Notice of determination – Keltic Road Rehabilitation Project, Detailed Impact Assessment

This notice of determination is being issued by Parks Canada under the *Impact Assessment Act*. Parks Canada has decided that the project is not likely to cause significant adverse environmental effects.

Parks Canada plans to rehabilitate Keltic Road in the Middle Head Peninsula, including re-routing a portion of the road further inland from the coast to address soil instability and long-term erosion of coastal embankments. Keltic Road is the only way to access visitor services offered in the peninsula, including the Keltic Lodge, the Highland Links Golf Course, and the Middle Head Trail.

The project area is one of the most visited sectors of the park, which supports a variety of ecosystems and unique cultural resources. Because of these factors and the potential for the project to have adverse effects, Parks Canada has determined that the level of analysis appropriate is the Detailed Impact Assessment (DIA) pathway. Following consultation with the Mi'kmaq of Nova Scotia, the public, and project stakeholders, this DIA resulted in the following findings:

Wetlands in the project area are numerous and provide important ecological, hydrological, and socio-economic functions. They are in an area predominantly formed by karst topography and may originate from karst depressions. Construction of the new road will remove approximately 700m^2 of wetland area, affecting wetland function and altering surface water drainage patterns. The proper sizing and placement of culverts during the design stage will ensure that the existing hydrological pathways and hydroperiod are maintained, minimizing the risk of significant adverse residual effects to wetland hydrology. The risk to wetland water quality from the construction and operation phases of the project is lowered through the implementation of mitigation measures, and water quality parameters should remain unchanged. The continued monitoring of wetland quality in the project area pre-, during and post construction is recommended to manage the risk and adopt an adaptive management framework as needed. There is risk that habitat fragmentation, disturbance, and the creation of a new "edge" caused by the new road may favour colonization of the wetlands by invasive plants. The application of mitigation measures and an adaptive management strategy that focuses on early intervention in the control of invasive species can minimize these risks.

The analysis provided concludes that even through the application of mitigation measures, the interaction of the road and the wetlands is expected to result in an adverse environmental effect on wetland function. To address this, the Cape Breton Field Unit will develop a compensation plan for the total wetland area impacted by the project at a 3:1 ratio. A monitoring plan to assess the efficacy of the mitigation measures to preserve wetland function is also recommended.

The interaction of the road with local amphibian populations is likely to result in adverse environmental effects through the removal of amphibian breeding habitat and an increased risk of road mortality. Given the lack of existing pre-construction data on the pond-breeding amphibian population, it will be difficult to accurately assess measurable impacts on the population post construction. The proposed mitigation measures may be effective in minimizing impacts to terrestrial habitat; however, the removal and alteration of wetland and upland habitat may result in significant, negative impacts to pond-breeding amphibians (e.g., frogs, newts, and blue-spotted and yellow-spotted salamanders). To offset these impacts, it is recommended that a goal of the wetland compensation plan be the creation of ephemeral amphibian breeding habitat.

The impacts of roads on amphibians are well documented. If designed appropriately, the implementation of a wildlife crossing system, including dedicated ecopassages and directional wildlife exclusion fencing, can mitigate these risks. A monitoring plan is recommended to assess the efficacy of the system.

Studies have shown that the Middle Head Peninsula is frequented by bats, including the endangered species little brown myotis and northern myotis. Based on habitat requirements, maternity roosts and hibernacula are also likely to be present in the project area, although their exact location has not been confirmed to date. Nevertheless, using general knowledge of maternity habitat preferences and bat life cycles, the proposed mitigation measures are likely to be effective in minimizing impacts to maternity roosts such that significant, adverse residual effects are not expected. Without an understanding of the presence/use of the cave system within the study area, potential impacts to over-wintering habitat are unknown and it will be difficult to accurately assess measurable impacts on the population post construction. However, the application of a timing window to avoid rock blasting during winter (i.e., bat over-wintering period) can be an effective mitigation measure to minimize the risk of impacts. Through careful staging and adherence to mitigation measures, the potential for significant adverse residual effects on over-wintering habitat is low. It is recommended that a monitoring plan be developed and implemented by the Cape Breton Field Unit and that the field unit advocate for inclusion of the project area within the Species at Risk Site Analysis as a way of increasing understanding of *Myotis* spp. distribution, abundance, and location of critical habitat in the park.

Forested ecosystems within Middle Head Peninsula provide habitat to a diversity of breeding and migratory birds. The new road would result in forest fragmentation and the direct removal and alteration of habitat for these birds. While the proposed project will result in some habitat removal, residual effects are not expected with the implementation of the proposed mitigation measures.

Regarding cultural resources, the existing stone fence, which represents remnants of European homesteads that existed in the area before park establishment, will be directly affected by the project. Of equal importance are artifacts of historical importance to the Mi'kmaq and local communities, which may be present in the project footprint and have not been identified to date. An Archaeological Impact Aassessment (AIA) must be performed prior to any ground disturbance, including proper documentation of the stone fence and any other artifacts uncovered during the study. Mitigations to avoid or minimize impacts to cultural resources that arise from the AIA will be implemented in project construction.

The interaction between the proposed project and visitor experience is not expected to result in significant adverse effects. While there may be some impacts to visitor experience during the construction phase, impacts are temporary in nature and can be minimized through mitigation measures. During operations, the project's interaction with visitor experience is related to a change in landscape and scenic ocean views. It is anticipated that with the application of mitigation measures, the realignment of Keltic In Road will provide an overall improvement in road safety and reliability for those travelling through the park, as well as present opportunities for public education.

The project proposal has the potential for adverse effects on other valued components that, because of known impacts and mitigations, were considered of low risk. The DIA found that there are negligible to no residual adverse effects associated with these interactions.

Overall, considering the implementation of mitigation measures, monitoring plans and wetland compensation requirements outlined in this report, the project is not likely to result in significant adverse environmental effects.