

ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 5273-BX7P5C
Issue Date: February 12, 2021

Ontario Plants Propagation Limited
38024 John Wise Line
Southwold, Ontario
N5P 3T2

Site Location: 38024 John Wise Line
Township of Southwold
County of Elgin, Ontario

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 treatment and subsurface disposal works, serving a greenhouse site located at 38024 John Wise Line, in the Township of Southwold, consisting of the following:

Sewage Works No.1

one (1) sewage treatment and subsurface disposal system capable of handling spent Greenhouse Nutrient Feedwater (GNF) with a maximum flow rate of 50,000 litres per day, consisting of the following:

- one (1) existing water storage pond (lined with an impermeable material), having a volume capacity of approximately 10,000 cubic metres, discharging into pump tank;
- one (1) 3,600 litre pump tank, equipped with effluent pump, with effluent demand dosed into a constructed wetland treatment system;
- one (1) subsurface vertical flow constructed wetland treatment system - Aqua Wetland System (AWS), consisting of three (3) cells, operating in series with option for flow recirculation, lined with impervious material and having a total area of 1,250 square metres, as follows:
 - Cell #1: having an area of 625 square metres, 1.2 metre deep filled approximately 1 metre (depth) of woodchips to allow de-nitrification, equipped with dosing manifold at the bottom of the cell within a layer of gravel, discharging into Cell #2;
 - Cell #2: having an area of 312.5 square metres, filled with 1.2 metre (depth) gravel to remove

organic material and solids, equipped with a surface sprinkler system (for dosing during warmer months), a set of manifolds (for winter season, 0.3 m below surface), and a dosing pump, discharging into Cell #3;

- Cell #3: having an area of 312.5 square metres, filled layers of filter sand and gravel with a total depth of 1.2 metres to remove any residual contaminants, equipped with surface sprinkler system (for dosing during warmer months), a set of manifolds (for winter season, 0.3 m below surface), a flow recirculation pump (to Cell #2), discharging effluent into a Type A disposal bed;
- one (1) transfer pump (optional system), to transfer a portion or all of AWS effluent to greenhouse irrigation system if chemistry is within operator determined limits;
- one (1) Type A dispersal bed, consisting of a stone layer with a minimum area of 1,000 square metres and a minimum thickness of 225 millimetres protected with a permeable Geotextile fabric and equipped with 32 runs (divided into 4 groups) of 20.05 metre long and 25 millimetre diameter distribution pipes, constructed on a 1,140 square metre imported sand layer having a minimum depth of 300 millimetres with a percolation time of 6 to 10 minutes per centimetres, covered with soil and seeded with grass; and
- all other controls, electrical equipment, instrumentation, piping, flow meter, valves and appurtenances essential for the proper operation of the aforementioned sewage Works.

Sewage Works No.2

sewage treatment and subsurface disposal works with a total Rated Capacity of 2,250 litres per day, for the treatment and disposal of domestic sewage from the site for accommodating a total of 30 employees, consisting of the following:

- one (1) 6,800 litre Waterloo Biofilter anaerobic digester tank, receiving raw sewage from the bathroom, equipped with an effluent filter, discharging via gravity to a pump tank;
- one (1) 2,700 litre pump tank, equipped with duplex pumps, discharging into a Waterloo Biofilter treatment unit;
- one (1) 9,100 litre Waterloo Biofilter treatment unit, equipped with a minimum of 5.6 cubic metres of foam biofilter media, with recirculation pump to recirculate to the inlet of the anaerobic digester tank and alternating effluent pump to dose the Type A dispersal bed;
- one (1) raised Type A dispersal bed, consisting of 30.0 square metre area and 280 millimetre thick stone layer and a 50.4 square metre and 300 millimetre thick imported sand layer, with the stone layer protected with a permeable Geotextile fabric and equipped with three runs of 7.4 metre long 75 millimetre diameter distribution pipes, with the imported sand layer having a percolation time of 6 to 10 minutes per centimetre; and
- all other controls, electrical equipment, instrumentation, piping, flow meter, valves and appurtenances

