

Report to Civic Works Committee

To: Chair and Members
Civic Works Committee

From: Kelly Scherr, P.Eng., MBA, FEC
Deputy City Manager, Environment & Infrastructure

Subject: Participation in the South London Air Monitoring Network
Pilot Project

Date: August 31, 2021

Recommendation

That, on the recommendation of the Deputy City Manager, Environment & Infrastructure, the following actions be taken with respect to the South London Air Monitoring Network Pilot Project:

- a) the staff report dated August 31, 2021 containing details of the Ministry of the Environment, Conservation and Parks South London Air Monitoring Network Pilot Project **BE RECEIVED** for information;
- b) the attached proposed by-law (Appendix "A") **BE INTRODUCED** at the Municipal Council meeting on September 14, 2021 to:
 - i. approve, substantially in the form of, the single source negotiated agreement (Schedule "A" to the By-law) between the Corporation of the City of London and Envirosuite Limited, to supply and maintain six (6) ambient air monitors, one (1) weather station and electronic reporting to be used as part of the City's involvement in South London Air Monitoring Network Pilot Project which are noted herein; and
 - ii. authorize the Mayor and the City Clerk to execute the above-noted Agreement;
- c) the single source negotiated price **BE ACCEPTED** to hire Envirosuite Limited for a term of three years for a total estimated price of \$303,990 plus HST;
- d) the financing for the project **BE APPROVED** in accordance with the "Source of Financing Report" attached hereto as Appendix "B";
- e) Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this purchase;
- f) approval hereby given **BE CONDITIONAL** upon the Corporation entering into a formal contract or having a purchase order, or contract record relating to the subject matter of this approval; and
- g) Civic Administration **BE AUTHORIZED** to work with Western University (Western Engineering) on the South London Air Monitoring Network Pilot Project including a specific focus on the W12A Landfill with approved funds in 2021 and base program funds in 2022 (Program 480201.355000) in the amount of \$40,000 per year for two years; noting that City of London funds will be used by Western University to secure additional research funding through Mitacs and similar academic funding agencies.

Executive Summary

The geographic area of south London has a high concentration of industrial and waste management facilities including the Convertus (formerly Renewi Canada / Orgaworld) composting facility, the StormFisher Environmental Ltd. bioenergy facility, the City of London's W12A Landfill and several other private waste processing and handling

facilities in addition to a few facilities next to London (e.g., City of Toronto's Green Lane Landfill). For these facilities, the Ministry of Environment, Conservation and Parks (MECP) continues to receive odour complaints from the community.

In late 2019, MECP staff contacted the City of London regarding the development of an air and odour monitoring network Pilot Project (continuous monitoring, 24/7) for south London being modeled after air monitoring networks that exist in Ontario. The difference for the south London area Pilot Project is that the focus will be on odours. This will be the first Pilot Project of its kind in Ontario. The draft Project Charter has been prepared by MECP staff with input from the participants.

After reviewing different monitoring technologies in 2018 and 2019, StormFisher and Renewi (now Convertus), in consultation with MECP, selected a monitoring technology proposed by Envirosuite Canada Inc. <https://envirosuite.com/>. On July 21, 2020, Council directed Civic Administration to negotiate a single source agreement for the procurement of air and odour monitoring equipment and technical reporting with Envirosuite.

The Envirosuite platform involves a detailed air emissions dispersion modelling and reporting software, in combination with odour monitors and a local weather station, to both backtrack and forecast where odours may be coming from in the vicinity of the W12A Landfill. This system will use both real-time data and predictive modelling to help City staff minimize the impacts of odours on nearby Londoners. The system being proposed for W12A Landfill has been designed with input from City staff. Six odour monitors and one weather station will be installed as part of the Pilot Project. This platform and earlier versions have been installed in over 500 industrial operations including other landfill operations and wastewater treatment facilities.

Over the past 5 to 10 years, the top resident concerns living near the W12A Landfill site have always included odours. The City has made a number of capital investments and operational changes that have reduced the number of odour occurrences as part of its Odour Management Strategy for the current operation.

Perhaps more important, introducing a more sophisticated and scientific technology will assist the City in being proactive with respect to odour management and refer to this as part of the Environmental Assessment (EA) of the proposed expansion of the W12A Landfill and the subsequent technical studies required for *Environmental Protection Act* (EPA) approvals. Numerous additional benefits of the Pilot Project range from the ability to respond to odour complaints by better understanding and identifying odour intensity, trajectories and potential sources to the opportunity to learn and share better and best practices through MECP and directly with other operating landfills and other waste management facilities that could be potentially be located next to the W12A Landfill in the future.

The Envirosuite platform will also complement Mitacs-funded research being undertaken by Western University in partnership with the City of London and Golder Associates to identify opportunities for improving odour management strategies at the W12A Landfill. The City's contribution will be \$40,000 per year for two years.

Participation in the Pilot Project will require the procurement of air monitoring equipment, a weather station and software. The estimated cost for the project is \$303,990 over a three-year period including a one-time installation fee. Subject to Council approval, equipment would be installed in the fall 2021 with a tentative start-up date of October.

Linkage to the Corporate Strategic Plan

Municipal Council continues to recognize the importance of solid waste management and the need for a more sustainable and resilient city in the development of its 2019-2023 Strategic Plan for the City of London. Specifically, London's efforts in solid waste management address the three following areas of focus: Building a Sustainable City; Growing our Economy; and Leading in Public Service.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

Some relevant reports that can be found at www.london.ca under Council and Committee meetings include:

- Pilot Project Technology for Air and Odour Monitoring in South London – Request to Negotiate a Single Source Agreement (July 14, 2020 meeting of the Civic Works Committee (CWC), Item #2.5)
- Odour Monitoring Pilot Program (June 18, 2018 meeting of the Community & Protective Services Committee (CPSC), Item #2.1)
- Proposed Public Nuisance By-law Amendment to Address Odour Monitoring Pilot Project (February 21, 2018 meeting of the CPSC, Item #9)
- Review of Impacts from Industrial Sources (Focus on Odour) and Potential Municipal Actions (Primarily South of Highway 401) August 28, 2017 meeting of Planning & Environment Committee (PEC), Item #16)
- Update & Next Steps – Review of Impacts from Industrial Sources (Focus on Odour) and Potential Municipal Actions (Primarily South of Highway 401), April 24, 2017 meeting of PEC, Item #4)
- Comments - Orgaworld Canada Ltd, November 13, 2012 meeting of PEC, Item #2)
- Various submissions and comments were made by delegations and participants at the Public Participation Meeting held on November 13, 2012

1.2 Context

The geographic area of south London has a high concentration of industrial and waste management facilities including the Convertus (formerly Renewi Canada / Orgaworld) composting facility, the StormFisher Environmental Ltd. bioenergy facility, the City of London's W12A Landfill and several other private waste processing and handling facilities. For these facilities, the Ministry of Environment, Conservation and Parks (MECP) continues to receive odour complaints from the community attributed to the local waste processing and handling industries.

