Newfoundland Labrador

Government of Newfoundland and Labrador
Department of Municipal Affairs and Environment
Water Resources Management Division

PERMIT TO CONSTRUCT

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 36, 48

Date:	**JUNE 12, 2018**	File No: **842.030.1** Permit No: **WS9172-2018**
Permit Holder:	**Town of Irishtown-Summerside** **P.O. Box 2795, RR#3** **Corner Brook, NL, A2H 4A1**	
Attention:	**Ms. Rita Blanchard, Town Clerk**	
Re:	**Irishtown-Summerside - Sanitary Sewer Extension - South Side**	

Permission is hereby given for : **the installation of 135 m of 300 mm diameter PVC sewermain, 15 m of 250 mm diameter PVC sewermain, 710 m of 200 mm diameter PVC sewermain, 110 m of 300 mm diameter HDPE sewage outfall pipe, one sewage pumping station, 50 m of 100 mm diameter PVC forcemain, a 450 cubic meter communal septic tank and related works and appurtenances as described in a specification entitled "Town of Irishtown-Summerside, Southside Sanitary Sewer System" as well as a set of revised drawings numbered 3083, sheets SP1 to SP6 inclusive, C1 to C4 inclusive as received from Atlantic Engineering Consultants Ltd. on May 18, 2018 and additional information submitted on June 7, 2018.**

- 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 Municipal Affairs and Environment 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

Water & Sewer General

1. 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.*

2. 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.

3. 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.

4. All waste materials resulting from this project must be disposed of at a site approved by the Department of Service NL.

5. The works proposed must satisfy the requirements of the latest applicable codes and standards, and be consistent with or otherwise address the design criteria set out in the Department of Municipal Affairs and Environment publication *Guidelines for The Design, Construction, and Operation of Water and Sewerage Systems, 2005*, and as amended from time to time.

6. The work must be undertaken in strict compliance with the submitted documents and the latest version of the *Municipal Water, Sewer and Roads Master Construction Specifications*. A copy of all documents, including the *Municipal Water, Sewer and Roads Master Construction Specifications* must be available for viewing at the construction site office at all times.

7. Liaison is to be maintained with the Environmental Scientist representing the Drinking Water and Wastewater Section of this Department, during the construction and operation of the project. They shall be notified of the pre-construction and post-construction meetings so that they may attend, if deemed necessary. They can be reached at telephone (709) 637-2034 .

8. Officials of this Department may visit the project from time to time to ensure that work is carried out within the provisions of this Permit, and is not creating any environmental hazard.

9. Any changes in the approved works, or works other than those specified in the application, must be submitted, in writing, to this Department, and approved, in the form of an Amendment to this Permit, prior to any work.

10. Copies of this Permit, as well as any subsequent Amendments, must be provided to the contractor(s) who will be carrying out these works, and to the engineer's site representative.

11. The attached Completion Report (Appendix C) for Permit No. 9172 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.

12. 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.

13. The drinking water and wastewater system shall be operated and maintained in accordance with the Permit to Operate issued by this Department.

14. Management of stormwater is the responsibility of the municipality or LSD. Stormwater management should focus on ensuring that the post-development stormwater runoff rate will be equal to or less than the pre-development runoff rate. Any stormwater runoff has the potential to contribute to flooding downstream which may have liability issues for the municipality or LSD if not managed properly.

15. The Owner must update any drawings maintained of the drinking water or wastewater system to reflect the modification or replacement of the works, where applicable.

Water & Sewer Installation

16. Where the horizontal separation between watermains (including hydrant leads and drains) and gravity sanitary sewers is less than 3.0

metres, the watermain shall be laid in a separate trench, or on an undisturbed earth shelf located on one side of the sanitary sewer and at such an elevation that the invert of the watermain shall be a minimum of 450 mm above the crown of the sanitary sewer and 300 mm horizontally from the sanitary sewer measured edge to edge.

17. Watermains (including hydrant leads) crossing gravity sanitary sewers should be laid to provide a minimum vertical distance of 450 mm between the outside of the watermain and the outside of the sanitary sewer. This should be the case where the watermain is either above or below the sanitary sewer with preference to the watermain located above the sanitary sewer. At crossings, above or below, one full length of water pipe shall be located so both joints will be as far from the sanitary sewer as possible. Special structural support for the water and/or sewer pipes may be required.

