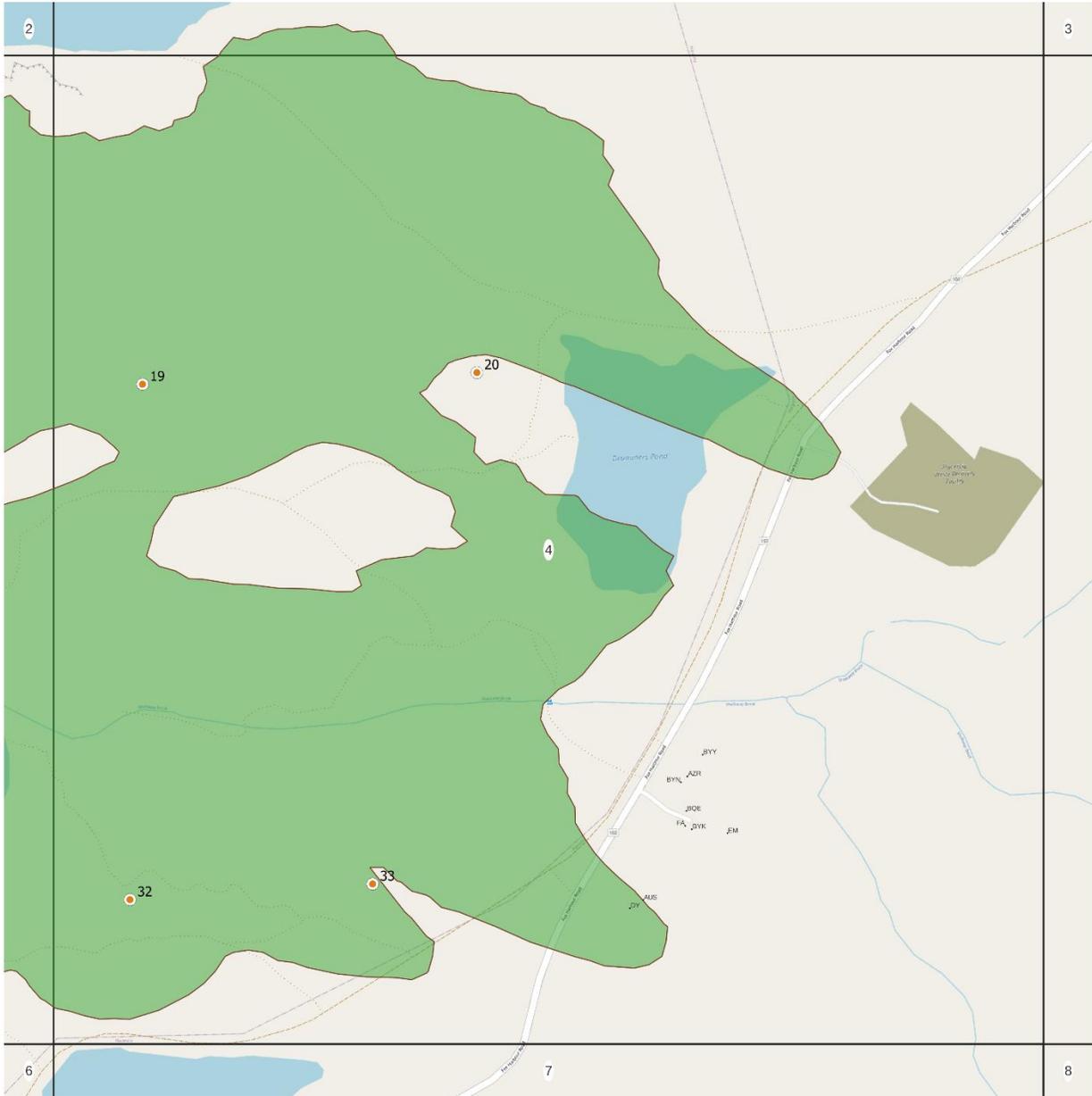
8 Appendix A, Shadow Flicker Map





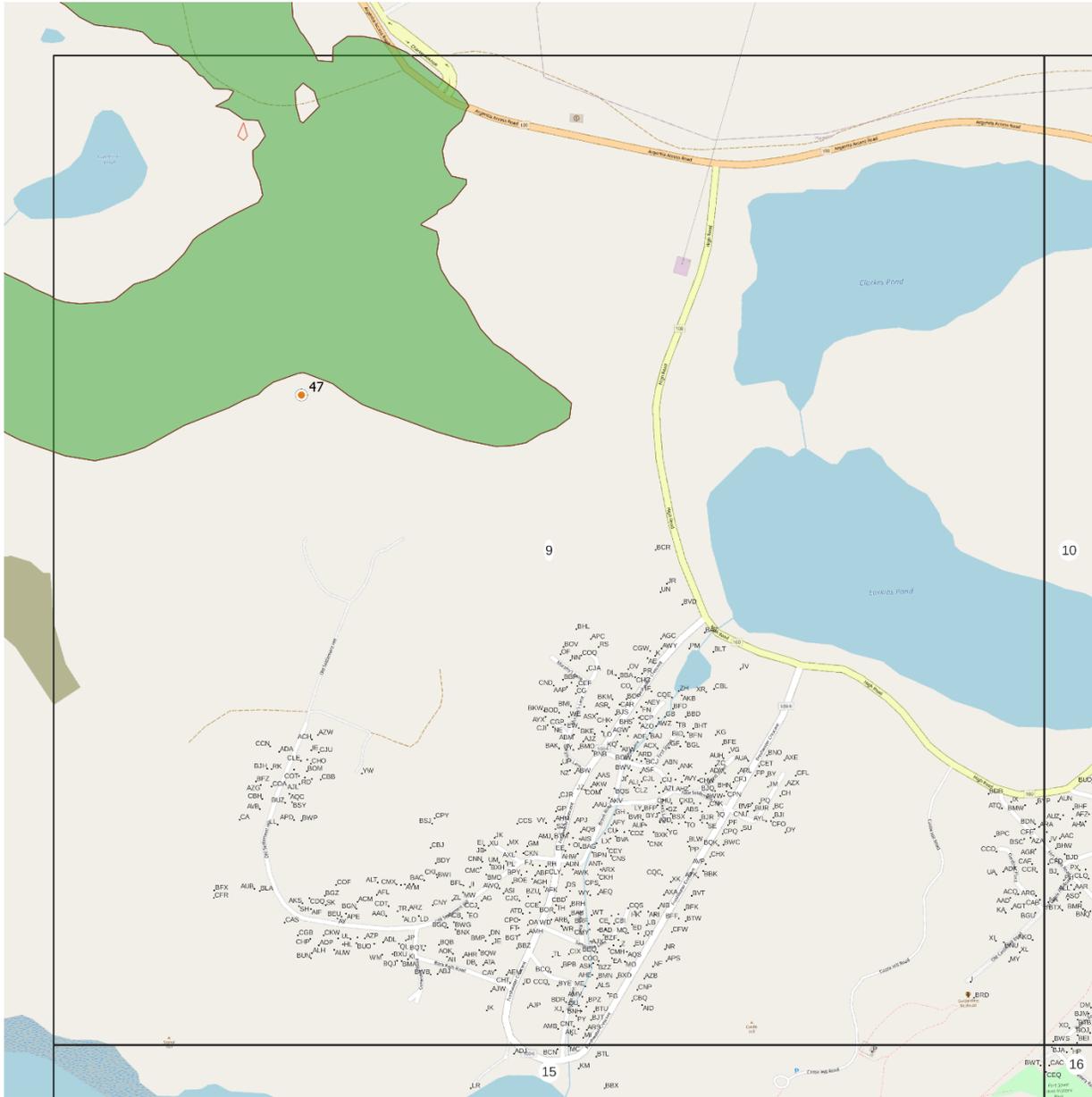


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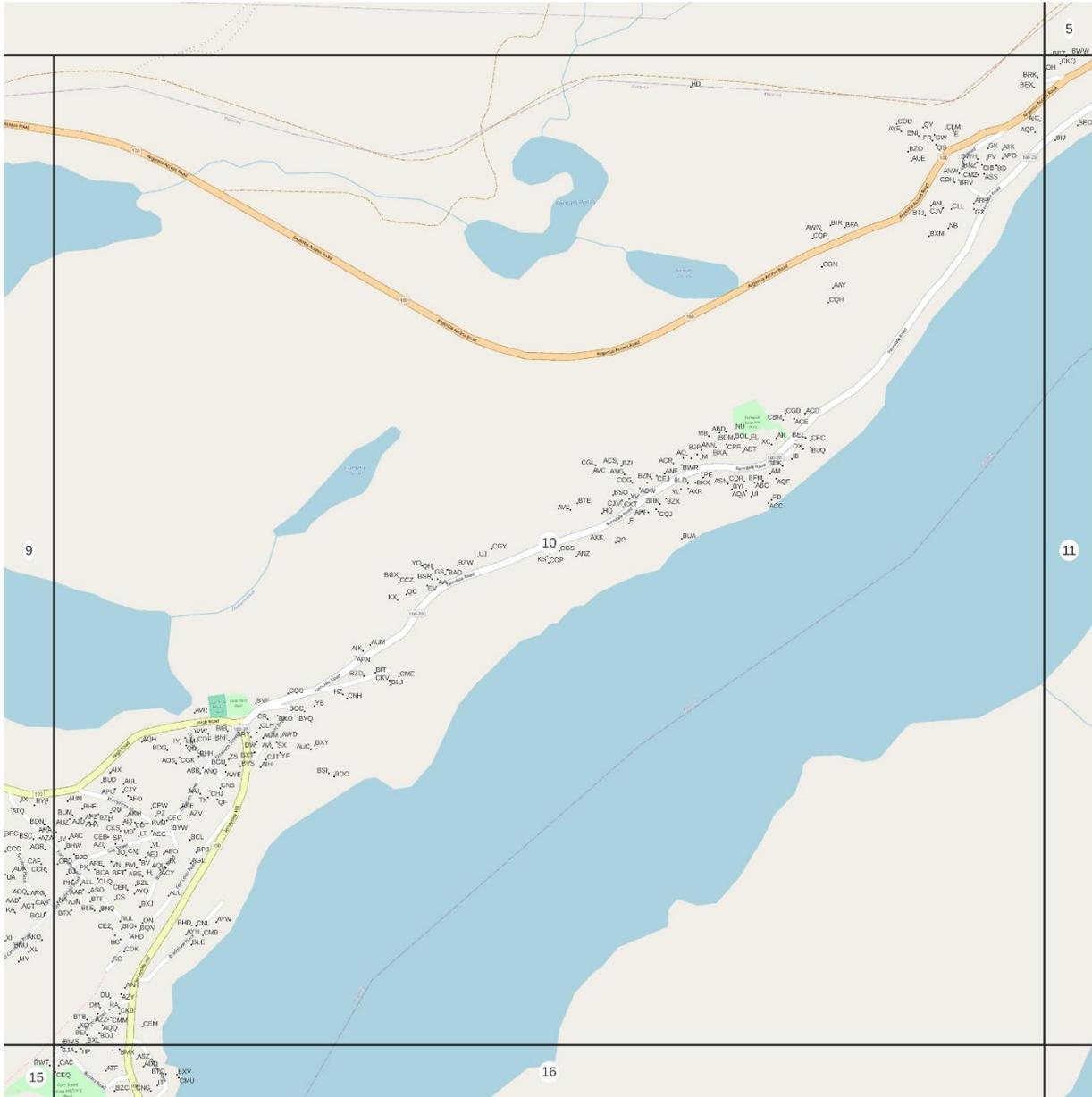


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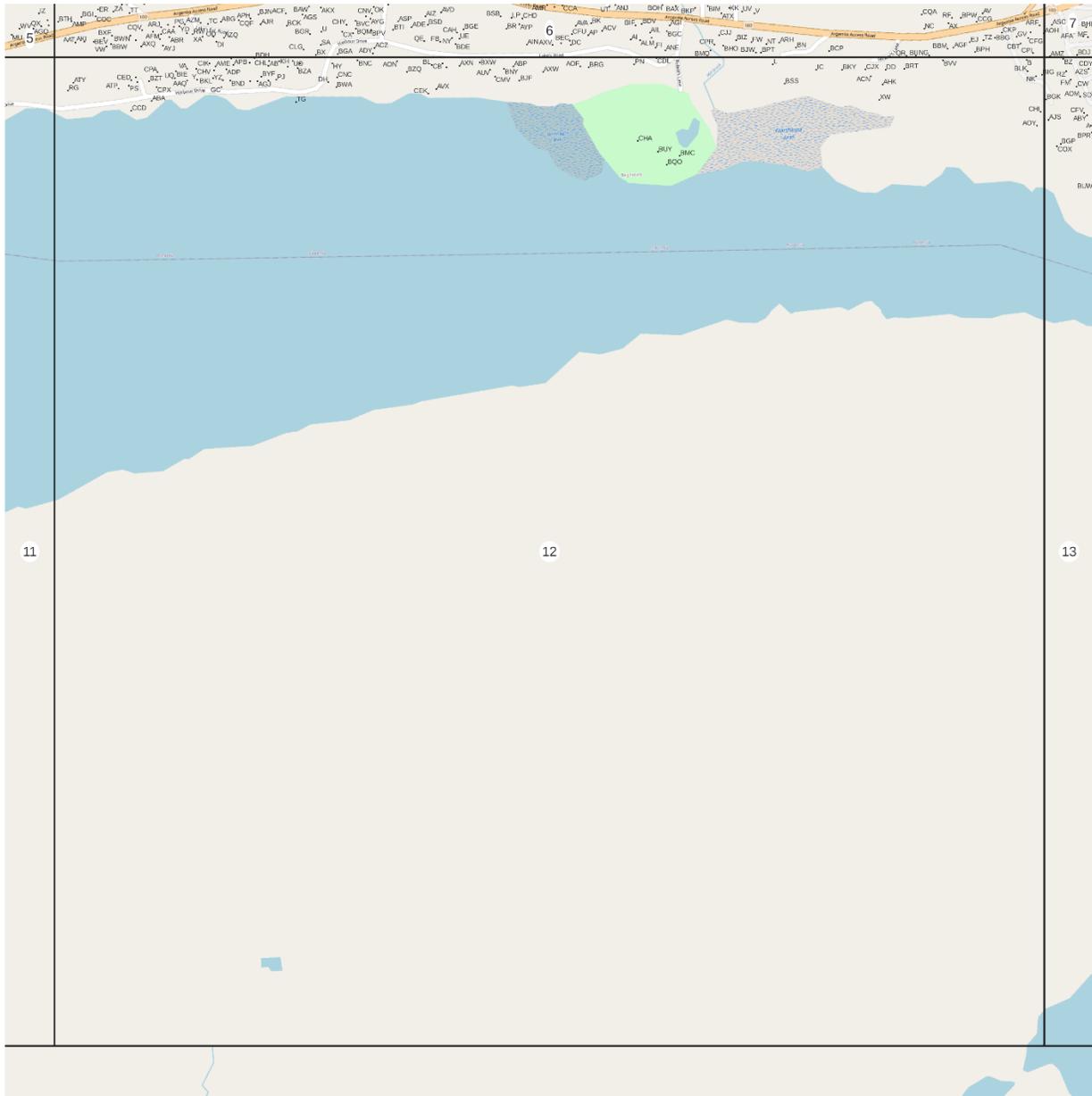


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9 Appendix B, Individual Receptor Results