essential for the proper operation of the aforementioned sewage 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. "Approval" means this environmental compliance approval and any schedules attached to it, and the application;
2. "CBOD5" means five day carbonaceous (nitrification inhibited) biochemical oxygen demand measured in an unfiltered sample;
3. "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;
4. "District Manager" means the District Manager of the London District Office;
5. "EPA" means the Environmental Protection Act, R.S.O. 1990, c.E.19, as amended;
6. "Licensed Installer" means a person who holds a licence under Article 2.12.3.1 of the Ontario Building Code;
7. "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, as amended;
8. "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;
9. "Owner" means any person that is responsible for the establishment of the Works being approved by this Approval, and includes Owner's Legal Name and its successors and assignees;
10. "OWRA" means the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40, as amended;
11. "Rated Capacity" means design daily sanitary sewage flow for which the Works are approved to handle;
12. "Single Sample Concentration" means the concentration 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;
13. "Works" means the sewage works described in the Owner's application and this Approval.

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 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. B.17*, as amended, shall be included in the notification;
 - d. change of name of the corporation where the Owner is or at any time becomes a corporation, and a copy of the most current information filed under the *Corporations Information Act, R.S.O. 1990, c. C.39*, as amended, shall be included in the notification;
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 environmental compliance approval number.

4. CONSTRUCTION

1. The Owner shall ensure that the construction of the Works is supervised by a Licensed Installer or a Licensed Engineering Practitioner.
2. The Owner shall ensure that both the Aqua Wetland system and Waterloo Biofilter treatment unit are installed in accordance with the Manufacturer's Installation Manual.
3. 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 or Licensed Installer for the percolation time (T) prior to delivering to the site location and the written records are kept at the site.
4. Upon construction of the Works, the Owner shall prepare a statement, certified by a Licensed Installer or 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.
5. Upon construction of the Works, the Owner shall prepare a set of as-built drawings showing the works "as constructed", which 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. EFFLUENT OBJECTIVES

1. The Owner shall design and undertake everything practicable to operate the sewage treatment works in accordance with the following objectives:
 - a. The design objectives listed in the Table 1A - Effluent Design Objectives listed in Schedule B for the effluent parameters from the AWS Cell #3 of Sewage Works No.1 prior to discharging into the Type A dispersal bed.
 - b. The design objectives listed in the Table 1B - Effluent Design Objectives listed in Schedule B for the effluent parameters from the Waterloo Biofilter treatment unit of Sewage Works No.2 prior to discharging into the Type A dispersal bed.

6. EFFLUENT LIMITS

1. The Owner shall operate and maintain the Sewage Works No.1 such that compliance limits for listed in the Table 2A - Effluent Compliance Limits Table in Schedule B are met in the effluent from the AWS Cell #3 of Sewage Works No.1 prior to discharging into the Type A dispersal bed.

2. The Owner shall operate and maintain the Sewage Works No.2 such that compliance limits for listed in the Table 2B - Effluent Compliance Limits Table in Schedule B are met in the effluent from the Waterloo Biofilter treatment unit prior to discharging into the Type A dispersal bed.

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 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 all the subsurface disposal beds, and the surface of the bed(s) are visually observed on a monthly basis. In the event a break-out is observed from a subsurface disposal bed, the Owner shall ensure that the sewage discharge to the bed is discontinued and the incident immediately reported verbally to the District Manager, followed by a written report within one (1) week. The Owner shall ensure that during the time remedial actions are taking place the sewage generated at the site shall not be allowed to discharge to a surface water body or to the environment, and shall be safely collected and disposed off through a licensed waste hauler to an approved waste disposal site.
7. The Owner shall ensure that adequate steps are taken to ensure that the area of the Works are protected from all forms of vehicle traffic.
8. 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.

8. 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 C** 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 document referenced in Paragraph 2.b.
 - c. definitions for frequency:
 - i. Monthly means once every month
 - ii. Quarterly means once every three months
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; and

- c. the publication "Standard Methods for the Examination of Water and Wastewater", as amended.
3. The Owner shall employ measurement devices to accurately measure quantity of effluent being discharged to each of the Type A dispersal beds, 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 each of the Type A dispersal beds.
4. The measurement parameters, frequencies and locations specified in subsection 1 in respect to any parameter are minimum requirements which may, after one (1) year of monitoring in accordance with this Condition, be modified by the Director in writing from time to time when approved by District Manager upon reviewing annual monitoring and performance report.
5. 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.

