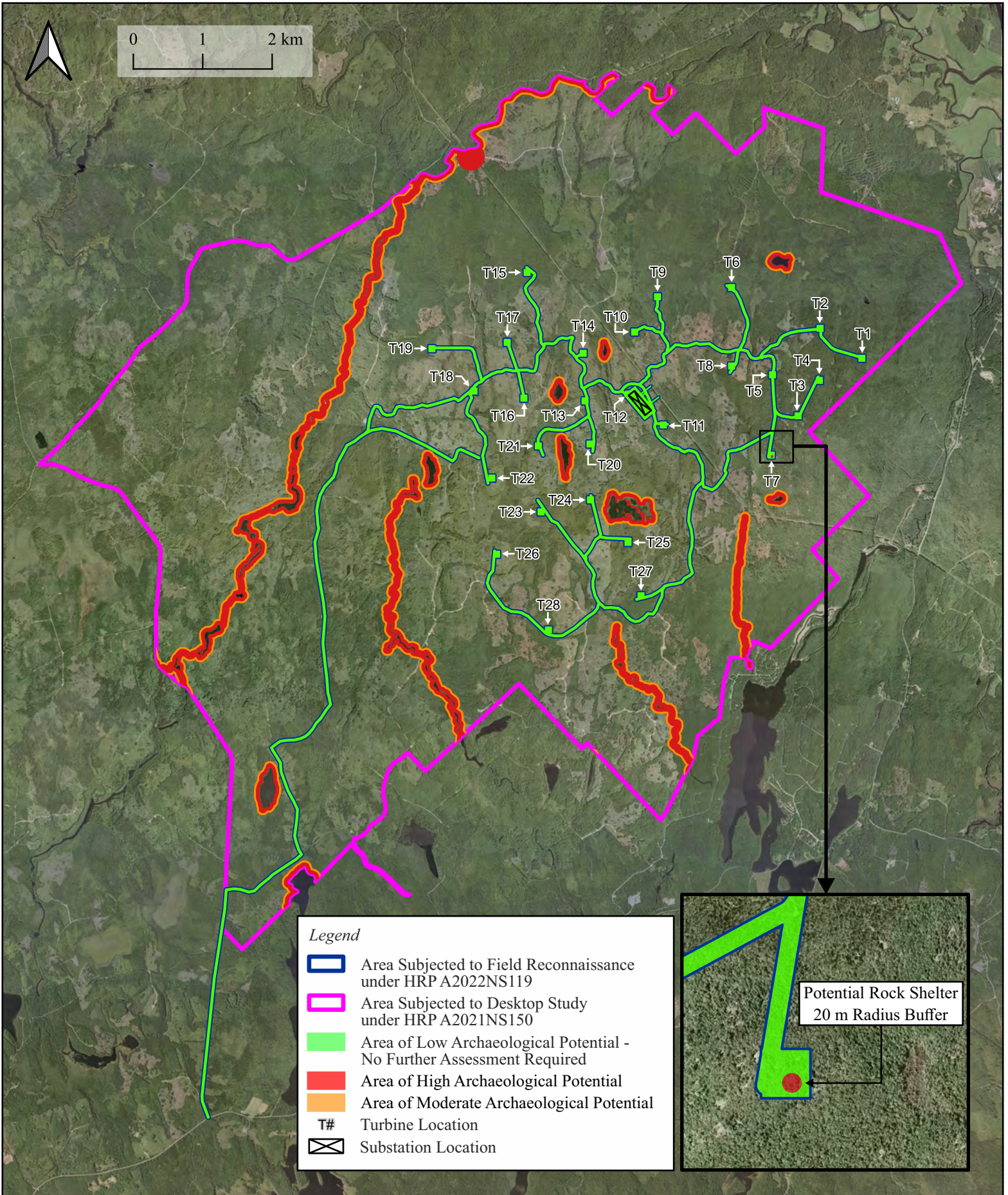


6.1.1 Background Research

In preparation for fieldwork, CRM Group undertook a review of background information compiled during the initial ARIA conducted under Heritage Resource Permit A2021NS150. The research included a review of relevant historic documentation incorporating the following:

- Land grant records;
- Legal survey and historic maps;
- Local and regional histories;
- Previous archaeological reports;
- Topographic maps and aerial photographs, both current and historic;
- Satellite and LiDAR DEM data were reviewed to delineate historic infrastructure and evaluate topography.