Previously, the City has participated in other odour monitoring approaches in south London, most recently in the summer of 2018. This project was done in collaboration with StormFisher Environmental and Convertus. In the spring of 2019, StormFisher Environmental and Convertus began preliminary discussions with MECP to investigate the feasibility of an odour monitoring network in South London.

In late 2019, MECP staff contacted the City of London regarding the development of an air and odour monitoring network Pilot Project (continuous monitoring, 24/7) for south London being modeled after air monitoring networks that exist in Ontario. The difference for the south London area Pilot Project is that the focus will be on odours. This will be the first Pilot Project of its kind in Ontario. The draft Project Charter, prepared by MECP staff with input from the participants, is found in Appendix C.

The air and odour monitoring Pilot Project will be led, funded and implemented by local organizations, in partnership and coordination with the MECP. The MECP will also provide technical expertise and oversight during the implementation and operation of the network.

The Pilot Project would not impact MECP's compliance and abatement processes. The province will continue to ensure any adverse effects are resolved through compliance and enforcement measures and/or with operational and maintenance work conducted by the industry/facilities to mitigate odour and the network will help all stakeholders to address the subjectivity of odour sources and the receptors that may be detecting them.

After reviewing different monitoring technologies in 2018 and 2019, StormFisher and Renewi (now Convertus), in consultation with MECP, selected a monitoring technology proposed by Envirosuite Limited <https://envirosuite.com/>.

On July 21, 2020, the following motion was passed at Council:

- a) The Civic Administration **BE DIRECTED** to negotiate a single source agreement for the procurement of air and odour monitoring equipment and technical reporting services as per Section 14.4(e) of the Procurement of Goods and Services Policy with EnviroSuite Limited for a term of up to three years, with two, one-year extension options at the sole discretion of the City, IT BEING NOTED that the final contract will be subject to approval by Municipal Council and Civic Administration will report back on:
 - i. the outcome of the negotiation with EnviroSuite Limited;
 - ii. the final details and costs of the Pilot Project including how the City will be participating and the potential benefits to the community; and
 - iii. the benefits of the Pilot Project and its role in addressing elements of the Environmental Assessment for the Expansion of the W12A Landfill, current landfill operations and future operations.

The City of Toronto's Green Lane Landfill, located in Southwold Township along Highway 401, will also be part of the network.

2.0 Discussion and Considerations

This section contains details as follows:

- 2.1 Overview of Envirosuite Limited Technology and Negotiation
- 2.2 Benefits of the Pilot Project
- 2.3 Role of Western University
- 2.4 Next Steps

2.1 Overview of Envirosuite Limited Technology and Negotiation

The Envirosuite platform involves a detailed air emissions dispersion modelling and reporting software, in combination with odour monitors and a local weather station, to both backtrack and forecast where odours may be coming from in the vicinity of the W12A Landfill. This system will use both real-time data and predictive modelling to help City staff minimize the impacts of odours on nearby Londoners. The system being proposed for W12a Landfill has been designed with input from City staff. Six odour monitors and one weather station will be installed as part of the Pilot Project. This platform and earlier versions have been installed in over 500 industrial operations including other landfill operations and wastewater treatment facilities.

The Envirosuite platform provides three services for City staff:

1. Real-time odour and hydrogen sulphide monitoring,
2. Odour incident "back-tracking" capabilities, and
3. Odour forecasting for possible future odour impacts

The proposed system is also designed to work in concert with existing and planned Envirosuite platforms for StormFisher, Convertus, and the City of Toronto's Green Lane landfill site.

City staff completed the negotiation and reviewed the proposed agreement from Envirosuite. A number of adjustments were recommended by the City and accepted by Envirosuite. The Agreement is found in Appendix A (Schedule A).

2.2 Benefits of the Pilot Project

Over the past 5 to 10 years, the top resident concerns living near the W12A Landfill site have always included odours. The City has made a number of capital investments and operational changes that have reduced the number of odour occurrences as part of its Odour Management Strategy for the current operation.

Equally as important, introducing a more sophisticated and scientific technology will assist the City in being proactive with respect to odour management and refer to this as part of the Environmental Assessment (EA) of the proposed expansion of the W12A Landfill and the subsequent technical studies required for *Environmental Protection Act* (EPA) approvals. Additional benefits of the Pilot Project include:

- The opportunity for the City to take a leadership role alongside MECP staff and other participating facility owners to monitor, understand and address odours and odour complaints that arise;
- The ability to respond to odour complaints by better understanding and identifying odour intensity, trajectories and potential sources;
- The opportunity to learn and share better and best practices through MECP and directly with other operating landfills;
- The opportunity to learn about odour management challenges with respect to future potential resource recovery facilities to be located next to the W12A Landfill in the area designated for resource recovery;
- The potential, over time, to continue to improve performance and optimize operations to assist with mitigating odours through increased data and intelligence including data to support capital investment and other solutions;
- The opportunity for the City to share information with the community in a transparent format and with the MECP (the regulator of the landfill) by demonstrating measures of due diligence and continuous improvement; and
- The platform and Pilot Project will also support the proposed “one window” odour reporting platform being developed by MECP to manage multiple sources of odours in south London.

Further details and examples for real-time odour and hydrogen sulphide monitoring and odour incident “back-tracking” capabilities are found on the next two pages. Real-time monitoring is provided by six odour monitoring stations located around the perimeter of the landfill site as shown in Figure 1 below. Each station is equipped with a hydrogen sulphide (H₂S) concentration monitor and an odour intensity sensor.

Landfill gas contains hydrogen sulphide, known for its distinctive "rotten egg" odour, as well as organic sulphur compounds known as “mercaptans” known for their “putrid” odour. The ambient monitor measures both hydrogen sulphide and methyl mercaptan and reports these as equivalent hydrogen sulphide.

The Metal-Oxide Semiconductor (MOS) odour intensity sensor is an “electronic nose” that provides a second method for detecting odours.

