

Agenda Including Addeds

Civic Works Committee

The 10th Meeting of the Civic Works Committee

July 27, 2021, 12:00 PM

2021 Meeting - Virtual Meeting during the COVID-19 Emergency

Please check the City website for current details of COVID-19 service impacts.

Meetings can be viewed via live-streaming on YouTube and the City website

Members

Councillors E. Pelosa (Chair), J. Helmer, M. Cassidy, P. Van Meerbergen, S. Turner,
Mayor E. Holder

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6.1. Litigation / Solicitor-Client Privileged Advice

A matter pertaining to litigation or potential litigation; advice that is subject to solicitor-client privilege, including communications necessary for that purpose from the solicitor and officers and employees of the Corporation with respect to litigation currently before the Superior Court of Justice, Court file No. 2278/18 and 2278/18-A1 affecting the municipality in relation to the Bradley Avenue West Extension and Wharncliffe Road South Improvements.

6.2. Litigation / Solicitor-Client Privileged Advice

A matter pertaining to litigation or potential litigation; advice that is subject to solicitor-client privilege, including communications necessary for that purpose from the solicitor and officers and employees of the Corporation with respect to litigation currently before the Superior Court of Justice, Court file 783/19 affecting the municipality in relation to the 2016 Sarnia Road Improvements.

7. Adjournment

Transportation Advisory Committee

Report

6th Meeting of the Transportation Advisory Committee

June 29, 2021

Advisory Committee Virtual Meeting - during the COVID-19 Emergency

Attendance PRESENT: D. Foster (Chair), G. Bikas, D. Doroshenko, B. Gibson, T. Kerr, T. Khan, M. Rice, M.D. Ross and J. Bunn (Committee Clerk)

ABSENT: P. Moore and S. Wraight

ALSO PRESENT: Councillor P. Squire; T. Macbeth, D. MacRae, P. Masse, A. Miller, E. Oladejo, M. Schulthess, J. Skimming and J. Stanford

The meeting was called to order at 12:20 PM.

1. Call to Order

1.1 Disclosures of Pecuniary Interest

That it BE NOTED that no pecuniary interests were disclosed.

2. Scheduled Items

2.1 E-Scooters and Cargo E-Bikes

That the following actions be taken with respect to the presentation, dated June 29, 2021, from A. Miller, Co-Ordinator, Transportation Demand Management, with respect to E-Scooters and Cargo E-Bikes:

- a) a Working Group BE CREATED, to be led by T. Khan, to review the above-noted presentation and report back to the next meeting of the Transportation Advisory Committee with comments; and,
- b) the above-noted presentation BE RECEIVED.

3. Consent

3.1 5th Report of the Transportation Advisory Committee

That it BE NOTED that the 5th Report of the Transportation Advisory Committee, from its meeting held on May 25, 2021, was received.

3.2 Municipal Council Resolution - 4th Report of the Transportation Advisory Committee

That it BE NOTED that the Municipal Council resolution, from its meeting held on May 25, 2021, with respect to the 4th Report of the Transportation Advisory Committee, was received.

4. Sub-Committees and Working Groups

4.1 Advisory Committee Review - Interim Report VI - RESUBMITTED

That it BE NOTED that the Transportation Advisory Committee held a general discussion regarding future working group activity with respect to the resubmitted staff report, dated May 17, 2021, related to the Advisory Committee Review Interim Report VI, as appended to the Agenda.

5. Items for Discussion

5.1 Summer Meeting Date(s)

That it BE NOTED that the Transportation Advisory Committee will meet on August 3, 2021 and then resume the normal meeting schedule in September 2021 for the remainder of the term.

6. Adjournment

The meeting adjourned at 1:11 PM.

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: Amendments to the Traffic and Parking By-law

Date: July 27, 2021

Recommendation

That on the recommendation of the Deputy City Manager, Environment & Infrastructure, the following actions be taken with respect to the Traffic and Parking By-law (PS-113):

- a) The proposed by-law, attached as Appendix A **BE INTRODUCED** at the Municipal Council meeting to be held on August 10th, 2021, for the purpose of amending the Traffic and Parking By-law (PS-113);
- b) The proposed by-law, attached as Appendix B **BE INTRODUCED** at the Municipal Council meeting to be held on August 10th, 2021, for the purpose of amending the Traffic and Parking By-law (PS-113) in order to implement 'No Stopping Anytime' zones in the vicinity of the London International Airport for Airshow London 2021 from August 27th, 2021, to August 29th, 2021; and
- c) The proposed by-law, attached as Appendix C **BE INTRODUCED** at the Municipal Council meeting to be held on August 10th, 2021, for the purpose of amending the Traffic and Parking By-law (PS-113) in order to remove the 'No Stopping Anytime' zones previously approved for Airshow London 2021 from August 27th, 2021, to August 29th, 2021.

Linkage to the Corporate Strategic Plan

The following report supports the 2019 to 2023 Strategic Plan through the strategic focus area of **Building a Sustainable City** by improving safety, traffic operations and residential parking needs in London's neighbourhoods.

Analysis

1.0 Background Information

The Traffic and Parking By-law (PS-113) requires amendments (Appendix A, B and C) to address safety, traffic operations and parking concerns. The amendments in the following sections are proposed.

2.0 Discussion and Considerations

2.1 No Stopping

Airshow London 2021

Staff received a request from the Airshow London 2021 organizers and the Parking Office to implement 'No Stopping Anytime' zones on key streets near the London International Airport during the show for traffic operation and safety reasons. These changes have been implemented for the Airshow London for the last several years. The changes are to be in place from August 27th, 2021, to August 29th, 2021. The 'No Stopping Anytime' signs will be removed after August 29th, 2021. The following are the recommended temporary 'No Stopping Anytime' zones:

- Both sides of Creamery Road north from Dundas Street to the north limit of Creamery Road;
- Both sides of Dakota Place from the south limit of Dakota Place to Huron Street;
- Both sides of Dundas Street from Crumlin Sideroad to the east City limit;
- Both sides of Evelyn Drive from Rebecca Road to the east City limit;
- Both sides of Kostis Avenue from Dundas Street to north limit of Kostis Avenue;
- Both sides of Rebecca Road from Robin's Hill Road to Evelyn Drive; and
- Both sides of Robin's Hill Road from Crumlin Sideroad to Rebecca Road.

