

**ENVIRONMENTAL COMPLIANCE APPROVAL**

NUMBER 6693-BVMSRW  
Issue Date: January 29, 2021

Hexo Operations Inc.  
5640 South Service Rd  
Lincoln, Ontario  
L0R 1B3

Site Location: 5640 South Service Road  
Lot 23, Concession 1, Part 1 to 5  
Reference Plan 30R-328, Beamsville  
Town of Lincoln  
Regional Municipality of Niagara, 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 system and a holding tank system, located at 5640 South Service Road, in the Town of Lincoln, consisting of the following:

**Proposed Works**

sewage treatment and subsurface disposal works with a total Rated Capacity of 25,000 litres per day, for the treatment and disposal of domestic sewage from a staff building for accommodating a total of 200 employees, consisting of the following:

- two (2) septic tanks - Septic Tanks No.1 and No.2, operating in series, with the Septic Tank No.1 having a volume capacity of 27,500 litres and equipped with an effluent filter, and the Septic Tank No.2 having a volume capacity of 45,400 litres equipped with two (2) effluent filters, discharging effluent into a pump tank;
- one (1) 27,500 litre pump tank, equipped with duplex pumps, discharging into a Waterloo Biofilter Treatment System;
- One (1) Waterloo Biofilter Treatment System, having a design capacity of 25,000 litres per day and comprising the following:
  - three (3) 27,500 litre Nitrifying Biofilter Tanks interconnected at the bottom of each tank, each

tank comprising spray unit and two (2) mesh baskets each filled with a minimum of 10.0 cubic metres Biofilter media, with the Nitrifying Biofilter Tank No.1 equipped with duplex pumps discharging treated effluent into a WaterNOx-LS Tank, a simplex pump to recirculate effluent back into the inlet of the Septic Tank No.2, and another simplex pump to close-recirculate flow from the first basket to the second basket in the Nitrifying Biofilter No.1;

- one (1) 27,500 litre WaterNOx-LS Tank, equipped with de-nitrifying Biofilter media, receiving treated Nitrifying Biofilter effluent and discharging into a Polishing and Discharge Tank;
- one (1) 18,000 litre Polishing and Discharge Tank, comprising spray units and two (2) mesh baskets each filled with a minimum 6.9 cubic metres of Biofilter media and a total of four (4) pumps, with a simplex pump recirculating a portion of effluent into the polishing Biofilter baskets contained within this tank, another simplex pump recirculating effluent to a Closed Loop WaterNOx-LS Tank, and two (duplex) pumps (rated at 3.1 litres per second with a TDH of 7.9 metres) discharging final effluent into a Type A Dispersal Bed, via a forcemain routed through a control building for flow metering, at a dosing rate of 1,400 litres per dose;
- one (1) 6,060 litre Closed Loop WaterNOx-LS tank, equipped with de-nitrifying Biofilter media, receiving the effluent from and recirculating back to the Polishing/Disposal Dosing Tank;
- one (1) raised Type A Dispersal Bed, having a stone area of 502.5 square metres, consisting of a 300 millimetre thick stone layer and a 600 millimetre thick imported sand layer, with the stone layer protected with a permeable Geotextile fabric and divided into two (2) cells with each cell equipped with seven runs of 30 metre long 75 millimetre diameter distribution pipes, with the imported sand layer having a percolation time of 6 to 10 minutes per centimetre, complete with 15 metre metre mantle area with a minimum of thickness of 300 millimetres providing a total loading area of 1,656 square metres;
- alkalinity and bacteria-seeds addition systems; and
- all other controls, electrical equipment, instrumentation, piping, flow meter, valves and appurtenances essential for the proper operation of the aforementioned sewage Works.

### **Existing Works**

- one (1) existing holding tank, receiving process wastewater from west greenhouse, with a volume capacity of 54,750 litres, equipped with high water level alarm system; and
- one (1) existing holding tank, receiving process wastewater from east greenhouse, with a volume capacity of 18,000 litres, equipped with high water level alarm system.