**Figure 1 - Proposed Locations for Odour Monitors and Weather Station
(Source: Envirosuite, 2021)**

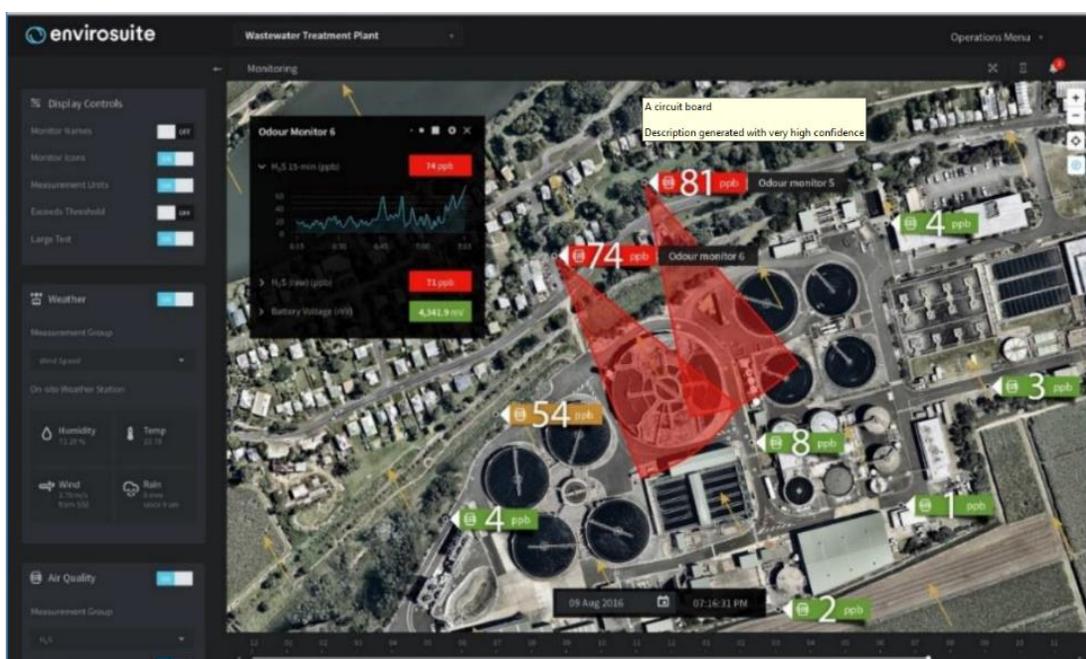


Real-time monitoring provides two critical advantages:

1. Consistency – the ability to identify odours with just your nose varies dramatically between different people and can even change over time for an individual (i.e., “getting used to the smell”), whereas hydrogen sulphide concentrations and odour intensity are objective measurements of what is in the air that stay consistent.
2. Timeliness – by the time City staff and/or MECP staff arrive at the scene of an odour complaint, the wind direction may have changed or the incident that may have caused the odour may have ended, whereas real-time monitoring allows City staff to go back to the exact time the complaint was received to see what the monitors detected.

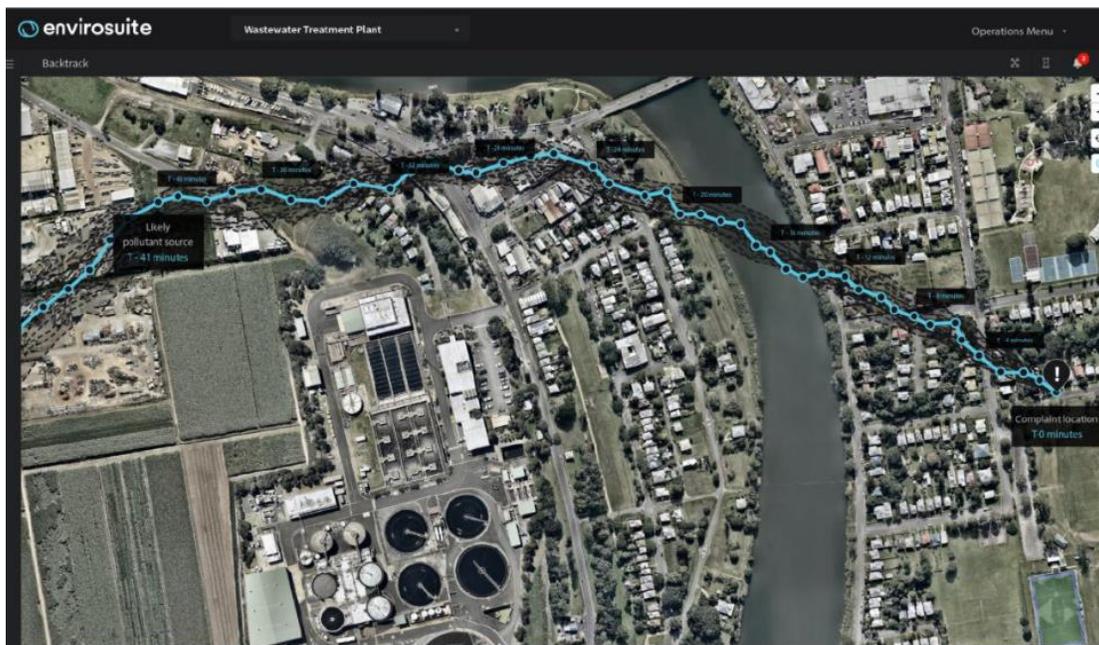
If increased levels of hydrogen sulphide and/or odour intensity are detected by one or more of the sensors, the weather station is used to help to determine where the odours may be coming from, as shown in the example in Figure 2.

**Figure 2 - Example of Real-time Detection of Potential Odour Emissions
(Source: Envirosuite, 2021)**



The odour incident “back-tracking” capabilities use the data from the weather station, combined with the location of an odour complaint, to see whether the odours might have come from as shown in the example in Figure 3.

Figure 3 - Example of the Odour Investigation Screen Showing the Back-trajectory to Possible Sources (Source: Envirosuite, 2021)



The odour forecasting capabilities use weather forecast data to alert City staff about upcoming weather conditions that could lead to odour complaints. City staff can then use this information to reschedule activities to help to reduce the potential for odours.

2.3 Role of Western University

The Envirosuite platform will also complement Mitacs-funded research being undertaken by Western University in partnership with the City of London and Golder Associates to identify opportunities for improving odour management strategies by:

1. Odour monitoring at the W12A landfill site
2. Regional odour monitoring in south London
3. Assessment of emerging practices for odour mitigation, including those with climate change mitigation co-benefits (e.g., adsorption of greenhouse gases using biochar in landfill cover), and
4. Analyzing the relationship between wind flow and the key regional features that influence the spread of odour from the landfill and other local sources

Specifically, the researchers from Western will be looking into how Envirosuite’s odour sensors respond to different types of odorous compounds that can be found in south London (e.g., those from organic waste management facilities or nearby agriculture and industrial processes) and whether it is possible for Envirosuite to be selective in identifying a specific odour source (i.e., is an odour from the landfill or manure spreading?). The researchers will utilize the data from Envirosuite’s sensors in air sampling studies and computer simulations to help understand Envirosuite’s application not only as a tool for odour monitoring but also as a tool in an overall odour prevention and mitigation strategies.

2.5 Next Steps

The next steps for the Pilot Project are identified in Table 1.