It should be noted that the timing of Airshow London may vary from year to year; therefore, the above changes are required on a yearly basis when the date of the event is finalized.

2.2 Stop Signs

King Edward Avenue and Dieppe Street Intersection

- Due to safety concerns, it is recommended to implement an all-way stop for the King Edward Avenue and Dieppe Street Intersection.

2.3 Pedestrian Crossovers

Trott Drive

- The 2021 New Sidewalk construction program on Coombs Avenue will also include Trott Drive from Fox Avenue to Edgar Drive. It is recommended to implement a type D pedestrian crossover on Coombs Avenue at 50 m south of Edgar Drive to assist pedestrians accessing or exiting University Heights Park.

2.4 Higher Speed Limits

Due to a significant increase in development on the following roads, it is recommended to reduce the speed limit on:

- Hyde Park Road from 200 m north of Sunningdale Road W to 50 m north of Twilite Boulevard from 90 km/h to 60 km/h;

- Sunningdale Road W from 200 m west of Hyde Park Rd to 150 m west of Denview Avenue from 80 km/h to 60 km/h;
- Sunningdale Road W from 1300 m west of Richmond Street to 200 m west of Richmond Street from 70 km/h to 60 km/h; and
- Wharncliffe Road S from 135 m south of Savoy Street to Bostwick Road from 80 km/h to 60 km/h.

2.5 School Zones

Jack Chambers Public School

The school zone on Virginia Road was reduced to 40 km/h; however, it was not designated as a Community Safety Zone (CSZ). It is recommended that this school zone be designated as a CSZ due to the large number of vulnerable pedestrians accessing the school from Virginia Road.

West Oaks French Immersion Public School

It is recommended that the speed limit within the school zone on Valetta Street from a point 150 m west of Plantation Road to a point 150 m east of Plantation Road be reduced to 40 km/h as per the School Zone Speed Limit Program and that the school zone be posted as a CSZ due to the large number of vulnerable pedestrians accessing the school.

2.6 Area Speed Limits

To date seven area speed limits have been signed as 40 km/hr. The following six area speed limit zones are being recommended for implementation:

- The East London area bounded by Highbury Avenue N, Oxford Street E, Clarke Road and Dundas Street;
- The East London area bounded by Wellington Street, Horton Street E, Adelaide Street N, York Street, Florence Street, Highbury Avenue N, Hamilton Road and South Thames River;
- The North-West London area bounded by Oxford Street W, Thames River, Hyde Park Road and CN Railway. Hyde Park Road is a major road and should remain 50 km/h and 60 km/h as posted;
- The Old North area bounded by Richmond Street, North Thames River, Adelaide Street N and Oxford Street E;
- The South-East London area bounded by Highbury Avenue N, CN Railway, Clarke Road, Gore Road - River Road, Veterans Memorial Parkway and Hamilton Road. Clarke Road and Gore Road are major roads and should remain 50 km/h; and,
- The West London area bounded by Wonderland Road N, CN Railway, Riverside Drive, Wharncliffe Road N and Springbank Drive. Riverside Drive from Wonderland Road N to the CN Rail line is a major road and should remain 50 km/h.

Maps showing the proposed area speed limits can be found in Appendix D.

Conclusion

Several changes are proposed to improved road safety and operations for all users. Amendments are required to Schedule 1 (No Stopping), Schedule 10 (Stop Signs), Schedule 13.1 (Pedestrian Crossovers), Schedule 17 (Higher Speed Limits), Schedule 17.1 (Lower Speed Limits) and Schedule 17.3 (Area Speed Limits) to address the above changes.

Prepared by: Shane Maguire, P. Eng., Division Manager, Traffic Engineering

Submitted by: Doug MacRae, P. Eng., MPA, Director, Transportation & Mobility

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

July 19, 2021/

Attach: Appendix A – By-law to Amend the Traffic and Parking By-law (PS-113)
Appendix B – By-law to Amend the Traffic and Parking By-law (PS-113) to add No Stopping Zones with respect to the Airshow London 2021
Appendix C – By-law to Amend the Traffic and Parking By-law (PS-113) to delete No Stopping Zones with respect to the Airshow London 2021
Appendix D – Area Speed Limit Zones

cc: Parking Office

APPENDIX A By-law to amend the Traffic and Parking By-law (PS-113)

Bill No.

By-law No. PS-113

A by-law to amend By-law PS-113 entitled, “A by-law to regulate traffic and the parking of motor vehicles in the City of London.”

WHEREAS subsection 10(2) paragraph 7. Of the *Municipal Act, 2001*, S.O. 2001, c.25, as amended, provides that a municipality may pass by-laws to provide any service or thing that the municipality considers necessary or desirable to the public;

AND WHEREAS subsection 5(3) of the *Municipal Act, 2001*, as amended, provides that a municipal power shall be exercised by by-law;

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

1. Stop Signs

Schedule 10 (Stop Signs) of the By-law PS-113 is hereby amended by **adding** the following rows:

Column 1 Traffic	Column 2 Street	Column 3 Intersection
Eastbound	Dieppe Street	King Edward Avenue
Westbound	King Edward Avenue	Dieppe Street
Southbound	King Edward Avenue	Dieppe Street

2. Through Highways

Schedule 13 (Through Highways) of the By-law PS-113 is hereby amended by **deleting** the following row:

Column 1 Street	Column 2 From	Column 3 To
King Edward Avenue	Veronica Avenue	Scenic Drive

Schedule 13 (Through Highways) of the By-law PS-113 is hereby amended by **adding** the following row:

Column 1 Street	Column 2 From	Column 3 To
King Edward Avenue	Dieppe Street	Veronica Avenue

3. Pedestrian Crossovers

Schedule 13.1 (Pedestrian Crossovers) of the By-law PS-113 is hereby amended by **adding** the following row:

Column 1 Street	Column 2 Location
Trott Dive	At a point 50 m south of Edgar Drive

