ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 5361-DTZEPX
Issue Date: June 29, 2026

Hammerford Development Co. (Ballantrae) Ltd.
40 Vogell Rd, No. 17
Richmond Hill, Ontario
L4B 2N6

Site Location: 15288, 15300, 15310, 15322 Highway 48 & 5194, 5208, 5222, 5232 Aurora Road
Whitchurch-Stouffville Town, Regional Municipality of York
L4A 7X4

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

the establishment of Works for the treatment of sanitary sewage and subsurface disposal of treated effluent from a year-round residential development (approximately 90 homes) at the above site location, rated at a Maximum Daily Flow of 90,000 litres per day, consisting of the following:

PROPOSED WORKS

NEWTERRA MBR WITH NITROGEN REMOVAL

The proposed sewage treatment system is a Newterra membrane bioreactor (MBR) with nitrogen removal, consisting of the following:

Raw Sewage Pumping Station: A raw sewage pumping station located near the wastewater treatment plant, consisting of a precast concrete wet well, equipped with a basket strainer, four level switches, low and high level alarms and two submersible sewage pumps (duty/standby configuration), transferring raw sewage to the fine screening unit.

Fine Screening Unit: One fine screening unit with two screens of 2 mm openings, one duty and one standby, removing coarse solids and fibrous materials to protect downstream equipment and membranes, discharging screened sewage to a horizontal flow grit chamber and compacted screenings to a solids bin for off-site disposal.

Horizontal Flow Grit Chamber: a horizontal flow grit chamber removing grit, sand and other heavy inorganic materials while maintaining sufficient velocity to prevent the settling of lighter organic materials, discharging effluent by gravity to an oil and scum chamber, and accumulated grits being removed periodically by a vacuum truck.

Oil and Scum Chamber: An oil and scum chamber equipped with internal baffles to facilitate the separation of floatable materials, discharging clarified effluent by gravity from the lower portion of the chamber to the equalization tank downstream and the floatables are being removed periodically by a vacuum truck

Flow Equalization Tank: An in-ground concrete flow equalization tank with a working volume of 48,720 L, equipped with a coarse bubble aeration system, two blowers (duty/standby configuration), and two submersible feed pumps (one duty and one standby) together with level transmitters, float switches, high- and low-level alarms, discharging effluent downstream to a pre-anoxic tank.

Pre-Anoxic Tank: A pre-anoxic tank with an effective volume of 30,000 L, equipped with submersible mixing pumps to maintain complete mixing condition under low dissolved oxygen where influent wastewater mixes with the nitrate-rich mixed liquor recycled from downstream aerobic processes, facilitating denitrification through biological conversion of nitrate to nitrogen gas, resulting in a reduction in total nitrogen and recovery of alkalinity by process stabilization.

Aerobic Tank: An aerobic tank with an effective volume of 40,290 L, receiving mixed liquor flow from the pre-anoxic tank, equipped with a fine bubble aeration system, two blowers (one duty and one standby), and process instrumentation including dissolved oxygen, pH, and flow monitoring. The aerobic conditions facilitate the biological oxidation of organic matter and ammonia where dissolved oxygen is maintained within a controlled range to optimize treatment efficiency. The tank is equipped with two VFD controlled recirculation pumps (duty/standby configuration), and a waste activated sludge (WAS) pump conveying sludge to the sludge holding tank.

Post-Anoxic Tank: A post-anoxic tank with an effective volume of 13,700 L, receiving flow from the aerobic tank, equipped with submersible mixing pumps (duty/shelf spare configuration), level transducers, flow transducers, a nitrate probe, VFD controlled two membrane feed pumps (both duty) and float switches, discharging effluent to the membrane filtration tank. An external carbon source is added at this stage to promote denitrification of residual nitrate to further reduce total nitrogen concentrations prior to membrane filtration.

Membrane Filtration Tank: A membrane filtration tank consists of two (2) membrane trains, each train is equipped with Zeeweed 500 (or equivalent) ultrafiltration membrane modules with 0.04 micrometer nominal pore size (8 each, 16 in total) and permeate extraction system (3 VFD pumps, one permeate duty pump per train and one common shelf spare) to separate effluent from the mixed liquor and solids and discharging permeates to Final Effluent Pump Tank. The membrane modules are being continually air scoured to induce flow of mixed liquor over the membrane surface and prevent fouling and buildup of solids on the membrane surface without the use of chemicals. Mixed liquor is being returned to the aerobic tank, and subsequently to the pre-anoxic tank through recirculation pumps for even distribution of solids and to introduce activated biology to the raw wastewater. Additional equipment in the membrane treatment train includes temperature transmitters, viewing windows, high level alarms, air scouring diffusers, sample ports, one common membrane backwash system, and an air scouring blower.

Final Effluent Pump Tank: An inground concrete final effluent pump tank with an effective volume of 13,700 L, receiving effluent from the membrane filtration tank, equipped with low and high level alarms, level transmitter, and four submersible effluent pumps (all are on duty), discharging treated effluent to the disposal beds.

Chemicals and Dosing Pumps: The chemicals being used are: Sodium Hypochlorite (or equivalent) and Citric Acid (or equivalent) for membrane cleaning, Sodium Hydroxide (or equivalent) for pH correction /alkalinity addition, and MicroC 2000 (or equivalent) as carbon source for denitrification. The system is equipped with two (2) diaphragm pumps (Prominent or equivalent) for dosing Sodium Hydroxide and MicroC 2000, and two (2) Shurflo or equivalent dosing pumps for Sodium Hypochlorite and Citric Acid.

Offline Sludge Holding and Thickening Tank: An offline sludge holding and thickening tank with a working volume of 37,330 L being used to store the sludge and decant the supernatant, returning to the equalization tank. The tank includes coarse bubble diffusers, one (1) aeration blower, level transducer, a decanting pump, high and low level alarms where aeration is used to maintain an aerobic environment to reduce odours, and thickened sludge is removed periodically by a licensed sewage hauler for off-site disposal.

