

Certificate of Property Use - DRAFT

Issued under the authority of the Environmental Protection Act, R.S.O. 1990, c. E.19, sections 168.6 (CPU) and 197 (Order)

Certificate of property use number: 5401-BDFQFE02
Risk assessment number: 1437-9MVNN3

Owner:

(Owner)

NovaCore (83 Elmsdale Drive) Inc.

393 Rymal Road West, Suite 405
Hamilton, ON, L9B 1V2

Site:

(Property)

83 Elmsdale Drive, Kitchener - Parcel B

With a Legal Description of:

Part Lot 3, Municipal Compiled Plan 1021, Part Lot 3, Municipal Compiled Plan No. 1026 being Parts 1, 2 & 3 on Plan 58R-18985; subject to an easement in gross over Part 3 on Plan 58R-18985 as in WR1173650; together with an easement over Parts 5, 7 & 10 on Plan 58R-18985 as in WR1177465; together with an easement over Parts 6 & 7 on Plan 58R-18985 as in WR1177465; subject to an easement over Part 2 on Plan 58R-18985 in favour of Parts 4, 5, 6 & 7 on Plan 58R-18985 as in WR1177465; subject to an easement over Part 2 on Plan 58R-18985 in favour of Parts 8, 9, 10 & 11 on Plan 58R-18985 as in WR1177465; subject to an easement as in WR1189094; City of Kitchener.

PIN: 22491-0843 (LT)

The conditions of this Certificate of Property Use (CPU) address the Risk Management Measures in the Risk Assessment noted above and described in detail in Part 1 below (Risk Assessment). In the event of a conflict between the CPU and the Risk Assessment, the conditions of the CPU take precedence.

Summary:

Refer to Part 1 of the CPU, Interpretation, for the meaning of all the defined capitalized terms that apply to the CPU.

Risk Management Measures (RMMs) that are required to be implemented are found in Part 4 of the CPU, Director Requirements. Key RMMs specified in Part 4 include, but are not limited to:

- Prohibiting the construction of any Building (s) on the Property unless the new Building (s) is constructed as specified in Section 4.2 (a) of this CPU;
- Implementing a groundwater management plan during any intrusive activities undertaken on the Property potentially in contact with COCs in groundwater that have been identified in the RA at concentrations that exceed the applicable site condition standards as per Section 4.2 (j) of this CPU.
- Implementing a sump water monitoring program for any Building (s) on the Property as specified in Section 4.2 (k) of this CPU;
- Implementing a methane gas monitoring program that includes enclosed spaces, other than Buildings, in addition to the methane barrier wall venting system as specified in Section 4.2 (l) and 4.2 (n) of this CPU;
- Prohibiting the use of groundwater in on or under the Property as per Section 4.3 of this CPU; and,
- Registering a certificate on the Property title in accordance with Section 197 of the Environmental Protection Act and that before dealing with the Property in any way, a copy of the CPU is to be given to any person who will acquire an interest in the Property as per Section 4.7 and 4.8 of this CPU.

Part 1: Interpretation

In the CPU the following terms shall have the meanings described below:

“Adverse Effect” has the same meaning as in the Act; namely,

- (a) impairment of the quality of the natural environment for any use that can be made of it,
- (b) injury or damage to property or to plant or animal life,
- (c) harm or material discomfort to any person,
- (d) an adverse effect on the health of any person,
- (e) impairment of the safety of any person,
- (f) rendering any property or plant or animal life unfit for human use,
- (g) loss of enjoyment of normal use of property, and
- (h) interference with the normal conduct of business;

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

“Applicable Site Condition Standards” and “ASCS” means soil and groundwater that meets the soil or groundwater criteria identified in **Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition (coarse textured soils)** of the Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Act published by the Ministry and dated April 15, 2011.

“Building (s)” means an enclosed structure (s) occupying an area greater than ten square metres consisting of a wall or walls, roof and floor.

“Building Code” means Ontario Regulation 332/12 (Building Code) as amended to January 1, 2018, made under the Building Code Act, 1992, S.O. 1992, c. 23.

“Competent Person” has the same meaning as set out in the Occupational Health and Safety Act R.S.O. 1990, c.O.1, as amended;

“Contaminant” has the same meaning as in the Act; namely any solid, liquid, gas, odour, heat, sound, vibration, radiation or combination of any of them, resulting directly or indirectly from human activities that may cause an Adverse Effect;

“Contaminant of Concern” and “COC” has the meaning as set out in section 3.2 of the CPU;

“CPU” means this Certificate of Property Use Number No. **5401-BDFQFE02** as may be amended from time to time;

"Director" means the undersigned Director or any other person appointed as a Director for the purpose of issuing a certificate of property use;

“EBR” means the Environmental Bill of Rights, 1993, .S.O. 1993, c.28, as amended;

“Environmental Compliance Approval” has the same meaning as set out in the Environmental Protection Act, R.S.O. 1990, Chapter E.19;

“Licensed Professional Engineer” means a person who holds a license, limited license or temporary license under the Professional Engineers Act, R.R.O. 1990, c.P.28, as amended;

“Methane Barrier Wall” means the methane barrier wall as specified in the Methane Barrier Wall Construction Report – 83 Elmsdale Drive, prepared by Maddalena Environmental Inc. dated October 2, 2018;

“Methane Venting System” means the methane venting system installed as specified in the Letter Re: Methane Barrier Wall – Venting System, 83 Elmsdale Drive, Kitchener, Ontario prepared by Lantek Limited Consulting Engineers dated April 18, 2019;

"Ministry" means Ontario Ministry of the Environment, Conservation and Parks;

“OHSA” means the Occupational Health and Safety Act, R.S.O. 1990, c.O.1, as amended from time to time;

“Owner” means **NovaCore (83 Elmsdale Drive) Inc.** the current owner of the Property, and any future Property Owner (s);

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

“Property” means the property that is the subject of the CPU and described in the “Property” section on page 1 above, and illustrated in Figure 1 of Schedule A which is attached to and forms part of this CPU;

“Property Specific Standards” and “PSS” means the property specific standards established for the Contaminants of Concern set out in the Risk Assessment and in section 3.2 of the CPU;