Archaeological potential modeling identified land within the LAA situated within 50 metres from the shore or bank of a body of water or watercourse as ascribed high archaeological potential. Land from 50 to 80 metres from the shore or bank of a body of water or watercourse as ascribed moderate potential. Likewise, land within 200 metres of a registered Pre-contact archaeological sites and land within 100 metres of a registered historic archaeological site as ascribed high archaeological potential. Structures identified from historic mapping and photos as situated within the study area were ascribed high archaeological potential and historic roadways and travel routes were ascribed moderate archaeological potential (**Figure 33**).



	<i>Recommendations</i>	<i>Figure 33</i>	
	BENJAMINS MILL WIND ENERGY PROJECT ARCHAEOLOGICAL FIELD RECONNAISSANCE 2022 BENJAMINS MILL, NOVA SCOTIA		November 2022
			Scale: 1:70,000

A review of the Maritime Archaeological Resource Inventory database determined that there are no registered archaeological sites within the PDA. The nearest site, BfDb-03, is located approximately 1.7 km north of the PDA. The nearest cemetery or burial plot is 2.2 kilometres away from the PDA. Background research of the Project Area yielded no evidence of National Historic Sites, Designated Special Places, Protected Areas, National or Provincial Parks within the PDA.

The proximity of registered archaeological site BfDb-03 and Apukji'jue'katik or Pine Lake, suggests that Mi'kmaq were active in the vicinity of the study area at least as early as the time of the Mu Awsami Saqiwe'k (not so recent people), otherwise known as the Archaic Period, sometime between 10,000 to 3,000 B.P. Numerous other sites further to the north and south are attributed to the Kejikawek L'nuk (recent people), and would have been occupied during the Woodland Period, which lasted from 3,000 to 500 B.P. Occupation of the region by Mi'kmaq into the historic period is indicated in mapping from the eighteenth century, which includes reference to a Mi'kmaq village in the Piziquid (now Windsor) region, between the Avon and St. Croix Rivers.

Historical mapping from approximately 1871 revealed that no historic period settlement or development has occurred within the study area, aside from possible sawmill activity along the northern boundary in the late nineteenth to early twentieth centuries and the creation of modern logging roads.

