

**ENVIRONMENTAL COMPLIANCE APPROVAL**

NUMBER 7603-C69JD3

Issue Date: September 21, 2021

St. Anthony Coptic Orthodox Monastery of Eastern Ontario  
608 Miners Point Rd  
Tay Valley, Ontario  
K7H 3C5

Site Location: St. Anthony Coptic Orthodox Monastery  
608 Miners Point Rd  
Tay Valley Township, County of Lanark  
K7H 3C5

*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:*

Expansion of on-site sewage works for the treatment and disposal of domestic wastewater generated from an existing retreat home and a proposed monk building at the Monastery property located in Perth, Ontario, consisting of the following:

**PROPOSED WORKS**

new sewage system for the collection, treatment and subsurface disposal of domestic sewage from a monk building with an occupancy of fifty (50) residents, operating at a maximum design capacity of 13,750 L/day, and comprising of the following:

**Oil and Grease Interceptor**

- One (1) new 6,000 litre capacity pre-cast concrete oil and grease interceptor tank installed outdoor as shown on the design drawing and be positioned to capture wastewater from the kitchen in the monk building via gravity and discharge by gravity to the proposed collection system and lift station as described below;

**Lift Station**

- One (1) new concrete manhole to be installed as shown on the design drawing and positioned to receive wastewater via gravity from the collection system and discharging to the anaerobic digester as described below;

- Two (2) submersible dosing sewage pumps are to be located in the lift station set to transfer sewage into the

anaerobic digester, each pump rated for a discharge of 540 L/min against 5.5 m total dynamic head (TDH);

### **Anaerobic Digesters**

- One (1) new single compartment concrete anaerobic digester with a capacity of 41,000 L, positioned to capture sewage via pump from the lift station, equipped with an innertube at the inlet and a baffle at the outlet, discharging by gravity to the pump tank as described below;

### **Pump Tank**

- One (1) 18,500 litre single compartment concrete pump tank to be installed as shown on the design drawing and positioned to receive effluent by gravity from the proposed anaerobic digester;
- Two (2) 0.5 hp submersible dosing effluent pumps to be located in the pump tank set to dose the Waterloo Biofilter System treatment system evenly over a twenty-four (24) hour period, each pump rated for a discharge of 64.3 L/min against 10.9 m total dynamic head (TDH), operating alternating and timer controlled, discharging to the biofilter tank as described below;

### **Biofilter Tank**

- One (1) 41,000 litre single compartment concrete biofilter tank positioned to receive effluent by pump from the proposed pump tank, housing two (2) wire baskets filled with biofilter medium, equipped with one (1) recirculation effluent pump and two (2) disposal effluent pumps as described below, with sewage evenly distributed over the surface of the medium and treated as it trickles through the interior of the medium;
- One (1) 0.5 hp submersible effluent pump for recirculation, rated for a discharge of 200 L/min against 7.3 m total dynamic head (TDH), discharging a portion (percentage is variable and to be adjusted during operation) of the treated effluent to the inlet of the proposed anaerobic digester;
- Two (2) 1.0 hp submersible effluent pumps for disposal, each pump connected to one cell of the leaching bed and is rated for a discharge of 295 L/min against 17.7 m total dynamic head (TDH), to be timer dosed and alternate;
- Two (2) 50mm diameter polyethylene (PE) forcemains, transferring the effluent from the Biofilter tank to the leaching bed;
- A flow meter to be installed to monitor the actual sewage flow being pumped to the leaching bed;

### **Shallow Buried Trench Subsurface Disposal System**

- One (1) pressurized shallow buried trench disposal system, consisting 276 m of 38 mm diameter pressure distribution piping constructed in two (2) cells, with each cell having six (6) runs of twenty-three (23) metre lengths with the runs spaced 2.0 metres apart, with 3 mm orifices drilled at 12 o'clock throughout the length of the run and spaced 0.8 m apart, with the 38 mm distribution piping network installed on a 100 mm layer of washed septic stone meeting the specifications of OBC Table 8.7.3.3 and covered with Quick 4 Plus EQ 24 low

profile chambers with geotextile placed over the chambers and over the stone, equipped with a 900 mm layer of imported sand with a percolation rate,  $T = 6 - 8 \text{ min/cm}$  under the stone layer, a proposed sand mantle and loading area in a thickness of 500 mm extending beyond the distribution area, a 300 mm layer of septic sand is used to backfill the leaching bed, which is overlain with 150 mm of topsoil to the design finish grade elevation;

## **EXISTING WORKS**

Existing sewage system approved by the Mississippi Rideau Septic System Office permit #16V005, for the collection, treatment and subsurface disposal of domestic sewage from a boarding house with an occupancy of thirty (30) residents and an assembly hall with an occupancy of sixty-nine (69) seats, operating at a maximum design capacity of 8,484 L/day, and comprising of the following:

### **Grease Trap**

- One (1) precast concrete oil and grease interceptor tank, having a capacity of 3,175 litres, discharging by gravity to a septic tank as described below;