Table 1: Tentative Timetable and Remaining Steps

Tentative Timeframe	Remaining Steps
August 31, 2021	CWC meeting
September 14, 2021	Council approval
Late September	Execution of contract and ordering of equipment
August to November	Final coordination with MECP, other project partners, completion of website hosted by Envirosuite

October/November	Installation of equipment, calibration
Early December	Field measurements start (3 year Pilot Project)

3.0 Financial Impact/Considerations

Participation in the Pilot Project will require the procurement of air monitoring equipment, a weather station and software. The estimated cost for the project is \$303,990 over a three-year period (Table 2) including a one-time installation fee. The annual fee includes a 10% reduction per year of \$10,704. A one-year fee is \$107,034.

Table 2: Estimated Annual and Total Costs of Air Monitoring System at W12A Landfill

Year	Item	Estimated Cost
2021 – One time cost	Installation of Equipment	\$15,000
November 2021	Annual Fee	\$96,330
November 2022	Annual Fee	\$96,330
November 2023	Annual Fee	\$96,330
Total		\$303,990

Based on the multiple benefits of the Pilot Project including the existing landfill, preparing for the proposed future landfill expansion and the potential increase in other resource recovery facilities on lands near the W12A Landfill, this project will be funded from the New and Emerging Technologies (for Waste Management) capital account.

The work to be undertaken by the Western University research team will be funded with approved funds in 2021 and base program funds in 2022 (Program 480201.355000) in the amount of \$40,000 per year for two years. Western University will secure additional research funds (usually doubling the amount) through Mitacs and similar academic funding agencies. Currently one year funding has been obtained from Mitacs.

Conclusion

Based on the details presented in this report, further discussions with the MECP, other Pilot Project participants, Western University researchers, and review and negotiations with Envirosuite, City staff recommend a 3 year commitment to the South London Air Monitoring Network Pilot Project.

Prepared by: James Skimming, P.Eng.
Manager, Energy & Climate Change

Prepared by: Mike Losee, B.Sc.
Division Manager, Waste Management

Prepared and Submitted by: Jay Stanford MA, MPA
Director, Climate Change, Environment & Waste Management

Concurred by: Mat Daley
Director, Information Technology Services
Enterprise Supports

Recommended by: Kelly Scherr, P.Eng., MBA, FEC, Deputy City Manager,
Environment & Infrastructure

Appendix A A by-law to authorize and approve an Agreement between Envirosuite Canada Inc. and The Corporation of the City of London

Appendix B Source of Financing

Appendix C DRAFT - London District Project Charter London Air Monitoring Network

Appendix A

Bill No.
2021

By-law No. A.-

A by-law to authorize and approve an Agreement between Envirosuite Canada Inc. and The Corporation of the City of London and to authorize the Mayor and the City Clerk to execute the Agreement.

WHEREAS section 5(3) of the *Municipal Act, 2001*, S.O. 2001, c. 25, as amended, provides that a municipal power shall be exercised by by-law;

AND WHEREAS section 9 of the *Municipal Act, 2001*, S.O. 2001, c. 25, as amended, provides that a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act;

AND WHEREAS it is deemed appropriate for The Corporation of the City of London (the “City”) to enter into an Agreement with Envirosuite Canada Inc. for the procurement of air and odour monitoring equipment and technical reporting with respect to the W12A Landfill and the City’s participation in the South London Air Monitoring Network Pilot Project as proposed by the Ministry of the Environment, Conservation and Parks;

AND WHEREAS it is deemed appropriate to authorize the Mayor and the City Clerk to execute the Agreement on behalf of the City;

NOW THEREFORE the Municipal Council of The Corporation of the City of London enacts as follows:

1. The Agreement between The Corporation of the City of London and the Envirosuite Canada Inc., attached as Schedule A to this by-law, is hereby authorized and approved.
2. The Mayor and the City Clerk are hereby authorized to execute the Agreement authorized and approved under section 1 of this by-law.
3. This by-law shall come into force and effect on the day it is passed.

PASSED in Open Council September 14, 2021

Ed Holder
Mayor

Catharine Saunders
City Clerk

First Reading – September 14, 2021
Second Reading – September 14, 2021
Third Reading – September 14, 2021

SCHEDULE A

ENVIROSUITE SERVICE TERMS ("AGREEMENT")

1 Service

1.1 Parties

Envirosuite ("the Supplier") will provide the Services to the Customer set out in the Order Form ("Customer") on the terms of this Agreement.

1.2 Acceptance

Any use or access of the Services by the Customer constitutes acceptance of this Agreement.

1.3 Right to Use

The Supplier grants to the Customer a world-wide, non-exclusive, non-transferable right to use the Services and the Documentation for its internal business purposes.

2 Term

2.1 Initial Term

This Agreement commences on the Commencement Date and continues for the Initial Term unless otherwise terminated in accordance with the Agreement.

2.2 Extension

This Agreement will automatically extend for a further period of 12 months upon each anniversary of the Commencement Date unless either party provides at least 30 days prior notice. The Supplier will provide the

Customer with reasonable notice of any changes to the pricing for the Services.

2.3 Change to Services

The Customer may request a change to the modules and scope of Services. In the event that pricing and scope of Services is agreed between the parties in writing, this Agreement will automatically apply to any such changes

3 Use of Subscription Services

3.1 Customer Obligations

The Customer must:

- a. comply with all applicable laws, regulations, licences, in relation to the Services;
- b. ensure that the Customer Data that resides on, and is transmitted and received via the Services does not infringe any Intellectual Property rights of a third party or breach any privacy laws;
- c. not use the Services to store or transmit any viruses or other malicious code; d. provide industry standard virus protection mechanisms for its applications;
- d. keep all account identification and log-in information, including passwords, secure and confidential to prevent unauthorised access to or use of the Services and promptly notify Supplier of any unauthorised access or use;
- e. use the Services only for its internal business purposes and not purport to re-sell or licence the Services;
- f. comply with all reasonable and lawful directions of Supplier; and
- g. ensure that any Authorised Users are

properly trained in the use of the Services.

3.2 Suspension

The Supplier will have the right to suspend the Customer's access to the Services to prevent or mitigate damage to the Services or the systems of the Supplier.

4 Intellectual Property Rights

4.1 Ownership and use of Intellectual Property Rights

The parties agree that other than as provided in this clause 4 (Intellectual Property Rights), nothing in this Agreement transfers ownership in, or otherwise grants any rights in, any Intellectual Property Rights of a party.

4.2 Ownership in Services

In using the Services the Customer does not obtain any ownership or interest in the Services and the Customer acknowledges that the Supplier holds all Intellectual Property rights in the Services, including in any upgrade, enhancement or modification of the Services under this Agreement.

4.3 Data

The Supplier acknowledges that the Customer is the owner of the Intellectual Property Rights in the Customer Data. The Customer provides the Supplier with a license to use the Customer Data to provide the Services.

