

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 8470-CSHP6K

Issue Date: August 22, 2023

Hamilton-Wentworth Catholic District School Board
90 Mulberry Street
Post Office Box, No. 2012
Hamilton, Ontario
L8N 3R9

Site Location: Guardian Angels Catholic Elementary School
705 Centre Road,
City of Hamilton

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 the Guardian Angels Catholic Elementary School at the above Site Location, rated at a Maximum Daily Flow of 21,450 litres per day, consisting of the following:

Proposed Works:

two (2) existing precast concrete septic tanks (27,000 L and 22,700 L) connected in series receiving sanitary sewage from the existing building area, discharging via existing gravity sewer to the pump tank described below;

one (1) existing pump chamber complete with effluent pumps, discharging to the proposed 22,500 L pump tank described below;

one (1) proposed 18,000 L precast concrete anaerobic digester tank receiving sanitary sewage from the building addition, equipped with an effluent filter, discharging to the 22,500 L pump tank described below;

one (1) proposed 22,500 L precast concrete pump tank complete with duplex effluent pumps to discharge effluent to Waterloo Biofilter basket tanks #2 and #3 described below;

two (2) proposed 27,500 L precast concrete Waterloo Biofilter basket biofilter tanks #2 and #3, each tank housing two (2) baskets with each basket filled with 10.5 cubic metres of biofilter medium, operating in parallel and discharging effluent by gravity to the basket biofilter tank #1 described below;

one (1) proposed 27,500 L precast concrete Waterloo Biofilter final basket

biofilter tank #1, housing two (2) baskets each filled with 10.5 cubic metres of biofilter medium, complete with a simplex effluent pump to recirculate effluent over the biofilter media within the tank, a simplex effluent pump to recirculate effluent back to the 18,000 L anaerobic digester tank inlet and the 22,700 L septic tank identified above, and duplex effluent pumps to discharge effluent to the 27,500 L WaterNOx-LS tank described below;

One (1) proposed 27,500 L precast concrete WaterNOx-LS tank filled with denitrifying medium, discharging by gravity to 22,500 L polishing basket biofilter tank described below;

one (1) proposed 22,500 L precast concrete Waterloo Biofilter polishing basket biofilter tank, housing two (2) baskets each filled with 8.7 cubic metres of biofilter medium, complete with a simplex effluent pump to recirculate effluent over the biofilter media within the tank, a simplex effluent pump to circulate effluent to the 9,000 L closed loop WaterNOx-LS tank described below, and duplex effluent pumps to discharge effluent to the existing leaching bed described below;

one (1) proposed 9,000 L precast concrete closed loop WaterNOx-LS tank filled with denitrifying medium, discharging by gravity to 22,500 L polishing basket biofilter tank described above;

two (2) existing distribution boxes distributing effluent to two (2) cells of the existing leaching bed, each cell comprising 31 runs of conventional absorption trenches, each 20 m long, for a total length of 1,240 m within the 101 m x 20 m field;

including all other controls, electrical equipment, 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. "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. "Commissioned" means the construction is complete and the system has been tested, inspected, and is ready for operation consistent with the design intent;
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 Hamilton District Office;
7. "EPA" means the Environmental Protection Act, R.S.O. 1990, c.E.19, as amended;
8. "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;
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. "Maximum Daily Flow" means the largest volume of flow to be received during a one-day period for which the Works is designed to handle;
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 Hamilton-Wentworth Catholic District School Board and its successors and assignees;
14. "OWRA" means the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40, as amended;
15. "Proposed Works" means those portions of the Works included in the Approval that are under construction or to be constructed;
16. "Works" means the approved sewage works, and includes Proposed 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 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;
 - 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.
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.
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 Waterloo Biofilter treatment system is installed in accordance with the manufacturer's installation manual.
4. Within **six (6) months** of the Works being Commissioned, 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.
5. Within **six (6) months** of the Works being Commissioned, 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**, for a period of **three (3) years** after the start-up of the operation of the Works.
5. Prior to the startup of the Works, background groundwater quality must be established by collecting groundwater samples and having them analyzed for the parameters listed in the Groundwater Monitoring Table included in **Schedule B**.
6. The Owner shall employ measurement devices to accurately measure quantity of effluent being discharged to the subsurface disposal bed, 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 bed.