No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z ([a.g.l.])			[h/year]	[h/day]	[h/year]
A	735721	5239524	15.7	1	1	1	Green house mode	2	0:00	0:00	0:00
B	735591	5239657	7.8	1	1	1	Green house mode	2	0:00	0:00	0:00
C	730139	5236756	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
D	730023	5236622	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00
E	731443	5239509	40	1	1	1	Green house mode	2	0:00	0:00	0:00
F	730788	5238717	20.8	1	1	1	Green house mode	2	0:00	0:00	0:00
G	733512	5245447	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
H	729825	5238006	42	1	1	1	Green house mode	2	0:00	0:00	0:00
I	729478	5237790	94.4	1	1	1	Green house mode	2	0:00	0:00	0:00
J	734610	5239811	32.5	1	1	1	Green house mode	2	6:06	0:16	1:27
K	728841	5238449	41.8	1	1	1	Green house mode	2	0:00	0:00	0:00
L	735078	5239648	6.9	1	1	1	Green house mode	2	0:00	0:00	0:00
M	730934	5238846	18.1	1	1	1	Green house mode	2	0:00	0:00	0:00
N	730111	5236894	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
O	730113	5236671	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
P	729279	5237649	76.7	1	1	1	Green house mode	2	0:00	0:00	0:00
Q	729745	5236915	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
R	729990	5236858	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
S	729950	5237188	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
T	729636	5236686	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
U	734166	5239714	13.7	1	1	1	Green house mode	2	0:00	0:00	0:00
V	735041	5239751	19.7	1	1	1	Green house mode	2	0:00	0:00	0:00
W	733118	5245013	5.2	1	1	1	Green house mode	2	0:00	0:00	0:00
X	730026	5236860	1	1	1	1	Green house mode	2	0:00	0:00	0:00
Y	733915	5239617	3	1	1	1	Green house mode	2	0:00	0:00	0:00
Z	728771	5237862	18.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AA	730402	5238604	56.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AB	734060	5239655	5.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AC	733493	5245279	4.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AD	730259	5236682	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AE	728826	5238444	42.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AF	729848	5236654	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AG	728491	5237954	43.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AH	728741	5237896	19.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AI	734791	5239698	14.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AJ	735455	5240295	54.1	1	1	1	Green house mode	2	14:15	0:25	3:02
AK	731086	5238889	20.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AL	729894	5237225	0.5	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
AM	731073	5238817	20.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AN	734893	5239776	22	1	1	1	Green house mode	2	0:00	0:00	0:00
AO	730905	5238854	20.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AP	734705	5239707	15.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AQ	729636	5236208	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AR	734603	5240068	41.4	1	1	1	Green house mode	2	22:13	0:25	5:21
AS	733368	5239680	27.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AT	729873	5236954	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AU	730157	5236496	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AV	735502	5239751	11.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AW	729456	5236184	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AX	735433	5239731	12.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AY	728200	5237918	67.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AZ	730091	5236855	1	1	1	1	Green house mode	2	0:00	0:00	0:00
BA	737853	5240080	20.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BB	729619	5236729	2.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BC	729080	5238140	70.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BD	731530	5239440	23.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BE	734648	5240177	48	1	1	1	Green house mode	2	13:56	0:24	3:06
BF	729939	5236751	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BG	738200	5240030	3.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BH	732040	5239636	19.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BI	730073	5236587	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BJ	729654	5238008	63.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BK	734711	5239731	19.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BL	734389	5239647	8.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BM	733340	5245006	13.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BN	735125	5239682	8.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BO	729997	5236574	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BP	736965	5240013	33	1	1	1	Green house mode	2	0:00	0:00	0:00
BQ	730025	5236594	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BR	734540	5239720	23.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BS	729942	5236950	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BT	730223	5236765	0.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BU	729835	5236654	2.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BV	729802	5238036	49	1	1	1	Green house mode	2	0:00	0:00	0:00
BW	735974	5239822	12.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BX	734155	5239667	9.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BY	729066	5238205	65.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BZ	735665	5239659	9.9	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
CA	728002	5238118	83.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CB	734411	5239650	8.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CC	735821	5239644	3.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CD	734301	5239769	24.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CE	728748	5237908	22.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CF	733475	5239648	25.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CG	728681	5238373	59.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CH	729094	5238166	72.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CI	736493	5239811	10.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CJ	729814	5236885	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CK	729893	5236144	2	1	1	1	Green house mode	2	0:00	0:00	0:00
CL	735753	5239651	9.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CM	730113	5236617	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CN	735368	5240073	45.6	1	1	1	Green house mode	2	25:21	0:26	6:09
CO	728793	5238383	43.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CP	730147	5236716	1	1	1	1	Green house mode	2	0:00	0:00	0:00
CQ	733135	5245020	4.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CR	730059	5238321	38.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CS	729751	5237956	49.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CT	730174	5236691	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CU	728765	5238096	32.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CV	736348	5239971	17.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CW	735692	5239603	10.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CX	734208	5239714	13.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CY	729786	5236695	2.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CZ	733208	5244982	6.7	1	1	1	Green house mode	2	0:00	0:00	0:00
DA	729237	5235969	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
DB	728480	5237824	26.6	1	1	1	Green house mode	2	0:00	0:00	0:00
DC	734670	5239687	13.8	1	1	1	Green house mode	2	0:00	0:00	0:00
DD	735306	5239637	4.9	1	1	1	Green house mode	2	0:00	0:00	0:00
DE	728702	5237740	14	1	1	1	Green house mode	2	0:00	0:00	0:00
DF	729738	5237010	3.1	1	1	1	Green house mode	2	0:00	0:00	0:00
DG	730086	5236871	1	1	1	1	Green house mode	2	0:00	0:00	0:00
DH	734180	5239612	4.3	1	1	1	Green house mode	2	0:00	0:00	0:00
DI	733954	5239694	20	1	1	1	Green house mode	2	0:00	0:00	0:00
DJ	729670	5236338	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00
DK	738229	5240040	4.2	1	1	1	Green house mode	2	0:00	0:00	0:00
DL	728762	5238410	50.5	1	1	1	Green house mode	2	0:00	0:00	0:00
DM	729721	5237738	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
DN	728507	5237884	25.7	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
DO	729830	5238040	47.3	1	1	1	Green house mode	2	0:00	0:00	0:00
DP	730116	5236587	1	1	1	1	Green house mode	2	0:00	0:00	0:00
DQ	729703	5236261	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
DR	734414	5240039	44.1	1	1	1	Green house mode	2	25:03	0:28	6:06
DS	728661	5237981	24.9	1	1	1	Green house mode	2	0:00	0:00	0:00
DT	729673	5236387	2.3	1	1	1	Green house mode	2	0:00	0:00	0:00
DU	729741	5237758	3	1	1	1	Green house mode	2	0:00	0:00	0:00
DV	735874	5239790	11.6	1	1	1	Green house mode	2	0:00	0:00	0:00
DW	730037	5238275	35.9	1	1	1	Green house mode	2	0:00	0:00	0:00
DX	731140	5238867	19.4	1	1	1	Green house mode	2	0:00	0:00	0:00
DY	736791	5241937	88.6	1	1	1	Green house mode	2	164:34	1:15	35:24
DZ	730183	5236731	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
EA	728754	5237838	17.6	1	1	1	Green house mode	2	0:00	0:00	0:00
EB	736456	5239698	8.7	1	1	1	Green house mode	2	0:00	0:00	0:00
EC	735767	5239545	12	1	1	1	Green house mode	2	0:00	0:00	0:00
ED	728794	5237906	22.3	1	1	1	Green house mode	2	0:00	0:00	0:00
EE	728660	5238055	28.2	1	1	1	Green house mode	2	0:00	0:00	0:00
EF	729818	5237047	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
EG	729651	5236161	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
EH	729987	5237026	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
EI	728496	5238066	50.9	1	1	1	Green house mode	2	0:00	0:00	0:00
EJ	735476	5239693	5.4	1	1	1	Green house mode	2	0:00	0:00	0:00
EK	734470	5239917	34.7	1	1	1	Green house mode	2	10:06	0:21	2:27
EL	731032	5238886	23.2	1	1	1	Green house mode	2	0:00	0:00	0:00
EM	736988	5242089	86.5	1	1	1	Green house mode	2	57:48	1:09	10:50
EN	732726	5239571	7.2	1	1	1	Green house mode	2	0:00	0:00	0:00
EO	728463	5237930	44.1	1	1	1	Green house mode	2	0:00	0:00	0:00
EP	728240	5237880	62.6	1	1	1	Green house mode	2	0:00	0:00	0:00
EQ	737055	5240018	27.2	1	1	1	Green house mode	2	0:00	0:00	0:00
ER	733715	5239759	31.6	1	1	1	Green house mode	2	0:00	0:00	0:00
ES	735816	5239603	3.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ET	732995	5244966	8.2	1	1	1	Green house mode	2	0:00	0:00	0:00
EU	728799	5237863	19.8	1	1	1	Green house mode	2	0:00	0:00	0:00
EV	730381	5238591	59	1	1	1	Green house mode	2	0:00	0:00	0:00
EW	728687	5238303	45.2	1	1	1	Green house mode	2	0:00	0:00	0:00
EX	729930	5236816	1	1	1	1	Green house mode	2	0:00	0:00	0:00
EY	736654	5239618	10.1	1	1	1	Green house mode	2	0:00	0:00	0:00
EZ	734419	5239940	36.4	1	1	1	Green house mode	2	9:10	0:20	2:13
FA	736903	5242104	84.7	1	1	1	Green house mode	2	74:05	1:21	13:54
FB	734406	5239694	15.5	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
FC	729763	5236411	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
FD	731076	5238764	0.3	1	1	1	Green house mode	2	0:00	0:00	0:00
FE	729287	5235965	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
FF	729178	5236001	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
FG	728746	5237767	16.9	1	1	1	Green house mode	2	0:00	0:00	0:00
FH	736843	5240005	29.6	1	1	1	Green house mode	2	0:00	0:00	0:00
FI	734841	5239682	13.6	1	1	1	Green house mode	2	0:00	0:00	0:00
FJ	728594	5238026	31.3	1	1	1	Green house mode	2	0:00	0:00	0:00
FK	730073	5236963	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
FL	733481	5239705	31.3	1	1	1	Green house mode	2	0:00	0:00	0:00
FM	735680	5239617	10.3	1	1	1	Green house mode	2	0:00	0:00	0:00
FN	728813	5238346	39.8	1	1	1	Green house mode	2	0:00	0:00	0:00
FO	729637	5236418	2.6	1	1	1	Green house mode	2	0:00	0:00	0:00
FP	729043	5238207	56.1	1	1	1	Green house mode	2	0:00	0:00	0:00
FQ	729744	5236582	2.4	1	1	1	Green house mode	2	0:00	0:00	0:00
FR	731401	5239490	42.3	1	1	1	Green house mode	2	0:00	0:00	0:00
FS	730143	5236801	1	1	1	1	Green house mode	2	0:00	0:00	0:00
FT	728565	5237899	23.6	1	1	1	Green house mode	2	0:00	0:00	0:00
FU	734353	5239979	39.6	1	1	1	Green house mode	2	10:13	0:22	2:28
FV	731511	5239452	25.2	1	1	1	Green house mode	2	0:00	0:00	0:00
FW	735035	5239693	15.1	1	1	1	Green house mode	2	0:00	0:00	0:00
FX	735433	5240035	39.6	1	1	1	Green house mode	2	23:25	0:25	5:41
FY	735527	5240097	47.2	1	1	1	Green house mode	2	19:41	0:24	4:45
FZ	729235	5236004	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
GA	729862	5236841	1	1	1	1	Green house mode	2	0:00	0:00	0:00
GB	728861	5238326	39.7	1	1	1	Green house mode	2	0:00	0:00	0:00
GC	733964	5239602	3.2	1	1	1	Green house mode	2	0:00	0:00	0:00
GD	735812	5239633	4.3	1	1	1	Green house mode	2	0:00	0:00	0:00
GE	737144	5239973	16	1	1	1	Green house mode	2	0:00	0:00	0:00
GF	728892	5238266	42.5	1	1	1	Green house mode	2	0:00	0:00	0:00
GG	735446	5240422	63.9	1	1	1	Green house mode	2	29:58	0:29	6:44
GH	728759	5238128	32.3	1	1	1	Green house mode	2	0:00	0:00	0:00
GI	728895	5238194	45.4	1	1	1	Green house mode	2	0:00	0:00	0:00
GJ	729948	5237084	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
GK	731513	5239475	26.7	1	1	1	Green house mode	2	0:00	0:00	0:00
GL	730265	5236741	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
GM	728583	5238064	34.4	1	1	1	Green house mode	2	0:00	0:00	0:00
GN	729932	5236780	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
GO	730159	5236727	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
GP	728641	5238135	31.8	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
GQ	730093	5236827	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
GR	729166	5236005	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
GS	730417	5238613	53.9	1	1	1	Green house mode	2	0:00	0:00	0:00
GT	734263	5239784	25	1	1	1	Green house mode	2	0:00	0:00	0:00
GU	729835	5236207	2	1	1	1	Green house mode	2	0:00	0:00	0:00
GV	735571	5239704	6.9	1	1	1	Green house mode	2	0:00	0:00	0:00
GW	731405	5239502	43.7	1	1	1	Green house mode	2	0:00	0:00	0:00
GX	731485	5239352	17.4	1	1	1	Green house mode	2	0:00	0:00	0:00
GY	732572	5239672	41.5	1	1	1	Green house mode	2	0:00	0:00	0:00
GZ	728865	5238139	40.1	1	1	1	Green house mode	2	0:00	0:00	0:00
HA	729718	5236306	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
HB	734307	5240095	54.1	1	1	1	Green house mode	2	28:27	0:30	6:54
HC	730066	5236922	1	1	1	1	Green house mode	2	0:00	0:00	0:00
HD	730913	5239599	67.9	1	1	1	Green house mode	2	0:00	0:00	0:00
HE	730292	5236701	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
HF	736501	5239665	9.6	1	1	1	Green house mode	2	0:00	0:00	0:00
HG	729762	5237876	31.9	1	1	1	Green house mode	2	0:00	0:00	0:00
HH	732753	5245063	6	1	1	1	Green house mode	2	0:00	0:00	0:00
HI	737707	5240062	20.5	1	1	1	Green house mode	2	0:00	0:00	0:00
HJ	729871	5236167	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
HK	728812	5237932	23.7	1	1	1	Green house mode	2	0:00	0:00	0:00
HL	728211	5237866	63.8	1	1	1	Green house mode	2	0:00	0:00	0:00
HM	729731	5236173	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
HN	730149	5236834	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
HO	729885	5236965	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
HP	729682	5237655	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
HQ	730734	5238737	33.4	1	1	1	Green house mode	2	0:00	0:00	0:00
HR	735744	5239730	6.6	1	1	1	Green house mode	2	0:00	0:00	0:00
HS	729846	5236744	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
HT	733069	5239501	4.9	1	1	1	Green house mode	2	0:00	0:00	0:00
HU	736384	5239745	8	1	1	1	Green house mode	2	0:00	0:00	0:00
HV	729866	5236762	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
HW	737111	5239826	7.6	1	1	1	Green house mode	2	0:00	0:00	0:00
HX	729807	5236898	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
HY	734188	5239650	7.5	1	1	1	Green house mode	2	0:00	0:00	0:00
HZ	730211	5238371	35.9	1	1	1	Green house mode	2	0:00	0:00	0:00
IA	733584	5245269	4.8	1	1	1	Green house mode	2	0:00	0:00	0:00
IB	731117	5238847	17.9	1	1	1	Green house mode	2	0:00	0:00	0:00
IC	735166	5239637	3.3	1	1	1	Green house mode	2	0:00	0:00	0:00
ID	728575	5237786	15.2	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
IE	728147	5238258	99.5	1	1	1	Green house mode	2	0:00	0:00	0:00
IF	728834	5238377	40.7	1	1	1	Green house mode	2	0:00	0:00	0:00
IG	737063	5239825	8.8	1	1	1	Green house mode	2	0:00	0:00	0:00
IH	734635	5240021	41.1	1	1	1	Green house mode	2	24:47	0:24	5:59
II	728467	5237982	46.9	1	1	1	Green house mode	2	0:00	0:00	0:00
IJ	737759	5240073	22	1	1	1	Green house mode	2	0:00	0:00	0:00
IK	728501	5237732	21.4	1	1	1	Green house mode	2	0:00	0:00	0:00
IL	737614	5239991	10.7	1	1	1	Green house mode	2	0:00	0:00	0:00
IM	732953	5239577	10.9	1	1	1	Green house mode	2	0:00	0:00	0:00
IN	729935	5236932	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
IO	729986	5237043	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
IP	729868	5236995	1	1	1	1	Green house mode	2	0:00	0:00	0:00
IQ	728966	5238134	49.6	1	1	1	Green house mode	2	0:00	0:00	0:00
IR	734371	5240124	54.4	1	1	1	Green house mode	2	32:32	0:29	7:49
IS	730116	5236684	1	1	1	1	Green house mode	2	0:00	0:00	0:00
IT	729836	5237581	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
IU	732074	5239718	38	1	1	1	Green house mode	2	0:00	0:00	0:00
IV	729638	5238074	64.1	1	1	1	Green house mode	2	0:00	0:00	0:00
IW	735374	5240238	49.5	1	1	1	Green house mode	2	18:56	0:26	4:19
IX	729560	5238154	62.7	1	1	1	Green house mode	2	0:00	0:00	0:00
IY	729883	5238271	49.1	1	1	1	Green house mode	2	22:38	0:23	5:32
IZ	733595	5239751	31.9	1	1	1	Green house mode	2	0:00	0:00	0:00
JA	734897	5239880	34.6	1	1	1	Green house mode	2	0:00	0:00	0:00
JB	728498	5238056	49.4	1	1	1	Green house mode	2	0:00	0:00	0:00
JC	733331	5245085	4	1	1	1	Green house mode	2	0:00	0:00	0:00
JD	733102	5244967	10.1	1	1	1	Green house mode	2	0:00	0:00	0:00
JE	728513	5237867	25.6	1	1	1	Green house mode	2	0:00	0:00	0:00
JF	736687	5239771	12.5	1	1	1	Green house mode	2	0:00	0:00	0:00
JG	736615	5239669	11.2	1	1	1	Green house mode	2	0:00	0:00	0:00
JH	729805	5237007	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
JI	728785	5238206	35.9	1	1	1	Green house mode	2	0:00	0:00	0:00
JJ	735333	5240232	48	1	1	1	Green house mode	2	21:57	0:27	5:07
JK	728517	5238081	48.2	1	1	1	Green house mode	2	0:00	0:00	0:00
JL	736592	5239616	10	1	1	1	Green house mode	2	0:00	0:00	0:00
JM	729069	5238184	65.9	1	1	1	Green house mode	2	0:00	0:00	0:00
JN	729876	5237135	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
JO	729773	5238046	50.4	1	1	1	Green house mode	2	0:00	0:00	0:00
JP	728338	5237874	52.2	1	1	1	Green house mode	2	0:00	0:00	0:00
JQ	729811	5237236	2.1	1	1	1	Green house mode	2	0:00	0:00	0:00
JR	728865	5238595	46.5	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
JS	732908	5245014	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
JT	729698	5236683	2.5	1	1	1	Green house mode	2	0:00	0:00	0:00
JU	733311	5239722	43.1	1	1	1	Green house mode	2	0:00	0:00	0:00
JV	729013	5238422	42.2	1	1	1	Green house mode	2	0:00	0:00	0:00
JW	734502	5240092	43.4	1	1	1	Green house mode	2	28:42	0:26	6:53
JX	729856	5238029	39.3	1	1	1	Green house mode	2	0:00	0:00	0:00
JY	730272	5236796	1	1	1	1	Green house mode	2	0:00	0:00	0:00
JZ	728700	5238178	32.5	1	1	1	Green house mode	2	0:00	0:00	0:00
KA	729549	5237930	79.1	1	1	1	Green house mode	2	0:00	0:00	0:00
KB	735809	5239675	4.3	1	1	1	Green house mode	2	0:00	0:00	0:00
KC	729772	5236731	2.3	1	1	1	Green house mode	2	0:00	0:00	0:00
KD	732941	5239533	1	1	1	1	Green house mode	2	0:00	0:00	0:00
KE	729776	5236900	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
KF	736933	5240045	41.5	1	1	1	Green house mode	2	0:00	0:00	0:00
KG	728963	5238289	45.1	1	1	1	Green house mode	2	0:00	0:00	0:00
KH	734081	5239654	6	1	1	1	Green house mode	2	0:00	0:00	0:00
KI	728342	5237836	49.4	1	1	1	Green house mode	2	0:00	0:00	0:00
KJ	735534	5240024	42	1	1	1	Green house mode	2	24:10	0:24	5:51
KK	734990	5239762	19.9	1	1	1	Green house mode	2	0:00	0:00	0:00
KL	730050	5236589	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00
KM	728687	5237615	8.2	1	1	1	Green house mode	2	0:00	0:00	0:00
KN	736481	5239597	8.1	1	1	1	Green house mode	2	0:00	0:00	0:00
KO	730081	5236507	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
KP	733769	5239790	35.1	1	1	1	Green house mode	2	0:00	0:00	0:00
KQ	728765	5238276	37.2	1	1	1	Green house mode	2	0:00	0:00	0:00
KR	730138	5236907	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
KS	730623	5238650	29.5	1	1	1	Green house mode	2	0:00	0:00	0:00
KT	734343	5245512	25.9	1	1	1	Green house mode	2	0:00	0:00	0:00
KU	730119	5236572	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
KV	730100	5236702	1	1	1	1	Green house mode	2	0:00	0:00	0:00
KW	737586	5240055	20.3	1	1	1	Green house mode	2	0:00	0:00	0:00
KX	730321	5238562	69.3	1	1	1	Green house mode	2	0:00	0:00	0:00
KY	732132	5239581	32	1	1	1	Green house mode	2	0:00	0:00	0:00
KZ	730125	5236532	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
LA	730005	5237054	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
LB	728824	5237905	22.6	1	1	1	Green house mode	2	0:00	0:00	0:00
LC	730176	5236915	1	1	1	1	Green house mode	2	0:00	0:00	0:00
LD	728364	5237923	55.9	1	1	1	Green house mode	2	0:00	0:00	0:00
LE	729921	5237086	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
LF	734417	5239861	31.3	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
LG	736764	5239649	11.8	1	1	1	Green house mode	2	0:00	0:00	0:00
LH	736550	5239877	11.3	1	1	1	Green house mode	2	0:00	0:00	0:00
LI	733046	5239506	4.4	1	1	1	Green house mode	2	0:00	0:00	0:00
LJ	736219	5239712	3.4	1	1	1	Green house mode	2	0:00	0:00	0:00
LK	734391	5239916	34.6	1	1	1	Green house mode	2	1:08	0:07	0:15
LL	728079	5238108	84.9	1	1	1	Green house mode	2	0:00	0:00	0:00
LM	729892	5238283	46.7	1	1	1	Green house mode	2	22:00	0:23	5:23
LN	730158	5236899	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
LO	728734	5238296	39.6	1	1	1	Green house mode	2	0:00	0:00	0:00
LP	734550	5239742	25.3	1	1	1	Green house mode	2	0:00	0:00	0:00
LQ	730046	5236571	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
LR	728469	5237575	2.1	1	1	1	Green house mode	2	0:00	0:00	0:00
LS	730117	5236879	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
LT	729799	5238084	48.8	1	1	1	Green house mode	2	3:49	0:12	0:54
LU	730275	5236864	1	1	1	1	Green house mode	2	0:00	0:00	0:00
LV	730114	5236597	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
LW	734708	5239828	31.9	1	1	1	Green house mode	2	0:00	0:00	0:00
LX	728751	5238080	30.7	1	1	1	Green house mode	2	0:00	0:00	0:00
LY	728816	5238136	35.5	1	1	1	Green house mode	2	0:00	0:00	0:00
LZ	729515	5236118	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
MA	735594	5240001	40.3	1	1	1	Green house mode	2	22:59	0:23	5:34
MB	730949	5238893	21	1	1	1	Green house mode	2	0:00	0:00	0:00
MC	728667	5237660	7.8	1	1	1	Green house mode	2	0:00	0:00	0:00
MD	729790	5238099	49.3	1	1	1	Green house mode	2	5:23	0:15	1:17
ME	728700	5237781	13.2	1	1	1	Green house mode	2	0:00	0:00	0:00
MF	735715	5239703	7.3	1	1	1	Green house mode	2	0:00	0:00	0:00
MG	734294	5240082	53.9	1	1	1	Green house mode	2	25:58	0:30	6:19
MH	736629	5239625	9.9	1	1	1	Green house mode	2	0:00	0:00	0:00
MI	728696	5237677	12.2	1	1	1	Green house mode	2	0:00	0:00	0:00
MJ	736479	5239621	9.1	1	1	1	Green house mode	2	0:00	0:00	0:00
MK	738492	5240155	7.1	1	1	1	Green house mode	2	0:00	0:00	0:00
ML	729918	5236868	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
MM	737885	5240070	21.5	1	1	1	Green house mode	2	0:00	0:00	0:00
MN	730188	5236669	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
MO	728780	5237831	18.4	1	1	1	Green house mode	2	0:00	0:00	0:00
MP	732941	5239589	17.7	1	1	1	Green house mode	2	0:00	0:00	0:00
MQ	728786	5237889	20.4	1	1	1	Green house mode	2	0:00	0:00	0:00
MR	728913	5238121	43.1	1	1	1	Green house mode	2	0:00	0:00	0:00
MS	729915	5237097	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
MT	729472	5236171	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
MU	733540	5239708	27.4	1	1	1	Green house mode	2	0:00	0:00	0:00
MV	734913	5239815	28.8	1	1	1	Green house mode	2	0:00	0:00	0:00
MW	728453	5237971	47.6	1	1	1	Green house mode	2	0:00	0:00	0:00
MX	728544	5238067	41	1	1	1	Green house mode	2	0:00	0:00	0:00
MY	729556	5237831	83.5	1	1	1	Green house mode	2	0:00	0:00	0:00
MZ	732886	5239585	21.8	1	1	1	Green house mode	2	0:00	0:00	0:00
NA	729635	5237951	73	1	1	1	Green house mode	2	0:00	0:00	0:00
NB	731433	5239313	38.1	1	1	1	Green house mode	2	0:00	0:00	0:00
NC	735384	5239720	8.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ND	735477	5240163	49.7	1	1	1	Green house mode	2	17:39	0:25	4:07
NE	728635	5238305	48.5	1	1	1	Green house mode	2	0:00	0:00	0:00
NF	728837	5237821	21.1	1	1	1	Green house mode	2	0:00	0:00	0:00
NG	735394	5239666	5.1	1	1	1	Green house mode	2	0:00	0:00	0:00
NH	736693	5239619	10.5	1	1	1	Green house mode	2	0:00	0:00	0:00
NI	734492	5240118	44.3	1	1	1	Green house mode	2	27:40	0:26	6:36
NJ	736404	5239714	8.7	1	1	1	Green house mode	2	0:00	0:00	0:00
NK	735610	5239624	8	1	1	1	Green house mode	2	0:00	0:00	0:00
NL	729946	5236649	2.1	1	1	1	Green house mode	2	0:00	0:00	0:00
NM	732997	5239581	7.3	1	1	1	Green house mode	2	0:00	0:00	0:00
NN	728670	5238440	67.6	1	1	1	Green house mode	2	0:00	0:00	0:00
NO	729575	5236438	2.3	1	1	1	Green house mode	2	0:00	0:00	0:00
NP	729887	5236868	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
NQ	735738	5239648	9.9	1	1	1	Green house mode	2	0:00	0:00	0:00
NR	728861	5237856	23.1	1	1	1	Green house mode	2	0:00	0:00	0:00
NS	736645	5239630	9.9	1	1	1	Green house mode	2	0:00	0:00	0:00
NT	735065	5239689	13.9	1	1	1	Green house mode	2	0:00	0:00	0:00
NU	731002	5238907	22.6	1	1	1	Green house mode	2	0:00	0:00	0:00
NV	733227	5239563	4.8	1	1	1	Green house mode	2	0:00	0:00	0:00
NW	738309	5240063	5.6	1	1	1	Green house mode	2	0:00	0:00	0:00
NX	730259	5236720	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
NY	734430	5239701	16.2	1	1	1	Green house mode	2	0:00	0:00	0:00
NZ	728669	5238218	37.7	1	1	1	Green house mode	2	0:00	0:00	0:00
OA	728584	5237905	22.7	1	1	1	Green house mode	2	0:00	0:00	0:00
OB	729977	5236586	1.9	1	1	1	Green house mode	2	0:00	0:00	0:00
OC	729873	5236940	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
OD	733948	5239704	21.4	1	1	1	Green house mode	2	0:00	0:00	0:00
OE	732768	5245043	7.6	1	1	1	Green house mode	2	0:00	0:00	0:00
OF	728650	5238452	72.1	1	1	1	Green house mode	2	0:00	0:00	0:00
OG	732907	5244985	3.3	1	1	1	Green house mode	2	0:00	0:00	0:00
OH	731629	5239633	38.6	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
OI	728691	5238061	27.3	1	1	1	Green house mode	2	0:00	0:00	0:00
OJ	730164	5236813	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
OK	734272	5239764	23.8	1	1	1	Green house mode	2	0:00	0:00	0:00
OL	736375	5239764	7.4	1	1	1	Green house mode	2	0:00	0:00	0:00
OM	729548	5236144	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
ON	729806	5237909	29.9	1	1	1	Green house mode	2	0:00	0:00	0:00
OO	729110	5235957	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
OP	735753	5239531	12.6	1	1	1	Green house mode	2	0:00	0:00	0:00
OQ	730296	5236803	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
OR	729979	5236929	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
OS	729692	5236912	2.1	1	1	1	Green house mode	2	0:00	0:00	0:00
OT	736661	5239633	10.6	1	1	1	Green house mode	2	0:00	0:00	0:00
OU	733116	5244958	9.8	1	1	1	Green house mode	2	0:00	0:00	0:00
OV	728787	5238422	48.5	1	1	1	Green house mode	2	0:00	0:00	0:00
OW	732649	5245091	3.5	1	1	1	Green house mode	2	0:00	0:00	0:00
OX	730163	5236775	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
OY	729104	5238092	82.6	1	1	1	Green house mode	2	0:00	0:00	0:00
OZ	733744	5245453	5.1	1	1	1	Green house mode	2	0:00	0:00	0:00
PA	729517	5236465	3.1	1	1	1	Green house mode	2	0:00	0:00	0:00
PB	730149	5236820	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
PC	733076	5244963	8.4	1	1	1	Green house mode	2	0:00	0:00	0:00
PD	737024	5239814	9.9	1	1	1	Green house mode	2	0:00	0:00	0:00
PE	730938	5238809	18	1	1	1	Green house mode	2	0:00	0:00	0:00
PF	728988	5238107	52.4	1	1	1	Green house mode	2	0:00	0:00	0:00
PG	733890	5239729	27.9	1	1	1	Green house mode	2	0:00	0:00	0:00
PH	729666	5237996	62.7	1	1	1	Green house mode	2	0:00	0:00	0:00
PI	730151	5236850	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
PJ	734075	5239617	4.9	1	1	1	Green house mode	2	0:00	0:00	0:00
PK	730088	5236695	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
PL	728540	5238034	39.5	1	1	1	Green house mode	2	0:00	0:00	0:00
PM	728910	5238464	41.1	1	1	1	Green house mode	2	0:00	0:00	0:00
PN	734798	5239648	12.4	1	1	1	Green house mode	2	0:00	0:00	0:00
PO	729595	5236691	2.3	1	1	1	Green house mode	2	0:00	0:00	0:00
PP	728910	5238064	38.6	1	1	1	Green house mode	2	0:00	0:00	0:00
PQ	729052	5238151	65.4	1	1	1	Green house mode	2	0:00	0:00	0:00
PR	728815	5238413	43	1	1	1	Green house mode	2	0:00	0:00	0:00
PS	733777	5239605	2.6	1	1	1	Green house mode	2	0:00	0:00	0:00
PT	730296	5236714	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
PU	734894	5239898	35.8	1	1	1	Green house mode	2	0:00	0:00	0:00
PV	729799	5236772	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
PW	734920	5239795	27.3	1	1	1	Green house mode	2	0:00	0:00	0:00
PX	729698	5238016	59	1	1	1	Green house mode	2	0:00	0:00	0:00
PY	728682	5237721	11.6	1	1	1	Green house mode	2	0:00	0:00	0:00
PZ	729833	5238125	49.4	1	1	1	Green house mode	2	0:00	0:00	0:00
QA	734983	5239781	22.7	1	1	1	Green house mode	2	0:00	0:00	0:00
QB	734491	5239833	29.2	1	1	1	Green house mode	2	0:00	0:00	0:00
QC	730339	5238573	66.6	1	1	1	Green house mode	2	0:00	0:00	0:00
QD	729894	5238268	48.9	1	1	1	Green house mode	2	0:00	0:00	0:00
QE	734374	5239695	17.4	1	1	1	Green house mode	2	0:00	0:00	0:00
QF	729957	5238159	46.3	1	1	1	Green house mode	2	0:00	0:00	0:00
QG	734592	5239792	31	1	1	1	Green house mode	2	1:06	0:07	0:15
QH	730392	5238625	61.2	1	1	1	Green house mode	2	0:00	0:00	0:00
QI	737655	5240117	27.6	1	1	1	Green house mode	2	0:00	0:00	0:00
QJ	733456	5239677	27.9	1	1	1	Green house mode	2	0:00	0:00	0:00
QK	730087	5236674	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
QL	728324	5237867	53.8	1	1	1	Green house mode	2	0:00	0:00	0:00
QM	729741	5236679	2.3	1	1	1	Green house mode	2	0:00	0:00	0:00
QN	729758	5238134	52.3	1	1	1	Green house mode	2	8:01	0:18	1:57
QO	730052	5236704	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
QP	730761	5238678	24.7	1	1	1	Green house mode	2	0:00	0:00	0:00
QQ	729917	5236762	2	1	1	1	Green house mode	2	0:00	0:00	0:00
QR	735348	5239665	4.2	1	1	1	Green house mode	2	0:00	0:00	0:00
QS	731408	5239482	40.6	1	1	1	Green house mode	2	0:00	0:00	0:00
QT	728819	5237883	21.6	1	1	1	Green house mode	2	0:00	0:00	0:00
QU	728687	5237742	12	1	1	1	Green house mode	2	0:00	0:00	0:00
QV	729884	5237031	1	1	1	1	Green house mode	2	0:00	0:00	0:00
QW	733403	5239547	2	1	1	1	Green house mode	2	0:00	0:00	0:00
QX	733600	5239725	29.1	1	1	1	Green house mode	2	0:00	0:00	0:00
QY	731382	5239517	49.5	1	1	1	Green house mode	2	0:00	0:00	0:00
QZ	737148	5239841	7.6	1	1	1	Green house mode	2	0:00	0:00	0:00
RA	729759	5237738	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
RB	733453	5239573	3.6	1	1	1	Green house mode	2	0:00	0:00	0:00
RC	736385	5239720	8.7	1	1	1	Green house mode	2	0:00	0:00	0:00
RD	728148	5238200	99.4	1	1	1	Green house mode	2	0:00	0:00	0:00
RE	734517	5239973	37.5	1	1	1	Green house mode	2	21:31	0:26	5:15
RF	735440	5239742	14.6	1	1	1	Green house mode	2	0:00	0:00	0:00
RG	733654	5239595	3.8	1	1	1	Green house mode	2	0:00	0:00	0:00
RH	728621	5238023	29.1	1	1	1	Green house mode	2	0:00	0:00	0:00
RI	729578	5236173	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
RJ	730075	5236567	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
RK	728067	5238220	90.4	1	1	1	Green house mode	2	0:00	0:00	0:00
RL	737008	5239995	23.3	1	1	1	Green house mode	2	0:00	0:00	0:00
RM	736583	5239683	10.9	1	1	1	Green house mode	2	0:00	0:00	0:00
RN	735921	5239795	12	1	1	1	Green house mode	2	0:00	0:00	0:00
RO	729937	5237238	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
RP	730109	5236636	1	1	1	1	Green house mode	2	0:00	0:00	0:00
RQ	736482	5239800	10.9	1	1	1	Green house mode	2	0:00	0:00	0:00
RR	730104	5236816	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
RS	728727	5238467	61.9	1	1	1	Green house mode	2	0:00	0:00	0:00
RT	736416	5239973	20.6	1	1	1	Green house mode	2	0:00	0:00	0:00
RU	729879	5236610	3	1	1	1	Green house mode	2	0:00	0:00	0:00
RV	733808	5239770	32.1	1	1	1	Green house mode	2	0:00	0:00	0:00
RW	733906	5239709	25.3	1	1	1	Green house mode	2	0:00	0:00	0:00
RX	729919	5236927	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
RY	729920	5236187	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00
RZ	735671	5239634	9.9	1	1	1	Green house mode	2	0:00	0:00	0:00
SA	734165	5239687	10.7	1	1	1	Green house mode	2	0:00	0:00	0:00
SB	733057	5239476	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
SC	729745	5237831	23.3	1	1	1	Green house mode	2	0:00	0:00	0:00
SD	735724	5239592	10.6	1	1	1	Green house mode	2	0:00	0:00	0:00
SE	728946	5238111	47.9	1	1	1	Green house mode	2	0:00	0:00	0:00
SF	730227	5236795	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
SG	733259	5239583	10	1	1	1	Green house mode	2	0:00	0:00	0:00
SH	728122	5237943	73.3	1	1	1	Green house mode	2	0:00	0:00	0:00
SI	735740	5239576	11.2	1	1	1	Green house mode	2	0:00	0:00	0:00
SJ	736277	5239958	17.3	1	1	1	Green house mode	2	0:00	0:00	0:00
SK	728176	5237945	73.8	1	1	1	Green house mode	2	0:00	0:00	0:00
SL	729887	5237080	0.5	1	1	1	Green house mode	2	0:00	0:00	0:00
SM	733286	5239674	28.8	1	1	1	Green house mode	2	0:00	0:00	0:00
SN	730052	5236814	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
SO	729991	5236936	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
SP	729766	5238076	50	1	1	1	Green house mode	2	0:06	0:02	0:01
SQ	734559	5240111	44.2	1	1	1	Green house mode	2	20:45	0:26	4:56
SR	735551	5239970	35.6	1	1	1	Green house mode	2	21:18	0:23	5:11
SS	729780	5236564	2.5	1	1	1	Green house mode	2	0:00	0:00	0:00
ST	729921	5237231	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
SU	729016	5238096	62.2	1	1	1	Green house mode	2	0:00	0:00	0:00
SV	733534	5245438	1.9	1	1	1	Green house mode	2	0:00	0:00	0:00
SW	733528	5245231	4.3	1	1	1	Green house mode	2	0:00	0:00	0:00
SX	730077	5238274	31.8	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
SY	732701	5239545	4.6	1	1	1	Green house mode	2	0:00	0:00	0:00
SZ	728640	5238099	30.6	1	1	1	Green house mode	2	0:00	0:00	0:00
TA	729621	5236183	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
TB	728885	5238315	40.7	1	1	1	Green house mode	2	0:00	0:00	0:00
TC	733937	5239730	26.6	1	1	1	Green house mode	2	0:00	0:00	0:00
TD	730142	5236731	1	1	1	1	Green house mode	2	0:00	0:00	0:00
TE	736375	5239806	7.3	1	1	1	Green house mode	2	0:00	0:00	0:00
TF	729961	5236785	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
TG	734115	5239572	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
TH	728641	5237945	23.5	1	1	1	Green house mode	2	0:00	0:00	0:00
TI	729811	5236872	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
TJ	729755	5236733	2.3	1	1	1	Green house mode	2	0:00	0:00	0:00
TK	729720	5236572	2.3	1	1	1	Green house mode	2	0:00	0:00	0:00
TL	728634	5237841	15.3	1	1	1	Green house mode	2	0:00	0:00	0:00
TM	735805	5239688	4.4	1	1	1	Green house mode	2	0:00	0:00	0:00
TN	730030	5236682	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00
TO	728902	5238113	42.2	1	1	1	Green house mode	2	0:00	0:00	0:00
TP	736421	5239805	8.2	1	1	1	Green house mode	2	0:00	0:00	0:00
TQ	734756	5240093	44.3	1	1	1	Green house mode	2	13:07	0:23	2:59
TR	728321	5237933	60.1	1	1	1	Green house mode	2	0:00	0:00	0:00
TS	736688	5239807	11.6	1	1	1	Green house mode	2	0:00	0:00	0:00
TT	733778	5239752	29	1	1	1	Green house mode	2	0:00	0:00	0:00
TU	733125	5239586	21.6	1	1	1	Green house mode	2	0:00	0:00	0:00
TV	736396	5239967	19.6	1	1	1	Green house mode	2	0:00	0:00	0:00
TW	728353	5237988	64.7	1	1	1	Green house mode	2	0:00	0:00	0:00
TX	729938	5238163	48.7	1	1	1	Green house mode	2	0:00	0:00	0:00
TY	729959	5236859	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
TZ	735504	5239697	4.7	1	1	1	Green house mode	2	0:00	0:00	0:00
UA	729530	5238007	81.9	1	1	1	Green house mode	2	0:00	0:00	0:00
UB	733518	5245351	5	1	1	1	Green house mode	2	0:00	0:00	0:00
UC	729542	5236159	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
UD	734488	5240081	42.9	1	1	1	Green house mode	2	29:09	0:27	7:01
UE	734445	5239700	15.8	1	1	1	Green house mode	2	0:00	0:00	0:00
UF	730139	5236852	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
UG	729264	5235992	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
UH	729852	5236772	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
UI	731035	5238771	14.8	1	1	1	Green house mode	2	0:00	0:00	0:00
UJ	730484	5238649	45.9	1	1	1	Green house mode	2	0:00	0:00	0:00
UK	729499	5236451	2.8	1	1	1	Green house mode	2	0:00	0:00	0:00
UL	728226	5237877	63.4	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
UM	728526	5238031	42	1	1	1	Green house mode	2	0:00	0:00	0:00
UN	728852	5238578	46.4	1	1	1	Green house mode	2	0:00	0:00	0:00
UO	734108	5239655	6.1	1	1	1	Green house mode	2	0:00	0:00	0:00
UP	728652	5238230	39.3	1	1	1	Green house mode	2	0:00	0:00	0:00
UQ	733870	5239620	4.1	1	1	1	Green house mode	2	0:00	0:00	0:00
UR	733024	5244984	7.6	1	1	1	Green house mode	2	0:00	0:00	0:00
US	733712	5245450	5.3	1	1	1	Green house mode	2	0:00	0:00	0:00
UT	734748	5239765	21.9	1	1	1	Green house mode	2	0:00	0:00	0:00
UU	736601	5239721	12.9	1	1	1	Green house mode	2	0:00	0:00	0:00
UV	735016	5239755	19.3	1	1	1	Green house mode	2	0:00	0:00	0:00
UW	735816	5239842	17.6	1	1	1	Green house mode	2	0:00	0:00	0:00
UX	733487	5245332	4	1	1	1	Green house mode	2	0:00	0:00	0:00
UY	728676	5238259	40.3	1	1	1	Green house mode	2	0:00	0:00	0:00
UZ	736496	5239755	12.5	1	1	1	Green house mode	2	0:00	0:00	0:00
VA	733895	5239639	3.6	1	1	1	Green house mode	2	0:00	0:00	0:00
VB	733615	5239727	29.2	1	1	1	Green house mode	2	0:00	0:00	0:00
VC	735743	5239707	6.5	1	1	1	Green house mode	2	0:00	0:00	0:00
VD	729930	5237182	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
VE	733078	5245007	4.7	1	1	1	Green house mode	2	0:00	0:00	0:00
VF	734331	5240148	58.3	1	1	1	Green house mode	2	34:07	0:30	8:11
VG	728991	5238254	46.8	1	1	1	Green house mode	2	0:00	0:00	0:00
VH	733155	5239539	3.9	1	1	1	Green house mode	2	0:00	0:00	0:00
VI	735789	5239762	7.4	1	1	1	Green house mode	2	0:00	0:00	0:00
VJ	734449	5239951	37.2	1	1	1	Green house mode	2	14:09	0:24	3:28
VK	733782	5239782	33.7	1	1	1	Green house mode	2	0:00	0:00	0:00
VL	729824	5238062	47.3	1	1	1	Green house mode	2	0:00	0:00	0:00
VM	730050	5237004	1	1	1	1	Green house mode	2	0:00	0:00	0:00
VN	729743	5238033	53.9	1	1	1	Green house mode	2	0:00	0:00	0:00
VO	729229	5235954	2.4	1	1	1	Green house mode	2	0:00	0:00	0:00
VP	729193	5236023	2.1	1	1	1	Green house mode	2	0:00	0:00	0:00
VQ	729284	5236153	2.4	1	1	1	Green house mode	2	0:00	0:00	0:00
VR	729787	5236669	2.7	1	1	1	Green house mode	2	0:00	0:00	0:00
VS	729915	5237048	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
VT	733064	5239547	8.2	1	1	1	Green house mode	2	0:00	0:00	0:00
VU	730030	5236787	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
VV	733296	5239613	16.5	1	1	1	Green house mode	2	0:00	0:00	0:00
VW	733732	5239684	21.6	1	1	1	Green house mode	2	0:00	0:00	0:00
VX	732953	5244984	2.9	1	1	1	Green house mode	2	0:00	0:00	0:00
VY	728621	5238111	32.3	1	1	1	Green house mode	2	0:00	0:00	0:00
VZ	729672	5236227	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
WA	732604	5239673	41.9	1	1	1	Green house mode	2	0:00	0:00	0:00
WB	733681	5245390	6.6	1	1	1	Green house mode	2	0:00	0:00	0:00
WC	736457	5239630	8.8	1	1	1	Green house mode	2	0:00	0:00	0:00
WD	728632	5237916	21.8	1	1	1	Green house mode	2	0:00	0:00	0:00
WE	728667	5238326	51	1	1	1	Green house mode	2	0:00	0:00	0:00
WF	729866	5236858	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
WG	730032	5236988	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
WH	729756	5236623	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
WI	733179	5239648	25.9	1	1	1	Green house mode	2	0:00	0:00	0:00
WJ	735022	5239792	23.3	1	1	1	Green house mode	2	0:00	0:00	0:00
WK	729676	5236737	2.4	1	1	1	Green house mode	2	0:00	0:00	0:00
WL	733584	5245428	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
WM	728290	5237845	57.3	1	1	1	Green house mode	2	0:00	0:00	0:00
WN	736424	5239823	8.1	1	1	1	Green house mode	2	0:00	0:00	0:00
WO	734477	5239927	35.9	1	1	1	Green house mode	2	12:34	0:23	3:04
WP	729243	5236034	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
WQ	732557	5239545	4.9	1	1	1	Green house mode	2	0:00	0:00	0:00
WR	728652	5237903	19.3	1	1	1	Green house mode	2	0:00	0:00	0:00
WS	729899	5236828	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
WT	728713	5237925	21.4	1	1	1	Green house mode	2	0:00	0:00	0:00
WU	730225	5236780	0.5	1	1	1	Green house mode	2	0:00	0:00	0:00
WV	733556	5239720	29.5	1	1	1	Green house mode	2	0:00	0:00	0:00
WW	729939	5238291	46.8	1	1	1	Green house mode	2	0:00	0:00	0:00
WX	730236	5236755	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
WY	728710	5237965	24.3	1	1	1	Green house mode	2	0:00	0:00	0:00
WZ	733806	5239786	34.1	1	1	1	Green house mode	2	0:00	0:00	0:00
XA	733926	5239704	22.9	1	1	1	Green house mode	2	0:00	0:00	0:00
XB	734462	5239900	33.9	1	1	1	Green house mode	2	6:21	0:17	1:31
XC	731076	5238876	20.5	1	1	1	Green house mode	2	0:00	0:00	0:00
XD	730177	5236890	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
XE	734988	5239807	24.9	1	1	1	Green house mode	2	0:00	0:00	0:00
XF	729872	5236978	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
XG	734589	5240116	45	1	1	1	Green house mode	2	18:19	0:25	4:18
XH	733159	5239585	15.3	1	1	1	Green house mode	2	0:00	0:00	0:00
XI	729529	5237873	82.4	1	1	1	Green house mode	2	0:00	0:00	0:00
XJ	728655	5237730	10.2	1	1	1	Green house mode	2	0:00	0:00	0:00
XK	728873	5237992	30	1	1	1	Green house mode	2	0:00	0:00	0:00
XL	729577	5237850	80.9	1	1	1	Green house mode	2	0:00	0:00	0:00
XM	729843	5236665	1.9	1	1	1	Green house mode	2	0:00	0:00	0:00
XN	729930	5237115	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
XO	729677	5237697	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
XP	729694	5236376	2.3	1	1	1	Green house mode	2	0:00	0:00	0:00
XQ	733241	5239553	4.1	1	1	1	Green house mode	2	0:00	0:00	0:00
XR	728944	5238376	40.8	1	1	1	Green house mode	2	0:00	0:00	0:00
XS	732466	5239404	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
XT	734951	5239857	33.5	1	1	1	Green house mode	2	0:00	0:00	0:00
XU	728505	5238065	48.8	1	1	1	Green house mode	2	0:00	0:00	0:00
XV	730789	5238766	22.4	1	1	1	Green house mode	2	0:00	0:00	0:00
XW	735293	5239576	3	1	1	1	Green house mode	2	0:00	0:00	0:00
XX	729486	5236177	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
XY	729914	5237212	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
XZ	735809	5239661	4.3	1	1	1	Green house mode	2	0:00	0:00	0:00
YA	736535	5239657	10.1	1	1	1	Green house mode	2	0:00	0:00	0:00
YB	730153	5238348	34.9	1	1	1	Green house mode	2	0:00	0:00	0:00
YC	729781	5237062	2.4	1	1	1	Green house mode	2	0:00	0:00	0:00
YD	733879	5239725	28.1	1	1	1	Green house mode	2	0:00	0:00	0:00
YE	736187	5239809	3.1	1	1	1	Green house mode	2	0:00	0:00	0:00
YF	730084	5238253	26.9	1	1	1	Green house mode	2	0:00	0:00	0:00
YG	728866	5238098	38.2	1	1	1	Green house mode	2	0:00	0:00	0:00
YH	736223	5239988	23.8	1	1	1	Green house mode	2	0:00	0:00	0:00
YI	729885	5237202	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
YJ	729788	5236253	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
YK	735939	5239891	18.7	1	1	1	Green house mode	2	0:00	0:00	0:00
YL	730893	5238786	18	1	1	1	Green house mode	2	0:00	0:00	0:00
YM	730011	5236953	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
YN	734392	5239862	31.2	1	1	1	Green house mode	2	0:00	0:00	0:00
YO	730370	5238631	62.4	1	1	1	Green house mode	2	0:00	0:00	0:00
YP	735761	5239676	6.1	1	1	1	Green house mode	2	0:00	0:00	0:00
YQ	736674	5239710	12.2	1	1	1	Green house mode	2	0:00	0:00	0:00
YR	729796	5236388	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
YS	730228	5236447	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
YT	734608	5240172	47.9	1	1	1	Green house mode	2	15:18	0:25	3:26
YU	730214	5236838	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
YV	733895	5239778	34.5	1	1	1	Green house mode	2	0:00	0:00	0:00
YW	728249	5238211	110.5	1	1	1	Green house mode	2	0:00	0:00	0:00
YX	729867	5236697	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
YY	729675	5236265	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
YZ	733967	5239616	5.1	1	1	1	Green house mode	2	0:00	0:00	0:00
ZA	733746	5239755	30.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ZB	735755	5239582	10.8	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
ZC	728963	5238227	47	1	1	1	Green house mode	2	0:00	0:00	0:00
ZD	734447	5239781	27.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ZE	729900	5237174	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ZF	730273	5236750	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ZG	733484	5239724	32.5	1	1	1	Green house mode	2	0:00	0:00	0:00
ZH	728889	5238378	39.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ZI	734625	5239912	34.5	1	1	1	Green house mode	2	19:46	0:24	4:50
ZJ	729654	5236354	1.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ZK	736404	5239738	8.3	1	1	1	Green house mode	2	0:00	0:00	0:00
ZL	728432	5237955	49.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ZM	732912	5239587	21.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ZN	729888	5237062	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ZO	735759	5239708	5.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ZP	736562	5239616	8.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ZQ	729834	5236400	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
ZR	736120	5239926	16.2	1	1	1	Green house mode	2	0:00	0:00	0:00
ZS	729980	5238240	42.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ZT	729935	5236905	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ZU	730280	5236689	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ZV	729722	5236237	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
ZW	736430	5239894	9.1	1	1	1	Green house mode	2	0:00	0:00	0:00
ZX	733323	5239674	29.6	1	1	1	Green house mode	2	0:00	0:00	0:00
ZY	729692	5236249	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ZZ	730163	5236840	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AAA	730039	5236753	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AAB	729603	5236396	2.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AAC	729658	5238080	64.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AAD	729558	5237960	80.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AAE	736775	5239647	11.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AAF	736658	5239724	12.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AAG	728298	5237923	60.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AAH	729771	5237778	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AAI	729588	5236285	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AAJ	729923	5238170	51.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AAK	734159	5239871	35.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AAL	733534	5245359	5.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AAM	729929	5237144	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AAN	730098	5236510	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AAO	730131	5236897	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AAP	728663	5238386	62.5	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
AAQ	733895	5239615	2.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AAR	729687	5237977	60.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AAS	728723	5238202	33.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AAT	733669	5239692	25	1	1	1	Green house mode	2	0:00	0:00	0:00
AAU	728716	5238143	29.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AAV	735034	5239820	25.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AAW	729773	5236976	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AAX	730284	5236780	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AAY	731200	5239193	73.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AAZ	733200	5239665	28.6	1	1	1	Green house mode	2	0:00	0:00	0:00
ABA	733823	5239574	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ABB	729923	5238212	49.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ABC	731042	5238799	19.3	1	1	1	Green house mode	2	0:00	0:00	0:00
ABD	730984	5238902	21.5	1	1	1	Green house mode	2	0:00	0:00	0:00
ABE	729806	5238003	45	1	1	1	Green house mode	2	0:00	0:00	0:00
ABF	728599	5238005	30.6	1	1	1	Green house mode	2	0:00	0:00	0:00
ABG	733963	5239734	26.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ABH	729762	5236501	2.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ABI	734630	5240037	40.7	1	1	1	Green house mode	2	24:04	0:24	5:48
ABJ	728402	5237806	39	1	1	1	Green house mode	2	0:00	0:00	0:00
ABK	729899	5237088	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ABL	733234	5245068	1.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ABM	728677	5238290	43.6	1	1	1	Green house mode	2	0:00	0:00	0:00
ABN	728858	5238229	41.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ABO	729849	5238048	44.3	1	1	1	Green house mode	2	0:00	0:00	0:00
ABP	734554	5239644	11	1	1	1	Green house mode	2	0:00	0:00	0:00
ABQ	735783	5239605	7.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ABR	733859	5239703	25.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ABS	728901	5238133	42.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ABT	734344	5239925	34.6	1	1	1	Green house mode	2	0:00	0:00	0:00
ABU	738418	5240082	3.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ABV	729806	5236822	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ABW	728679	5238212	36	1	1	1	Green house mode	2	0:00	0:00	0:00
ABX	735003	5245509	45.5	1	1	1	Green house mode	2	0:00	0:00	0:00
ABY	735713	5239545	11.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ABZ	729608	5236205	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ACA	733941	5239780	32.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ACB	728451	5237919	44.3	1	1	1	Green house mode	2	0:00	0:00	0:00
ACC	731070	5238758	2.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ACD	731144	5238939	20.7	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
ACE	731122	5238928	20	1	1	1	Green house mode	2	0:00	0:00	0:00
ACF	734094	5239751	24.5	1	1	1	Green house mode	2	0:00	0:00	0:00
ACG	730096	5236932	1	1	1	1	Green house mode	2	0:00	0:00	0:00
ACH	728148	5238280	99.6	1	1	1	Green house mode	2	0:00	0:00	0:00
ACI	729833	5237189	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ACJ	729998	5236086	1.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ACK	729896	5236214	1.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ACL	734355	5240061	46.8	1	1	1	Green house mode	2	25:22	0:29	6:10
ACM	728240	5237952	69.3	1	1	1	Green house mode	2	0:00	0:00	0:00
ACN	735276	5239624	4	1	1	1	Green house mode	2	0:00	0:00	0:00
ACO	729907	5237072	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ACP	730074	5236688	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ACQ	729574	5237967	79.6	1	1	1	Green house mode	2	0:00	0:00	0:00
ACR	730878	5238838	22	1	1	1	Green house mode	2	0:00	0:00	0:00
ACS	730765	5238838	30.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ACT	733230	5239658	25.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ACU	734579	5239801	30.7	1	1	1	Green house mode	2	1:12	0:08	0:16
ACV	734733	5239716	18.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ACW	732803	5239568	8.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ACX	728846	5238262	40.2	1	1	1	Green house mode	2	0:00	0:00	0:00
ACY	729842	5238016	39	1	1	1	Green house mode	2	0:00	0:00	0:00
ACZ	734273	5239681	13.1	1	1	1	Green house mode	2	0:00	0:00	0:00
ADA	728082	5238255	91.2	1	1	1	Green house mode	2	0:00	0:00	0:00
ADB	730262	5236791	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ADC	734671	5240131	46.3	1	1	1	Green house mode	2	14:28	0:24	3:17
ADD	729808	5237619	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
ADE	734348	5239723	21.2	1	1	1	Green house mode	2	0:00	0:00	0:00
ADF	728825	5238281	38	1	1	1	Green house mode	2	0:00	0:00	0:00
ADG	729720	5236681	2.3	1	1	1	Green house mode	2	0:00	0:00	0:00
ADH	732842	5239558	7	1	1	1	Green house mode	2	0:00	0:00	0:00
ADI	729880	5236239	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ADJ	728556	5237645	11.6	1	1	1	Green house mode	2	0:00	0:00	0:00
ADK	729544	5238013	81.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ADL	728292	5237870	58.6	1	1	1	Green house mode	2	0:00	0:00	0:00
ADM	728982	5238212	49	1	1	1	Green house mode	2	0:00	0:00	0:00
ADN	728658	5238023	27.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ADO	734534	5239818	30.3	1	1	1	Green house mode	2	0:00	0:00	0:00
ADP	733974	5239638	6	1	1	1	Green house mode	2	0:00	0:00	0:00
ADQ	733296	5239709	38	1	1	1	Green house mode	2	0:00	0:00	0:00
ADR	729935	5236594	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
ADS	729944	5237222	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ADT	731018	5238861	21.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ADU	729631	5236220	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ADV	729955	5236971	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ADW	730810	5238788	20.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ADX	729908	5236983	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ADY	734270	5239670	13.2	1	1	1	Green house mode	2	0:00	0:00	0:00
ADZ	734447	5239850	30.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AEA	733553	5245445	2	1	1	1	Green house mode	2	0:00	0:00	0:00
AEB	736545	5239739	13.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AEC	729825	5238095	48	1	1	1	Green house mode	2	0:00	0:00	0:00
AED	729911	5236722	2	1	1	1	Green house mode	2	0:00	0:00	0:00
AEE	728779	5238093	32.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AEF	732964	5239587	12.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AEG	729595	5236194	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AEH	729486	5235994	1.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AEI	729376	5235929	2	1	1	1	Green house mode	2	0:00	0:00	0:00
AEJ	729812	5238042	48.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AEK	731694	5239668	37.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AEL	729679	5236837	3	1	1	1	Green house mode	2	0:00	0:00	0:00
AEM	728541	5237804	18.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AEN	734887	5239799	24.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AEO	730304	5236755	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AEP	729805	5236977	1	1	1	1	Green house mode	2	0:00	0:00	0:00
AEQ	728726	5237967	25.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AER	736185	5239766	2.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AES	735486	5240211	51.6	1	1	1	Green house mode	2	15:15	0:24	3:27
AET	736312	5239954	16.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AEU	730108	5236804	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AEV	734955	5239892	35.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AEW	729466	5236323	3.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AEX	736360	5239762	7.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AEY	728823	5238355	39.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AEZ	730160	5236753	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AFA	735686	5239711	7.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AFB	730037	5236888	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AFC	735601	5239933	31.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AFD	736255	5239752	3.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AFE	729883	5238140	52.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AFF	729742	5238132	53.6	1	1	1	Green house mode	2	6:31	0:16	1:35