Odour Control: two (2) activated carbon vessels trapping odour from air coming from the fine screening unit. The unit is equipped with pressure gauges, vacuum gauges, a common inlet moisture separator and ventilation blowers.

Instrumentation and Control System: The treatment system is being monitored and controlled by a programmable logic controller (PLC) integrated with a human-machine interface (HMI), where the PLC is equipped with communication capabilities for integration with the plant control system supporting on-site and remote monitoring, alarm management, and operation.

Composite Sampling System: An automatic composite sampler installed at an appropriate location for collecting representative samples of the final effluent prior to discharging to the subsurface disposal system.

FINAL EFFLUENT DISPOSAL SYSTEM

The final effluent is disposed subsurface through a Type ‘A’ dispersal bed, designed for Q = 90,000 L/day, consisting of the followings:

Sand Layer: A sand layer forming the base of the Type ‘A’ dispersal bed, covering an area of approximately 2,618 m² with a minimum thickness of 300 mm, placed on the native soil with T-time of 8 min/cm. The sand layer is constructed using imported sand meeting *Ontario Building Code* (OBC) specifications, with a T-time between 6 and 10 min/cm and containing less than 5% fines passing the 0.074 mm (No. 200) sieve. The sand layer underlies the stone layer described below.

Stone Layer and Distribution Piping: A stone layer consisting of septic stones meeting *Ontario Building Code* (OBC) specifications, with a minimum thickness of 300 mm and a total area of approximately 1,320 m², accommodating four pairs of cells equipped with distribution piping. Each pair of cells measuring 33 m × 10 m (330 m²) containing twenty (20) runs of perforated distribution pipes, each 15 m in length and 75 mm in diameter, totalling 1,200 linear metres. The pipes are spaced at 1.0 m centre-to-centre and installed a minimum

of 500 mm from the edge of the stone layer. The ends of all distribution lines are interconnected using 75 mm diameter solid PVC piping.

The base of the stone layer is located at least 600 mm above the highest groundwater level, including the effects of groundwater mounding, or any impermeable surface. A permeable geotextile fabric (or equivalent) is placed over the stone layer prior to backfilling with sand to prevent soil migration into the stone medium.

Cover Materials: Cover materials comprising of imported sands are placed over the leaching bed to within 100 to 150 mm of the finished grade. The final surface is then brought to grade using 100 to 150 mm of screened topsoil, followed by sod or seed placement.

Leaching Bed Dosing: Treated sewage from the final effluent pumping tank is conveyed via a 50 mm diameter forcemain to four pairs of leaching bed cells where dosing is provided by four (4) timer-controlled BJM J750 (or equivalent) 1 hp effluent pumps, each operating at an estimated total dynamic head (TDH) of approximately 6 m. Each pump delivers approximately 1,000 L per cycle, with a maximum runtime of 15 minutes per cycle, resulting in up to 90 cycles per day. Dosing occurs on demand, with pumps operating in an alternating sequence.

All other requirements for a Type "A" dispersal bed, as specified in the OBC, and described in the design drawings submitted with this Approval application are adhered to.

Alll other controls, electrical equipment, standby power system, instrumentation, piping, pumps, valves and appurtenances essential for the proper operation of the aforementioned Works;

all in accordance with the submitted supporting documents listed in **Schedule A**.

For the purpose of this environmental compliance approval, the following definitions apply:

1. "Annual Maximum Daily Influent Flow" means the maximum Influent collected in a single day during a calendar year;

2. "Approval" means this entire Environmental Compliance Approval and any Schedules attached to it;

3. "BOD5" (also known as TBOD5) means five day biochemical oxygen demand measured in an unfiltered sample and includes carbonaceous and nitrogenous oxygen demands;

4. "CBOD5" means five day carbonaceous (nitrification inhibited) biochemical oxygen demand measured in an unfiltered sample;

5. "Director" means a person appointed by the Minister pursuant to section 5 of the EPA for the purposes of Part II.1 of the EPA;

6. "District Manager" means the District Manager of the appropriate local district office of the Ministry where the Works is geographically located;

7. "EPA" means the *Environmental Protection Act* , R.S.O. 1990, c.E.19;

8. "Equivalent Equipment" means alternate piece(s) of equipment that meets the design requirements and performance specifications of the piece(s) of equipment to be substituted;

9. "Final Effluent" means effluent that is discharged to the environment through the approved effluent disposal facilities, that are required to meet the compliance limits stipulated in the Approval for the Sewage Treatment Plant at the Final Effluent sampling point;

10. "Grab Sample" or "Grab" means an individual sample of at least 1000 millilitres collected in an appropriate container at a randomly selected time over a period of time not exceeding 15 minutes;

11. "Influent" means flows to the Sewage Treatment Plant from the collection system but excluding process return flows;

12. "Licensed Engineering Practitioner" means a person who holds a licence, limited licence or temporary licence under the *Professional Engineers Act,* R.S.O. 1990, c. P.28;

13. "Limited Operational Flexibility" (LOF) means the conditions that the Owner shall follow in order to undertake any modification that is pre-authorized as part of this Approval;

14. "Maximum Daily Flow" (also referred to as Peak Daily Flow Rate or Maximum Day Flow) means the largest volume of flow to be received during a one-day period for which the sewage treatment process unit or equipment is designed to handle;

15. "Ministry" means the ministry of the government of Ontario responsible for the EPA and OWRA and includes all officials, employees or other persons acting on its behalf;

16. "Monthly Average Effluent Concentration" is the mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured during a calendar month;

17. "Normal Operating Condition" means the condition when all unit process(es), excluding Preliminary Treatment System, in a treatment train is operating within its design capacity;

18. "OBC" means the Ontario Building Code, Ontario Regulation 163/24 (Building Code) as amended to January 1, 2025, made under the *Building Code Act,* 1992 , S.O. 1992, c. 23;

