

**PERMIT TO ALTER A BODY OF WATER**

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 48

Date: **JANUARY 04, 2017**

File No: **522-12, 560-03**  
Permit No: **ALT9001-2017**

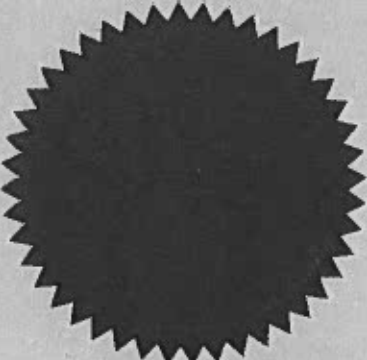
Permit Holder: **Newfoundland Power Inc.  
55 Kenmount Road  
P.O. Box 8910  
St. John's NL A1B 3P6**

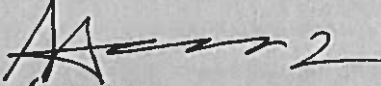
Attention: **Robert Cahill**

Re: **St. John's (Waterford River) - Waterford River Ductbank Truss Bridge Replacement in 1:20 Year and 1:100 Year Flood Zones**

Permission is hereby given for : **the replacement of Waterford River Ductbank Truss Bridge at Southside Road Dockyard in 1:20 year and 1:100 year flood zones of Waterford River in the City of St. John's, with reference to the application dated June 8, 2016 and additional information received on June 29, December 15 and December 21, 2016.**

- This Permit does not release the Permit Holder from the obligation to obtain appropriate approvals from other concerned municipal, provincial and federal agencies.
- The Permit Holder must obtain the approval of the Crown Lands Administration Division if the project is being carried out on Crown Land.
- This Permit is subject to the terms and conditions indicated in Appendices A and B (attached).
- It should be noted that prior to any significant changes in the design or installation of the proposed works, or in event of changes in ownership or management of the project, an amendment to this Permit must be obtained from the Department of Environment and Climate Change under Section 49 of the *Water Resources Act*.
- Failure to comply with the terms and conditions will render this Permit null and void, place the Permit Holder and their agent (s) in violation of the *Water Resources Act* and make the Permit Holder responsible for taking any remedial measures as may be prescribed by this Department.



  
MINISTER

**APPENDIX A**  
**Terms and Conditions for Permit**

**Bridge Design**

1. A ductbank truss bridge may be constructed across Waterford River at Southside Road Dockyard in the City of St. John's.

2. The bridge must have the following minimum dimensions:

**Bridge span 32 m**  
**Waterway opening 145 m<sup>2</sup>**  
**Height above high water level 2.4 m**

3. The crossing structure must provide adequate capacity to safely discharge flood flows without causing backwater effects upstream or increased flow velocity downstream.

4. To safely convey peak flows the bridge must be designed according to the following hydraulic criteria:

**Design return period 100 years**  
**Maximum flow capacity 145 m<sup>3</sup>/s**  
**Maximum flow velocity 4.03 m/s**

5. Piers must be designed to prevent failure resulting from scouring of streambed material.

6. The bridge(s) must have the following minimum dimensions:

| <b>Crossing Name / No.</b>   | <b>Span (m)</b> | <b>Waterway Opening (m<sup>2</sup>)</b> | <b>Height Above Stream Bed (m)</b> | <b>Freeboard (m)</b> |
|------------------------------|-----------------|---|------------------------------------|----------------------|
| <b>Ductbank Truss Bridge</b> | <b>32</b>       | <b>145</b>                              | <b>4.25</b>                        | <b>2.4</b>           |

**Bridge Construction**

7. The use of creosote treated wood is strictly prohibited within 15 metres of all bodies of fresh water in the province.

8. Drainage ditches must collect and transport surface runoff in a manner that does not cause flooding, erosion or sedimentation of adjacent land or receiving waters.

9. Bridge abutments must be set back 0.5 metres from the normal edge of a watercourse to prevent constriction during high flow conditions.

10. Infilling must not cause increased water elevation upstream or increase flow velocity downstream of the site. Reduction of the natural cross sectional area of any watercourse is not permitted.

11. The upstream and downstream sides of abutments must be protected with rip-rap, concrete or heavy timber to prevent erosion and scouring.

12. Where pumping is used to bypass flow, cofferdams must be installed both above and below areas of construction. The Permit Holder must provide pumps with sufficient capacity to prevent washout of cofferdams.