18. There shall be at least **3.0 m** horizontal separation between water mains and sanitary sewer forcemains. Watermains crossing forcemains shall be laid to provide a minimum vertical separation of **450 mm** between the crown of the forcemain and the invert of the watermain. **Also in this regard, one full length of watermain should be centered over the forcemain so that both joints will be as far from the forcemain as possible.**

Sewer Systems

19. Safety landings to be installed in all manholes over 5m in depth and in accordance with the Municipal Master Specification.

20. Storm water drainage, including roof drains, weeping tile drains, and street drainage, shall not be connected to the sanitary sewer system.

21. In the event that private or existing sewer lines are disturbed during construction, the lines are to be restored to their original *working* condition. Care shall be taken to ensure that soil or other material does not enter the lines to cause blockage.

22. Drop manholes must be provided for lateral sanitary sewers entering a manhole at an elevation of 600 mm or more above the manhole invert. Where the difference between the incoming sanitary sewer and the manhole invert is less than 600 mm, the invert should be filleted to prevent deposition of solids.

23. The flow channel through manholes should be made to conform in shape and slope to that of the sanitary sewer.

24. The direct connection of sanitary sewer service lines to manholes is prohibited unless the service enters at the flow line of the manhole. In this instance, filleting must be provided to prevent solids deposition.

25. All sanitary sewers shall be laid or covered with sufficient depth of suitable material to prevent frost penetration and damage from traffic loading.

26. Sanitary sewers entering or crossing streams shall be constructed of ductile iron pipe with mechanical joints, or similar construction to ensure watertight joints free from change in alignment or grade. Material used to backfill the trench shall be stone, coarse aggregate, washed gravel, or other materials which will not readily erode, cause siltation, damage pipe during placement, or corrode the pipe.

27. The additional wastewater produced by consumers who are serviced by this project must not result in an exceedance of the maximum rated capacity of the wastewater collection system or wastewater treatment plant as specified in the Permit to Operate.

28. Sanitary sewers with a 20% slope or greater are secured with concrete anchors or equivalent, and spaced accordingly.

29. Additional sewer services resulting from this project must not adversely affect the wastewater collection system causing surcharging or overflow conditions during peak flows.

Pipe Crossing

30. 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.

31. Completed pipe crossings must provide a minimum cover of 0.6 metres of stable compacted material sufficient to resist scouring and erosion. The finished surface cover must not extend above the original grade of the channel.

32. 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.

33. 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.

34. A temporary diversion channel adequate to convey flow without causing erosion or downstream siltation may be employed during construction of the stream crossing. After the installation is complete, all flow must be diverted back into the fully reinstated original channel. The temporary channel must be permanently closed to all flow, backfilled and the area must be restored to its original condition.

35. The installation of the water supply pipe must comply with the manufacturers specifications, particularly with regard to pipe zone bedding material, degree of compaction, and maximum - minimum pipe cover for design loadings.

General Alterations

36. Any work that must be performed below the high water mark must be carried out during a period of low water levels.

37. Any flowing or standing water must be diverted around work sites so that work is carried out in the dry.

38. 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.

39. 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.

40. 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.

41. 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.

42. 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.

43. 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.

44. 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.

45. The owners of structures are responsible for any environmental damage resulting from dislodgement caused by wind, wave, ice action, or structural failure.

46. 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.

47. 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.

48. The attached Completion Report (Appendix C) for Permit No. 9172 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.

49. The location of the work is highlighted on the Location Map for this Permit attached as Appendix D.

50. All work must be carried out within the Permit Holder's legal property boundaries.

Lift Stations and Forcemains

51. The sewage lift station must be equipped with a manual line transfer switch to accommodate an auxiliary power source during power outages.

52. Forcemains shall enter the gravity sanitary sewer at a point not more than 600 mm above the flow line of the receiving manhole.

53. The direct connection of sanitary sewer services to sewage lift stations is not permitted. Connection may be made to a sanitary sewer main leading to the sewage lift station, or to a manhole immediately prior to the sewage lift station provided the sanitary sewer service lateral enters the manhole at the flow line.

54. Contingency plans must be established for mechanical and extended electrical failure for all sewage pumping stations. Alarm systems shall be activated in cases of power failure, pump failure, unauthorized entry, or any cause of pump station malfunction.

55. All septic sludge and grit removed from the lift station chamber must be disposed of by a licensed hauler to an approved waste disposal site.