4.4 Related Services

The Supplier will irrevocably and unconditionally assign to the Customer on payment, any Customer Specific New Material.

5 Warranties

5.1 Compliance with Specifications

The Supplier warrants that the Services will materially comply with the Specifications and the Documentation when used in accordance with this Agreement.

5.2 Changes to the Services

The Supplier may make changes, modifications or enhancements to the Services and the Documentation upon reasonable notice to the Customer.

5.3 Implied Warranties

If the Supplier is in breach of any non-excludable condition or warranty implied by any statute or law, the Supplier's liability is limited to:

1. where Supplier has supplied Services, the cost of having the Services supplied again; and
2. where the Supplier supplied Equipment, the repair or replacement of the Equipment or the supply of equivalent Equipment.

5.4 Disclaimer

Except as expressly provided in the Agreement, neither the Supplier nor its subcontractors make any representation or warranties, express or implied, statutory or otherwise, regarding any matter, including the merchantability, suitability, originality, or fitness for a particular use or purpose, non-infringement or results to be derived from the use of the Services provided under the Agreement, or that the operation of the Services will be secure, uninterrupted or error free.

6 Confidentiality

6.1 Treatment of Confidential Information

Each party undertakes to keep the Confidential Information of the other party secret and to protect and preserve the confidential nature of all Confidential Information.

6.2 Use of Confidential Information

A Recipient may only use the Confidential Information of the Discloser for the purposes of performing the Recipient's obligations or exercising the Recipient's rights under this Agreement.

6.3 Disclosure of Confidential Information

A Recipient may not disclose Confidential Information of the Discloser to any person except to:

- a. Representatives of the Recipient who require it for the purposes of the Recipient performing its obligations or exercising its rights under this Agreement and then only on a need to know basis;
- b. with the prior written consent of the Discloser;
- c. if the Recipient is required to do so by law or a stock exchange; or
- d. if the Recipient is required to do so in connection with legal proceedings relating to this Agreement.

6.4 Disclosure by Recipient

A Recipient disclosing information under clause 6.3(a) or clause 6.3(b) must ensure that persons receiving Confidential Information are aware it is the other party's Confidential Information and not to disclose

the information except in the circumstances permitted in clause 6.3.

6.5 Return of Confidential Information

Subject to clause 6.6, on the Discloser's request, the Recipient must, deliver to the Discloser or destroy, all documents or other materials containing or referring to the Discloser's Confidential Information in the Recipient's possession, power or control; or in the possession, power or control of persons who have received Confidential Information from the Recipient under clause 6.3(a) or clause 6.3(b).

6.6 Exceptions

The obligation in clause 6.5 does not apply to Confidential Information of the Discloser that the Recipient requires in order to perform its obligations under this Agreement or is otherwise entitled to retain.

Nothing in clause 6 prevents or restricts the Customer from using or disclosing Customer Specific New Material, upon assignment thereof to the Customer pursuant to clause 4.4.

7 Fees & Taxes

7.1 Fees

The Supplier must provide the Services for the applicable Fee.

7.2 Fees inclusive of Taxes

All Fees exclude Taxes, whether increased, new or additional amounts and all freight, insurance, delivery and other expenses which may be incurred.

7.3 GST

- a. Unless otherwise expressly stated in this Agreement, prices or other sums payable or consideration to be provided under or in accordance with this Agreement are exclusive of GST.
- b. If a party makes a taxable supply under or in connection with this Agreement, the other party must pay to the supplier at the same time, and in addition to the GST-exclusive consideration, an amount equal to the GST payable on that supply.
- c. The supplier must, as a precondition to the payment of GST under clause 7.3(b), give the other party a tax invoice.
- d. If an adjustment event arises in connection with a supply made under this Agreement, the supplier must give the other party an adjustment note.
- e. If this Agreement requires one party to pay for, reimburse or contribute to any expense, loss or outgoing suffered or incurred by the other party, the amount required to be paid, reimbursed or contributed by the first party will be reduced by the amount of input tax credits (if any) to which the other party is entitled in respect of the reimbursable.

8 Invoicing and payment

8.1 Payment

- a. Customer will pay each invoice within thirty (30) days
- b. If Customer considers that an invoice is not correctly rendered, then Customer will notify the Supplier in writing setting out the reasons why Customer considers that the

invoice is not correctly rendered and identifying any amounts which are in dispute.

8.2 Invoice

For the purposes of this Agreement, an invoice is not correctly rendered unless:

- a. the amount specified in the invoice is correctly calculated in accordance with this Agreement; and
- b. the amount claimed in the invoice is due for payment.

9 Equipment

9.1 Equipment Supply

The Supplier will provide the Equipment as set out in an Order Form.

9.2 Title and risk

Title for any Equipment provided as managed Service will remain with the Supplier. The risk of loss or damage to the Equipment passes to Customers on the date the relevant Equipment is delivered to the delivery address. The Customer will ensure that the Equipment is covered by sufficient insurance to cover the full replacement value of the Equipment. The Customer will provide to the Supplier evidence of insurance coverage upon request by the Supplier.

11 Liability and indemnity

11.1 Liability

Subject to clause 11.2 (No limitation):

- a. neither party will be liable to the other party under or in respect of this Agreement for any Consequential Loss arising from negligence or breach of

- contract;
- b. the aggregate liability of either party whether in contract, tort (including negligence), statute or any other cause of action (other than the obligation to pay Fees) is limited to the amount paid by the Customer to the Supplier in the 12 months prior to the cause of action arising.

11.2 No limitation

Nothing in this Agreement operates to limit or exclude:

- a. liability that cannot be limited or excluded by law;
- b. Either party's liability in respect of the indemnity in clause 11.3 or 11.6; and
- c. Either party's liability resulting from its fraudulent or unlawful act or omission or any act or omission that results in personal injury, death or property damage.

11.3 Indemnity

- a. Supplier will defend Customer against claims brought by any third party alleging that Customer's use of the Services infringes any Intellectual Property Rights.
- b. The Supplier's obligations under Clause 11.3(a) will not apply to the extent the claim results from:
 - i. Customer's breach of the Agreement; or
 - ii. use of the Services in conjunction with any product or service not provided or recommended by the Supplier.
- c. In the event a claim is made or likely to be made, the Supplier may:
 - i. procure for Customer the right to

continue using the Services under the terms of the Agreement, or

- ii. replace or modify the Services to be non-infringing without material decrease in functionality.

11.4 Notification of a Claim

Customer will notify the Supplier in writing promptly after becoming aware of any Claim which might give rise to an indemnity by Supplier under clause 11.3 .

11.5 Customer obligations

In respect of any Claim notified under clause 11.4, Customer will provide the Supplier with reasonable assistance in conducting the defence of the Claim.

11.6 Customer and Supplier Indemnity

Each party will indemnify the other for any loss suffered by the other party or its Representatives, due to their negligence or breach of this Agreement.