4. Higher Speed Limits

Schedule 17 (Higher Speed Limits) of the By-law PS-113 is hereby amended by **deleting** the following rows:

Column 1 Highway	Column 2 From	Column 3 To	Column 4 Maximum Rate of Speed
Hyde Park Road	North City limit	A point 50 m north of Twilite Boulevard	90 km/h
Hyde Park Road	A point 50 m north of Twilite Boulevard	A point 260 m north of North Routledge Park	60 km/h
Sunningdale Road W	West City limit	A point 150 m west of Denview Avenue	80 km/h
Sunningdale Road W	A Point 150 m west of Denview Avenue	Wonderland Road N	60 km/h
Sunningdale Road W	A point 1300 m west of Richmond Street	A point 200 m west of said street	70 km/h
Wharncliffe Road S	A point 605 m east of Campbell Street	A point 175 m east of said street	60 km/h
Wharncliffe Road S	A point 605 m north of Campbell Street	A point 50 m south of Bradley Avenue	80 km/h

Schedule 17 (Higher Speed Limits) of the By-law PS-113 is hereby amended by **adding** the following rows:

Column 1 Highway	Column 2 From	Column 3 To	Column 4 Maximum Rate of Speed
Hyde Park Road	North City limit	A point 200 m north of Sunningdale Road W	90 km/h
Hyde Park Road	A point 200 m north of Sunningdale Road W	A point 260 m north of North Routledge Park	60 km/h
Sunningdale Road W	A point 200 m west of Hyde Park Road	Wonderland Road N	60 Km/h

Column 1 Highway	Column 2 From	Column 3 To	Column 4 Maximum Rate of Speed
Sunningdale Road W	A point 1300 m west of Richmond Street	A point 200 m west of Richmond Street	60 km/h
Wharncliffe Road S	A point 175 m east of Campbell Street	Bostwick Road	60 km/h
Wharncliffe Road S	Bostwick Road	A point 50 m south of Bradley Avenue	80 km/h

5. **Lower Speed Limits**

Schedule 17.1 (Lower Speed Limits) of the PS-113 By-law is hereby amended by **adding** the following row:

Column 1 Highway	Column 2 From	Column 3 To	Column 4 Maximum Rate of Speed
Valetta Street	A point 150 m west of Plantation Road	A point 150 m east of Plantation Road	40 km/h

6. **Community Safety Zones**

Schedule 17.2 (Community Safety Zones) of the By-law PS-113 is hereby amended by **adding** the following rows:

Column 1 Street	Column 2 From	Column 3 To
Valetta Street	A point 150 m west of Plantation Road	A point 150 m east of Plantation Road
Virginia Road	Hastings Drive	Repton Avenue

7. **Area Speed Limits**

Schedule 17.3 (Area Speed Limits) of the By-law PS-113 is hereby amended by **adding** the following rows:

Column 1 Area Limit	Column 2 Maximum Rate of Speed
Adelaide Street N – York Street – Florence Street – Highbury Avenue N – Trafalgar Street - Hamilton Road	40 km/h
Clarke Road – Gore Road – River Road – Veterans Memorial Parkway – Hamilton Road	40 km/h
Gore Road – Clarke Road – Hamilton Road	40 km/h
Highbury Avenue N – Trafalgar Street - CN Railway - Clarke Road – Gore Road – Hamilton Road	40 km/h
Highbury Avenue N - Oxford Street E - Clarke Road - Dundas Street	40 km/h

Column 1 Area Limit	Column 2 Maximum Rate of Speed
Oxford Street W, Thames River and CN Railway; excluding: Hyde Park Road from Oxford Street W to CN Railway	40 km/h
Richmond Street - North Thames River - Adelaide Street N - Oxford Street E	40 km/h
Trafalgar Street – Highbury Avenue N – Hamilton Road	40 km/h
Wellington Street - Horton Street E – Hamilton Road - Adelaide Street N - South Thames River	40 km/h
Wonderland Road N – CN Rail – Riverside Drive	40 km/h
Wonderland Road S - Wonderland Road N – Riverside Drive - Wharnccliffe Road N – Wharnccliffe Road S - Springbank Drive	40 km/h

This by-law comes into force and effect on the day it is passed.

PASSED in Open Council on August 10, 2021

Ed Holder
Mayor

Catharine Saunders
City Clerk

First Reading – August 10, 2021
Second Reading – August 10, 2021
Third Reading – August 10, 2021

APPENDIX B By-law to amend the Traffic and Parking By-law (PS-113) to add No Stopping Zones with respect to the Airshow London 2021

Bill No.

By-law No. PS-113

A by-law to amend By-law PS-113 entitled, “A by-law to regulate traffic and the parking of motor vehicles in the City of London.”

WHEREAS subsection 10(2) paragraph 7. Of the *Municipal Act, 2001*, S.O. 2001, c.25, as amended, provides that a municipality may pass by-laws to provide any service or thing that the municipality considers necessary or desirable to the public;

AND WHEREAS subsection 5(3) of the *Municipal Act, 2001*, as amended, provides that a municipal power shall be exercised by by-law;

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

1. No Stopping

Schedule 1 (No Stopping) of the PS-113 By-law is hereby amended by **adding** the following rows:

Column 1 Street	Column 2 Side	Column 3 From	Column 4 To	Column 5 Period
Creamery Road	Both	Dundas Street	North limit of Creamery Road	Anytime
Dakota Place	Both	South limit of Dakota Place	Huron Street	Anytime
Dundas Street	Both	Crumlin Sideroad	East City limit	Anytime
Evelyn Drive	Both	Rebecca Road	East City limit	Anytime
Kostis Avenue	Both	Dundas Street	North limit of Kostis Avenue	Anytime
Rebecca Road	Both	Robin’s Hill Road	Evelyn Drive	Anytime
Robin’s Hill Road	Both	Crumlin Sideroad	Rebecca Road	Anytime

This by-law comes into force and effect on August 27, 2021.

PASSED in Open Council on August 10, 2021

Ed Holder
Mayor

Catharine Saunders
City Clerk

First Reading – August 10,2021
Second Reading – August 10,2021
Third Reading – August 10,2021

APPENDIX C By-law to amend the Traffic and Parking By-law (PS-113) to delete No Stopping Zones with respect to the Airshow London 2021

Bill No.

