

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 4863-CKBLBB
Issue Date: February 9, 2023

Ableliving Services Inc.
565 Sanatorium Rd
Hamilton, Ontario
L9C 7N4

Site Location: AbleLiving Binbrook
2080 Trinity Church Rd
City of Hamilton,
L0R 1C0

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:

sewage works for the collection, treatment and disposal of domestic sewage with a Rated Capacity of 12,000 litres per day and a Peak Daily Flow Rate of 20,000 litres per day, consisting of the following:

PROPOSED WORKS

TREATMENT SYSTEM

- ***iQ.MBBR System (BNA moving bed biofilm bioreactor) including :***
 - **Sludge Storage / Primary Clarification Tank** (existing): One 45,000 L tank for sludge storage/primary clarification.
 - **Flow Equalization Tank** (existing): One 45,000 L flow equalization pump tank, equipped with timer-operated duplex pumps set to discharge 830 L every hour or 20,000 L/d.
 - **Aerobic carbon reduction Bioreactors:** One bioreactor consisting of two aerobic carbon reduction bioreactor chambers, receiving effluent from the primary clarification tank, each having an effective volume of 5,800 L and partially filled with 2,100 L of plastic carrier media.
 - **Secondary Clarifier:** One clarifier, receiving effluent from the aerobic bioreactor stage, with an effective volume of 3,500 L and liquid surface area of 3.5 m², equipped with two sludge

return pumps (0.33 HP rated at 75 L/min, 4.5 m TDH).

- **Effluent Pump Tank (existing):** One 45,000 L effluent pump tank is proposed, equipped with existing duplex sewage pumps (0.5 HP at 190 L/min, 6 m TDH), to discharge effluent to the Type A dispersal bed on demand.
- **Tank Maintenance/Servicing Features:** Duplex pumps in the flow equalization and effluent pump tanks to be equipped with high-level floats and external audible/visual warning alarms.

DISPERSAL BED

A **raised Type A Dispersal Bed** consisting of:

- total sand area of 3424 m² (54.0 m x 65.5 m) with a minimum depth of 0.3 m and T-time in the range of 6 to 10 min/cm.
- stone area of 608 m² (19.2 m x 31.7 m) with a minimum of 0.6 m between the base of the stone and the underlying soil as required by the OBC.
- One bed having thirty two (32) runs of 14.5 m long 100 mm perforated, equipped with a polylok distribution box to ensure even distribution.
- a minimum 15 m mantle beyond the edge of the stone layer in the direction of the flow as per OBC;
- 200-300 mm topsoil bed cover.

EXISTING WORKS

- An inground 45,000 L capacity watertight two (2)-compartment septic tank equipped with baffles, inlet and outlet piping, access opening, venting and manhole access openings, discharging by gravity to an existing inground balancing tank/sewage pumping chamber;
- An inground 45,000 L capacity watertight two (2)-compartment flow balancing tank/sewage pumping chamber, equipped with inlet and outlet piping, access hatchways, venting, together with two (2) new effluent sewage pumps each with a rated capacity of 1.42 L/s at a TDH of 9.8 m, timer controls, liquid level float control system with alarms, valves and piping, access hatchway, gravity venting, benching, dual forcemain discharge piping discharging via an inground three-way distribution valve to one of three (3) individual inground "Norweco Singular Treatment unit" sewage treatment systems operating in parallel (**to be decommissioned**), each treatment unit having a maximum treatment capacity of 4,750 L/d;
- An inground 45,000 L treated effluent pump chamber, receiving the combined treated effluent from all the "Norweco" sewage treatment units by gravity, equipped with two (2) effluent sewage pumps each with a rated capacity of 1.42 L/s at a TDH of 9.8 m, timer controls, liquid level float control system with alarms, valves and piping, access hatchway, with forcemain discharge piping to a flow control valve which alternately doses one of four (4) tile beds comprising a shallow buried leaching bed subsurface sewage disposal system;

- A shallow buried leaching bed subsurface sewage disposal system (**to be decommissioned**) comprised of a minimum total surface area of 2,000 m² and imported soil having a design percolation rate “T” of 5.0 to 10 min/cm having a maximum hydraulic loading rate of 6 L/m²/d, complete with four (4) tile beds each with six (6) runs of 13.2 m length perforated pressurized pipe discharging to existing raised bed having a design percolation rate “T” of 5.0 to 10 min/cm and native soil subgrade having a percolation rate T of 45 min/cm;
- An above ground lockable weatherproof control panel housing a cycle meter and elapsed time meter;

All controls and sensors, electrical equipment, instrumentation, piping, and appurtenances essential for the proper operation of the aforementioned Works.