11.7 Contribution

Any amount claimed by either party pursuant to the indemnities in clause 11.3 or 11.6 will be reduced proportionally to the extent the loss, damage, liability, claim or expense is directly caused by the negligence or breach of this agreement of the other party or its Representatives.

12 Termination

12.1 Termination for cause

Either party may terminate in whole or in part this Agreement immediately by giving notice in writing to the other party if:

- a. the other party commits a breach of this Agreement and the breach is incapable of remedy;

- b. the other party commits a breach of this Agreement that is capable of remedy and does not rectify that breach within 7 Business Days of first party issuing a notice of the breach; or
- c. a party is Insolvent.

12.2 Termination for Convenience

After the Initial Term, the Customer may terminate this Agreement on 30 days' notice without cause.

12.3 No other right of either party to terminate.

Other than as set out in this Agreement neither party may terminate any Order Form or this Agreement.

13 Consequences of termination

13.1 Payments and obligations on expiry or termination

Upon termination of this Agreement or an Order Form by Customer under clause 12.1, the Supplier will reimburse the Customer for the unused portion of any Fees paid in advance by Customer. To avoid doubt, the Customer will have no right to be reimbursed the unused portion of any Fees paid in advance by Customer upon termination of this Agreement or an Order Form by Customer under clause 12.2.

13.2 Preservation of rights

- a. Termination of this Agreement for any reason does not extinguish or otherwise affect any rights or remedies of either party which arose prior to the time of termination, or the provisions of this Agreement which by their nature survive termination.
- b. Without limiting the above, clause 4

(Intellectual Property Rights), 6 (Confidentiality), 8 (Invoicing and payment), 11 (Liability and indemnity), 13 (Consequences of termination), 17 (Assignment), 18 (Governing law), 19 (General) and 20 (Interpretation) survive termination of this Agreement.

14 Force majeure

14.1 Effects of Event

A party does not breach this Agreement and is not liable to the other party for a delay or failure to perform an obligation to the extent it results from a Force Majeure Event.

14.2 Obligation of affected party

The party affected by the Force Majeure Event must notify the other party of the Force Majeure Event as soon as reasonably practicable and must take all reasonable steps to limit the effects of Force Majeure Event.

14.3 Termination

If a Force Majeure Event occurs and its effect continues for a period of 20 Business Days, the Services affected by the Force Majeure Event may Be terminated at any time thereafter by either party giving written notice to the other party.

15 Notices

15.1 Form

Unless expressly stated otherwise in this Agreement, all notices, certificates, consents, approvals, waivers and other communications in connection with this Agreement must be in writing, signed by the sender (if an individual) or a person appointed as an authorised officer of the

sender and marked for the attention of the person identified by the other party as the contact person or, if the recipient has notified otherwise, then marked for attention in the way last notified.

15.2 Delivery

A communication must be:

- a. Left or mailed to the address notified by the recipient;
- b. sent by email to the email address notified by the recipient; or
- c. given in any other way permitted by law.

15.3 When effective

1. A communication will take effect from the time it is received unless a later time is specified.
2. If sent by post, a communication is taken to be received three days after posting (or seven days after posting if sent to or from a place outside Australia).
3. If sent by email, when the sender receives an automated message confirming delivery; or 30 minutes after the time sent (as recorded on the device from which the sender sent the email) unless the sender receives an automated message that the email has not been delivered, whichever happens first.

16 Disclosure or Promotion of this Agreement

The Customer agrees that the Supplier may from time to time disclose certain details regarding this Agreement (including but not limited to, the Customer's name, the Fees and a description of this Agreement):

1. as required by any stock exchange or law; or
2. for promotional purposes on the

Supplier's website, in promotional materials, press releases or other documents. The Customer will have the opportunity to approve, in advance, any promotional material that will be posted by the Supplier involving this agreement.

17 Assignment

17.1 Consent

Subject to clause 17.2, Neither party can assign, transfer, novate, encumber or otherwise deal with all or part of its rights or obligations under this Agreement without the other party's prior written consent.

17.2 Void Assignments

Any purported assignment, transfer, novation or other dealing with the rights under this Agreement that does not comply with clause 17.1 is void and has no effect.

18 Governing law

This Agreement is governed by the law in force in the Province of Ontario, Canada. Each party submits to the non-exclusive jurisdiction of the courts of that place.

19 General

19.1 Discretion in exercising rights

A party may exercise a right or remedy or give or refuse its consent in any way it considers appropriate (including by imposing conditions), unless this Agreement expressly states otherwise.

19.2 Partial exercising of rights

If a party does not exercise a right or remedy

fully or at a given time, the party may still exercise it later.

19.3 No liability for loss

A party is not liable for loss caused by the exercise or attempted exercise of, failure to exercise, or delay in exercising a right or remedy under this Agreement.

19.4 Approvals and consents

By giving its approval or consent a party does not make or give any warranty or representation as to any circumstance relating to the subject matter of the consent or approval

19.5 Remedies cumulative

The rights and remedies provided in this Agreement are in addition to other rights and remedies given by law independently of this Agreement.

19.6 Rights and obligations are unaffected

Rights given to the parties under this Agreement and the parties' liabilities under it are not affected by anything which might otherwise affect them by law.

19.7 Variation and waiver

A provision of this Agreement or a right created under it, may not be waived or varied except in writing, signed by the party or parties to be bound.

19.8 Indemnities

The indemnities in this Agreement are continuing obligations, independent from the other obligations of the Supplier under this Agreement and continue after this Agreement ends. It is not necessary for a party to incur expense or make payment before enforcing a right of indemnity under

this Agreement.

19.9 Further steps

Each party agrees, at its own expense, to do anything the other party asks (such as obtaining consents, signing and producing documents and getting documents completed and signed):

- a. to bind the party and any other person intended to be bound under this Agreement;
- b. to enable the party to exercise its rights; and
- c. to show whether the party is complying with this Agreement.

19.10 Prompt performance

If this Agreement specifies when the party agrees to perform an obligation, the party agrees to perform it by the time specified. Each party agrees to perform all other obligations promptly.

19.11 Construction

No rule of construction applies to the disadvantage of a party because that party was responsible for the preparation of, or seeks to rely on, this Agreement or any part of it.

19.12 Costs

The parties agree to pay their own legal and other costs and expenses in connection with the preparation, execution and completion of this Agreement and other related documentation except for stamp duty.

19.13 Entire agreement

This Agreement constitutes the entire agreement of the parties about its subject matter and supersedes all previous agreements, understandings and negotiations on that subject matter.

19.14 Severability

If the whole or any part of a provision of this Agreement is void, unenforceable or illegal in a jurisdiction it is severed for that jurisdiction. The remainder of this Agreement has full force and effect and the validity or enforceability of that provision in any other jurisdiction is not affected. This clause has no effect if the severance alters the basic nature of this agreement or is contrary to public policy.