19. "Operating Agency" means the Owner, person or the entity that is authorized by the Owner for the management, operation, maintenance, or alteration of the Works in accordance with this Approval;

20. "Owner" means Hammerford Development Co. (Ballantrae) Ltd., including any successors and assignees;

21. "OWRA" means the *Ontario Water Resources Act* , R.S.O. 1990, c. O.40;

22. "Peak Daily Flow Rate" (also referred to as Maximum Daily Flow or Maximum Day Flow) means the largest volume of flow to be received during a one-day period for which the sewage treatment process unit

or equipment is designed to handle;

23. "Preliminary Treatment System" means all facilities in the Sewage Treatment Plant associated with screening and grit removal;

24. "Primary Effluent" means the effluent from the Primary Treatment System;

25. "Primary Treatment System" means all facilities in the Sewage Treatment Plant associated with the primary sedimentation unit process and includes chemically enhanced primary treatment;

26. "Proposed Works" means those portions of the Works included in the Approval that are under construction or to be constructed;

27. “Responsibility Agreement” means a legal agreement between a municipality and developer which stipulate the conditions under which communal services will be constructed, operated and maintained, as well as, the action to be undertaken by the municipality in the event of default;

28. "Secondary Effluent" means the effluent from the Secondary Treatment System;

29. "Secondary Treatment System" means all facilities in the Sewage Treatment Plant associated with biological treatment and secondary sedimentation processes;

30. "Sewage Treatment Plant" means all the facilities related to sewage treatment within the sewage treatment plant site excluding the Final Effluent disposal facilities;

31. "Single Sample Result" means the test result of a parameter in the effluent discharged on any day, as measured by a probe, analyzer or in a composite or grab sample, as required;

32. "Site" means the properties listed in the Site Location section of this Approval;

33. "Source Protection Authority" has the same meaning as in the Clean Water Act, 2006;

34. "Source Protection Plan" means a drinking water source protection plan prepared under the Clean Water Act, 2006;

35. "Works" means the approved sewage works, and includes Proposed Works, and modifications made under Limited Operational Flexibility.

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL PROVISIONS

1. The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Works is notified of this Approval and the terms and conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

2. The Owner shall design, construct, operate and maintain the Works in accordance with the conditions of this Approval.

3. Where there is a conflict between a provision of any document referred to in this Approval and the conditions of this Approval, the conditions in this Approval shall take precedence.

4. The issuance of, and compliance with the conditions of this Approval does not:

   a. relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement, including, but not limited to, the obligation to obtain approval from the local conservation authority necessary to construct or operate the Works; or

   b. limit in any way the authority of the Ministry to require certain steps be taken to require the Owner to furnish any further information related to compliance with this Approval.

2. CHANGE OF OWNER AND OPERATING AGENCY

1. The Owner shall notify the District Manager and the Director, in writing, of any of the following changes within **thirty (30) days** of the change occurring:

   a. change of address of Owner;

   b. change of Owner, including address of new owner;

   c. change of partners where the Owner is or at any time becomes a partnership, and a copy of the most recent declaration filed under the *Business Names Act, R.S.O. 1990, c. B.17* shall be included in the notification;

   d. change of name of the corporation and a copy of the most current information filed under the *Corporations Information Act, R.S.O. 1990, c. C.39* shall be included in the notification.

2. The Owner shall notify the District Manager, in writing, of any of the following changes within **thirty (30) days** of the change occurring:

   a. change of address of the Operating Agency;

   b. change of the Operating Agency, including address of the new Operating Agency.

3. In the event of any change in ownership of the Works, the Owner shall notify the succeeding owner in writing, of the existence of this Approval, and forward a copy of the notice to the District Manager.

4. The Owner shall ensure that all communications made pursuant to this condition refer to the number of

this Approval.

3. CONSTRUCTION OF PROPOSED WORKS AND RECORD DRAWINGS

1. All Proposed Works in this Approval shall be constructed and installed and must commence operation within **five (5) years** of issuance of this Approval, after which time the Approval ceases to apply in respect of any portions of the Works not in operation. In the event that the construction, installation and/or operation of any portion of the Proposed Works is anticipated to be delayed beyond the time period stipulated, the Owner shall submit to the Director an application to amend the Approval to extend this time period, at least six (6) months prior to the end of the period. The amendment application shall include the reason(s) for the delay and whether there is any design change(s).

2. Upon completion of construction of the Proposed Works, the Owner shall prepare and submit a written statement to the District Manager, certified by a Licensed Engineering Practitioner, that the Proposed Works is constructed in accordance with this Approval.

3. **One (1) week** prior to the commencement of the operation of the Proposed Works, the Owner shall notify the District Manager (in writing) of the pending start-up date.

4. Within **one (1) year** of completion of construction of the Proposed Works, a set of record drawings of the Works shall be prepared or updated. These drawings shall be kept up to date through revisions undertaken from time to time and a copy shall be readily accessible for reference at the Works.

5. The Owner shall ensure that the treatment technologies are installed in accordance with the manufacturer's installation manual.

6. The Owner shall ensure that the Works are constructed such that minimum horizontal clearance distances as specified in the OBC are satisfied.

7. The Owner shall ensure that an imported soil that is required for construction of any subsurface disposal bed as per this Approval is tested and verified by the Licensed Engineering Practitioner for the percolation time (T) prior to delivering to the site location and the written records are kept at the site.

4. DESIGN OBJECTIVES

1. The Owner shall design and undertake everything practicable to operate the Sewage Treatment Plant in accordance with the following objectives:

   a. Final Effluent parameters design objectives listed in the table included in **Schedule B**.

   b. Annual Maximum Daily Influent Flow is within the design capacity of the Sewage Treatment Plant.

5. COMPLIANCE LIMITS

1. The Owner shall operate and maintain the Sewage Treatment Plant such that compliance limits for the

Final Effluent parameters listed in the table included in **Schedule C** are met.