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

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

1. "Approval" means this entire Approval document and any Schedules to it, including the application and Supporting Documentation;
2. "BOD₅" (also known as TBOD₅) means five day biochemical oxygen demand measured in an unfiltered sample and includes carbonaceous and nitrogenous oxygen demand;
3. "CBOD₅" means five day carbonaceous (nitrification inhibited) biochemical oxygen demand measured in an unfiltered sample;
4. "Director" means a person appointed by the Minister pursuant to Section 5 of the EPA for the purposes of Part II.I of the EPA;
5. "Grab Sample" 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;
6. "District Manager" means the District Manager of the *Hamilton office* of the Ministry;
7. "EPA" means the Environmental Protection Act, R.S.O. 1990, c.E.19, as amended;
8. "Existing Works" means those portions of the Works included in the Approval that have been constructed previously;
9. "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;
10. "Licensed Installer" means a person who is registered under the OBC to construct, install, repair, service, clean or empty on-site sewage systems;
11. "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;

12. "OBC" means the Ontario Building Code, Ontario Regulation 332/12 (Building Code) as amended to January 1, 2015, made under the *Building Code Act*, 1992, S.O. 1992, c. 23;
13. "Owner" means Ableliving Services Inc. and its successors and assignees;
14. "OWRA" means the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40, as amended;
15. "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;
16. "Proposed Works" means those portions of the Works included in the Approval that are under construction or to be constructed; and
17. "Rated Capacity" means design daily sanitary sewage flow for which the Works are approved to handle;
18. "Supporting Documentation" means the documents listed in Schedule A of this Approval;
19. "Works" means the approved sewage works, and includes Proposed Works, and Existing Works.

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.

2. EXPIRY OF APPROVAL

1. This Approval will cease to apply to those parts of the Proposed Works which have not been

constructed within **five (5) years** of the date of this Approval.

3. CHANGE OF OWNER

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.B17 shall be included in the notification to the District Manager;
 - d. change of name of the corporation and a copy of the most current information filed under the *Corporations Informations Act*, R.S.O. 1990, c. C39 shall be included in the notification to the District Manager;
2. In the event of any change in ownership of the Works, other than a change to a successor municipality, the Owner shall notify in writing the succeeding owner of the existence of this Approval, and a copy of such notice shall be forwarded to the District Manager and the Director.
3. The Owner shall ensure that all communications made pursuant to this condition refer to the number of this Approval.

4. CONSTRUCTION

1. The Owner shall ensure that the construction of the Works is supervised by a Licensed Engineering Practitioner or Licensed Installer.
2. The Owner shall ensure that the Works are constructed such that minimum horizontal clearance distances as specified in the OBC are satisfied.
3. The Owner shall ensure that the BNA moving bed biofilm bioreactor (MBBR) treatment system is installed in accordance with the Manufacturer's Installation Manual.
4. The Owner shall ensure that any 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.
5. Upon construction of the Works, the Owner shall prepare a statement, certified by a Licensed Engineering Practitioner, that the Works are constructed in accordance with this Approval, and upon

request, shall make the written statement available for inspection by Ministry staff.

6. Upon construction of the Works, the Owner shall prepare a set of as-built drawings showing the Works "as constructed". "As-built" drawings shall be kept up to date through revisions undertaken from time to time and a copy shall be retained at the site for the operational life of the Works and shall be made available for inspection by Ministry staff.

5. MONITORING AND RECORDING

The Owner shall, upon commencement of operation of the Works, carry out the following monitoring program:

