

4.0 Public Engagement

4.1 Overview

Stakeholders play an important role in the energy transition within Nova Scotia and should be actively involved in clean energy projects. The Proponent aims to facilitate inclusive public processes that encourage input throughout Project development. This section describes Natural Forces' approach to outreach and engagement, including both past and future activities, and reflects feedback received from the community regarding the proposed Project.

Core to the Proponents approach to engagement is that the concerns expressed by community members are not only addressed but that they become supportive of the Project and the immense benefits that renewable energy can bring through local economic benefits, energy security through source diversity, and a reduction in air pollutants from carbon-based energy sources. The Proponent recognizes that traditional forms of information sharing are not always successful and has developed, over several years, various alternative and creative forms of engagement to reach all stakeholders involved in the Project.

Engagement with the public and other stakeholders began in early 2021. Throughout Project development, Natural Forces has and will continue to meet with various community stakeholders, local businesses, and members of municipal, provincial, and federal government agencies. These communications have been important to build relationships with stakeholders early in Project development and to ensure alignment with regulations and community needs. Natural Forces has also assembled a stakeholder list to which regular updates on Project status are sent in the form of newsletters.

4.2 Community Overview

4.2.1 Closest Communities

Upper Falmouth, Falls Lake, Vaughn and Smith's Corner are the communities that are located closest to the Project site. These neighborhoods consist of a mix of year-round residents and seasonal cottagers. The Smith's Lake and Vaughn areas are home to several subdivisions constructed by the same developer and run by Homeowners' Associations.

4.2.2 Businesses

Major industries in Hants County include natural resources, manufacturing and hospitality, with the majority of businesses located in the Windsor area. Most likely to benefit from the project are local skilled trades, supply and hospitality businesses.

Businesses in the immediate Project area are few and consist of gas stations, a campground, plant nurseries, corner stores and a winery. Some industrial warehouses exist on the outskirts of the area.

4.2.3 Elected Officials

The Project is in the constituency of Hants West, represented in the Nova Scotia Legislature by Melissa Sheehy-Richard. Windsor and the immediate Project area fall in West Hants Regional Municipality. The municipality is divided into eleven districts and is led by a Mayor (currently represented by Mayor

Abraham Zebian). The project is located in District 7, Vaughn – Upper Falmouth, and is represented by Councillor Ed Sherman.

4.2.4 Recreation

The community is home to the South West Hants Fire Station and accompanying hall. There are various hiking trails in the area, some of which are maintained by the West Hants Trails Association.

The Project site is actively being used for forestry purposes, with several existing logging roads. Through community consultation, we have learned that some of the Project and surrounding land is used by community residents for hunting, hiking and snowmobiling purposes.

4.2.5 Nearby Wind Projects

As the Hants County and Annapolis Valley area have abundant wind resources, there are existing wind projects in the area. In general, community members have mentioned that they are accustomed to having wind projects in their community.

Wind projects nearest to the site include:

- The Ellershuse Wind Farm, a 10 turbine, 23.5 MW project located 29 km from the Project. This Ellershuse Wind Farm was commissioned in 2018.
- The South Canoe Wind Energy Project, a 34 turbine, 102 MW project located 30 km from the Project. This Sound Canoe Wind Energy Project was commissioned in 2015.

4.3 Community and Public Engagement

Natural Forces employs a fulltime Communications and Government Relations Manager as well as several development staff who are dedicated to stakeholder engagement and local outreach. The Proponent has a flexible, place-based approach to engagement that ensures the consideration of a wide range of interests and allows the maximization of community participation. In-person engagement is always conducted in accordance with COVID-19 regulations and guidance.

The following section lists and describes the activities the Proponent has and intends to use throughout the lifetime of the Project. This section includes a non-exhaustive list of the tools that will be used to consult and engage with residents, stakeholders and Rightsholders.

Maintaining flexibility with consultation and engagement is vital to address current and future concerns in an appropriate manner that best suits the needs of the community.

Various forms of communication have been, and will be used to engage stakeholders and are detailed in the following section and summarized in **Table 3**. Examples of some of the print materials used for consultation are included in **Appendix A**.

TABLE 3: STAKEHOLDER COMMUNICATION CHANNEL MATRIX

Channel	Community Members	Economic & Special Interest Groups	Elected Officials
Email	X	X	X
Telephone	X	X	X
Newsletters	X	X	
Website	X	X	
Meetings and Presentations	X	X	X

4.3.1 Stakeholder Identification

The first step of the consultation process is the identification of stakeholders. This important step provides a better understanding of the people living within the community and leads to a better understanding of how the Project could impact the community. Properly identifying the stakeholders ensures those who will be affected by the Project have access to information regarding the Project and opportunities to discuss and voice any questions or concerns that may arise. In the early stages of development, the Proponent undertook comprehensive stakeholder identification. Stakeholders were identified in the following categories:

- Community Members
- Economic and Special Interest Groups
- Elected Officials

Each phase of the Project will have differing objectives when it comes to community and public engagement for each of these three categories of stakeholders. These objectives are summarized in **Table 4**.

TABLE 4: PROJECT PHASE OBJECTIVES FOR COMMUNITY AND PUBLIC ENGAGEMENT

Phase	Community Members	Economic & Special Interest Groups	Elected Officials
Early development	<ul style="list-style-type: none"> • Inform of the Project • Bring forward concerns and questions the community members may have about the Project • Address or seek to address any concerns through development activities and studies being conducted 	<ul style="list-style-type: none"> • Inform of the Project • Discuss any concerns from the business perspective and discuss potential synergies in working together on the Project 	<ul style="list-style-type: none"> • Inform and educate on the Project and the Proponent • Form relationships with local leaders and become a resource for municipal leaders when their constituents ask questions • Listen to better understand the community where the

Phase	Community Members	Economic & Special Interest Groups	Elected Officials
Mid-development	<ul style="list-style-type: none"> • Continue informing on the Project progress and the results of the studies conducted on site • Inform local community members about opportunities for the public to participate in the Project • Continue to address or seek to address any concerns or questions arising 	<ul style="list-style-type: none"> • Inform on Project progress • Address concerns • Build a list of local suppliers interested in the Project 	<p>project is located and understand its members</p> <ul style="list-style-type: none"> • Follow advice from municipal leaders on how best to approach informing and engaging with community members • Inform on Project progress • Continue to keep communication lines open • Build on the relationship established • Continue to offer our expertise as a resource for and to local leaders and community members
Pre-construction	<ul style="list-style-type: none"> • Inform on Project progress and on any activities that may impact local community members • Address concerns arising before construction 	<ul style="list-style-type: none"> • Informing business owners of Project progress • Continue communication with businesses interested in supplying services or material for the Project • Provide tenders to suppliers that meet the right criteria as appropriate 	<ul style="list-style-type: none"> • Inform on the Project progress • Continue communication • Listen to concerns heard by municipal leaders • Continue to offer our expertise as a resource for and to local leaders and community members
Construction	<ul style="list-style-type: none"> • Inform on construction activities that could impact the area • Share accurate schedule for construction activities • Continue to address concerns and 	<ul style="list-style-type: none"> • Inform of the Project progress • Share accurate schedule for construction activities • Continue to address concerns and questions raised 	<ul style="list-style-type: none"> • Inform of Project progress • Share accurate schedule for construction activities

Phase	Community Members	Economic & Special Interest Groups	Elected Officials
	questions raised		
Operation	<ul style="list-style-type: none"> • Provide the opportunity to visit the Project • Inform about Project facts • Continue to address questions as they arise 	<ul style="list-style-type: none"> • Provide the opportunity to visit the Project • Inform about Project facts • Provide contact details for a project representative should any issues or questions arise 	<ul style="list-style-type: none"> • Provide the opportunity to visit the Project • Inform about Project facts • Provide contact details for a Project representative • Continue to offer expertise as a resource for and to community members and future developments

4.3.2 Public Consultation Comments Received

Through the engagement methods described in the sections below, the Proponent has received various comments, questions, and feedback on the proposed Project. These comments and the steps taken to address them are listed in Table 5.

TABLE 5 COMMENTS, QUESTIONS, AND FEEDBACK ON THE PROPOSED PROJECT.