"Provincial Officer" means a person who is designated as a provincial officer for the purposes of the Act;

“Qualified Person” means a person who meets the qualifications prescribed in O. Reg. 153/04, as amended, made under the Act;

"Risk Assessment" and “RA” means the Risk Assessment No. **1437-9MVNN3** accepted by the Director on **June 5 2019**, and set out in the following final documents:

- **Human Health and Ecological Risk Assessment, 83 Elmsdale Drive, Kitchener, Ontario. Prepared by NovaTox Inc., dated May 2015;**
- **Human Health and Ecological Risk Assessment, 83 Elmsdale Drive, Kitchener, Ontario. Prepared by NovaTox Inc., dated June 2016;**
- **Human Health and Ecological Risk Assessment, 83 Elmsdale Drive, Kitchener, Ontario. Prepared by NovaTox Inc., dated March 28, 2018;**
- **Human Health and Ecological Risk Assessment, 83 Elmsdale Drive, Kitchener, Ontario. Prepared by NovaTox Inc., dated December 2018; and,**

- **Email Re: Request for additional information for 83 Elmsdale Drive, Kitchener; RA1418-14d; IDS#1437-9MVNN3, from Mark Chappel, NovaTox Inc., received by TASDB on May 16, 2019, with the following documents attached:**
 - *14-214 Addendum RA_83 Elmsdale_14May2019.pdf*
 - *Landtek Methane Letter Barrier Letter_18April2019.pdf*
 - *14-214 Mandatory Certifications.pdf*

“Risk Management Measures” and “RMMs” means the risk management measures specific to the Property described in the Risk Assessment and/or Part 4 of the CPU;

“Risk Management Plan” and “RMP” means Letter Re: Risk Management Measures (Section 7) – 83 Elmsdale Drive, Kitchener, Ontario. Prepared by Landtek Limited Consulting Engineers dated April 18, 2019;

“Supplemental Technical Memorandum” means Letter Re: Technical Memo – Risk Management Plan (RM Plan) for Parcel B and C, 83 Elmsdale Avenue, Kitchener, Ontario dated November 14, 2019;

“Tribunal” has the same meaning as in the Act; namely, the Environmental Review Tribunal;

Part 2: Legal Authority

- 2.1 Section 19 of the Act states that a certificate of property use is binding on the executor, administrator, administrator with the will annexed, guardian of property or attorney for property of the person to whom it was directed, and on any other successor or assignee of the person to whom it was directed.
- 2.2 Subsection 132(1.1) of the Act states that the Director may include in a certificate of property use a requirement that the person to whom the certificate is issued provide financial assurance to the Crown in right of Ontario for any one or more of,
 - a. the performance of any action specified in the certificate of property use;
 - b. the provision of alternate water supplies to replace those that the Director has reasonable and probable grounds to believe are or are likely to be contaminated or otherwise interfered with by a contaminant on, in or under the property to which the certificate of property use relates; and
 - c. measures appropriate to prevent adverse effects in respect of the property to which the certificate of property use relates.
- 2.3 Subsection 168.6 (1) of the Act states that if the Director accepts a risk assessment relating to a property, he or she may, when giving notice under clause 168.5 (1)(a), issue a certificate of property use to the owner of the property, requiring the owner to do any of the following things:
 1. Take any action specified in the certificate that, in the Director’s opinion, is necessary to prevent, eliminate or ameliorate any adverse effect on the property, including installing any equipment, monitoring any contaminant or recording or reporting information for that purpose.
 2. Refrain from using the property for any use specified in the certificate or from constructing any building specified in the certificate on the property.
- 2.4 Subsection 168.6(2) of the Act states that a certificate of property use shall not require an owner of the property to take any action that would have the effect of reducing the concentration of a contaminant on, in or under the property to a level below the level that is required to meet the standards specified for the contaminant in the risk assessment.
- 2.5 Subsection 168.6(3) of the Act states that the Director may, on his or her own initiative or on application by the owner of the property in respect of which a certificate has been issued under subsection 168.6(1),
 - a. alter any terms and conditions in the certificate or impose new terms and conditions; or
 - b. revoke the certificate.

- 2.6 Subsection 168.6(4) of the Act states that if a certificate of property use contains a provision requiring the owner of the property to refrain from using the property for a specified use or from constructing a specified building on the property,
- a. the owner of the property shall ensure that a copy of the provision is given to every occupant of the property;
 - b. the provision applies, with necessary modifications, to every occupant of the property who receives a copy of the provision; and
 - c. the owner of the property shall ensure that every occupant of the property complies with the provision.
- 2.7 Subsection 196(1) of the Act states that the authority to make an order under the Act includes the authority to require the person or body to whom the order is directed to take such intermediate action or such procedural steps or both as are related to the action required or prohibited by the order and as are specified in the order.
- 2.8 Subsection 197(1) of the Act states that a person who has authority under the Act to make an order or decision affecting real property also has authority to make an order requiring any person with an interest in the property, before dealing with the property in any way, to give a copy of the order or decision affecting the property to every person who will acquire an interest in the property as a result of the dealing.
- 2.9 Subsection 197(2) of the Act states that a certificate setting out a requirement imposed under subsection 197(1) may be registered in the proper land registry office on the title of the real property to which the requirement relates, if the certificate is in a form approved by the Minister, is signed or authorized by a person who has authority to make orders imposing requirements under subsection 197(1) and is accompanied by a registrable description of the property.
- 2.10 Subsection 197(3) of the Act states that a requirement, imposed under subsection 197(1) that is set out in a certificate registered under subsection 197(2) is, from the time of registration, deemed to be directed to each person who subsequently acquires an interest in the real property.
- 2.11 Subsection 197(4) of the Act states that a dealing with real property by a person who is subject to a requirement imposed under subsection 197(1) or 197(3) is voidable at the instance of a person who was not given the copy of the order or decision in accordance with the requirement.