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 Niagara 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. "OBC" means the Ontario Building Code;
10. "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;
11. "OWRA" means the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40, as amended;
12. "Rated Capacity" means design daily sanitary sewage flow for which the Works are approved to handle;
13. "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;
14. "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 the each of the Waterloo Biofilter Treatment System is installed in accordance with the Manufacturer's Installation Manual.

3. The Owner shall ensure that an imported soil that is required for construction of any subsurface disposal bed as per this Approval is tested and verified by the Licensed Engineering Practitioner 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 1 - Effluent Design Objectives listed in Schedule B for the effluent parameters from the Waterloo Biofilter Treatment System prior to discharging into the Type A Dispersal Bed.
  - b. The total flow of treated effluent from the Waterloo Biofilter Treatment System discharged into the Type A Dispersal Bed does not exceed the Rated Capacity of 25,000 litres per day

## **6. EFFLUENT LIMITS**

1. The Owner shall operate and maintain the Works such that compliance limits for listed in the Table 2 - Effluent Compliance Limits Table in **Schedule B** are met in the effluent from the Waterloo Biofilter Treatment System 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 have a valid agreement with a hauled sewage operator who is in possession of a Waste Management Systems Approval, for the disposal of sanitary sewage from the holding tanks and septic tanks, on as required basis, and shall keep a copy of the valid Agreement at all times during the operation of Works.
  7. 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.
  8. 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.

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.

## 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 the Type A Dispersal 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 Type A Dispersal Bed.
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 groundwater monitoring program outlined in Table 4 of Schedule C is for a planned one-year monitoring program, after one (1) year of monitoring in accordance with this Condition, it may be modified or eliminated when approved by District Manager upon reviewing annual monitoring and performance report.
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.

## 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 March 10, 2020 and received on April 24, 2020, and submitted by Hexo Operations Inc., for the proposed sewage treatment and subsurface disposal systems, including design brief, final plans and specifications.

## Schedule B

**Table 1 - Effluent Design Objectives  
(Effluent from the Waterloo Biofilter Treatment System)**

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
Nitrate Nitrogen	Single Sample Concentration	5.0

**Table 2 - Effluent Compliance Limits  
(Effluent from the Waterloo Biofilter Treatment System)**

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 3 - Effluent Monitoring Table**

<b>Sample locations</b>	treated effluent from Waterloo Biofilter Treatment System, prior to discharging into the Type A Dispersal Bed
<b>Sample Type</b>	Grab
<b>Frequency</b>	Monthly ( one sample every month)
<b>Parameters</b>	CBOD5, Total Suspended Solids (TSS), and Nitrate Nitrogen

**Table 4 - Groundwater Monitoring Table**

<b>Sample locations</b>	one (1) shallow monitoring well near the property boundary east of the subsurface sewage dispersal bed (situated between the dispersal bed and the residential property at 4761 Durham Road)
<b>Sample Type</b>	Grab
<b>Frequency</b>	Quarterly (one sample every three months)
<b>Parameters</b>	Nitrate Nitrogen and Nitrite Nitrogen

\* **Note:** one (1) additional sample, prior to the operation of the Proposed Works.

*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

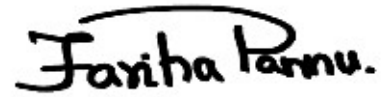
The Director appointed for the purposes of  
Part II.1 of the Environmental Protection Act  
Ministry of the Environment,  
Conservation and Parks  
135 St. Clair Avenue West, 1st Floor  
Toronto, Ontario  
M4V 1P5

**\* 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](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 29th day of January, 2021



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Fariha Pannu, P.Eng.

Director

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

NH/

c: District Manager, MECP Niagara District Office  
Anne Egan, R. J. Burnside & Associates Limited