Comment	Methods Used to Submit Comment	Methods Used Proposed to Address Comment	Summary of Response
Will the Project impact the value of my property?	<ul style="list-style-type: none"> • Open House conversation • Email 	<ol style="list-style-type: none"> 1. Discussion at open house with individuals 2. Canadian Renewable Energy Association materials on wind energy and property values provided to individuals 3. Email response to individuals 	<p>Many studies globally and throughout Canada have been conducted on this topic and have found that being located near wind turbines does not impact local property values. One such study, a review of properties in Chatham- Kent, Ontario conducted following national professional appraisal guidelines found that it was highly unlikely that a relationship exists between wind farms and the market values of rural residential real estate. These findings are consistent with studies throughout Canada and internationally. We acknowledged that in the absence of understanding how the project will affect the viewscape of the general area during the development of the project, this might affect some purchasers but that as the studies show, once the project is built, there is no evidence that wind projects affect property values.</p> <p>Further information and studies are discussed on the following Canadian Renewable Energy Associations page: https://canwea.ca/communities/property-</p>

Comment	Methods Used to Submit Comment	Methods Used Proposed to Address Comment	Summary of Response
			<p>values/. Paper copies of these sheets were available at the open house.</p>
<p>Will I hear the turbines from my home?</p>	<ul style="list-style-type: none"> • Open House conversation • Email 	<ol style="list-style-type: none"> 1. Discussion at open house with individuals 2. Canadian Renewable Energy Association materials on wind energy and sound levels provided to individuals 3. Email response to individuals 4. Frequently Asked Question posting on website 	<p>There is a possibility that some homes will hear the turbines under very specific weather conditions a handful of times throughout the year. However, this is mitigated by having the wind turbines set back sufficiently far from nearby homes. In this instance, the nearest home to a proposed turbine location is 1.6 km away in which case, the noise heard will be faint especially given the natural environment surrounding the Project.</p> <p>Modelling has also been carried out to predict the worst-case sound levels that could be experienced at nearby houses. This modelling shows that the sound levels will not exceed the provincial limit of a maximum of 40 dB(A) at a residence.</p> <p>Anecdotal evidence from other wind projects throughout Canada was also shared to explain that local landowners have expressed their surprise that they could not hear the project from their homes.</p>

Comment	Methods Used to Submit Comment	Methods Used Proposed to Address Comment	Summary of Response
Will post construction sound level monitoring studies be completed?	<ul style="list-style-type: none"> • Open House conversation • Email 	<ol style="list-style-type: none"> 1. Discussion at open house with individuals 2. Email response to individuals 	<p>This type of study has been shown to be ineffective in monitoring the sound levels coming from a project like this one because it cannot distinguish between sound coming from the Project and that coming from other background sources, such as the wind itself and cars on the road. Therefore, this type of study is not planned. Rather, there is a Complaint Resolution Plan for the Project that individuals can follow if they experience sound levels from the Project that are bothersome. Then, there are various mitigation measures that can be put in place to reduce the sound levels, such as the addition of vegetation nearby to block the sounds.</p>
Will the Project impact recreational land uses in the area, such as hunting, hiking, and snowmobiling?	<ul style="list-style-type: none"> • Open House conversation • Email 	<ol style="list-style-type: none"> 1. Discussion at open house with individuals 2. Email response to individuals 	<p>We have been and will continue to work with all land users who express interest or concern. We are well-versed in designing our sites to accommodate other land uses, such as snowmobile trails, and will mitigate impacts as much as possible. As this is an industrial land use, our main focus is the safety of anyone using the lands.</p>
How will emergency services be involved with the Project?	<ul style="list-style-type: none"> • Open House conversation • Email 	<ol style="list-style-type: none"> 1. Discussion at open house with individuals 2. Email response to individuals 	<p>Our operations team will prepare an emergency response plan, likely in collaboration with the local fire departments. Part of this can be site visits to ensure that the fire departments are familiar and comfortable with the Project site.</p>
Will the Project deter terrestrial wildlife from using the area?	<ul style="list-style-type: none"> • Open House conversation 	<ol style="list-style-type: none"> 1. Discussion at open house with individuals 2. Email follow-up response to individuals 	<p>From our experience with our other projects, this type of development does not in practice deter wildlife from using an area. In fact, we have had sightings of deer, black bears, coyotes, and other animals at our operational sites. Habitat fragmentation tends to be the biggest impact to terrestrial wildlife from this type of development. However, for this Project, we are using a site that has largely been heavily forested and has an existing network of access roads. We will take advantage of the existing infrastructure to allow us to reduce the amount of additional fragmentation. Ultimately, our environmental assessment studies will help in determining the types of species that use the area and how we can mitigate our impact on them.</p>

Comment	Methods Used to Submit Comment	Methods Used Proposed to Address Comment	Summary of Response
Which roads will be used to access the Project during construction? Some local infrastructure (i.e. bridges) would not be able to handle the weight of oversized materials.	<ul style="list-style-type: none"> • Open House conversation • Group meeting conversation 	<ol style="list-style-type: none"> 1. Discussion at open house with individuals 2. Discussion in meeting with group 	<p>We are still evaluating the access options for during construction activities. Ultimately, we need an access route that can support oversized loads. We are actively accepting feedback on the options from land users and local residents and stakeholders. We understand that some roads and bridges are maintained by local homeowners associations, so we will be sure to work with these groups in addition to municipal staff in our planning efforts. Our environmental assessment will also inform this decision.</p> <p>*NB: The main access road to the site has been selected since the open house. The access road is presented in the EA.</p>
I have heard that uranium has been identified in the area of the Project. What is being done about this?	<ul style="list-style-type: none"> • Open House conversation 	<ol style="list-style-type: none"> 1. Discussion at open house with individuals 2. Email follow-up response to individuals 3. Study initiated to assess uranium presence 	<p>This concern will be fully evaluated prior to the start of any construction activities. As this is a new concern for this project, we will engage a third party to evaluate the risk associated with the uranium leaching.</p> <p>*NB: Immediately after the open house, research was conducted to understand the potential for a uranium deposit in the Project area. As well, industry experts were contacted to discuss this risk. It was ultimately understood that the risk is low given the shallow depth at which the turbine foundations will be built. To further clarify this position, a desktop study was initiated by a 3rd party. This information will be shared with the public at the next open house.</p>
Will construction or operation of this Project contaminate my well?	<ul style="list-style-type: none"> • Open House conversation 	<ol style="list-style-type: none"> 1. Discussion at open house with individuals 2. Email follow-up response to individuals 	<p>By siting the Project infrastructure over a kilometer from any residence, we have significantly reduced any risk of impact on nearby well water. Additionally, nearby hydrology and groundwater is assessed through the environmental assessment process with the province to ensure avoidance and/or mitigation of impacts. We also carry out geotechnical studies prior to construction activities, which would reveal any impacts to groundwater and allows time for mitigative measures to be applied.</p>

Comment	Methods Used to Submit Comment	Methods Used Proposed to Address Comment	Summary of Response
Will we be able to see the Project from our communities nearby?	<ul style="list-style-type: none"> Open House conversation 	<ol style="list-style-type: none"> Discussion at open house with individuals 	<p>Due to the topography of the area it is actually less likely that the nearest residences will be able to see the Project since we have proposed the Project in an elevated area that has forested lands around it. On the other hand, because the Project is proposed on elevated land, the Project (or parts of it) will be visible from surrounding areas that are slightly further from the Project.</p> <p>The shadow flicker maps and photomontages were also presented to the individuals and discussed in detail.</p>
How far will the turbines be from residences?	<ul style="list-style-type: none"> Open House conversation Group meeting conversation 	<ol style="list-style-type: none"> Discussion at open house with individuals Discussion in meeting with group Frequently Asked Question posting on website 	<p>Natural Forces uses the industry standard of a minimum of 1 km setback from residences for any wind turbine locations. In this case, the turbines are setback more than a kilometer from nearby residences.</p>
Can local companies take part in the Project?	<ul style="list-style-type: none"> Open House conversation Group meeting conversation 	<ol style="list-style-type: none"> Discussion at open house with individuals Discussion in meeting with group Frequently Asked Question posting on website 	<p>For construction contracts, Natural Forces makes every effort to hire local contractors using our in-house construction management company Natural Forces Construction to ensure smaller companies are able to participate as subcontractors of the overall construction contract.</p>

4.3.3 Meetings with Elected Officials and Special Interest Groups

Natural Forces has and will continue to engage elected officials and special interest groups to provide Project information. The Proponent believes these discussions help to formulate bonds with trusted community leaders and ensures they are aware of the Project details prior to hearing of the Project from their constituents and/or members. These conversations help to determine possible areas of concern in the communities allowing Natural Forces to address these potential issues in initial communications.