Part 3: Background

- 3.1 The Risk Assessment (RA) was undertaken for the Property to establish the risks that the Contaminants identified in the Risk Assessment may pose to future users and to identify appropriate Risk Management Measures to be implemented to ensure that the Property is suitable for the intended use: **residential and commercial use** as defined in O. Reg. 153/04, as amended, made under the Act.
- 3.2 The Contaminants on, in, or under the Property that are present either above **Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition (coarse textured soils)** for Use under Part XV.1 of the Act published by the Ministry and dated April 15, 2011 or for which there are no such standards, are set out in the Risk Assessment (Contaminants of Concern). The Property Specific Standards for these Contaminants of Concern are set out in **Table 1A and 1B of Schedule 'A'** which is attached to and forms part of the CPU.
- 3.3 I am of the opinion, for the reasons set out in the Risk Assessment that the Risk Management Measures described therein and outlined in Part 4 of the CPU are necessary to prevent, eliminate or ameliorate an Adverse Effect on the Property.
- 3.4 The Risk Assessment indicates the presence of Contaminants of Concern in soil and groundwater which requires on-going restriction of land use and pathway elimination. As such, it is necessary to restrict the use of the Property and impose building restrictions and implement Risk Management Measures as set out in the Risk Assessment and in Part 4 of the CPU.

Part 4: Director Requirements

Pursuant to the authority vested in me under section 168.6(1) of the Act, I hereby require the Owner to do or cause to be done the following:

Risk Management Measures

- 4.1 Implement, and thereafter maintain or cause to be maintained, the Risk Management Measures.
- 4.2 Without restricting the generality of the foregoing in Section 4.1, carry out or cause to be carried out the following key elements of the Risk Management Measures:

Enclosed Building (s) (new Building (s)):

- a) Refrain from constructing any **Building (s)** on, in or under the Property unless the Building (s) includes a vapour mitigation system, as detailed in Section 7.2.2.3 of the RMP along with Section 4.2 (b) of this CPU.
- b) The construction of any **building (s)** is permitted on the Property provided that a vapour mitigation system, as identified in Section 7.2.2.3 of the RMP and the Supplemental Technical Memorandum, has been incorporated into the design of, and installed in, any building (s) to be constructed on the Property or portions of the Property. The vapour mitigation system shall be designed by an appropriately qualified Licensed Professional Engineer in consultation with a Qualified Person in accordance with the conceptual design detailed in Section 7.2.2.3 of the RMP and the Supplemental Technical Memorandum and shall also include the following components:
 - a) The Owner shall obtain an Environmental Compliance Approval, as necessary, and any other permits or approvals as may be required;
 - b) The installation of the vapour mitigation system shall be completed under the supervision of an appropriately qualified Licensed Professional Engineer and a Qualified Person;
 - c) The passive vapour mitigation system shall be designed and constructed such that the passive venting system can easily be converted to an active venting system with all applicable approvals and permits as may be necessary; and,
 - d) A quality assurance/quality control (QA/QC) program shall be undertaken during the installation of the vapour mitigation system and shall be completed by, and clearly documented in a report prepared by, a qualified contractor and overseen by an appropriately qualified Licensed Professional Engineer and Qualified Person.
- c) Within 90 days of the installation of the vapour mitigation system as detailed in Section 7.2.2.3 of the RMP, the Supplemental Technical Memorandum and Section 4.2 (b) of this CPU, in any building (s) on the Property, the Owner shall submit to the Director as-built drawings and detailed design specifications of the vapour mitigation system, including any verification and QA/QC reports, prepared by the appropriately qualified Licensed Professional Engineer along with a statement from the qualified Licensed Professional Engineer that the vapour mitigation system has been installed in accordance with the original design specifications and that it has been designed to meet the requirements and objectives of Section 7.1 of the RMP along with Section 4.2 (b) of this CPU.
- d) The vapour mitigation system detailed in Section 7.2.2.3 of the RMP, the Supplemental Technical Memorandum and 4.2 (b) of this CPU shall be operated, monitored and maintained by the Owner for as long as the COCs are present on the Property. As detailed in Section 7.3.2 of the RMP, the qualified Licensed Professional Engineer that designed the vapour mitigation system shall prepare an operation, monitoring, and maintenance program, including a contingency plan as detailed in Section 7.4.2 of the RMP, that is to be implemented by the Owner, prior to first occupancy, and shall be made available by the Owner to the Ministry upon request.

- e) An inspection, monitoring and maintenance program specified in Section 7.2.2.3 of the RMP and Section 4.2 (d) of this CPU shall be implemented to ensure the continued integrity of the building floor slab and vapour mitigation system for as long as the COCs are present on the Property. The inspection program shall include, at minimum, semi-annual inspections of the integrity of the building floor slab and monitoring of the vapour mitigation system in accordance with the monitoring and maintenance program specified in Section 4.2 (d) of this CPU. Any cracks, breaches or loss of integrity observed in the building floor slab or any observed deficiencies or necessary maintenance requirements with the vapour mitigation system shall be repaired forthwith to the original design specification, at minimum. Repairs or maintenance shall be made by an appropriately qualified contractor, under the supervision of a qualified Licensed Professional Engineer as necessary. If repairs to the building floor slab or the vapour mitigation system cannot be completed in a timely manner, the Owner shall ensure that the contingency measures prepared by a qualified Professional Engineer, as specified in Section 7.4.2 of the RMP and Section 4.2 (d) of this CPU, are implemented. All repairs are to be inspected by an appropriately qualified Licensed Professional Engineer and signed documentation shall be provided to the Owner that states that the repairs meet the original design specifications, at minimum. The Owner shall submit to the Director the written confirmation, prepared and signed by a qualified Licensed Professional Engineer, that the vapour mitigation System has been repaired to meet the original design specifications, at minimum. The written confirmation shall also include a description of any contingency measures that were put in place and shall be submitted to the Director within 30 days of the completion of any repairs to the vapour mitigation system. The Owner shall keep records of the inspections, monitoring and maintenance program, along with documentation of all repairs that were required to be undertaken and these records shall be made available by the Owner to the Ministry for review upon request.
- f) The Owner shall ensure that all individuals/contractors intending to undertake work which could potentially come into contact with or interfere with the vapour mitigation system specified Section 7.2.2.3 of the RMP and Section 4.2 (b) of this CPU are made aware of the presence of the vapour mitigation system and the need to take appropriate precautions to ensure the integrity of the vapour mitigation system at all times. If the vapour mitigation system is damaged at any time, the Owner shall ensure that it is repaired forthwith by a qualified contractor, under the supervision of a qualified Licensed Professional Engineer as necessary, to the original design specifications, at minimum. If repairs to the vapour mitigation system cannot be completed in a timely manner, the Owner shall ensure that the contingency measures prepared by a qualified Professional Engineer, as specified in Section 7.4.2 of the RMP and Section 4.2 (d) of this CPU are implemented. All repairs to the vapour mitigation system are to be inspected by an appropriately qualified Licensed Professional Engineer and signed documentation shall be provided to the Owner that states that the repairs meet the original design specifications, at minimum. The Owner shall submit to the Director the written confirmation, prepared and signed by a qualified Licensed Professional Engineer, that the vapour mitigation system has been repaired to meet the original design specifications, at minimum. The written confirmation shall also include a description of any contingency measures that were put in place and shall be submitted to the Director within 30 days of the completion of any repairs to the vapour mitigation system. The Owner shall maintain records of all activities and repairs in relation to the vapour mitigation system and these records shall be made available by the Owner to the Ministry for review upon request.
- g) Once the final design of the vapour mitigation system is completed as specified in Section 4.2 (b) of this CPU the Owner shall submit to the Director, for review and approval, a sub-slab vapour monitoring program. The sub-slab vapour monitoring program shall be prepared by a qualified Licensed Professional Engineer in consultation with an appropriately Qualified Person in accordance with the Supplemental Technical Memorandum. Specifically, the sub-slab vapour monitoring program shall include the following key components:
- a. Be overseen by a Qualified Person;
 - b. The collection of sub-slab vapour samples collected from an appropriate number of representative locations at the following frequency:
 - i. Prior to first occupancy; and
 - ii. Quarterly (spring, summer, fall and winter) thereafter for a minimum of two (2) years; and
 - c. The sub-slab vapour samples shall be sent to an appropriately accredited laboratory and analyzed for the