### **Septic Tank**

- One (1) precast concrete two compartment tank, having a capacity of 22,500 litres and equipped with an effluent filter at the outlet, discharging by gravity to a balancing tank as described below;

### **Balancing Tank**

- One (1) precast concrete single compartment tank, having a capacity of 6,000 litres, discharging by two (2) pumps to the treatment unit as described below;

### **Waterloo Biofilter Treatment**

- One (1) model 85C Waterloo Biofilter precast concrete single compartment tank with 18,000 litre capacity, housing two (2) wire baskets filled with  $13.4 \text{ m}^3$  of biofilter medium, equipped with three (3) effluent pumps, one (1) for recirculation and two (2) discharging effluent on an alternating timer setting to the leaching bed as described below;

### **Leaching Bed**

- One (1) raised shallow buried trench leaching bed consisting of 170 m of distribution piping constructed in two (2) cells, with each cell having ten (10) runs of seventeen (17) metre long 38 mm diameter perforated PVC distribution pipes spaced 2.0 metres apart, with 3 mm orifices drilled at 12 o'clock throughout the length of the run and spaced 0.8 m apart;

All other controls, electrical equipment, instrumentation, piping, valves and appurtenances essential for the proper operation of the aforementioned sewage works;

All in accordance with the supporting documents set out in Schedule "A" attached to this Approval.

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

"Act" means the Ontario Water Resources Act, R.S.O. 1990, Chapter 0.40, as amended;

"Approval" means this entire document and any schedules attached to it, and the application;

"BOD5" (also known as TBOD<sub>5</sub>) means five day biochemical oxygen demand measured in an unfiltered sample and includes carbonaceous and nitrogenous oxygen demand;

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

"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;

"District Manager" means the District Manager of the Ottawa District Office;

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

"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;

"Monthly Average Concentration" means the arithmetic mean of all Daily Concentrations of a contaminant in the effluent sampled or measured, or both, during a calendar month;

"Owner" means St. Anthony Coptic Orthodox Monastery of Eastern Ontario and its successors and assignees;

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

"Substantial Completion" has the same meaning as "substantial performance" in the Construction Lien Act ;

"Works" means the sewage works described in the Owner's application, and this Approval, 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 conditions herein and shall take all reasonable measures to ensure any such person complies with the same.
- (2) Except as otherwise provided by these conditions, the Owner shall design, build, install, operate and maintain the Works in accordance with the description given in this Approval, and the application for approval of the Works.
- (3) Where there is a conflict between a provision of any document in the schedule referred to in this Approval and the conditions of this Approval, the Conditions in this Approval shall take precedence, and where there is a conflict between the documents in the schedule, the document bearing the most recent date shall prevail.
- (4) Where there is a conflict between the documents listed in the Schedule submitted documents, and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.
- (5) The Conditions of this Approval are severable. If any Condition of this Approval, or the application of any requirement of this Approval to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this Approval shall not be affected thereby.

### **2. EXPIRY OF APPROVAL**

- (1) The approval issued by 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 Owner;
  - (b) change of address of the 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 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. 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.

#### **4. CONSTRUCTION**

(1) The Owner shall ensure that the construction of the works is supervised by a Professional Engineer, as defined in the *Professional Engineers Act*.

(2) Upon construction of the Works, the Owner shall prepare a statement, certified by a Professional Engineer, that the Works are constructed in accordance with this Approval, and upon request, shall make the written statement available for inspection by Ministry staff and staff of the local municipality.

#### **5. EFFLUENT OBJECTIVES**

(1) The Owner shall use best efforts to design, construct and operate the Works with the objective that the concentrations of the materials named below as effluent parameters are not exceeded in the effluent being discharged from the biofilter treatment systems to the Leaching Bed.

<b>Table 1 - Effluent Objectives</b>	
<b>Effluent Parameter</b>	<b>Annual Average Concentration</b> (milligrams per litre unless otherwise indicated)
CBOD5	10.0
Total Suspended Solids	10.0

(2) For the purposes of subsection (1):

(a) the concentrations of CBOD5 and TSS named in Column 1 of Effluent Objectives Table, as measured at each monitoring event, should be compared to the corresponding concentration set out in Column 2 of Effluent Objectives Table.

(b) operate the Works below the maximum daily flow approved for the Works.