These meetings will continue to occur throughout the development, construction and operation of the Project. These key stakeholders and elected officials have and will be notified prior to any communication with the community to allow time for their questions to be answered in advance.

This category of consultation also includes all the relevant regulators. As such, the government engagement and consultation efforts for the Project are summarized in the sections below by jurisdiction.

4.3.3.1 Municipal Consultation

Natural Forces has had formal and informal meetings to discuss the proposed Project with West Hants Regional Municipality staff and Council. In May 2021, the Proponent met with city planners to establish a working relationship, and to begin discussions surrounding municipal permitting requirements. In

November 2021, the Proponent met with the planners again to give a presentation on the Project, and clarify further details regarding the municipal permitting process.

In January 2021, the Proponent engaged with the municipal Councillor that represents the area where the Project is located to introduce both Natural Forces and the Project. This was followed in June 2021 with a presentation at a municipal Council meeting. This presentation introduced the proposed Project and discussed benefits to the local area. The Proponent answered questions from Councillors as part of this.

The Proponent will continue to work with the municipality.

4.3.3.2 Provincial Consultation

The Proponent has met and discussed the Project with various provincial organizations. The Land Services Branch of the Department of Natural Resources and Renewables (formerly Lands and Forestry) has been engaged on the topic of the use of the Crown lands. The Office of L'nu Affairs has been engaged on the topic of Mi'kmaq engagement. The scoping of this EIA document was designed in consultation with the Department of Environment and Climate Change and the Wildlife Division of the Department of Natural Resources and Renewables. Consultation topics included:

- Submission process and timelines;
- Pre-registration consultation;
- Consultation and engagement efforts; and
- Scoping and guidance of wildlife surveys and studies to conduct as part of the Project EIA.

The Proponent commits to maintaining dialogue with provincial authorities when necessary throughout the duration of the Project.

Additionally, the Proponent met with the MLA for the area in January 2021 to introduce both Natural Forces and the Project, and to gather more information about the appropriate stakeholders with which to engage.

4.3.3.3 Federal Consultation

The Proponent has consulted federal government entities, or consulted guidance documents and databases, regarding the development and construction of the Project. The following federal government entities were contacted and consulted: the Canadian Wildlife Services branch of Environment and Climate Change Canada, the Canadian Coast Guard, Navigation Canada, Transport Canada, the Department of National Defense, and the Royal Canadian Mounted Canadian Police. Similar to their provincial counterparts, federal regulators have provided guidance in the preparation of this document, Project planning, and design.

The Proponent will continue to engage federal regulators when required throughout the development, construction, and operation of the Project.

4.3.4 Digital Communications

4.3.4.1 Project Website

Websites have proven to be an excellent way to make project information available for the general public to access and stay up to date on the progress of wind energy projects. The website has and will continue to be updated periodically in order to inform the general public, Rightsholders, and stakeholders about all aspects of the proposed development. Website content and updates will include some or all of the following items:

- Purpose of the project;
- Project details and progress;
- Contact information for Natural Forces;
- Notices for public information sessions;
- Photos of the Project location and turbine types;
- Progress reports on the EA;
- FAQ section that addressed concerns identified during consultation activities;
- Construction activity notifications;
- Online questionnaire and comment form; and
- Media and Press Release related material.

Additionally, the 'Frequently Asked Questions' section on the website allows Natural Forces to address questions and concerns brought forward through all engagement and consultation activities.

A webpage for the Project was created in the winter of 2021. This has ensured that up to date information has been available to community members should they wish to learn more about the Project. The Project webpage can be viewed at:

<https://www.naturalforces.ca/benjamins-mills-wind-project.html>.

This webpage is, and will continue to be, updated on an ongoing basis.

4.3.4.2 Email

Email will be used to contact stakeholders, answer questions sent via our contact page, plan informal engagement activities, and distribute newsletters and to send Project updates to our stakeholder list.

4.3.4.3 Social Media

Social media is used by the Proponent to post pertinent information to the Project, including construction updates and open house notifications on applicable group platforms. The Proponent can be found on Twitter at @naturalforce1 and on LinkedIn at:

<https://www.linkedin.com/company/natural-forces>

In lieu of posting to the company Facebook page, the Proponent has identified popular community pages and creates content for individual community members to share.

4.3.5 Open Houses

Open houses are used to consult and engage with stakeholders and local community members in a relaxed and welcoming atmosphere. Natural Forces prefers a drop-in style open house to allow stakeholders to attend the meeting and receive answers to their questions when and for the duration of time that best suits their schedule. The Proponent also believes there are many other benefits to the one-on-one discussions such as:

- Having discussions about the Project specifics, the community, the region, other developments, etc.;
- Being able to discuss with the experts conducting the studies;
- Intimate conversation for those who may not be comfortable with public speaking; and,
- Forming relationships with the attendees and to exchange views.

Open houses have, among others, the following elements:

- A general sign-in, information sheet and COVID tracing system;
- Several information boards displaying the location of the proposed Project in relation to nearby communities, facts, and figures pertaining to the wind energy generation, and general public updates on the status and progress of development activities;
- Large-scale maps and renderings that illustrate the Project area; and
- Take home resources, including a summary of information presented at the open house and fact sheets on common topics.

4.3.5.1 First Open House

The Proponent held an open house in July 2021 at the South West Hants Fire Hall, which is an accessible site and is located close to the Project site. Local community members, special interest groups, and government officials were invited to come learn more about the Project and meet the Natural Forces team in person from 4 pm to 8 pm. Community members and stakeholders were invited via email, newspaper advertisement, and letters. Invitations to the open house were sent to 18 individuals who had requested to be on the stakeholder list, Municipal council and staff, 3 recreational special interest groups and their members, and, nearby homeowners associations and their members.

Approximately 30 people attended the first open house. The attendance at the open house was tracked using a sign-in sheet, which also doubled for COVID-19 contact tracing.

Attendees were given handouts containing the Project information that was presented on display boards at the open house. This included a preliminary Project layout, Project overview, Project timeline, frequently asked questions, a sound level study map, and contact information should stakeholders have any questions about the Project. In addition, attendees were given the opportunity to pose their questions and provide their feedback using post-it notes on a display board and by filling out a questionnaire. All of the questions that were asked at and after the open house were recorded and added to the frequently asked questions section of the Project website. Additionally, all attendees who asked for follow up information were contacted.

In addition to the questions, Project information presented at the open house can be viewed on the Project website for anyone who was not able to attend the open house in person. More information on the website is outlined above in **Section 4.3.4**.

The second open house for the Project is being planned for January 2022, which will provide the most up to date information on the Project.

4.3.6 Other Engagement Tools

There are many other engagement tools that the Proponent has used or is open to using should it be appropriate for the community. These are listed in the sections below.

These additional engagement tools should be used when a specific need or synergy exists.

4.3.6.1 Newsletters

The Proponent uses newsletters as a key engagement tool to update and inform the local community on recent Project activities. Circulating the newsletters with Natural Forces' primary contact information also provides community members the necessary information to contact the appropriate person should questions or concerns arise.

Newsletters are distributed via Canada Post and/or email directly to nearby residents, landowners, and individuals who have expressed interest in the Project. These newsletters introduce the Project with a brief description, identify the location of the proposed Project, provide information on the EIA progress, and include contact information with a statement encouraging the public to voice any concerns.

The Proponent distributed the first newsletter in December 2020 with preliminary information on the Project and Natural Forces, contact information for questions, a timeline, and the Project location. Another newsletter was sent out in November 2021 with updates on Project development. As the Project continues to progress, the Proponent will continue to use newsletters as a form of communicating with community members and key stakeholders.

4.3.6.2 Newspaper Advertisements

Advertisements in local newspapers were used to inform the local community of the open house event that was held in July 2021. This form of communication will continue to be used to inform local community members of upcoming events, as well as provide information on Project benefits and contact information for the Proponent.