- Target Analytes listed in Table 1D of Schedule A (**Table 1D**), which is attached to and forms part of this CPU and methane gas shall be monitored using appropriate hand-held or portable detectors/monitors or by other appropriate sampling methods.
- d. An annual report documenting the sub-slab vapour monitoring program shall be prepared by an appropriately Qualified Person and submitted to the Director on or before **March 31st** following each year of monitoring until written approval to discontinue the program is received by the Owner from the Director. The annual report shall include, but not be limited to:
- i. Laboratory results and laboratory certificates of analysis;
 - ii. Results of methane monitoring and any other parameter monitored using appropriate hand-held or portable detectors/monitors;
 - iii. Field logs, leak testing (as necessary) and documentation of QA/QC;
 - iv. Discussion and interpretation of the results in comparison to the respective Target Indoor Air Concentration as listed in **Table 1D**; and,
 - v. Conclusions and recommendations with respect the need for additional and/or continued monitoring as may be warranted.
- h) Upon completion of the installation of the vapour mitigation system as specified in Section 4.2 (b) of this CPU, and prior to first occupancy, the Owner shall implement the sub-slab vapour monitoring program, that has been approved in writing by the Director, as required by Section 4.2 (g) of this CPU and detailed in Supplemental Technical Memorandum for a minimum of two years and until the Owner receives written approval from the Director to discontinue the program. Any changes to the vapour monitoring program that has been approved by the Director, as required by Section 4.2 (g) of this CPU, (i.e. sampling frequency, locations, methodology etc.) must be requested in writing by an appropriately Qualified Person and these changes shall only be implemented upon the Owner receiving written approval from the Director.
- i) In the event that the sub-slab vapour monitoring program detailed in Section 4.2 (h) of this CPU identifies one or more of the Target Analytes at concentrations above the Target Indoor Air Concentration in **Table 1D**, *and where the concentrations of the observed Target Analytes are determined by the qualified Licensed Professional Engineer to be a result of vapour intrusion*, the Owner shall implement the contingency measures detailed in Section 7.4.2 and Table 7-5 Procedures and Contingency – Indoor Air Concentrations (Table 7-5) of the RMP and as follows:
- i. Written notice shall be submitted to the Director by the Owner within 14 calendar days of the Owner's receipt of the laboratory analysis. This written notice shall include the sub-slab vapour sampling results, the laboratory certificates of analysis and the anticipated timeline for the implementation of the confirmatory sampling program and any additional work as may be deemed necessary by an appropriately Licensed Professional Engineer working with a Qualified Person (Risk Assessment) familiar with the on-Property conditions (that may include, but not be limited, to system maintenance and/or recommendations for modifying the vapour mitigation system). Confirmatory indoor air sampling shall occur within 14 calendar days from the date of the Owner's receipt of the laboratory analysis and shall be completed by a qualified Licensed Professional Engineer.
 - ii. In the event that the confirmatory sub-slab vapour sampling results verifies the exceedances of one or more of the COCs above the Target Indoor Air Concentration in **Table 1D**, the Owner shall:
 - (a) Submit written notice to the Director within 14 calendar days of the Owner's receipt of the laboratory analysis. This written notice shall include the confirmatory sub-slab vapour sampling results, the laboratory certificates of analysis and the details of, and the anticipated timeline to implement contingency measures consistent with those outlined in Section 7.4.2 and Table 7-5 of the RMP along with the implementation of further evaluation/assessment of the vapour mitigation system as may be deemed necessary by a qualified Licensed Professional Engineer. The implementation of contingency measures that include the conversion of the passive vapour mitigation system to an active system, along with the implementation of a confirmatory sub-slab vapour and indoor air sampling program, shall

- occur within 14 calendar days of the Owner's submission of the written notice of the exceedance to the Director;
- (b) Within 30 calendar days of the implementation of the contingency measures, the Owner shall submit to the Director an update report prepared by a qualified Licensed Professional Engineer documenting the implementation of contingency measures, results of the implementation of the confirmatory sub-slab vapour and indoor air sampling program along with the details and timelines for the implementation of a new performance sub-slab/indoor air monitoring program. The update report shall include, but not be limited to:
- i. Laboratory results and laboratory certificates of analysis;
 - ii. Results of methane monitoring, and any other parameters measured using appropriate hand-held or portable detectors/monitors;
 - iii. Field logs, leak testing (as necessary) and documentation of QA/QC;
 - iv. Discussion and interpretation of the results in comparison to the respective Target Sub-slab vapour concentrations and indoor air concentration in **Table 1D** and **Table 1C, respectively**; and,
 - v. Conclusions and recommendations with respect to the performance of the vapour mitigation system along with the need for additional work and/or continued monitoring as may be deemed warranted.