6. OPERATION AND MAINTENANCE

1. The Owner shall ensure that, at all times, the Works and the related equipment and appurtenances used to achieve compliance with this Approval are properly operated and maintained. Proper operation and maintenance shall include effective performance, adequate staffing and training, including training in all procedures and other requirements of this Approval and the OWRA and relevant regulations made under the OWRA, process controls and alarms and the use of process chemicals and other substances used in the Works.

2. The Owner shall prepare/update the operations manual for the Works within **six (6) months** of completion of construction of the Proposed Works, that includes, but not necessarily limited to, the following information:

   a. operating procedures for the Works under Normal Operating Conditions;

   b. inspection programs, including frequency of inspection, for the Works and the methods or tests employed to detect when maintenance is necessary;

   c. repair and maintenance programs, including the frequency of repair and maintenance for the Works;

   d. procedures for the inspection and calibration of monitoring equipment;

   e. operating procedures for the Works to handle situations outside Normal Operating Conditions and emergency situations such as a structural, mechanical or electrical failure, or an unforeseen flow condition;

   f. a spill prevention control and countermeasures plan, consisting of contingency plans and procedures for dealing with equipment breakdowns, potential spills and any other abnormal situations, including notification of the Spills Action Centre (SAC) and District Manager;

   g. procedures for receiving, responding and recording public complaints, including recording any followup actions taken.

3. The Owner shall maintain an up to date operations manual and make the manual readily accessible for reference at the Works for the operational life of the Works. Upon request, the Owner shall make the manual available to Ministry staff.

4. The Owner shall ensure that the Operating Agency fulfills the requirements under O. Reg. 129/04, as amended for the Works, including the classification of facilities, licensing of operators and operating standards.

5. The Owner shall maintain a logbook to record the results of all inspections, repair and maintenance undertaken, calibrations, monitoring and spill response or contingency measures undertaken and shall

make the logbook available for inspection by Ministry staff. The logbook shall include the following:

a. the name of the operator making the entry; and

b. the date and results of each inspection, repair, maintenance, calibration, monitoring, spill response and contingency measure.

6. The Owner shall, upon completion of construction, prepare and make available for inspection by Ministry staff, a maintenance agreement with the manufacturer for the treatment process/technology. The maintenance agreement must be retained at the site and kept current for the operational life of the Works.

7. The Owner shall ensure that grass-cutting is maintained regularly over the subsurface disposal beds, and that adequate steps are taken to ensure that the area of the underground Works is protected from vehicle traffic.

8. The Owner shall visually inspect the general area where Works are located for break-out on a monthly basis throughout the year.

9. In the event a break-out is observed from a subsurface disposal bed, the Owner shall do the following:

a. sewage discharge to that subsurface disposal bed shall be discontinued;

b. the incident shall be **immediately** reported verbally to the Spills Action Centre (SAC) at (416) 325-3000 or 1-800-268-6060;

c. submit a written report to the District Manager within **fifteen (15) days** of the break-out;

d. access to the break-out area shall be restricted until remedial actions are complete;

e. during the time remedial actions are taking place the sewage generated at the site shall not be allowed to discharge to the environment; and

f. sewage generated at the site shall be safely collected and disposed of through a licensed waste hauler to an approved sewage disposal site.

10. The Owner shall ensure that the sludge tank be inspected as recommended by the manufacturer, and the sewage sludge accumulated in the sludge tank be periodically withdrawn at the frequency required to maintain efficiency of the treatment system as per manufacturer's guideline.

11. The Owner shall have a valid written agreement with an approved or registered hauler who is in possession of a Waste Management Systems Approval, for the treatment and disposal of the sludge generated from the Works, at all times during operation of the Works.

12. The Owner shall ensure that flow of effluent discharged into the subsurface disposal bed does not

exceed 90,000 litres per day.

13. The Owner shall provide and install a standby power supply integrated with the Works, ensuring it is readily available to maintain safe and continuous operation in the event of a power outage.

14. The Owner shall retain a Licensed Engineering Practitioner to conduct an inspection of the Works every five (5) years after issuance of this Approval, and prepare an Inspection Report that shall provide at a minimum, the following information:

    a. Details about general operational condition of the Works.

    b. Assessment of potential indications of failure of the Works, including but not limited to offensive odours, ponding on disposal beds or near underground tanks, sewage back-ups, etc.

15. Upon request, the Owner shall make the Inspection Reports available to Ministry staff.

16. The Owner shall retain for a minimum of **five (5) years** from the date of their creation, all records and information related to or resulting from the operation and maintenance activities required by this Approval.

7. MONITORING AND RECORDING

1. The Owner shall, upon commencement of operation of the Works, carry out a scheduled monitoring program of collecting samples at the required sampling points, at the frequency specified or higher, by means of the specified sample type and analyzed for each parameter listed in the tables under the monitoring program included in **Schedule D** and record all results, as follows:

    a. all samples and measurements are to be taken at a time and in a location characteristic of the quality and quantity of the sewage stream over the time period being monitored.

    b. definitions and preparation requirements for each sample type are included in the document referenced in Paragraph 2.b.

    c. a schedule of the day of the week/month for the scheduled sampling shall be created. The sampling schedule shall be revised and updated every year through rotation of the day of the week for the scheduled sampling program, except when the actual scheduled monitoring frequency is three (3) or more times per week.

2. The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in the following documents and all analysis shall be conducted by a laboratory accredited to the ISO/IEC:17025 standard or as directed by the District Manager:

    a. the Ministry's Procedure F-10-1, “Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works (Liquid Waste Streams Only), as amended;

    b. the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal

Wastewater Version 2.0" (January 2016), PIBS 2724e02, as amended;

c. the publication "Standard Methods for the Examination of Water and Wastewater", as amended; and

d. for any parameters not mentioned in the documents referenced in Paragraphs 2.a, 2.b and 2.c, the written approval of the District Manager shall be obtained prior to sampling.