By-law No. PS-113

A by-law to amend By-law PS-113 entitled, “A by-law to regulate traffic and the parking of motor vehicles in the City of London.”

WHEREAS subsection 10(2) paragraph 7. Of the *Municipal Act, 2001*, S.O. 2001, c.25, as amended, provides that a municipality may pass by-laws to provide any service or thing that the municipality considers necessary or desirable to the public;

AND WHEREAS subsection 5(3) of the *Municipal Act, 2001*, as amended, provides that a municipal power shall be exercised by by-law;

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

2. No Stopping

Schedule 1 (No Stopping) of the PS-113 By-law is hereby amended by **deleting** the following rows:

Column 1 Street	Column 2 Side	Column 3 From	Column 4 To	Column 5 Period
Creamery Road	Both	Dundas Street	North limit of Creamery Road	Anytime
Dakota Place	Both	South limit of Dakota Place	Huron Street	Anytime
Dundas Street	Both	Crumlin Sideroad	East City limit	Anytime
Evelyn Drive	Both	Rebecca Road	East City limit	Anytime
Kostis Avenue	Both	Dundas Street	North limit of Kostis Avenue	Anytime
Rebecca Road	Both	Robin’s Hill Road	Evelyn Drive	Anytime
Robin’s Hill Road	Both	Crumlin Sideroad	Rebecca Road	Anytime

This by-law comes into force and effect on the August 30, 2021.

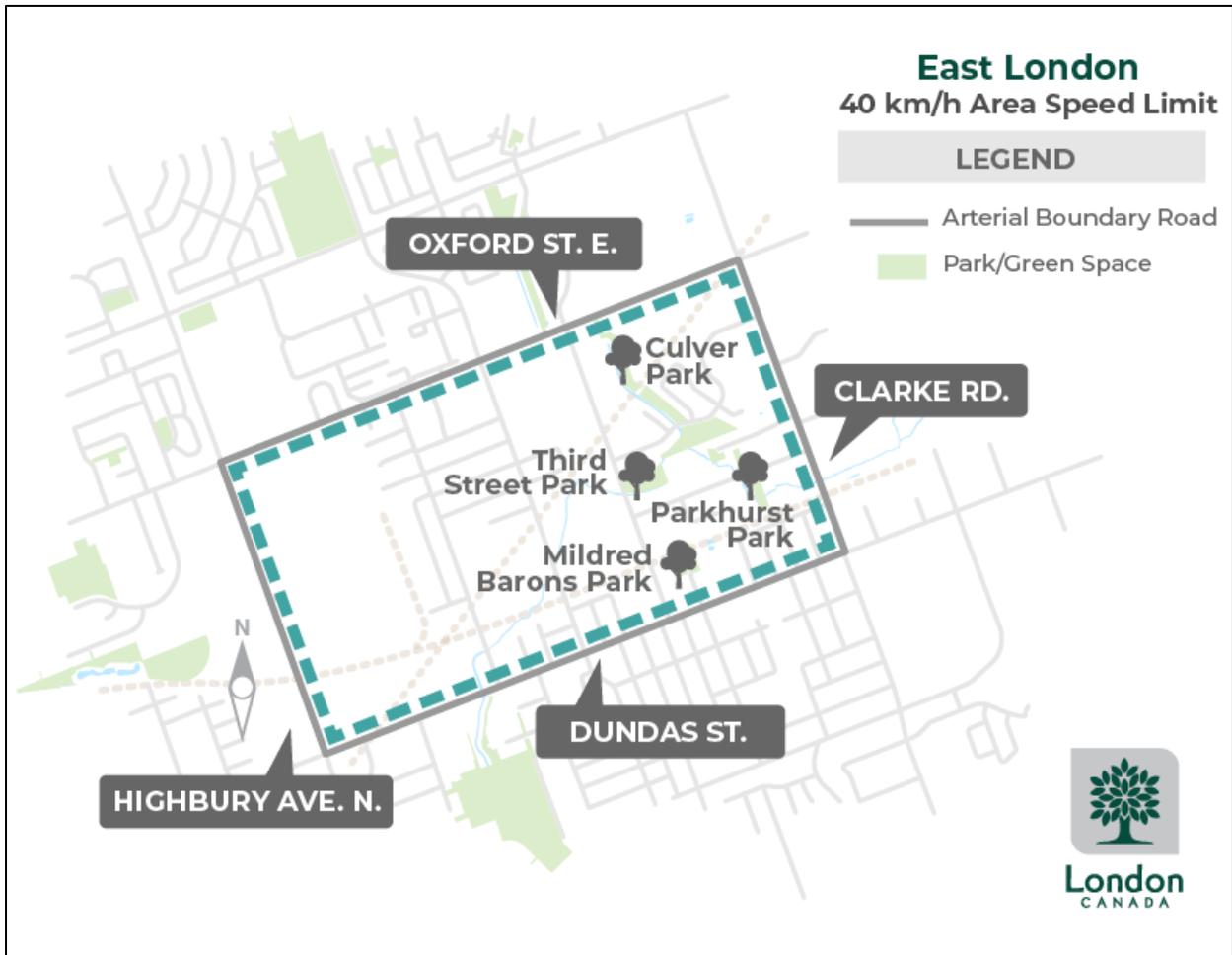
PASSED in Open Council on August 10, 2021