#### **6. OPERATIONS AND MAINTENANCE**

(1) The Owner shall prepare an Operations Manual within six (6) months of the start up of the Works, that includes, but is not necessarily limited to, the following information:

- (a) operating procedures for routine operation of the Works;
  - (b) procedures for the inspection and calibration of monitoring equipment;
  - (c) inspection programs, including frequency of inspection, for the Works and the methods or tests employed to detect when maintenance is necessary.
  - (d) repair and maintenance programs, including the frequency of repair and maintenance for the sewage Works;
  - (e) contingency plans and procedures for dealing with equipment breakdowns, potential spills and any other abnormal situations, including notification of the District Manager; and
  - (f) complaint procedures for receiving and responding to public complaints.
- (2) The Owner shall maintain the Operations Manual current and retain a copy at the location of the Works for the operational life of the Works. Upon request, the Owner shall make the manual available to Ministry staff.
- (3) The Owner shall ensure that at all times, the Works and related equipment and appurtenances which are installed or used to achieve compliance with this Approval are properly operated and maintained.
- (4) The Owner shall sign a Service and Maintenance Agreement with the manufacturer or approved agent of the Waterloo Biofilter treatment systems. The maintenance agreement must be retained at the site for as long as the Works are in operation, kept current and made available for inspection by the Ministry staff.
- (5) The Owner shall receive from the manufacturer or distributor of Waterloo Biofilter printed literature that describes the unit in detail and provides complete instructions regarding the operation, servicing, and maintenance requirements of the unit and its related components necessary to ensure the continued proper operation in accordance with the original design and specifications.
- (6) The Owner shall ensure that the treatment systems are at minimum inspected annually by Waterloo Biofilter authorized personnel, and maintained according to the manufacturer's recommendations;
- (7) The Owner shall ensure that the septic tank(s) is pumped out every 3-5 years or when the tank is 1/3 full of solids and the effluent filter(s) is cleaned out at minimum once a year (or more often if required).
- (8) The Owner shall ensure that the oil/grease interceptor is inspected and maintained on regular basis as required, and grease is disposed off site by a licensed hauler (e.g. at approved recycling sites).
- (9) 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.

(10) The Owner shall ensure that the drainage operations in the subsurface disposal bed on the property are observed on a monthly basis for breakouts and results recorded in a log book.

(11) 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

(12) The Owner, prior to the start-up of the Works, shall test the proposed effluent dosing pumps installed upstream of leaching beds to verify capacity and pump(s) running time as per this Approval, so the Works will operate within the approved capacity by this Approval.

(13) 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.

(14) The Owner shall maintain a physical or digital logbook to record the results of Operation and Maintenance activities specified in the above subclauses, and shall make the logbook available for inspection by the Ministry staff.

(15) 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.

## **7. 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) For the purposes of this condition, the following definitions apply:

(a) Quarterly means once every three months;

(3) Samples shall be collected at the following sampling points, at the frequency specified, by means of the specified sample type and analyzed for each parameter listed and all results recorded:

<b>Table 2 - Effluent Monitoring - Outlets of the Waterloo Biofilters Systems)</b>		
<b>Parameters</b>	<b>Sample Type</b>	<b>Frequency</b>
CBOD5	Grab	Quarterly
Total Suspended Solids	Grab	Quarterly

(4) The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in the following:

- 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;
- 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.

(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 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. REPORTING**

(1) In addition to the obligations under Part X of the *Environmental Protection Act*, the Owner shall, within ten (10) working days of the occurrence of any reportable spill as defined in Ontario Regulation 675/98, bypass or loss of any product, by-product, intermediate product, oil, solvent, waste material or any other polluting substance into the environment, submit a full written report of the occurrence to the District Manager describing the cause and discovery of the spill or loss, clean-up and recovery measures taken, preventative measures to be taken and 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 to the District manager, a performance report, on an annual basis, within ninety (90) days following the end of the period being reported upon. The first such report shall cover the first annual period following the commencement of operation of the Works and subsequent reports shall be submitted to cover successive annual periods following thereafter. 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 objectives outlined in Effluent Objectives Condition, including an overview of the success and adequacy of the Works;
- b. a description of any operating problems encountered and corrective actions taken;
- c. a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the Works;
- d. a summary of any effluent quality assurance or control measures undertaken in the reporting period;
- e. a summary of the calibration and maintenance carried out on all effluent monitoring equipment; and
- f. a description of efforts made and results achieved in meeting the objectives of Design Objectives Condition.
- g. 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 in accordance with the approval and that record drawings of the Works "as Constructed" are maintained for future references.
5. Condition 5 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.
6. Condition 6 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 a 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.
7. Condition 7 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.
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.

### **SCHEDULE "A"**

1. Environmental Compliance Approval Application for Municipal and Private Sewage Works, submitted by Kollaard Associates Inc., dated January 28, 2021 and received on March 22, 2021.
2. On-site Sewage System Design Report for Monk Building, along with drawings, dated November 30, 2020, and prepared by Kollaard Associates Inc.

*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

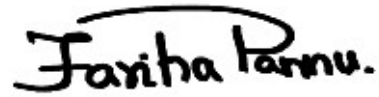
The Director appointed for the purposes of  
Part II.1 of the Environmental Protection Act  
Ministry of the Environment,  
Conservation and Parks  
135 St. Clair Avenue West, 1st Floor  
Toronto, Ontario  
M4V 1P5

**\* 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](http://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 21st day of September, 2021



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Fariha Pannu, P.Eng.

Director

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

YZ/

c: District Manager, MECP Ottawa District Office  
Kaleb Lakew, Kollaard Associates Inc.