3. The Owner shall monitor and record the flow rate and daily quantity using flow measuring devices or other methods of measurement as approved below calibrated to an accuracy within plus or minus 10 per cent (+/- 10%) of the actual flowrate of the following:

   a. Influent flow to the Sewage Treatment Plant by continuous flow measuring devices and instrumentation or in lieu of an actual installation of equipment by recording pumping rates;

   b. Final Effluent discharged from the Sewage Treatment Plant by continuous flow measuring devices and instrumentations or in lieu of an actual installation of equipment by recording pumping rates;

4. The Owner shall retain for a minimum of **five (5) years** from the date of their creation, all records and information related to or resulting from the monitoring activities required by this Approval.

8. LIMITED OPERATIONAL FLEXIBILITY

1. The Owner may make pre-authorized modifications to the sewage pumping stations and Sewage Treatment Plant in Works in accordance with the document "Limited Operational Flexibility - Protocol for Pre-Authorized Modifications to Private Works" **(Schedule E**), as amended, subject to the following:

   a. the modifications will not involve the addition of any new treatment process or the removal of an existing treatment process, including chemical systems, from the liquid or solids treatment trains as originally designed and approved.

   b. the scope and technical aspects of the modifications are in line with those delineated in Schedule E and conform with the Ministry's publication "Design Guidelines for Sewage Works 2008", as amended, Ministry's regulations, policies, guidelines, and industry engineering standards;

   c. the modifications shall not negatively impact on the performance of any process or equipment in the Works or result in deterioration in the Final Effluent quality;

   d. where the pre-authorized modification requires notification, a "Notice of Modifications to Sewage Works" (Schedule E), as amended shall be completed with declarations from a Licensed Engineering Practitioner and the Owner and retained on-site prior to the scheduled implementation date. All supporting information including technical memorandum, engineering plans and specifications, as applicable and appropriate to support the declarations that the modifications conform with LOF shall remain on-site for future inspection.

2. The following modifications are not pre-authorized under Limited Operational Flexibility:

   a. Modifications that involve addition or extension of process structures, tankages or channels;

   b. Modifications that involve relocation of the Final Effluent outfall or any other discharge location or that may require reassessment of the impact to the receiver or environment;

   c. Modifications that involve addition of or change in technology of a treatment process or that may involve reassessment of the treatment train process design;

   d. Modifications that require changes to be made to the emergency response, spill prevention and contingency plan; or

   e. Modifications that are required pursuant to an order issued by the Ministry.

9. REPORTING

1. The Owner shall report to the District Manager orally **as soon as possible** any non-compliance with the compliance limits specified in Condition 5, and in writing within **seven (7) days** of non-compliance.

2. In addition to the obligations under Part X of the EPA and O. Reg. 675/98 (Classification and Exemption of Spills and Reporting of Discharges) made under the EPA, the Owner shall, within **fifteen (15) days** of the occurrence of any reportable spill as provided in Part X of the EPA and O. Reg. 675/98, submit a full written report of the occurrence to the District Manager describing the cause and discovery of the spill, clean-up and recovery measures taken, preventative measures to be taken and a schedule of implementation.

3. The Owner shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to Ministry staff, Source Protection Authority and any other parties identified in the Source Protection Plans.

4. The Owner shall prepare performance reports on a calendar year basis and submit to the District Manager in an electronic format by **March 31** of the calendar year following the period being reported upon. The reports shall contain, but shall not be limited to, the following information pertaining to the reporting period:

   a. a summary and interpretation of all Influent monitoring data, and a review of the historical trend of the sewage characteristics and flow rates;

   b. a summary and interpretation of all flow data and results achieved in not exceeding the Maximum Daily Flow discharged into the subsurface disposal system;

   c. a summary and interpretation of all Final Effluent monitoring data, including concentration, flow rates, and a comparison to the design objectives and compliance limits in this Approval, including an overview of the success and adequacy of the Works;

d. a summary of any deviation from the monitoring schedule and reasons for the current reporting year and a schedule for the next reporting year;

e. a summary and interpretation of groundwater monitoring data including shallow groundwater flow direction, and groundwater mounding beneath the drainfield.

f. a summary of all operating issues encountered and corrective actions taken;

g. a summary of all normal and emergency repairs and maintenance activities carried out on any major structure, equipment, apparatus or mechanism forming part of the Works;

h. a summary of any effluent quality assurance or control measures undertaken;

i. a summary of the calibration and maintenance carried out on all Influent and Final Effluent monitoring equipment to ensure that the accuracy is within the tolerance of that equipment as required in this Approval or recommended by the manufacturer;

j. a summary of efforts made to achieve the design objectives in this Approval, including an assessment of the issues and recommendations for pro-active actions when any of the design objectives is not achieved more than 50% of the time in a year or there is an increasing trend in deterioration of Final Effluent quality;

k. a tabulation of the volume of sludge generated, an outline of anticipated volumes to be generated in the next reporting period and a summary of the locations to where the sludge was disposed;

l. a summary of any complaints received and any steps taken to address the complaints;

m. a summary of all Notice of Modifications to Sewage Works completed under Paragraph 1.d. of Condition 8, including a report on status of implementation of all modification;

n. any changes or updates to the schedule for the completion of construction and commissioning operation of major process(es)/equipment groups in the Proposed Works;

o. any other information the District Manager requires from time to time.

10. RESPONSIBILITY AGREEMENT

1. The Owner shall take all reasonable steps to enter into a duly signed Responsibility Agreement with York Region prior to the construction of the Works approved herein in accordance with the Ministry Procedure D-5-2 entitled "Application of Municipal Responsibility for Communal Water and Sewage Services".

2. The Owner shall provide written confirmation that the Responsibility Agreement was entered into, including the effective date of the Responsibility Agreement, to the Director and the District Manager.