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
AFG	733176	5239571	11.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AFH	732936	5244981	2.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AFI	730184	5236484	1	1	1	1	Green house mode	2	0:00	0:00	0:00
AFJ	729849	5236714	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AFK	728617	5237982	28	1	1	1	Green house mode	2	0:00	0:00	0:00
AFL	728279	5237966	66.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AFM	733840	5239699	25.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AFN	735754	5239614	9.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AFO	729777	5238166	53.1	1	1	1	Green house mode	2	13:40	0:22	3:22
AFP	732977	5239569	6.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AFQ	736469	5239679	9.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AFR	733457	5245197	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AFS	735734	5239673	7.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AFT	729771	5236628	2.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AFU	730225	5236690	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AFV	734392	5239874	31.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AFW	729737	5237535	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AFX	737860	5240053	18.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AFY	728753	5238107	31.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AFZ	729717	5238129	57	1	1	1	Green house mode	2	4:54	0:15	1:10
AGA	732952	5239597	17.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AGB	729859	5236987	1	1	1	1	Green house mode	2	0:00	0:00	0:00
AGC	728853	5238484	44.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AGD	734464	5239972	38.4	1	1	1	Green house mode	2	18:33	0:26	4:32
AGE	729921	5237255	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AGF	735443	5239682	4.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AGG	733868	5239724	28.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AGH	728593	5237998	30.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AGI	734870	5239727	18.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AGJ	734037	5239614	5.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AGK	733201	5239550	3.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AGL	729904	5238030	30.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AGM	730049	5238283	35.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AGN	729789	5236435	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AGO	730277	5236741	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AGP	729826	5237346	2.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AGQ	733584	5239720	28.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AGR	729609	5238058	67.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AGS	734128	5239749	24.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AGT	729561	5237938	79.3	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
AGU	734672	5240180	47.1	1	1	1	Green house mode	2	13:23	0:24	2:57
AGV	729839	5237231	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AGW	728789	5238305	37.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AGX	729014	5235961	3.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AGY	729997	5236836	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AGZ	728201	5237878	65.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AHA	729710	5238114	58.6	1	1	1	Green house mode	2	2:05	0:09	0:29
AHB	735011	5239778	21.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AHC	736478	5239692	9.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AHD	729780	5237887	30.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AHE	728714	5237804	13.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AHF	729725	5236851	2	1	1	1	Green house mode	2	0:00	0:00	0:00
AHG	732660	5239674	38.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AHH	730159	5236739	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AHI	734273	5239778	25.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AHJ	729543	5236239	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AHK	735300	5239607	4.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AHL	730015	5236560	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AHM	728638	5238115	31.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AHN	736630	5239724	13	1	1	1	Green house mode	2	0:00	0:00	0:00
AHO	736466	5239895	12.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AHP	730241	5236714	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AHQ	729875	5237394	3.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AHR	728453	5237840	31.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AHS	734039	5239817	32.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AHT	729767	5238108	50.8	1	1	1	Green house mode	2	4:58	0:14	1:11
AHU	729708	5236444	2.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AHV	736357	5239806	7.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AHW	728685	5238049	27.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AHX	733826	5239714	27.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AHY	736246	5239798	3.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AHZ	728910	5238186	46	1	1	1	Green house mode	2	0:00	0:00	0:00
AIA	729839	5236504	2.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AIB	728848	5237939	25.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AIC	731618	5239530	17.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AID	728815	5237743	19.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AIE	736519	5239594	7.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AIF	728146	5237937	72.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AIG	729362	5236157	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AIH	730045	5238224	28.9	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
AII	728421	5237841	36.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AIJ	729781	5238109	50.2	1	1	1	Green house mode	2	6:14	0:16	1:30
AIK	730251	5238459	50.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AIL	734830	5239712	16.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AIM	732136	5239626	30.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AIN	734581	5239688	15.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AIO	729840	5237252	1.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AIP	729900	5236704	1.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AIQ	733105	5245007	5.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AIR	730104	5236953	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AIS	728689	5238079	27.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AIT	735462	5240044	40.8	1	1	1	Green house mode	2	24:46	0:25	6:00
AIU	736399	5239803	7.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AIV	730286	5236755	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AIW	729820	5236365	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AIX	729741	5238213	50.3	1	1	1	Green house mode	2	16:20	0:24	4:02
AIY	734951	5239797	27.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AIZ	734376	5239745	23.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AJA	729641	5236639	2.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AJB	729580	5236624	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AJC	736201	5239954	18.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AJD	728875	5238112	39.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AJE	729799	5236952	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AJF	733557	5245354	8.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AJG	737375	5240007	16.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AJH	734946	5239841	32.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AJI	733204	5239690	39.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AJJ	729745	5236711	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AJK	730091	5236591	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AJL	728123	5238190	96.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AJM	729900	5236598	3.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AJN	729674	5237957	63	1	1	1	Green house mode	2	0:00	0:00	0:00
AJO	737487	5240027	16.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AJP	728584	5237738	14	1	1	1	Green house mode	2	0:00	0:00	0:00
AJQ	729996	5236965	1	1	1	1	Green house mode	2	0:00	0:00	0:00
AJR	734043	5239729	23.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AJS	735635	5239536	9.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AJT	735603	5239948	31.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AJU	729683	5238120	59.3	1	1	1	Green house mode	2	0:25	0:04	0:05
AJV	730285	5236812	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
AJW	728510	5237771	21.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AJX	728711	5237872	15.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AJY	729823	5237203	2	1	1	1	Green house mode	2	0:00	0:00	0:00
AJZ	728696	5238276	40.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AKA	734909	5239901	36.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AKB	728895	5238369	40.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AKC	730002	5236988	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AKD	734572	5240214	50.9	1	1	1	Green house mode	2	15:11	0:25	3:20
AKE	736393	5239677	8.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AKF	734473	5239818	28.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AKG	736538	5239763	13.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AKH	729775	5238125	51.3	1	1	1	Green house mode	2	8:05	0:18	1:58
AKI	733687	5239694	24	1	1	1	Green house mode	2	0:00	0:00	0:00
AKJ	738189	5240010	2.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AKK	729823	5237063	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AKL	728686	5237695	12.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AKM	733664	5245380	8.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AKN	736534	5239804	13.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AKO	729603	5237875	75.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AKP	730189	5236705	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AKQ	729563	5236170	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AKR	734480	5240009	40.5	1	1	1	Green house mode	2	24:10	0:27	5:53
AKS	728129	5237949	73.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AKT	733549	5245316	7.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AKU	729934	5237022	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AKV	728748	5238162	32	1	1	1	Green house mode	2	0:00	0:00	0:00
AKW	728712	5238184	31.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AKX	734165	5239763	26.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AKY	728800	5237932	23.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AKZ	725895	5235882	15.2	1	1	1	Green house mode	2	0:00	0:00	0:00
ALA	733641	5245414	4.5	1	1	1	Green house mode	2	0:00	0:00	0:00
ALB	733577	5245328	7.1	1	1	1	Green house mode	2	0:00	0:00	0:00
ALC	734756	5239780	23.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ALD	728332	5237922	58.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ALE	730063	5236665	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
ALF	734671	5239782	26.1	1	1	1	Green house mode	2	6:00	0:16	1:26
ALG	729758	5236369	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ALH	728148	5237848	67.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ALI	728809	5238188	36.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ALJ	729620	5236705	2.4	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
ALK	734671	5240015	41.1	1	1	1	Green house mode	2	22:46	0:23	5:31
ALL	729681	5237986	60.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ALM	734810	5239697	14.1	1	1	1	Green house mode	2	0:00	0:00	0:00
ALN	735711	5239723	7	1	1	1	Green house mode	2	0:00	0:00	0:00
ALO	730063	5236521	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
ALP	733262	5239556	5.6	1	1	1	Green house mode	2	0:00	0:00	0:00
ALQ	735761	5239728	6.3	1	1	1	Green house mode	2	0:00	0:00	0:00
ALR	730301	5236783	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ALS	728723	5237778	14.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ALT	728281	5237991	71.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ALU	729859	5237964	30.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ALV	736699	5239988	27.1	1	1	1	Green house mode	2	0:00	0:00	0:00
ALW	729812	5237086	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ALX	728889	5238110	41	1	1	1	Green house mode	2	0:00	0:00	0:00
ALY	732633	5239517	2.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ALZ	734879	5239784	23.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AMA	730185	5236818	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AMB	728645	5237695	7.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AMC	730115	5236703	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AMD	735429	5240427	63.9	1	1	1	Green house mode	2	29:22	0:28	6:34
AME	733952	5239644	4.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AMF	730070	5236552	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AMG	729867	5237050	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AMH	728584	5237887	19.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AMI	729927	5237285	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AMJ	728633	5238079	30.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AMK	734440	5239929	35.7	1	1	1	Green house mode	2	9:16	0:20	2:14
AML	734919	5239873	34.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AMM	729657	5236208	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AMN	736589	5239665	10.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AMO	734476	5239853	30.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AMP	733661	5239735	29.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AMQ	729657	5236247	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AMR	734622	5239768	26.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AMS	736572	5239682	10.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AMT	729886	5236853	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AMU	730142	5236901	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AMV	728694	5237760	12.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AMW	736560	5239666	10.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AMX	735599	5239713	6.6	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
AMY	729974	5236885	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AMZ	735638	5239664	9	1	1	1	Green house mode	2	0:00	0:00	0:00
ANA	729796	5236930	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
ANB	736671	5239617	10.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ANC	732823	5245021	6.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AND	734179	5239874	34.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ANE	734861	5239676	13.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ANF	730860	5238817	19.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ANG	730779	5238816	26.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ANH	736616	5239749	12.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ANI	730128	5236922	1	1	1	1	Green house mode	2	0:00	0:00	0:00
ANJ	734760	5239768	22.1	1	1	1	Green house mode	2	0:00	0:00	0:00
ANK	728889	5238221	45.1	1	1	1	Green house mode	2	0:00	0:00	0:00
ANL	731398	5239358	36	1	1	1	Green house mode	2	0:00	0:00	0:00
ANM	733513	5245322	6.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ANN	730963	5238870	19.2	1	1	1	Green house mode	2	0:00	0:00	0:00
ANO	729889	5236953	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ANP	729758	5237542	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
ANQ	729928	5238222	48	1	1	1	Green house mode	2	0:00	0:00	0:00
ANR	737042	5239818	8.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ANS	729676	5236683	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
ANT	728733	5238029	28.6	1	1	1	Green house mode	2	0:00	0:00	0:00
ANU	735797	5239756	7	1	1	1	Green house mode	2	0:00	0:00	0:00
ANV	729568	5236506	2.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ANW	731455	5239424	21.5	1	1	1	Green house mode	2	0:00	0:00	0:00
ANX	736409	5239693	8.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ANY	729654	5236684	2.5	1	1	1	Green house mode	2	0:00	0:00	0:00
ANZ	730682	5238650	27.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AOA	736973	5240013	33	1	1	1	Green house mode	2	0:00	0:00	0:00
AOB	733014	5244970	8.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AOC	732826	5239569	9.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AOD	734862	5239783	24.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AOE	729937	5237048	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AOF	734689	5239644	10.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AOG	729915	5237183	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AOH	735626	5239711	7.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AOI	730200	5236748	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AOJ	729889	5237012	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AOK	728433	5237847	35	1	1	1	Green house mode	2	0:00	0:00	0:00
AOL	734310	5239793	27.5	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
AOM	735699	5239583	11.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AON	734319	5239654	8.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AOO	734660	5240098	42.6	1	1	1	Green house mode	2	16:00	0:24	3:43
AOP	728162	5237864	67.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AOQ	734547	5240095	44.1	1	1	1	Green house mode	2	24:37	0:26	5:54
AOR	729722	5236974	2.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AOS	729874	5238232	56	1	1	1	Green house mode	2	0:00	0:00	0:00
AOT	729643	5236781	2.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AOU	730249	5236770	0.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AOV	734516	5240013	40.3	1	1	1	Green house mode	2	25:38	0:26	6:14
AOW	733593	5245376	4.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AOX	735455	5240423	64.1	1	1	1	Green house mode	2	31:19	0:30	7:04
AOY	735612	5239524	9	1	1	1	Green house mode	2	0:00	0:00	0:00
AOZ	729971	5237122	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
APA	729796	5236609	2.4	1	1	1	Green house mode	2	0:00	0:00	0:00
APB	733988	5239647	6.3	1	1	1	Green house mode	2	0:00	0:00	0:00
APC	728711	5238483	65.5	1	1	1	Green house mode	2	0:00	0:00	0:00
APD	728112	5238117	89.2	1	1	1	Green house mode	2	0:00	0:00	0:00
APE	728217	5237928	68.6	1	1	1	Green house mode	2	0:00	0:00	0:00
APF	730827	5238739	20.3	1	1	1	Green house mode	2	0:00	0:00	0:00
APG	730265	5236776	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
APH	734023	5239741	26.4	1	1	1	Green house mode	2	0:00	0:00	0:00
API	733755	5239800	38.8	1	1	1	Green house mode	2	0:00	0:00	0:00
APJ	728679	5238112	29.2	1	1	1	Green house mode	2	0:00	0:00	0:00
APK	732978	5244958	6.2	1	1	1	Green house mode	2	0:00	0:00	0:00
APL	729884	5237171	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
APM	736629	5239744	12.6	1	1	1	Green house mode	2	0:00	0:00	0:00
APN	730237	5238447	50	1	1	1	Green house mode	2	0:00	0:00	0:00
APO	731542	5239454	24.7	1	1	1	Green house mode	2	0:00	0:00	0:00
APP	734732	5240054	42.4	1	1	1	Green house mode	2	14:59	0:23	3:31
APQ	729842	5237540	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
APR	729499	5236143	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
APS	728864	5237832	22.8	1	1	1	Green house mode	2	0:00	0:00	0:00
APT	736639	5239985	24.4	1	1	1	Green house mode	2	0:00	0:00	0:00
APU	729751	5238180	53	1	1	1	Green house mode	2	13:37	0:22	3:22
APV	730238	5236811	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
APW	737530	5239946	3.2	1	1	1	Green house mode	2	0:00	0:00	0:00
APX	729751	5237884	33.8	1	1	1	Green house mode	2	0:00	0:00	0:00
APY	730230	5236851	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
APZ	737398	5240018	17.1	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
AQA	731025	5238782	15.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AQB	728691	5238093	28.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AQC	728103	5238170	93.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AQD	734256	5239745	20.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AQE	735357	5240075	45.5	1	1	1	Green house mode	2	25:17	0:26	6:08
AQF	731085	5238807	20.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AQG	729536	5236403	2.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AQH	729805	5238275	45.3	1	1	1	Green house mode	2	23:21	0:24	5:44
AQI	730038	5236539	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AQJ	736629	5239930	15.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AQK	736162	5239864	8.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AQL	729853	5238020	38.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AQM	729773	5236542	2.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AQN	736700	5239639	11.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AQO	734419	5239642	8	1	1	1	Green house mode	2	0:00	0:00	0:00
AQP	731608	5239507	14.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AQQ	729725	5237703	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AQR	729747	5236698	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AQS	728784	5237851	18.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AQT	734426	5240052	43.8	1	1	1	Green house mode	2	26:56	0:28	6:32
AQU	736733	5239716	12.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AQV	734234	5240108	61	1	1	1	Green house mode	2	27:15	0:32	6:38
AQW	736565	5239988	25.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AQX	730098	5236670	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AQY	729879	5236874	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AQZ	734490	5240111	43.9	1	1	1	Green house mode	2	28:32	0:27	6:49
ARA	729616	5238103	64.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ARB	728666	5237910	18.6	1	1	1	Green house mode	2	0:00	0:00	0:00
ARC	734385	5240093	50.1	1	1	1	Green house mode	2	30:21	0:29	7:20
ARD	728805	5238256	37.1	1	1	1	Green house mode	2	0:00	0:00	0:00
ARE	729727	5238024	55.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ARF	735617	5239727	7.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ARG	729610	5237964	77.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ARH	735091	5239692	14.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ARI	728827	5237932	24.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ARJ	733842	5239723	28.6	1	1	1	Green house mode	2	0:00	0:00	0:00
ARK	733791	5239622	4.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ARL	729009	5238212	52	1	1	1	Green house mode	2	0:00	0:00	0:00
ARM	735047	5245536	42.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ARN	732183	5239693	39	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
ARO	730219	5236458	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ARP	731485	5239364	16.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ARQ	729656	5236228	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
ARR	729929	5236798	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
ARS	728703	5237693	12.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ART	729859	5236849	1	1	1	1	Green house mode	2	0:00	0:00	0:00
ARU	737914	5240066	19.3	1	1	1	Green house mode	2	0:00	0:00	0:00
ARV	729787	5236585	2.5	1	1	1	Green house mode	2	0:00	0:00	0:00
ARW	736388	5239821	7.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ARX	728731	5238017	27.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ARY	733526	5245296	7.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ARZ	728343	5237935	59	1	1	1	Green house mode	2	0:00	0:00	0:00
ASA	730914	5238848	18.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ASB	730168	5236743	1	1	1	1	Green house mode	2	0:00	0:00	0:00
ASC	735642	5239728	8.1	1	1	1	Green house mode	2	0:00	0:00	0:00
ASD	729853	5236760	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ASE	729795	5236204	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
ASF	728812	5238213	38.3	1	1	1	Green house mode	2	0:00	0:00	0:00
ASG	735493	5240134	46.9	1	1	1	Green house mode	2	18:52	0:24	4:29
ASH	732629	5239448	3.6	1	1	1	Green house mode	2	0:00	0:00	0:00
ASI	728535	5237969	34.3	1	1	1	Green house mode	2	0:00	0:00	0:00
ASJ	729349	5236052	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ASK	728716	5237828	14.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ASL	733559	5245298	7.3	1	1	1	Green house mode	2	0:00	0:00	0:00
ASM	730095	5236606	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
ASN	730988	5238797	18	1	1	1	Green house mode	2	0:00	0:00	0:00
ASO	729699	5237970	57.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ASP	734321	5239735	17.5	1	1	1	Green house mode	2	0:00	0:00	0:00
ASQ	733504	5245152	13.5	1	1	1	Green house mode	2	0:00	0:00	0:00
ASR	728748	5238344	45.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ASS	731505	5239423	21.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AST	733568	5245263	4.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ASU	734212	5239772	25.1	1	1	1	Green house mode	2	0:00	0:00	0:00
ASV	728936	5238112	47.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ASW	738233	5239971	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ASX	728724	5238332	50.8	1	1	1	Green house mode	2	0:00	0:00	0:00
ASY	735500	5239958	36.1	1	1	1	Green house mode	2	18:24	0:24	4:30
ASZ	729794	5237634	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
ATA	728494	5237824	25.5	1	1	1	Green house mode	2	0:00	0:00	0:00
ATB	729994	5237072	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
ATC	729922	5236239	2	1	1	1	Green house mode	2	0:00	0:00	0:00
ATD	728574	5237928	25.6	1	1	1	Green house mode	2	0:00	0:00	0:00
ATE	733544	5245290	7.5	1	1	1	Green house mode	2	0:00	0:00	0:00
ATF	729732	5237610	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ATG	733524	5245284	7.2	1	1	1	Green house mode	2	0:00	0:00	0:00
ATH	736520	5239674	9.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ATI	734644	5240161	47.8	1	1	1	Green house mode	2	14:26	0:24	3:14
ATJ	728668	5238068	28.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ATK	731542	5239472	25.6	1	1	1	Green house mode	2	0:00	0:00	0:00
ATL	729785	5236140	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
ATM	733288	5239688	32.5	1	1	1	Green house mode	2	0:00	0:00	0:00
ATN	730099	5236617	1	1	1	1	Green house mode	2	0:00	0:00	0:00
ATO	730022	5236908	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
ATP	733756	5239599	2.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ATQ	729541	5238141	67.2	1	1	1	Green house mode	2	0:00	0:00	0:00
ATR	729616	5236338	2.5	1	1	1	Green house mode	2	0:00	0:00	0:00
ATS	735429	5240091	45.1	1	1	1	Green house mode	2	26:49	0:25	6:27
ATT	730149	5236691	1	1	1	1	Green house mode	2	0:00	0:00	0:00
ATU	730185	5236689	1	1	1	1	Green house mode	2	0:00	0:00	0:00
ATV	729738	5236472	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
ATW	728772	5238266	36.7	1	1	1	Green house mode	2	0:00	0:00	0:00
ATX	734974	5239751	19.3	1	1	1	Green house mode	2	0:00	0:00	0:00
ATY	733665	5239611	5.4	1	1	1	Green house mode	2	0:00	0:00	0:00
ATZ	738329	5240069	5.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AUA	729029	5238237	53.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AUB	728032	5237978	89.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AUC	730146	5238260	16.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AUD	729700	5238128	59.1	1	1	1	Green house mode	2	3:27	0:13	0:48
AUE	731358	5239449	50.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AUF	733342	5239682	30.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AUG	735542	5240084	48.5	1	1	1	Green house mode	2	19:34	0:23	4:43
AUH	728979	5238242	46.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AUI	729690	5236636	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AUJ	728882	5238199	45.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AUK	729668	5236410	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AUL	729768	5238190	52.8	1	1	1	Green house mode	2	15:50	0:23	3:55
AUM	730266	5238471	53.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AUN	729655	5238155	59.4	1	1	1	Green house mode	2	3:10	0:12	0:44
AUO	734537	5240076	43	1	1	1	Green house mode	2	27:26	0:26	6:36
AUP	728823	5238107	35.6	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
AUQ	729651	5236590	2.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AUR	736773	5239658	11.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AUS	736818	5241954	88.1	1	1	1	Green house mode	2	139:03	1:12	29:35
AUT	732635	5239474	4.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AUU	729631	5236147	1	1	1	1	Green house mode	2	0:00	0:00	0:00
AUV	734507	5239637	9.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AUW	728193	5237855	65.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AUX	734472	5239991	39.9	1	1	1	Green house mode	2	21:37	0:27	5:17
AUY	728848	5238323	38.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AUZ	729659	5238119	60.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AVA	734680	5239726	19.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AVB	728043	5238139	85.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AVC	730714	5238818	33.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AVD	734408	5239753	24.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AVE	730670	5238744	39.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AVF	736423	5239667	8.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AVG	729736	5236709	1.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AVH	729765	5236168	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AVI	730068	5238263	31.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AVJ	729713	5236735	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AVK	733286	5245472	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AVL	736738	5239980	22.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AVM	732919	5244983	3.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AVN	736728	5239745	12.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AVO	733134	5244993	7.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AVP	728943	5238028	37.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AVQ	730099	5236544	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AVR	729911	5238334	41.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AVS	736664	5239680	11.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AVT	729677	5236713	2.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AVU	729019	5238149	58.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AVW	729706	5236701	2.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AVW	734315	5245523	25.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AVX	734398	5239598	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AVY	728899	5238207	45.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AVZ	737100	5240029	25.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AWA	728868	5238211	42.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AWB	730037	5238294	38.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AWC	729881	5236115	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AWD	730086	5238285	31.9	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
AWE	729974	5238215	44	1	1	1	Green house mode	2	0:00	0:00	0:00
AWF	728728	5237552	6.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AWG	734311	5239989	41.6	1	1	1	Green house mode	2	7:51	0:19	1:53
AWH	730237	5236435	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AWI	736268	5239798	4.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AWJ	729909	5237107	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AWK	728675	5238017	25.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AWL	732054	5239692	33.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AWM	735705	5239705	7.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AWN	731177	5239309	61.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AWO	729808	5236445	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AWP	737066	5239910	9.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AWQ	728527	5237979	36.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AWR	729752	5238069	52.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AWS	728841	5237926	24.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AWT	729578	5236368	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AWU	734230	5239711	13.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AWV	729657	5236800	2.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AWW	728980	5238166	51.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AWX	733513	5245476	2.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AWY	728854	5238464	42.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AWZ	728843	5238307	38.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AXA	728859	5237966	27.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AXB	729802	5236462	1.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AXC	728770	5238290	38.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AXD	734924	5239853	33.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AXE	729102	5238238	68.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AXF	733949	5239636	4.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AXG	732704	5239607	26.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AXH	734282	5239794	27.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AXI	729889	5236689	2.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AXJ	729616	5236684	2.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AXK	730738	5238683	28.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AXL	728560	5238053	37	1	1	1	Green house mode	2	0:00	0:00	0:00
AXM	734410	5239841	30	1	1	1	Green house mode	2	0:00	0:00	0:00
AXN	734445	5239645	10.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AXO	734707	5240035	41.4	1	1	1	Green house mode	2	17:10	0:23	4:06
AXP	736446	5239799	8.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AXQ	733802	5239684	24.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AXR	730908	5238787	18.2	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
AXS	730250	5236744	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AXT	736438	5239646	8.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AXU	733033	5239576	8	1	1	1	Green house mode	2	0:00	0:00	0:00
AXV	734633	5239687	15.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AXW	734614	5239633	7	1	1	1	Green house mode	2	0:00	0:00	0:00
AXX	729967	5236919	1	1	1	1	Green house mode	2	0:00	0:00	0:00
AXY	729687	5236798	2	1	1	1	Green house mode	2	0:00	0:00	0:00
AXZ	736681	5239788	11.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AYA	736736	5239629	10.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AYB	738600	5240208	5.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AYC	729755	5236699	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AYD	733448	5245169	-0.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AYE	730034	5236551	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AYF	731338	5239509	56.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AYG	734265	5239740	21.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AYH	729894	5237886	3.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AYI	734670	5240080	42	1	1	1	Green house mode	2	16:20	0:24	3:50
AYJ	733846	5239686	22.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AYK	728928	5238001	35.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AYL	729065	5238115	69.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AYM	728336	5237987	64.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AYN	729953	5236874	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AYO	734615	5240158	47.8	1	1	1	Green house mode	2	15:24	0:25	3:29
AYP	734566	5239729	23.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AYQ	729790	5237968	43.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AYR	734419	5239953	36.8	1	1	1	Green house mode	2	11:35	0:22	2:49
AYS	734687	5239842	32.1	1	1	1	Green house mode	2	15:23	0:23	3:47
AYT	735389	5240191	48.4	1	1	1	Green house mode	2	21:22	0:26	5:03
AYU	735420	5240278	53	1	1	1	Green house mode	2	15:40	0:26	3:26
AYV	729906	5237082	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
AYW	729955	5237911	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AYX	728620	5238326	53.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AYY	736490	5239597	8.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AYZ	733603	5245312	6.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AZA	729599	5238081	67.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AZB	728819	5237797	20	1	1	1	Green house mode	2	0:00	0:00	0:00
AZC	733224	5244977	8.5	1	1	1	Green house mode	2	0:00	0:00	0:00
AZD	729990	5236913	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
AZE	735511	5240173	52	1	1	1	Green house mode	2	15:37	0:24	3:35
AZF	736637	5239610	9.2	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
AZG	728045	5238188	87.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AZH	733785	5239808	37.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AZI	729729	5238062	54.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AZJ	729767	5236596	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AZK	736623	5239978	23.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AZL	728857	5238175	41.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AZM	733922	5239732	28	1	1	1	Green house mode	2	0:00	0:00	0:00
AZN	729485	5236446	3	1	1	1	Green house mode	2	0:00	0:00	0:00
AZO	728810	5238313	38.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AZP	728255	5237878	62	1	1	1	Green house mode	2	0:00	0:00	0:00
AZQ	733969	5239702	19.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AZR	736907	5242204	85.1	1	1	1	Green house mode	2	88:42	1:32	16:47
AZS	735716	5239639	10.2	1	1	1	Green house mode	2	0:00	0:00	0:00
AZT	730049	5236041	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AZU	733459	5245114	14.6	1	1	1	Green house mode	2	0:00	0:00	0:00
AZV	729900	5238125	52.4	1	1	1	Green house mode	2	0:00	0:00	0:00
AZW	728160	5238289	100.3	1	1	1	Green house mode	2	0:00	0:00	0:00
AZX	729105	5238187	72.1	1	1	1	Green house mode	2	0:00	0:00	0:00
AZY	729763	5237765	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
AZZ	729737	5237714	1	1	1	1	Green house mode	2	0:00	0:00	0:00
BAA	729856	5236185	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BAB	728669	5237924	19.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BAC	728375	5237995	62.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BAD	728726	5237895	18.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BAE	733486	5245128	16.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BAF	729968	5236947	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BAG	728723	5238070	28	1	1	1	Green house mode	2	0:00	0:00	0:00
BAH	729639	5236367	2.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BAI	737178	5239958	14.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BAJ	728830	5238293	38.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BAK	728647	5238262	41.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BAL	737961	5240096	21.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BAM	736596	5239736	13	1	1	1	Green house mode	2	0:00	0:00	0:00
BAN	729749	5237517	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BAO	730422	5238623	53.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BAP	729586	5236186	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BAQ	729718	5236711	2.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BAR	729987	5237095	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BAS	734664	5240164	46.8	1	1	1	Green house mode	2	13:51	0:24	3:05
BAT	733021	5239577	7.5	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
BAU	734581	5240151	46.2	1	1	1	Green house mode	2	17:03	0:25	3:55
BAV	735800	5239729	5.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BAW	734141	5239765	27.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BAX	734882	5239766	21.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BAY	729933	5237254	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BAZ	728941	5238496	41.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BBA	728768	5238404	49.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BBB	732686	5239487	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BBC	729729	5236484	2.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BBD	728903	5238326	41.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BBE	734584	5240070	41.3	1	1	1	Green house mode	2	24:28	0:25	5:53
BBF	734610	5240119	45.4	1	1	1	Green house mode	2	17:12	0:25	3:59
BBG	735527	5239702	6.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BBH	736411	5239895	8.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BBI	728804	5238335	39.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BBJ	729936	5236881	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BBK	728938	5238014	37	1	1	1	Green house mode	2	0:00	0:00	0:00
BBL	733483	5245297	3.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BBM	735431	5239680	5.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BBN	733613	5239737	30	1	1	1	Green house mode	2	0:00	0:00	0:00
BBO	729680	5236199	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BBP	728655	5238401	64.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BBQ	729838	5236161	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BBR	735041	5239808	24.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BBS	730210	5236137	44.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BBT	733703	5239827	48.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BBU	729396	5236273	2.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BBV	733763	5239769	33	1	1	1	Green house mode	2	0:00	0:00	0:00
BBW	733741	5239689	22.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BBX	728739	5237575	8.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BBY	730043	5236633	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BBZ	728562	5237858	18.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BCA	729710	5238017	58.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BCB	729658	5236332	1.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BCC	734719	5239878	36	1	1	1	Green house mode	2	20:20	0:23	4:59
BCD	729623	5236715	2.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BCE	729787	5236395	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BCF	729867	5236920	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BCG	732582	5239547	4.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BCH	728743	5238307	40.5	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
BCI	733691	5245410	4.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BCJ	728821	5238241	38.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BCK	734096	5239726	22.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BCL	729902	5238077	37.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BCM	734362	5239875	32.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BCN	728644	5237654	6.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BCO	735389	5240050	43.4	1	1	1	Green house mode	2	23:47	0:26	5:47
BCP	735192	5239675	5.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BCQ	728630	5237810	13.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BCR	728842	5238663	49.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BCS	735477	5240012	41.7	1	1	1	Green house mode	2	23:00	0:25	5:36
BCT	736596	5239756	12.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BCU	729974	5238229	43.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BCV	729890	5237140	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BCW	733130	5239500	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BCX	736508	5239937	15.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BCY	733299	5239673	29.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BCZ	733794	5239612	2.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BDA	728740	5238090	29.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BDB	729514	5238170	63.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BDC	733795	5239794	35	1	1	1	Green house mode	2	0:00	0:00	0:00
BDD	735399	5240163	48.3	1	1	1	Green house mode	2	24:39	0:26	5:52
BDE	734437	5239689	14.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BDF	734624	5240016	40.2	1	1	1	Green house mode	2	25:25	0:24	6:09
BDG	729856	5238258	51.1	1	1	1	Green house mode	2	22:58	0:23	5:38
BDH	734031	5239661	7	1	1	1	Green house mode	2	0:00	0:00	0:00
BDI	734650	5240127	46.1	1	1	1	Green house mode	2	15:22	0:24	3:31
BDJ	735693	5239667	8.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BDK	734692	5240099	42.5	1	1	1	Green house mode	2	14:47	0:23	3:25
BDL	733462	5239714	33.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BDM	730968	5238885	19.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BDN	729608	5238109	64	1	1	1	Green house mode	2	0:00	0:00	0:00
BDO	730193	5238205	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BDP	729794	5236299	1.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BDQ	736492	5239625	9	1	1	1	Green house mode	2	0:00	0:00	0:00
BDR	728661	5237749	10	1	1	1	Green house mode	2	0:00	0:00	0:00
BDS	736620	5239609	10	1	1	1	Green house mode	2	0:00	0:00	0:00
BDT	729791	5238112	50.2	1	1	1	Green house mode	2	7:21	0:17	1:47
BDU	734637	5239764	25.3	1	1	1	Green house mode	2	0:08	0:02	0:01
BDV	734813	5239730	19.9	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
BDW	729857	5236957	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BDX	733119	5239532	6.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BDY	728398	5238030	65	1	1	1	Green house mode	2	0:00	0:00	0:00
BDZ	734611	5240029	40.6	1	1	1	Green house mode	2	25:31	0:25	6:10
BEA	736314	5239736	5	1	1	1	Green house mode	2	0:00	0:00	0:00
BEB	735072	5245525	43.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BEC	734668	5239696	15.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BED	736647	5239732	12.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BEE	729853	5236932	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BEF	733730	5239818	43.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BEG	736645	5239715	12.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BEH	736442	5239625	8.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BEI	729694	5237682	1	1	1	1	Green house mode	2	0:00	0:00	0:00
BEJ	730079	5236538	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BEK	731098	5238833	17.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BEL	731145	5238890	19.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BEM	734562	5240152	45.5	1	1	1	Green house mode	2	17:42	0:25	4:05
BEN	733178	5239540	2.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BEO	731694	5239521	2.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BEP	733770	5245451	5	1	1	1	Green house mode	2	0:00	0:00	0:00
BEQ	728724	5237850	16.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BER	729674	5236402	2.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BES	735380	5240128	47.2	1	1	1	Green house mode	2	28:17	0:26	6:47
BET	734733	5239909	36.1	1	1	1	Green house mode	2	22:13	0:23	5:25
BEU	728208	5237922	67.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BEV	733706	5239694	22.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BEW	738094	5239998	3.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BEX	731606	5239598	36.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BEY	734502	5239974	38.2	1	1	1	Green house mode	2	21:00	0:26	5:08
BEZ	731671	5239661	38.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BFA	731224	5239315	57.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BFB	736519	5239818	13.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BFC	734605	5240087	42.4	1	1	1	Green house mode	2	19:36	0:25	4:41
BFD	728877	5238342	40.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BFE	728977	5238270	45.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BFF	728889	5237918	28.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BFG	732551	5239363	2.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BFH	734529	5240150	46	1	1	1	Green house mode	2	19:38	0:26	4:35
BFI	729672	5236628	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BFJ	735971	5239906	20.4	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
BFK	728901	5237936	30.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BFL	728454	5237985	48.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BFM	731059	5238803	19.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BFN	728907	5238294	41.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BFO	734490	5239865	31	1	1	1	Green house mode	2	2:27	0:11	0:34
BFP	728846	5238147	38.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BFQ	737789	5240036	19	1	1	1	Green house mode	2	0:00	0:00	0:00
BFR	735777	5239564	9.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BFS	730220	5236714	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BFT	729772	5238016	51	1	1	1	Green house mode	2	0:00	0:00	0:00
BFU	738567	5240188	5.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BFV	733547	5245252	4.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BFW	729933	5237270	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BFX	727951	5237975	98.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BFY	730037	5237026	1	1	1	1	Green house mode	2	0:00	0:00	0:00
BFZ	728035	5238195	85.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BGA	734199	5239669	9.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BGB	733725	5245425	5.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BGC	734864	5239715	16.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BGD	729820	5237030	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BGE	734453	5239719	17.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BGF	729639	5236739	2.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BGG	736404	5239669	8.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BGH	729670	5236208	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BGI	733681	5239744	30.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BGJ	729922	5237013	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BGK	735630	5239577	9.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BGL	728903	5238275	41.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BGM	729995	5236543	2.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BGN	728238	5237938	67.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BGO	733001	5239568	6.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BGP	735660	5239487	9.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BGQ	728422	5237900	43.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BGR	734143	5239709	14.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BGS	732063	5239701	35.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BGT	728567	5237885	20.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BGU	729609	5237930	76.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BGV	732202	5239685	38.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BGW	735530	5240116	47.8	1	1	1	Green house mode	2	17:48	0:24	4:14
BGX	730324	5238607	67.6	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
BGY	729958	5236899	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BGZ	728174	5237964	76.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BHA	729850	5236811	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BHB	735425	5240029	39.6	1	1	1	Green house mode	2	22:35	0:25	5:29
BHC	729892	5236105	1	1	1	1	Green house mode	2	0:00	0:00	0:00
BHD	729906	5237904	2.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BHE	734559	5240058	40.8	1	1	1	Green house mode	2	26:58	0:25	6:29
BHF	729685	5238139	58.7	1	1	1	Green house mode	2	3:30	0:12	0:49
BHG	734670	5240043	41.8	1	1	1	Green house mode	2	18:39	0:24	4:29
BHH	729920	5238246	48.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BHI	735725	5239724	6.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BHJ	729668	5236189	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BHK	730851	5238756	20	1	1	1	Green house mode	2	0:00	0:00	0:00
BHL	728682	5238503	72.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BHM	734565	5240020	40.3	1	1	1	Green house mode	2	26:31	0:25	6:25
BHN	728995	5238182	53	1	1	1	Green house mode	2	0:00	0:00	0:00
BHO	734978	5239686	13.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BHP	729734	5236459	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BHQ	730162	5236693	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BHR	734508	5239994	39.9	1	1	1	Green house mode	2	23:42	0:26	5:47
BHS	728797	5238322	39	1	1	1	Green house mode	2	0:00	0:00	0:00
BHT	728918	5238302	41.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BHU	729902	5237131	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BHV	730065	5236709	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BHW	729650	5238060	63.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BHX	734574	5240037	40.8	1	1	1	Green house mode	2	26:44	0:25	6:27
BHY	735365	5240194	47.3	1	1	1	Green house mode	2	23:25	0:26	5:33
BHZ	736631	5239818	11.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BIA	733189	5245055	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BIB	729978	5238297	40.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BIC	729787	5236384	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BID	728899	5238286	41.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BIE	733872	5239634	4.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BIF	734801	5239727	20.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BIG	735622	5239627	9.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BIH	732887	5244994	4.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BII	735367	5239666	4.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BIJ	731649	5239491	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BIK	729562	5236154	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BIL	730260	5236842	1	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
BIM	734947	5239766	21.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BIN	729699	5236780	2.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BIO	729764	5237897	34.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BIP	733459	5239700	31.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BIQ	734059	5239615	5	1	1	1	Green house mode	2	0:00	0:00	0:00
BIR	731195	5239319	58.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BIS	729963	5236594	2	1	1	1	Green house mode	2	0:00	0:00	0:00
BIT	730276	5238415	37.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BIU	736180	5239867	8.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BIV	730031	5236942	1	1	1	1	Green house mode	2	0:00	0:00	0:00
BIW	735434	5240249	51.5	1	1	1	Green house mode	2	15:57	0:25	3:34
BIX	732811	5245037	5.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BIY	732675	5239469	0.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BIZ	735004	5239697	16.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BJA	729642	5237658	2.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BJB	733047	5244991	6.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BJC	730029	5236971	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BJD	729668	5238048	63.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BJE	736532	5239979	23.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BJF	734566	5239615	7.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BJG	730053	5236064	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BJH	728058	5238221	89.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BJI	729080	5238122	71.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BJJ	730057	5236640	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BJK	730110	5236521	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BJL	729829	5236444	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BJM	729716	5237726	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BJN	734039	5239749	26.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BJO	729846	5236631	2.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BJP	730935	5238865	19.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BJQ	728962	5238176	49.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BJR	728932	5238117	46.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BJS	728761	5238330	42.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BJT	728712	5237713	14	1	1	1	Green house mode	2	0:00	0:00	0:00
BJU	729969	5236573	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BJV	729951	5236582	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BJW	735044	5239672	13.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BJX	730054	5236899	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BJY	729621	5236382	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BJZ	729778	5236717	2.5	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
BKA	735806	5239834	16.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BKB	728932	5238151	46.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BKC	737061	5239805	8.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BKD	734350	5240006	41.7	1	1	1	Green house mode	2	15:13	0:25	3:43
BKE	728719	5238291	39.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BKF	734733	5240090	43.6	1	1	1	Green house mode	2	13:45	0:23	3:10
BKG	732708	5239625	26.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BKH	733513	5245205	5	1	1	1	Green house mode	2	0:00	0:00	0:00
BKI	737069	5239852	8.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BKJ	736997	5239985	22.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BKK	728767	5237927	23.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BKL	733947	5239620	3.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BKM	728755	5238361	46.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BKN	732924	5239590	22.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BKO	730079	5238328	37.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BKP	734921	5239762	20.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BKQ	729686	5236274	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BKR	734992	5245524	45.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BKS	729733	5236734	2.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BKT	729515	5236251	2	1	1	1	Green house mode	2	0:00	0:00	0:00
BKU	734081	5239798	28.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BKV	736200	5239825	3.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BKW	728617	5238338	54.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BKX	730923	5238799	18.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BKY	735218	5239637	3.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BKZ	730843	5238745	20	1	1	1	Green house mode	2	0:00	0:00	0:00
BLA	728043	5237974	87.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BLB	730280	5236791	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BLC	728813	5238236	38.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BLD	730907	5238798	17.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BLE	729905	5237865	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BLF	729709	5237934	51.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BLG	734735	5239878	36	1	1	1	Green house mode	2	0:00	0:00	0:00
BLH	729581	5236320	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BLI	729670	5236596	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BLJ	730307	5238390	29.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BLK	735593	5239634	8	1	1	1	Green house mode	2	0:00	0:00	0:00
BLL	729949	5236912	1	1	1	1	Green house mode	2	0:00	0:00	0:00
BLM	730036	5236914	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BLN	735812	5239650	4.2	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
BLO	730053	5236953	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BLP	736583	5239908	11.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BLQ	736642	5239827	11.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BLR	730205	5236777	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BLS	729283	5236110	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BLT	728959	5238457	41.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BLU	729918	5237033	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BLV	729943	5236876	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BLW	728907	5238073	38.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BLX	736518	5239756	12.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BLY	730898	5238849	20.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BLZ	728698	5238346	53.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BMA	728329	5237832	51.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BMB	729895	5236960	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BMC	734890	5239463	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BMD	728500	5238007	44.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BME	733427	5245092	12.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BMF	728786	5238287	37.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BMG	728767	5237875	18.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BMH	729817	5236206	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BMI	728671	5238347	55.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BMJ	737895	5240088	21.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BMK	729806	5236124	1.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BML	735448	5240065	40.4	1	1	1	Green house mode	2	25:43	0:25	6:13
BMM	728274	5237867	60.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BMN	728724	5237797	14.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BMO	728687	5238261	40.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BMP	728499	5237873	25.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BMQ	734952	5239676	11.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BMR	729705	5237937	53.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BMS	730247	5236700	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BMT	734470	5239871	32.1	1	1	1	Green house mode	2	1:40	0:09	0:23
BMU	731924	5239643	17.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BMV	729695	5236732	2.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BMW	729588	5238147	61.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BMX	729760	5237654	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BMY	735444	5240465	65.2	1	1	1	Green house mode	2	39:44	0:34	9:04
BMZ	729881	5236787	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BNA	732870	5245026	2.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BNB	728715	5238257	38.5	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
BNC	734239	5239656	11.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BND	733982	5239615	5.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BNE	734584	5240100	43.8	1	1	1	Green house mode	2	19:51	0:25	4:44
BNF	729980	5238278	41.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BNG	736502	5239801	11.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BNH	728692	5237731	13	1	1	1	Green house mode	2	0:00	0:00	0:00
BNI	731373	5239500	48.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BNJ	736629	5239916	12.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BNK	734539	5240179	49	1	1	1	Green house mode	2	17:28	0:26	3:58
BNL	736698	5239754	12.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BNM	736314	5239743	5.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BNN	736559	5239823	11.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BNO	729067	5238248	57.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BNP	729957	5237152	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BNQ	729720	5237933	50	1	1	1	Green house mode	2	0:00	0:00	0:00
BNR	729378	5236073	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BNS	729815	5236408	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BNT	728869	5238263	42.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BNU	729545	5237870	82.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BNV	730082	5236628	1	1	1	1	Green house mode	2	0:00	0:00	0:00
BNW	729960	5237067	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BNX	728438	5237896	42.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BNY	734535	5239639	10.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BNZ	731491	5239446	24.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BOA	729886	5236739	1.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BOB	730243	5236869	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BOC	730133	5238337	33.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BOD	728647	5238334	53.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BOE	728553	5237990	34.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BOF	732963	5244964	4.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BOG	736200	5239980	23.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BOH	734855	5239768	23.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BOI	730268	5236829	1	1	1	1	Green house mode	2	0:00	0:00	0:00
BOJ	729719	5237687	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BOK	736292	5239799	5	1	1	1	Green house mode	2	0:00	0:00	0:00
BOL	731001	5238888	20.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BOM	728138	5238216	99.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BON	728753	5237924	24.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BOO	736748	5239704	11.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BOP	728783	5238362	43.3	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
BOQ	729765	5236716	2.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BOR	728638	5237930	23	1	1	1	Green house mode	2	0:00	0:00	0:00
BOS	728112	5238219	96.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BOT	735461	5240434	64.3	1	1	1	Green house mode	2	34:18	0:31	7:48
BOU	735442	5240475	65.3	1	1	1	Green house mode	2	41:24	0:34	9:28
BOV	728656	5238467	73	1	1	1	Green house mode	2	0:00	0:00	0:00
BOW	728795	5238238	36.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BOX	733928	5239776	32.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BOY	732090	5239686	33.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BOZ	736488	5239701	9.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BPA	730062	5236561	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BPB	728653	5237820	14.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BPC	729527	5238084	78.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BPD	729911	5236915	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BPE	734651	5240039	42	1	1	1	Green house mode	2	20:41	0:24	5:00
BPF	733027	5244969	7.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BPG	734370	5240036	43.4	1	1	1	Green house mode	2	22:08	0:28	5:24
BPH	735487	5239673	4.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BPI	734286	5240051	48.1	1	1	1	Green house mode	2	18:47	0:28	4:35
BPJ	729914	5238052	31.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BPK	730192	5236770	1	1	1	1	Green house mode	2	0:00	0:00	0:00
BPL	729826	5236096	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BPM	730813	5238741	21	1	1	1	Green house mode	2	0:00	0:00	0:00
BPN	728714	5238052	27.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BPO	728582	5238013	32.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BPP	730074	5236707	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BPQ	736214	5239957	18.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BPR	735722	5239510	16.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BPS	729587	5236391	2.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BPT	735054	5239672	12.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BPU	730047	5236931	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BPV	734267	5239717	17.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BPW	735458	5239742	13.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BPX	729971	5236862	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BPY	728571	5238006	32.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BPZ	728704	5237749	13.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BQA	736217	5239735	3.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BQB	728405	5237865	41	1	1	1	Green house mode	2	0:00	0:00	0:00
BQC	728943	5238211	48	1	1	1	Green house mode	2	0:00	0:00	0:00
BQD	729901	5236993	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
BQE	736905	5242134	85.7	1	1	1	Green house mode	2	77:23	1:25	14:29
BQF	736721	5239730	12.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BQG	734270	5240132	60.2	1	1	1	Green house mode	2	32:25	0:31	7:50
BQH	735493	5240193	51.7	1	1	1	Green house mode	2	15:35	0:24	3:33
BQI	729860	5236138	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BQJ	728320	5237833	52.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BQK	728969	5238066	47.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BQL	734487	5240029	41.1	1	1	1	Green house mode	2	26:17	0:27	6:23
BQM	734236	5239720	13.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BQN	729800	5237894	28.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BQO	734864	5239445	1	1	1	1	Green house mode	2	0:00	0:00	0:00
BQP	736689	5239694	11.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BQQ	734715	5239794	25.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BQR	729696	5236205	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BQS	728759	5238181	32.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BQT	728374	5237854	44.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BQU	732858	5245002	6.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BQV	730101	5236833	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BQW	728486	5237854	25.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BQX	736231	5239960	17.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BQY	735422	5240081	44.2	1	1	1	Green house mode	2	26:31	0:25	6:24
BQZ	733738	5245436	5.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BRA	730142	5236818	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BRB	730201	5236824	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BRC	735837	5239870	22	1	1	1	Green house mode	2	0:00	0:00	0:00
BRD	729485	5237758	101.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BRE	728757	5237864	17.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BRF	728707	5237908	18.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BRG	734706	5239642	10.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BRH	728670	5237943	22	1	1	1	Green house mode	2	0:00	0:00	0:00
BRI	734714	5240051	41.7	1	1	1	Green house mode	2	15:51	0:23	3:45
BRJ	729632	5236325	2.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BRK	731613	5239618	37.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BRL	729805	5238112	50.1	1	1	1	Green house mode	2	8:23	0:18	2:03
BRM	734693	5240048	41.6	1	1	1	Green house mode	2	16:57	0:23	4:02
BRN	736563	5239763	13.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BRO	735829	5239879	22.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BRP	736481	5239708	9.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BRQ	729843	5236476	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BRR	729818	5237228	1.9	1	1	1	Green house mode	2	0:00	0:00	0:00



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			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
BRS	737212	5239858	10	1	1	1	Green house mode	2	0:00	0:00	0:00
BRT	735344	5239639	3.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BRU	734539	5239960	37	1	1	1	Green house mode	2	21:15	0:26	5:12
BRV	731454	5239411	20.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BRW	734098	5239643	5.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BRX	730218	5236777	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BRY	730025	5238285	37.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BRZ	734487	5239941	37.1	1	1	1	Green house mode	2	15:39	0:24	3:50
BSA	732691	5245074	4.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BSB	734528	5239745	25.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BSC	729586	5238079	68.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BSD	734381	5239728	22.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BSE	730226	5236743	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BSF	729923	5237274	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BSG	729827	5237114	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BSH	730134	5236522	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BSI	730182	5238212	3.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BSJ	728391	5238110	78.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BSK	737225	5239864	10.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BSL	729895	5236884	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BSM	736573	5239826	12	1	1	1	Green house mode	2	0:00	0:00	0:00
BSN	734345	5240150	58.1	1	1	1	Green house mode	2	34:01	0:30	8:09
BSO	730756	5238774	26.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BSP	728673	5237683	9	1	1	1	Green house mode	2	0:00	0:00	0:00
BSQ	729817	5236950	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BSR	730391	5238604	57.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BSS	735102	5239609	2.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BST	730197	5236759	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BSU	734492	5240049	41.7	1	1	1	Green house mode	2	27:48	0:26	6:44
BSV	729818	5236180	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BSW	734144	5239858	34.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BSX	728873	5238130	40.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BSY	728108	5238153	91.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BSZ	729413	5236180	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BTA	729967	5236820	1	1	1	1	Green house mode	2	0:00	0:00	0:00
BTB	729694	5237714	2.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BTC	729927	5236998	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BTD	730089	5236705	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BTE	730684	5238757	39.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BTF	729701	5237952	56.3	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
BTG	730008	5236609	2.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BTH	733634	5239734	29.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BTI	734311	5239718	16.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BTJ	731386	5239339	39.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BTK	730138	5236544	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BTL	728722	5237639	11	1	1	1	Green house mode	2	0:00	0:00	0:00
BTM	728666	5238091	29.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BTN	733791	5239697	24.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BTO	735410	5240132	47.6	1	1	1	Green house mode	2	27:06	0:26	6:29
BTP	734527	5240001	39.5	1	1	1	Green house mode	2	24:57	0:26	6:04
BTQ	729853	5237604	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BTR	733632	5245351	8.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BTS	734770	5239851	31.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BTT	729952	5237118	1	1	1	1	Green house mode	2	0:00	0:00	0:00
BTU	728718	5237730	14.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BTV	735467	5240194	51.7	1	1	1	Green house mode	2	16:37	0:25	3:49
BTW	728903	5237913	29.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BTX	729663	5237935	63.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BTY	735731	5239703	6.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BTZ	733077	5245037	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BUA	730895	5238686	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BUB	734425	5239882	32.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BUC	736695	5239788	11.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BUD	729724	5238193	52.2	1	1	1	Green house mode	2	13:15	0:22	3:16
BUE	733143	5245092	2	1	1	1	Green house mode	2	0:00	0:00	0:00
BUF	729640	5236233	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BUG	729515	5236420	2.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BUH	732916	5245010	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BUI	730280	5236706	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BUJ	734589	5240224	52	1	1	1	Green house mode	2	14:32	0:25	3:09
BUK	729934	5237102	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BUL	729761	5237912	39	1	1	1	Green house mode	2	0:00	0:00	0:00
BUM	729665	5238127	59.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BUN	728146	5237838	67.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BUO	728238	5237868	62.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BUP	729769	5236888	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BUQ	731155	5238870	19	1	1	1	Green house mode	2	0:00	0:00	0:00
BUR	729041	5238136	63.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BUS	736644	5239931	15.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BUT	733312	5239672	29.1	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
BUU	729653	5236143	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BUV	736314	5239757	5.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BUW	735726	5239396	6	1	1	1	Green house mode	2	0:00	0:00	0:00
BUX	733252	5239563	6.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BUY	734846	5239471	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BUZ	728094	5238152	90.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BVA	728761	5238084	31.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BVB	737120	5239857	8.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BVC	734235	5239736	15.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BVD	728896	5238553	44	1	1	1	Green house mode	2	0:00	0:00	0:00
BVE	734624	5240073	41.5	1	1	1	Green house mode	2	19:25	0:25	4:39
BVF	730035	5238353	41.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BVG	735435	5240292	54.1	1	1	1	Green house mode	2	14:47	0:25	3:11
BVH	734347	5240109	52.9	1	1	1	Green house mode	2	31:15	0:29	7:33
BVI	729794	5238021	49.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BVJ	730041	5236870	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BVK	732728	5245096	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BVL	734389	5240002	40.9	1	1	1	Green house mode	2	17:48	0:26	4:21
BVM	729846	5238117	48.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BVN	734530	5240183	49.6	1	1	1	Green house mode	2	17:42	0:26	4:02
BVO	734491	5239897	32.4	1	1	1	Green house mode	2	8:08	0:18	1:57
BVP	729037	5238151	61.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BVQ	733447	5245106	14.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BVR	728816	5238118	36.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BVS	730004	5238226	35.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BVT	728915	5237964	32	1	1	1	Green house mode	2	0:00	0:00	0:00
BVU	729861	5236971	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BVV	735422	5239656	4.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BVW	729964	5237047	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BVX	734302	5240041	48	1	1	1	Green house mode	2	18:24	0:28	4:30
BVY	728851	5238113	37.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BVZ	734556	5239998	39.7	1	1	1	Green house mode	2	25:20	0:25	6:09
BWA	734196	5239602	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BWB	728388	5237805	39.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BWC	728979	5238067	49.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BWD	729914	5237078	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BWE	734123	5239650	6	1	1	1	Green house mode	2	0:00	0:00	0:00
BWF	734568	5240078	42.8	1	1	1	Green house mode	2	25:08	0:25	6:02
BWG	728435	5237911	44.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BWH	731492	5239453	25	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
BWI	728401	5238001	61.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BWJ	734833	5239702	15.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BWK	729619	5236168	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BWL	729441	5236095	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BWM	731907	5239669	21.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BWN	733780	5239706	25.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BWO	729709	5236232	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BWP	728127	5238116	90.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BWQ	737616	5239946	2.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BWR	730895	5238835	20	1	1	1	Green house mode	2	0:00	0:00	0:00
BWS	729645	5237670	2.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BWT	729619	5237621	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BWU	730971	5238900	22.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BWV	728793	5238218	36.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BWW	731709	5239666	37.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BWX	729689	5236184	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BWY	730046	5236528	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BWZ	729872	5236684	2	1	1	1	Green house mode	2	0:00	0:00	0:00
BXA	730986	5238854	18.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BXB	729589	5236172	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BXC	728894	5238150	43	1	1	1	Green house mode	2	0:00	0:00	0:00
BXD	728764	5237798	18.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BXE	734323	5239919	34.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BXF	733743	5239706	24.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BXG	734784	5239832	31.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BXH	728508	5238027	45.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BXI	729855	5236171	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BXJ	729802	5237942	36.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BXK	728838	5238093	35.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BXL	729693	5237667	1	1	1	1	Green house mode	2	0:00	0:00	0:00
BXM	731394	5239297	40.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BXN	732835	5245051	3.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BXO	730825	5238799	20.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BXP	738073	5245438	144.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BXQ	734501	5240068	42.6	1	1	1	Green house mode	2	28:37	0:26	6:54
BXR	732690	5239676	35.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BXS	736544	5239909	11.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BXT	730032	5238254	33.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BXU	728311	5237846	54.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BXV	729876	5237603	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
BXW	734486	5239652	12	1	1	1	Green house mode	2	0:00	0:00	0:00
BXX	732873	5244997	4.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BXY	730154	5238268	16.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BXZ	735526	5240077	47.8	1	1	1	Green house mode	2	22:56	0:24	5:32
BYA	728585	5237963	28.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BYB	731476	5239446	23.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BYC	729532	5236094	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BYD	736937	5239996	32.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BYE	728644	5237782	11.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BYF	734045	5239623	5.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BYG	729764	5237517	2.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BYH	733505	5245252	3.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BYI	730996	5238786	17.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BYJ	728849	5238132	38.5	1	1	1	Green house mode	2	0:00	0:00	0:00
BYK	736916	5242097	84.7	1	1	1	Green house mode	2	71:20	1:19	13:24
BYL	734275	5240096	58.3	1	1	1	Green house mode	2	27:26	0:31	6:40
BYM	728139	5238239	99.4	1	1	1	Green house mode	2	0:00	0:00	0:00
BYN	736894	5242192	85.1	1	1	1	Green house mode	2	88:29	1:34	16:36
BYO	734646	5240076	41.6	1	1	1	Green house mode	2	17:51	0:24	4:14
BYP	729611	5238150	60.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BYQ	730120	5238328	33	1	1	1	Green house mode	2	0:00	0:00	0:00
BYR	732636	5239675	40.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BYS	732806	5239538	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BYT	736610	5239810	11.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BYU	729836	5237206	2	1	1	1	Green house mode	2	0:00	0:00	0:00
BYV	730146	5236921	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BYW	729865	5238107	45.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BYX	737842	5240065	19.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BYY	736938	5242248	83.8	1	1	1	Green house mode	2	90:34	1:31	17:33
BYZ	736249	5239952	16.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BZA	734118	5239640	5.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BZB	736506	5239614	8.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BZC	729750	5237570	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BZD	730253	5238408	38.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BZE	729883	5236699	2.1	1	1	1	Green house mode	2	0:00	0:00	0:00
BZF	728737	5237885	18.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BZG	736941	5240008	33.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BZH	729739	5238116	54.1	1	1	1	Green house mode	2	4:09	0:13	0:59
BZI	730773	5238833	30.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BZJ	734586	5240054	41.2	1	1	1	Green house mode	2	25:51	0:25	6:13