Groundwater Management Plan:

- j) The property specific groundwater management Plan (Plan) shall be developed for the Property and be overseen by a Qualified Person and implemented during all intrusive activities potentially in contact with or exposing COCs in groundwater that exceed the Applicable Site Conditions Standards on the Property as detailed in Section 7.2.2.2 of the RMP. A copy of the Plan shall be maintained on the Property for the duration of all planned intrusive activities. Any short term intrusive activities required for the purposes of emergency repairs (i.e. for repairs to underground utilities etc.) will not require the submission of the Plan prior to undertaking the short term emergency repairs. For planned intrusive activities, this Plan shall be submitted to the Director by the Owner at least 14 calendar days prior to any such intrusive activities being undertaken and shall be consistent with the measures specified in Section 7.2.2.2 of the RMP.

Sump Water Monitoring:

- k) Upon completion of the construction of any Building (s), and in the event that the sump water is discharged to the Storm Sewer (i.e. the natural environment), the Owner shall implement the Sump Water Monitoring Program as detailed in Section 7.3.3 of the RMP and the Supplemental Technical Memorandum and shall also include the following key components:
- i. Be overseen by a Qualified Person;
 - ii. Include visual inspections of the water for any visible sheen and or Petroleum Hydrocarbon (PHC) odour and the collection of a representative number of sump water samples at least two times per year (spring and late summer); at the following locations at minimum:
 - i. one sample per sump; or,
 - ii. in the event that sump water from multiple townhome units constructed as one Building is collected and conveyed to a single point of discharge, one sump water sample per collection point just prior to discharge to Storm Sewer,
 - iii. The sump water samples shall be sent to an appropriately accredited laboratory and analyzed for the COCs in groundwater as identified in the attached Schedule 'A': Table 1B Property Specific Standards – Groundwater (Table 1B);
 - iv. In the event that groundwater concentrations for the COCs are found to exceed the Applicable Site Condition Standards for groundwater and or any visible PHC sheen or odour is identified, the Owner shall:
 - i. immediately stop discharging to the Storm Sewer upon the Owner's receipt of the laboratory results until such time as the Owner either (a) obtains approval from the Regional Municipality of Waterloo to discharge the sump water to the sanitary sewer via a sewer use agreement or (b) obtains the services of a mobile wastewater treatment

contractor with a valid Environmental Compliance Approval (ECA) issued under Section 53 of the Ontario Water Resource Act (OWRA) on a temporary basis and apply for a site specific ECA under Section 53 of the OWRA; and,

- ii. provide written notification to the Director within 7 calendar days of the Owner's receipt of the laboratory results. Written notification shall include:
 1. the sampling results and the laboratory certificates of analysis;
 2. the date at which discharge to the Storm Sewer had ceased; and,
 3. either a copy of the sewer use discharge agreement obtained from the Regional Municipality of Waterloo or the name of a mobile wastewater treatment contractor (including a copy of their valid ECA under Section 53 of the OWRA) along with timelines for the submission of a site specific ECA application under Section 53 of the OWRA.
- v. Include record keeping. All records shall be kept and made available for review by the Ministry upon request.

Methane Monitoring Programs:

- l) Upon issuance of this CPU, the Owner shall implement the Methane Monitoring- Enclosed Spaces Program as detailed in Section 7.3.5 of the RMP and shall include the following key components:
 - i. Be overseen by a Competent Person;
 - ii. Methane gas shall be monitored in all enclosed or underground spaces, other than Buildings, and including any excavation/trench on the Property prior to entry;
 - iii. Methane gas shall be monitored prior to commencing work in any underground space, excavation/trench;
 - iv. The methane detector must be capable of measuring methane between 0-5% of volume in 0.01% increments; and,
 - v. Include record keeping. All records shall be kept on-site and made available for review by the Ministry upon request.
- m) In the event that methane levels are detected above 1% as a result of the Methane Monitoring- Enclosed Spaces Program, the Owner shall ensure additional engineering measures are implemented as determined by a Competent Person prior to entry into any work area and as specified by the health and safety plan as detailed in Section 4.2 (p) of this CPU and as detailed in Section 7.3.5 of the RMP.
- n) Upon issuance of this CPU, the Owner shall implement the Methane Monitoring – Venting Systems Program as detailed in Section 7.3.6 of the RMP and shall include the following key components:
 - i. Be overseen by a qualified Licensed Professional Engineer;
 - ii. Include the monitoring of methane from the vent stack monitoring ports installed at MV-5 and MV-6 as identified in Schedule 'A': Figure 3- Location of Methane Barrier Wall and Gas Venting (Figure 3) which is attached to and forms part of this CPU;
 - iii. Include ambient air quality monitoring for methane at the base of the vent stack located at MV-1 at minimum, as identified in Figure 3;
 - iv. Methane monitoring shall occur on a semi-annual basis (spring and fall) using a hand-held device capable of measuring methane between 0-5% of volume in 0.01% increments or other appropriate sampling method as specified in Section 7.4.3 of the RMP;
 - v. Include record keeping. All records shall be kept on-site and made available for review by the Ministry upon request; and,
 - vi. Include the monitoring of methane gas from the gas monitoring wells as identified in Schedule 'A': Figure 2 – Location of Gas Monitoring wells (Parcel B) (Figure 2) which is attached to and forms part of this CPU.
- o) In the event that methane levels are detected above 1%, the Owner shall implement the contingency plan as specified in Section 7.4.3 of the RMP and shall include the following key components:
 - i. Written notice shall be submitted to the Director by the Owner within 7 calendar days of the measured exceedance. This written notice shall include the data collected as part of

the Methane Monitoring- Venting Systems Program and the anticipated timeline for the implementation of the confirmatory methane monitoring and any additional work as may be deemed necessary by an appropriately Licensed Professional Engineer (that may include, but not be limited, to system maintenance and/or recommendations for modifying the methane venting system). Confirmatory methane monitoring shall occur within 14 calendar days from the date of the initial measured exceedance and shall be completed by a qualified Licensed Professional Engineer.

