

## PERMIT TO ALTER A BODY OF WATER

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Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 39, 48

Date: **NOVEMBER 22, 2022**

File No: **525**  
Permit No: **ALT12818-2022**

Permit Holder: **GHD Limited**  
**1118 Topsail Road**  
**P.O. Box 8353**  
**Mount Pearl, NL A1N 5E7**  
**Jamie.O'Neill@ghd.com**

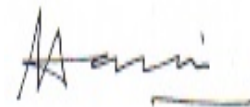
Attention: **Mr. James O. Neill**

Re: **Indian Bay (Indian Bay Brook) - Exploratory drilling to collect soil sample and monitor water quality**

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Permission is hereby given for : **the clearing of vegetation and extending existing trail (if required) up to hydrometric station and its surrounding area to get access for equipment for exploratory drilling to collect soil sample and monitor water quality for the purpose of investigating potential diesel contamination from the existing stilling well and contamination from former creosote-treated timber cableway structure, with reference to the application dated September 7, 2022.**

- 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*.



(for) MINISTER

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

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**Geotechnical Testing**

1. The initial placement of the drill rod assembly or drill casing onto the bottom of the body of water shall be done with the minimum disturbance possible to any bottom sediment that may be present.
2. The proponent must use existing trails, winter roads or cut lines wherever possible as access routes to limit unnecessary clearing of additional vegetation and prevent soil compaction
3. Monitoring wells and boreholes, when no longer required, must be decommissioned as specified in this Department's policy - **Guidelines for Sealing Groundwater Wells**.
4. Monitoring well sample results must be submitted to the Manager of the Groundwater Section of this Department within 30 days of the completion of the work.
5. The work must meet the requirements of the Environmental Protection Plan (latest approved version) for the project.
6. Other than emergency repairs, all maintenance of the drill rig or other equipment, must be carried out on land, no closer than 30 metres to any body of water.

**General Alterations**

7. Any work that must be performed below the high water mark must be carried out during a period of low water levels.
8. Any flowing or standing water must be diverted around work sites so that work is carried out in the dry.
9. 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*.
10. 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.
11. 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.
12. 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.
13. 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.

14. 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.
15. 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.
16. 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.
17. All waste materials resulting from this project must be disposed of at a site approved by the Department of Digital Government and Service NL.
18. 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.
19. The owners of structures are responsible for any environmental damage resulting from dislodgement caused by wind, wave, ice action, or structural failure.
20. 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.
21. 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.
22. The attached Completion Report (Appendix C) for Permit No. 12818 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.
23. 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.
24. The location of the work is highlighted on the Location Map for this Permit attached as Appendix D.
25. All work must be carried out within the Permit Holder's legal property boundaries.

**PPWSA General**

26. All persons working on this project must be informed that they are within a Protected Public Water Supply Area, and must be made aware of all conditions of this Permit. A copy of this Permit must be on site during operations.
27. Equipment storage, maintenance facilities associated with this project, and all maintenance other than emergency repairs must not be located/carried out within the Protected Public Water Supply Area.
28. Officials of the Department and the appropriate Municipal Authority, Operator, or Watershed Management Committee may visit the site to ensure compliance with this Permit.