4.3.6.3 Individual Dialogue

The Proponent encourages and welcomes individual dialogue with stakeholders throughout the development, construction, and operation of the Project. Individual dialogue can occur under many forms such as email correspondence, phone calls and in-person discussions. Individual discussions can be most effective at resolving concerns as they can easily facilitate mutual learning and an exchange of varying perspectives.

4.3.6.4 Signage

At the entry point(s) to the Project during construction and operation, the Proponent will have signage introducing the Project, listing the primary contact person, and identifying the presence of any hazards, such as ice throw during certain weather conditions. Natural Forces will use this as an opportunity to

provide additional information about the Project including facts about the construction schedule, electricity generation, and wind energy statistics. At a minimum, signage will include contact information for the Proponent.

4.3.6.5 Town Hall or World Café

If there is a desire in the community, the Proponent will participate in a town hall or world café style meetings.

Town hall style meetings are formal engagement activities that include a presentation from the Proponent followed by a question-and-answer period. The question-and-answer period usually involves an appointed moderator who directs questions from the audience to a panel made up of several members of the Project development team and/or consultants.

A World Café exercise is an engagement method that makes use of an informal café-style setting for participants to explore an issue by discussing it in small table groups. Discussion is held in multiple rounds of 20-30 minutes, with the cafe ambiance intended to allow for more relaxed and open conversations to take place.

4.3.6.6 Participation in Community Events

Proponent presence at local BBQs, sporting events, and other community gatherings can allow an opportunity for the Proponent to have informal discussions about the Project with local residents.

4.3.6.7 Group Presentations

Group presentations can be completed if interest arises. To date, the Proponent has held such presentations to a number of community groups interested in the Project.

4.3.6.8 Expert Visits

If a key area of concern is identified, an expert can be integrated into the community engagement process as opposed to working solely with the Proponent. Experts may attend an open house or community workshop as most appropriate to the level of interest and the issue of concern.

4.3.7 Issues Resolution

The Proponent has drafted a Complaint Resolution Plan as part of this EA registration document. This plan will cover what community members should do and whom to contact should there be negative impacts affecting the community members or the environment caused by the Project. The Complaint Resolution Plan is located in **Appendix B**.

5.0 Environmental Assessment Scope and Methodology

Environmental assessment (EA) is used as a planning tool in the initial stages of project conceptualization, planning, and design. Its intention is to identify or predict Project-related effects based on results of scientific assessment and/or traditional knowledge, and to determine standard and design mitigation strategies to avoid, reduce, or eliminate adverse environmental effects. The scope of the assessment and the methods used to prepare this EA Registration document, including the

characterization of the factors to be considered, and the details of the assessment of each valued component of the environment are provided below.

The Project, like any other development project, has the potential to interact with the environment in both positive and negative ways. The assessment of those potential interactions constitutes an Environmental Assessment. The assessment is completed in three steps;

1. Identification of the Valued Environmental Components (VECs) that the Project has the potential to interact with;
2. Identify the Phase of the Project during which the interaction is most likely to occur; and
3. Identify mitigation to reduce, or eliminate, those potential impacts.
- 4.

5.1 Selection of Valued Environmental Components

VECs are those components of the biophysical and socioeconomic environments that are of value or interest to regulatory agencies, the public, other stakeholders, and Indigenous peoples.

VCs are typically selected for assessment on the basis of: regulatory issues, scientific concern, legislation, guidelines, policies, and requirements; input arising from consultation with regulatory agencies, the public, stakeholder groups, and First Nations; field reconnaissance; and professional judgment.

The Proponent has identified physical, biophysical and socio-economic VECs that were subject to assessment based on knowledge and experience, Technical Review Committee (TRC) comments and a review of the regulatory requirements. The VECs are listed in **Table 6** and addressed throughout this report.

TABLE 6: IDENTIFIED VALUED ENVIRONMENTAL COMPONENTS

Physical VECs	Biophysical VECs	Socioeconomic VECs	Cultural and Heritage VECs
Atmospheric Environment (Weather Conditions, Climate and Climate Change, Ambient Air Quality, Ambient Sound Levels)	Terrestrial Environment (Vegetation, Wildlife, Wetlands)	Economy	Archaeological and Cultural Resources
Physical Environment (Geology; Surface Water, Groundwater)	Birds and Bird Habitat	Land Use and Value	Existing and Historic Land Uses
Visual Environment (Shadow Flicker, Visual Aesthetics)	Bats and Bat Habitat	Transportation	
	Aquatic Environment (Fish and Fish Habitat)	Recreation and Tourism	
	Species at Risk	Human Health	

5.2 Spatial and Temporal Boundaries

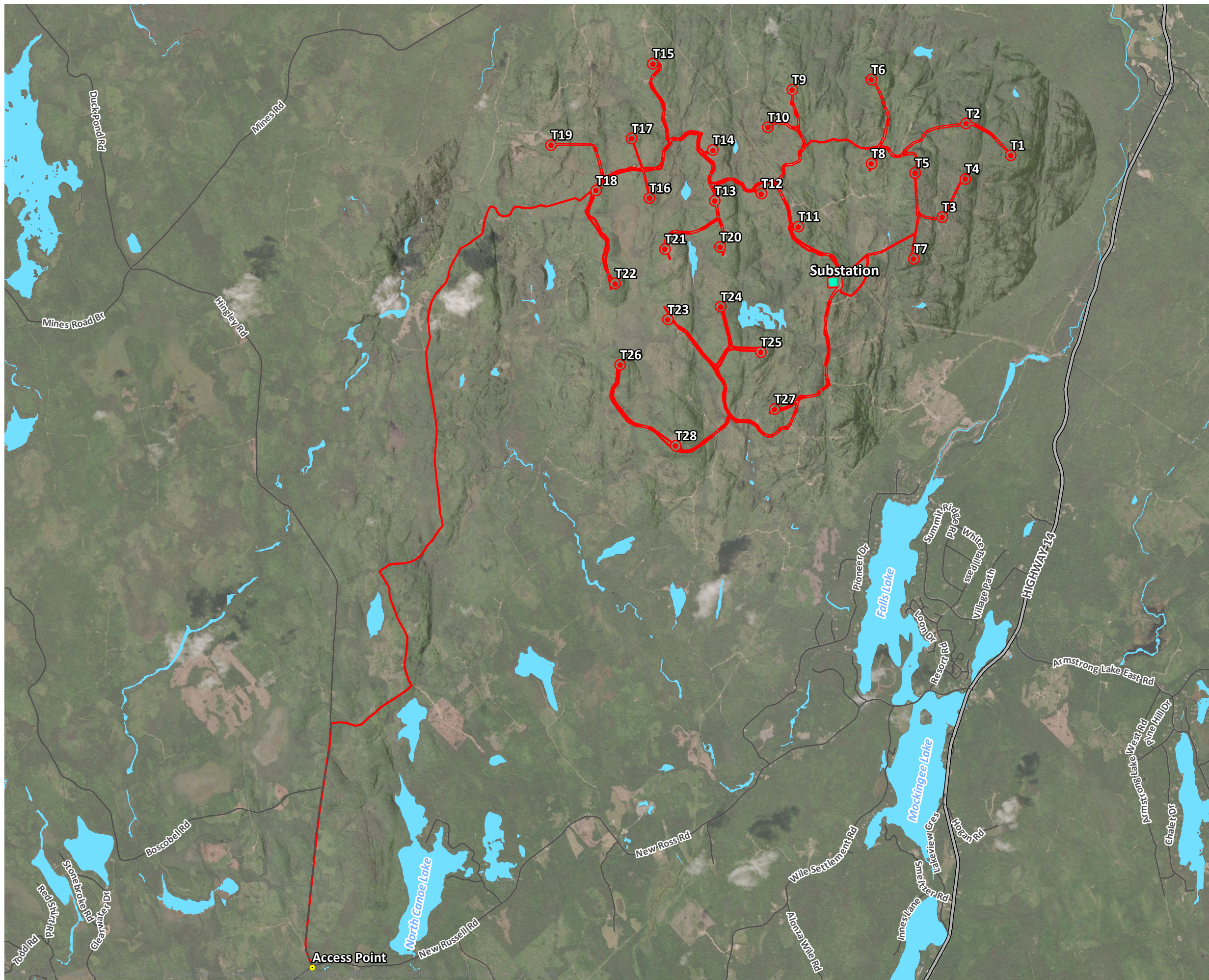
Spatial and temporal boundaries must be determined for each component in the assessment process to properly evaluate the Projects impacts on the VECs. Spatial boundaries are the physical bounds in which the physical Project and related activities are located, as well as zones affected by Project activities. Temporal boundaries are the time frame in which the activities will occur within the spatial boundary.