Outfalls and Overflows

56. A minimum of 3.0 metres of water cover at L.N.T. is required over the outfall outlet, and the end of the outfall shall extend as far as possible in order to achieve this cover.

57. The outfall or overflow shall be installed in such a manner as to protect against the effects of tides, floodwater, ice or other hazards to ensure continuous function.

58. A sign shall be posted indicating the location of the outfall.

Septic Tanks

59. The septic tank's outlet elevation shall be above the highest normal tide.

60. The septic tank shall have a minimum liquid capacity of 450,000 litres and shall be constructed as outlined on drawing(s) C1 and C2. The tank must be CSA certified and/or constructed and tested in accordance with the CSA B66-00 Standard.

61. Access (by persons and vehicles) to the top of the septic tank shall be prohibited by a barrier.

62. There shall be a minimum 75 mm difference in elevation between the tank's inlet and outlet pipes.

63. The tank's outlet tee must extend down into the chamber's clear liquid section to prevent carryover of solids and scum.

APPENDIX B

Special Terms and Conditions for Permit

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.

cc: Amir Ali Khan, Ph.D., P.Eng.
Manager, Water Rights, Investigations and Modelling Section
Water Resources Management Division
Department of Municipal Affairs and Environment
P.O. Box 8700
4th Floor, West Block, Confederation Building
St. John's, NL A1B 4J6
akhan@gov.nl.ca

cc: Mr. Chris Blanchard, B.Tech.(Env), AScT
Environmental Scientist
Water Resources Management Division
Department of Municipal Affairs and Environment
P.O. Box 2006
Corner Brook, NL A2H 6J8
cblancha@gov.nl.ca

cc: Ms. Deneen Spracklin, P.Eng.
Environmental Engineer, Drinking Water and Wastewater Section
Water Resources Management Division
Department of Municipal Affairs and Environment
P.O. Box 8700
4th Floor, West Block, Confederation Building
St. John's, NL A1B 4J6
dspracklin@gov.nl.ca

cc: Jeff Bannister (Western and Labrador)
Western and Labrador Regional Lands Manager
Crown Lands Administration Division
JeffBannister@gov.nl.ca

cc: Mr. Chris Power, P. Eng.
Regional Engineer, Western Regional Office
Department of Municipal Affairs and Environment
6th Floor, Sir Richard Squires Building
P.O. Box 2006
Corner Brook, NL A2H 6J8
ChrisPower@gov.nl.ca

cc: Ms. Susan Hoddinott
Regional Director
Service NL
PO Box 2006
Corner Brook NL A2H 6J8
SusanHoddinott@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: Mr. D. Dicesare, P. Eng.
Atlantic Engineering Consultants
34 Main Street
Corner Brook, NL A2H 1C3
djdicesare@aecl.nfld.net

Newfoundland Labrador

Government of Newfoundland and Labrador
Department of Municipal Affairs and Environment
Water Resources Management Division

Appendix C - Completion Report

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, specifically Section(s) 36, 48

Date: **JUNE 12, 2018**

File No: **842.030.1**
Permit No: **WS9172-2018**

Permit Holder: **Town of Irishtown-Summerside**
P.O. Box 2795, RR#3
Corner Brook, NL, A2H 4A1

Attention: **Ms. Rita Blanchard, Town Clerk**

Re: **Irishtown-Summerside - Sanitary Sewer Extension - South Side**

Permission was given for : **the installation of 135 m of 300 mm diameter PVC sewermain, 15 m of 250 mm diameter PVC sewermain, 710 m of 200 mm diameter PVC sewermain, 110 m of 300 mm diameter HDPE sewage outfall pipe, one sewage pumping station, 50 m of 100 mm diameter PVC forcemain, a 450 cubic meter communal septic tank and related works and appurtenances as described in a specification entitled "Town of Irishtown-Summerside, Southside Sanitary Sewer System" as well as a set of revised drawings numbered 3083, sheets SP1 to SP6 inclusive, C1 to C4 inclusive as received from Atlantic Engineering Consultants Ltd. on May 18, 2018 and additional information submitted on June 7, 2018.**

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 Municipal Affairs and Environment 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 Municipal Affairs and Environment
Water Resources Management Division
PO Box 8700
St. John's NL A1B 4J6

APPENDIX D

Location Map for Permit