9. 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. The Owner shall, within fifteen (15) days of occurrence of a spill within the meaning of Part X of the EPA, 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 schedule of implementation, in addition to fulfilling the requirements under the EPA and O. Reg. 675/98 "Classification and Exemption of Spills and Reporting of Discharges".
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 of the end of the operation season, to the District Manager. The reports shall contain, but shall not be limited to, the following information:
 - a. a summary and interpretation of all monitoring data and a comparison to the Effluent Limits (Condition 6) including an overview of the success and adequacy of the Works;
 - b. a review and assessment of performance of Works, including sewage treatment units and subsurface disposal beds;
 - c. a description of any operating problems encountered and corrective actions taken at all sewage Works located at the property;

- d. a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of all Works located at the property;
- e. a summary of any effluent quality assurance or control measures undertaken in the reporting period;
- f. a summary and description of efforts made and results achieved in meeting the Effluent Objectives of Condition 5;
- g. a summary and interpretation of all flow data and results achieved in not exceeding the maximum daily flow discharged into each subsurface disposal system;
- h. the date, time and volume of the sewage pump out from the holding tanks and septic tanks;
- 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; and
- k. any other information the District Manager requires from time to time.

Schedule A

1. Application for Environmental Compliance Approval dated April 27, 2020 and received on June 11, 2020, and submitted by Ontario Plants Propagation Limited, for the proposed process wastewater and sewage treatment and subsurface disposal systems, including design brief, final plans and specifications.

Schedule B

**Table 1A - Effluent Design Objectives
(Effluent from the AWS Cell #3 of Sewage Works No.1)**

Final Effluent Parameter	Averaging Calculator	Concentration Objectives (milligrams per litre unless otherwise indicated)
Total Inorganic Nitrogen*	Single Sample Concentration	3.5

* **Note:** Total Inorganic Nitrogen is the sum of ammonia nitrogen, nitrite nitrogen and nitrate nitrogen.

**Table 1B - Effluent Design Objectives
(Effluent from the Waterloo Biofilter treatment unit of Sewage Works No.2)**

Final Effluent Parameter	Averaging Calculator	Concentration Objectives (milligrams per litre unless otherwise indicated)
CBOD5	Single Sample Concentration	10.0
Total Suspended Solids	Single Sample Concentration	10.0
Total Nitrogen	Annual Average Concentration (based on Quarterly sampling)	31.0

**Table 2A - Effluent Compliance Limits
(Effluent from the AWS Cell #3 of Sewage Works No.1)**

Final Effluent Parameter	Averaging Calculator	Concentration Limits (milligrams per litre unless otherwise indicated)
Total Inorganic Nitrogen	Single Sample Concentration	7.0

**Table 2B - Effluent Compliance Limits
(Effluent from the Waterloo Biofilter system of Sewage Works No.2)**

Final Effluent Parameter	Averaging Calculator	Concentration Limits (milligrams per litre unless otherwise indicated)
CBOD5	Single Sample Concentration	20.0
Total Suspended Solids	Single Sample Concentration	20.0

Schedule C

Table 3A - Effluent Monitoring Table (Sewage Works No.1)

Sample locations	treated effluent from AWS Cell #3, prior to discharging into the Type A dispersal bed
Sample Type	Grab
Frequency	Monthly
Parameters	Total Inorganic Nitrogen, and Chloride

Table 3B - Effluent Monitoring Table (Sewage Works No.2)

Sample locations	treated effluent from Waterloo Biofilter treatment unit, prior to discharging into the Type A dispersal bed
Sample Type	Grab
Frequency	Monthly for CBOD5 and TSS Quarterly for Total Nitrogen
Parameters	CBOD5, Total Suspended Solids (TSS), and Total Nitrogen

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 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 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.
6. Condition 6 is imposed to ensure that the effluent discharged from the Works to the groundwater meets the Ministry's effluent quality requirements thus minimizing environmental impact on the receiver.
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 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.
9. Condition 9 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.

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me, the Environmental Review 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 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:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

AND

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

AND

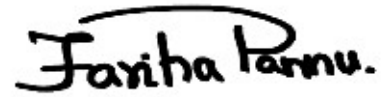
The Director appointed for the purposes of
Part II.1 of the Environmental Protection Act
Ministry of the Environment,
Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or www.ert.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 12th day of February, 2021

A handwritten signature in black ink that reads "Fariha Pannu." The signature is written in a cursive style with a horizontal line above the name.

Fariha Pannu, P.Eng.

Director

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

NH/

c: District Manager, MECP London District Office
Andrew Hellebust, Rivercourt Engineering Inc.