29. Liaison is to be maintained with the appropriate Municipal Authority and Environmental Scientist. If there are any specific problems (i.e. sedimentation, fuel spill, other potential water quality impairment), the appropriate Town Manager/Clerk must be notified immediately at (709)678-2727. The Environmental Scientist must also be notified immediately at (709)292-4280.
30. The felling or disposing of trees, parts of trees, sawdust, bark, logging debris or slash into a water body or upon the frozen surface of a water body is strictly prohibited.
31. Drainage from roads and other disturbed areas, and all water, runoff or effluent from the site, that is pumped or flows by gravity, shall have silt, sludge, sediment, cuttings, and visible turbidity removed by means of sediment boxes, settling tanks, settling ponds, sumps dug into the ground, filtration or other suitable treatment, to less than or equal to 30 milligrams per litre of Total Suspended Solids (TSS), before being discharged to the environment. More specifically, at the last point of control, the final discharge of all water, runoff or effluent must conform to the limits specified in Schedule A of the Environmental Control Water and Sewer Regulations, 2003, <https://www.assembly.nl.ca/Legislation/sr/Regulations/rc030065.htm>. It is the responsibility of the Permit Holder to demonstrate, that the final discharge meets the requirement of these Regulations.
32. Treated wood shall not be used within 150 meters of Indian Bay Brook measured from the high water mark. The use of creosote treated wood anywhere within the Protected Public Water Supply Area is strictly prohibited.
33. The Permit Holder must inspect the site daily, and any water quality impairment related problems are to be reported immediately to the Environmental Scientist at (709)292-4280 and the appropriate Municipal Authority or Watershed Monitoring Committee at (709)678-2727.
34. Any changes in water quality resulting directly from this project, rendering the water unsuitable as a public water supply, are the responsibility of the Permit Holder. The Minister may order the Permit Holder to provide an alternate source of potable water to the affected community until water quality returns to an accepted level.
35. All vehicles and equipment must be in good working order with no leaking fuel, oil, or other harmful substances that could impair water quality.
36. All stationary motorized equipment and associated fuel tanks shall have metal trays, absorbent pads or impervious liners under them to catch and contain in excess of 110 % of the aggregate volume of any fuel, lubricant and oil.
37. Any streams not visible on a 1:50,000 scale map (including field identified streams) shall require a minimum buffer of 30 m.
38. For any clearing inside buffer zones: no ground disturbance (no disturbance to the root mat, no grubbing, or removal of soil) shall take place in the buffer zones. The Permit Holder is to ensure that the appropriate best practices are employed to prevent any detrimental effects that could impact water quality. Where possible, work in buffer zones shall be completed when the ground is frozen.
39. Where permits, licences, approvals or authorizations are issued by multiple governments, departments or agencies, in the case of similar conditions, the more stringent of those shall prevail; in the case of conflicting conditions, the Permit Holder shall seek clarification and direction in writing from each of the respective departments or agencies.

40. The Permit Holder is required to ensure that adequate sanitary (bathroom) facilities are available or provided on site. This may be in the form of a portable toilet, chemical toilet, pit privy (outhouse), sub-surface disposal system, or municipal sewer system. If a portable toilet or chemical toilet is used, the waste water must be disposed of in a septic disposal system approved by Service NL, or at an approved waste disposal site, outside the Protected Public Water Supply Area in accordance with the Environmental Protection Act, SNL 2002 cE-14.2. If a pit privy (outhouse) or sub-surface disposal system is used, it must be located outside the required buffers, and be subject to Service NL standards, requirements and approval.
41. The issuance of this permit does not guarantee, nor set precedent, that additional or similar permits or amendments will be issued in this or any other Protected Public Water Supply Area for additional or similar activity or development.

### **Fuel Storage**

42. There shall be no bulk fuel storage associated with this project within the protected water supply area. Fuel shall be brought to the operating area in no more than two (2), 205 litre barrels or one (1) 500 litre slip tank. Refueling sites shall be located at least 150 metres from any water body or wetland. The Permit Holder is hereby informed that fuel storage and handling requires a separate approval under the *Storage and Handling of Gasoline and Associated Products Regulations*, CNR 775/96.
43. A complete oil spill clean-up kit must be on site at all times when gasoline or fuel powered equipment is being used or refueled. The kit must contain the following:
  - Fire pump and 100 metres of hose
  - Two hand operated fuel pumps
  - Six recovery containers such as empty 205 litre drums
  - Four shovels
  - Two pick axes
  - Ten metres of containment boom
  - Twenty-five absorbent pads
  - One hundred litres of loose absorbent material
44. Contaminated snow and soil must be removed from the site and disposed of at an approved location outside the protected public water supply area, in accordance with the *Environmental Protection Act*, SNL 2002 cE-14.2.
45. Any spills of gasoline, fuel or oil, regardless of volume, shall be reported immediately to the Environmental Scientist and the appropriate Municipal Authority by calling (709)292-4280 and (709)678-2727 respectively. Furthermore, all spills in excess of 70 litres shall be reported immediately to the 24 hour spill report line at 1-800-563-9089.

### **Protected Miscellaneous**

46. The Permit Holder is required to provide this Department with all documentation, information and data which may be requested or required in order to carry out the inspection or investigation.
47. All silt, sludge, sediment, cuttings, drilling additives, and drilling mud must be collected, properly disposed of and not permitted to flow freely over the ground into any receiving waterbody (including Indian Bay Brook). A layered risk mitigation approach is required.