5.2.1 Spatial Boundaries

The spatial boundaries of the assessment are typically based on the natural system boundaries for biophysical VECs, or administrative/political boundaries for socioeconomic VECs. The assessment of potential environmental interactions with the VECs encompasses two spatial boundaries: the Project Development Area (PDA) and the relevant local assessment area (LAA).

The PDA is defined as the anticipated area of physical disturbance (or physical footprint) associated with the Project. As illustrated on **Figure 3**, the PDA is defined as 15 m on either side of roadways (either existing or new), collector lines and transmission line; 75 m around the base of each turbine locations; and 25 m around the substation. The PDA is the same for all VECs discussed within this EA Registration document.

The relevant LAA for each VEC is defined as the maximum area where Project-specific environmental interactions can be predicted and measured with a reasonable degree of accuracy and confidence (i.e., the “zone of influence” of the Project phases on each VEC). The LAA, which can vary by VEC, is summarized for each VEC in **Table 7**.

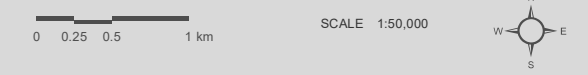


BENJAMINS MILL WIND PROJECT

PROJECT DEVELOPMENT AREA

FIGURE 3

- Proposed Access Point
- Proposed Turbine Location
- Highway
- Public Road
- BM Substation
- Waterbody
- Project Development Area



MAP DRAWING INFORMATION:
 DATA PROVIDED BY DILLON CONSULTING, GEONB, NATURAL FORCES

MAP CREATED BY: MEC
 MAP CHECKED BY: KB
 MAP PROJECTION: NAD 1983 UTM ZONE 20N



PROJECT: 21-1329
 STATUS: DRAFT
 DATE: 2021-12-22

TABLE 7: LOCAL ASSESSMENT AREAS (LAA) FOR VALUED ENVIRONMENTAL COMPONENTS

VEC	Local Assessment Area (LAA)
Atmospheric Environment (Weather conditions, Climate and Climate Change, Ambient Air Quality, Ambient Sound Level)	A 2 km buffer around all Project components, including the PDA.
Physical Environment (Geology; Surface Water, Groundwater)	A 500 m buffer around all Project components, including the PDA.
Visual Environment (Shadow Flicker, Visual Aesthetics)	A 2 km buffer around all Project components, including the PDA.
Terrestrial Environment (Vegetation, Wildlife, Wetlands)	A buffer of 50 m along roads required to access turbine sites during construction and operation and along powerline corridors. A buffer of 150 m around turbine bases, substations and ancillary equipment.
Birds and Bird Habitat	A 500 m buffer around all Project components, including the PDA.
Bats and Bat Habitat	A 250 m buffer around all Project components, including the PDA.
Aquatic Environment (Fish and Fish Habitat)	A 100 m buffer upstream and downstream of all watercourse crossings, including the Project site.
Species at Risk and Species of Conservation Concern	A 10 km buffer around all Project components, including the PDA.
Socioeconomic Environment (Demography, Economy, Land Use and Value; Transportation, Recreation and Tourism, Human Health)	The PDA and the surrounding rural communities within the West Hants Regional Municipality.
Cultural and Heritage Environment (Archaeological and Cultural Resources, Existing and Historical Land Uses)	Archaeological and Cultural Resources screening includes the site property boundaries Existing and Historical Land Uses: A 5 km buffer around all Project components, including the PDA.

5.2.2 Temporal Boundaries

Temporal boundaries vary according to the different Project phases and potential effects. Typically, the Planning, Site Preparation and Construction phase is short-term (for example, effects related to the use of laydown areas for construction activities) due to the short duration of the activities. The temporal boundaries for the Project generally correspond to the timing duration of the Project phases and are outlined below in Table 8.

TABLE 8: TEMPORAL BOUNDARY FOR PROJECT PHASES

Phase	Temporal Boundary
Phase I - Planning, Site Preparation and Construction, Site Restoration	Q4 2022 – Q1-2024
Phase II – Operation and Maintenance	Q1 2024 – Operations end (estimated 25+ years after commissioning)
Phase III – Decommissioning, Infrastructure Removal and Site Reclamation	Estimated 25+ years after commissioning

5.3 Effects Assessment Methods

The assessment of potential environmental interactions with the Project involves identifying the potential for the Project to interact with the VECs outlined in the section above. As each phase of the Project involves different activities, and potentially different interactions with the VECs, the assessment was completed in consideration of each of the Project phases (Site Preparation and Construction; Operation and Maintenance; and Decommissioning) as well as for Accidents, Malfunctions, and Unplanned Events. The potential interactions between the Project and the VECs are presented in **Section 7.0**.

For each of the areas where a Project-VEC interaction has the potential to occur the following assessment methodology was followed:

Scope of VEC – This involves defining the VEC and a rationale for its selection, including a description of temporal and spatial boundaries.

Existing Conditions – This involves the establishment of current existing (baseline) environmental conditions for the VEC in the absence of the Project. Existing conditions were defined based on both desktop information sources as well as confirmatory field work in the Project site and LAA (where available).

Assessment of Project-VEC Interactions –This involves describing how a potential interaction could occur in the absence of mitigation; a discussion of the mitigation and environmental protection measures that are proposed to avoid, reduce, or eliminate adverse interactions between the Project and the VEC, and a characterization of the interactions and prediction of potential environmental effects that could occur as a result of the interactions.

All phases of the Project are assessed, as are accidents, malfunctions, and unplanned events. The evaluation also considers the effects of the environment on the Project. A summary of the assessment for each VEC is provided, leading to an overall conclusion in respect of the interactions and associated effects of the Project on the VEC. The summary also outlines the planned follow-up confirmatory field studies that are recommended for each VEC in order to confirm the predicted environmental effects.

5.4 Project Risk Categories

In order to qualify the potential risk to biophysical VECs (i.e., wild species and/or their habitat), wind power projects are assigned to one of four project risk categories described in the publication *Guide to Preparing an EA Registration Document for Wind Power Projects in Nova Scotia* (NS Environmental Assessment Branch 2021). The project risk category is determined by a combination of site sensitivity, project size, and turbine height. With this qualification, the Project can be planned and monitored such that impacts resulting from construction or operation can be minimized and/or mitigated.

The above publication categorizes projects within one of four Levels of Concern based on the facility size and site sensitivity. The Project size has been categorized as being medium in size (11-40 turbines); however, the PDA was assessed as very high Environmental Sensitivity due to the presence of species at risk and a known bat hibernacula within a 25 km radius. Therefore, the Project merits a ranking of a Category 4, defined as follows:

“Projects in this category present the highest level of potential risk to wildlife, and/or their habitat(s) and require the highest level of effort for environmental assessment. Comprehensive baseline surveys are required for category 4 projects. These surveys must be completed over the course of one calendar year. The Proponent must apply standards and protocols for bird monitoring specified for “Category 4” projects as defined by Environment and Climate Change Canada and the Canadian Wildlife Service. Long-term monitoring extended over five years or more, for example, may in some cases be required to document potential negative effects of functional habitat loss.”

6.0 Valued Environmental Components (VECs)

6.1 Physical VECs

6.1.1 Atmospheric Environment

6.1.1.1 Weather Conditions

The Project is located within the South Mountain Ecodistrict of Nova Scotia’s Western Ecoregion of the Acadian Ecozone (Webb and Marshall 1999). The Western Ecoregion is characterized by mild winters and warm summers, with total precipitation between 1300-1500 mm per year (NSDLF 2019). The ecodistrict has a mean annual temperature of 6.5°C, a mean summer temperature of 17.2°C and a mean winter temperature of -4.3°C. The ecodistrict accumulates about 1350 mm of precipitation annually, with 480 mm between May and September. During the summer, the ecodistrict experiences a significant moisture deficit of about 56 mm of precipitation. The ecodistrict has an average growing season of 203 days, receiving 1663 annual growing degree-days (5° C basis) (Webb and Marshall 1999).