19.15 No relationship

Nothing in this agreement will be taken to constitute the Supplier as an employee, agent, partner or joint venturer of Customer nor is the Supplier authorised to represent itself as acting, or to incur any obligation, on behalf of Customer.

20 Interpretation

20.1 Definitions

Authorised Users means the employees or contractors of the Customer who are entitled to use the Subscription Services.

Business Day means a day other than a Saturday, Sunday or public holiday in:

- a. the place of the Governing law; or
- b. where an obligation under this agreement is required to be performed in a particular place, that place.

Claim means any allegation, debt, cause of action, liability, claim, proceeding, suit or demand of any nature whatsoever arising and whether present or future, fixed or unascertained, actual or contingent whether at law, in equity, under statute or otherwise.

Commencement Date means the date specified under that heading in the Details. If there is no Commencement Date specified, then the Commencement Date is the date on which the last party executes this Agreement.

Confidential Information means:

- a. all confidential, non-public or proprietary information, regardless of how the information is stored or delivered, exchanged between the parties or their Representatives before, on or after the Commencement Date relating to the business, technology or other affairs of the Discloser of the information, including the details of the Services; and
- b. in the case of Customer, all Customer Data;

but does not include information:

- a. which is in or becomes part of the public domain other than through breach of this Agreement or an obligation of confidence owed to the Discloser; which the Recipient can prove by contemporaneous written documentation was:
- b. already known to it at the time of disclosure by the Discloser (unless such knowledge arose from disclosure of information in breach of an obligation of confidentiality); or
- c. independently developed by the Recipient without reference to the Confidential Information of the Discloser; or
- d. which the Recipient acquires from a source other than the Discloser or any of its representatives where such source is entitled to disclose it on a non-

confidential basis.

Consequential Loss means any indirect or consequential loss or damage which, although in the contemplation of the parties at the time they entered into this Agreement, is not a loss or damage which may fairly and reasonably be considered to arise naturally (that is, in the usual course of things) from the breach including, but not limited to, loss of profits, loss of data, loss of revenue, loss of opportunity or loss of goodwill.

Contract Representative means a person appointed by each party to be their representative for the purpose of managing this Agreement and any disputes arising under it.

Customer Data means all data, information, text, drawing or other material which is provided to the Supplier, or inputted into the Services, by the Customer.

Customer Specific New Material means any material created by the Supplier in the course of providing the Related Services that is based on or is a modification or enhancement of, the Customer Data.

Discloser means the party disclosing Confidential Information.

Documentation means any documentation provided by the Supplier which sets out the details of the Services.

Fee means the fee for the Services and any Equipment calculated in accordance with the Order Form.

Force Majeure Event means any of the

following causes provided that they are outside the reasonable control of the affected party and could not have been prevented or avoided by that party taking all reasonable steps including:

Government Agency means any governmental, semi-governmental, administrative, fiscal, judicial or quasi-judicial body, department, commission, authority, tribunal, agency or entity.

GST means any goods and services or value added tax.

A person is **Insolvent** if:

- a. it is (or states that it is) an insolvent under administration or insolvent;
- b. it is subject to any arrangement, assignment, moratorium or composition, protected from creditors under any statute or dissolved (in each case, other than to carry out a reconstruction or amalgamation while solvent on terms approved by the other parties to this Agreement); or an application or order has been made (and in the case of an application, it is not stayed, withdrawn or dismissed within 30 days), resolution passed, proposal put forward, or any other action taken, in each case in connection with that person, which is preparatory to or could result in any of (a), (b) or (c) above; or
- c. it is otherwise unable to pay its debts when they fall due; or
- d. something having a substantially similar effect to (a) to (d) happens in connection with that person under the law of any jurisdiction.

Initial Term means, unless stated otherwise in the Order Form, 12 months.

Intellectual Property Rights means all intellectual property rights including current and future registered and unregistered rights in respect of copyright, designs, circuit layouts, trade marks, trade secrets, know-how, confidential information, patents, invention and discoveries and all other intellectual property as defined in article 2 of the convention establishing the World Intellectual Property Organisation 1967.

Moral Rights means any moral rights including the rights described in Article 6b of the Berne Convention for Protection of Literary and Artistic Works 1886 (as amended and revised from time to time), being “droit moral” or other analogous rights arising under any statute that exist or that may come to exist, anywhere in the world.

Order Form means an order or proposal provided by the Supplier or the Reseller which sets out the details of the order to which this Agreement applies.

Receiver includes a receiver or receiver and manager.

Recipient means the party receiving Confidential Information.

Related Services means the professional services agreed in an Order Form.

Representative of a party includes an employee, agent, officer, director, auditor,

advisor, partner, consultant, contractor or sub-contractor of that party.

Reseller means an authorised reseller of the Supplier who has the direct relationship with the Customer.

Service Levels mean the Service Levels set out in the Documentation.

Services means all Subscription Services and Related Services required to be provided by the Supplier under this Agreement.

Subscription Services means the Software as a Service modules provided by the Supplier to the Customer as set out in the Order Form.

Taxes means taxes, levies, imposts, charges and duties (including stamp and transaction duties) imposed by any authority together with any related interest, penalties, fines and expenses in connection with them except if imposed on, or calculated having regard to, the net income of Supplier.

Term means the Initial Term as extended if applicable.

20.2 Headings

Headings are included for convenience only and are not to affect the interpretation of this Agreement.

Appendix "B"
Revised Date

#21123

August 31, 2021
(Award Contract)

Chair and Members
Civic Works Committee

RE: Participation in the South London Air Monitoring Network Pilot Project
(Subledger LF210002)
Capital Project SW6050 - New and Emerging Solid Waste Technologies
Envirosuite Limited - \$303,990.00 (excluding HST)

Finance Supports Report on the Sources of Financing:

Finance Supports confirms that the cost of this project can be accommodated within the financing available for it in the Capital Budget and that, subject to the approval of the Deputy City Manager, Environment and Infrastructure, the detailed source of financing for this project is:

Estimated Expenditures	Approved Budget	This Submission	Balance for Future Work
Engineering	1,000,000	309,341	690,659
Construction	35,000,000	0	35,000,000
Total Expenditures	\$36,000,000	\$309,341	\$35,690,659
Sources of Financing			
Debenture Quota (Note 1)	11,700,000	0	11,700,000
Drawdown from Solid Waste Renewal Reserve Fund	16,351,532	309,341	16,042,191
Federal Gas Tax	7,948,468	0	7,948,468
Total Financing	\$36,000,000	\$309,341	\$35,690,659

Financial Note:

Contract Price	\$303,990
Add: HST @13%	39,519
Total Contract Price Including Taxes	343,509
Less: HST Rebate	-34,168
Net Contract Price	\$309,341

Note 1: Note to City Clerk: Administration hereby certifies that the estimated amounts payable in respect of this project does not exceed the annual financial debt and obligation limit for the Municipality from the Ministry of Municipal Affairs in accordance with the provisions of Ontario Regulation 403/02 made under the Municipal Act, and accordingly the City Clerk is hereby requested to prepare and introduce the necessary by-laws.