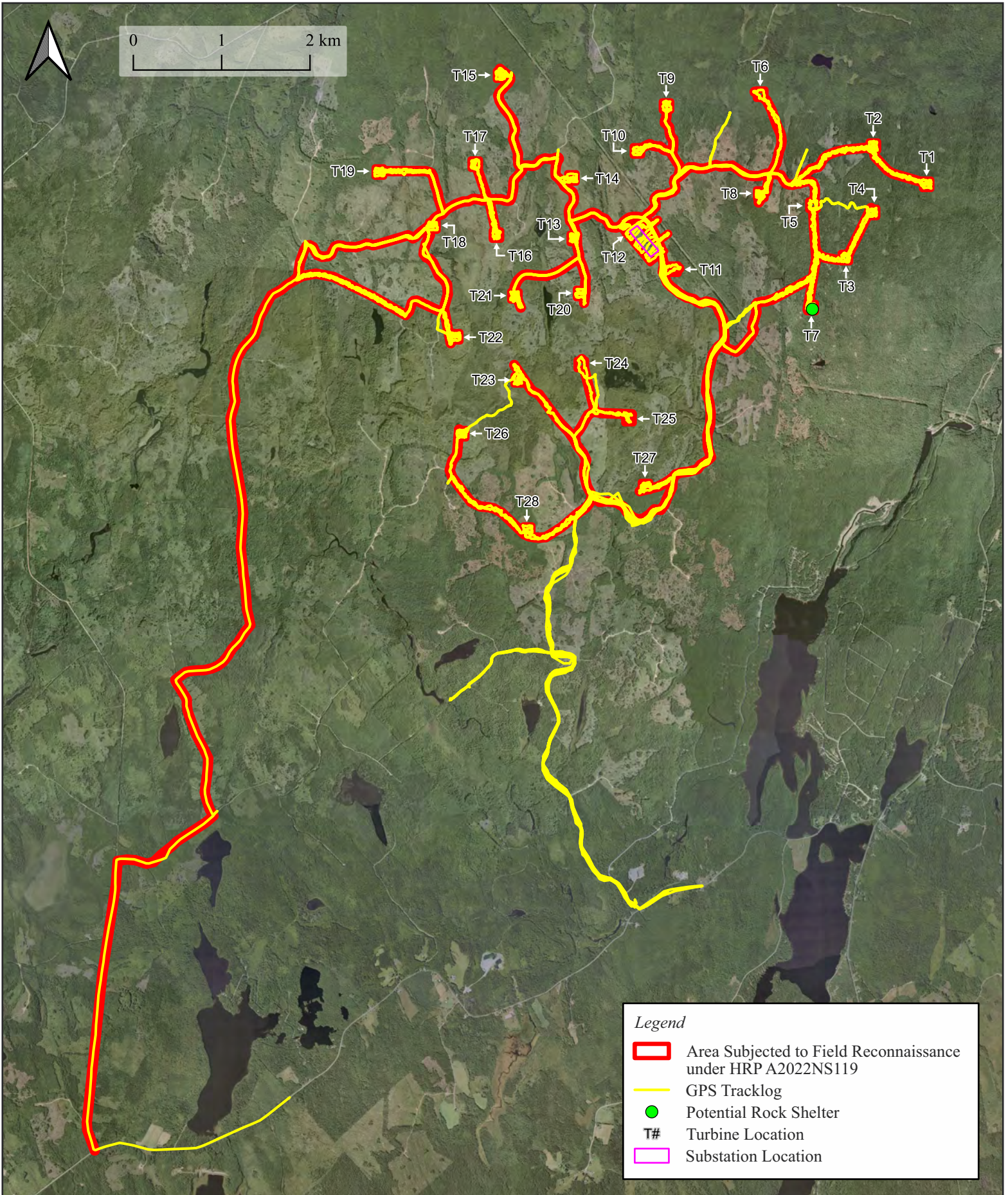
The General Project Area and vicinity has been utilized and occupied by European settlers from at least the second half of the seventeenth century. However, aside from possible sawmill activity along the northern boundary of the General Project Area in the late nineteenth to early twentieth centuries and the creation of modern logging roads, no historic period settlement or development of the area has occurred. Therefore, as part of the archaeological potential model, the PDA is ascribed low potential for encountering early Euro-Canadian archaeological resources.


The information obtained from this suite of research materials enabled a preliminary evaluation of archaeological potential and ensured readiness for swift interpretation of any archaeological features encountered during reconnaissance.

6.1.2 Archaeological Fieldwork

The goals of the archaeological field reconnaissance were to conduct a visual inspection of the PDA to search for and document any exposed archaeological resources and to further delineate areas of archaeological potential (low, moderate, and high). The survey was guided by the results of engagement and background research and took care to note any cultural landscape indicators. Researchers were watchful for topographic or vegetative anomalies, searching the ground surface for signs of historic land use (e.g., levelled ground, anomalous mounds or depressions, structural features, vestige populations of domestic plants, and Culturally Modified Trees) that might indicate the presence of buried archaeological resources. Prominent stone faces, whether on bedrock outcrops or exposed boulders, were searched for petroglyphs. Soil exposures within road-cuts, in recently grubbed areas, and at

the base of uprooted trees were searched for artifacts and evidence of archaeological features. The field team also remained watchful for the suite of environmental conditions recognized as being conducive to past settlement – relatively flat, dry land close to transportation routes such as waterways, portage routes, or early roads, or topographic high-points that would have offered strategic vistas. The field team conducted regular transects across proposed infrastructure locations and surrounding buffer areas (Figure 32) between October 5 and 21, 2022.