- ii. In the event that the methane levels continue to be detected above 1%, the Owner shall:
 - (a) Submit written notice to the Director within 14 calendar days of the measured exceedance. This written notice shall include the data collected and, if applicable, the laboratory certificates of analysis for an appropriately qualified laboratory, and the details of, and the anticipated timeline to implement contingency measures consistent with those outlined in Section 7.4.3 of the RMP along with the implementation of further evaluation/assessment of the methane venting system as may be deemed necessary by a qualified Licensed Professional Engineer. The implementation of contingency measures, that include the conversion of the passive methane venting system to an active system, along with the implementation of a confirmatory methane monitoring program shall occur within 14 calendar days of the Owner's submission of the written notice of the measured exceedance to the Director;
 - (b) Within 30 calendar days of the implementation of the contingency measures, the Owner shall submit to the Director an update report prepared by a qualified Licensed Professional Engineer documenting the implementation of contingency measures, results of the implementation of the confirmatory methane monitoring program along with the details and timelines for the implementation of a new performance monitoring program for the active methane venting system as may be required. The update report shall include, but not be limited to:
 - i. Results of methane monitoring, and any other parameters measured using appropriate hand-held or portable detectors/monitors, or laboratory certificates of analysis, from an appropriately qualified laboratory;
 - ii. Field logs, leak testing (as necessary) and documentation of QA/QC;
 - iii. Discussion and interpretation of the results; and,
 - iv. Conclusions and recommendations with respect to the performance of the active methane venting system along with the need for additional work and/or continued monitoring as may be deemed warranted.

Prohibition of potable groundwater wells:

- 4.3 The Owner shall,
- a. refrain from using groundwater in or under the Property as a source of water;
 - b. properly abandon any wells on the Property, as defined in section 35. (1) of O. Reg. 153/04, according to R.R.O. 1990, Regulation 903 (Wells), as amended, made under the Ontario Water Resources Act, R.S.O. 1990, c. O.40; and
 - c. refrain from constructing on the Property any wells as defined in section 35. (1) of O. Reg. 153/04.

Site Changes

- 4.4 In the event of a change in the physical site conditions or receptor characteristics at the Property that may affect the Risk Management Measures and/or any underlying basis for the Risk Management Measures, forthwith notify the Director of such changes and the steps taken, to implement, maintain and operate any

further Risk Management Measures as are necessary to prevent, eliminate or ameliorate any Adverse Effect that will result from the presence on, in or under the Property or the discharge of any Contaminant of Concern into the natural environment from the Property. An amendment to the CPU will be issued to address the changes set out in the notice received and any further changes that the Director considers necessary in the circumstances.

Reports

- 4.5 Retain a copy of any reports required under the CPU, the Risk Assessment and any reports referred to in the Risk Assessment (until otherwise notified by the Director) and within ten (10) days of the Director or a Provincial Officer making a request for a report, provide a copy to the Director or Provincial Officer.

Property Requirement

- 4.6 For the reasons set out in the CPU and pursuant to the authority vested in me under subsection 197(1) of the Act, I hereby order you and any other person with an interest in the Property, before dealing with the Property in any way, to give a copy of the CPU, including any amendments thereto, to every person who will acquire an interest in the Property, as a result of the dealing.

Certificate of Requirement

- 4.7 Within fifteen (15) days from the date of receipt of a certificate of requirement, issued under subsection 197(2) of the Act, register the certificate of requirement on title to the Property in the appropriate Land Registry Office.
- 4.8 Immediately after registration of the certificate of requirement, provide to the Director written verification that the certificate of requirement has been registered on title to the Property.

Owner / Occupant Change

- 4.9 While the CPU is in effect, forthwith report in writing to the Director any changes of ownership, of the Property, except that while the Property is registered under the Condominium Act, 1998, S.O. 1998, c.19, as amended, no notice shall be given of changes in the ownership of individual condominium units or any related common elements on the Property.

Financial Assurance

- 4.10 Within fifteen (15) days of receipt of this CPU, the owner shall provide financial assurance to the Crown in the right of Ontario in the amount of **thirty six thousand nine hundred and fifty dollars (\$36,950.00)**The financial assurance shall be in the form of a certified cheque payable to the Ontario Minister of Finance or an irrevocable letter of credit issued by a Canadian Chartered Bank as outlined in the Ministry's *Financial Assurance Guideline* revised November 2005. This amount is to cover the costs associated with implementation of Sections 4.2 (e), 4.2 (h), 4.2 (k), 4.2 (l) and 4.2 (n) of this CPU.
- 4.11 The amount of financial assurance required in Section 4.10 of this CPU shall be reviewed every **two years** by a Qualified Person, for the Owner, and an updated cost estimate shall be included in the annual vapour monitoring report as required by Section 4.2 (g) of this CPU.