1. All samples and measurements taken for the purposes of this Approval are to be taken at a time and in a location characteristic of the quality and quantity of the effluent stream over the time period being monitored.
2. Samples shall be collected at the sampling point(s), at the sampling frequencies and using the sample type specified for each parameter listed in the Influent Monitoring Table included in **Schedule B**.
3. Samples shall be collected at the sampling point(s), at the sampling frequencies and using the sample type specified for each parameter listed in the Effluent Monitoring Table included in **Schedule B**.
4. Samples shall be collected at the sampling point(s), at the sampling frequencies and using the sample type specified for each parameter listed in the Groundwater Monitoring Table included in **Schedule B**.
5. The Owner shall employ measurement devices to accurately measure quantity of effluent being discharged to each individual subsurface disposal system, including but not limited to water/wastewater flow meters, event counters, running time clocks, or electronically controlled dosing, and shall record the daily volume of effluent being discharged to the subsurface disposal system.
6. The Owner shall ensure that flow of treated effluent discharged into the subsurface sewage system does not exceed a peak flow of 20,000 litres per day.
7. 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 from time to time by more recently published editions;
 - b. the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal

Wastewater" (January 1999), ISBN 0-7778-1880-9, as amended from time to time by more recently published editions; and

- c. the publication "Standard Methods for the Examination of Water and Wastewater" (21st edition), as amended from time to time by more recently published editions.
8. 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.

6. EFFLUENT OBJECTIVES

1. The Owner shall design and undertake everything practicable to operate the Works in accordance with the following objectives:
 - a. Final Effluent parameters design objectives listed in the table(s) included in Schedule B.
 - b. Annual Average Daily Influent Flow is within the Rated Capacity of the Sewage Treatment Plant.
2. For the purposes of subsection (1):
 - a. The concentrations of CBOD5 and TSS named in Column 1 of Effluent Objectives Table listed in Schedule B, as measured at each monitoring event, should be compared to the corresponding concentration set out in Column 2 of Effluent Objectives Table listed in **Schedule B**.

7. OPERATIONS 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 funding, adequate staffing and training, including training in all procedures and other requirements of this Approval and the OWRA and regulations, adequate laboratory facilities, process controls and alarms and the use of process chemicals and other substances used in the Works.
2. The Owner shall prepare an operations manual within **six (6) months** of the introduction of sewage to the Works, that includes, but not necessarily limited to, the following information:
 - a. operating procedures for routine operation of all the Works;
 - b. inspection programs, including frequency of inspection, for all 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 all the Works; copies of maintenance contracts for any routine inspections & pump-outs should

- be included for all the tanks and treatment units;
- d. procedures for the inspection and calibration of monitoring equipment;
 - e. 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; and
 - f. procedures for receiving, responding and recording public complaints, including recording any follow-up 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, upon the construction, prepare and make available for inspection by Ministry staff, a maintenance agreement with the manufacturer for the treatment process/technology or its authorized agent. The maintenance agreement must be retained at the site and kept current for the operational life of the Works.
 5. The Owner shall ensure that all septic tanks are pumped out every 3-5 years or when the tank is 1/3 full of solids and the effluent filters are cleaned out at minimum once a year or more often if required.
 6. The Owner shall ensure that grass-cutting is maintained regularly over the subsurface disposal bed(s), and that adequate steps are taken to ensure that the area of the underground Works is protected from vehicle traffic.
 7. The Owner shall visually inspect the general area where Works are located for break-out once every month during the operating season.
 8. 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 system 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 **one (1) week** 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.
9. The Owner shall employ for the overall operation of the Works a person who possesses the level of training and experience sufficient to allow safe and environmentally sound operation of the Works.
10. 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 operations and maintenance activities required by this Approval.

8. REPORTING

1. **One week** prior to the start up of the operation of the Works, the Owner shall notify the District Manager (in writing) of the pending start up date.
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.
4. The Owner shall prepare and submit a performance report, on an annual basis, within **ninety (90) days** following the end of each operational season to the District Manager. The first such report shall cover the first annual period following the commencement of operation of the Works and subsequent reports shall cover successive annual periods following thereafter. The reports shall contain, but shall not be limited to, the following information:
 - a. a summary and description of efforts made and results achieved in meeting the Effluent Objectives of (Condition 6);
 - b. a summary and interpretation of groundwater monitoring data;
 - c. a summary and interpretation of surface water monitoring data;
 - d. a review and assessment of performance of Works, including all treatment units and disposal beds;
 - e. a description of any operating problems encountered and corrective actions taken at all

Works located at the property;

- f. a record of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of all Works located at the property including but not limited to: records of maintenance inspections for the treatment system, records of septic tank effluent filters cleaning, records of septic tank pump-outs, records of sludge pump-outs accumulated from the treatment system, records of visual inspections of all disposal systems;
- g. a summary of any effluent quality assurance or control measures undertaken in the reporting period;
- h. a summary and interpretation of all daily flow data and results achieved in not exceeding the maximum daily sewage flow discharged into the subsurface disposal system;
- i. a summary of any complaints received during the reporting period and any steps taken to address the complaints;
- j. a summary of all spill or abnormal discharge events;
- k. any other information the District Manager requires from time to time;

Schedule A

1. Environmental Compliance Approval Application for Private Sewage Works dated July 21, 2022 and signed by Steve Sherrer, CEO including final plans, specifications and report prepared by David Morlock, P.Eng., FlowSpec Engineering Ltd.