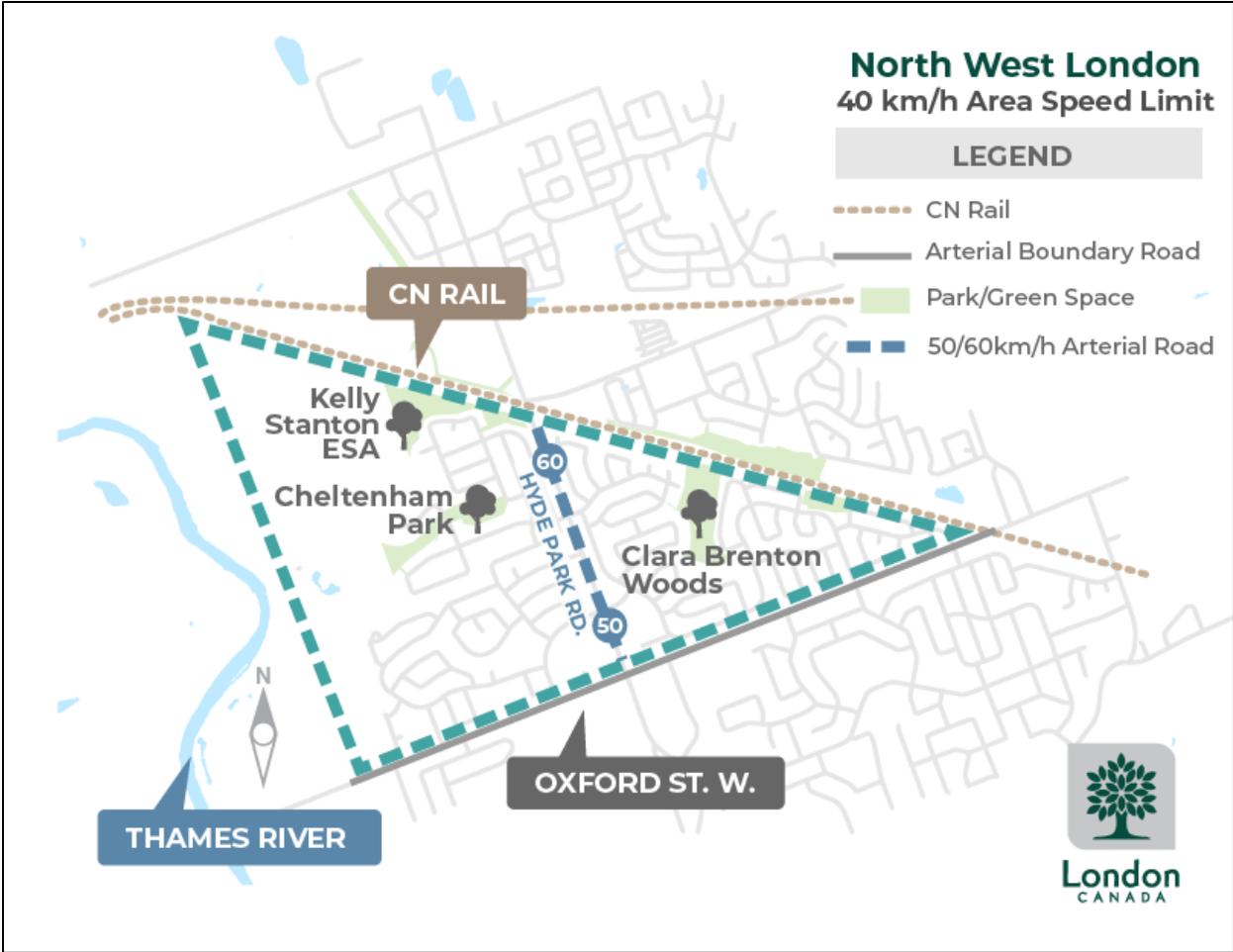
Ed Holder
Mayor

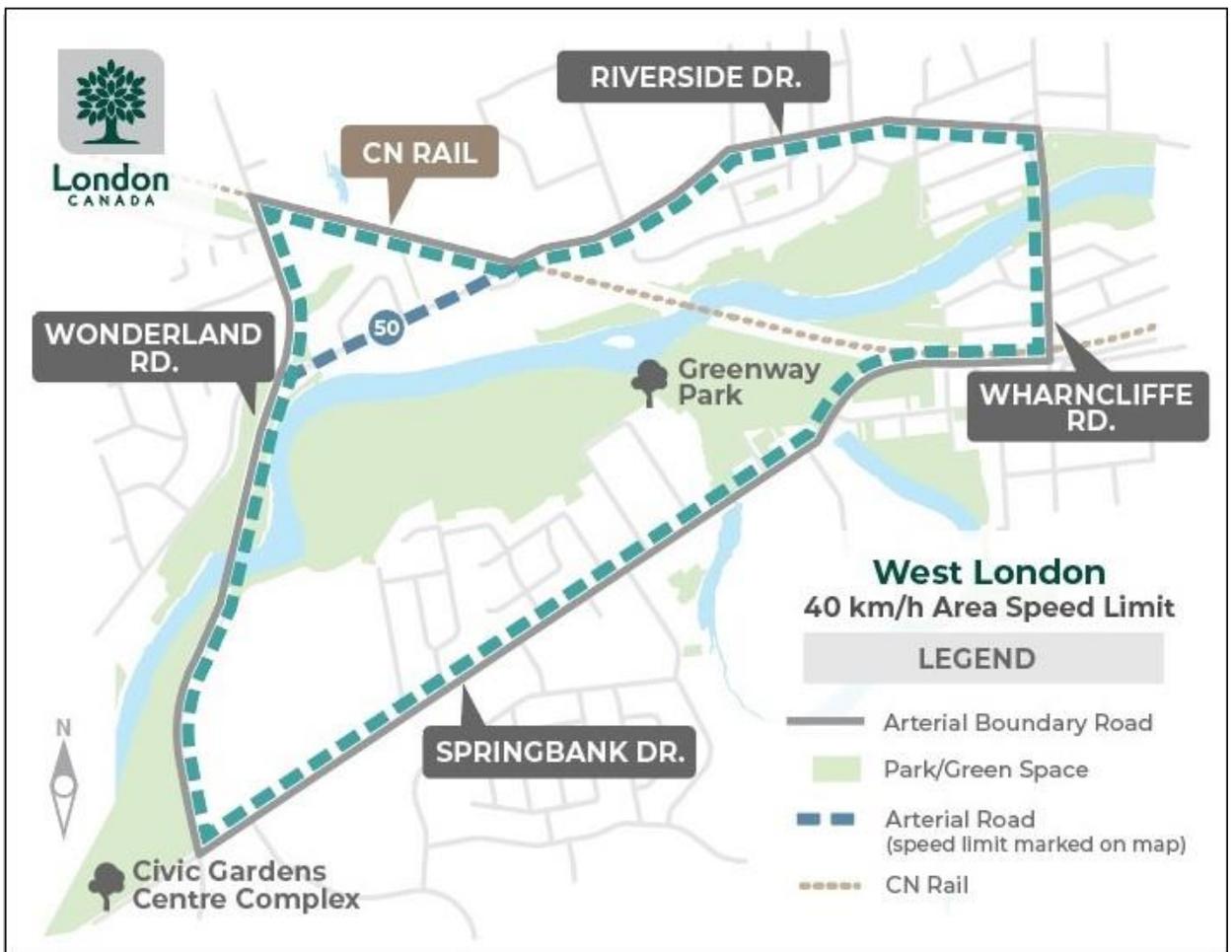
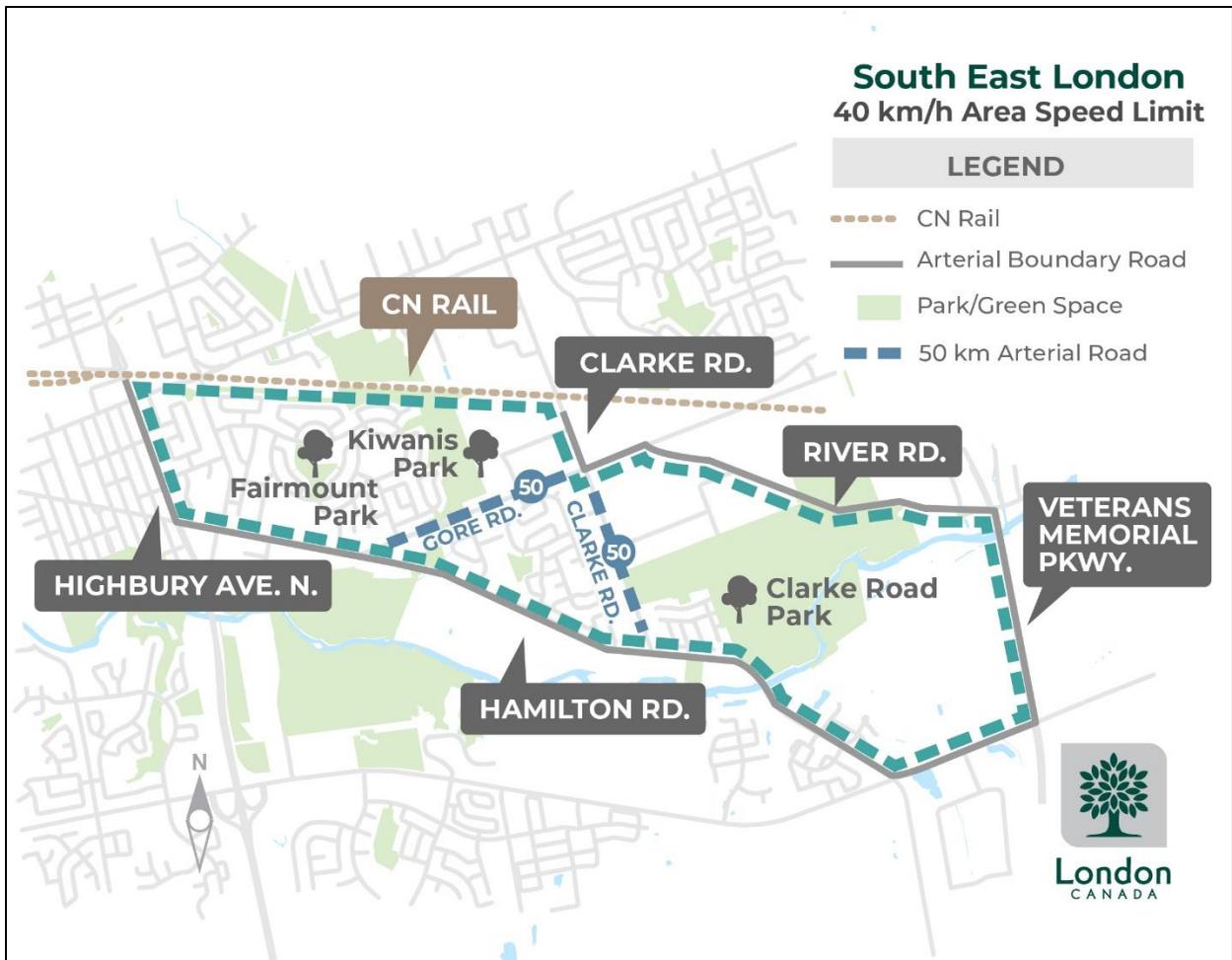
Catharine Saunders
City Clerk

First Reading – August 10,2021
Second Reading – August 10,2021
Third Reading – August 10,2021

APPENDIX D: Area Speed Limit Zones







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: Greenway Organic Rankine Cycle Project – Connection
Agreement with London Hydro

Date: July 27, 2021

Recommendation

That, on the recommendation of the Deputy City Manager, Environment & Infrastructure, the following actions be taken with respect to the execution of a Connection Agreement with London Hydro for power generation at the Greenway Wastewater Treatment Plant:

- a) The Connection Agreement provided by London Hydro for a Mid-Sized Embedded Generation Facility, **BE ACCEPTED**; and
- b) the Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations.

Executive Summary

Purpose

This report seeks the approval of Council to enter into an agreement with London Hydro for the connection of a new generating facility to the electrical distribution grid.

Context

The Organic Rankine Cycle system installed at Greenway Wastewater Treatment Plant constitutes a mid-sized embedded generation facility that requires a Connection Agreement to be executed as a condition of connection to the London Hydro local distribution grid.

Linkage to the Corporate Strategic Plan

This project supports the 2019-2023 Strategic Plan through the following: Building a Sustainable City, Build infrastructure to support future development and protect the environment.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

Civic Works Committee, May 14, 2019, Item 2.7 – Contract Award: Tender T19-36: Greenway Organic Rankine Cycle Engine Installation.

Civic Works Committee, May 14, 2019, Item 2.10 – Greenway Wastewater Treatment Plant Organic Rankine Cycle Equipment Installation Budget Allocation.