11. REGISTRATION ON TITLE REQUIREMENT

1. Pursuant to Section 197 of the Environmental Protection Act, prior to dealing with any of the properties comprising the Site in any way, the Owner shall provide a copy of this Approval and any amendments, to any person who will acquire an interest in the property as a result of the dealing.

2. Within **sixty (60) calendar days** of the issuance of this Approval, the Owner shall submit to the Director:

   a. a plan of survey including each property comprising the Site indicating where the Works will be located;

   b. a completed Certificate of Requirement and its supporting documents containing a registerable description of each property comprising the Site.

3. Within **fifteen (15) calendar days** of receiving a Certificate of Requirement authorized by the Director, the Owner shall:

   a. register the Certificate of Requirement in the Land Titles Division of the Land Registry Office on the title to each property comprising the Site; and

   b. submit to the Director written verification that the Certificate of Requirement has been registered on title.

Schedule A

1. Application for Environmental Compliance Approval submitted by Jim Rawling, Controller, Hammerford Development Co. (Ballantrae) Ltd., received on May 2, 2025 for the proposed Woks, including environmental impact study, design report, final plans and specifications.

2. Additional information (revised process flow diagram, hydraulic profile and process calculations) received from Newterra on June 18, 2026.

Schedule B

Final Effluent Design Objectives

Final Effluent Parameter	**Averaging Calculator**	**Concentration Objective** (milligrams per litre unless otherwise indicated)
CBOD5	Single Sample Result	5 mg/L
Total Suspended Solids	Single Sample Result	5 mg/L
Total Inorganic Nitrogen	Single Sample Result	2 mg/L
Total Nitrogen	Single Sample Result	3.5 mg/L
pH	Single Sample Result	6.5 - 8.5 inclusive

Schedule C

Final Effluent Compliance Limits

Final Effluent Parameter	**Averaging Calculator**	**Concentration Limit** (maximum unless otherwise indicated)
CBOD5	Monthly Average Effluent Concentration	10 mg/L
Total Suspended Solids	Monthly Average Effluent Concentration	10 mg/L
Total Inorganic Nitrogen	Monthly Average Effluent Concentration	2.5 mg/L
Total Nitrogen	Monthly Average Effluent Concentration	5 mg/L
pH	Single Sample Result	6.0 - 9.5 inclusive

Schedule D

Monitoring Program

Influent - Influent sampling point (Flow Equalization Tank)

Parameters	Sample Type	Minimum Frequency
BOD5	8 hour composite	Bi-weekly (once every two weeks)
Total Suspended Solids	8 hour composite	Bi-weekly (once every two weeks)
Total Phosphorus	8 hour composite	Bi-weekly (once every two weeks)
Total Kjeldahl Nitrogen	8 hour composite	Bi-weekly (once every two weeks)
Total Ammonia Nitrogen	8 hour composite	Bi-weekly (once every two weeks)
Total Inorganic Nitrogen	8 hour composite	Bi-weekly (once every two weeks)
Alkalinity	8 hour composite	Bi-weekly (once every two weeks)

Note: Bi-weekly 8-hour composite sampling shall be conducted during site operations for the first three (3) years following issuance of the Approval. Contingent upon performance of the system, the sampling type may be changed from 8-hour composite sampling to grab sampling and frequency may be changed to once a month from bi-weekly, subject to notification to and written concurrence from the District Manager.

Final Effluent - Final Effluent sampling point (Final Effluent Tank)

Parameters	Sample Type	Minimum Frequency
CBOD5	8 hour composite	Bi-weekly (once every two weeks)
Total Suspended Solids	8 hour composite	Bi-weekly (once every two weeks)
Total Phosphorus	8 hour composite	Bi-weekly (once every two weeks)
Total Inorganic Nitrogen	8 hour composite	Bi-weekly (once every two weeks)
Total Nitrogen	8 hour composite	Bi-weekly (once every two weeks)
Total Ammonia Nitrogen	8 hour composite	Bi-weekly (once every two weeks)
Nitrate as Nitrogen	8 hour composite	Bi-weekly (once every two weeks)
Nitrite as Nitrogen	8 hour composite	Bi-weekly (once every two weeks)
Alkalinity	8 hour composite	Bi-weekly (once every two weeks)
pH	Grab/Probe/Analyzer	Bi-weekly (once every two weeks)

Note: Bi-weekly 8-hour composite sampling shall be conducted during site operations for the first three (3) years following issuance of the Approval. If, during this period, no analytical results for any parameter exceed the applicable compliance limits, the sampling method may be changed from 8-hour composite sampling to grab sampling, subject to notification to and written concurrence from the District Manager.

Groundwater Mounding Monitoring

Groundwater mounding shall be monitored at four (4) monitoring wells located adjacent to the leaching bed, as shown in Figure C4 (PDF page 86) of the report titled “On-site Sewage System Design and Water Resource Impact Study,” dated March 3, 2025, prepared by Envision Consultants Ltd.

Parameter	Sample Type	Minimum Frequency
Groundwater level	Transducer	Continuous

Note: groundwater mounding monitoring may be discontinued after five (5) years of monitoring, subject to consultation with and approval from the District Manager.

Schedule E

Limited Operational Flexibility

Protocol for Pre-Authorized Modifications to Works

1. General

1. Pre-authorized modifications are permitted only where Limited Operational Flexibility has already been granted in the Approval and only permitted to be made at the pumping stations and sewage treatment plant in the Works, subject to the conditions of the Approval.

2. Where there is a conflict between the types and scope of pre-authorized modifications listed in this document, and the Approval where Limited Operational Flexibility has been granted, the Approval shall take precedence.

3. The Owner shall consult the District Manager on any proposed modifications that may fall within the scope and intention of the Limited Operational Flexibility but is not listed explicitly or included as an example in this document.

4. The Owner shall ensure that any pre-authorized modifications will not:

    a. adversely affect the hydraulic profile of the Sewage Treatment Plant or the performance of any upstream or downstream processes, both in terms of hydraulics and treatment performance;

    b. result in a reduction in the required Peak Flow Rate of the treatment process or equipment as originally designed.