An authorizing by-law should be drafted to secure debenture financing for project SW6050 - New and Emerging Solid Waste Technologies for the net amount to be debentured of \$11,700,000.00.

Jason Davies
Manager of Financial Planning & Policy

HB

Appendix C

DRAFT - London District Project Charter **London Air Monitoring Network:** **2019-2022**

General Project Information

Client(s): StormFisher Environmental Ltd., Convertus (formerly Renewi), Ministry of the Environment, Parks and Conservation (MECP), City of London (W12A Landfill), City of Toronto (Green Lane)

Physical Address: multiple

Primary Environmental Officer(s): Sybil Kyba, Andrew Woodhouse, Jessica Ceneviva, Jeff Mills

Date of Initial Engagement: Spring 2019

Stakeholders: Local residents and businesses, StormFisher, Convertus, City of London, City of Toronto, Middlesex London Health Unit,

Environmental Plan Alignment

Clean Air

The ministry will work in partnership with municipalities, industry, public health units and other community stakeholders to address local air quality concerns and achieve air quality objectives.

Background and Purpose

The geographic area of south London has a high concentration of industrial facilities including the Convertus composting facility, StormFisher Environmental Ltd. bioenergy facility, the City of London's W12A landfill, the City of Toronto's Green Lane landfill, Ingredion, and several other private waste processing and handling facilities. The ministry continues to receive odour complaints from the community attributed to the manufacturing as well as waste processing and handling industries.

In the spring of 2019, StormFisher Environmental and Convertus began preliminary discussions with the ministry to investigate the feasibility of an odour monitoring network in London.

The London Air Monitoring network will be led, funded and implemented by local industry, in partnership and coordination with the ministry. The ministry will also provide technical expertise and oversight during the implementation and operation of the network.

This project charter defines the ministry's role/oversight in the development and implementation of an air monitoring network in London, as well as the goals and objectives of the industry network.

The London Air Monitoring network would not impact ministry compliance and abatement processes. The ministry will continue to ensure any adverse effects are resolved through proactive measures and/or compliance and enforcement measures and/or with operational and maintenance work conducted by the industry/facilities to mitigate odour. The network will help all stakeholders to address the subjectivity of odour sources and the receptors that may be detecting them.

Issues Summary

Local industry implemented facility improvements and best management practices to help mitigate odours in the community.

The ministry has also undertaken compliance and enforcement actions when waste handling, and processing, odours have impacted the community.

In order to further address odour concerns raised by the community, and the potential source of odours, local industry and municipalities, will lead the development of an air monitoring network, with the support of the ministry, to provide a more objective measure of odour in the community.

Project Objectives

The local industry and municipalities will:

1. Fund the implementation of the London Air Monitoring network.
2. Retain a qualified vendor to implement and operate the London Air Monitoring network.
3. Provide information to the local community at Community/Public Liaison Committees, or similar forums, to provide information, and invite feedback, about the implementation and functionality of the London Air Monitoring network. In the case of StormFisher Environmental, this will occur through its public liaison committee which has been meeting quarterly for a number of years.
4. StormFisher has been collecting air quality and meteorological data in London since at least July 1, 2020. Establish a website, or similar platform, to clearly display the information and make the data generated from the London Air Monitoring network available in “real time” to the community. Additional air monitors will be phased in as other participants join the network.

The industry led London Air Monitoring network will:

1. Assess current local air conditions. The minimal operational time and data validity of the air monitoring network should be 95% in any given year.
2. Ensure air monitoring equipment is maintained and operated according to manufacturer specifications and the [ministry operations manual for air quality monitoring in Ontario](#).
3. Utilize current and available technology to assist in the determination of the presence/absence of odours in the community.
4. Develop a data base of air quality and weather-related information that will help to continuously improve predicative modelling in the community. Maintain this database in a format that is publicly available online.

The ministry will:

1. Endorse, assist and support the London industry with engaging stakeholders to inform them of the implementation of the air monitoring network and to solicit feedback and help address concerns (where appropriate and feasible). This will include support and assistance at the public meetings or at StormFisher’s public liaison committee meetings.
2. Review, recommend and provide technical input and feedback, to the companies, on the location of equipment.
3. Review and provide technical input on the validity of the air monitoring equipment and the data generated from the London Air Monitoring network.
4. Endorse and assist with promoting a website, or similar online platform, for the London Air Monitoring network to clearly display and publicly share the data generated, where feasible.
5. Undertake an annual review, or more frequently as required, of the data generated from the London Air Monitoring network.
6. Ensure that routine voluntary or mandatory abatement actions are undertaken by industry to resolve any odour incidents identified in the community.

Project Outcomes

1. Local industry/municipalities develop and implement an Air Monitoring network in London.
2. Local industry/municipalities establish a website, or similar platform, to clearly display the information and make the data generated available in “real time”, and ensure historical data is also available online.
3. The air and meteorological data generated from the air monitoring network is publicly available to provide local residents/stakeholders with a better understanding of the current status of local air quality along with potential odours in the community.
4. The London Air Monitoring network will provide a more objective measure of odours, and their sources, in the community. Information from each monitor is representative of the odours present at that location.

Key Performance Indicators

- Reliable, publicly accessibility, data is generated from the London Air Monitoring network. The minimal operational time and data validity of the air monitoring network should be 95% in any given year.
- Industry/municipalities implement facility improvements and best management practices when information demonstrates odours are from a particular industry are in the community.
- Evaluation/review of data generated from the London Air Monitoring network will be used for continuous improvement by local industry, municipalities, and the ministry to address any odours in the community.
- The community, facilities, municipalities, and the ministry all have a better understanding of local air quality.
- Collaboration is improved between industry, municipalities, the public and the ministry to reduce and resolve odour concerns.

Communication and Reporting

Ministry commits to regular communication between the London District Office and individual stakeholders, including industry who request information. When possible, the ministry will collaborate with appropriate stakeholders and organizations to explore effective avenues of communication.

Industry and municipalities will provide an annual report to the ministry that provides a summary and assessment of the data and corrective actions related to the London Air Monitoring network.

Tools and Additional Project Resources

Document Tracking

Date	Summary of Changes	Author	Approval (Initial / Date)
December 17, 2019	V .02	MECP-SF comments	
March 23, 2020	V .03	City of London comments	
April 24, 2020	V .04	Formatting edits	
July 9, 2021	V.05	Bring to current year.	