Part 5: General

- 5.1 The requirements of the CPU are severable. If any requirement of the CPU or the application of any requirement to any circumstance is held invalid, the application of such requirement to other circumstances and the remainder of the CPU shall not be affected thereby.
- 5.2 An application under sub section 168.6(3) of the Act to,
- a) alter any terms and conditions in the CPU or impose new terms and conditions; or
 - b) revoke the CPU;
- shall be made in writing to the Director, with reasons for the request.
- 5.3 The Director may amend the CPU under subsections 132(2) or (3) of the Act to change a requirement as to financial assurance, including that the financial assurance may be increased or provided, reduced or released in stages. The total financial assurance required may be reduced from time to time or released by an order issued by the Director under section 134 of the Act upon request and submission of such supporting documentation as required by the Director.
- 5.4 Subsection 186(3) of the Act provides that non-compliance with the requirements of the CPU constitutes an offence.
- 5.5 The requirements of the CPU are minimum requirements only and do not relieve you from,
- a) complying with any other applicable order, statute, regulation, municipal, provincial or federal law; or
 - b) obtaining any approvals or consents not specified in the CPU.
- 5.6 Notwithstanding the issuance of the CPU, further requirements may be imposed in accordance with legislation as circumstances require.
- 5.7 In the event that any person is, in the opinion of the Director, rendered unable to comply with any requirements in the CPU because of,
- a) natural phenomena of an inevitable or irresistible nature, or insurrections,
 - b) strikes, lockouts or other labour disturbances,
 - c) inability to obtain materials or equipment for reasons beyond your control, or
 - d) any other cause whether similar to or different from the foregoing beyond your control,
- the requirements shall be adjusted in a manner defined by the Director. To obtain such an adjustment, the Director must be notified immediately of any of the above occurrences, providing details that demonstrate that no practical alternatives are feasible in order to meet the requirements in question.
- 5.8 Failure to comply with a requirement of the CPU by the date specified does not absolve you from compliance with the requirement. The obligation to complete the requirement shall continue each day thereafter.
- 5.9 In the event that the Owner complies with provisions of Sections 4.7 and 4.8 of the CPU regarding the registration of the certificate of requirement on title to the Property, and then creates a condominium corporation by the registration of a declaration and description with respect to the Property pursuant to the *Condominium Act*, 1998, S.O. 1998, c.19, as amended, and then transfers ownership of the Property to various condominium unit owners, the ongoing obligations of the Owner under this CPU may be carried out and satisfied by the condominium corporation by and on behalf of the new Owners of the Property.

Part 6: Hearing before the Environmental Review Tribunal

- 6.1 Pursuant to section 139 of the Act, you may require a hearing before the Environmental Review Tribunal (the "Tribunal"), if within fifteen (15) days after service on you of a copy of the CPU, you serve written notice upon the Director and the Tribunal.

- 6.2 Pursuant to section 142 of the Act, the notice requiring the hearing must include a statement of the portions of the CPU and the grounds on which you intend to rely at the hearing. Except by leave of the Tribunal, you are not entitled to appeal a portion of the CPU or to rely on a ground that is not stated in the notice requiring the hearing.
- 6.3 Service of a notice requiring a hearing must be carried out in a manner set out in section 182 of the Act and Ontario Regulation 227/07: Service of Documents, made under the Act as they may be amended from time to time. The address, email address and fax numbers of the Director and the Tribunal are:

The Secretary

Environmental Review Tribunal

655 Bay Street, Suite 1500
Toronto, ON, M5G 1E5

Fax: (416) 326-5370
Fax Toll Free: 1(844) 213-3474
Email: ERTTribunalSecretary@ontario.ca

and

Amy Shaw, Director

Ministry of the Environment, Conservation and Parks
1 Stone Rd. West, 4th Floor
Guelph, ON
N1G 4Y2

Fax: 519-826-4286
Email: amy.shaw@ontario.ca

- 6.4 Unless stayed by application to the Tribunal under section 143 of the Act, the CPU is effective from the date of issue.
- 6.5 If you commence an appeal before the Tribunal, under section 47 of the Environmental Bill of Rights, 1993 (the “EBR”), you must give notice to the public in the EBR registry. The notice must include a brief description of the CPU (sufficient to identify it) and a brief description of the grounds of appeal.

The notice must be delivered to the Ministry of the Environment, Conservation and Parks who will place it on the EBR registry. The notice must be delivered to the Minister of the Environment, Conservation and Parks at 777 Bay Street, 5th Floor, Toronto, Ontario M7A 2J3 by the earlier of:

- 6.5.1 two (2) days after the day on which the appeal before the Tribunal was commenced; and
- 6.5.2 fifteen (15) days after service on you of a copy of the CPU.
- 6.6 Pursuant to subsection 47(7) of the EBR, the Tribunal may permit any person to participate in the appeal, as a party or otherwise, in order to provide fair and adequate representation of the private and public interests, including governmental interests, involved in the appeal.
- 6.7 For your information, under section 38 of the EBR, any person resident in Ontario with an interest in the CPU may seek leave to appeal the CPU. Under section 40 of the EBR, the application for leave to appeal must be made to the Tribunal by the earlier of:

- 6.7.1 fifteen (15) days after the day on which notice of the issuance of the CPU is given in the EBR

- registry; and
- 6.7.2 if you appeal, fifteen (15) days after the day on which your notice of appeal is given in the EBR registry.

Issued at Guelph this **XXXXX** day of **XXXXX 2019**.