The Nova Scotia wind atlas was used in the site finding stage and indicates the approximate wind speed at the PDA is between 6.5-7.0 m/s at a height of 80 m, with the predominant wind direction from the west. A site-specific wind monitoring campaign is underway and confirms the westerly wind direction, as shown in the site wind rose in **Figure 4**.

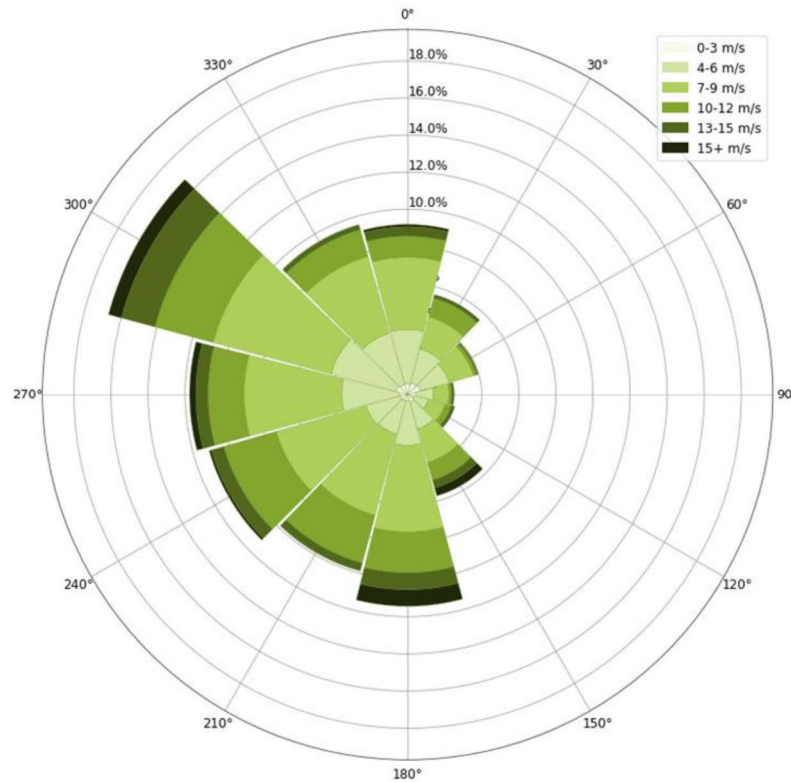


FIGURE 4: WIND ROSE GENERATED FROM WIND DATA COLLECTED ON THE PROJECT SITE.

6.1.1.2 Climate and Climate Change

Current climate conditions are generally described by the most recent 30-year period for which Environment and Climate Change Canada (ECCC) has developed statistical summaries referred to as climate normals. The closest weather station to the Project with available historical data is the Windsor Martock weather station, located approximately 4.5 km from the Project. The Windsor Martock weather station provides historical data for temperature and precipitation, amongst a limited number of other variables, but does not provide historical data for wind. Canadian Climate Normals for 1981-2010 that are representative for the BMWP site are not available from ECCC. The nearest available wind data is from the Kentville CDA weather station, located over 20 km northwest of the BMWP site. The elevation of the BMWP site and distance inland from the Bay of Fundy are very different from the location of the Kentville CDA weather station and wind conditions are likely to reflect this. A 60 m meteorological tower is located at the BMWP and has been monitoring the weather conditions since September 2020.

Canadian Climate Normals from 1981 to 2010 reported from the Windsor-Martock weather station, including yearly averages, maximum extremes for precipitation and temperature are presented in **Table 9**. Based on precipitation data from the Windsor Martock weather station, from 1981 to 2010, annual daily average temperature was 7.4°C and ranged between -5.5°C in January and 19.9°C in July (ECCC 2021). The extreme maximum temperature was 36.5°C recorded on August 10, 2001 and the extreme minimum temperature was -32.5°C recorded February 7, 1993 (ECCC 2021). Precipitation amounts, on average, were highest between November and January. Extreme daily precipitation in the past century ranged from 55.4 mm (May 2001) to 94.2 mm (September 2002) (ECCC 2021).

TABLE 9: 1981 TO 2010 CANADIAN CLIMATE NORMALS – WINDSOR MARTOCK STATION DATA (ECCC 2021)

Parameter	Monthly Range	Annual Average	Extreme Daily Maximum	Extreme Daily Minimum
Daily Average Temperature (°C)	-5.5 - 19.9	7.4	36.5	-32.5
Total Precipitation (mm)	76.3-147.1	1309.6	94.2	0

6.1.1.3 Ambient Air Quality

Nova Scotia Environment monitors the outdoor air quality at six sites across the province (NSE 2010). The Air Quality Health Index (AQHI) is based on the measurement of three key air pollutants: ground-level ozone, nitrogen dioxide, and particulate matter. The associated health risk is represented by the AQHI scale, which ranges from 1 to 10+. AQHI index values are also grouped into health risk categories, ranging from Low (AQHI 1-3) to Very High (AQHI 10+).

The closest Air Quality Health Index monitoring sites are located in Kentville, Nova Scotia and Greenwood, Nova Scotia. The Kentville station is approximately 25 km to the Northwest and the Greenwood Station is approximately 50 km to the West of the BMWP site. The AQHI is generally rated low at both locations (ECCC 2021). Both of these monitoring sites are located in developed municipalities, with Greenwood hosting an active air force base. The Project site, in comparison, is undeveloped with occasional forestry activity, and is therefore anticipated to have an even lower AQHI rating.

6.1.1.4 Ambient Sound Levels

The proposed BMWP is located in a rural area with an active forestry industry and recreational use. Due to the site elevation, wind resource, industrial activity and recreational uses, ambient noise levels in the area may be elevated. As the site was chosen for its excellent wind resources, particularly windy days can greatly increase existing ambient sound levels.

The Proponent has undertaken a sound level impact assessment study to assess the impact of the sound emissions on the dwellings, seasonal residences, and local businesses surrounding the Project during both construction and operation. The study, which is presented in **Appendix C**, concluded that, while heightened sound levels during construction activities are unavoidable, the sound level assessment for the construction period shows that sounds levels at nearby residences are not expected to be significant. The operational sound level modelling for the Project demonstrates that the sound levels expected to be experienced at local receptors under worst case conditions adhere to the Nova Scotia guidance.

6.1.2 Physical Environment

6.1.2.1 Geology

The surficial geology in the South Mountain ecodistrict is dominated by a thin stony till cover with bedrock very close and often exposed at the surface (Nova Scotia DNR 2015). Almost the entire

ecodistrict is characterized by Gibraltar/Bayswater soils which are derived from the parent material and are typically shallow and acidic. These soils are often well-drained, coarse sandy loams. Surface stoniness in these soils is usually high and sometimes excessive. The landscape is often dotted with large, granite boulders which can restrict forest operations and travel. The surficial geology of the PDA is primarily made up of fragmented rock consisting of angular blocks and finer interstitial debris; overlain by thin, discontinuous veneer of till generally 1-4 meters thick (Stea, et al., 1992)

There is a potential for existing soil contamination to be present within the Project area. As a result of industrial forestry operations carried out in the past, historical spills, leaks, and releases from forestry machinery may have occurred on the Project area. These contaminants, if present, may pose hazardous risks or cause adverse effects to the nearby environment. All suspected contaminated soils will be reported, investigated and properly cleaned up.

The bedrock geology of the South Mountain Ecodistrict is a fairly homogenous land mass underlain by Devoian granite (the South Mountain Batholith). The bedrock geology of the PDA is composed of the mid to late Devonian granodiorite and monzogranite and is part of the Liscomb Complex (Keppie, 2000). A few small outliers of carboniferous rocks from the Windsor Group (Early Carboniferous, 340 to 330 Ma) and a few small sections of Meguma Group (Cambrian to Ordovician in age, 540 to 480 Ma) occur along the margins of the ecodistrict (Nova Scotia DNR 2015). The local geology is presented on **Figure 5**.

Based on the Nova Scotia Department of Lands and Forestry Geoscience and Mines Bedrock Geology Map of the central Annapolis Valley area (OFM ME), the bedrock underlying the Project areas consists of Middle - Late Devonian biotite monzogranite (LDS) and Middle – Late Devonian fine grained granodiorite (LDfm) (WHPDD 2018). It is recognized that there is potential for uranium to be present in the geological units underlying the Project area.