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
BZK	728675	5238081	28.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BZL	729792	5237985	45.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BZM	729853	5236903	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
BZN	730834	5238807	20.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BZO	731352	5239468	51	1	1	1	Green house mode	2	0:00	0:00	0:00
BZP	728377	5237863	44.7	1	1	1	Green house mode	2	0:00	0:00	0:00
BZQ	734339	5239633	6.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BZR	733613	5239775	39.3	1	1	1	Green house mode	2	0:00	0:00	0:00
BZS	734709	5240086	42.7	1	1	1	Green house mode	2	14:38	0:23	3:23
BZT	733818	5239614	2.8	1	1	1	Green house mode	2	0:00	0:00	0:00
BZU	728608	5237968	27.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BZV	729629	5236355	1.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BZW	730442	5238632	51	1	1	1	Green house mode	2	0:00	0:00	0:00
BZX	730863	5238767	18.9	1	1	1	Green house mode	2	0:00	0:00	0:00
BZY	729956	5236224	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
BZZ	728725	5237825	15	1	1	1	Green house mode	2	0:00	0:00	0:00
CAA	733842	5239709	26.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CAB	729618	5237956	76.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CAC	729637	5237621	1	1	1	1	Green house mode	2	0:00	0:00	0:00
CAD	729714	5237067	4.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CAE	730058	5236688	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CAF	729602	5238028	71.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CAG	729672	5237648	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CAH	734440	5239712	16.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CAI	729557	5236385	2.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CAJ	729913	5237228	0.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CAK	732840	5245010	7	1	1	1	Green house mode	2	0:00	0:00	0:00
CAL	730245	5236789	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CAM	734527	5239990	39.3	1	1	1	Green house mode	2	23:58	0:26	5:51
CAN	735486	5239989	40.9	1	1	1	Green house mode	2	21:21	0:24	5:12
CAO	733894	5239711	26	1	1	1	Green house mode	2	0:00	0:00	0:00
CAP	730091	5236731	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CAQ	730350	5236929	2.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CAR	728769	5238351	44.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CAS	728093	5237910	75	1	1	1	Green house mode	2	0:00	0:00	0:00
CAT	733343	5245019	13	1	1	1	Green house mode	2	0:00	0:00	0:00
CAU	729382	5236302	3.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CAV	729599	5236352	2.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CAW	729762	5236675	2.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CAX	735542	5239992	37.2	1	1	1	Green house mode	2	22:37	0:24	5:29



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
CAY	728519	5237814	22	1	1	1	Green house mode	2	0:00	0:00	0:00
CAZ	736646	5239676	11	1	1	1	Green house mode	2	0:00	0:00	0:00
CBA	730242	5236830	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CBB	728166	5238199	100.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CBC	734628	5240122	45.7	1	1	1	Green house mode	2	16:18	0:24	3:46
CBD	728662	5237962	23.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CBE	733027	5239563	6.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CBF	734348	5240039	44	1	1	1	Green house mode	2	21:02	0:28	5:08
CBG	735496	5240122	46.8	1	1	1	Green house mode	2	19:38	0:24	4:42
CBH	728048	5238160	87.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CBI	728758	5237908	21.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CBJ	728388	5238061	70.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CBK	733143	5245102	2.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CBL	728960	5238382	41.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CBM	731099	5238926	20	1	1	1	Green house mode	2	0:00	0:00	0:00
CBN	733248	5239670	28.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CBO	736511	5239739	12.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CBP	733403	5245059	11.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CBQ	728795	5237752	19.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CBR	736643	5239918	13.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CBS	733258	5245047	3.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CBT	735579	5239690	5.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CBU	735730	5239355	4.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CBV	735467	5240480	65	1	1	1	Green house mode	2	43:40	0:34	10:00
CBW	734512	5240111	44.5	1	1	1	Green house mode	2	26:33	0:26	6:21
CBX	732745	5245059	6.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CBY	734745	5239874	36	1	1	1	Green house mode	2	0:00	0:00	0:00
CBZ	729374	5236058	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CCA	734653	5239767	24.6	1	1	1	Green house mode	2	2:00	0:10	0:28
CCB	734682	5239785	25.9	1	1	1	Green house mode	2	7:13	0:17	1:44
CCC	734548	5239981	38.7	1	1	1	Green house mode	2	23:40	0:26	5:46
CCD	733782	5239554	0.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CCE	728608	5237951	26.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CCF	730058	5236940	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CCG	735490	5239734	9.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CCH	730013	5237039	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CCI	733448	5239549	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CCJ	728484	5237939	40.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CCK	736562	5239801	13	1	1	1	Green house mode	2	0:00	0:00	0:00
CCL	733856	5239728	29.2	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
CCM	733222	5239551	3.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CCN	728064	5238266	89	1	1	1	Green house mode	2	0:00	0:00	0:00
CCO	729530	5238053	78.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CCP	728808	5238324	38.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CCQ	728626	5237785	11.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CCR	729612	5238012	71.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CCS	728563	5238110	41.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CCT	733984	5239660	6.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CCU	729803	5237035	0.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CCV	734293	5240137	59.9	1	1	1	Green house mode	2	33:31	0:30	8:05
CCW	729979	5236192	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CCX	734575	5240159	46.2	1	1	1	Green house mode	2	16:53	0:25	3:52
CCY	729648	5236312	2.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CCZ	730324	5238597	67.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CDA	729028	5235914	3.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CDB	735542	5239825	24.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CDC	729775	5236228	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CDD	730099	5236917	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CDE	729916	5238275	47.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CDF	730027	5236922	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CDG	729800	5236233	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CDH	732552	5239387	2.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CDI	729795	5236730	2.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CDJ	729632	5238093	64.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CDK	729769	5237851	22.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CDL	734843	5239661	12.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CDM	734974	5239791	23.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CDN	729938	5237096	0.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CDO	730103	5236593	1	1	1	1	Green house mode	2	0:00	0:00	0:00
CDP	728786	5238131	33.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CDQ	728143	5237959	74.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CDR	734516	5239983	39	1	1	1	Green house mode	2	22:47	0:26	5:34
CDS	730095	5236555	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CDT	728303	5237943	62.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CDU	730066	5236907	1	1	1	1	Green house mode	2	0:00	0:00	0:00
CDV	729792	5237901	30.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CDW	728807	5237888	21.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CDX	729964	5236879	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CDY	735726	5239644	10	1	1	1	Green house mode	2	0:00	0:00	0:00
CDZ	728789	5238096	32.8	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
CEA	733251	5239618	16.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CEB	729737	5238083	54.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CEC	731155	5238884	19.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CED	733782	5239616	3.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CEE	735363	5240120	46.8	1	1	1	Green house mode	2	28:16	0:26	6:48
CEF	728684	5238388	61.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CEG	734782	5239780	22.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CEH	735489	5239945	35.2	1	1	1	Green house mode	2	16:21	0:23	4:00
CEI	736234	5239994	24.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CEJ	730844	5238813	19.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CEK	734382	5239589	0.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CEL	734529	5240052	41.7	1	1	1	Green house mode	2	27:46	0:26	6:42
CEM	729806	5237700	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CEN	729515	5235962	2	1	1	1	Green house mode	2	0:00	0:00	0:00
CEO	729855	5238116	47.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CEP	734461	5240002	39.9	1	1	1	Green house mode	2	22:26	0:27	5:28
CEQ	729630	5237608	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CER	729776	5237976	49.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CES	729811	5236849	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CET	729051	5238226	56.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CEU	734689	5240083	41.8	1	1	1	Green house mode	2	15:32	0:23	3:37
CEV	729795	5236626	2.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CEW	733041	5239545	5.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CEX	730049	5236985	1	1	1	1	Green house mode	2	0:00	0:00	0:00
CEY	728745	5238060	30.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CEZ	729745	5237897	38.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CFA	728328	5237986	64.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CFB	728936	5238134	46.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CFC	729771	5236238	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CFD	729635	5238028	64.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CFE	729607	5238099	65.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CFF	729806	5237043	0.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CFG	735594	5239701	6	1	1	1	Green house mode	2	0:00	0:00	0:00
CFH	730208	5236801	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CFI	734348	5240086	50.5	1	1	1	Green house mode	2	28:37	0:29	6:56
CFJ	728999	5238194	52	1	1	1	Green house mode	2	0:00	0:00	0:00
CFK	736466	5239823	9.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CFL	729125	5238207	72.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CFM	734947	5239815	29.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CFN	733283	5244946	15.8	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
CFO	729075	5238115	70.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CFP	729673	5236781	2.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CFQ	738545	5240151	4.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CFR	727950	5237960	98.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CFS	732981	5244976	5.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CFT	735735	5239721	6.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CFU	734672	5239709	19.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CFV	735707	5239550	11.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CFW	728875	5237891	26	1	1	1	Green house mode	2	0:00	0:00	0:00
CFX	735727	5239655	9.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CFY	733239	5245057	1.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CFZ	729750	5236198	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CGA	729115	5235968	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CGB	728120	5237884	70.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CGC	733253	5239604	15.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CGD	731104	5238939	20.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CGE	729653	5236404	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CGF	733003	5239581	7.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CGG	732667	5239608	27.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CGH	734022	5239614	5.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CGI	730926	5238856	19.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CGJ	730239	5236883	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CGK	729881	5238244	54.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CGL	730721	5238834	33.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CGM	729936	5236869	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CGN	731178	5239235	65.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CGO	729768	5236787	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CGP	728659	5238310	47.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CGQ	729699	5238113	59.4	1	1	1	Green house mode	2	1:03	0:07	0:14
CGR	734743	5240039	41.8	1	1	1	Green house mode	2	15:08	0:23	3:34
CGS	730648	5238661	27.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CGT	729935	5237033	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CGU	736680	5239637	10.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CGV	732842	5245045	3.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CGW	728831	5238459	42.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CGX	733174	5245049	2.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CGY	730511	5238665	45.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CGZ	736544	5239988	24.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CHA	734805	5239493	2.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CHB	736723	5239642	11.5	1	1	1	Green house mode	2	0:00	0:00	0:00



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			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
CHC	728801	5238406	44.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CHD	734572	5239741	24.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CHE	733389	5239679	26.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CHF	734264	5240092	58.2	1	1	1	Green house mode	2	26:16	0:31	6:24
CHG	729650	5236325	2	1	1	1	Green house mode	2	0:00	0:00	0:00
CHH	735907	5239893	18.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CHI	735619	5239552	9.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CHJ	729942	5238176	48.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CHK	728753	5238319	41.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CHL	734059	5239645	5.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CHM	729735	5236609	2.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CHN	735553	5240035	43.1	1	1	1	Green house mode	2	23:54	0:24	5:47
CHO	728146	5238231	100.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CHP	728145	5237877	69.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CHQ	736421	5239640	8.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CHR	729905	5236890	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CHS	733134	5239491	-0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CHT	728548	5237788	17.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CHU	728874	5238151	41.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CHV	733913	5239639	4.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CHW	728928	5238197	46.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CHX	728952	5238043	41.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CHY	734217	5239728	14.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CHZ	730250	5236813	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CIA	729900	5237249	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CIB	731501	5239441	25.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CIC	730256	5236439	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CID	731822	5239649	21.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CIE	730246	5236858	1	1	1	1	Green house mode	2	0:00	0:00	0:00
CIF	734259	5240132	60.5	1	1	1	Green house mode	2	32:03	0:31	7:45
CIG	729657	5236739	2.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CIH	730007	5236968	1	1	1	1	Green house mode	2	0:00	0:00	0:00
CII	734961	5239834	30.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CIJ	728853	5238193	41.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CIK	733940	5239650	4.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CIL	736507	5239928	14.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CIM	729745	5236630	2.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CIN	735503	5240089	46.6	1	1	1	Green house mode	2	23:43	0:24	5:42
CIO	729928	5236584	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CIP	729728	5237514	3.1	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
CIQ	730295	5236742	1	1	1	1	Green house mode	2	0:00	0:00	0:00
CIR	733451	5245185	-0.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CIS	733728	5239782	36.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CIT	736869	5239996	30	1	1	1	Green house mode	2	0:00	0:00	0:00
CIU	734431	5239903	33.9	1	1	1	Green house mode	2	3:26	0:13	0:48
CIV	729764	5236690	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CIW	728672	5238395	63	1	1	1	Green house mode	2	0:00	0:00	0:00
CIX	728667	5237846	15.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CIY	737071	5239844	8.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CIZ	734203	5239913	37.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CJA	728704	5238419	62.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CJB	729299	5236029	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CJC	729814	5236232	2.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CJD	736568	5239739	13.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CJE	737117	5239937	9.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CJF	732899	5244990	3.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CJG	728567	5237954	29.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CJH	729978	5236954	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CJI	728624	5238309	48.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CJJ	734970	5239707	15.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CJK	729879	5236862	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CJL	728814	5238195	37.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CJM	730774	5238763	22.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CJN	730297	5236687	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CJO	730155	5236671	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CJP	734522	5240035	41	1	1	1	Green house mode	2	27:12	0:26	6:35
CJQ	734604	5240104	44.5	1	1	1	Green house mode	2	18:13	0:25	4:17
CJR	728648	5238163	32.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CJS	736642	5239702	12.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CJT	730056	5238239	29.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CJU	728162	5238254	100.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CJV	731422	5239354	33.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CJW	733790	5245436	5.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CJX	735265	5239638	4.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CJY	729767	5238173	52.9	1	1	1	Green house mode	2	13:45	0:22	3:24
CJZ	730100	5236719	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CKA	729790	5236899	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CKB	729760	5237726	1.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CKC	728345	5237988	65.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CKD	728919	5238151	45.4	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
CKE	734905	5239804	27.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CKF	729955	5236941	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CKG	734728	5239773	22	1	1	1	Green house mode	2	0:00	0:00	0:00
CKH	728726	5238007	26.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CKI	728400	5238007	62.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CKJ	735937	5239902	18.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CKK	729856	5237556	1.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CKL	738439	5239428	6.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CKM	729762	5236604	2	1	1	1	Green house mode	2	0:00	0:00	0:00
CKN	728575	5238050	35	1	1	1	Green house mode	2	0:00	0:00	0:00
CKO	730189	5236794	1	1	1	1	Green house mode	2	0:00	0:00	0:00
CKP	735541	5239712	6.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CKQ	731659	5239646	37.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CKR	733285	5244937	16	1	1	1	Green house mode	2	0:00	0:00	0:00
CKS	729762	5238095	50.8	1	1	1	Green house mode	2	2:44	0:11	0:38
CKT	730777	5238750	22.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CKU	734387	5240062	45.8	1	1	1	Green house mode	2	26:52	0:29	6:32
CKV	730305	5238399	31.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CKW	728172	5237884	67.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CKX	733207	5239594	15.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CKY	729906	5236971	1	1	1	1	Green house mode	2	0:00	0:00	0:00
CKZ	729684	5236889	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CLA	736781	5239986	23.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CLB	734473	5240079	42.9	1	1	1	Green house mode	2	29:21	0:27	7:04
CLC	732621	5239537	2.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CLD	730075	5236832	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CLE	728126	5238237	98.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CLF	729893	5236606	2.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CLG	734130	5239678	9.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CLH	730043	5238303	39.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CLI	729699	5236420	2.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CLJ	729876	5236671	2.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CLK	729777	5236831	1.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CLL	731439	5239352	32.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CLM	731427	5239513	43.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CLN	737980	5240086	20.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CLO	728804	5238240	37.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CLP	733015	5245012	5.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CLQ	729716	5237999	58	1	1	1	Green house mode	2	0:00	0:00	0:00
CLR	729911	5237276	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
CLS	728608	5238025	30.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CLT	736580	5239762	13.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CLU	733727	5239701	23.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CLV	730080	5236861	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CLW	728669	5237974	23.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CLX	736184	5239858	7.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CLY	728653	5238007	26.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CLZ	728799	5238183	35.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CMA	729859	5237309	1.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CMB	729928	5237884	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CMC	728489	5238021	46.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CMD	729864	5237288	1.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CME	730324	5238407	30.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CMF	729921	5236990	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CMG	729767	5236525	2.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CMH	728748	5237857	17.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CMI	729795	5238049	49.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CMJ	729952	5236954	1	1	1	1	Green house mode	2	0:00	0:00	0:00
CMK	733256	5245090	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CML	736611	5239620	10	1	1	1	Green house mode	2	0:00	0:00	0:00
CMM	729743	5237718	1	1	1	1	Green house mode	2	0:00	0:00	0:00
CMN	734650	5239691	15.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CMO	736885	5240010	30.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CMP	736708	5239745	12.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CMQ	733345	5239696	33.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CMR	729874	5236854	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CMS	728134	5238203	97.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CMT	736461	5239799	10.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CMU	729879	5237596	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CMV	734517	5239623	8.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CMW	737194	5239928	10.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CMX	728319	5237987	64.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CMY	728709	5237896	17.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CMZ	731493	5239421	20.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CNA	733122	5244976	10.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CNB	729963	5238182	46.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CNC	734198	5239622	5.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CND	728636	5238389	64.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CNE	729967	5236962	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CNF	729629	5236393	2	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
CNG	729823	5237570	1.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CNH	730219	5238363	33.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CNI	729471	5236458	3.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CNJ	729731	5236222	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CNK	728949	5238145	47.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CNL	729914	5237903	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CNM	730228	5236866	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CNN	728492	5238033	47.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CNO	730042	5236596	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CNP	728805	5237774	18.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CNQ	733546	5245346	8.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CNR	736391	5239738	8.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CNS	728752	5238045	30.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CNT	728677	5237700	10.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CNU	729028	5238135	60.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CNV	734268	5239751	22.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CNW	734602	5240016	40	1	1	1	Green house mode	2	25:53	0:25	6:16
CNX	728827	5238074	34.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CNY	728392	5237945	55.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CNZ	729903	5237021	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
COA	728067	5238185	88.9	1	1	1	Green house mode	2	0:00	0:00	0:00
COB	729789	5236829	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
COC	733710	5239745	30.6	1	1	1	Green house mode	2	0:00	0:00	0:00
COD	731329	5239524	56.2	1	1	1	Green house mode	2	0:00	0:00	0:00
COE	734021	5239651	6.4	1	1	1	Green house mode	2	0:00	0:00	0:00
COF	728197	5237986	77	1	1	1	Green house mode	2	0:00	0:00	0:00
COG	730795	5238799	23.8	1	1	1	Green house mode	2	0:00	0:00	0:00
COH	731446	5239406	23.1	1	1	1	Green house mode	2	0:00	0:00	0:00
COI	737154	5239946	12.9	1	1	1	Green house mode	2	0:00	0:00	0:00
COJ	735520	5240190	53.3	1	1	1	Green house mode	2	14:46	0:24	3:21
COK	728842	5238185	40.6	1	1	1	Green house mode	2	0:00	0:00	0:00
COL	730188	5236464	0.9	1	1	1	Green house mode	2	0:00	0:00	0:00
COM	728732	5238179	31	1	1	1	Green house mode	2	0:00	0:00	0:00
CON	736431	5239822	8.1	1	1	1	Green house mode	2	0:00	0:00	0:00
COO	728727	5237832	15.5	1	1	1	Green house mode	2	0:00	0:00	0:00
COP	730626	5238637	28.9	1	1	1	Green house mode	2	0:00	0:00	0:00
COQ	728692	5238450	65.6	1	1	1	Green house mode	2	0:00	0:00	0:00
COR	728588	5237930	25.2	1	1	1	Green house mode	2	0:00	0:00	0:00
COS	735467	5240231	52.5	1	1	1	Green house mode	2	15:21	0:25	3:26
COT	728122	5238206	97.1	1	1	1	Green house mode	2	0:00	0:00	0:00



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No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
COU	734412	5239914	34.6	1	1	1	Green house mode	2	3:20	0:12	0:46
COV	736577	5239805	12.9	1	1	1	Green house mode	2	0:00	0:00	0:00
COW	729871	5236817	1.2	1	1	1	Green house mode	2	0:00	0:00	0:00
COX	735652	5239482	9.4	1	1	1	Green house mode	2	0:00	0:00	0:00
COY	735424	5240307	55.1	1	1	1	Green house mode	2	14:43	0:25	3:08
COZ	733237	5239565	6	1	1	1	Green house mode	2	0:00	0:00	0:00
CPA	733835	5239632	4.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CPB	729836	5236175	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CPC	729922	5237074	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CPD	731732	5239619	23.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CPE	736770	5239979	21.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CPF	730985	5238877	19.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CPG	730051	5236601	1.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CPH	729920	5236891	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CPI	735604	5239671	7.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CPJ	733285	5239722	38.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CPK	729660	5236714	2.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CPL	732686	5239594	25.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CPM	733219	5244996	5.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CPN	728985	5238175	52.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CPO	728567	5237915	25	1	1	1	Green house mode	2	0:00	0:00	0:00
CPP	728849	5238172	40.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CPQ	728977	5238089	50.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CPR	734960	5239688	12.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CPS	728728	5237985	27.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CPT	729967	5236904	0.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CPU	730147	5236947	0.8	1	1	1	Green house mode	2	0:00	0:00	0:00
CPV	734522	5240129	45	1	1	1	Green house mode	2	21:56	0:26	5:13
CPW	729824	5238141	51.1	1	1	1	Green house mode	2	13:20	0:22	3:18
CPX	733833	5239602	2.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CPY	728396	5238121	79	1	1	1	Green house mode	2	0:00	0:00	0:00
CPZ	729776	5237182	2.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CQA	735379	5239749	14.3	1	1	1	Green house mode	2	0:00	0:00	0:00
CQB	733380	5245062	10.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CQC	728855	5238006	29.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CQD	734412	5239774	26	1	1	1	Green house mode	2	0:00	0:00	0:00
CQE	728875	5238365	40.1	1	1	1	Green house mode	2	0:00	0:00	0:00
CQF	733999	5239737	25.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CQG	730100	5238373	40.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CQH	731191	5239163	73	1	1	1	Green house mode	2	0:00	0:00	0:00



SFA-240424-1183-0001-KS

No.	Easting*	Northing*	Z	Window Parameters (m)			Direction mode	Eye Ht (m)	Worst Case		Real Case
			[m]	Width	Height	Z (a.g.l.)			[h/year]	[h/day]	[h/year]
CQI	734756	5240055	42.8	1	1	1	Green house mode	2	14:06	0:23	3:17
CQJ	730848	5238741	20.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CQK	729632	5236437	2.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CQL	736334	5239995	18.4	1	1	1	Green house mode	2	0:00	0:00	0:00
CQM	737401	5239991	14.5	1	1	1	Green house mode	2	0:00	0:00	0:00
CQN	729678	5236174	1.6	1	1	1	Green house mode	2	0:00	0:00	0:00
CQO	729934	5237154	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CQP	731159	5239293	62.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CQQ	734548	5240054	41.1	1	1	1	Green house mode	2	27:31	0:26	6:38
CQR	731021	5238802	17.9	1	1	1	Green house mode	2	0:00	0:00	0:00
CQS	728787	5237939	24.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CQT	729987	5236888	0.7	1	1	1	Green house mode	2	0:00	0:00	0:00
CQU	736810	5239883	12.2	1	1	1	Green house mode	2	0:00	0:00	0:00
CQV	733804	5239717	26.6	1	1	1	Green house mode	2	0:00	0:00	0:00

* UTM, NAD83 (CSRS), Zone 21



SFA-240424-1183-0001-KS

10 Appendix C, Receptor Calendar

Project: 1183 Argentina

AL-PRO GmbH & Co.KG
Dorfstraße 100
DE-26532 Großheide
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Kirk / kirk.schmidt@al-pro.de
18.04.2024 19:38/4.0.540

SHADOW - Calendar

Calculation: Real Case with Wind data April 9 Receptors Shadow receptor: DY - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (3136)
Assumptions for shadow calculations Sunshine probability S (Average daily sunshine hours) [S,JOHNS]

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,39	3,16	3,33	3,84	5,23	6,23	7,65	6,13	4,66	3,46	2,47	1,97

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
201	344	265	520	556	672	1.674	1.813	1.107	632	507	468	8.759

	January	February	March	April	May	June							
1	07:23	07:03	06:18	06:17	18:14 (30)	05:21	17:33 (32)	04:44	17:43 (32)				
2	15:56	16:37	17:20	19:05	26	18:40 (29)	19:46	74	18:47 (32)	20:24	60	18:43 (32)	
3	07:23	07:02	06:16	06:15	18:12 (30)	05:19	17:34 (32)	04:44	17:44 (32)				
4	15:58	16:38	17:22	19:06	30	18:42 (29)	19:48	74	18:48 (32)	20:25	59	18:43 (32)	
5	07:23	07:00	06:14	06:13	18:10 (30)	05:18	17:33 (32)	04:43	17:44 (32)				
6	15:58	16:40	17:23	19:07	33	18:43 (29)	19:49	75	18:48 (32)	20:26	58	18:42 (32)	
7	07:23	06:59	06:12	06:11	18:10 (30)	05:16	17:33 (32)	04:42	17:45 (32)				
8	15:59	16:42	17:25	19:09	35	18:45 (29)	19:50	75	18:48 (32)	20:26	58	18:43 (32)	
9	07:23	06:58	06:10	06:09	18:09 (30)	05:15	17:33 (32)	04:42	17:45 (32)				
10	16:00	16:43	17:26	19:10	38	18:47 (29)	19:52	75	18:48 (32)	20:27	57	18:42 (32)	
11	07:23	06:56	06:08	06:07	18:08 (30)	05:13	17:33 (32)	04:41	17:46 (32)				
12	16:01	16:45	17:27	19:12	38	18:46 (29)	19:53	75	18:48 (32)	20:28	56	18:42 (32)	
13	07:22	06:55	06:06	06:05	18:07 (30)	05:12	17:32 (32)	04:41	17:46 (32)				
14	16:02	16:46	17:29	19:13	39	18:46 (29)	19:54	75	18:47 (32)	20:29	55	18:41 (32)	
15	07:22	06:53	07:04	06:03	18:06 (30)	05:10	17:33 (32)	04:41	17:47 (32)				
16	16:03	16:48	18:30	19:14	40	18:46 (29)	19:56	75	18:48 (32)	20:30	55	18:42 (32)	
17	07:22	06:52	07:02	06:01	18:06 (30)	05:09	17:32 (32)	04:40	17:48 (32)				
18	16:04	16:49	18:32	19:16	39	18:45 (29)	19:57	75	18:47 (32)	20:30	54	18:42 (32)	
19	07:21	06:50	07:01	05:59	18:05 (30)	05:07	17:33 (32)	04:40	17:48 (32)				
20	16:06	16:51	18:33	19:17	40	18:45 (30)	19:58	74	18:47 (32)	20:31	54	18:42 (32)	
21	07:21	06:49	06:59	05:57	18:02 (32)	05:06	17:33 (32)	04:40	17:48 (32)				
22	16:07	16:53	18:35	19:18	42	18:44 (30)	20:00	75	18:48 (32)	20:32	53	18:41 (32)	
23	07:21	06:47	06:57	05:55	17:58 (32)	05:05	17:34 (32)	04:39	17:49 (32)				
24	16:08	16:54	18:36	19:20	46	18:44 (30)	20:01	74	18:48 (32)	20:32	52	18:41 (32)	
25	07:20	06:46	06:55	05:53	17:55 (32)	05:03	17:33 (32)	04:39	17:49 (32)				
26	16:09	16:56	18:38	19:21	48	18:43 (30)	20:02	74	18:47 (32)	20:33	52	18:41 (32)	
27	07:20	06:44	06:53	05:51	17:52 (32)	05:02	17:34 (32)	04:39	17:50 (32)				
28	16:11	16:57	18:39	19:23	50	18:42 (30)	20:04	73	18:47 (32)	20:33	51	18:41 (32)	
29	07:19	06:42	06:51	05:49	17:50 (32)	05:01	17:34 (32)	04:39	17:50 (32)				
30	16:12	16:59	18:41	19:24	52	18:42 (30)	20:05	73	18:47 (32)	20:34	51	18:41 (32)	
31	07:18	06:41	06:49	05:47	17:48 (32)	04:59	17:34 (32)	04:39	17:51 (32)				
32	16:13	17:00	18:42	19:25	54	18:42 (30)	20:06	73	18:47 (32)	20:34	50	18:41 (32)	
33	07:18	06:39	06:47	05:46	17:46 (32)	04:58	17:35 (32)	04:39	17:51 (32)				
34	16:15	17:02	18:43	19:27	54	18:40 (30)	20:07	72	18:47 (32)	20:35	50	18:41 (32)	
35	07:17	06:37	06:45	05:44	17:45 (32)	04:57	17:35 (32)	04:39	17:51 (32)				
36	16:16	17:03	18:45	19:28	56	18:41 (32)	20:08	72	18:47 (32)	20:35	50	18:41 (32)	
37	07:16	06:36	06:43	05:42	17:43 (32)	04:56	17:36 (32)	04:39	17:52 (32)				
38	16:18	17:05	18:46	19:30	58	18:41 (32)	20:10	70	18:46 (32)	20:35	49	18:41 (32)	
39	07:15	06:34	06:41	05:40	17:41 (32)	04:55	17:36 (32)	04:39	17:52 (32)				
40	16:19	17:06	18:48	19:31	61	18:42 (32)	20:11	70	18:46 (32)	20:36	49	18:41 (32)	
41	07:15	06:32	06:39	05:38	17:41 (32)	04:54	17:37 (32)	04:39	17:53 (32)				
42	16:20	17:08	18:49	19:32	63	18:44 (32)	20:12	69	18:46 (32)	20:36	49	18:42 (32)	
43	07:14	06:30	06:37	05:36	17:40 (32)	04:53	17:37 (32)	04:40	17:53 (32)				
44	16:22	17:10	18:50	19:34	64	18:44 (32)	20:13	69	18:46 (32)	20:36	49	18:42 (32)	
45	07:13	06:29	06:35	05:35	17:38 (32)	04:52	17:38 (32)	04:40	17:53 (32)				
46	16:23	17:11	18:52	19:35	66	18:44 (32)	20:14	67	18:45 (32)	20:36	49	18:42 (32)	
47	07:12	06:27	06:33	05:33	17:37 (32)	04:51	17:38 (32)	04:40	17:52 (32)				
48	16:25	17:13	18:53	19:37	68	18:45 (32)	20:16	67	18:45 (32)	20:36	50	18:42 (32)	
49	07:11	06:25	06:31	05:31	17:37 (32)	04:50	17:39 (32)	04:40	17:53 (32)				
50	16:26	17:14	18:55	19:38	69	18:46 (32)	20:17	66	18:45 (32)	20:36	50	18:43 (32)	
51	07:10	06:23	06:29	05:29	17:36 (32)	04:49	17:39 (32)	04:41	17:53 (32)				
52	16:28	17:16	18:56	19:39	70	18:46 (32)	20:18	65	18:44 (32)	20:36	50	18:43 (32)	
53	07:09	06:21	06:27	05:28	17:35 (32)	04:48	17:39 (32)	04:41	17:52 (32)				
54	16:29	17:17	18:58	19:41	71	18:46 (32)	20:19	65	18:44 (32)	20:36	51	18:43 (32)	
55	07:08	06:20	06:25	05:26	17:35 (32)	04:47	17:41 (32)	04:42	17:53 (32)				
56	16:31	17:19	18:59	19:42	72	18:47 (32)	20:20	63	18:44 (32)	20:36	51	18:44 (32)	
57	07:06	06:23	06:23	05:24	17:34 (32)	04:46	17:41 (32)	04:42	17:53 (32)				
58	16:32	19:00	10	18:33 (30)	19:43	73	18:47 (32)	20:21	63	18:44 (32)	20:36	51	18:44 (32)
59	07:05	06:21	18:19 (30)	05:23	17:34 (32)	04:46	17:41 (32)	04:43	17:53 (32)				
60	16:34	19:02	19	18:38 (29)	19:45	74	18:48 (32)	20:22	62	18:43 (32)	20:36	52	18:45 (32)
61	07:04	06:19	18:16 (30)	04:45	20:23	61	18:43 (32)	476					
62	16:35	19:03	23	18:39 (29)	467								
Potential sun hours	278	287	369	408	467	2190	476	1575					
Total, worst case			52	1569		0,35	0,39						
Sun reduction			0,28	0,28		1,00	1,00						
Oper. time red.			1,00	1,00		0,55	0,55						
Wind dir. red.			0,56	0,55		0,19	0,22						
Total reduction			0,16	0,16		417	339						
Total, real			8	245									

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SFA-240424-1183-0001-KS

Project:
1183 Argentinia

Licensee user:
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Dorfstraße 100
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+49 (0) 4936 6986-0
Kirk / kirk.schmidt@al-pro.de
Calculator:
18.04.2024 19:38/4.0.540

SHADOW - Calendar

Calculation: Real Case with Wind data April 9 Receptors Shadow receptor: DY - Shadow Receptor: 1,0 x 1,0 Azimuth: 0,0° Slope: 90,0° (3138)
Sunshine probability S (Average daily sunshine hours) [SJOHNS]

Assumptions for shadow calculations

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2,39 3,16 3,33 3,84 5,23 6,23 7,65 6,13 4,66 3,46 2,47 1,97

Operational time
N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
201 344 265 520 556 672 1.674 1.813 1.107 632 507 468 8.759

	July	August	September	October	November	December
1 04:43	17:52 (32) 05:13	17:43 (32) 05:54	18:01 (32) 06:34	18:01 (32) 06:34	06:18	07:01
20:36	53 18:45 (32) 20:10	74 18:57 (32) 19:18	42 18:43 (30) 18:17	16:20	15:48	
2 04:44	17:53 (32) 05:15	17:44 (32) 05:55	18:03 (30) 06:35	18:03 (30) 06:35	06:20	07:02
20:36	53 18:46 (32) 20:09	74 18:58 (32) 19:16	40 18:43 (30) 18:15	16:19	15:48	
3 04:44	17:53 (32) 05:16	17:43 (32) 05:56	18:04 (30) 06:37	18:04 (30) 06:37	06:21	07:04
20:36	54 18:47 (32) 20:08	75 18:58 (32) 19:14	39 18:43 (29) 18:13	16:17	15:47	
4 04:45	17:52 (32) 05:17	17:43 (32) 05:58	18:04 (30) 06:38	18:04 (30) 06:38	06:23	07:05
20:35	55 18:47 (32) 20:06	75 18:58 (32) 19:12	39 18:43 (29) 18:11	16:16	15:47	
5 04:46	17:52 (32) 05:18	17:42 (32) 05:59	18:03 (30) 06:39	18:03 (30) 06:39	06:24	07:06
20:35	55 18:47 (32) 20:05	75 18:57 (32) 19:10	39 18:42 (29) 18:09	16:14	15:47	
6 04:46	17:52 (32) 05:20	17:43 (32) 06:00	18:03 (30) 06:41	18:03 (30) 06:41	06:26	07:07
20:34	56 18:48 (32) 20:03	75 18:58 (32) 19:08	38 18:41 (29) 18:07	16:13	15:46	
7 04:47	17:51 (32) 05:21	17:43 (32) 06:02	18:04 (30) 06:42	18:04 (30) 06:42	06:27	07:08
20:34	57 18:48 (32) 20:02	75 18:58 (32) 19:06	38 18:42 (29) 18:05	16:12	15:46	
8 04:48	17:51 (32) 05:22	17:42 (32) 06:03	18:04 (30) 06:43	18:04 (30) 06:43	06:29	07:09
20:34	58 18:49 (32) 20:00	75 18:57 (32) 19:04	36 18:40 (29) 18:03	16:10	15:46	
9 04:49	17:51 (32) 05:24	17:42 (32) 06:04	18:04 (30) 06:45	18:04 (30) 06:45	06:30	07:10
20:33	59 18:50 (32) 19:59	75 18:57 (32) 19:02	33 18:37 (29) 18:01	16:09	15:46	
10 04:50	17:51 (32) 05:25	17:42 (32) 06:06	18:05 (30) 06:46	18:05 (30) 06:46	06:32	07:11
20:32	59 18:50 (32) 19:57	74 18:56 (32) 19:00	30 18:35 (29) 17:59	16:08	15:46	
11 04:50	17:51 (32) 05:26	17:42 (32) 06:07	18:07 (30) 06:48	18:07 (30) 06:48	06:33	07:12
20:32	60 18:51 (32) 19:56	74 18:56 (32) 18:58	27 18:34 (29) 17:57	16:06	15:46	
12 04:51	17:50 (32) 05:27	17:42 (32) 06:08	18:08 (30) 06:49	18:08 (30) 06:49	06:35	07:13
20:31	61 18:51 (32) 19:54	74 18:56 (32) 18:56	23 18:31 (29) 17:56	16:05	15:46	
13 04:52	17:50 (32) 05:29	17:42 (32) 06:10	18:10 (30) 06:50	18:10 (30) 06:50	06:36	07:14
20:31	61 18:51 (32) 19:52	73 18:55 (32) 18:54	19 18:29 (29) 17:54	16:04	15:46	
14 04:53	17:49 (32) 05:30	17:42 (32) 06:11	18:13 (30) 06:52	18:13 (30) 06:52	06:38	07:15
20:30	63 18:52 (32) 19:51	72 18:54 (32) 18:52	12 18:25 (30) 17:52	16:03	15:46	
15 04:54	17:49 (32) 05:31	17:43 (32) 06:12	18:13 (30) 06:53	18:13 (30) 06:53	06:39	07:16
20:29	63 18:52 (32) 19:49	71 18:54 (32) 18:50	17:50	16:01	15:46	
16 04:55	17:49 (32) 05:33	17:43 (32) 06:14	18:13 (30) 06:55	18:13 (30) 06:55	06:41	07:16
20:28	64 18:53 (32) 19:47	71 18:54 (32) 18:48	17:48	16:00	15:46	
17 04:56	17:49 (32) 05:34	17:43 (32) 06:15	18:13 (30) 06:56	18:13 (30) 06:56	06:42	07:17
20:27	64 18:53 (32) 19:45	70 18:53 (32) 18:46	17:46	15:59	15:46	
18 04:57	17:48 (32) 05:35	17:43 (32) 06:16	18:13 (30) 06:58	18:13 (30) 06:58	06:43	07:18
20:26	66 18:54 (32) 19:44	68 18:51 (32) 18:44	17:44	15:58	15:47	
19 04:58	17:48 (32) 05:37	17:44 (32) 06:18	18:13 (30) 06:59	18:13 (30) 06:59	06:45	07:19
20:26	66 18:54 (32) 19:42	67 18:51 (32) 18:41	17:42	15:57	15:47	
20 04:59	17:47 (32) 05:38	17:44 (32) 06:19	18:13 (30) 07:00	18:13 (30) 07:00	06:46	07:19
20:25	68 18:55 (32) 19:40	66 18:50 (32) 18:39	17:41	15:56	15:47	
21 05:00	17:47 (32) 05:39	17:44 (32) 06:20	18:13 (30) 07:02	18:13 (30) 07:02	06:48	07:20
20:24	68 18:55 (32) 19:38	65 18:49 (32) 18:37	17:39	15:55	15:48	
22 05:02	17:47 (32) 05:41	17:45 (32) 06:22	18:13 (30) 07:03	18:13 (30) 07:03	06:49	07:20
20:23	68 18:55 (32) 19:37	62 18:47 (32) 18:35	17:37	15:54	15:48	
23 05:03	17:46 (32) 05:42	17:46 (32) 06:23	18:13 (30) 07:05	18:13 (30) 07:05	06:51	07:21
20:22	70 18:56 (32) 19:35	61 18:47 (32) 18:33	17:35	15:54	15:49	
24 05:04	17:46 (32) 05:43	17:47 (32) 06:24	18:13 (30) 07:06	18:13 (30) 07:06	06:52	07:21
20:20	70 18:56 (32) 19:33	58 18:45 (32) 18:31	17:34	15:53	15:49	
25 05:05	17:45 (32) 05:45	17:46 (32) 06:26	18:13 (30) 07:08	18:13 (30) 07:08	06:53	07:22
20:19	71 18:56 (32) 19:31	55 18:43 (32) 18:29	17:32	15:52	15:50	
26 05:06	17:46 (32) 05:46	17:46 (32) 06:27	18:13 (30) 07:09	18:13 (30) 07:09	06:55	07:22
20:18	71 18:57 (32) 19:29	54 18:42 (30) 18:27	17:30	15:51	15:51	
27 05:07	17:45 (32) 05:47	17:50 (32) 06:28	18:13 (30) 07:11	18:13 (30) 07:11	06:56	07:22
20:17	72 18:57 (32) 19:27	53 18:43 (30) 18:25	17:29	15:51	15:51	
28 05:08	17:45 (32) 05:49	17:52 (32) 06:30	18:13 (30) 07:12	18:13 (30) 07:12	06:57	07:22
20:16	72 18:57 (32) 19:25	51 18:43 (30) 18:23	17:27	15:50	15:52	
29 05:10	17:44 (32) 05:50	17:53 (32) 06:31	18:13 (30) 07:14	18:13 (30) 07:14	06:59	07:23
20:14	73 18:57 (32) 19:23	50 18:43 (30) 18:21	17:25	15:49	15:53	
30 05:11	17:44 (32) 05:51	17:56 (32) 06:32	18:13 (30) 07:15	18:13 (30) 07:15	07:00	07:23
20:13	73 18:57 (32) 19:21	48 18:44 (30) 18:19	17:24	15:49	15:54	
31 05:12	17:43 (32) 05:53	17:58 (32) 06:33	18:13 (30) 07:17	18:13 (30) 07:17	07:02	07:23
20:12	74 18:57 (32) 19:20	46 18:44 (30) 18:18	17:22	15:48	15:55	
Potential sun hours	481	441	378	338	281	265
Total, worst case	1977	2056	455			
Sun reduction	0,49	0,43	0,37			
Oper. time red.	1,00	1,00	1,00			
Wind dir. red.	0,55	0,55	0,56			
Total reduction	0,27	0,24	0,21			
Total, real	535	487	94			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Appendix L

Ice Throw Analysis



Ice Throw Analysis

Argentia Renewables Project

Pattern Energy

22 March 2024

➔ The Power of Commitment



Project name		Argentia Renewables Project					
Document title		Ice Throw Analysis Argentia Renewables Project					
Project number		12618385					
File name		12618385_Ice_Throw_Analysis_Final.docx					
Status Code	Revision	Authors	Reviewer		Approved for issue		
			Name	Signature	Name	Signature	Date
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Executive Summary

GHD Limited (GHD) was retained by Pattern Energy Group (Pattern Energy) to conduct an ice throw study as part of the environmental assessment (EA) registration for the wind power project being developed in Newfoundland and Labrador (NL), Canada, as part of the Argentia Renewables Project (Project). The Project is a green energy project using wind generated electricity by a 300 Mega Watt (MW) wind farm to power an electrolysis process that extracts hydrogen from water. The hydrogen will in turn be converted into ammonia for more efficient storage and transportation by marine vessels to international markets.

The Project will consist of 46 wind turbines located around the Port of Argentia, NL. The ice throw assessment was completed using the Vestas V172-7.2 wind turbine model, with a hub height of 166 meters (m), rotor diameter of 172 m, and rated power of 7.2 MW.

The risk of ice fall or throw is a notable hazard for wind turbine operations in cold climates. Although there have been limited ice throw events leading to public property damage globally, and no known recorded events to date of a person being struck by a falling or thrown ice fragment, the consequences associated can be significant – potentially leading to serious injury or fatality – and therefore should be mitigated as reasonably achievable. Each incident or accident caused by ice throw is an unnecessary event and will decrease the public acceptance of wind energy.

The ice throw study presented herein is based on the high-level, conservative approach recommended by the Canadian Renewable Energy Association (CanREA) in the 2020 *Best Practices for Wind Farm Icing and Cold Climate Health and Safety* document [1]. This methodology is widely accepted as being conservative, as ice throw risk outside of the determined zone is considered null.

Following the methodology described in section 3, with a rotor diameter of 172 m and hub height of 166 m, the **maximum ice throw distance for the planned wind turbines is 507 m.**

In Appendix A, this maximum ice throw distance is assessed at each of the 46 wind turbines using Google Earth to identify hazards within the ice throw zone. Risks identified and potential mitigation measures are detailed in section 5.2 of this report and summarized in section 6 with conclusions and recommendations.