13. Cofferdams must be properly designed and constructed of suitable materials to prevent leakage and to resist loss of any material as a result of erosion. Cofferdams must be removed upon completion of their intended function. All material must be removed carefully to prevent disturbance of the water body and to prevent water quality degradation.
14. Abutments and piers must be constructed in the dry and during times of low flow.
15. Roadside embankments near the watercourse must be adequately protected from erosion by sodding, seeding or placing of rip-rap.
16. Adequate erosion protection must be provided where roadside ditches discharge into watercourses near bridges.

#### **Flood Zone Development**

17. The proponent's property is within the designated flood plain of the Waterford River in the City of St. John's. This development, and future development at the site, must comply with this Department's policy directive for *Flood Plain Management W.R. 96-1*.
18. Any further development in the flood zone area not specifically covered by this permit will require a separate permit from this Division under Section 48 of the *Water Resources Act*.
19. The proposed use of the facility and site will not involve any storage of pollutants such as fuels, chemicals, pesticides, etc.
20. The structure will not interfere with the flow of water or displace water such that it creates a worse flooding situation for other properties.

#### **General Alterations**

21. Any work that must be performed below the high water mark must be carried out during a period of low water levels.
22. Any flowing or standing water must be diverted around work sites so that work is carried out in the dry.
23. Water pumped from excavations or work areas, or any runoff or effluent directed out of work sites, must have silt and turbidity removed by settling ponds, filtration, or other suitable treatment before discharging to a body of water. Effluent discharged into receiving waters must comply with the *Environmental Control Water and Sewage Regulations, 2003*.
24. All operations must be carried out in a manner that prevents damage to land, vegetation, and watercourses, and which prevents pollution of bodies of water.
25. The use of heavy equipment in streams or bodies of water is not permitted. The operation of heavy equipment must be confined to dry stable areas.
26. All vehicles and equipment must be clean and in good repair, free of mud and oil, or other harmful substances that could impair water quality.
27. During the construction of concrete components, formwork must be properly constructed to prevent any fresh concrete from entering a body of water. Dumping of concrete or washing of tools and equipment in any body of water is prohibited.
28. Wood preservatives such as penta, CCA or other such chemicals must not be applied to timber near a body of water. All treated wood or timber must be thoroughly dry before being brought to any work site and installed.
29. Any areas adversely affected by this project must be restored to a state that resembles local natural conditions. Further remedial measures to mitigate environmental impacts on water resources can and will be specified, if considered necessary in the opinion of this Department.
30. The bed, banks and floodplains of watercourses, or other vulnerable areas affected by this project, must be adequately protected from erosion by seeding, sodding or placing of rip-rap.
31. All waste materials resulting from this project must be disposed of at a site approved by the Department of Service NL.
32. Periodic maintenance such as painting, resurfacing, clearing of debris, or minor repairs, must be carried out without causing any physical disruption of any watercourse. Care must be taken to prevent spillage of pollutants into the water.

33. The owners of structures are responsible for any environmental damage resulting from dislodgement caused by wind, wave, ice action, or structural failure.
34. Sediment and erosion control measures must be installed before starting work. All control measures must be inspected regularly and any necessary repairs made if damage is discovered.
35. Fill material must be of good quality, free of fines or other substances including metals, organics, or chemicals that may be harmful to the receiving waters.
36. The attached Completion Report (Appendix C) for Permit No. 9001 must be completed and returned to this Department upon completion of the approved works. Pictures must be submitted along with the completion report, showing the project site prior to and after development.
37. This Permit is valid for two years from the date of issue. Work must be completed by that date or the application and approval procedure must be repeated.
38. The location of the work is highlighted on the Location Map for this Permit attached as Appendix D.
39. All work must be carried out within the Permit Holder's legal property boundaries.
40. Pictures must be submitted along with the completion report, showing the project site prior to and after development.