6.1.2.2 Surface Water















Surface water flow across the site is expected to be guided by topography. The general topography in the South Mountain ecodistrict (720) is characterized by low, rounded hills or slight ridges, along with broad, shallow depressions (NSDLF 2019). Some of the highest elevations within western Nova Scotia occur in the South Mountain ecodistrict, including within the Project area. The elevation of the site ranges from 90 m above sea level at the north of the site in the vicinity of the Southwest Branch of the Avon River to maximum peaks approximately 260 m above sea level.

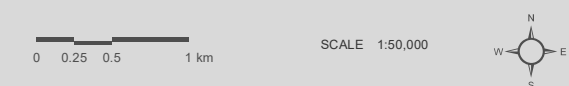
The ecodistrict also includes the headwaters of some of the province's longest rivers, including the Avon, Gaspereau, and Gold Rivers (Nova Scotia DNR 2015). The Project site is located within the Avon River secondary watershed (1DE-2, NSE 2011) and contains several rivers, tributaries and lakes. The Avon River secondary watershed includes three main river branches (South, West, and Southwest). Mapped rivers and tributaries that fall within the area of the proposed Project include the Mint River, Levy Meadow Brook, and Five Island Brook. Lakes in the vicinity of the Project Area include Five Island Lake, Bennett Lake, Duck Ponds, Pine Lake, and Splash Dam Lake. Mapped water features within the Project Area are shown on **Figure 6**.

The proposed Project is situated within the Avon River Secondary Watershed, which encompasses a drainage area of 460 square kilometres, and empties into the Minas Basin in the inner Bay of Fundy

BEDROCK GEOLOGY

FIGURE 5

-  Access Point
 -  Turbine
 -  Highway
 -  Road
 -  Waterbody
 -  Project Development Area
 -  Local Assessment Area
- Bedrock Geology**
-  Goldenville Formation
 -  Halifax Formation
 -  Horton Bluff Formation
 -  Middle - Late Devonian biotite monzogranite
 -  Middle - Late Devonian fine grained leucomonzgranite
 -  Middle - Late Devonian granodiorite
 -  Middle - Late Devonian leucomonzgranite

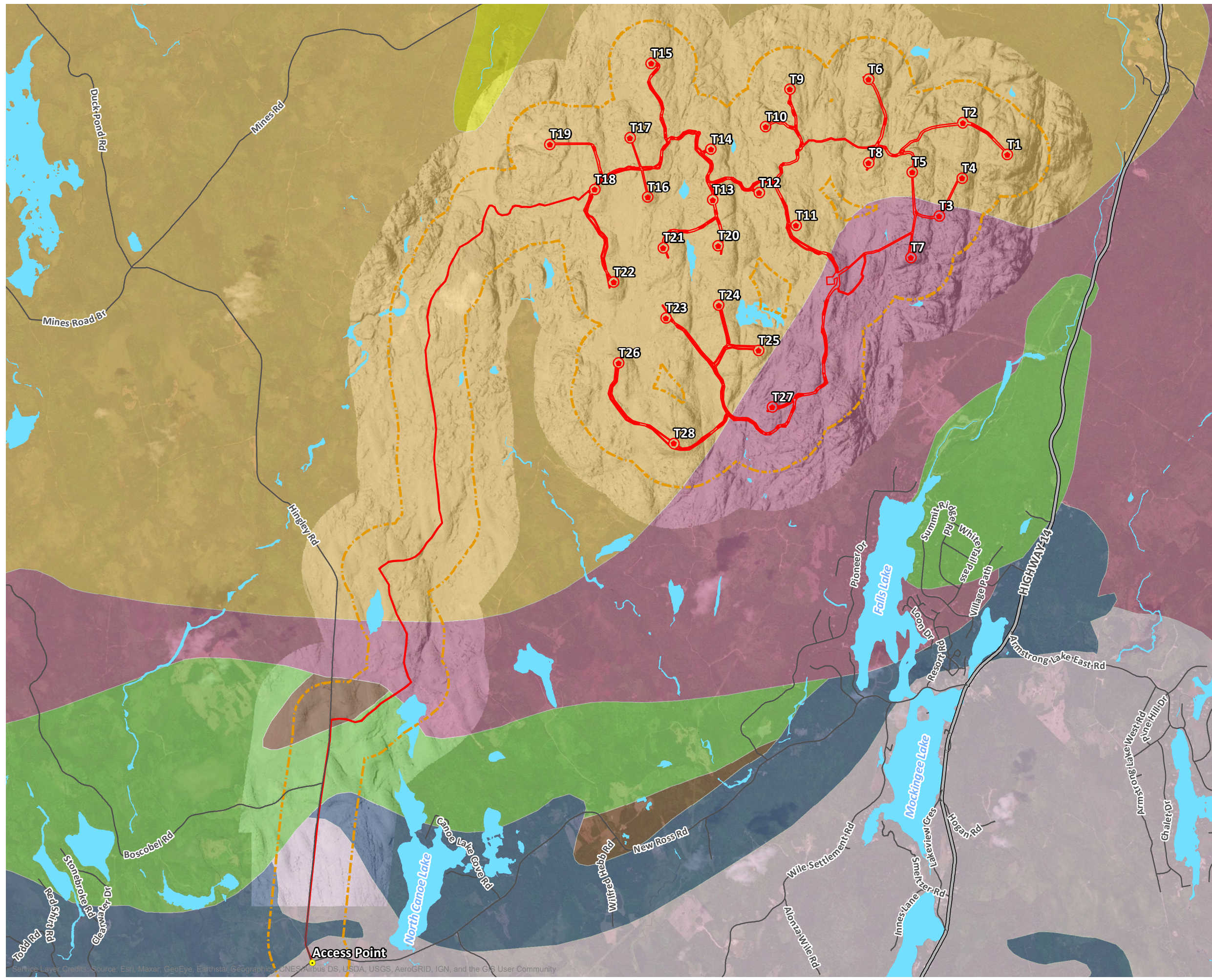


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MAP PROJECTION: NAD 1983 UTM ZONE 20N












PROJECT: 21-1329
STATUS: DRAFT
DATE: 2021-12-20

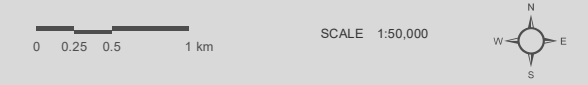


Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar, Geographic, CNES, Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