7. The Owner shall ensure that the flow of treated effluent discharged into the subsurface disposal bed does not exceed 21,450 litres per day.
8. 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 Version 2.0" (January 2016), PIBS 2724e02, as amended; 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.
9. 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 Final Effluent parameters design objectives listed in the table(s) included in **Schedule B**.
2. For the purposes of subsection 1:
 - a. The concentrations of CBOD₅, TSS and TIN 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. EFFLUENT LIMITS

1. The Owner shall design, construct, operate and maintain the Works such that the concentrations of the materials named as effluent parameters in the Effluent Limits Table in **Schedule B** are not exceeded in the effluent from the Works:

2. For the purposes of determining compliance with and enforcing subsection (1):
 - a. The concentrations measured at each monitoring event of CBOD₅, TSS and TIN named in Column 1 of Effluent Limits Table listed in **Schedule B** shall not exceed the corresponding maximum concentration set out in Column 2 of Effluent Limits Table listed in **Schedule B**.

8. 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.

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 report to the District Manager orally **as soon as possible** any non-compliance with the compliance limits specified in subsection 2 of Condition 7, and in writing within **seven (7) days** of non-compliance.
3. 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.
4. The Owner shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to Ministry staff.
5. The Owner shall prepare a performance report, on an annual basis, within **ninety (90) days** following the end of each reporting period. 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 report shall be submitted to the District Manager **every two (2) years**. 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 all monitoring data and a comparison to the effluent limits Condition 7 including an overview of the success and adequacy of the Works, and a Contingency Plan in the event of non-compliance with the effluent limits.
 - c. a summary and interpretation of groundwater monitoring data;
 - d. a review and assessment of the performance of the Works, including all treatment units and subsurface disposal bed;
 - 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 each one of 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.

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

8. Condition 8 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.

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.

Schedule A

1. Application for Environmental Compliance Approval submitted by Hamilton-Wentworth Catholic School Board dated February 7, 2023 and received on April 14, 2023, including design report, final plans and specifications prepared by GM Blue Plan.

Schedule B

Influent Monitoring Table

Sampling Location	upstream of the Waterloo Biofilter Treatment System
Frequency	Quarterly
Sample Type	Grab Sample

Parameters	BOD ₅ Total Suspended Solids (TSS)
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Effluent Monitoring Table

Sampling Location	on discharge from the final Waterloo Treatment System upstream from the subsurface disposal bed
Frequency	Monthly
Sample Type	Grab Sample
Parameters	CBOD ₅ Total Suspended Solids (TSS) Total Ammonia Nitrogen (TAN) Nitrate Nitrogen Nitrite Nitrogen

Groundwater Monitoring Table

Sampling Location	BH111, BH110, BH109, PZ01
Frequency	Quarterly
Sample Type	Grab
Parameters	Nitrate Nitrogen Nitrite Nitrogen Ammonia -N Alkalinity Total and Dissolved Phosphorous Total Suspended Solids (TSS) field groundwater levels, field pH, field temperature, field dissolved oxygen

Effluent Objectives Table

Effluent Parameter (tested on the outlet from the final Waterloo Biofilter Treatment Unit prior to discharge into the subsurface disposal bed)	Concentration Objective (milligrams per litre unless otherwise indicated)
CBOD ₅	10
Total Suspended Solids (TSS)	10
Total Inorganic Nitrogen (TIN)	20

Effluent Limits Table

Effluent Parameter (tested on the outlet from the final Waterloo Biofilter Treatment Unit)	Concentration Limit (milligrams per litre unless otherwise indicated)
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prior to discharge to the subsurface disposal bed)	
CBOD ₅	25
Total Suspended Solids (TSS)	30
Total Inorganic Nitrogen (TIN)	25

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 0534-4MUKJ5 issued on August 11, 2000.

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:

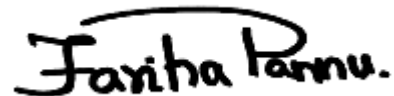
Registrar* Ontario Land Tribunal 655 Bay Street, Suite 1500 Toronto, Ontario M5G 1E5	and	The Minister of the Environment, Conservation and Parks 777 Bay Street, 5th.Floor Toronto, Ontario M7A 2J3	and	The Director appointed for the purposes of Part II.1 of the <i>Environmental Protection Act</i> Ministry of the Environment, Conservation and Parks 135 St. Clair Avenue West, 1st Floor
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*** 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 22nd day of August,
2023



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

JY/
c: District Manager, MECP Hamilton - District
Grant Parkinson, GM BluePlan Engineering Limited