Schedule B

Influent Monitoring Table

Sampling Location	Sludge storage/Primary clarification tank
Frequency	Semi-annual (Spring and Fall)
Sample Type	Grab
Parameters	BOD5, Total Suspended Solids (TSS), Total Ammonia Nitrogen, Total Kjeldahl Nitrogen, and field-pH

Effluent Monitoring Table

Sampling Location	On discharge from the final Treatment System upstream from subsurface disposal bed (effluent from the pump tank)
Frequency	Quarterly
Sample Type	Grab
Parameters	CBOD5 , Total Suspended Solids (TSS), Total Phosphorus (TP), Nitrate and Nitrite Nitrogen

Groundwater Monitoring Table

Sampling Location	at existing downgradient groundwater monitoring well
Frequency	Quarterly
Sample Type	Grab
Parameters	Total Phosphorus (TP), Nitrate and Nitrite Nitrogen

Effluent Objectives Table

Effluent Parameter (tested on outlet from the final Waterloo Biofilter Treatment Units)	Concentration Objective (milligrams per litre unless otherwise indicated)
CBOD5	10
Total Suspended Solids (TSS)	10

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

1. Condition 1 is imposed to ensure that the Works are built and operated in the manner in which they were described for review and upon which approval was granted. This condition is also included to emphasize the precedence of Conditions in the Approval and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review. The condition also advises the Owners their responsibility to notify any person they authorized to carry out work pursuant to this Approval the existence of this Approval.
2. Condition 2 is included to ensure that, when the Works are constructed, the Works will meet the standards that apply at the time of construction to ensure the ongoing protection of the environment.
3. Condition 3 is included to ensure that the Ministry records are kept accurate and current with respect to the approved 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.
4. Condition 4 is included to ensure that the Works are constructed, and may be operated and maintained such that the environment is protected and deterioration, loss, injury or damage to any person or property is prevented.
5. Condition 5 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 specified in the Approval and that the Works does not cause any impairment to the receiving watercourse.
6. Condition 6 is imposed to establish non-enforceable effluent quality objectives which the Owner is obligated to use best efforts to strive towards on an ongoing basis. These objectives are to be used as a mechanism to trigger corrective action proactively and voluntarily before environmental impairment occurs.
7. Condition 7 is included to require that the Works be properly operated, maintained, and equipped such that the environment is protected. As well, the inclusion of an operations manual, maintenance agreement with the manufacturer for the treatment process/technology and a complete set of "as constructed" drawings governing all significant areas of operation, maintenance and repair is prepared, implemented and kept up-to-date by the owner and made available to the Ministry. Such information 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 work.

8. Condition 8 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 all the terms and conditions outlined in this Approval, so that the Ministry can work with the Owner in resolving any problems in a timely manner.

**Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s).
5486-67QPCW issued on April 7, 2005**

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 Notice") 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.

Pursuant to subsection 139(3) of the *Environmental Protection Act*, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

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
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5
OLT.Registrar@ontario.ca

and

The Minister of the Environment,
Conservation and Parks
777 Bay Street, 5th.Floor
Toronto, Ontario
M7A 2J3

and

The Director appointed for the purposes of
Part II.1 of the *Environmental Protection Act*
Ministry of the Environment,
Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

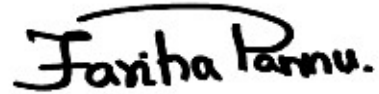
*** Further information on the Ontario Land Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349 or 1 (866) 448-2248, or www.olt.gov.on.ca**

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 9th day of February, 2023



Fariha Pannu, P.Eng.

Director

appointed for the purposes of Part II.1 of the
Environmental Protection Act

YK/

c: District Manager, MECP Hamilton - District
David Morlock, FlowSpec Engineering Ltd.