Civic Works Committee, July 17, 2018, Item 2.6 – Clean Water and Wastewater Fund Project Budget Adjustments.

Civic Works Committee, June 7, 2017, Item 11 – Clean Water and Wastewater Fund – Purchase of Major Organic Rankine Cycle System Components for Power Generations at the Greenway Wastewater Treatment Plant.

Civic Works Committee, November 29, 2016, Item 11 – Appointment of Consultants – Clean Water and Wastewater Fund Projects.

Civic Works Committee, October 4, 2016, Item 8 – Infrastructure Canada Phase 1 Project Requests – Clean Water and Wastewater Fund Projects.

Civic Works Committee, July 18, 2016, Item 5 – Electricity Generation from Waste Heat at the Greenway Wastewater Treatment Plant-Update.

Civic Works Committee, September 9, 2013, Item 11 – Biosolids Disposal Assessment.

Civic Works Committee, February 25, 2013 – Timeline for major Environmental and Engineering Reports.

Civic Works Committee, May 14, 2012 – Renewable Energy Production from the Greenway Fluidized Bed Incinerator.

2.0 Discussion and Considerations

2.1 Organic Rankine Cycle Project History

The Organic Rankine Cycle installation at Greenway Wastewater Treatment Plant is currently being commissioned and is expected to commence producing power from waste heat within a month. The completion of this project represents the culmination of nine years of study, procurement, design and construction. Over this time, almost \$18 million was invested by the City, leveraging Federal and Provincial funding through the Canadian Water and Wastewater Fund and the Federal Gas Tax.

It is expected that the power generated by the Organic Rankine Cycle system will be capable of offsetting a quarter of the power consumption at Greenway, the City's largest wastewater treatment plant, saving a projected \$600,000 per year in electricity costs. The energy consumption reduction achieved through this project alone accounts for over 12% of the City's Corporate Energy Conservation and Demand Management Plan's overall target.

2.2 Connection Agreement with London Hydro

Despite the fact that all power produced by the Organic Rankine Cycle generator will be consumed at Greenway, the operation of an electricity generating system in parallel with the local distribution grid requires several studies to be completed, as well as the execution of an agreement with London Hydro.

This agreement, called the "London Hydro Form of Connection Agreement for a Small or a Mid-Sized Embedded Generation Facility", lays out several aspects of the

arrangement between the City and London Hydro, including design and operation of the facility, liabilities, insurance, access to site and dispute resolution terms, among other terms. Staff from Legal, Risk Management and Environment and Infrastructure Divisions have reviewed the agreement as provided by London Hydro and have no concerns with its terms. It is attached as Appendix 'A' to this report.

3.0 Financial Impact/Considerations

There are no financial considerations to this action.

Conclusion

The construction of the Organic Rankine Cycle power generation system at Greenway Wastewater Treatment Plant is the result of significant efforts on the part of City staff, consultants and contractors. It is a major achievement that contributes in a substantial way to corporate goals for energy reduction and greenhouse gas reduction. By executing the Connection Agreement with London Hydro, the City takes the final step required to implement these achievements. It is recommended that Council approve the execution of the Connection Agreement with London Hydro.

Prepared by: Kirby Oudekerk, P.Eng., Division Manager, Wastewater Treatment Operations

Submitted by: Scott Mathers, MPA, P. Eng., Director, Water, Wastewater and Storm Water

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

CC: Aynsley Anderson, Legal Services
Jason Wills, Risk Management



300 Dufferin Avenue
P.O. Box 5035
London, ON
N6A 4L9

June 9, 2021

William A. Milroy, P.Eng.
London Hydro Inc.
111 Horton Street
London, ON N6A 4H6

Re: Connection Agreement for Greenway WWTP Organic Rankine Cycle System

Mr. Milroy,

In response to the requirement that the City enter into a Connection Agreement for a Mid-Sized Embedded Generation Facility for the Greenway Wastewater Treatment Plant Organic Rankine Cycle system, please be advised that only the Mayor and City Clerk have the authority to bind the corporation. However, timelines for the project do not allow that process to be completed prior to the expected commissioning date of June 15, 2021. As an interim measure, we understand that London Hydro is willing to permit the short-term operation of the generator upon receipt of an acceptance of the terms of the Connection Agreement by civic administration on the understanding that the agreement will be submitted for Council approval during the next committee/Council cycle.

To that end, please take this letter as confirmation that the civic administration of the City of London intends to present a report to Council, through the Civic Works Committee at its scheduled meeting on July 27, 2021, recommending that the Mayor and Clerk be delegated the authority to execute the Connection Agreement and bind the Corporation. The final approval, if granted, would be enacted by resolution of City Council as part of their scheduled meeting on August 10, 2021. It is understood that if final approval is not granted the generator will be required to cease operation.

As requested, this letter also confirms that the City carries the requisite \$2,000,000 commercial general liability insurance, proof of which is attached hereto.

Sincerely,

Scott Mathers, MPA, P.Eng
Director,
Water, Wastewater, and Stormwater
City of London



LONDON HYDRO FORM OF CONNECTION AGREEMENT
FOR A SMALL OR A MID-SIZED EMBEDDED GENERATION FACILITY

This Connection Agreement is made this 14 day of June, 2021.

BETWEEN

London Hydro Inc. ("London Hydro") 111 Horton Street, London (Address)

AND

Corporation of City of London (the "Generator") 300 Dufferin Ave (Address)

(each a "Party" and collectively the "Parties")

RECITALS

WHEREAS London Hydro is the owner of the distribution system serving the service area as described in its electricity distribution license number RP-2002-0220/EB-2002-0557 (the "License") issued by the Ontario Energy Board (the "Board") (the "London Hydro's distribution system").

AND WHEREAS the Generator owns or operates a 965 kW embedded Biomass generation facility that is located at 109 Greenside Ave (Address)
(e.g. Solar, Wind, Biomass)

in the London Hydro licensed service area (the "Facility").

AND WHEREAS the Generator has connected or wishes to connect its Facility to the London Hydro distribution system and London Hydro has connected or has agreed to connect the Facility to the London Hydro distribution system.