 <p>CRM Group Cultural Resource Management Group Ltd.</p>	<i>Results of Reconnaissance</i>	<i>Figure 34</i>
	BENJAMINS MILL WIND ENERGY PROJECT PROJECT ARCHAEOLOGICAL FIELD RECONNAISSANCE 2022 BENJAMINS MILL, NOVA SCOTIA	
	November 2022 Scale: 1:55,000	

The only zone of elevated archaeological potential identified during the survey was at the site of a massive glacial erratic within the PDA for Turbine 7, in the northeast portion of the study area. A massive granite boulder was perched atop smaller glacial erratics and suspended somewhat above the underlying ground/bedrock surface, offering a naturally dry and protected cavity that may have attracted past human use as a rock-shelter. Large enough to shelter one or two individuals, this natural feature is located approximately 22 metres southeast of the proposed turbine location, within the 50-metre-radius construction zone.

Although the very northeast edge of the moderate potential buffer surrounding Burnt Lake fell within the southern boundary of a proposed access road, field reconnaissance for the 2022 ARIA determined that this area exhibits low archaeological potential based on the area being low lying and wet, surrounded by hummocky terrain with thin, rocky soils.

6.2 Potential Interactions and Mitigation

Without mitigation measures, the Project has the potential to interact with heritage resources via accidental discovery of archaeological resources during excavation activities. However, it is unlikely that heritage resources will be encountered in the Project areas because the Project is largely located on previously disturbed land, but as with any ground moving activity, such as excavation, the potential to uncover previously undiscovered heritage resources exists. Based on the findings from the 2022 ARIA, CRM provided four recommendations for the Project and were deemed acceptable by CCTH. These recommendations were incorporated in the mitigation measures and are included in the Environmental Management and Protection Program (**Appendix O**) for construction, operation, maintenance and decommissioning phases. The potential interactions of the Project on archaeological and cultural resources and the proposed mitigative measures are summarized in **Table 56**.

TABLE 56: POTENTIAL INTERACTIONS AND PROPOSED MITIGATION FOR ARCHAEOLOGICAL AND CULTURAL RESOURCES

Potential Interactions with Archaeological and Cultural Resources	Proposed Mitigation Measures
Direct impact to cultural resources during <u>construction</u> .	<ol style="list-style-type: none"> 1) Any ground disturbance within 20 metres of the footprint of the potential rock-shelter near Turbine 7 will be preceded by a program of strategic subsurface excavation within that footprint. Due to the presumed thinness of the soil and the restrictive size of the workspace, the test units will be excavated by trowel. 2) Avoidance is the preferred method of mitigation in all instances where archaeological resources are present. 3) If the proposed infrastructure alignments should deviate from the areas assessed in this report, an ARIA should be undertaken, as the surrounding study area retains archaeological potential. 4) Ground intrusive work activities will not exceed the predefined Project areas.

Potential Interactions with Archaeological and Cultural Resources	Proposed Mitigation Measures
	<ol style="list-style-type: none"> 5) Site workers will be informed on the high potential for archaeological resources in the area, what to look for and proper processes for anything found. 6) Construction workers working within 80 m of a watercourse will be advised of the higher potential for archaeological resources. 7) Contingency and emergency response procedures will be developed and implemented. 8) If archaeological deposits or human remains are encountered during construction activity within the study area, all work in the associated area(s) will halt and immediate contact will be made with the Special Places Program (John Cormier: 902-424-4542). 9) Until a qualified archaeologist arrives at the scene, no one will disturb, move or re-bury any uncovered artifact. 10) Activities at the site will only resume when authorized by Archaeological Services and once mitigation measures have been completed. 11) If bones or human remains are found, work in the area will cease, and the RCMP will be immediately notified. 12) No one will disturb, move or rebury any uncovered human remains. 13) If the discovered resources are related to Indigenous culture, the Nova Scotia Office of L'nu Affairs will be contacted to determine how best to proceed with respect to repatriation of the resources. 14) The Nova Scotia Museum of Natural History will be notified at (902) 424-7353, should fossils be encountered during the ground intrusive work.