2. Modifications that do not require pre-authorization:

1. Works that are exempt from Ministry approval requirements;

2. Modifications to the electrical system, instrumentation and control system.

3. Pre-authorized modifications that do not require preparation of "Notice of Modification to Sewage Works"

1. Normal or emergency maintenance activities, such as repairs, renovations, refurbishments and replacements with Equivalent Equipment, or other improvements to an existing approved piece of equipment of a treatment process do not require pre-authorization. Examples of these activities are:

    a. Repairing a piece of equipment and putting it back into operation, including replacement of minor components such as belts, gear boxes, seals, bearings;

    b. Repairing a piece of equipment by replacing a major component of the equipment such as motor, with

the same make and model or another with the same or very close power rating but the capacity of the pump or blower will still be essentially the same as originally designed and approved;

c. Replacing the entire piece of equipment with Equivalent Equipment.

2. Improvements to equipment efficiency or treatment process control do not require pre-authorization. Examples of these activities are:

a. Adding variable frequency drive to pumps;

b. Adding on-line analyzer, dissolved oxygen probe, ORP probe, flow measurement or other process control device.

4. Pre-Authorized Modifications that require preparation of "Notice of Modification to Sewage Works"

1. Pumping Stations

a. Replacement or realignment of existing sewers including manholes, valves, gates, weirs and associated appurtenances provided that the modifications will not add new influent source(s) or result in an increase in flow from existing sources as originally approved.

b. Extension or partition of wet well to increase retention time for emergency response and improve station maintenance and pump operation;

c. Replacement or installation of inlet screens to the wet well;

d. Replacement or installation of flowmeters;

e. Replacement, reconfiguration and modifications to pump suctions and discharge pipings including valve, gates, motors, variable frequency drives and associated appurtenances to maintain firm pumping capacity or modulate the pump rate provided that the modifications will not result in a reduction in the firm pumping capacity or discharge head or an increase in the peak pumping rate of the pumping station as originally designed;

f. Replacement or realignment of existing forcemain(s) including valves, gates, and associated appurtenances provided that the modifications will not reduce the flow capacity or increase the total dynamic head and transient in the forcemain.

2. Sewage Treatment Plant

1. Sewers and appurtenances

a. Replacement or realignment of existing sewers (including pipes and channels), including manholes, valves, gates, weirs and associated appurtenances within the sewage treatment plant, provided that the modifications will not add new influent source(s) or result in an increase in flow from existing sources as originally approved and that the modifications will remove hydraulic bottlenecks or

improve the conveyance of sewage into and through the Works.

2. Flow Distribution Chambers/Splitters

    a. Replacement or modification of existing flow distribution chamber/splitters or construction of new flow distribution chamber/splitters, including replacements or installation of sluice gates, weirs, valves for distribution of flows to the downstream process trains, provided that the modifications will not result in a change in flow distribution ratio to the downstream process trains as originally designed.

3. Preliminary Treatment System

    a. Replacement of existing screens and grit removal units with equipment of the same or higher process performance technology, including where necessary replacement or upgrading of existing screenings dewatering washing compactors, hydrocyclones, grit classifiers, grit pumps, air blowers conveyor system, disposal bins and other ancillary equipment to the screening and grit removal processes.

    b. Replacement of channel aeration systems, including air blowers, air supply main, air headers, air laterals, air distribution grids and diffusers.

4. Primary Treatment System

    a. Replacement of existing sludge removal mechanism, including sludge chamber;

    b. Replacement of scum removal mechanism, including scum chamber;

    c. Replacement of primary sludge pumps, scum pumps, provided that the modifications will not result in a reduction in the firm pumping capacity or discharge head that the primary sludge pump(s) and scum pump(s) are originally designed to handle.

5. Secondary Treatment System

    1. Biological Treatment

        a. Conversion of complete mix aeration tank to plug-flow multi-pass aeration tank, including modifications to internal structural configuration;

        b. Addition of inlet gates in multi-pass aeration tank for step-feed operation mode;

        c. Partitioning of an anoxic/flip zone in the inlet of the aeration tank, including installation of submersible mixer(s);

        d. Replacement of aeration system including air blowers, air supply main, air headers, air laterals, air distribution grids and diffusers, provided that the modifications will not result in a reduction in the firm capacity or discharge pressure that the blowers are originally designed to supply or in the net oxygen transferred to the wastewater required for biological treatment as originally required.

    2. Secondary Sedimentation

        a. Replacement of sludge removal mechanism, including sludge chamber;

        b. Replacement of scum removal mechanism, including scum chamber;

        c. Replacement of return activated sludge pump(s), waste activated sludge pump(s), scum pump(s), provided that the modifications will not result in a reduction in the firm pumping capacity or discharge head that the activated sludge pump(s) and scum pump(s) are originally designed to handle.

6. Post-Secondary Treatment System

    a. Replacement of filtration system with equipment of the same filtration technology, including feed pumps, backwash pumps, filter reject pumps, filtrate extract pumps, holding tanks associated with the pumping system, provided that the modifications will not result in a reduction in the capacity of the filtration system as originally designed.

7. Disinfection System

    1. UV Irradiation

        a. Replacement of UV irradiation system, provided that the modifications will not result in a reduction in the design capacity of the disinfection system or the radiation level as originally designed.

8. Supplementary Treatment Systems

    1. Chemical systems

        a. Replacement or relocation of chemical storage tanks for existing chemical systems only, provided that the tanks are sited with effective spill containment;

        b. Replacement of chemical dosing pumps provided that the modifications will not result in a reduction in the firm capacity that the dosing pumps are originally designed to handle.

        c. Relocation and addition of chemical dosing point(s) including chemical feed pipes and valves and controls, to improve phosphorus removal efficiency;

        d. Use of an alternate chemical provided that it is a non-proprietary product and is a commonly used alternative to the chemical approved in the Works, provided that the chemical storage tanks, chemical dosing pumps, feed pipes and controls are also upgraded, as necessary.