Original Signed By

DRAFT

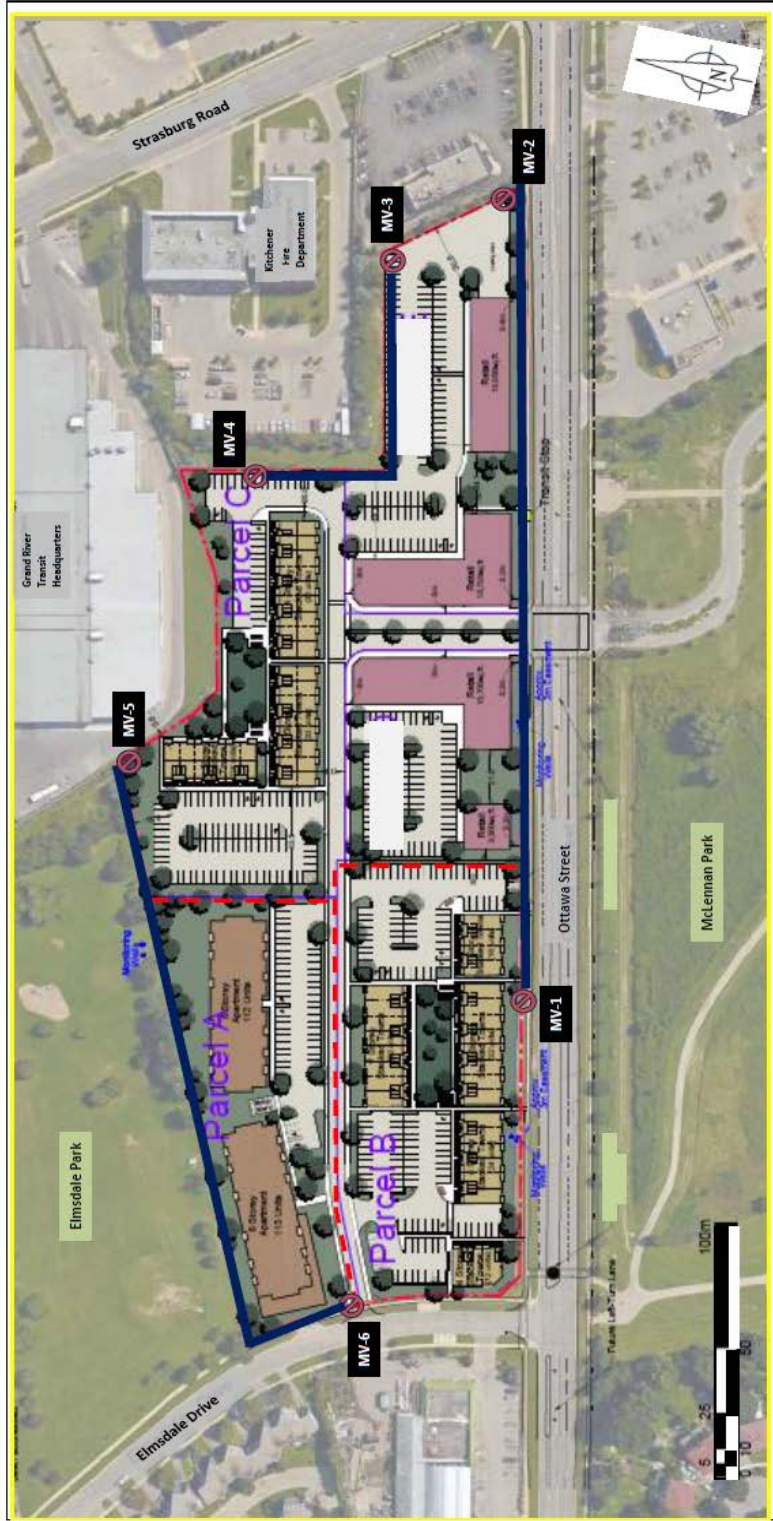
Amy Shaw,
Director, section 168.6 of the Act

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Schedule 'A': Figure 2- Location of Gas Monitoring Wells (Parcel B)
(not to scale)



Schedule 'A': Figure 3- Location of Methane Barrier Wall and Gas Venting (Parcel B)
(not to scale)



LANDTEK LIMITED	
Scale: as shown	Date: Nov. 2018
Project: Methane Gas Venting Locations	Project: 83 Elmsdale Drive Kitchener, Ontario
Title: Figure No. 2	Project No. 10003

	Proposed building locations (March 2018)
	Methane barrier wall
	Proposed methane vent location

Schedule 'A': Table 1A: Property Specific Standards (PSS) – Soil

<i>Soil Contaminant of Concern (COC)</i>	<i>PSS (µg/g)</i>
1,3,5-Trimethybenzene	0.55

Schedule 'A': Table 1B: Property Specific Standards (PSS) - Groundwater

<i>Groundwater Contaminant of Concern (COC)</i>	<i>PSS (µg/L)</i>
Barium	1,536
Cobalt	18.1
Vanadium	22.9
Chloride	1,284,00
Sodium	724,800
Methylnaphthalene, 1-(2-)	16.7
Phenanthrene	2.82
Benzene	7.872
PHC F2	2,460
PHC F3	1,740
Chloroethane	24.6
1,4-Dioxane	6,480

Schedule 'A': Table 1C: Target Indoor Air Concentrations

<i>Target Analytes</i>	<i>Residential Target Indoor Air Concentration (µg/m³)</i>	<i>Commercial Target Indoor Air Concentration (µg/m³)</i>
Benzene	0.505	1.63
Ethylbenzene	209	715
Xylene Mixture	146	501
Aliphatic C6-C8	9594	32900
Aliphatic C>8-C10	521	1790
Aromatic C>8-C10	1.04	358
Aliphatic C>10-C12	521	1790
Aliphatic C>12-C16	502	1790
Aromatic C>10-C12	104	358
Aromatic C>12-C16	104	358
Naphthalene	0.772	2.65
Mercury	0.0188	0.0644
1,4-Dicholorobenzene	0.278	0.894
Viny Chloride	0.126	0.406
Trichloroethylene	0.271	0.401
1,2-cis-DCE	31.3	107
1,4-Dioxane	751	2570
Methane Gas*	N/A	N/A

Note: * Levels must be below 1% by volume. Oxygen and Carbon Dioxide levels will also be assessed

Schedule 'A': Table 1D: Target Sub-Slab Vapour Concentrations

<i>Target Analytes</i>	<i>Residential Target Sub-Slab Vapour Concentration ** ($\mu\text{g}/\text{m}^3$)</i>	<i>Commercial Target Sub-Slab Vapour Concentration ** ($\mu\text{g}/\text{m}^3$)</i>
Benzene	25.25	407.5
Ethylbenzene	10,450	178,750
Xylene Mixture	7,300	125,250
Aliphatic C6-C8	479,714	8,225,000
Aliphatic C>8-C10	26,050	447,500
Aromatic C>8-C10	5,200	89,500
Aliphatic C>10-C12	26,050	447,500
Aliphatic C>12-C16	25,100	447,500
Aromatic C>10-C12	5,200	89,500
Aromatic C>12-C16	5,200	89,500
Naphthalene	38.6	662.5
Mercury	0.94	16.1
1,4-Dichlorobenzene	13.9	223.5
Viny Chloride	6.3	101.5
Trichloroethylene	13.55	100.25
1,2-cis-DCE	1,565	26,750
1,4-Dioxane	37,500	642,500
Methane Gas*	N/A	N/A

Note: * Levels must be below 1% by volume. Oxygen and Carbon Dioxide levels will also be assessed

**Sub-Slab vapour Concentrations were generated by adjusting the MECP health-based indoor air criteria (HBIAC) by a default attenuation factor of 0.002 for residential buildings and 0.04 for any commercial use building or buildings with first floor commercial use.