Significance of Residual Effects

The potential to encounter previously unidentified archaeological resources will to be limited during the construction phase and non-occurring during operation, maintenance and reclamation phases. After mitigation measures, potential to encounter previously unidentified heritage resources is anticipated to be low, as the PDA only showed potential to encounter archaeological resources at a single site (T7). However, educating site workers on the high potential of archaeological resources in the area is crucial to ensure adequate responses if any heritage resource were to be found.

7 Closure

The Project site was selected due to the existing anthropogenic land uses and impacts over the area, in order to minimize impacts to undeveloped lands as much as feasible. To further mitigate risk to local and migratory wildlife during the Project phases, there will be a concerted effort to use existing corridors found on site, to limit over story removal, and to limit vegetation management. Additionally, a comprehensive post-construction monitoring plan will be developed and will include monitoring for bird and bat mortality. Without offsetting greenhouse gas emissions through renewable energy sources, the broader threat of climate change will have many negative impacts to wildlife and the environment, including habitat loss, pollution, and the potential for thermal stress (NSDNRR 2021). Overall, the societal transition to renewable energy is a positive action which may support long term population growth through a reduction in climate change impacts.

Remaining approvals required that pertain to the AIR are listed below (**Table 57**). They provide further opportunity for the Proponent to continue to work with provincial regulators on minimizing environmental impacts.

TABLE 57: REMAINING APPROVALS PERTAINING TO THE AIR REQUIRED PRIOR TO THE BEGINNING OF THE PROJECT

Approval/Permit	Agency	Jurisdiction	Status, applicable notes
Watercourse Alteration Approval	NSECC	Provincial	To apply following EA approval
Wetland Alteration Approval	NSECC	Provincial	To apply following EA approval
Crown Land Easement Application	NSDNRR	Provincial	Ongoing

Many adaptation and mitigation options can help address climate change; however, no single option is sufficient alone. As discussed at COP26, substantial emissions reductions over the next few decades are required to limit climate warming to below 2 degrees Celsius relative to pre-industrial levels. The Benjamins Mill Wind Project and other similar projects represent an integral part of the global effort to reach these reduction targets, which the Province of Nova Scotia has recognized and integrated into legislation.

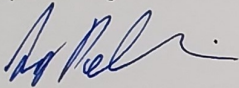
The following benefits will result due to the Project and are considered as advantages of this development:

- Production of emission-free energy, which will displace energy produced from fossil fuels in Nova Scotia;
- Assist Nova Scotia in meeting the target of 80% renewable energy set in the Renewable Electricity Regulations made under Section 5 of the *Electricity Act*;
- Help decrease anthropogenic induced climate change, which is putting both human and environmental health at risk;

- Increase revenue to West Hants Regional Municipality through the payment of annual property taxes;
- Increased revenue to local businesses due to activities associated with the construction, operation, and decommissioning of the Project;
- Increased revenue to landowners participating in the Project; and
- Creation of additional employment in the region during all Project phases.

The Benjamins Mill Wind Project provides an excellent opportunity to produce renewable energy on already fragmented lands, providing source diversity and helping to meet increasing energy demands in Nova Scotia. The Proponent is seeking to develop the Project with the intent of helping Nova Scotia meet its renewable electricity targets while providing local economic benefits. The Proponent is pleased to provide this addendum to the Policy, Planning & Environmental Assessment Branch of the Department of Environment and Climate Change and looks forward to working with provincial regulators to progress the Project to a construction ready stage.

Respectfully submitted,



Natural Forces Developments Limited Partnership

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