48. The primary layer of risk mitigation, where physical conditions allow, shall consist of the construction of a temporary sump pit. The temporary sump pit shall be constructed on the down-slope side of the drill pad to collect discharge waters and to allow solids to settle out. In areas where it is physically impossible to dig a sump pit, a settling tank will be required. Performance of the sump pit or settling tank during operations and after heavy rainfall events should be monitored on an hourly basis and any issues reported to the Water Resources Management Division of this Department.
49. The secondary layer of risk mitigation shall consist of, but may not be limited to, some combination of additional temporary sump pits, sediment traps, interceptor ditches of sump pit runoff prior to discharge into any waterbody, settling tanks or constructed settling ponds. The design of secondary risk mitigation layers shall be approved by the Environmental Scientist prior to any development activity.
50. Drilling fluids other than water must be approved by this Department prior to their use.
51. Should an accumulated mass of material from the drilling activity be collected by either the primary or secondary risk mitigation layer, the accumulation shall be excavated and deposited outside the PPWSA prior to rehabilitation.
52. All boreholes shall be sealed with bentonite to prevent any artesian flow.
53. The Permit Holder is required to undertake a water quality monitoring program as outlined below, and all water quality data must be submitted to this Department, within ten days of the samples being taken.
  - Water samples shall be collected from the intake area on Indian Bay Brook .
  - Water samples shall be collected before the drilling begins, one per borehole while the drilling is ongoing, and after the completion of the drilling project.
  - The following parameters will be included in the laboratory analysis: Alkalinity, Aluminum, Ammonia, Antimony, Arsenic, Barium, Boron, Bromide, Cadmium, Calcium, Chloride, Chromium, Colour, Conductivity, Copper, Dissolved Organic Carbon, Fluoride, Hardness, Iron, Lead, Magnesium, Manganese, Mercury, Nickel, Nitrate, Nitrite, pH, Potassium, Selenium, Sodium, Strontium, Sulphate, Total Dissolved Solids, Total Kjeldahl Nitrogen, Total Organic Carbon, Total Phosphorus, Turbidity, Uranium, Zinc, BTEX/TPH and Polycyclic Aromatic Hydrocarbons.
54. There shall be no reinjection of silt, sludge, sediment, cuttings, drilling additives, and drilling mud back into the drill hole.
55. At least seven (7) days advance notice of the beginning and end of the planned drilling operations is required. The town must be notified at [toib1971@gmail.com](mailto:toib1971@gmail.com) and the Environmental Scientist must be notified at [trentpollett@gov.nl.ca](mailto:trentpollett@gov.nl.ca). Any changes in the planned drilling operation must also be communicated in a timely manner, and approved with a subsequent Permit or amendment before being undertaken.
56. In the case of an event that may impact drinking water quality, the Proponent's Contingency Plan shall be followed.
57. Cleaning of any equipment, including but not limited to equipment that comes into contact with impacted water, sediment or soil, is not permitted within Indian Bay Brook.

**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, as determined by this Department, the Minister may, without notice, 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.

- cc: Ms. Paula Dawe, P.Eng.  
Manager, Water Rights, Investigations and 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  
pauladawe@gov.nl.ca
- cc: Richard Harvey, Ph.D., P.Eng.  
Manager, Water Rights, Investigations and Modelling Section  
Water Resources Management Division  
Department of Environment and Climate Change  
RHarvey@gov.nl.ca
- cc: Dave Mercer (Central)  
Land Management Specialist  
Crown Lands Administration Division  
Department of Fisheries, Forestry and Agriculture  
davemercer@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: Town of Indian Bay  
Ms. Triffie Parsons, Town Clerk/Manager  
10-18 Municipal Cres.  
Indian Bay, NL A0G 2V0  
townofindianbay@hotmail.com





**Appendix C - Completion Report**

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 39, 48

Date: **NOVEMBER 22, 2022**

File No: **525**  
Permit No: **ALT12818-2022**

Permit Holder: **GHD Limited**  
**1118 Topsail Road**  
**P.O. Box 8353**  
**Mount Pearl, NL A1N 5E7**  
**Jamie.O'Neill@ghd.com**

Attention: **Mr. James O. Neill**

Re: **Indian Bay (Indian Bay Brook) - Exploratory drilling to collect soil sample and monitor water quality**

Permission was given for : **the clearing of vegetation and extending existing trail (if required) up to hydrometric station and its surrounding area to get access for equipment for exploratory drilling to collect soil sample and monitor water quality for the purpose of investigating potential diesel contamination from the existing stilling well and contamination from former creosote-treated timber cableway structure, with reference to the application dated September 7, 2022.**

*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**

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Location of exploratory drilling site at Hydrometric Station in Indian Bay



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**Second Attached Image File**

