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# Basic Impact Analysis (BIA)

## Paving at Port au Choix National Historic Site

Port au Choix National Historic Site, Newfoundland and Labrador

PACNHS-2017-001

March 2017

1. PROJECT TITLE	Paving at Port au Choix National Historic Site	
2. PROJECT LOCATION (Park, Site, Canal, NMCA)	Port au Choix National Historic Site	
3. PROJECT SITE(S)	<ul style="list-style-type: none"> <li>Road from Visitor Reception Centre to Point Riche Lightstation</li> <li>Point Riche Lightstation Parking Area</li> </ul>	
4. PROPONENT	Parks Canada	
5. PROPONENT CONTACT INFORMATION		
6. PROJECT DATES	Planned Commencement 2017 05 01	Planned Completion 2017 09 30
7. INTERNAL PROJECT FILE #	PACNHS-2017-001	
8. PROJECT DESCRIPTION	<p>Upgrades to the Port au Choix National Historic Site (PACNHS) road and Point Riche parking lot will include scarifying and reshaping the existing roadbed and parking lot area followed by resurfacing with hot-mix asphalt pavement. The road and parking area were upgraded in recent years, therefore, no new aggregate materials will be required before paving. There is concern, however, for potential effects upon nearby rare limestone barrens plants.</p> <p>This paving project will be included as part of the tender package for "Highway 430 Rehabilitation of Segments B and D".</p>	
9. VALUED COMPONENTS LIKELY TO BE AFFECTED	<p><u>Environmental</u></p> <ul style="list-style-type: none"> <li>The limestone barrens support a large variety of uncommon and rare plants which are protected within the boundaries of this National Historic Site (NHS).</li> <li>The Parks Canada Visitor Reception Centre (VRC) building is located within a Critical Habitat area for SARA listed Fernald's braya (<i>Braya fernaldii</i>). A braya patch is located only 2-3 metres away from the edge of the existing VRC gravel parking lot.</li> <li>The provincially rare plant (NL. Endangered Species Act) Oval-leaved Creeping Spearwort (<i>Ranunculus flammula</i> var. <i>ovalis</i>) occurs approximately 12 metres from the border of the Point Riche parking lot.</li> </ul> <p><u>Visitor Experience</u></p> <ul style="list-style-type: none"> <li>disruption to visitor experience due to construction</li> <li>visitor safety</li> </ul>	

## 10. EFFECTS ANALYSIS

- There is potential risk of adverse effects to native limestone barren flora by changes in drainage patterns and water quality from precipitation flowing over asphalt surfaces.
- There is potential for adverse effects to nearby plants caused by toxic leachates running off fresh asphalt surfaces.
- Pulsing sheet flow of rain water over impermeable asphalt surfaces could erode nearby substrates and potentially have adverse effects on limestone barrens plants.

## 11. MITIGATION MEASURES

### Environmental

A number of mitigations must be in place to prevent asphalt, asphalt petroleum leachates and sheet flow runoff from adversely affecting nearby limestone barrens plants.

1. To mitigate all potential risk of adverse impacts from asphalt paving toward Fernald's braya and its Critical Habitat, the NHS Visitor Information Centre parking lot area will not be paved.
2. No vehicles, machinery or workers will be permitted to travel outside the boundaries of the roadbed corridor or margins of the VRC and Point Riche parking lot areas.
3. No paving or storage of equipment and materials will be permitted outside the existing footprint of the road to Point Riche and Point Riche parking lot.
4. The Point Riche Light Station parking lot will become reduced in size by this project. The former parking areas must be barricaded to prevent vehicle use. Site remediation will involve scarifying only, restoration of plant cover will be from natural seed dispersal and propagation from adjacent vegetation. Parks Canada will monitor to examine that no invasive plants become established on the exposed soil.
5. Parks Canada will clearly mark all rare plant locations, and introduce workers to which sites to avoid.
6. Road-salt or any other de-icing chemical must never be used in PACNHS.
7. An asphalt plant will not be set up within the NHS.
8. All equipment and vehicles must be checked regularly to ensure there are no fuel or hydraulic fluid leaks.
9. Hazardous spill containment kits must be readily available on site at all times, along with people trained in their use.
10. Refueling of equipment should occur outside the NHS; otherwise on impermeable pads to allow full containment of possible spills.
11. Contractors are required to stop work and contact Parks Canada immediately if a contaminant spill occurs.
12. The costs involved in a spill incident (e.g. the control, clean up, disposal of contaminants and site remediation to pre-spill conditions) shall be the responsibility of the contractor. The spill site will then be inspected to ensure there is complete containment and disposal to the satisfaction of Parks Canada.
13. Should dust control be required on the roadbed, only freshwater will be permitted.
14. To prevent invasive plants and/or seeds from being transported onto the worksites, all construction equipment, heavy machinery and vehicles must be clean of any soil and mud before entering the NHS.
15. Dumping leftover asphalt anywhere off the work site area is prohibited. All leftover asphalt must be transported outside the NHS boundaries for appropriate disposal.
16. To prevent hot-mixed asphalt materials from escaping from trucks, all loads must be covered or tarped during transport in the NHS.