AQUATIC LOCAL ASSESSMENT AREA

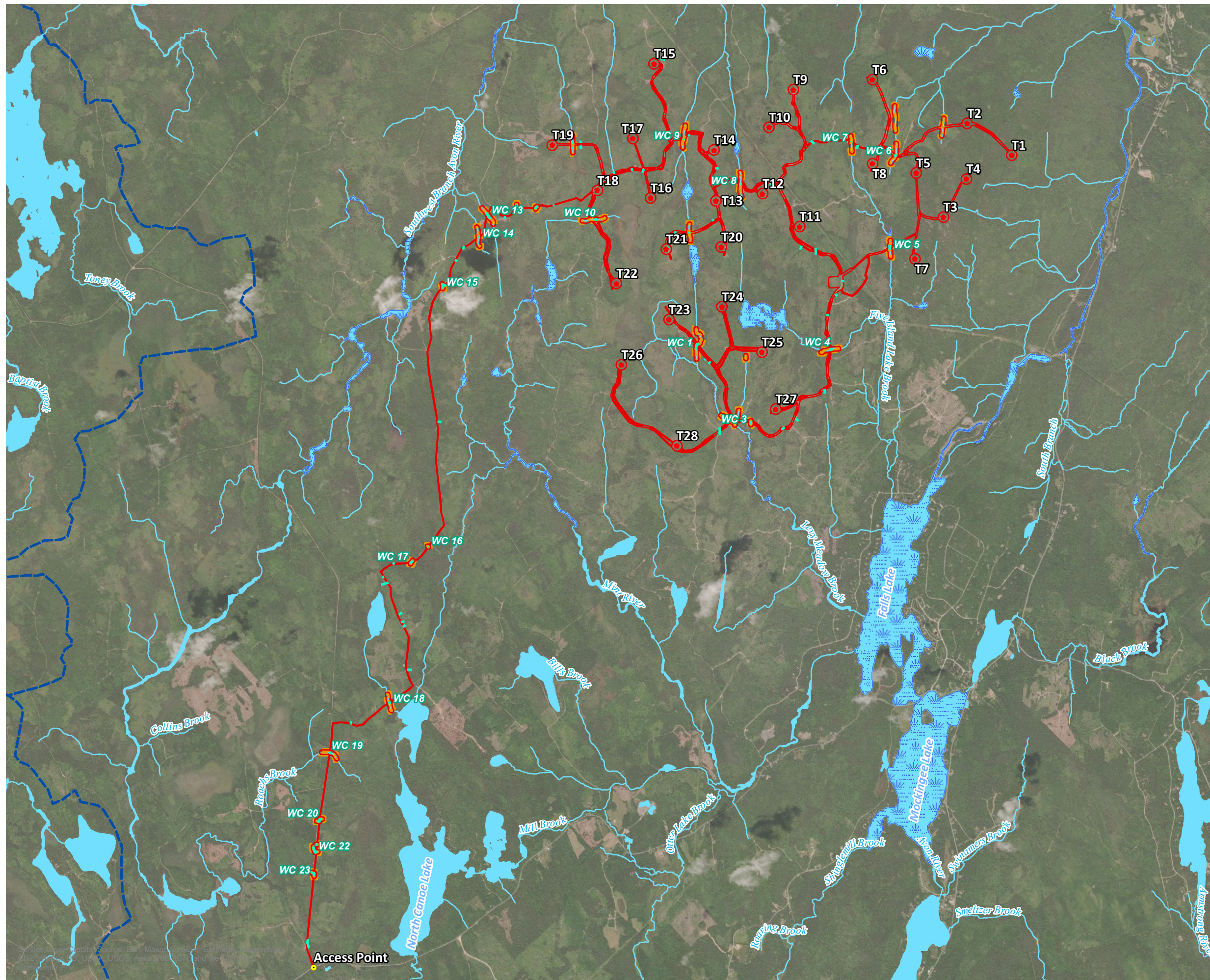
FIGURE 6

-  Proposed Access Point
-  Proposed Turbine Location
-  Watercourse (Nova Scotia Hydrographic Network)
-  Waterbody
-  Wetland (Nova Scotia Hydrographic Network)
-  Project Development Area
-  Local Assessment Area for the Aquatic Environment
-  Field Delineated Watercourse
-  Watershed Boundary



MAP DRAWING INFORMATION:
DATA PROVIDED BY DILLON CONSULTING, GEONB, NATURAL FORCES

MAP CREATED BY: MEC
MAP CHECKED BY: KB
MAP PROJECTION: NAD 1983 UTM ZONE 20N



(Isaacman 2005). The St. Croix River joins the Avon River just below Windsor, creating a total watershed of 1,306 square kilometres. The northerly flowing Avon River (approximately 64 km in length) headwaters in Card and Bag Lakes on the South Mountain, southwest of the town of Windsor. At Windsor Forks, the main tributary, the West Branch of the Avon River, adds its flow, along with the Southwest Branch of the Avon River, to the Avon. Levy Meadow Brook and Five Island Brook also flow across the proposed Project area, flowing south into Falls Lake.

An assessment of potential watercourse crossings within the proposed project footprint was conducted during the 2021 environmental assessment surveys. The assessment included both desktop and field assessments for the purpose of identifying watercourses and assessing the watercourses potential to support fish habitat. Details of the assessment are provided in **Appendix K**.

The PDA intersects 23 watercourses, of these, 19 potentially support fish habitat based on a preliminary assessment; presence/absence fish surveys could be completed to confirm if fish are present, where necessary. The remaining watercourses are relatively small, generally ephemeral to seasonally flowing and have been ruled out as being fish habitat because they are not connected to a fish-bearing waterbody or have a pH too low to support fish (i.e., < 4). The majority of the assessed watercourses appear run north/south with the exception of watercourses on the eastern side of the site that run east/west. There are no known springs on the site. Details of the assessment of the watercourses to support fish or fish habitat are provided in **Section 6.2.4**. Details of the wetland assessment are provided in **Section 6.2.1.3**.

6.1.2.3 Groundwater

Approximately 34% of municipal water supplies in Nova Scotia obtain their water from groundwater sources and 12% use a combination of groundwater and surface water (NSE 2017). Wells in Nova Scotia are either shallower dug wells sourcing the overburden aquifers, or deeper drilled wells sourcing the bedrock aquifers. The most common water supply for homes not served by a public system is a drilled well. The Nova Scotia Department of Environment and Climate Change has developed several initiatives to protect the quality of groundwater by minimizing the potential for contamination from human activities. The department works with municipalities and stakeholders to develop source water protection plans and to delineate Protected Water Areas and Wellhead Protection Areas (WHPA) in Nova Scotia. In Nova Scotia, a minimum of three WHPA zones are recommended. Protection applied to the various zones of a designated wellhead are not particularly onerous for residential zoned properties; however, they are fairly restrictive for other uses.

The PDA is not located in a Wellhead Protection Area or a designated Protected Water Area under the *Nova Scotia Environment Act*. The nearest protected water areas to the PDA are the Falmouth Municipal Water Supply located to the north and Mill Lakes Watershed is located to the north east. There are no known potable wells located within the PDA, based on well records, accessible through the Nova Scotia Groundwater Atlas (GNS 2020), the closest potable well to the PDA is located in Mill Section, approximately 1.6 km north-east from the closest Proposed WTG.

Localized groundwater in the vicinity of the PDA will flow towards nearby tributaries and lakes. Regional groundwater flow is north toward the Minas Basin/Bay of Fundy, however as the PDA extends to the south there may also be regional flow to the south towards the Atlantic Ocean.

A desktop review of the New Scotia Groundwater Atlas (GNS 2020) was completed by Dillon Consulting (2022). It should be noted that the information provided within the Nova Scotia Groundwater Atlas is not guaranteed for accuracy. There are a number of domestic water wells located within the Falls Lake area to the Southwest of the PDA. The wells range from 15.2 to 152.3 meters deep and have between 6.1 and 12.2 meters of casing. Bedrock in the Falls Lake area was encountered between ground surface and 9.7 meters below ground surface (mbgs) (GNS 2020). Domestic Water wells are also located in the area of North Canoe Lake which is in the vicinity of the access point to the PDA. The wells range from 23.8 to 97.4 meters deep and have between 4.8 and 12.2 meters of casing. Bedrock in the area of North Canoe Lake was encountered between ground surface and 4.8 mbgs (GNS 2020).

A groundwater chemistry sample was collected from a groundwater well on October 18, 1965 within the vicinity of the PDA, however no information was provided on the well, sample methodology or depth the sample was collected.

6.1.3 Visual Environment

The existing landscape surrounding the PDA consists of a combination of rolling hills, forested areas in various stages of regeneration due to harvesting activities, lakes, and open fields. There are also some small residential neighbourhoods located at least 1.6 km from the nearest proposed WTG. The immediate Project site is located on an elevated area that is fairly remote. The land has largely been forested and therefore has a network of existing forestry access roads throughout and impacted vegetation. A small portion of the Project site is a forested area not impacted by forestry activity. The details of a visual assessment are presented in **Appendix D**.

6.2 Biophysical VECs

6.2.1 Terrestrial Environment

The terrestrial environment considers the vegetation, wildlife and wetlands within the assessed area. For all VECs of the terrestrial environment, as part of this EA, the assessed area included 50 m on either side of roads required to access turbine sites during construction and operation and along powerline easements; as well as 150 m around turbine bases, substations and ancillary equipment. Vegetation, wildlife and wetlands were selected as terrestrial environment VECs because they are valued in their relationship with species at risk, migratory birds and bats and other biological and physical components addressed as VECs in this environmental assessment (EA) Registration.

The assessed area primarily consists of forested lands which were previously disturbed through forestry activities. A description of the existing terrestrial environment is based on data and observations obtained through desktop and biological field surveys. Details of the baseline assessments for vegetation (including lichens), wildlife and wetlands are discussed in the sections below.

Most of the terrestrial habitat identified in the assessed area consisted of the following habitat types: hardwood-dominant forests, conifer-dominant forests, mixed-wood forests, previously cut disturbed areas, bogs and fens, and swamps and marshes. The major habitat types were identified based on the results of the desktop and field surveys. These habitats are described in relation to the VECs in the sections and the shown on **Figure 7**.