9. Sludge Management System

    1. Sludge Holding and Thickening

        a. Replacement of sludge holding tanks, sludge handling pumps, such as transfer pumps, feed pumps, recirculation pumps, provided that modifications will not result in reduction in the solids storage or handling capacities;

    2. Sludge Digestion

        a. Replacement of digesters, sludge handling pumps, such as transfer pumps, feed pumps, recirculation pumps, provided that modifications will not result in reduction in the solids storage or handling capacities;

        b. replacement of sludge digester covers.

    3. Sludge Dewatering and Disposal

        a. Replacement of sludge dewatering equipment, sludge handling pumps, such as transfer pumps, feed pumps, cake pumps, loading pumps, provided that modifications will not result in reduction

in solids storage or handling capacities.

10. Standby Power System

    1. Replacement or installation of standby power system, including feed from alternate power grid, emergency power generator, fuel supply and storage systems, provided that the existing standby power generation capacity is not reduced.

3. Final Effluent Disposal Facilities

    a. Replacement or realignment of the Final Effluent channel, sewer or forcemain, including manholes, valves and appurtenances from the end of the treatment train to the discharge outfall section, provided that the sewer conveys only effluent discharged from the Sewage Treatment Plant and that the replacement or re-aligned sewer has similar dimensions and performance criteria and is in the same or approximately the same location and that the hydraulic capacity will not be reduced.

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 regarding general provisions is imposed to ensure that the Works are constructed and operated in the manner in which they were described and upon which approval was granted.

2. Condition 2 regarding change of Owner and Operating Agency is included to ensure that the Ministry records are kept accurate and current with respect to ownership and Operating Agency of the Works and to ensure that subsequent owners of the Works are made aware of the Approval and continue to operate the Works in compliance with it.

3. Condition 3 regarding construction of Proposed Works and Record Drawings is included to ensure that the Works are constructed in a timely manner so that standards applicable at the time of Approval of the Works are still applicable at the time of construction to ensure the ongoing protection of the environment, and also ensure that record drawings of the Works "as constructed" are updated and maintained for future references.

4. Condition 4 regarding design objectives is imposed to establish non-enforceable design objectives to be used as a mechanism to trigger corrective action proactively and voluntarily before environmental impairment occurs.

5. Condition 5 regarding compliance limits is imposed to ensure that the Final Effluent discharged from the Works to the environment meets the Ministry's effluent quality requirements.

6. Condition 6 regarding operation and maintenance is included to require that the Works be properly operated, maintained, funded, staffed and equipped such that the environment is protected and deterioration, loss, injury or damage to any person or property is prevented. As well, the inclusion of a comprehensive operations manual governing all significant areas of operation, maintenance and repair is prepared, implemented and kept up-to-date by the Owner. Such a manual is an integral part of the operation of the Works. Its compilation and use should assist the Owner in staff training, in proper plant operation and in

identifying and planning for contingencies during possible abnormal conditions. The manual will also act as a benchmark for Ministry staff when reviewing the Owner's operation of the Works.

7. Condition 7 regarding monitoring and recording is included to enable the Owner to evaluate and demonstrate the performance of the Works, on a continual basis, so that the Works are properly operated and maintained at a level which is consistent with the design objectives and compliance limits.

8. Condition 8 regarding Limited Operational Flexibility is included to ensure that the Works are constructed, maintained and operated in accordance with the Approval, and that any pre-approved modification will not negatively impact on the performance of the Works.

9. Condition 9 regarding reporting is included to provide a performance record for future references, to ensure that the Ministry is made aware of problems as they arise, and to provide a compliance record for this Approval.

10. Condition 10 is included to ensure that there is a Responsibility Agreement in place between the Owner and the Municipality prior to construction of the Works so that, in the event that the Owner is unable to continue to provide sewage service, the Municipality may be able to assume ownership and operation of the Works.

11. Condition 11 is included in order to require the Owner to give notice of this Approval to potential future owners of the property before the property is dealt with.

In accordance with Section 139 of the *Environmental Protection Act,* you may by written notice served upon me, the Ontario Land Tribunal and in accordance with Section 47 of the *Environmental Bill of Rights,* 1993, the Minister of the Environment, Conservation and Parks, within 15 days after receipt of this notice, require a hearing by the Tribunal. The Minister of the Environment, Conservation and Parks will place notice of your appeal on the Environmental Registry. Section 142 of the *Environmental Protection Act* provides that the notice requiring the hearing ("the Hearing") shall state:

a. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
b. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

1. The name of the appellant;
2. The address of the appellant;
3. The environmental compliance approval number;
4. The date of the environmental compliance approval;
5. The name of the Director, and;
6. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

Registrar*
Ontario Land Tribunal

The Minister of the Environment,
Conservation and Parks

The Director appointed for the purposes of
Part II.1 of the *Environmental Protection Act*
Ministry of the Environment,

655 Bay Street, Suite 1500 Toronto, Ontario M5G 1E5 OLT.Registrar@ontario.ca	and	777 Bay Street, 5th Floor Toronto, Ontario M7A 2J3	and	Conservation and Parks 135 St. Clair Avenue West, 1st Floor Toronto, Ontario M4V 1P5

*** Further information on the Ontario Land Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349 or 1 (866) 448-2248, or www.olt.gov.on.ca**

This instrument is subject to Section 38 of the *Environmental Bill of Rights,* 1993, that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek leave to appeal within 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry at https://ero.ontario.ca/, you can determine when the leave to appeal period ends.

The above noted activity is approved under s.20.3 of Part II.1 of the *Environmental Protection Act.*

DATED AT TORONTO this 29th day of June, 2026

Fariha Pannu.

Fariha Pannu, P.Eng.
Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act

MK/
c: District Manager, MECP York-Durham
Michael Varty, EnVision Consultants Ltd.