### Visitor Experience

17. Parks Canada will notify park visitors of potential traffic delays due to paving.
18. Traffic disruption must be kept to a minimum.

19. Public vehicle traffic must be safely controlled while work trucks, vehicles and heavy machinery are working on the road and parking lot areas.	
<b>12. CONSIDERATION OF THE NEED FOR PUBLIC PARTICIPATION &amp; ABORIGINAL CONSULTATION</b>	
12 a)	Need for public participation? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>
12 b)	Aboriginal consultations required? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>
<b>13. OTHER Considerations</b>	
Check all that apply	
<input type="checkbox"/> Public/stakeholder engagement	
<input type="checkbox"/> Aboriginal engagement or consultation	
<input checked="" type="checkbox"/> Surveillance	
<input checked="" type="checkbox"/> Follow-up monitoring, required to evaluate effectiveness of mitigation measures and/or assess restoration success	
<input type="checkbox"/> Follow-up monitoring, required by legislation or policy (indicate basis of requirement e.g. required by the <i>Species at Risk Act</i> )	
<input type="checkbox"/> SARA Notification	
<ul style="list-style-type: none"> <li>• Parks Canada on site staff will continually monitor the work to ensure that measures to mitigate environmental impacts on limestone barrens plants are effective and being adhered to. Follow-up monitoring will be done by Parks Canada to examine that no adverse impacts upon Fernald's braya or other limestone barrens plants have occurred.</li> <li>• Because this project is located within the boundaries of a Critical Habitat area for a Species at Risk listed under Schedule 1 of the Species at Risk Act (SARA), it is extremely important that no travel by vehicles and workers, or storage of equipment and materials occur outside the areas which have been defined by Parks Canada.</li> <li>• Upon conviction of an offense under the federal SARA, fines and penalties can range as high as \$1,000,000 and up to 5 years imprisonment for contravention of this Act.</li> </ul>	
<b>14. SIGNIFICANCE OF RESIDUAL ADVERSE EFFECTS</b>	
Portions of this project will occur within the boundaries of an area defined as Critical Habitat for Fernald's braya, a species listed under Schedule 1 of SARA. Therefore, the PACNHS Visitor Information Centre parking lot will not be paved, nor will storage of equipment and materials be permitted in this area. Similarly, it is important that no travel by vehicles and workers and storage of materials and equipment occur outside the existing roadbed and Point Riche parking areas.	
<b>15. SITE INSPECTION</b> ( For help completing this section see instructions at end of document)	
<input checked="" type="checkbox"/>	Site inspection required
<input type="checkbox"/>	Site inspection not required
<ul style="list-style-type: none"> <li>• In July 2016 the work sites were examined for presence of Fernald's braya and provincially rare plants.</li> <li>• Parks Canada staff will remain onsite during paving to insure measures to protect rare plants are being adhered to.</li> </ul>	