This report is subject to, and must be read in conjunction with, the limitations set out in section 1 and the assumptions and qualifications contained throughout the Report.

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Appendices

Appendix A	Maximum Ice Throw Zones on Wind Turbine Locations
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1. Introduction

GHD Limited (GHD) was retained by Pattern Energy Group (Pattern Energy) to conduct an ice throw study as part of the environmental assessment (EA) registration for the wind power project being developed in Newfoundland and Labrador (NL), Canada, as part of the Argentia Renewables Project (Project). The Project is a green energy project using wind generated electricity by a 300-megawatt (MW) wind farm to power an electrolysis process that extracts hydrogen from water. The hydrogen will in turn be converted into ammonia for more efficient storage and transportation by marine vessels to international markets.

The Project will consist of 46 wind turbines located around the Port of Argentia, NL. The ice throw assessment was completed using the Vestas V172-7.2 wind turbine model, with a hub height of 166 meters (m), rotor diameter of 172 m, and rated power of 7.2 MW.

This report is structured as follows:

- Section 2 – Wind Turbine Icing Background: Discussion of wind turbine icing context and risks, and methodology for ice throw and ice fall analysis.
- Section 3 – Methodology: Presents the methodology for the ice throw assessment.
- Section 4 – Project Details: Provides information on the wind turbine characteristics, planned locations, and site conditions.
- Section 5 – Ice Throw & Fall Zone Evaluation: Presents the evaluation results including risk identification within the ice throw zones of each wind turbine.
- Section 6 – Conclusions: Conclusions and discussion.
- Appendix A – Max Ice Throw Zone Figures: Provides figures showing the locations of the 46 wind turbines, max ice throw zones, and identification of risks within these zones.

1.1 Purpose of this report

The purpose of this report is to present the methodology, results, and recommendations of the ice throw and fall study for the Argentia Renewables Project.

1.2 Scope and limitations

This report has been prepared by GHD for Pattern Energy and may only be used and relied on by Pattern Energy for the purpose agreed between GHD and Pattern Energy as set out in section 1.1 of this report.

GHD otherwise disclaims responsibility to any person other than Pattern Energy arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

Accessibility of documents

If this report is required to be accessible in any other format, this can be provided by GHD upon request and at an additional cost if necessary.

Disclaimers

GHD has prepared this report on the basis of information provided by Pattern Energy and others who provided information to GHD (including Government authorities)], which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

1.3 Assumptions

The following key assumptions have been utilized for the ice throw study:

- Evaluation is based on the Vestas V172-7.2 wind turbine model, with a hub height of 166 m and rotor diameter of 172 m.
- The latest planned wind turbine locations were provided via shape file on Nov. 21, 2023. Should the planned locations be modified, it is recommended to perform and updated ice throw assessment on the additional locations.
- Climate data is sourced from Argentia meteorological station (AUT, Climate ID 8400104), which is the nearest station to the Project site, located at latitude 47°18'38.278" N, longitude 53°59'53.423" W.

2. Wind Turbine Icing Background

2.1 Ice Throw & Fall Context

Cold climates present unique challenges for wind turbine operation. Wind turbine blades and other components can be subject to in-fog icing and freezing rain events, causing the accumulation of ice mass that can affect the performance of data collection devices, increase vibrations from blade imbalance, and impact blade aerodynamic properties resulting in reduced power conversion efficiency. Accumulated ice can break or melt off the blades and structure, resulting in ice throw or ice fall that presents a hazard to people, animals, and property.

The Canadian Renewable Energy Association (CanREA) has published a series of *Best Practices for Wind Farm Icing and Cold Climate Health & Safety* guidelines, the latest of which was updated with a 2020 publication, which is utilized as the methodology basis for this wind farm ice throw assessment [1].

Accumulated ice may be shed from wind turbines via two mechanisms, defined as follows:

- **Ice Throw:** refers to ice fragments detaching from the rotating wind turbine blades during operations, where the ice fragments can be projected out a significant distance from the wind turbine. In the case of ice throw, the maximum potential throw distance has been determined empirically to depend primarily on the hub height and blade length of the wind turbine in question.
- **Ice Fall:** refers to ice fragments detaching from the wind turbine when the turbine rotor is paused/idle, resulting in ice falling within a smaller radius of the turbine. In the case of ice fall, the maximum potential fall distance has been determined empirically to depend on the wind turbine hub height, blade length, and wind speeds. The majority of ice will typically fall within the footprint of the wind turbine itself, although some fragments may be carried a greater distance from the turbine by strong gusts of wind.

In either case of ice fall or ice throw, the ice fragments can present a significant hazard to people and property that lie within the maximum ice fall or throw zone. A 0.2 kilogram (kg) ice fragment falling from a height of just 30-50 m carries enough force to potentially land a fatal blow to an unprotected human head [1]. The risks of ice fall or throw are most likely to occur when temperatures rise or are close to or above 0 degrees Celsius, or when the wind turbine begins operation in the case of a turbine that was paused during the icing event. General risk mitigation measures following icing events are discussed in section 2.3.

2.2 Ice Class & Risk of Icing Occurrence

Ice accretion occurs during periods of meteorological icing, which is defined as the periods during which atmospheric conditions are favorable for ice build-up on structures, including wind turbines. The total duration that ice is present on structures is defined as the instrumental icing period, as ice can remain on structures for hours or even days after a meteorological icing event has occurred.

The International Energy Association (IEA) and CanREA further define *rotor icing* as the period during which ice is present on the rotor blades of a wind turbine. Rotor icing is not equivalent to instrumental icing due to the geometry of the blades, rotational speed, and resultant relative velocity of the wind acting upon the blades. Rotor ice can accrete faster than on static structures if the rotor is operating, and the ablation¹ phase during which ice remains on the blades is generally shorter than the period of instrumental icing, particularly if blade heating or other ice mitigation technology is employed. According to publications from the IEA Task 19 workforce on wind turbine icing and commentary from DNV [2], [3], rotor blade icing periods may correspond to half the period of instrumental icing, depending on the operating conditions and any blade de-icing technologies employed.

There are different methods for determining the risk of icing occurrence at a site, from direct site measurement campaigns to meso-scale modelling. CanREA refers to the wind power icing atlas, called *WIceAtlas*, created and managed by the VTT Technical Research Centre of Finland, which provides probability levels of in-cloud icing risk worldwide based on meso-scale modelling [4], for assessing the risk of icing occurrence. The *WIceAtlas* follows the IEA's Ice Class Definitions, which define the risk of meteorological and instrumental icing by IEA Ice Class 1 through 5 as follows:

Table 1 IEA Ice Class Definitions [5]

IEA Ice Class	Meteorological Icing (% of the year)	Instrumental Icing Risk (% of the year)
1	0 – 0.5	0 – 1.5
2	0.5 – 3	1 – 9
3	3 – 5	6 – 15
4	5 – 10	10 – 30
5	>10	>20

2.3 Best Practices & Risk Mitigation

The general hazards presented by ice throw/fall include:

- Serious injury or fatality to an unprotected worker or member of the public within the vicinity of the ice throw zone during periods of rotor icing.
- Serious injury or fatality to cattle or wildlife within the vicinity of the ice throw zone during periods of rotor icing².
- Damage to property and infrastructure within the ice throw zone during periods of rotor icing, including damage to vehicles, equipment, electrical or other infrastructure, and buildings.

It is worth noting that while the consequence of ice throw impact to persons is at the highest consequence rating (serious injury or fatality), in the history of wind farm operations in cold climates to date, there has never been a single recorded incident of injury or fatality from a human being struck by falling or thrown ice. The risk occurrence is very low at the outer areas of the maximum ice throw zone and considered null outside of the maximum ice throw zone.

¹ Ablation is defined as the removal of ice from the structure, either via shedding (ice fragments fall or are thrown), melting, sublimation or otherwise.

² Note that there are no active farming / ranching operations within the study area, so this risk is not addressed. The risk of wildlife being struck by an ice fragment is always present for any wind farm in cold climates but cannot be effectively mitigated by signage or otherwise.

Directly under the wind turbine, or any iced structure, CanREA recommends the risk should be considered as medium [1], as this is the zone in which most ice will shed from the structure.

There are several mitigation measures that can be employed by wind farm operators in cold climates to mitigate the hazards presented by ice fall or throw. These include the following:

- **Shutdown the turbines during rotor icing periods:** Generally, the ice throw zone is notably larger than the ice fall zone. During periods of rotor icing, which can be detected through a variety of direct and indirect methods (IEA has a detailed report on the technologies/methods available [6]), wind turbine operators can pause the wind turbines to mitigate the risk of ice throw, effectively reducing the hazard zone to the ice fall zone, closer to the wind turbine base. Pausing the wind turbine also mitigates vibrational impacts from blade imbalance due to uneven ice accretion, and results in less ice accumulation due to the lowered relative velocity of wind to the blades.
- **Ice protection devices:** In the case that workers may be required to attend to wind turbines during potential periods of rotor icing (for example, for maintenance following an icing event, when some ice is still present on the structure), ice protection devices should be installed at the wind turbine base such that workers can step directly from their vehicle into a covered walkway that leads to the base access. An example permanent ice protection device is shown in the figure to the right.
- **Restrain site access:** Public access to wind farms can be restricted, for example with fences or private property signage. The maximum ice throw zone could be used to determine the limits of site access restrictions.
- **Public Danger Warning Signs:** Operators should add signage to warn the public of the risk of ice fall around the maximum ice throw zones to emphasize the importance of not trespassing during and following periods of icing events. Public danger warning signs should be visible and placed strategically, keeping in mind potential recreational activities in the area (such as hiking, snowmobiling trails). Educational signs can be added to any parking lots, trail heads, etc. to provide more detailed information. Additionally, danger warning signs can be equipped with flashing lights to indicate ongoing icing events, which should be tied to the operator's ice detection method. On public recreational trails, signs can be located at the points where the trail intersects with the maximum ice throw boundary, warning the public to remain clear of the area during potential icing events.
- **Anti- and De-Icing Technologies:** Wind farm project developers can opt for ice prevention technologies as part of the wind turbine package, which can include blade heating technology that actively reduces the rotor icing period by speeding up the melting/ablation of ice from the blades and mitigating ice accretion.
- **Follow the best practices detailed by CanREA [1]:** These include employing occupational health and safety systems and requirements including adequate personal protection equipment (PPE) for all workers, education on the hazard and right to refuse unsafe work for workers, regular inspections of protective equipment such as ice protection devices, and more.



Figure 1 Permanent Ice Protection Device for Worker Access [1]

3. Ice Throw Study Methodology

The ice throw study presented herein is based on the high-level, conservative approach recommended by CanREA in the 2020 *Best Practices for Wind Farm Icing and Cold Climate Health and Safety* document [1]. This methodology is widely accepted as being conservative (as ice throw risk outside of the determined zone is considered zero), however it does not result in probability distribution of an ice throw impact within the maximum ice throw zone. Should a statistical ice throw risk assessment be required within the ice throw zone, a more detailed analysis based on statistical computer models will be needed, which can allow for resizing (shrinking) the ice fall risk zone with a more precise and less conservative methodology. This type of analysis can provide quantitative evaluation of the expected probability of an ice fragment hitting the ground, measured as the number of strikes anticipated per square metre per year. The IEA Wind TCP Task 19 has published detailed guidance on such statistical ice throw risk assessment [2].

The risk of icing occurrence is determined utilizing the WIceAtlas icing map for the wind turbine locations [4] and IEA Ice Class definitions [5].

The maximum ice throw zone is evaluated with the following equation, as recommended by CanREA [1] and determined empirically by Seifert *et al.* [7]:

$$d_t = 1.5 * (D + H)$$

Where:

- d_t is the maximum ice throw distance (m)
- D is the wind turbine rotor diameter (m)
- H is the wind turbine hub height (m)

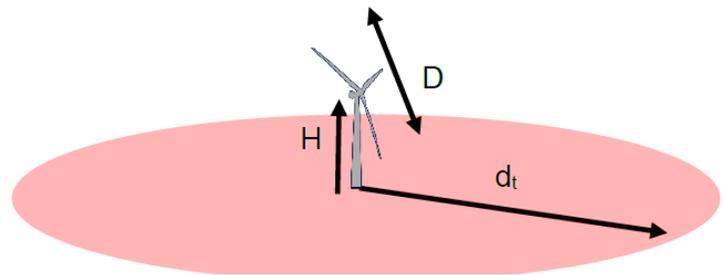


Figure 2 Maximum ice throw distance area

The maximum ice fall distance, on the other hand, is a result of the hub height, rotor diameter, and the wind speeds acting on the falling ice fragment. Ice fall should therefore be evaluated for a range of typical wind speeds, and actual wind speeds should be evaluated during rotor icing events to assess the safety of workers being near and around the wind turbines. Periods of higher wind speeds represent greater risk of ice falling beyond the direct footprint of the wind turbine.

The equation for maximum ice fall distance as recommended by CanREA and similarly determined empirically by Seifert *et al.* is as follows:

$$d_f = \frac{\frac{D}{2} + H}{15} * V$$

Where:

- d_f is the maximum ice fall distance (m)
- D is the wind turbine rotor diameter (m)
- H is the wind turbine hub height (m)
- V is the wind speed at hub height (m/s)

The maximum ice fall zones are determined for a range of wind speeds considering historical wind speed data from the region. Note that site-specific wind speed at hub height data was not available for this study. Such data can support more precise evaluation of potential ice fall zones.

The study assesses the maximum ice throw zone and ice fall zones (by wind speed) for the wind turbine model evaluated, and then identifies and assesses risks within the maximum ice throw zone for each wind turbine via geospatial data. Notable hazards are identified and potential mitigation measures are recommended.

4. Project Details

4.1 Wind Turbine Characteristics & Locations

The planned wind power project will consist of 46 wind turbines located around the Port of Argentia, NL. The expected installed capacity of the overall wind farm is over 300 MW, with exact capacity dependent on the final turbine selection.

The ice throw assessment was completed using the Vestas V172-7.2 wind turbine model, with a hub height of 166 m and rotor diameter of 172 m. The wind turbines have an installed rated power of 7.2 MW and come with pitch and variable speed control. Vestas offers anti- and de-icing technologies that can be considered for these units.

The figure below indicates the planned locations of the 46 wind turbines near the Argentia Port in Newfoundland and Labrador. Note that there were originally 47 wind turbines and in the updated plan wind turbine #3 has been removed. The wind turbines are still numbered 1 through 47 with the absence of number 3.

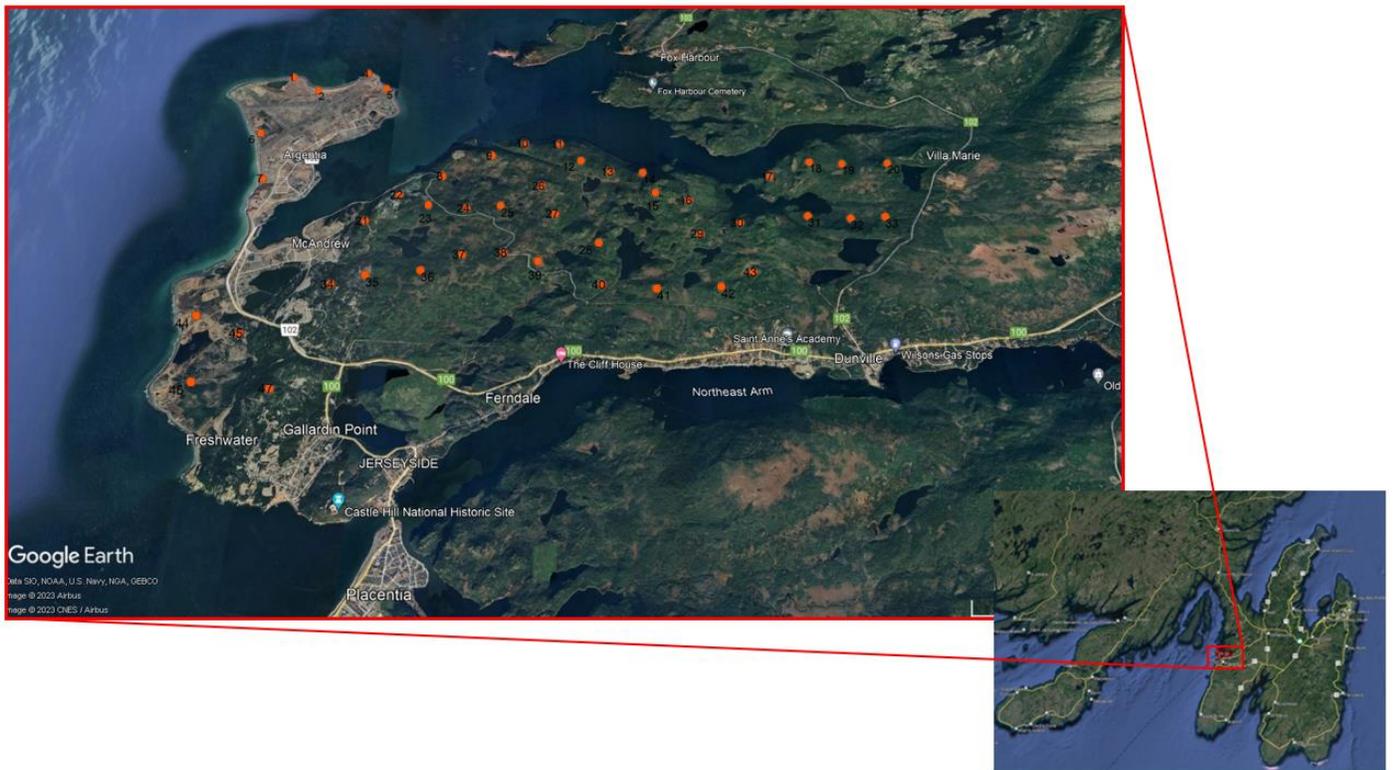
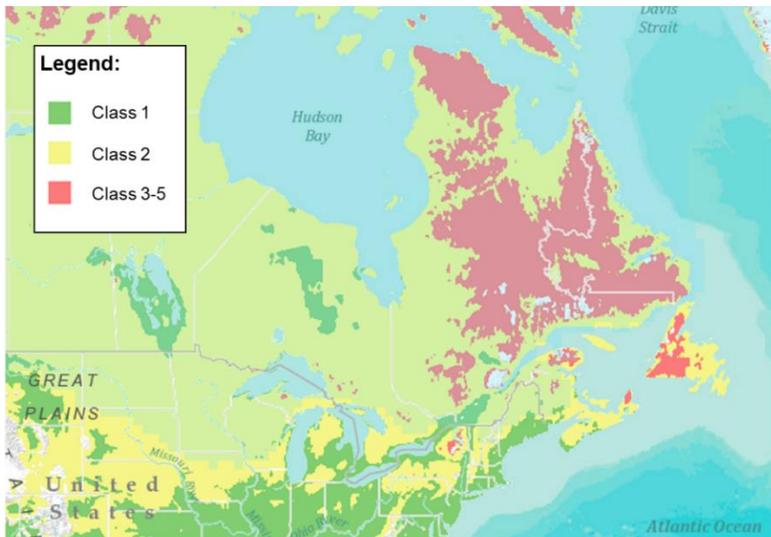


Figure 3 Planned Locations of the Project Wind Turbines near Argentia Port, NL

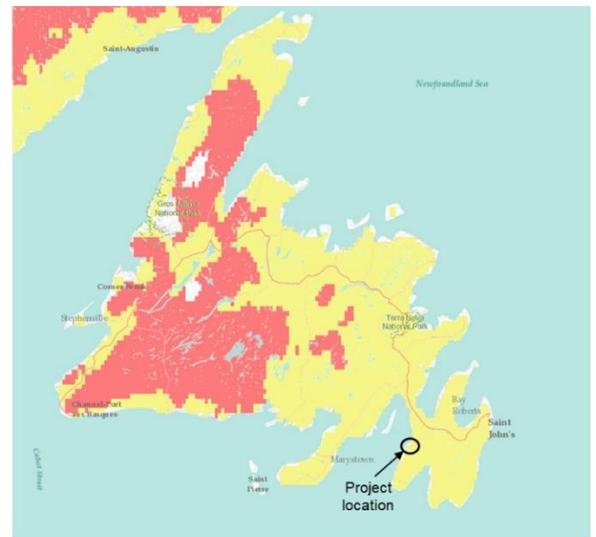
4.2 Site Conditions

The potential for instrumental icing and for ice throw or fall is influenced by site specific meteorological conditions. The IEA Ice Classification for the region is utilized to assess the potential for instrumental and rotor icing. Publicly available historical wind records from the nearest meteorological station (AUT) are utilized for the ice fall assessment [8].

The figure below presents the WIceAtlas IEA Ice Classifications for Eastern Canada (a) and zoomed in on the Island of Newfoundland with the project location identified (b).



(a) WlceAtlas snapshot for Eastern Canada



(b) WlceAtlas snapshot for Newfoundland with Project location identified

Figure 4 WlceAtlas IEA Ice Classification for Project Location [4]

As indicated by WlceAtlas in the figure above, the IEA Ice Class for the Project location is Class 2. This corresponds to anticipated:

- Meteorological icing occurrence 0.5 – 3% of the year (average of 1.8 to 11.0 days per year)
- Instrumental icing occurrence 1 – 9% of the year (average of 3.7 to 32.9 days per year)

The rotor icing period, during which ice is present on the wind turbine blades, is not equivalent to instrumental icing and is typically distinctly shorter as ice sheds more readily from wind turbine blades than static structures due to movement, vibrations, and heating. The duration of rotor icing strongly differs for a wind turbine at stand-still versus in operation, and for wind turbines with ice mitigation technologies such as integrated blade heating compared to wind turbines without. DNV has employed a factor of 50% for rotor icing compared to instrumental icing in other studies, which would correspond to an expected rotor icing occurrence of between 2 and 17 days per year for this Project. A conservative evaluation of rotor icing likelihood would equate rotor icing duration with instrumental icing duration, for a maximum expected rotor icing occurrence of up to 33 days per year for this Project.

In general, wind farm owners can invest in anti- or de-icing technologies up front that are provided by the turbine manufacturer. These systems can significantly reduce the period of rotor icing by (a) mitigating the build-up of ice on blades and (b) accelerating the process of melting / detaching ice from the blades. Vestas, for example, offers blade heating technology with anti- and de-icing modes. Employing such technology would reduce the rotor icing occurrence likelihood, mitigating risks of ice throw and fall.

Wind speeds for the Project location were sourced from Environment and Climate Change Canada (ECCC) historical data from the Argentia meteorological station, which is the nearest station to the Project site [8]. Maximum daily recorded wind speed records from 20-year historical record (2003-2023) were utilized for the ice fall assessment. Utilizing maximum daily wind gusts provides for a conservative assessment of ice fall zone as the likelihood of an ice fragment breaking off at the exact moment that the daily maximum wind gust is realized is very low [7].

The frequency of maximum daily recorded wind speeds (2003-2023) is visualized below. On average, the maximum daily recorded wind speed is less than 15 metre per second (m/s), with 56% of days recording less than this value. On the vast majority of days (83%), maximum recorded wind speed is less than 20 m/s.

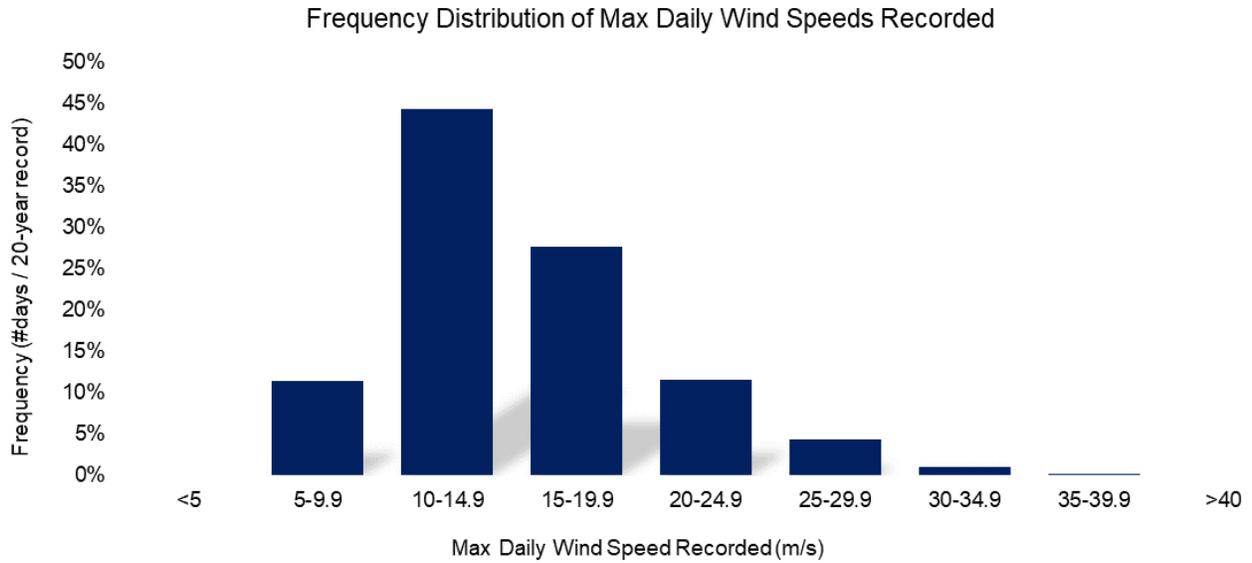


Figure 5 Frequency Distribution of Maximum Daily Wind Speeds Recorded at Argentia Station, 2003-2023 [8]

Additionally, Pattern Energy provided met mast data collection on wind speeds for 2 measurement campaigns performed in the approximate area of the planned wind turbines, from July 2-8, 2008, and November 3-10, 2015. The recorded combined wind speeds (combined to single vector) at 60 m height from the November 2015 measurements is shown in Figure 6 below; July data is not shown as icing only occurs during winter season.

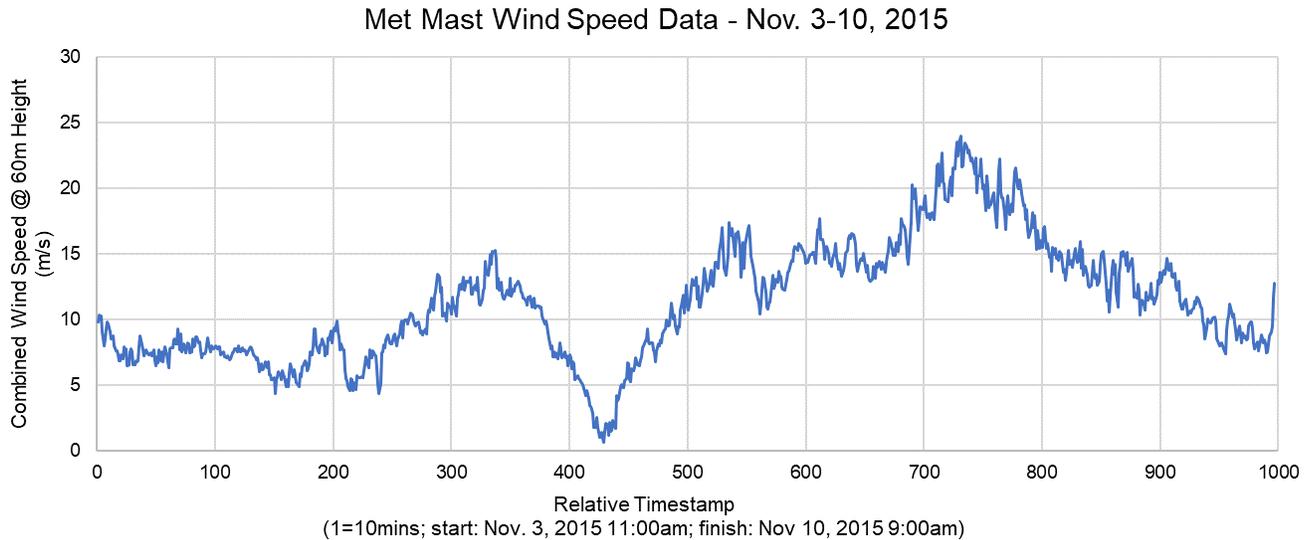


Figure 6 Recorded Wind Speed Data from Met Mast at 60 m height, November 3-10, 2015

Although the time period of data collection is short, the data gives insight into fluctuations of wind speeds experienced. Over the seven-day period, wind speeds were recorded in excess of 20 m/s during 45 10-minute time periods, or about 4.5% of the recorded time.

5. Ice Throw & Fall Zone Evaluation

5.1 Results

5.1.1 Maximum Ice Throw

Following the methodology described in section 3, with a rotor diameter of 172 m and hub height of 166 m, the **maximum ice throw distance for the planned wind turbines is 507 m.**

In Appendix A, this maximum ice throw distance is assessed at each of the 46 wind turbines using Google Earth to identify hazards within the ice throw zone. Risks identified and recommended mitigation measures are summarized in section 5.2.

Maximum ice throw zone is reduced as wind turbine hub height or rotor diameter is reduced. For example, the Project was previously considering the Siemens SG 6.6-155 wind turbine with a hub height of 105 m and rotor diameter of 162 m, which would have a maximum ice throw zone of 400 m, considerably reduced from the current turbine model. Another model being considered by the Project is the Vestas V162-6.8MW wind turbine, with hub height of 119 m and rotor diameter of 162 m, which would have a maximum ice throw zone of 421 m.

5.1.2 Ice Fall

Maximum ice fall distance when the wind turbines are paused depends on both the turbine characteristics (hub height and rotor diameter) and wind speeds. Following the methodology described in section 3, the maximum ice fall distance from the turbines for various wind speeds is provided in the table below.

Table 2 *Maximum Ice Fall Distance by Wind Speed*

Wind speed (m/s)	Max ice fall distance (m)
0	0
5	84
10	168
15	252
20	336
25	420
30	504

The likelihood of ice falling a distance greater than 507 m (the maximum ice throw distance) when the wind turbines are paused is considered extremely low to null as the likelihood of an ice fragment detaching at the same time as a gust of wind in excess of 30 m/s is extremely low to null.

5.2 Risk Identification & Mitigations

5.2.1 General Risks & Mitigations for all Wind Turbines

General risks that apply for all the planned wind turbines include the following:

- a. Workers accessing the wind turbines for maintenance / operations purposes during periods of rotor icing may be struck by a falling or thrown ice fragment, and
- b. Damage to wind turbine structure or associated aboveground electrical or other infrastructure.

The risks associated with item (a) above include possible serious injury and/or death if workers are within the ice throw zone without ice protection. Ideally, this risk is best mitigated by avoiding maintenance activities within periods of rotor icing, such that workers do not enter the maximum ice throw zone when ice is detected to be present on the structure or blades. If workers must access the wind turbine during possible rotor icing periods, the following risk mitigation measures should be employed:

- **Use ice protection devices:** ice protection devices can be mobile units deployed as needed or permanent installations at each wind turbine. These devices should provide an entryway for workers to leave their vehicle and enter the wind turbine base while being completely covered and protected from any falling ice fragments, such as the structure shown previously in Figure 1.
- **PPE and training in accordance with CanREA Best Practices recommendations:** Workers should be aware of the risks, should be aware of active rotor icing events, and should have adequate PPE.

The risks associated with item (b) above include damage to property resulting in unexpected costs. Aboveground equipment sensitive to potential impacts from ice fragments can be protected with caging or housing. Following rotor icing events, operators should inspect equipment within the ice throw zones for any damage and plan repairs to ice protection devices as needed.

Across all the wind turbines and identified hazards, a driving factor for the risks presented is the likelihood of rotor icing occurrence. Rotor icing periods can be reduced with both active and passive ice mitigation techniques. These may include, for example, hydrophobic coatings on the blades that provide passive mitigation of ice accretion, or active blade heating technology that heats the sections of the blades most susceptible to icing to mitigate ice build up and accelerate the rate of ice ablation. Vestas offers anti- and de-icing technologies that can be considered for this project that would effectively reduce the expected periods of rotor icing.

Finally, a general risk mitigation measure across all the wind turbine sites can be to pause the wind turbines during active rotor icing events to reduce the likelihood of ice falling at greater distances.

5.2.2 Specific Risks Identified for the Planned Wind Turbine Locations

Appendix A provides a visual identification of features within the maximum ice throw zone for each of the 46 planned wind turbines that present risk from ice throw or fall. The features identified include the following. Risks and potential mitigation measures for each are discussed in the following subsections.

- a. Abandoned Argentia Naval Base
- b. Argentia Backland public hiking trails, roads, and destinations
- c. Sunset RV Park
- d. Ammonia Production Plant (planned)
- e. Industrial activities and service/access roads
- f. Public roads
- g. Existing and planned transmission power lines
- h. Potential planned connectors tie-in / substation

5.2.2.1 Abandoned Argentia Naval Base

The Argentia Port is home to the abandoned Argentia Naval Base, which was previously used as a U.S. strategic military base from 1941 to 1994. There are several historical sites remaining in the area, which are accessible to the public and of-interest to hobbyists and explorers. These include the abandoned airfield with historical sites featuring ammunition magazines, bunkers, and runways. While the area today is mostly used as an industrial park, public access is not restricted. Wind Turbine #45 also overlaps with Battery 282, a historical site part of the abandoned military operations just south of abandoned naval base.

Risk description: Public access within wind turbine maximum ice throw zones presents the risk that a person or vehicle may be struck by a falling or thrown ice fragment during periods of rotor icing. Although likelihood is low, the

consequence of a person being struck may include serious injury and/or fatality, making this risk of very high importance. The consequence of a vehicle in motion or stopped being struck may include serious injury and/or fatality as well as property damage. The likelihood of this risk event occurring is above zero within the maximum ice throw zone during periods of rotor icing.

Relevant wind turbines: # 1, 2, 4, 5, 6, and 45.

Risk mitigations measures: Potential risk mitigation measures include the following:

- **Public danger warning signage:** Signs should be located at the outset of the ice throw zone where pathways or roads intersect with the zone. Signs should be clear and provide adequate understanding of the ice throw risk. As an added risk mitigation measure, signage with flashing lights can be tied to an ice detection system to warn the public of active rotor icing periods when the risk is present. The goal is to prevent members of the public from entering the maximum ice throw areas during periods of rotor icing through education and warning.
- **Restrain site access:** Where possible, particularly closer to the base of the wind turbines where the risk of ice fall or throw is highest, public access may be restricted with fencing or otherwise.

5.2.2.2 Argentia Backland Public Trails & Roads

The Argentia and Placentia Bay areas are home to the Backland Trail system, which includes approx. 16 kilometres of walking and vehicle trails to reach lookouts and historical sites. The trail is maintained by the Argentia Management Authority. The figure below presents an overview of the walking and driving trails that are part of this system.

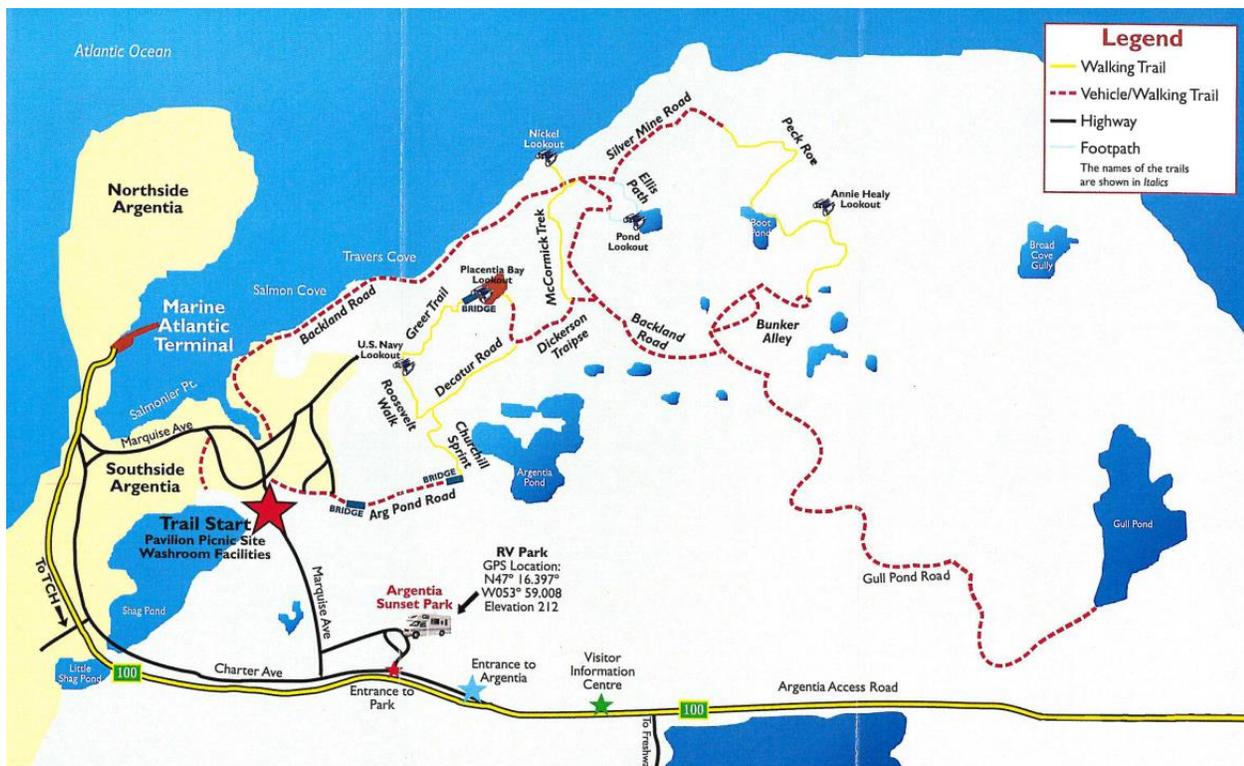


Figure 7 Argentia Backland Trails, from Port of Argentia [9]

Risk description: Public access within wind turbine maximum ice throw zones presents the risk that a person or vehicle may be struck by a falling or thrown ice fragment during periods of rotor icing. Although likelihood is low, the consequence of a person being struck may include serious injury and/or fatality, making this risk of very high importance. The consequence of a vehicle in motion or stopped being struck may include serious injury and/or fatality as well as property damage. The likelihood of this risk event occurring is above zero within the maximum ice throw zone during periods of rotor icing.

Relevant wind turbines:

- Argentia Backland trail system: # 8, 9, 21, 22, 23, 24, 25, 26, 34, 35, 36, 37, 38, 39, 40, 45
- Unnamed trails and old railway line (used by ATVs and hikers) identified in geo-information system, not part of Backland system however similar risks and mitigation measures apply: #18, 19, 20, 31, 32, 33

Risk mitigations measures: Potential risk mitigation measures include the following:

- **Public danger warning signage:** Signs should be located at the outset of the ice throw zone where pathways or roads intersect with the zone. Signs should be clear and provide adequate understanding of the ice throw risk. As an added risk mitigation measure, signage with flashing lights can be tied to an ice detection system to warn the public of active rotor icing periods when the risk is present. The goal is to prevent members of the public from entering the maximum ice throw areas during periods of rotor icing through education and warning. In addition to being located at the points where trails intersect with the wind turbine maximum ice throw zones, it is recommended that descriptive signage be placed at the trail head at Pavilion Picnic Site, where tourists and explorers are most likely to park their vehicle to begin the trail, as well as at any lookout points that are within maximum ice throw zones.
- **Restrict site access:** Due to the extensive public trails through the area, restricting site access at the outset of the maximum ice throw zones is not likely a possibility. However, access closer to the wind turbines base where risk of ice fall is highest may be achievable at certain turbine locations and should be investigated.

5.2.2.3 Sunset RV Park

The Argentia Sunset RV Park features 40 serviced sites with amenities including water, sewer, electrical, washrooms, showers, and a picnic area. Notably, the RV Park is described as being seasonally operated, implying that the site may be closed during the winter season when camping and exploring is less popular, which would reduce the risk of active public activity during winter icing events.

Risk description: There is one wind turbine for which the maximum ice throw zone overlaps with the Sunset RV Park, where members of the public may be parked and camping. Public access within wind turbine maximum ice throw zones presents the risk that a person or vehicle may be struck by a falling or thrown ice fragment during periods of rotor icing. Although likelihood is low, the consequence of a person being struck may include serious injury and/or fatality, making this risk of very high importance. The consequence of a vehicle in motion or stopped being struck may include serious injury and/or fatality as well as property damage. The likelihood of this risk event occurring is above zero within the maximum ice throw zone during periods of rotor icing.

Relevant wind turbines: # 34

Risk mitigations measures: Potential risk mitigation measures include the following:

- **Reduce wind turbine size:** The maximum ice throw zone for wind turbine #34 currently overlaps significantly with the main parking area of the Sunset RV Park. The risk of ice throw from this turbine landing within the Sunset RV Park can be eliminated by reducing the size of this wind turbine, for example reducing either the hub height, rotor diameter, or both. For example, the original wind turbine model assessed (Siemens SG 6.6-155 wind turbine with a hub height of 105 m and rotor diameter of 162 m), would have a maximum ice throw zone of 400 m that does not overlap with the Sunset RV Park, as shown in Figure 8 (compare to Wind Turbine #34 image in Appendix A).



Figure 8 Wind Turbine #34 Maximum Ice Throw Distance if Hub Height and Rotor Diameter reduced to 105 m and 162 m, respectively

- **Public danger warning signage:** Signs should be located at the outset of the ice throw zone where pathways or roads intersect with the zone. Signs should be clear and provide adequate understanding of the ice throw risk. As an added risk mitigation measure, signage with flashing lights can be tied to an ice detection system to warn the public of active rotor icing periods when the risk is present. The goal is to prevent members of the public from entering the maximum ice throw areas during periods of rotor icing through education and warning. In addition to being located at the points where trails intersect with the wind turbine maximum ice throw zones, it is recommended that descriptive signage be placed within the Sunset RV Park information area to educate and warn the public on the risks during periods of icing events and areas that the public should avoid during these times.

5.2.2.4 Ammonia Production Plant (Planned)

The planned ammonia production plant that will be supplied energy from the wind turbine project will be located within the Port of Argentia, in the area shown by the red outline below. There is one wind turbine (#2) that slightly overlaps with the Northernmost corner of the planned ammonia plant site, as shown in Appendix A. Given that the overlap is minimal, the risk may not be considered significant enough to warrant reducing the wind turbine size. That said, if the wind turbine size was reduced modestly, the risk of ice throw landing within the ammonia plant site would be eliminated.



Figure 9 Planned Ammonia Production Plant Site (Red Outline)

Risk description: There is one wind turbine for which the maximum ice throw zone overlaps slightly with the Northern corner of the planned ammonia plant site, presenting a risk for workers and property damage.

Relevant wind turbines: # 2

Risk mitigations measures: Potential risk mitigation measures include the following:

- **Reduce wind turbine size:** The maximum ice throw zone for wind turbine #2 currently overlaps only slightly with the Northernmost corner of the planned ammonia plant size. Reducing the wind turbine hub height and/or rotor diameter modestly will completely eliminate this risk.

5.2.2.5 Industrial, Coast Guard, & Research Activities & Service Roads

There are several industrial activities within maximum ice throw zones evaluated. These include:

- Coastal Exposure Marine Test Site (almost overlapped by max ice throw zone of Wind Turbine #6)

- Husky Graving Dock (overlapped by max ice throw zone of Wind Turbine #5)
- Argentia Freezers and Terminals Main Site and Marshalling Yard (overlapped by Wind Turbine #7)
- QSL Port Facility (overlapped by max ice throw zone of Wind Turbine #7)
- Canadian Coast Guard MCTS Centre (overlapped by max ice throw zone of Wind Turbine #7)
- Unidentified industrial / storage activities in Argentia area (overlapped by max ice throw zones of Wind Turbines #5, 6, 7, 44, 46, 47)
- Service / industrial access roads, not including the planned wind turbine access roads (Wind Turbines #1, 2, 4, 5, 6, 7, 8, 9, 21, 22, 23, 24, 34, 35, 44, 45, 46, 47)

Risk description: Ice fall or throw may strike workers within industrial activity zones, potentially causing serious injury and/or fatality, or vehicle and property damage.

Relevant wind turbines: # 1, 2, 4, 5, 6, 7, 8, 9, 21, 22, 23, 24, 34, 35, 44, 45, 46, 47

Risk mitigations measures: Potential risk mitigation measures include the following:

- **Engage with and educate the industrial operations:** The industrial operations within the maximum ice throw zones should be included in stakeholder engagement and education for the Project. Operations should be educated on the risk of ice fall and throw and mitigation measures should be deployed, such as worker training and education, adequate PPE, signage indicating the hazardous area and potentially also indicating active rotor icing periods, and work stand down during periods of active rotor icing within ice throw zones. For added mitigation, the Project could consider an active notification system whereby the industrial and other stakeholders are notified of the start and finish of every rotor icing event.
- **Reduce wind turbine size:** The maximum ice throw zones can be reduced by reducing wind turbine size. Turbine locations can also be modified to mitigate ice throw zone overlap with industrial areas.
- **Warning / danger signs:** Signage can be placed at the points where industrial activities intersect with maximum ice throw zones to warn workers to avoid the areas during active icing events.