GOVERNMENT OF NEWFOUNDLAND AND LABRADOR  
Department of Environment and Climate Change

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Permit No: ALT9001-2017

**APPENDIX B**  
**Special Terms and Conditions for Permit**

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1. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall keep all systems and works in good condition and repair and in accordance with all laws, by-laws, directions, rules and regulations of any governmental authority. The Permit Holder or its agent(s), subcontractor(s), or consultant(s) shall immediately notify the Minister if any problem arises which may threaten the structural stability of the systems and works, endanger public safety and/or the environment or adversely affect others and/or any body of water either in or outside the said Project areas. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall be responsible for all damages suffered by the Minister and Government resulting from any defect in the systems and works, operational deficiencies/inadequacies, or structural failure.
2. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall operate the said Project and its systems and works in a manner which does not cause any water related and/or environmental problems, including but not limited to problems of erosion, deposition, flooding, and deterioration of water quality and groundwater depletion, in or outside the said Project areas. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall be responsible for any and all damages associated with these problems caused as a result of changes, deficiencies, and inadequacies in the operational procedures by the Permit Holder or its agent(s), subcontractor(s), or consultant(s).
3. If the Permit Holder or its agent(s), subcontractor(s), or consultant(s) fails to perform, fulfil, or observe any of the terms and conditions, or provisions of this Permit and/or Ministerial orders and guidelines, as determined by this Department, the Minister may, after providing ten (10) day notice to the Permit Holder, amend, modify, suspend or cancel this Permit in accordance with the *Water Resources Act*.
4. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) indemnify and hold the Minister and Government harmless against any and all liabilities, losses, claims, demands, damages or expenses including legal expenses of any nature whatsoever whether arising in tort, contract, statute, trust or otherwise resulting directly or indirectly from granting this Permit, systems and works in or outside the said Project areas, or any act or omission of the Permit Holder or its agent(s), subcontractor (s), or consultant(s) in or outside the said Project areas, or arising out of a breach or non-performance of any of the terms and conditions, or provisions of this Permit by the Permit Holder or its agent(s), subcontractor(s), or consultant(s).
5. This Permit is subject to all provisions of the *Water Resources Act* and any regulations in effect either at the date of this Permit or hereafter made pursuant thereto or any other relevant legislation enacted by the Province of Newfoundland and Labrador in the future.
6. This Permit shall be construed and interpreted in accordance with the laws of the Province of Newfoundland and Labrador.

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Permit No: ALT9001-2017

- cc: Dr. Amir Ali Khan, P. Eng.  
Manager, Hydrologic Modelling Section  
Water Resources Management Division  
Department of Environment and Climate Change  
P.O. Box 8700  
4th Floor, West Block, Confederation Building  
St. John's, NL A1B 4J6  
akhan@gov.nl.ca
- cc: File Copy for Binder
- cc: Mr. Steve Barnable (E)  
Eastern Regional Lands Manager  
Crown Lands Administration Division  
Department of Municipal Affairs  
P.O. Box 8700  
Howley Building, Higgin's Line  
St. John's, NL A1B 4J6  
easternlandsoffice@gov.nl.ca
- cc: Fisheries Protection Division  
Ecosystem Management Branch  
Fisheries and Oceans Canada  
P.O. Box 5667  
St. John's, NL A1C 5X1  
FPP-NL@dfo-mpo.gc.ca
- cc: City of St. John's  
Jason Sinyard, P.Eng.  
Director of Planning & Development  
P.O. Box 908  
St. John's, NL A1C 5M2  
planning@stjohns.ca
- cc: Mr. Paul Porter, P. Eng  
Newfoundland Design Associates Limited  
Bally Rou Place  
370 Torbay Road  
St. John's, NL A1A 3W8  
pporter@ndal.com



Government of Newfoundland and Labrador  
Department of Environment and Climate Change  
Water Resources Management Division

### Appendix C - Completion Report

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 48

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**55 Kenmount Road**  
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**St. John's NL A1B 3P6**

Attention: **Robert Cahill**

Re: **St. John's (Waterford River) - Waterford River Ductbank Truss Bridge Replacement in 1:20 Year and 1:100 Year Flood Zones**

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*I (the Permit Holder named above or agent authorized to represent the Permit Holder) do hereby certify that the project described above was completed in accordance with the plans and specifications submitted to the Department of Environment and Climate Change and that the work was carried out in strict compliance with the terms and conditions of the Permit issued for this project.*

Date: \_\_\_\_\_ Signature: \_\_\_\_\_

This completion report must be completed and forwarded to the following address upon completion of the approved work.

Department of Environment and Climate Change  
Water Resources Management Division  
PO Box 8700  
St. John's NL A1B 4J6

**APPENDIX D**  
**Location Map for Permit**

**Ductbank Truss Bridge at Southside Road Dockyard across Waterford River**