<b>16. SARA REQUIREMENTS</b>	<input checked="" type="checkbox"/> There are no residual adverse effects to species at risk and therefore the SARA-Compliant Authorization Decision Tool was not required <b>OR,</b> the SARA-Compliant Authorization Decision Tool ( <a href="#">Appendix 2</a> ) was used and determined: <input type="checkbox"/> There is no contravention of SARA prohibitions <input type="checkbox"/> Project activities contravene a SARA prohibition and CAN be authorized under SARA <input type="checkbox"/> Project activities contravene a SARA prohibition and CANNOT be authorized	
<b>17. EXPERTS CONSULTED</b> Include Parks Canada experts. Add as many entries as necessary for the project.		
Department/Agency/Institution: Memorial University of Newfoundland	Date of Request: 2017-01-09	
Expert's Name and Contact Information: Dr. Luise Hermanutz Phone: (709) 864-7919 Email: <a href="mailto:lhermanu@mun.ca">lhermanu@mun.ca</a>	Title: Professor, Department of Biology.	
Expertise Requested: Dr. Hermanutz is a co-chair of the Limestone Barrens Species at Risk Recovery Team, who has been involved in research and management for more than 15 years developing stewardship and management strategies for the endemic limestone barrens species, Long's braya ( <i>Braya longii</i> ), Fernald's braya ( <i>B. fernaldii</i> ) and Barrens willow ( <i>Salix jejuna</i> ) on the Great Northern Peninsula, NL.		
Response: Precipitation runoff over asphalt would be toxic to Fernald's braya. Given the slope of the VRC parking lot and copious rain and snow melt that happens at PACNHS, runoff would be more intense and pulsed flows could result in erosion of the substrate. The PACNHS population is the most at-risk of all the <i>Braya fernaldii</i> populations and any habitat degradation through direct and indirect impacts will further imperil this population. Therefore, Dr. Hermanutz has recommended that paving the Visitor Reception Centre parking lot area not be undertaken.		
Department/Agency/Institution: Parks Canada	Date of Request: 2016-07-21	
Expert's Name and Contact Information: Carson Wentzell Gros Morne National Park P.O. Box 130, Rocky Harbour, NL. A0K 4N0 Telephone: (709) 458-3548 Facsimile: (709) 458-2059 Email: <a href="mailto:Carson.Wentzell@pc.gc.ca">Carson.Wentzell@pc.gc.ca</a>	Title: Resource Management Officer I	
Expertise Requested: Ability to identify Species at Risk and provincially rare plants.		
Response: Carson Wentzell and Randy Thompson confirmed locations of rare plants near the VRC and Point Riche Lightstation parking lot areas.		

<b>18. DECISION</b>	
NOTE: If the project is identified as likely to cause significant adverse effects, CEAA 2012 prohibits approval of the project unless the Governor in Council (Cabinet) determines that the effects are justified in the circumstances. A finding of significant effects therefore means that the project CANNOT go ahead.	
Taking into account implementation of mitigation measures outlined in the analysis, the project is:	
<input checked="" type="checkbox"/>	Not likely to cause significant adverse environmental effects.
<input type="checkbox"/>	Likely to cause significant adverse environmental effects.
<b>19. REFERENCE LIST</b>	
<ul style="list-style-type: none"> <li>• M. Burzynski, Mann, H. and Marceau, A. <u>Exploring the Limestone Barrens of Newfoundland and Labrador: A Photographic Guide to the Natural History of Limestone Barrens, Cliffs, Ponds, and Fens.</u> Published by Gros Morne Co-operating Association, in association with the Humber Natural History Society (2016). ISBN 978-0-9699509-7-4</li> <li>• Environment Canada. 2012. Recovery Strategy for Long's Braya (<i>Braya longii</i>) and Fernald's Braya (<i>Braya fernaldii</i>) in Canada. Species at Risk Act Recovery Strategy Series. Environment Canada, Ottawa. v + 38 pp.</li> <li>• The Newfoundland Rare Plant Project Including an Update to the Rare Vascular Plants of the Island of Newfoundland. Prepared by Nathalie Djan-Chékar and Claudia Hanel; Newfoundland and Labrador Fish and Wildlife Division and the Atlantic Canada Conservation Data Centre (2004).</li> <li>• BMP - Parks Canada Agency. 2012. Minor Repairs to Transportation Infrastructure in Atlantic Canada National Parks - Replacement Class Screening Report 2012, 105 pp.</li> <li>• Parks Canada National Best Management Practices for Roadway, Highway, Parkway and Related Infrastructure, 2015. 36 pp.</li> <li>• Highway 430 – Segment B &amp; D Rehabilitation General Instructions. Parks Canada Gros Morne National Park, Rocky Harbour, NL. January 31, 2017.</li> </ul>	
<b>20. ATTACHMENT LIST</b> (e.g., BMPs, project area diagrams, sensitive area maps, project execution plan, previous analysis, relevant permits)	



21. **NATIONAL IMPACT ASSESSMENT TRACKING SYSTEM** (CEAA 2012 requires PCA submit a report to Parliament annually. EIAs must be entered in the tracking system by the end of April to enable reporting.)

- Project registered in tracking system  
 Project not yet registered

**RECOMMENDATION AND APPROVAL** (Add additional blocks as required.)

**Prepared by:**

Randy G. Thompson  
 Resource Management Officer II / Environmental Impact  
 Assessment Practitioner

**Signature:**

Randy G. Thompson

**Date:**

8/03/2017

**Recommended by:**

Trevor Rendell  
 Western Newfoundland and Labrador Field Unit Resource  
 Conservation Manager

**Signature:**

Trevor M. Rendell

**Date:**

08/03/17

**Approval signature:**

Geoffrey Hancock  
 Western Newfoundland and Labrador Field Unit Superintendent

**Signature:**

Trevor M. Rendell (A.F.O.S.)

**Date:**

08/03/17