5.2.2.6 Public Roads

The maximum ice throw zones of several wind turbines overlap with public roads and a highway through the Argentia and Placentia areas. These include:

- Highway 102 / Charter Ave
- Backland Road
- Andrews Ave
- Fox Harbour Road
- Marquis Ave
- Argentia Pond Road
- Cooper Drive

There is also potentially a planned future Dunville Bypass road that will pass through the area.

Risk description: Ice fall or throw landing on roads may result in serious injury or fatality as well as property damage if ice fragments strike moving or parked vehicles. The likelihood of occurrence is reduced if vehicles do not stop within the ice throw zone and therefore are only within the ice throw zone for a short period of time.

Relevant wind turbines: # 7, 8, 21, 22, 23, 24, 25, 33, 34, 35, 38, 39, 40, 44, 45, 46

Risk mitigations measures: Potential risk mitigation measures include the following:

- **Public danger warning signage:** Similar to avalanche risk zones, public warning signage can be placed in visible locations along roadways to warn drivers of the danger and to not stop/park their vehicles within the ice throw zones during the winter season. Signage can also be tied to an ice detection system providing warning lights during periods of active rotor icing risk.

5.2.2.7 Transmission Power Line

There are existing and planned transmission power lines running from Argentia Port and through the Argentia Backland area.

Risk description: Ice throw may strike power lines or associated infrastructure and cause damages that could potentially lead to power outage resulting in economic losses.

Relevant wind turbines: # 7, 40, 41, 42, 44, 45

Risk mitigations measures: There are minimal potential mitigation measures unique to this risk. As with all other wind turbines, pausing the turbines during periods of active rotor icing will reduce the likelihood of ice fragments falling beyond the immediate area of the wind turbine itself, mitigating this risk.

5.2.2.8 Potential Planned Substation / Collectors Tie-In

Part of the Project will include electrical collectors bringing energy produced from the wind turbines to a collector substation. This is visualized in Figure 10 to the right showing the collectors from multiple wind turbines coalescing on the potential substation location.

Risk description: Aboveground electrical infrastructure may be struck by thrown/falling ice fragments leading to damages that could result in loss of power and economic losses.

Relevant wind turbines: # 16, 29

Risk mitigations measures: There are minimal potential mitigation measures unique to this risk. As with all other wind turbines, pausing the turbines during periods of active rotor icing will reduce the likelihood of ice fragments falling beyond the immediate area of the wind turbine itself, mitigating this risk.

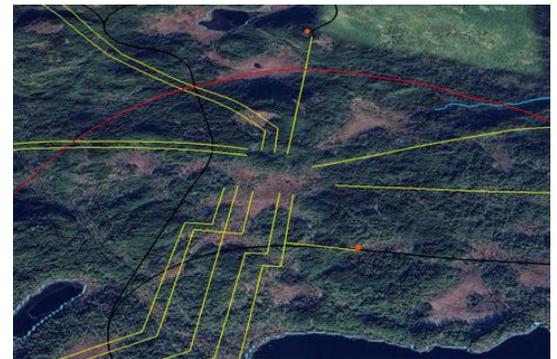


Figure 10 *Planned Collectors Converging on Potential Electrical Substation Location*

6. Conclusions & Recommendations

The risk of ice fall or throw is a notable hazard for wind turbine operations in cold climates. Although there have been limited ice throw events leading to public property damage globally, and no known recorded events to date of a person being struck by a falling or thrown ice fragment, the consequences associated can be significant – potentially leading to injury or fatality – and therefore should be mitigated as is reasonably achievable. Each incident or accident caused by ice throw is an unnecessary event and will decrease the public acceptance of wind energy.

The main risks identified in this ice throw analysis are summarized below along with recommended mitigation measures.

Note that across all risk items identified and wind turbines, potential mitigation measures that can be deployed include (a) pausing the wind turbines to reduce likelihood that ice fragments are thrown beyond the footprint of the wind turbine, and (b) investing in anti- and de-icing technologies from the wind turbine manufacturer to reduce rotor icing periods.

Table 3 Summary of Key Risks and Recommended Mitigation Measures

Risk Description	Relevant Wind Turbines	Recommended Mitigation Measures
Sunset RV Park – public parking and camping area within maximum ice throw and fall zones, where ice throw may strike a person or property resulting in serious injury or fatality or public property damage	34	<ul style="list-style-type: none"> • Reduce the size of wind turbine #34 to eliminate the overlap with the RV Park • Add public education and warning signage to the RV Park explaining the hazard and areas to avoid during potential icing events. For added mitigation, signage can be equipped with flashing lights tied to the rotor icing detection system to warn the public of active rotor icing events. The goal is to prevent members of the public from entering the maximum ice throw areas during periods of rotor icing through education and warning.
Wind farm operations and maintenance workers accessing wind turbines may be struck by thrown/falling ice resulting in serious injury and/or fatality	All wind turbines	<ul style="list-style-type: none"> • Invest in ice protection devices at all wind turbines to provide safe worker access. • Educate and train employees in the potential risks in accordance with the CanREA Best Practices.
Public access within the Backland Trails and Road system and abandoned Argentia Naval Base, and other trails in the area that are not within the Backland system, where a person or vehicle may be struck by falling or thrown ice resulting in serious injury or fatality and property damage	<p>Backland trails: 8, 9, 21, 22, 23, 24, 25, 26, 34, 35, 36, 37, 38, 39, 40, 45</p> <p>Abandoned Argentia Naval Base: 1, 2, 4, 5, 6, and 45</p> <p>Other trails: 18, 19, 20, 31, 32, 33</p>	<ul style="list-style-type: none"> • Add public education and warning signage to the trail head (Pavilion Picnic Site), lookouts, points of interest (such as Battery 282) and any point where a trail intersects with maximum ice throw zones. Signage should explain the hazard and areas to avoid during potential icing events. For added mitigation, signage can be equipped with flashing lights tied to the rotor icing detection system to warn the public of active rotor icing events. The goal is to prevent members of the public from entering the maximum ice throw areas during periods of rotor icing through education and warning.
Industrial, coast guard, and research activities and service roads within maximum ice throw zones, where industrial operations or workers may be struck by a thrown or falling ice fragment resulting in serious injury or death in addition to property damage	1, 2, 4, 5, 6, 7, 8, 9, 21, 22, 23, 24, 34, 35, 44, 45, 46, 47	<ul style="list-style-type: none"> • Engagement with the industrial and other activities as part of project stakeholder engagement, to educate the organizations on the risks of ice fall or throw and support development of risk mitigation plans. Risk mitigations that the industrial and other activities can employ will include adequate worker education and PPE, warning signage, and potentially work stand down during periods of active rotor icing. For added mitigation, the Project could consider an active notification system whereby the industrial and other stakeholders are notified of the start and finish of every rotor icing event. • Where risk is considered too significant for active industrial operations, wind turbine locations may be moved or wind turbine size reduced to remove the overlap with the maximum ice throw zone.
Public roadways that intersect within maximum ice throw zones present the risk of falling or thrown ice striking a vehicle, resulting in possible injury or fatality and property damage	7, 8, 21, 22, 23, 24, 25, 33, 34, 35, 38, 39, 40, 44, 45, 46	<ul style="list-style-type: none"> • Similar to avalanche risk zones, public warning signage can be placed in visible locations along roadways to warn drivers of the danger and to not stop/park their vehicles within the ice throw zones. Signage can also be tied to an ice detection system providing warning lights during periods of active rotor icing.
General risk of ice throw	All wind turbines	<ul style="list-style-type: none"> • Invest in anti- or de-icing technologies to reduce the anticipated rotor icing periods and thereby mitigate the likelihood of ice fall and throw. • Pause wind turbines during periods of detected active rotor icing events to mitigate the risk of ice throw.

7. References

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Appendices

Appendix A

Maximum Ice Throw Zones on Wind Turbine Locations

Ice Throw Assessment
Maximum Ice Throw Boundary

Wind Turbine #1

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- SERVICE ROAD
- ABANDONED ARGENTIA NAVAL BASE

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment

Maximum Ice Throw Boundary

Wind Turbine #2

- ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- NH3 PLANT SITE
 - SERVICE ROAD
 - ABANDONED ARGENTIA NAVAL BASE

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



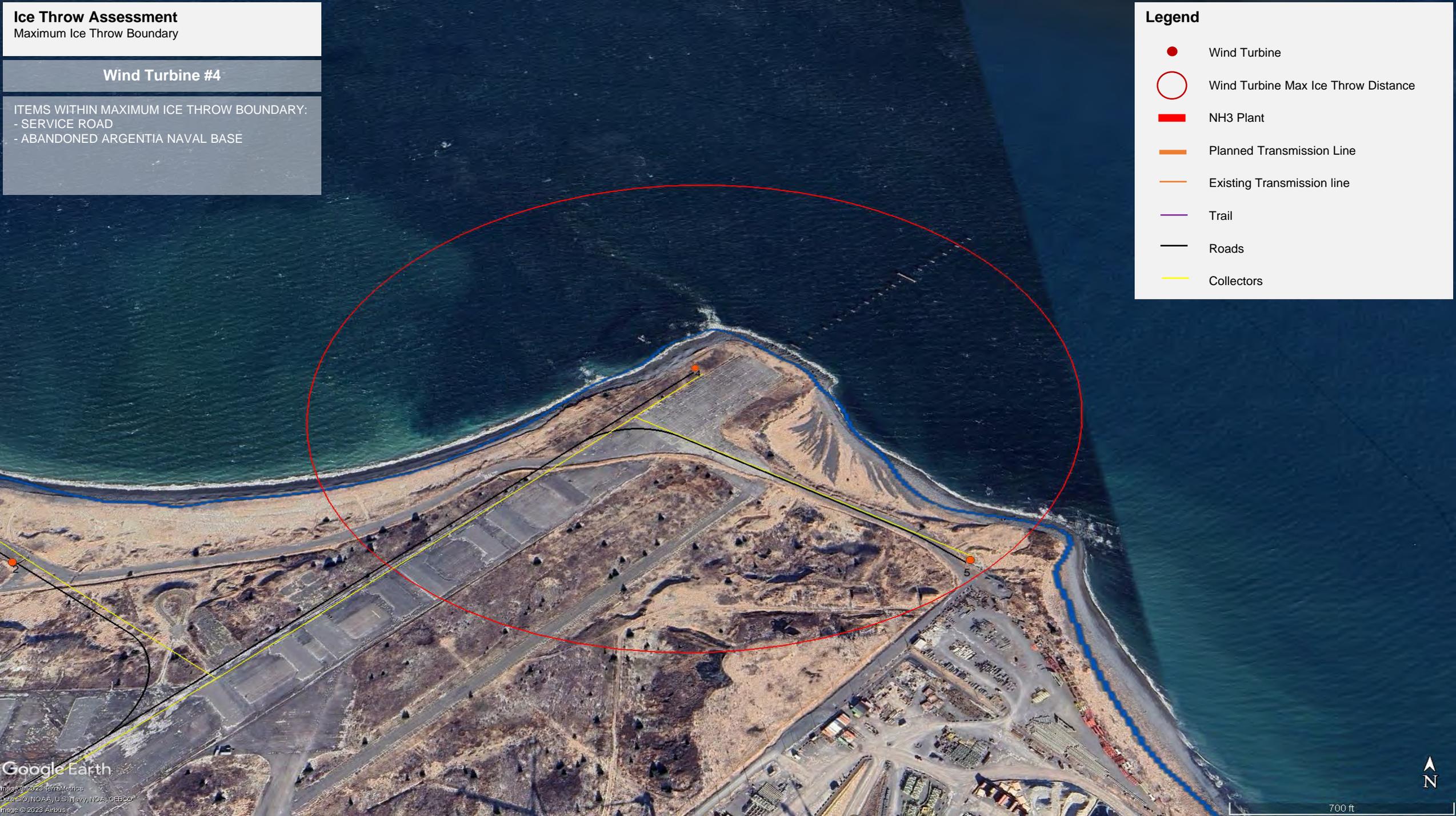
Ice Throw Assessment
Maximum Ice Throw Boundary

Wind Turbine #4

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- SERVICE ROAD
- ABANDONED ARGENTIA NAVAL BASE

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- █ NH3 Plant
- █ Planned Transmission Line
- █ Existing Transmission line
- █ Trail
- █ Roads
- █ Collectors



Ice Throw Assessment
Maximum Ice Throw Boundary

Wind Turbine #5

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
 - SERVICE ROAD
 - ABANDONED ARGENTIA NAVAL BASE
 - INDUSTRIAL ACTIVITIES

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment

Maximum Ice Throw Boundary

Wind Turbine #6

- ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- SERVICE ROAD
 - ABANDONED ARGENTIA NAVAL BASE
 - INDUSTRIAL ACTIVITIES

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- ▬ Planned Transmission Line
- ▬ Existing Transmission line
- ▬ Trail
- ▬ Roads
- ▬ Collectors



Ice Throw Assessment
 Maximum Ice Throw Boundary

Wind Turbine #7

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
 - PLACENTIA PIKE
 - HWY 102
 - TRANSMISSION LINE
 - INDUSTRIAL ACTIVITIES
 - SERVICE ROADS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment

Maximum Ice Throw Boundary

Wind Turbine #8

- ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- BACKLAND ROAD & TRAILS
 - SERVICE ROADS
 - INDUSTRIAL AREA
 - UNMARKED TRAILS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



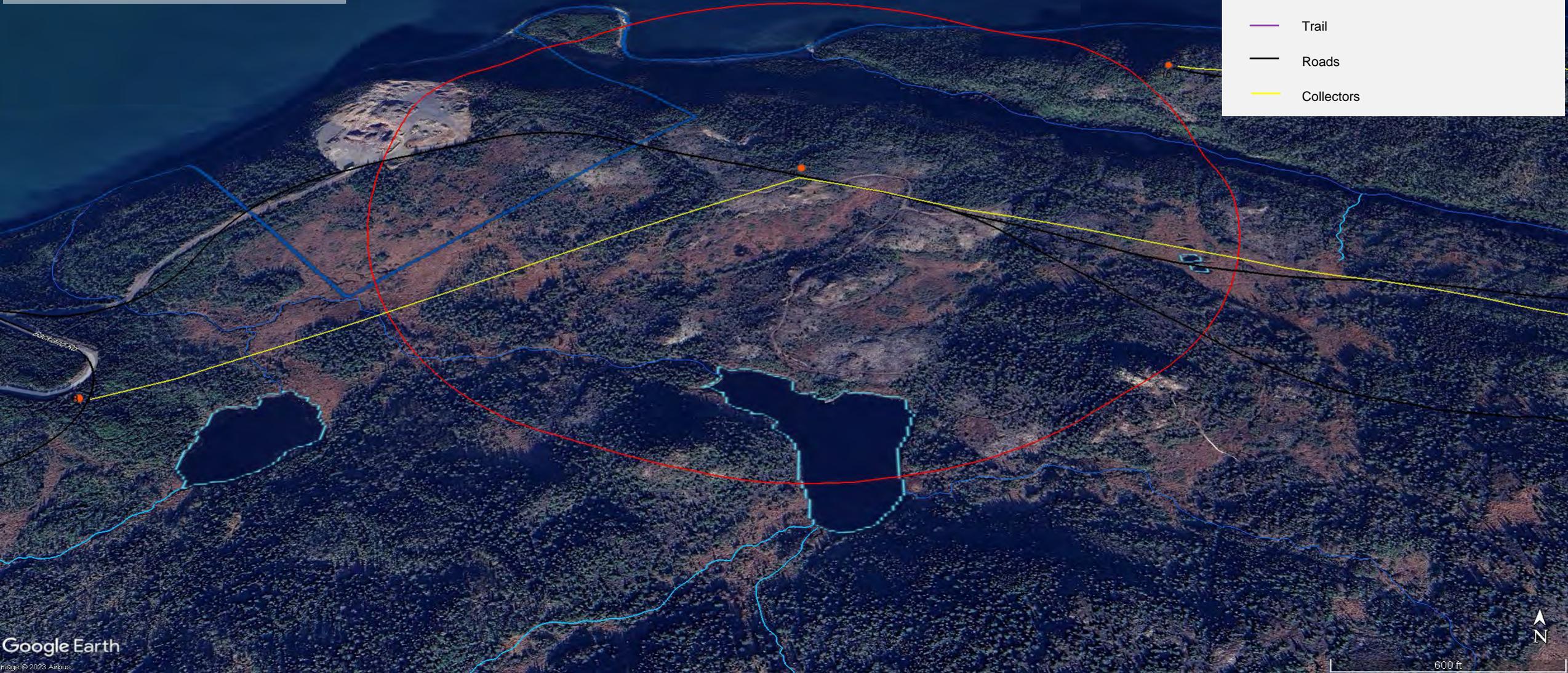
Ice Throw Assessment
Maximum Ice Throw Boundary

Wind Turbine #9

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- INDUSTRIAL AREA
- SERVICE ROADS
- BACKLAND TRAILS
- UNMARKED TRAILS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment
Maximum Ice Throw Boundary

Wind Turbine #10

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- SERVICE ROADS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment
Maximum Ice Throw Boundary

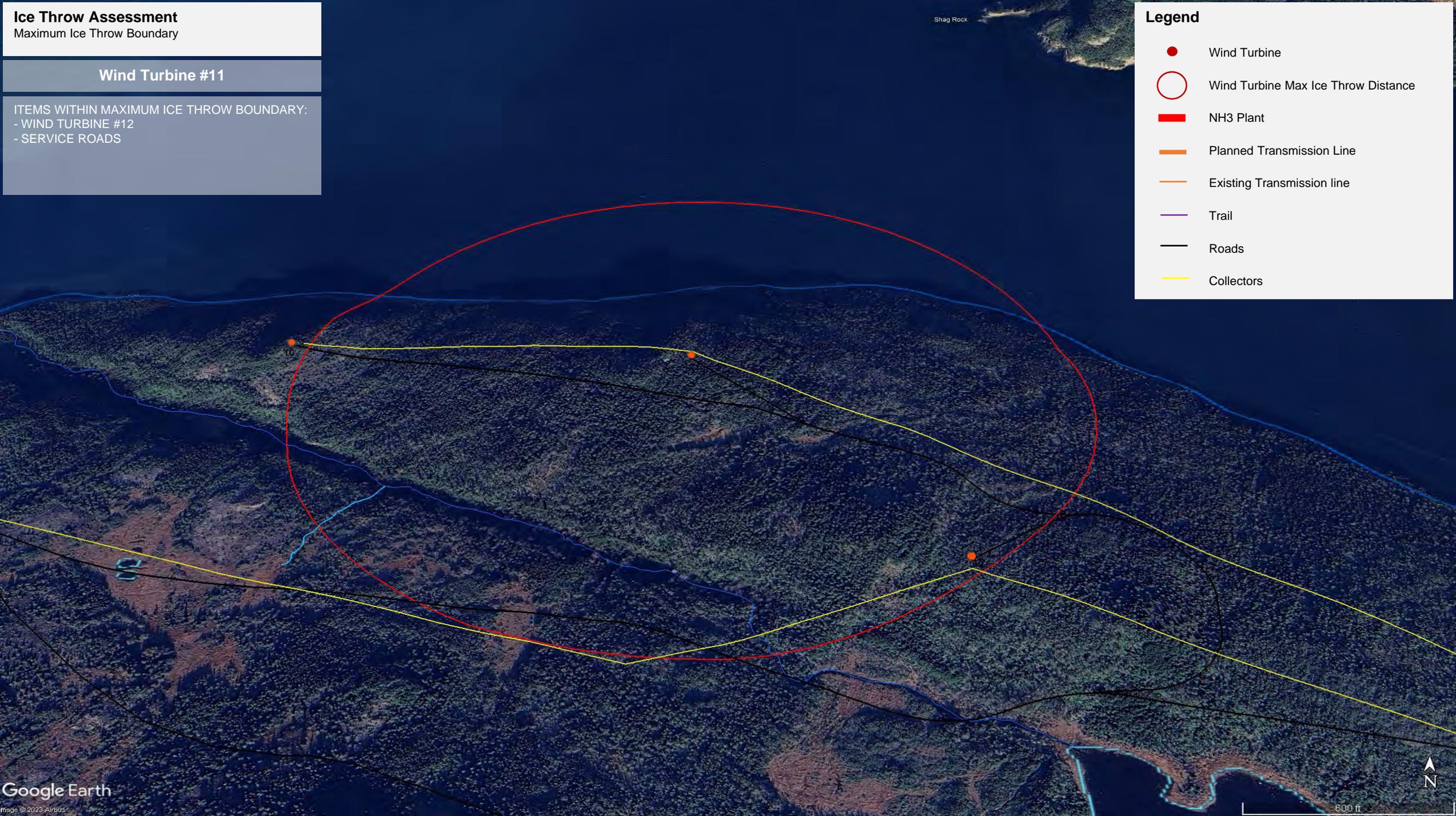
Wind Turbine #11

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- WIND TURBINE #12
- SERVICE ROADS

Shag Rock

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



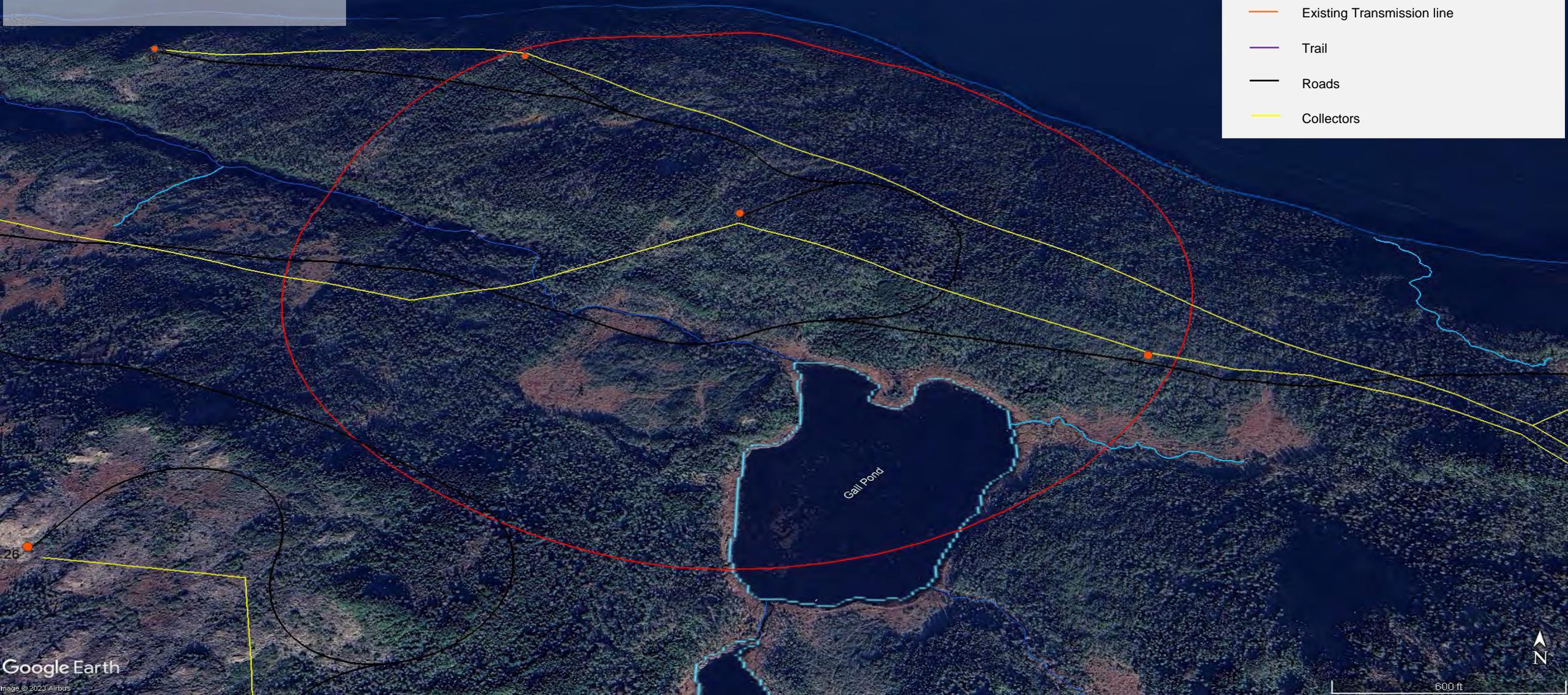
Ice Throw Assessment
Maximum Ice Throw Boundary

Wind Turbine #12

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- WIND TURBINE #11
- WIND TURBINE #13
- SERVICE ROADS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



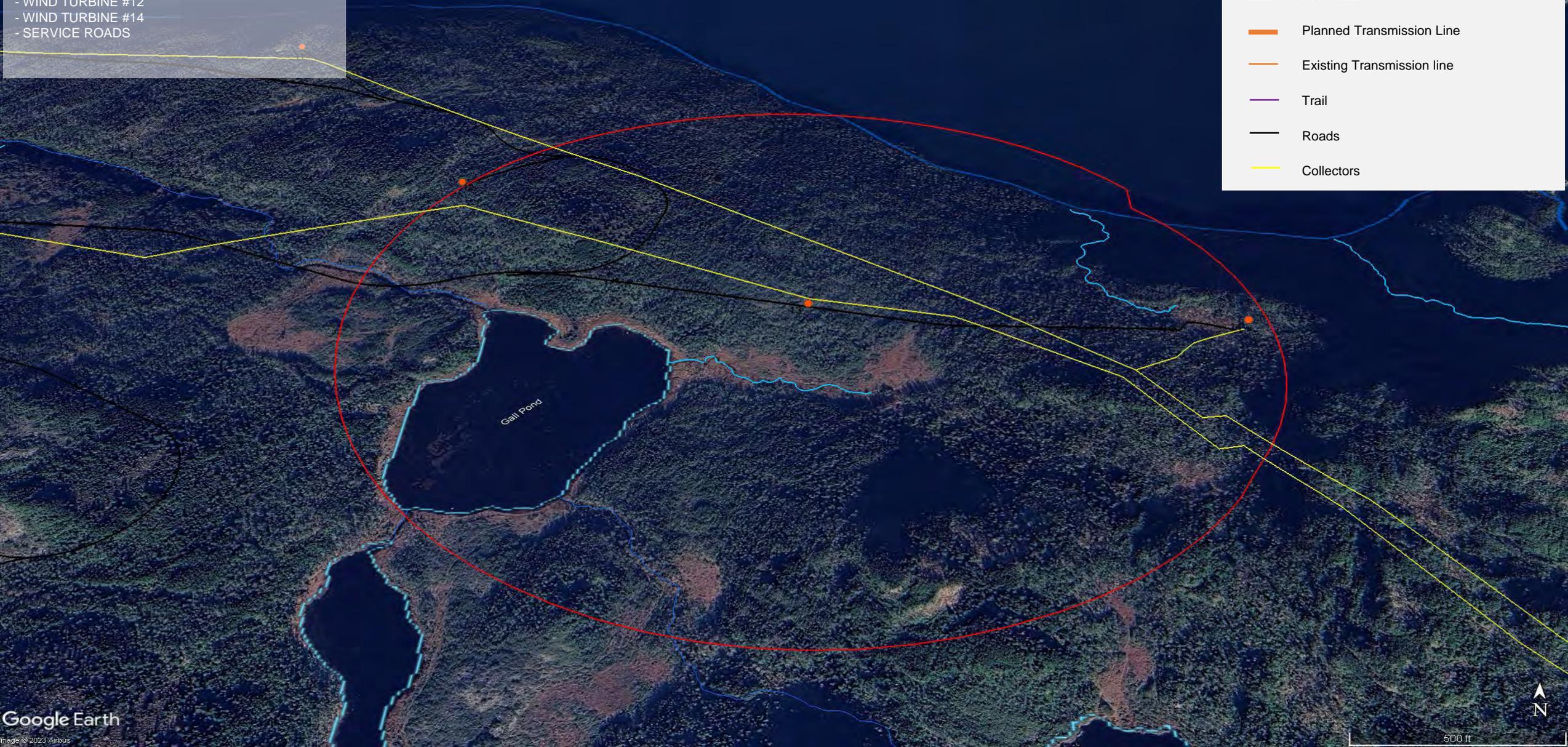
Ice Throw Assessment
Maximum Ice Throw Boundary

Wind Turbine #13

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- WIND TURBINE #12
- WIND TURBINE #14
- SERVICE ROADS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment

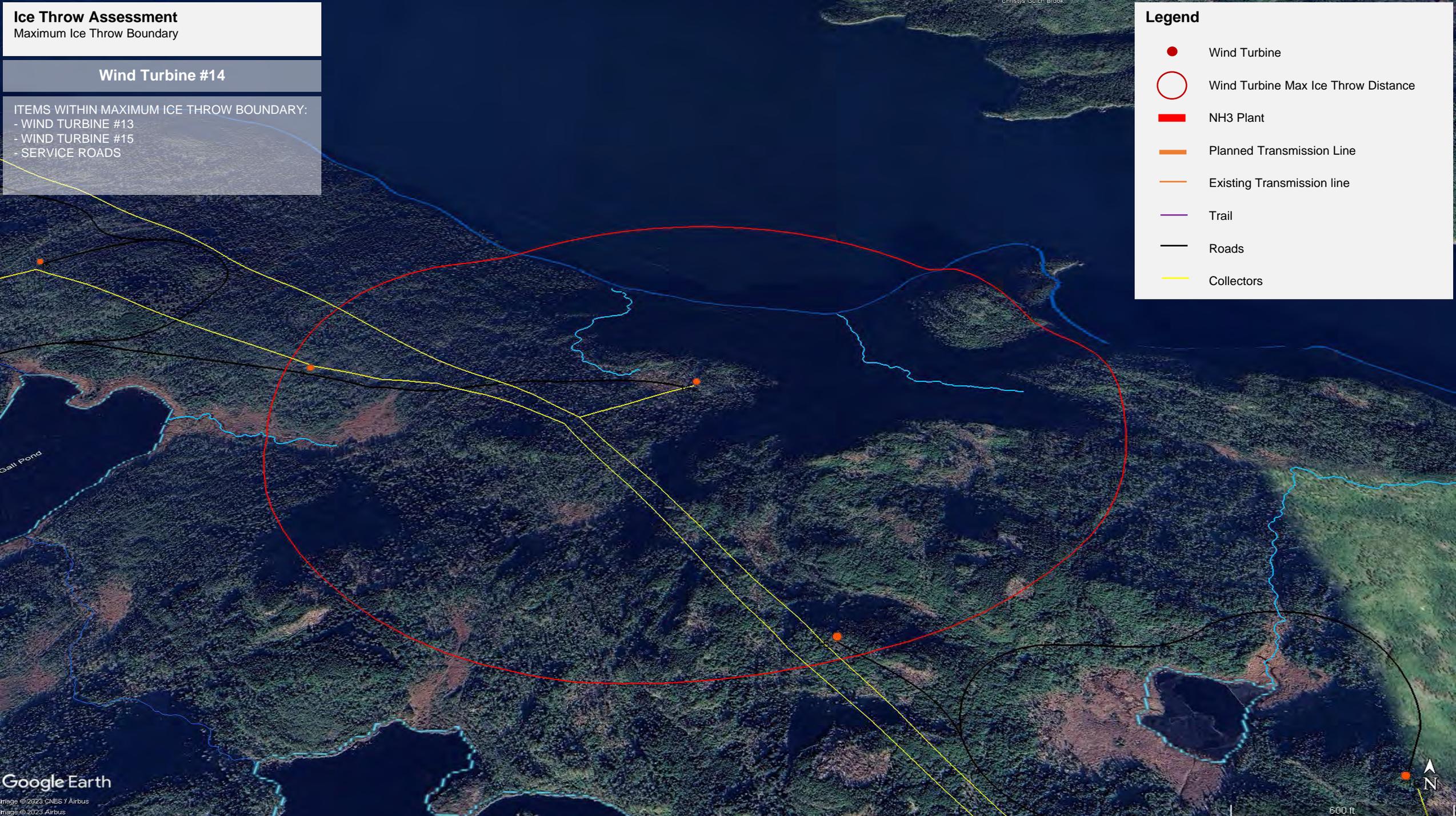
Maximum Ice Throw Boundary

Wind Turbine #14

- ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- WIND TURBINE #13
 - WIND TURBINE #15
 - SERVICE ROADS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment

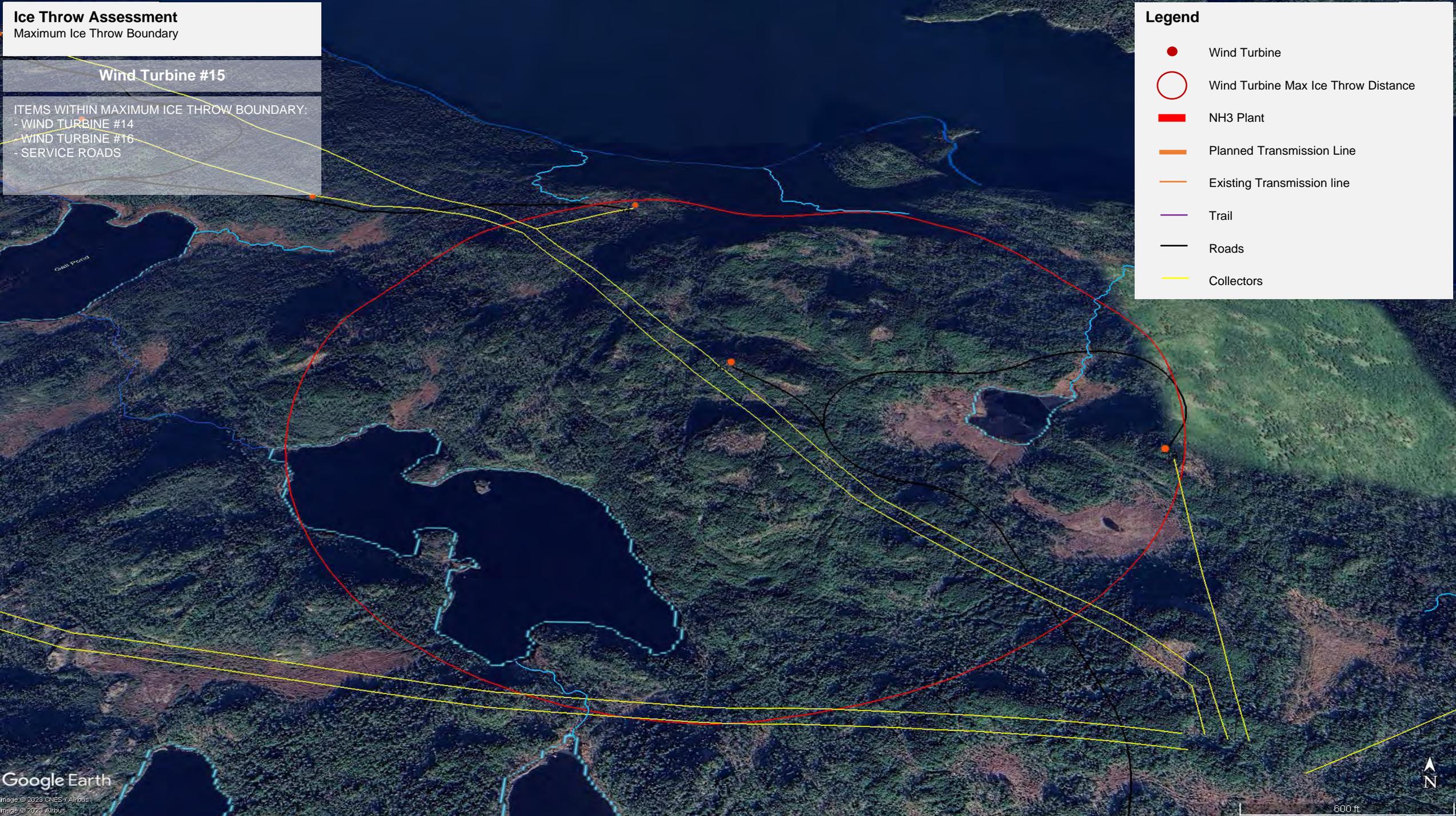
Maximum Ice Throw Boundary

Wind Turbine #15

- ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- WIND TURBINE #14
 - WIND TURBINE #16
 - SERVICE ROADS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment

Maximum Ice Throw Boundary

Wind Turbine #16

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:

- WIND TURBINE #15
- SERVICE ROADS
- POSSIBLE PLANNED SUBSTATION / COLLECTORS TIE IN

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



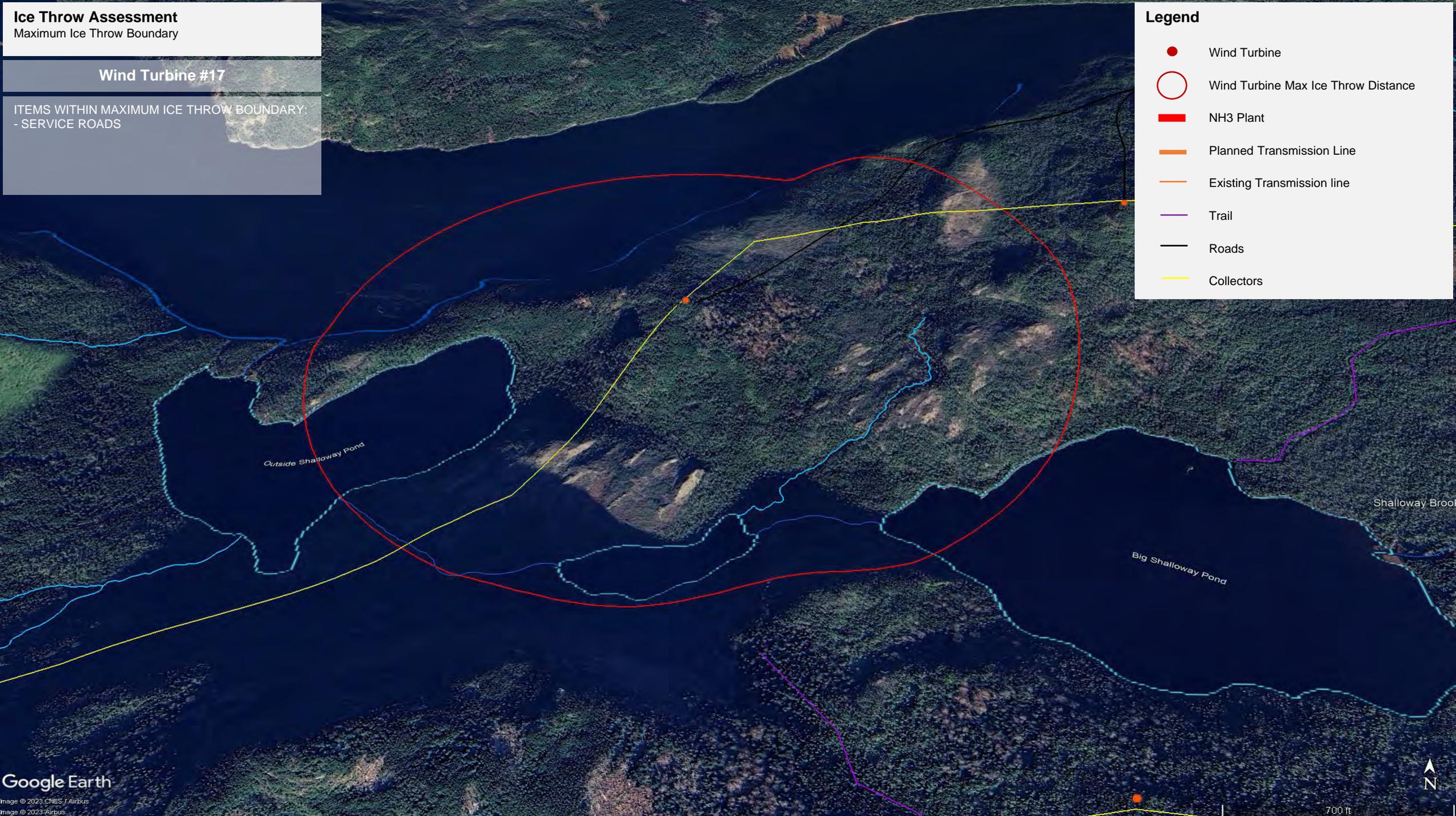
Ice Throw Assessment
Maximum Ice Throw Boundary

Wind Turbine #17

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- SERVICE ROADS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment

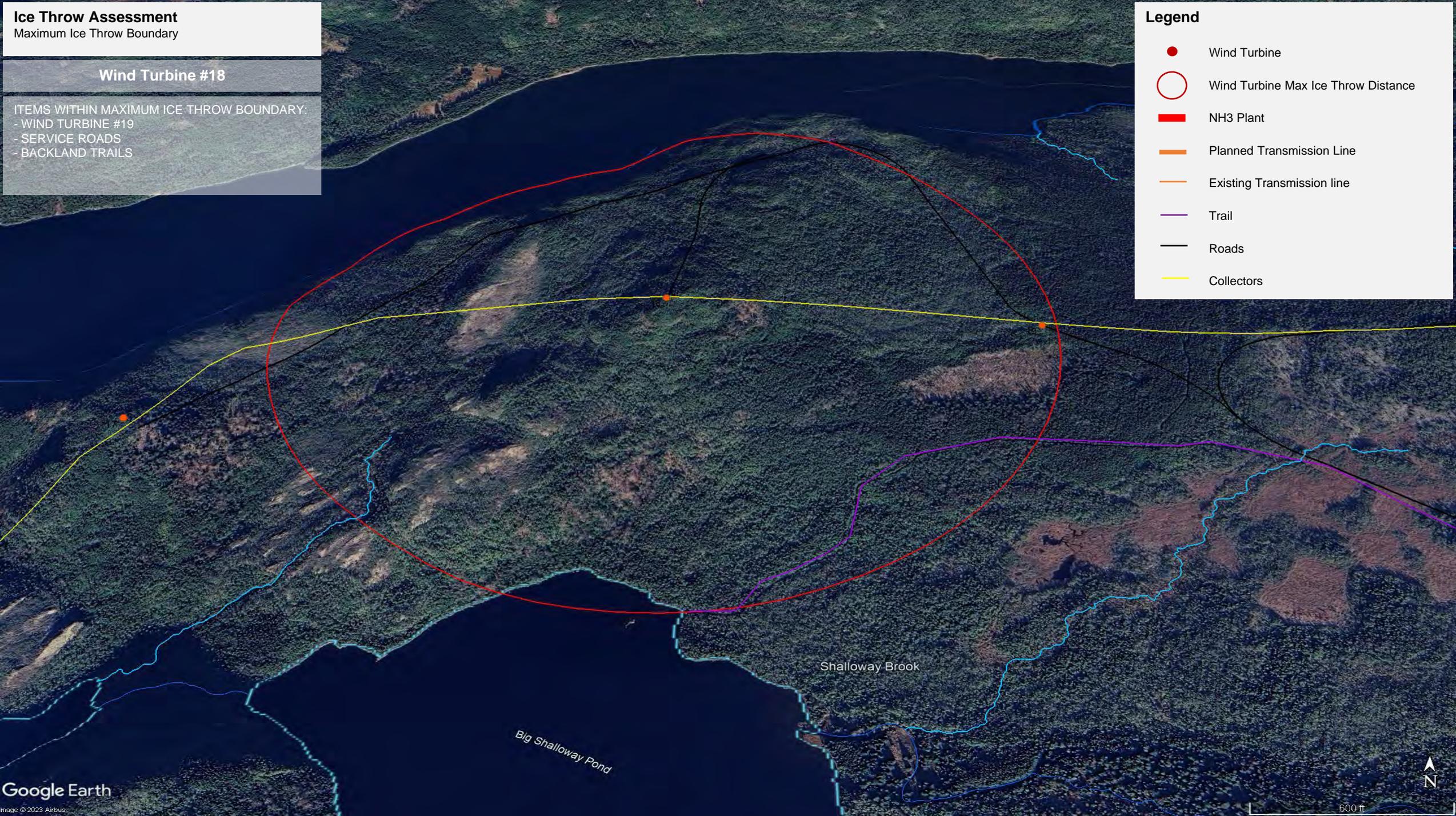
Maximum Ice Throw Boundary

Wind Turbine #18

- ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- WIND TURBINE #19
 - SERVICE ROADS
 - BACKLAND TRAILS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- ▬ Planned Transmission Line
- ▬ Existing Transmission line
- ▬ Trail
- ▬ Roads
- ▬ Collectors



Ice Throw Assessment

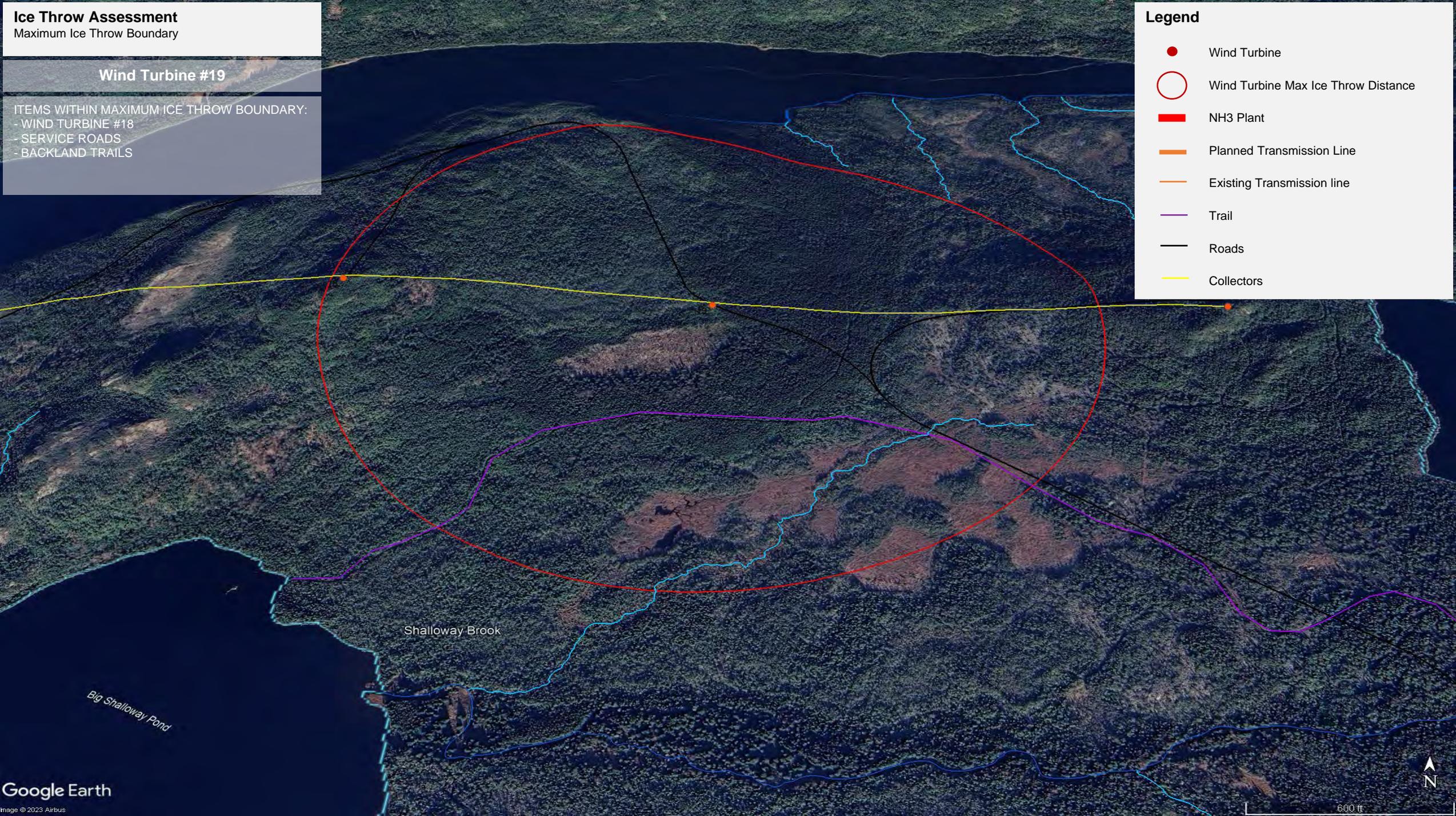
Maximum Ice Throw Boundary

Wind Turbine #19

- ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- WIND TURBINE #18
 - SERVICE ROADS
 - BACKLAND TRAILS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- ▬ Planned Transmission Line
- ▬ Existing Transmission line
- ▬ Trail
- ▬ Roads
- ▬ Collectors



Shalloway Brook

Big Shalloway Pond



Ice Throw Assessment

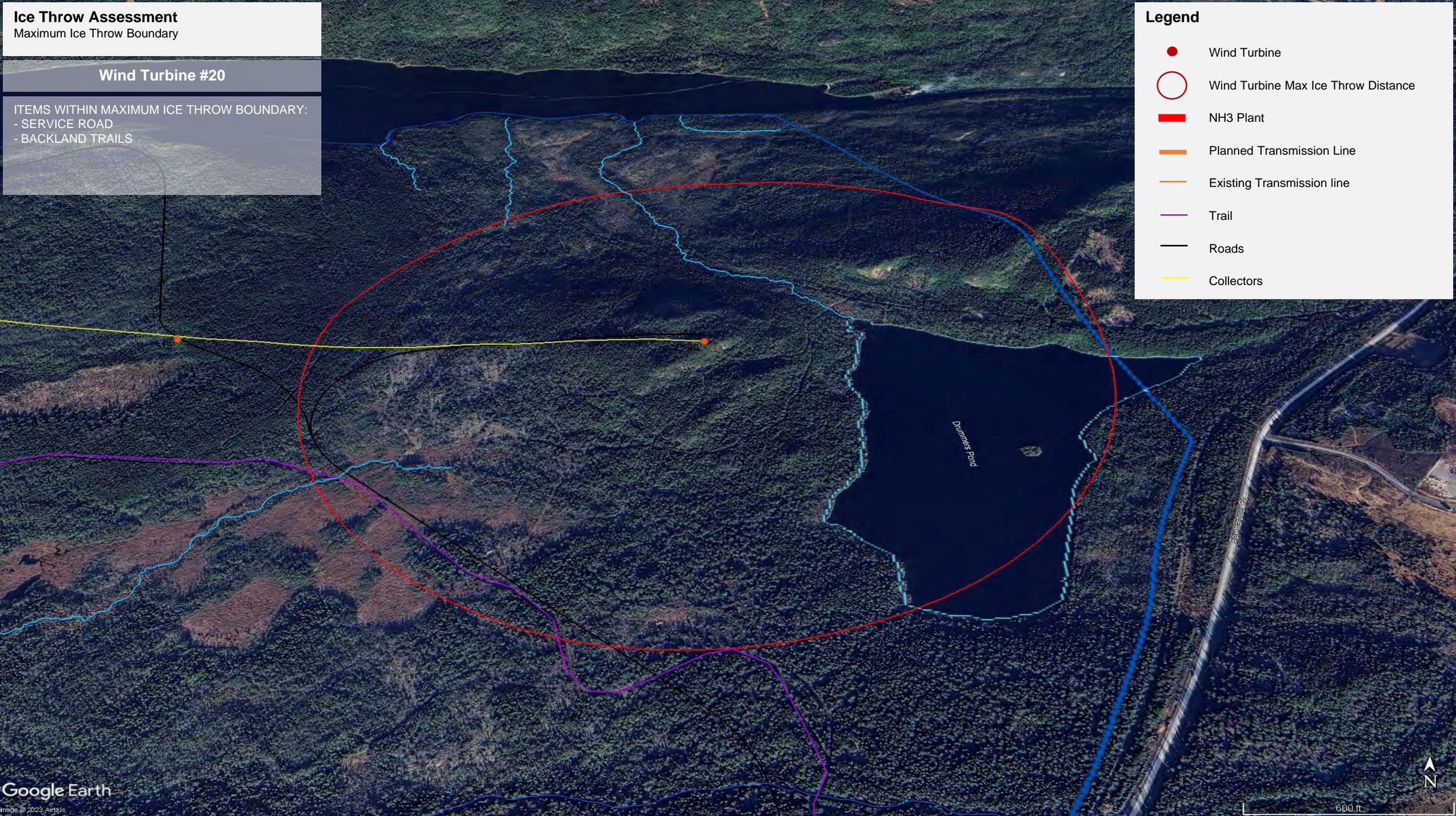
Maximum Ice Throw Boundary

Wind Turbine #20

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- SERVICE ROAD
- BACKLAND TRAILS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



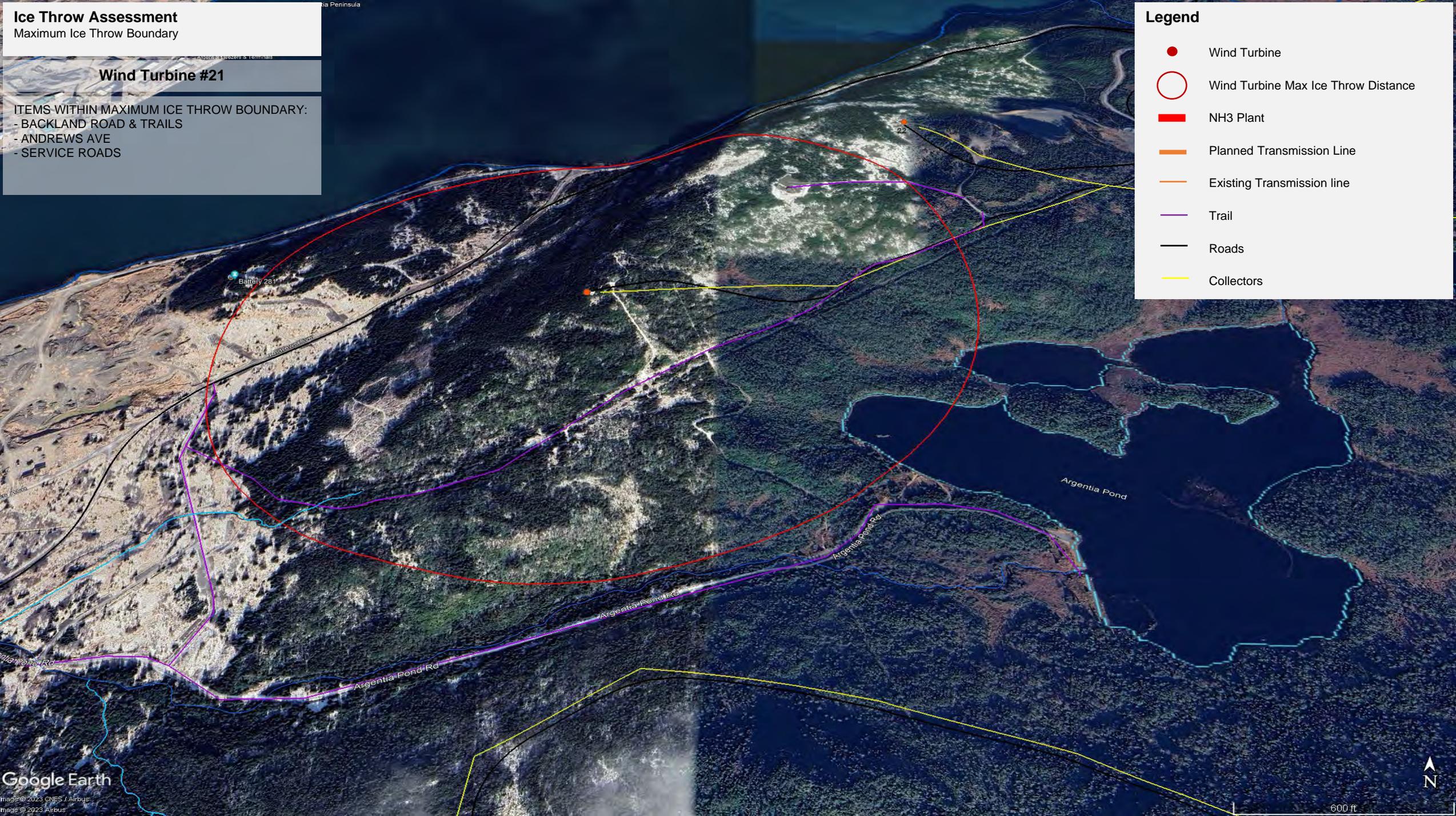
Ice Throw Assessment
Maximum Ice Throw Boundary

Wind Turbine #21

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
 - BACKLAND ROAD & TRAILS
 - ANDREWS AVE
 - SERVICE ROADS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



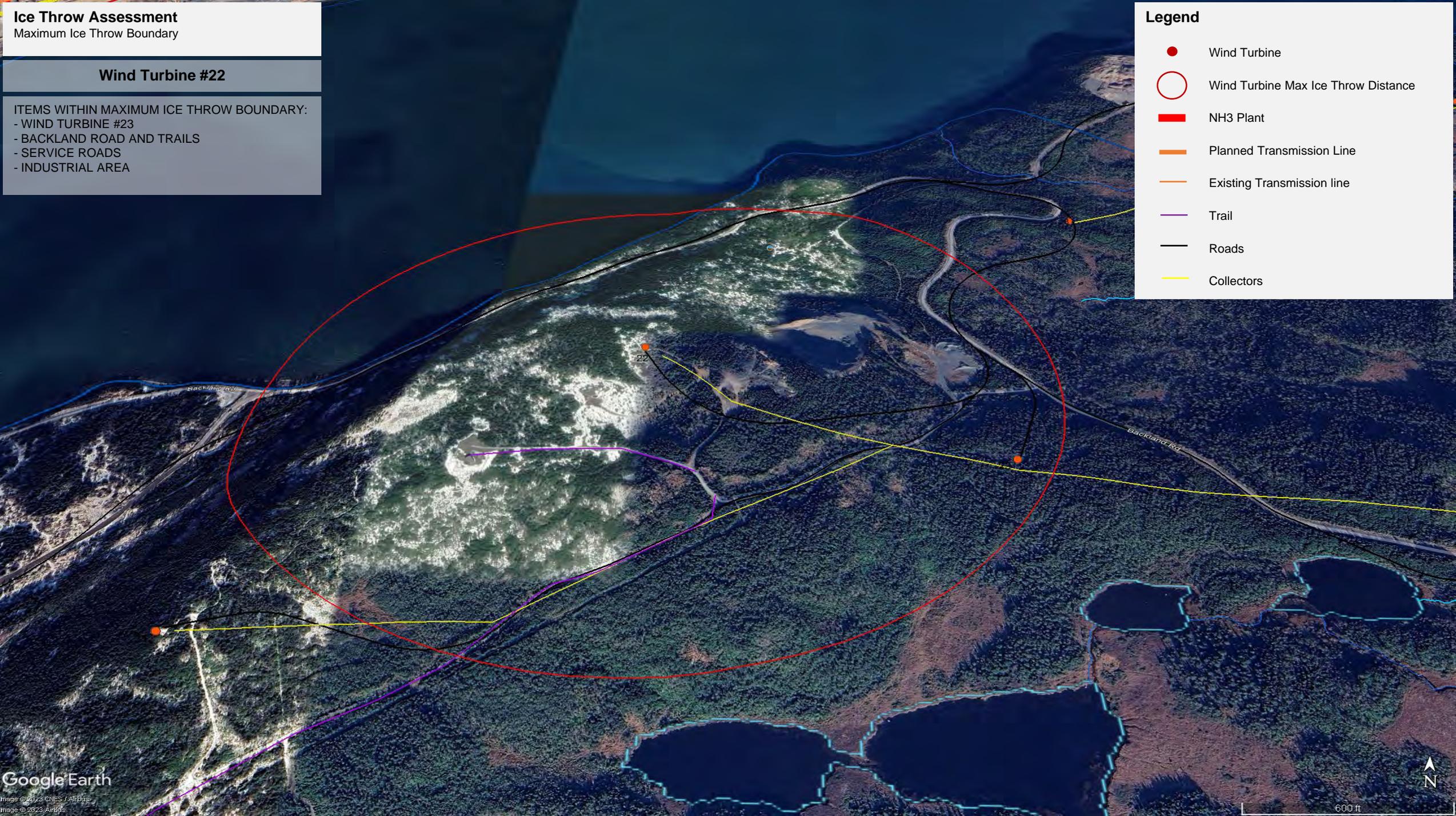
Ice Throw Assessment
Maximum Ice Throw Boundary

Wind Turbine #22

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- WIND TURBINE #23
- BACKLAND ROAD AND TRAILS
- SERVICE ROADS
- INDUSTRIAL AREA

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment

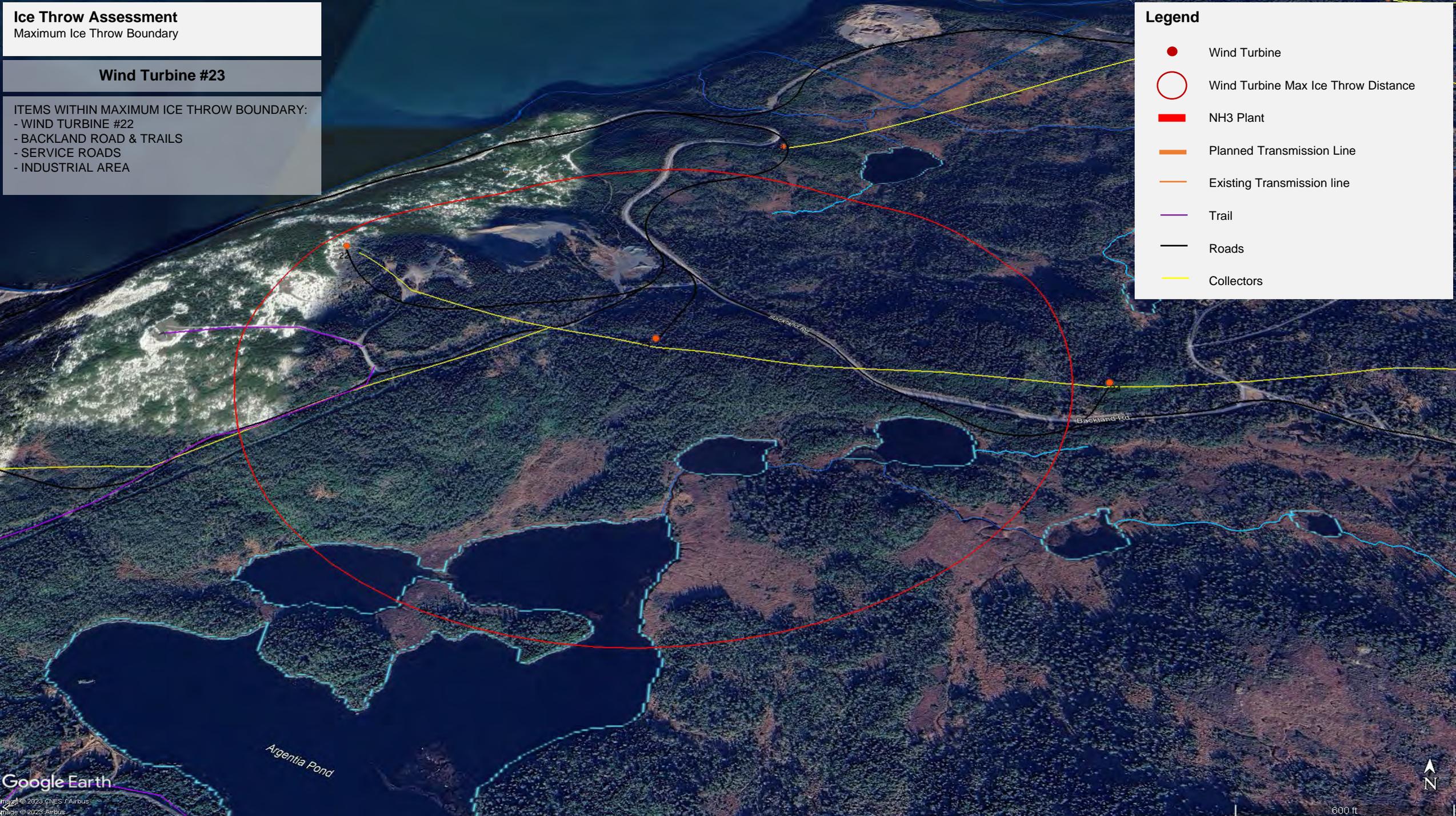
Maximum Ice Throw Boundary

Wind Turbine #23

- ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- WIND TURBINE #22
 - BACKLAND ROAD & TRAILS
 - SERVICE ROADS
 - INDUSTRIAL AREA

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



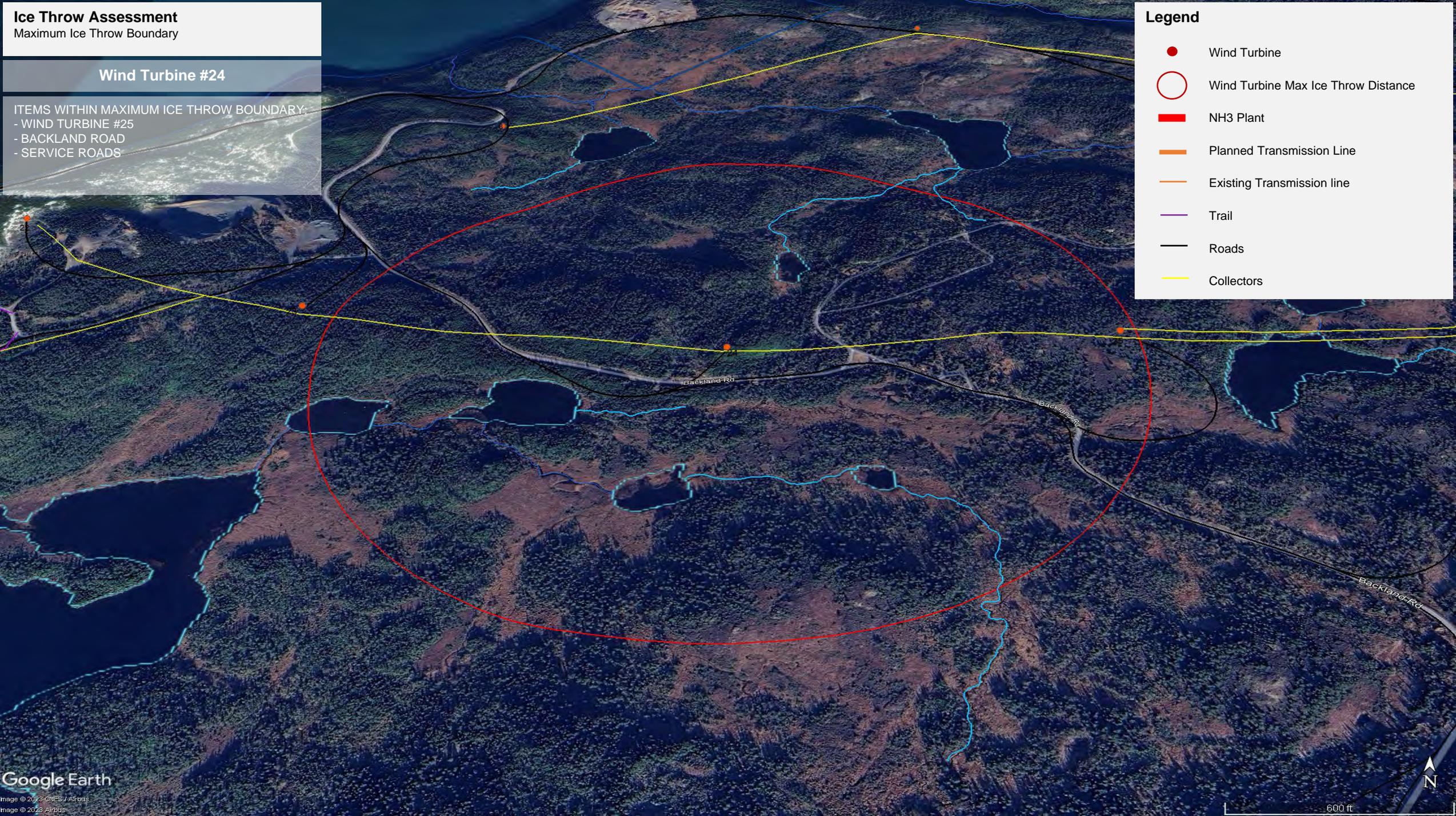
Ice Throw Assessment
Maximum Ice Throw Boundary

Wind Turbine #24

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
 - WIND TURBINE #25
 - BACKLAND ROAD
 - SERVICE ROADS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment

Maximum Ice Throw Boundary

Wind Turbine #25

- ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- WIND TURBINE #24
 - BACKLAND ROAD
 - SERVICE ROADS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment

Maximum Ice Throw Boundary

Wind Turbine #26

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- SERVICE ROADS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment

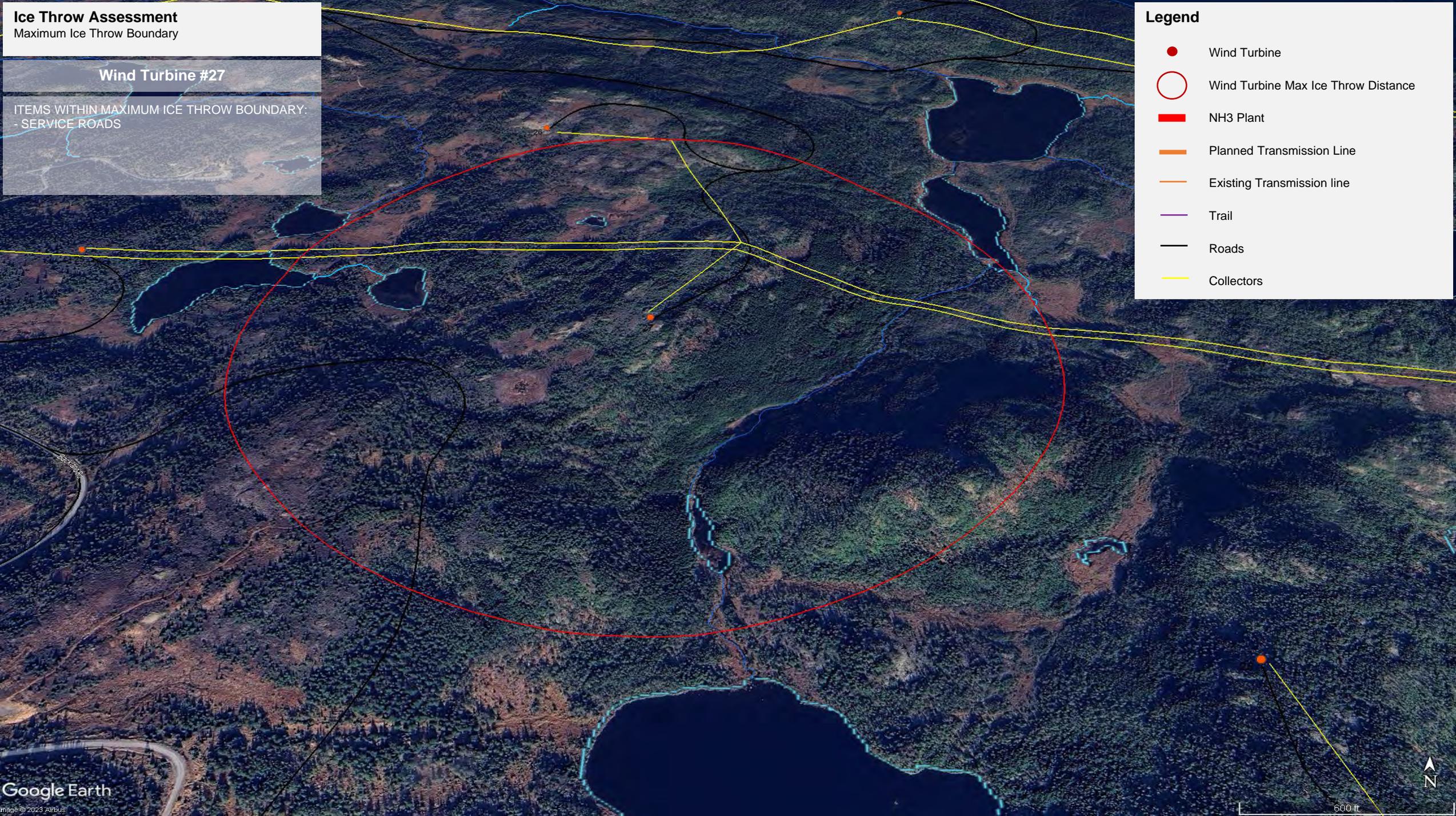
Maximum Ice Throw Boundary

Wind Turbine #27

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- SERVICE ROADS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- ▬ Planned Transmission Line
- ▬ Existing Transmission line
- ▬ Trail
- ▬ Roads
- ▬ Collectors



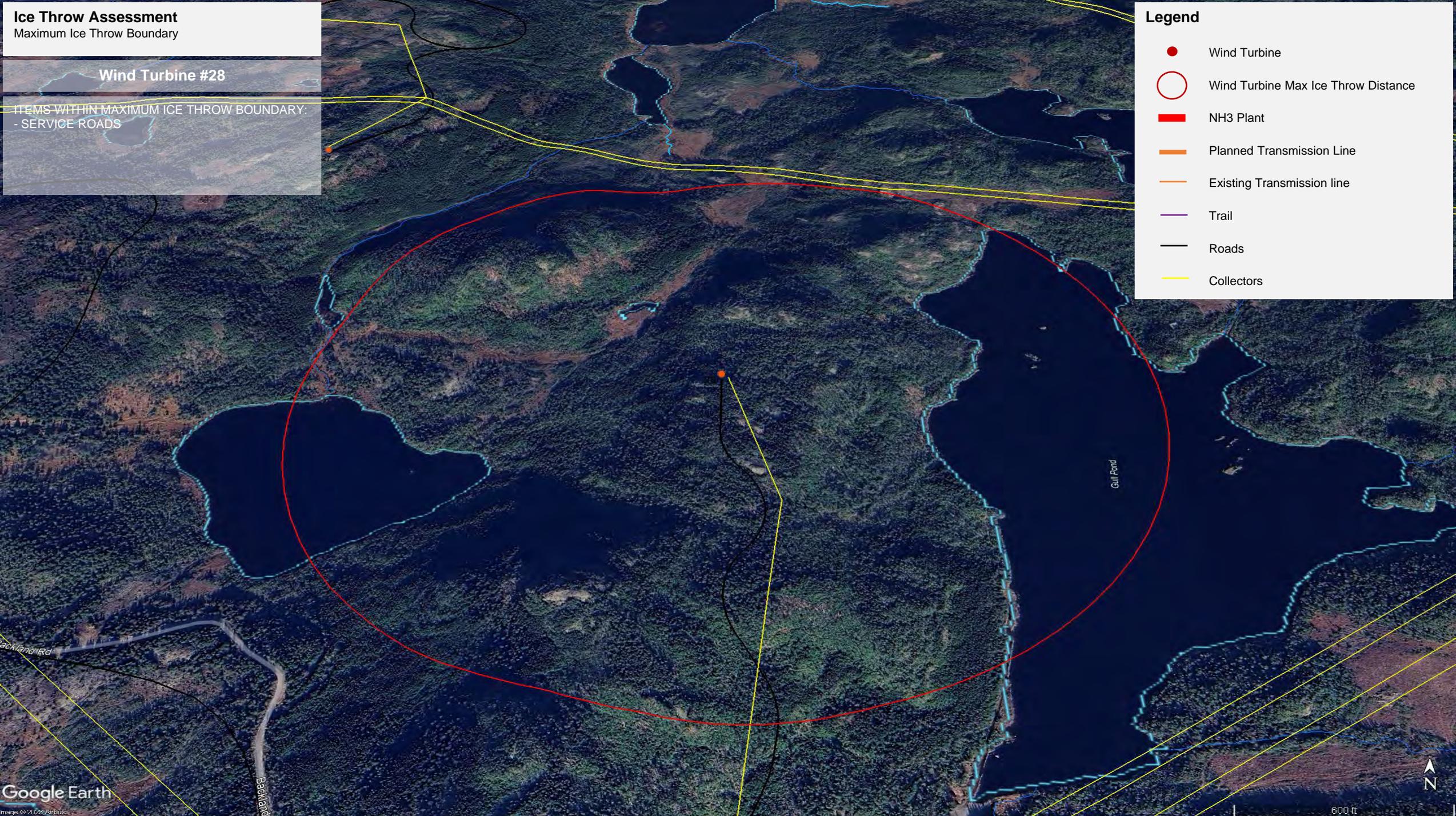
Ice Throw Assessment
Maximum Ice Throw Boundary

Wind Turbine #28

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- SERVICE ROADS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment

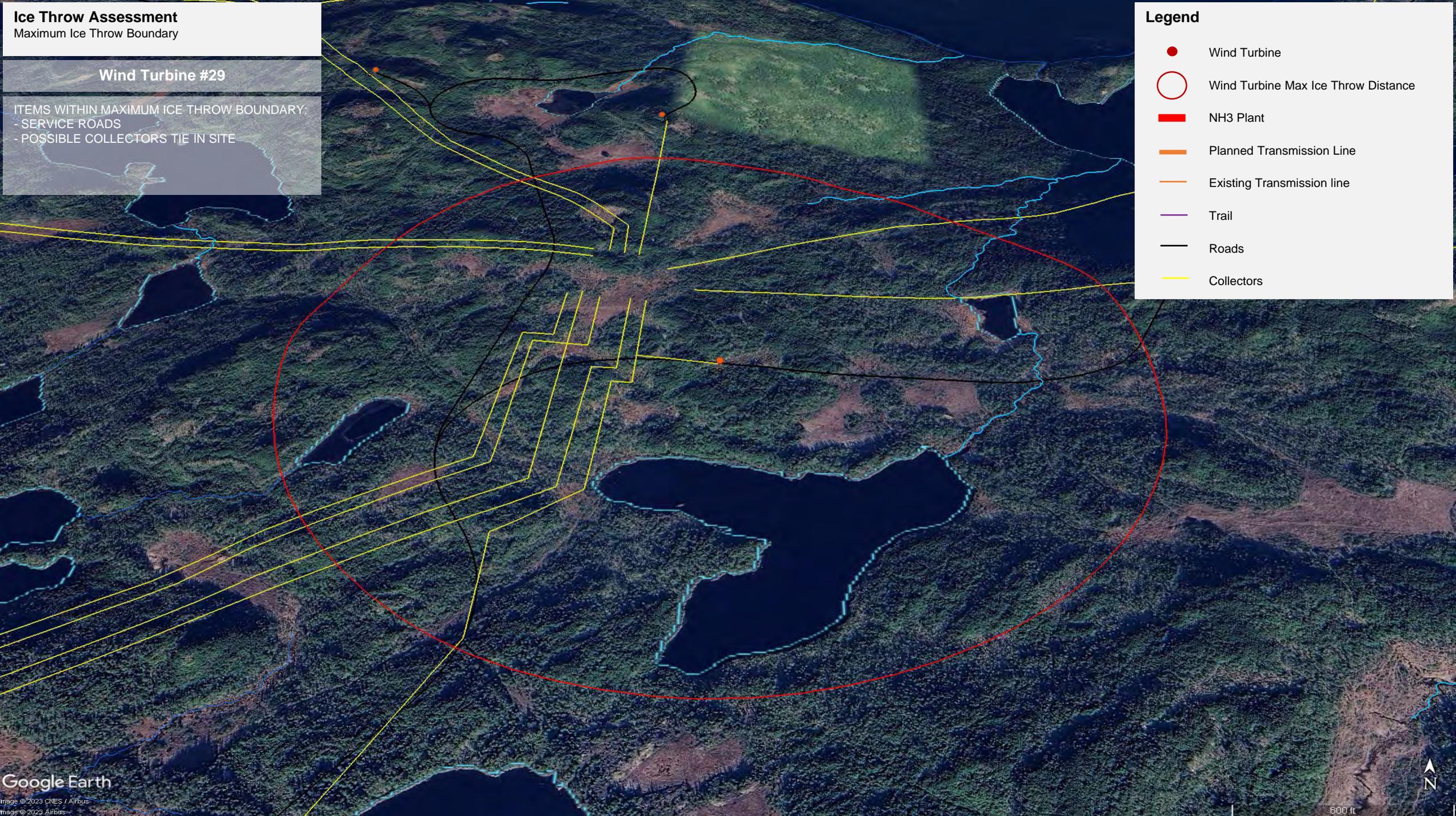
Maximum Ice Throw Boundary

Wind Turbine #29

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- SERVICE ROADS
- POSSIBLE COLLECTORS TIE IN SITE

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment

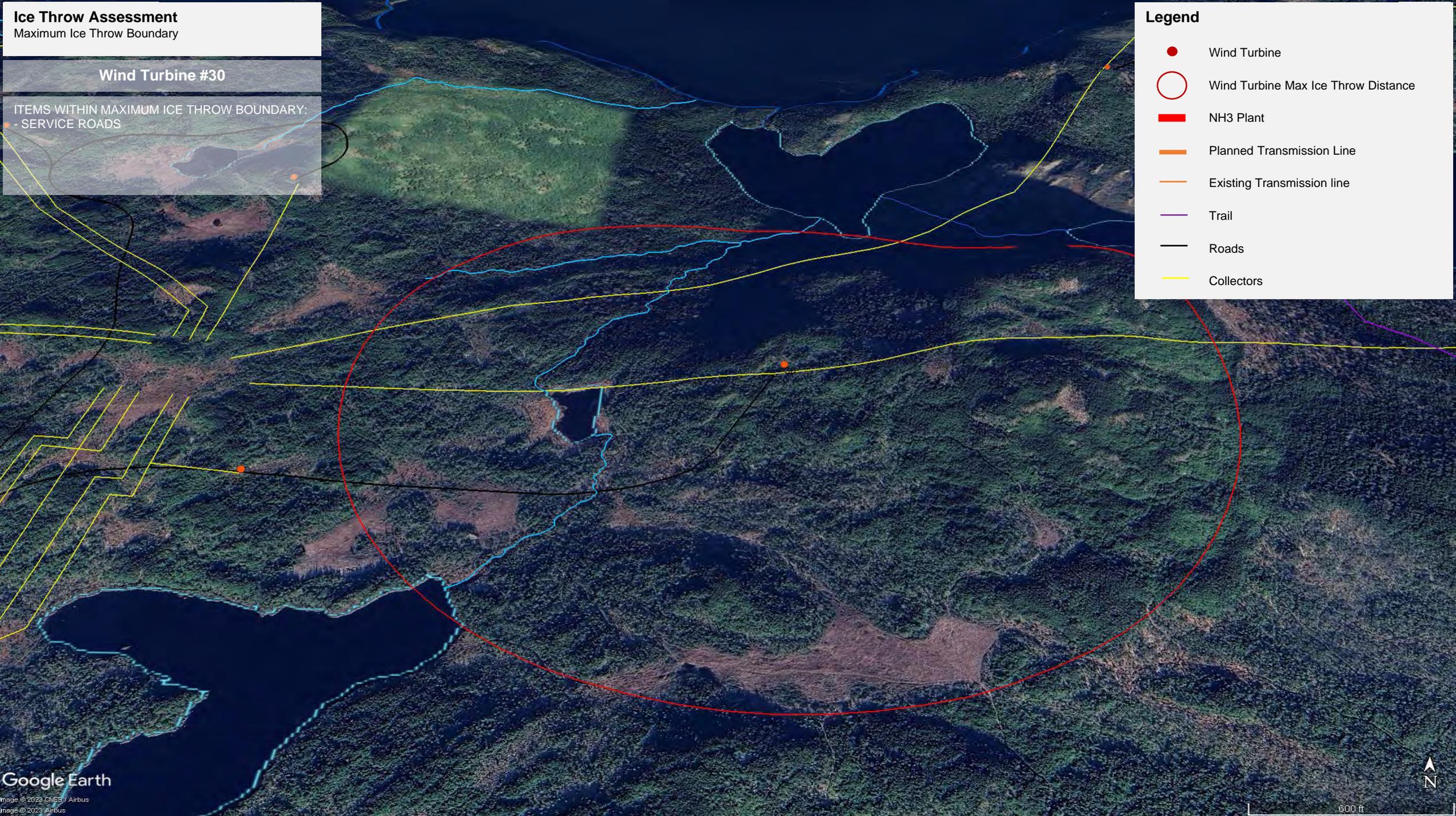
Maximum Ice Throw Boundary

Wind Turbine #30

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- SERVICE ROADS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- ▬ Planned Transmission Line
- ▬ Existing Transmission line
- ▬ Trail
- ▬ Roads
- ▬ Collectors



Ice Throw Assessment

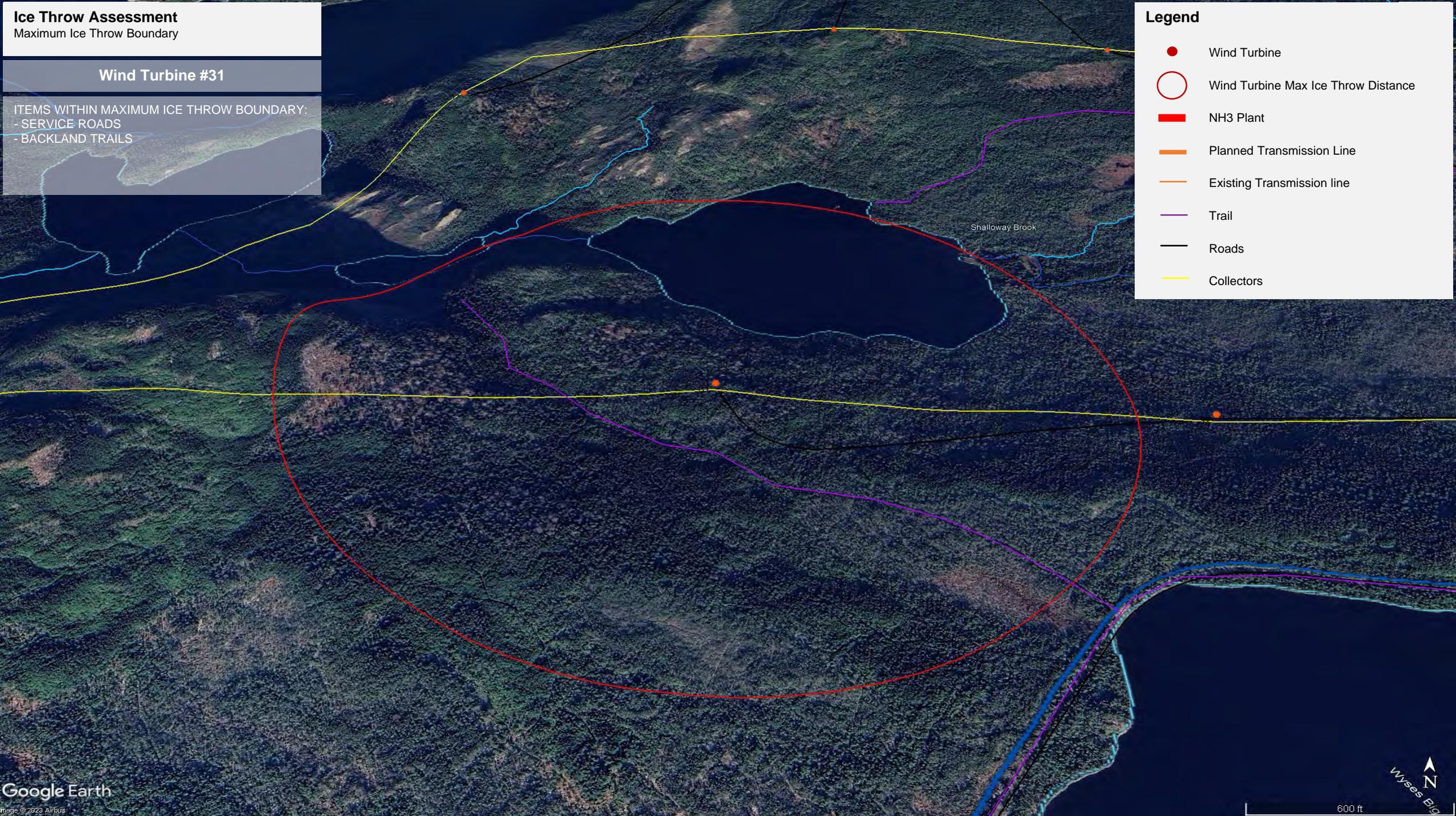
Maximum Ice Throw Boundary

Wind Turbine #31

- ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- SERVICE ROADS
 - BACKLAND TRAILS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment

Maximum Ice Throw Boundary

Wind Turbine #32

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:

- WIND TURBINE #33
- SERVICE ROADS
- BACKLAND TRAILS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- ▬ Planned Transmission Line
- ▬ Existing Transmission line
- ▬ Trail
- ▬ Roads
- ▬ Collectors



Ice Throw Assessment

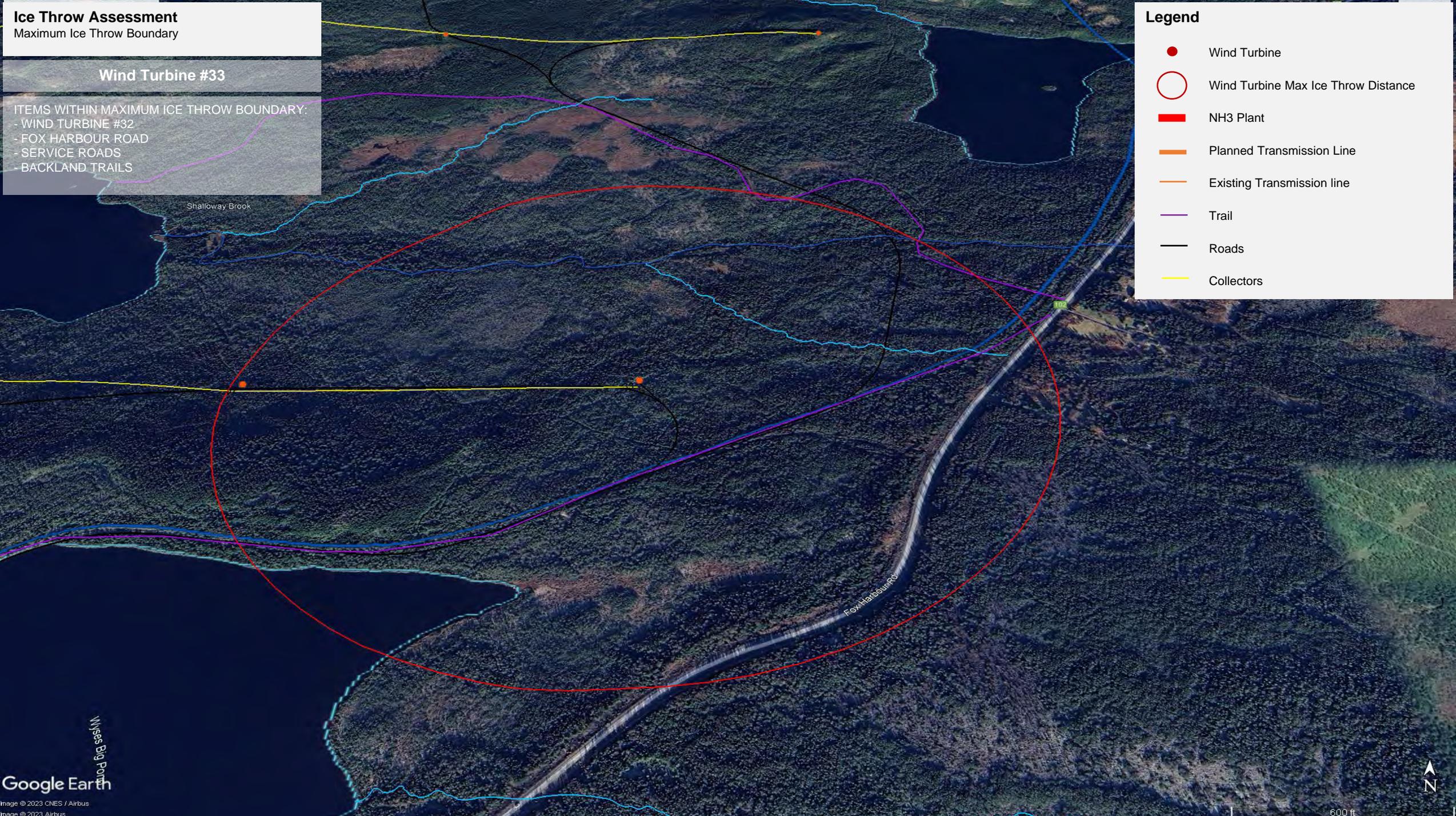
Maximum Ice Throw Boundary

Wind Turbine #33

- ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- WIND TURBINE #32
 - FOX HARBOUR ROAD
 - SERVICE ROADS
 - BACKLAND TRAILS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- ▬ Planned Transmission Line
- ▬ Existing Transmission line
- ▬ Trail
- ▬ Roads
- ▬ Collectors



Ice Throw Assessment

Maximum Ice Throw Boundary

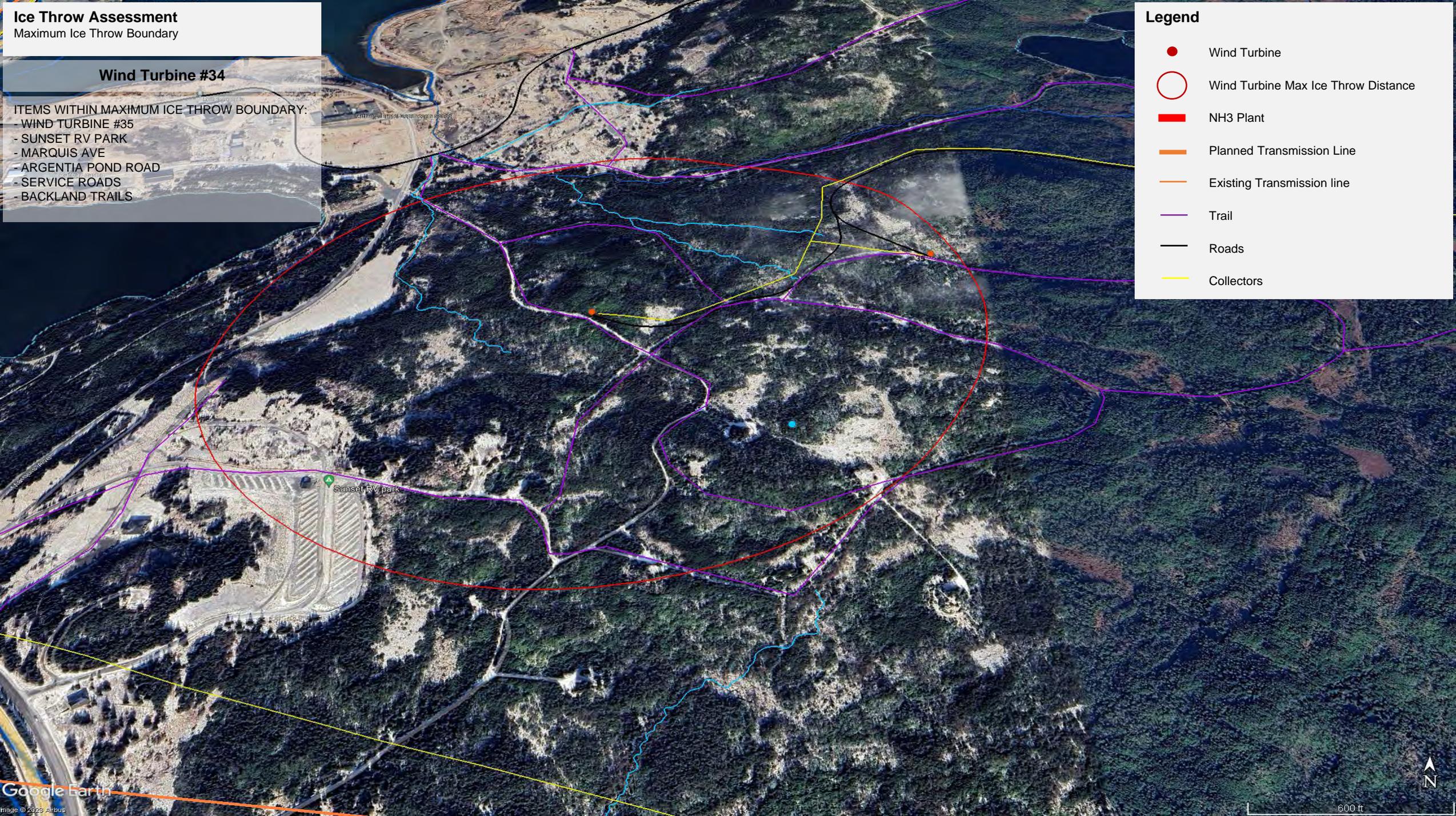
Wind Turbine #34

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:

- WIND TURBINE #35
- SUNSET RV PARK
- MARQUIS AVE
- ARGENTIA POND ROAD
- SERVICE ROADS
- BACKLAND TRAILS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment

Maximum Ice Throw Boundary

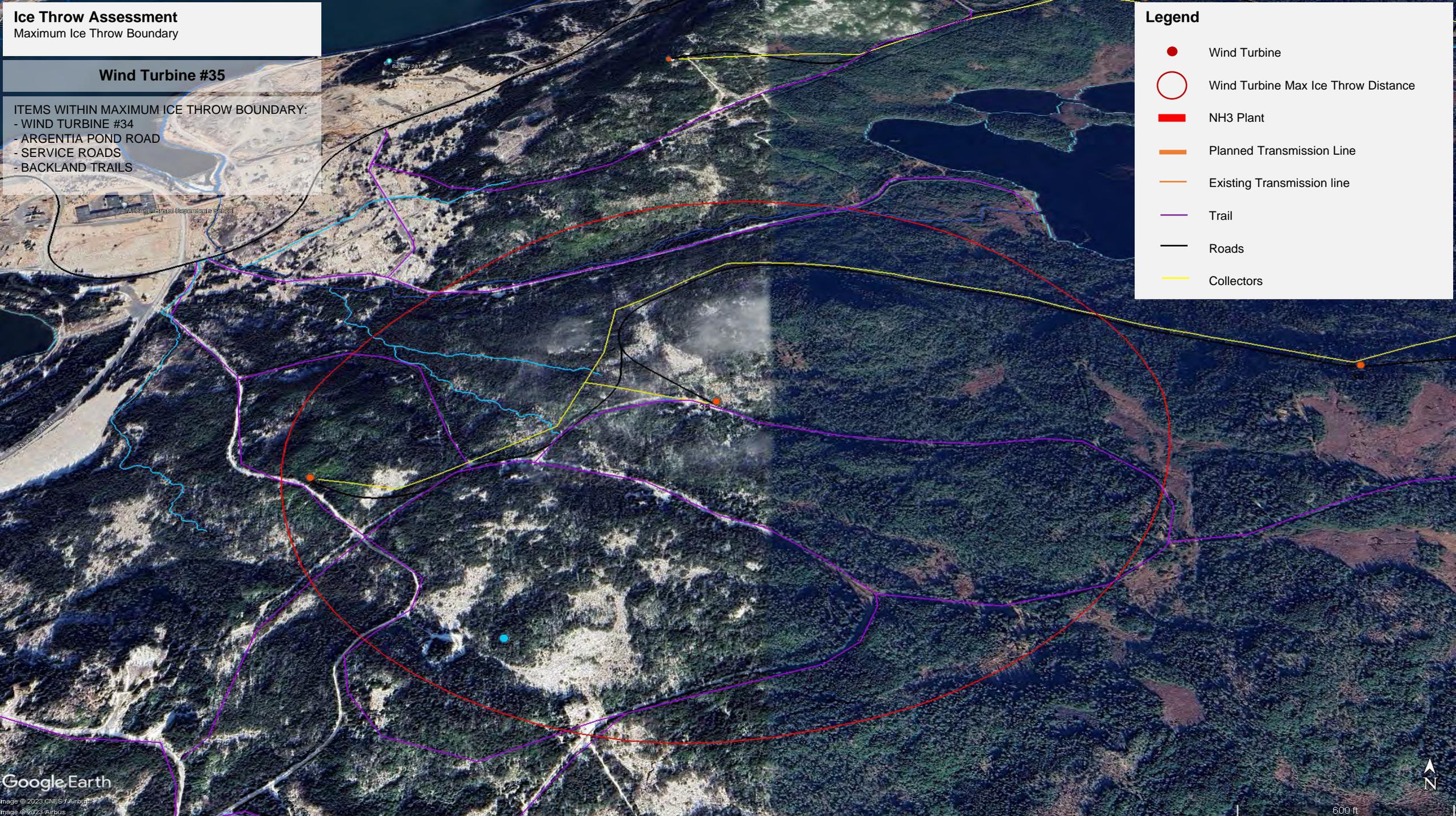
Wind Turbine #35

- ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- WIND TURBINE #34
 - ARGENTIA POND ROAD
 - SERVICE ROADS
 - BACKLAND TRAILS



Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- ▬ Planned Transmission Line
- ▬ Existing Transmission line
- ▬ Trail
- ▬ Roads
- ▬ Collectors



Ice Throw Assessment

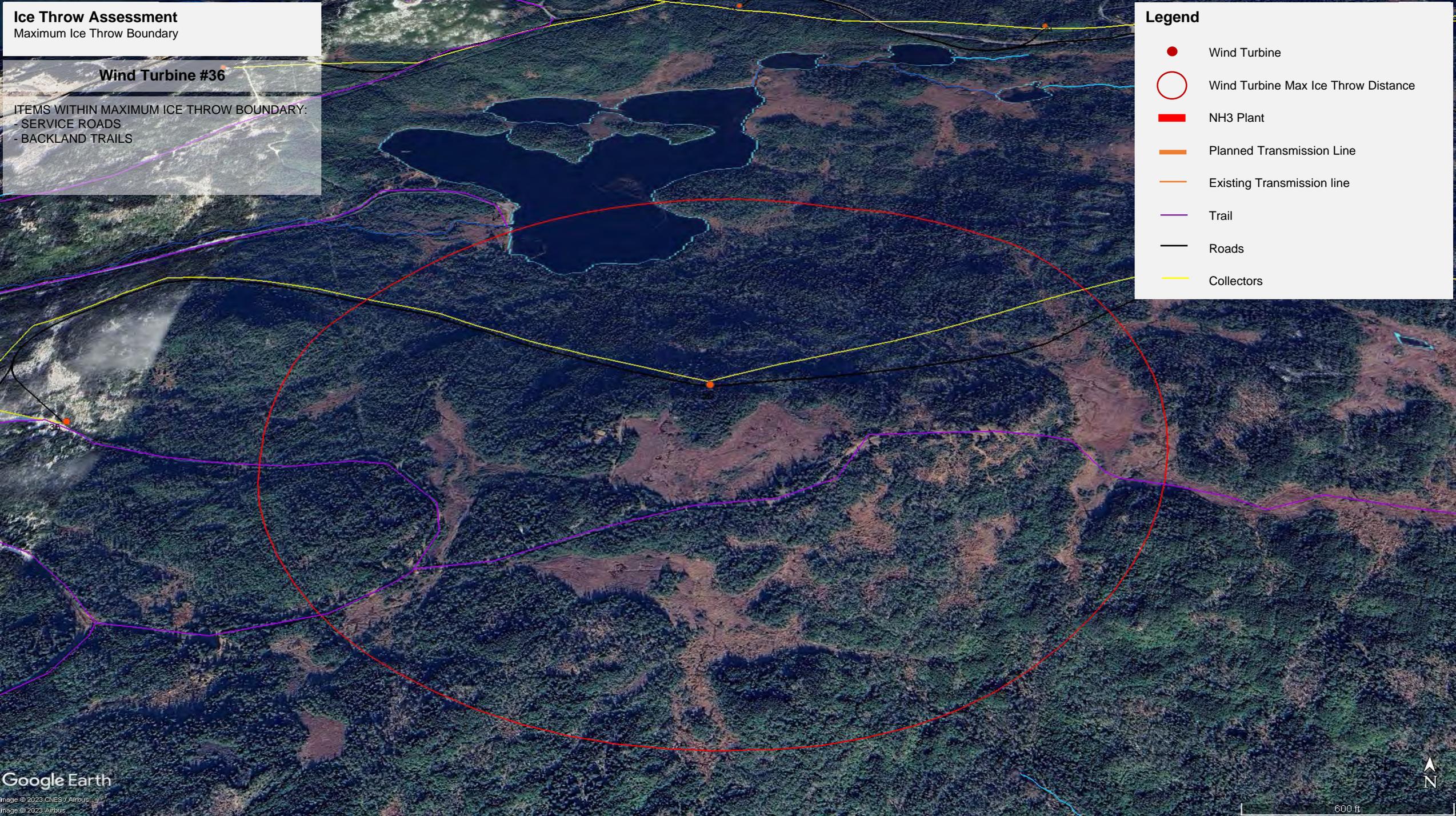
Maximum Ice Throw Boundary

Wind Turbine #36

- ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- SERVICE ROADS
 - BACKLAND TRAILS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment

Maximum Ice Throw Boundary

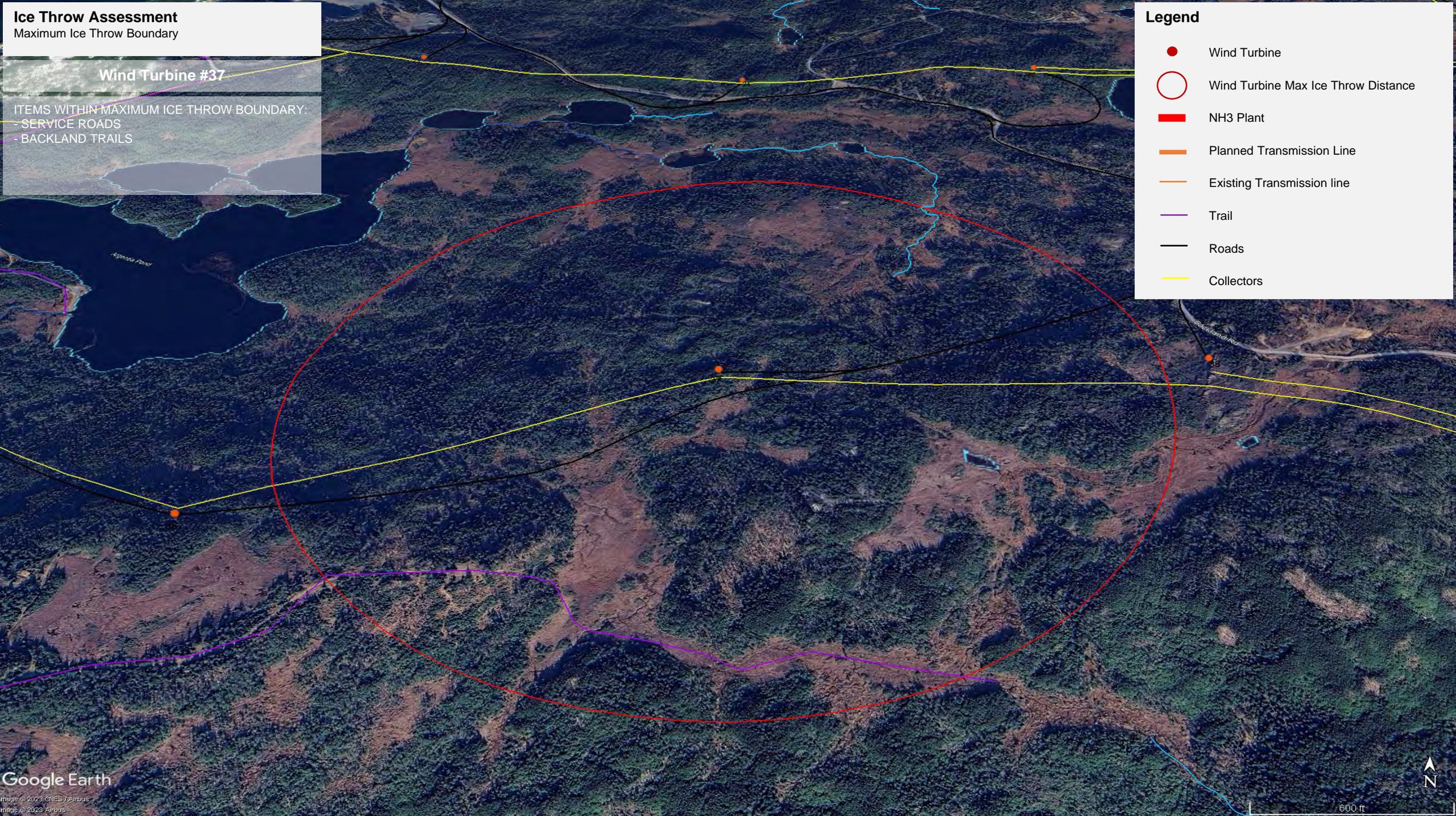
Wind Turbine #37

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:

- SERVICE ROADS
- BACKLAND TRAILS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- ▬ Planned Transmission Line
- ▬ Existing Transmission line
- ▬ Trail
- ▬ Roads
- ▬ Collectors



Ice Throw Assessment

Maximum Ice Throw Boundary

Wind Turbine #38

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:

- WIND TURBINE #39
- BACKLAND ROAD
- SERVICE ROADS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment
Maximum Ice Throw Boundary

Wind Turbine #39

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- WIND TURBINE #38
- BACKLAND ROAD
- SERVICE ROADS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- ▬ Planned Transmission Line
- ▬ Existing Transmission line
- ▬ Trail
- ▬ Roads
- ▬ Collectors



Ice Throw Assessment

Maximum Ice Throw Boundary

Wind Turbine #40

- ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- BACKLAND ROAD
 - SERVICE ROADS
 - POWER TRANSMISSION LINE

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



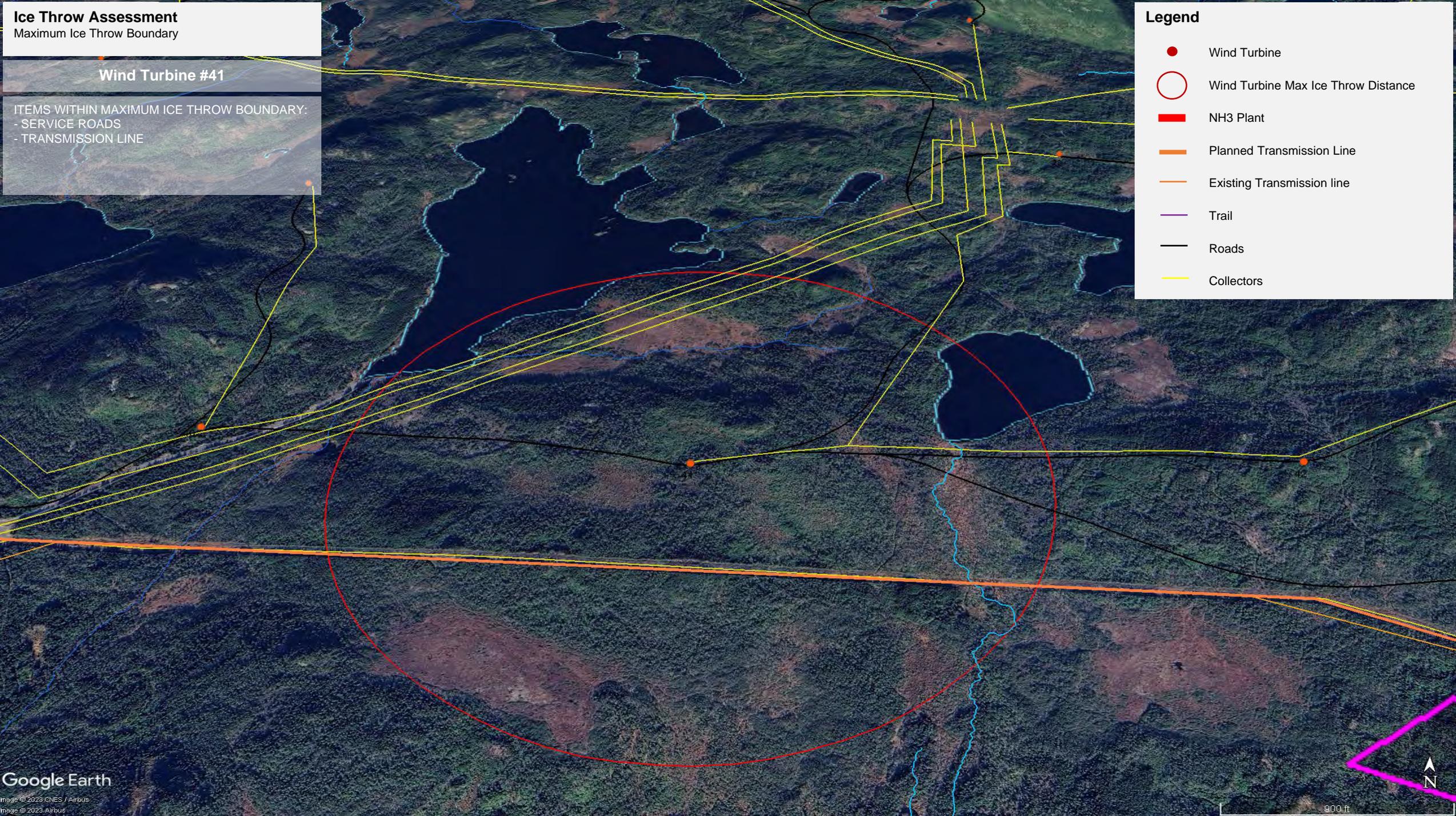
Ice Throw Assessment
Maximum Ice Throw Boundary

Wind Turbine #41

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- SERVICE ROADS
- TRANSMISSION LINE

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- ▬ Planned Transmission Line
- ▬ Existing Transmission line
- ▬ Trail
- ▬ Roads
- ▬ Collectors



Ice Throw Assessment

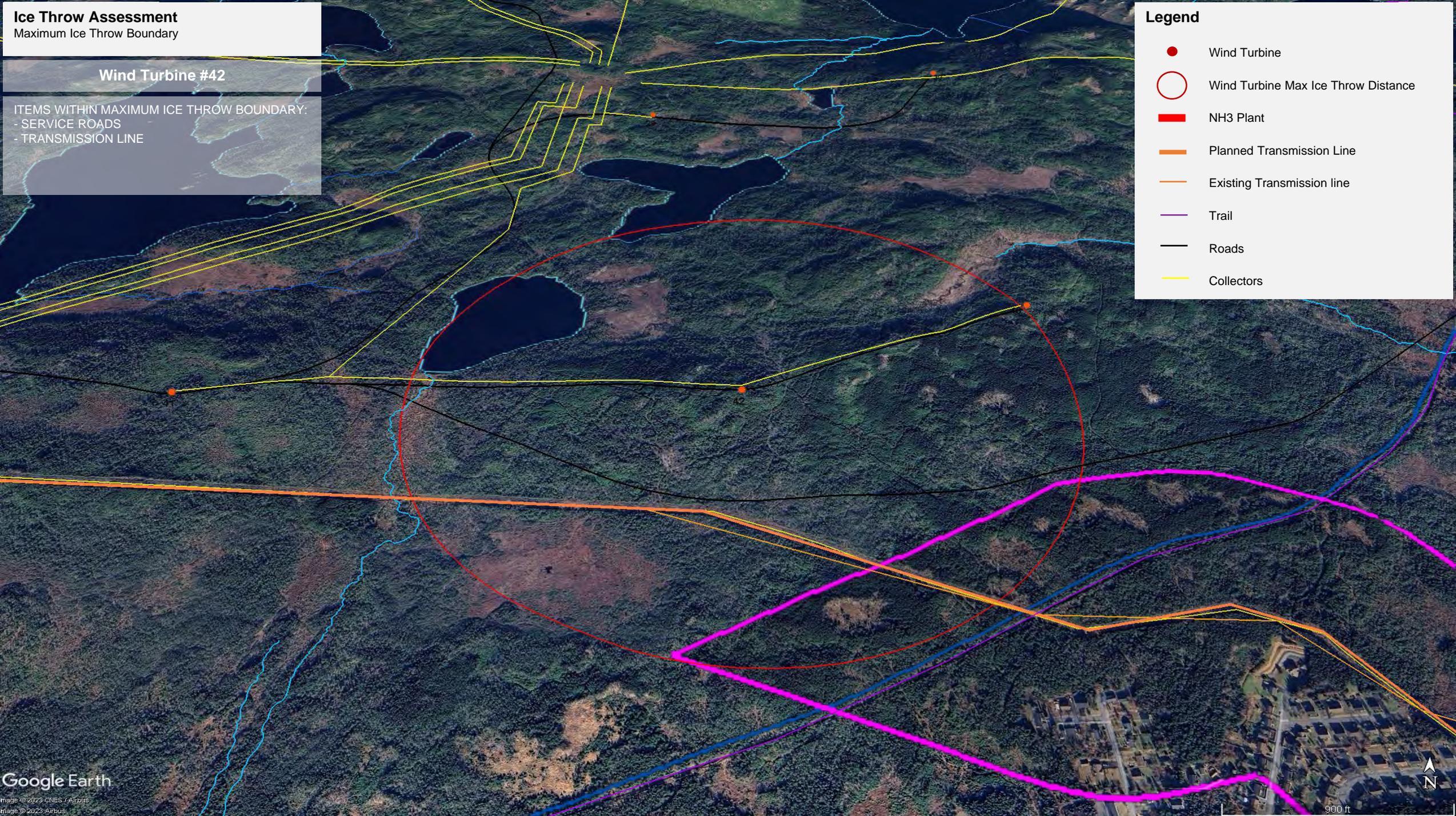
Maximum Ice Throw Boundary

Wind Turbine #42

- ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- SERVICE ROADS
 - TRANSMISSION LINE

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment

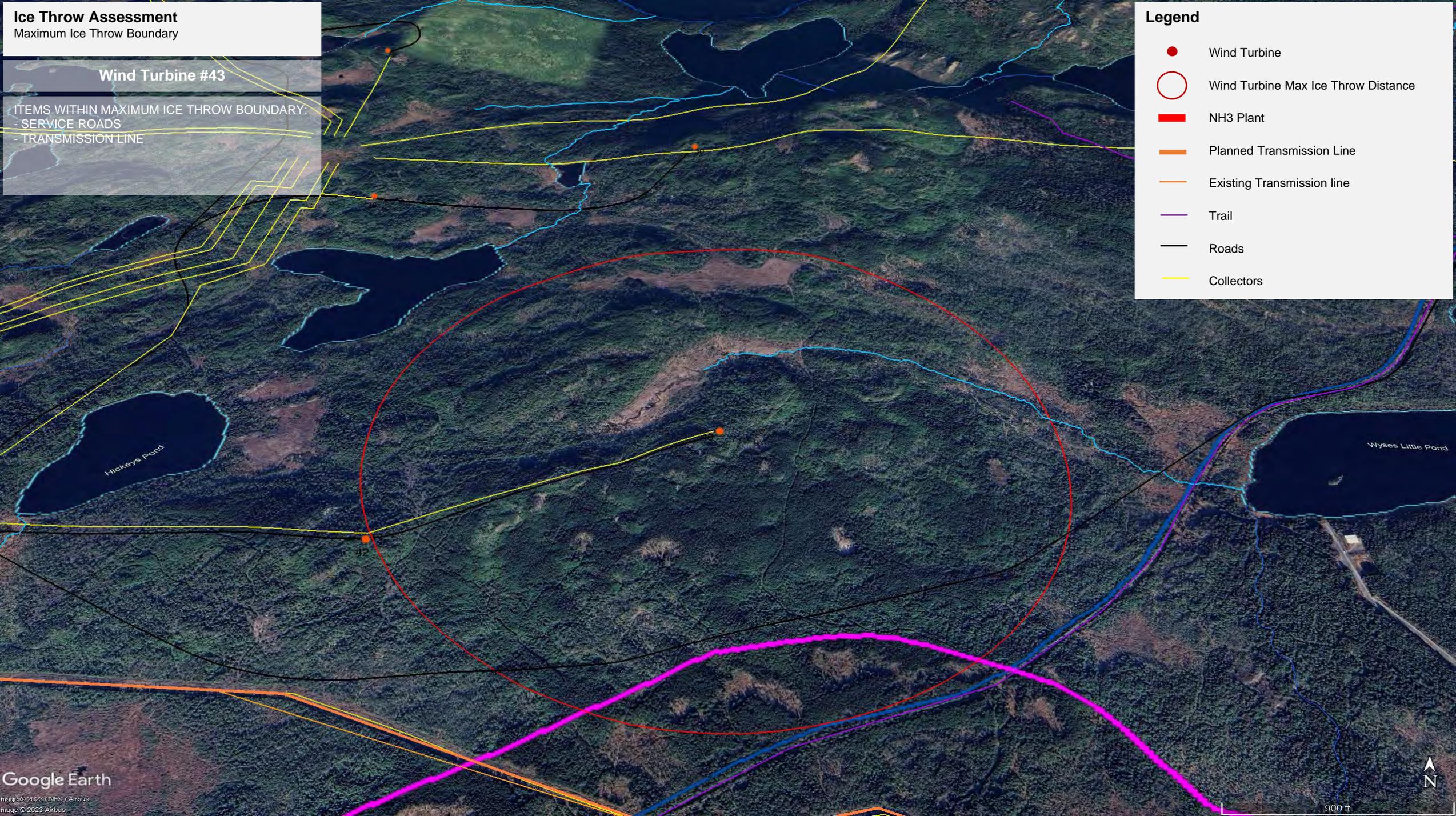
Maximum Ice Throw Boundary

Wind Turbine #43

- ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- SERVICE ROADS
 - TRANSMISSION LINE

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment

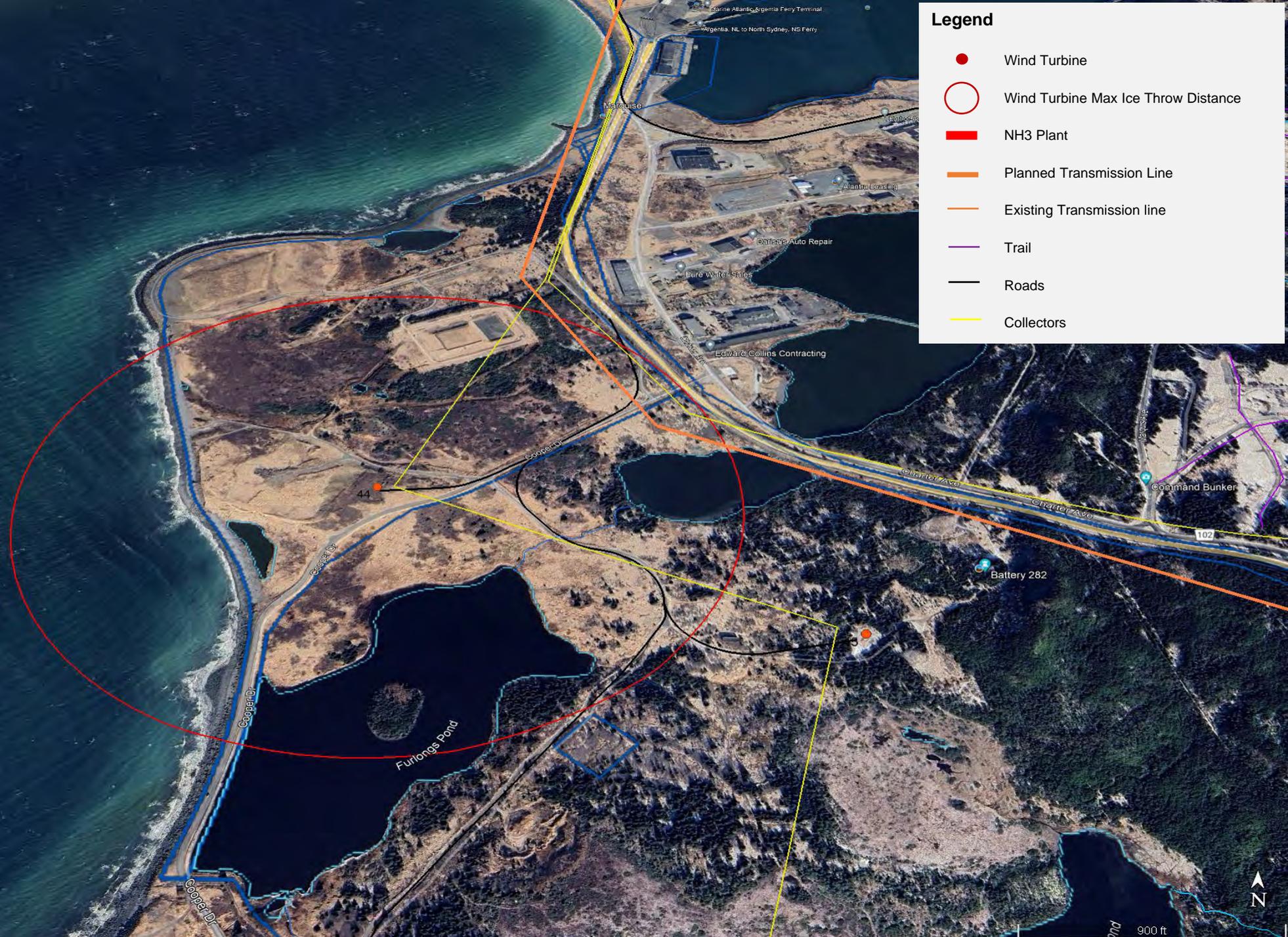
Maximum Ice Throw Boundary

Wind Turbine #44

- ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- INDUSTRIAL AREA
 - COOPER DRIVE
 - TRANSMISSION LINE
 - SERVICE ROAD

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment

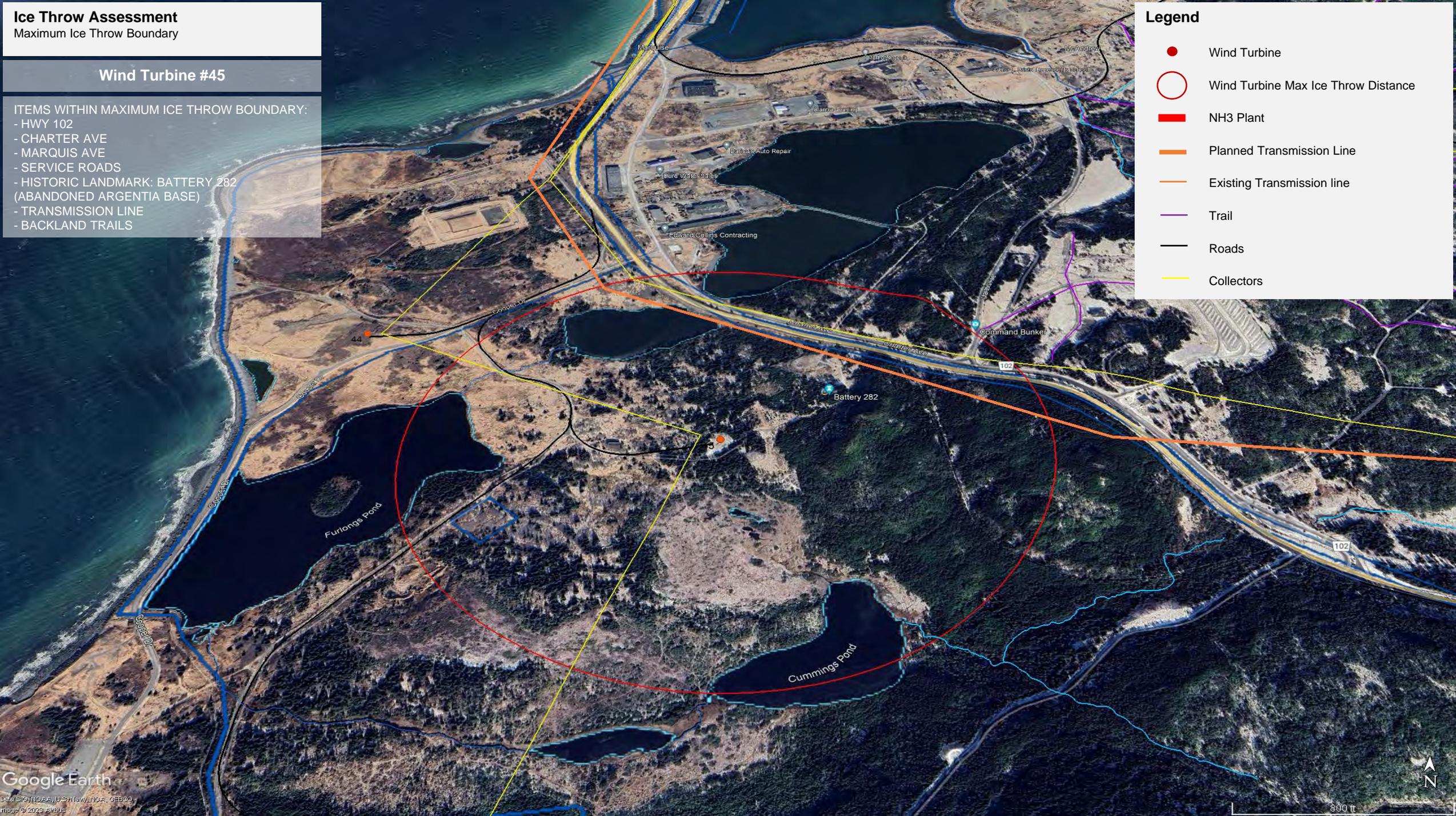
Maximum Ice Throw Boundary

Wind Turbine #45

- ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- HWY 102
 - CHARTER AVE
 - MARQUIS AVE
 - SERVICE ROADS
 - HISTORIC LANDMARK: BATTERY 282 (ABANDONED ARGENTIA BASE)
 - TRANSMISSION LINE
 - BACKLAND TRAILS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



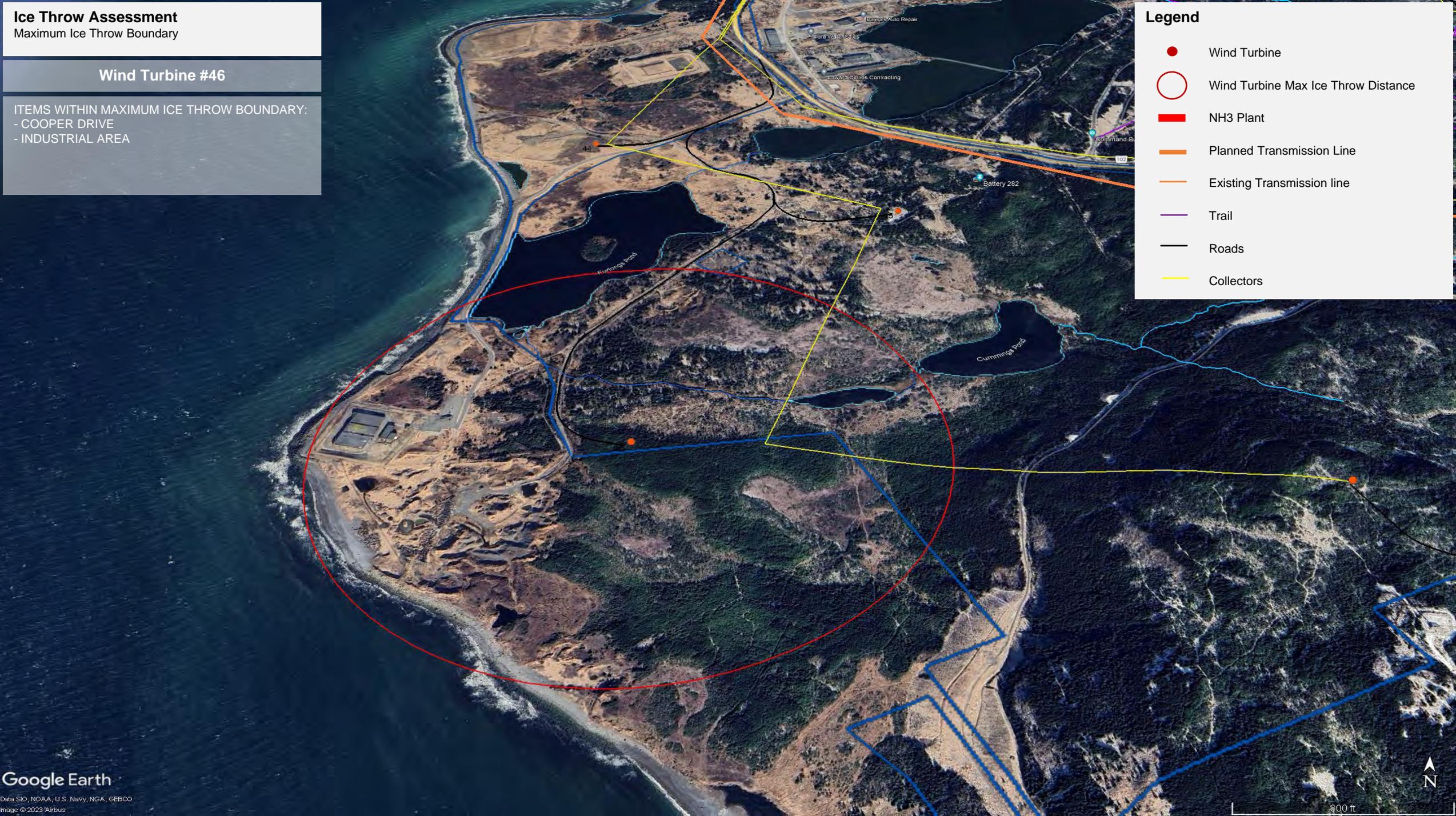
Ice Throw Assessment
Maximum Ice Throw Boundary

Wind Turbine #46

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- COOPER DRIVE
- INDUSTRIAL AREA

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



Ice Throw Assessment
Maximum Ice Throw Boundary

Wind Turbine #47

ITEMS WITHIN MAXIMUM ICE THROW BOUNDARY:
- SERVICE ROADS

Legend

- Wind Turbine
- Wind Turbine Max Ice Throw Distance
- NH3 Plant
- Planned Transmission Line
- Existing Transmission line
- Trail
- Roads
- Collectors