AND WHEREAS London Hydro has previously reviewed and accepted the Generator's application to connect and related materials that were submitted to London Hydro in accordance with the process set out in the Distribution System Code (the "Code") (all together, the "Application") and London Hydro and the Generator have signed a connection cost agreement (both of which are attached to this Agreement as Schedule A).

AND WHEREAS the Generator has requested a connection in accordance with its License and the Code, London Hydro has agreed to offer, and the Generator has agreed to accept, distribution service in relation to the Facility.

NOW THEREFORE in consideration of the foregoing, and of the mutual covenants, agreements, terms and conditions herein contained, the Parties, intending to be legally bound, hereby agree as follows:

1. Definitions and Schedules

1.1 Words and phrases contained in this Agreement (whether capitalized or not) that are not defined in this Agreement have the meanings given to them in the *Electricity Act, 1998*, the *Ontario Energy Board Act, 1998*, any regulations made under either of those *Acts*, or the Code.

1.2 The following schedules form part of this Agreement:

Schedule A – Application and Connection Cost Agreement (recitals)

Schedule B – Single Line Diagram, Connection Point, Location of Facilities (section 2.3)

Schedule C – List of Other Contracts (section 3.4)

Schedule D – Technical and Operating Requirements (section 4.1(d))

Schedule E – Billing and Settlement Procedures (section 5.3)

Schedule F – Contacts for Notice (section 12.1)

Schedule G – Dispute Resolution (section 16.1)

Schedule H – Provisions Applicable if Facility Financed by a Lender (sections 19.3, 20.3 and 21.1)

Where a schedule is to be completed by the Parties, the Parties may not include in that schedule a provision that would be contrary to or inconsistent with the Code or the remainder of this Agreement.

2. Type of Facility

2.1 The Facility has a name-plate rated capacity of

more than 10 kW and:

(a) up to and including 500 kW, if the Facility is or will be connected to a less than 15 kV line; or

(b) up to and including 1 MW, if the Facility is or will be connected to a 15 kV or greater line

(in which case the Facility is a “Small Embedded Generation Facility”).

10 MW or less and:

(a) more than 500 kW, if the Facility is or will be connected to a less than 15 kV line; or

- (b) more than 1 MW, if the Facility is or will be connected to a 15 kV or greater line

(in which case the Facility is a “Mid-sized Embedded Generation Facility”)

2.2 The Facility is or will be connected:

- directly to the London Hydro distribution system
- on the load customer side of a connection point to the London Hydro distribution system.
 - the load customer is the same as the Generator
 - the load customer is: _____

2.3 Schedule B sets out the following:

- (a) a single line diagram of the Facility;
- (b) a list of the facilities of one Party that are on the property of the other Party; and
- (c) a diagram of the metering installations applicable to the Facility.

2.4 The Generator:

- is an “Embedded Retail Generator” and intends to:
 - sell output from the Facility to the Independent Electricity System Operator and has entered into an agreement with the Independent Electricity System Operator for that purpose; or
 - deliver and / or sell output from the Facility to London Hydro
- does not intend to sell any of the output of the Facility to the Independent Electricity System Operator or London Hydro

3. Incorporation of Code and Application of Conditions of Service and Other Contracts

3.1 The Code, as it may be amended from time to time, is hereby incorporated in its entirety by reference into, and forms part of this Agreement. Unless the context otherwise requires, all references to “this Agreement” include a reference to the Code.

3.2 London Hydro hereby agrees to be bound by and at all times to comply with the Code, and the Generator acknowledges and agrees that London Hydro is bound at all times to comply with the Code in addition to complying with the provisions of this Agreement.

3.3 In addition to this Agreement, the relationship between London Hydro and the

Generator will be governed by London Hydro's Conditions of Service that are in effect at the relevant time. In the event of a conflict or an inconsistency between a provision of this Agreement and a provision of London Hydro's Conditions of Service, the provision of this Agreement shall govern.

- 3.4 London Hydro may require or may have already required the Generator to enter into one or more of the other contracts listed in Schedule C. In the event of a conflict or an inconsistency between a provision of the Code or this Agreement and a provision of such other contract, the provision of the Code or this Agreement shall govern.

4. Facility Standards

- 4.1 The Generator shall ensure that the Facility:

- (a) meets all applicable requirements of the Electrical Safety Authority ("ESA");
- (b) conforms to all applicable industry standards including, but not limited to, those of the Canadian Standards Association ("CSA"), the Institute of Electrical and Electronic Engineers ("IEEE"), the American National Standards Institute ("ANSI") and the International Electrotechnical Commission;
- (c) is installed, constructed, operated and maintained in accordance with this Agreement, London Hydro's offer to connect, the requirements of the ESA, the connection cost agreement, all applicable reliability standards and good utility practice; and
- (d) meets the technical and operating requirements set out in Schedule D. These requirements shall not exceed any technical or operating requirements set out in the Code unless the Generator agrees.

5. Charges, Settlement and Billing

- 5.1 The Generator shall pay London Hydro such charges as may be approved by the Board in relation to the connection of, and the provision of distribution service to, the Facility.

- 5.2 The Generator agrees to the following in relation to settlement for the output of the Facility:

- if the Generator is not an Embedded Retail Generator (see section 2.4)
London Hydro will not pay the Generator for any excess generation that results in a net delivery to London Hydro between meter reads and there will be no carryover of excess generation from one billing period to the next, unless the Generator is at the relevant time a *net metered* generator
- if the Generator is an Embedded Retail Generator (see section 2.4)

London Hydro will settle all applicable payments and charges in accordance with the Retail Settlement Code

- 5.3. Billing and settlement activities will be conducted in accordance with the procedures set out in Schedule E.

6. Representations, Warranties and Liabilities

- 6.1 The Generator represents and warrants to London Hydro as follows, and acknowledges that London Hydro is relying on such representations and warranties without independent inquiry in entering into this Agreement:

- (a) the Facility is fully and accurately described in the Application;
- (b) all information in the Application is true and correct;
- (c) the Facility is in compliance with all applicable technical requirements and laws;
- (d) the Generator has been given warranty information and operation manuals for the Facility;
- (e) the Generator has been adequately instructed in the operation and maintenance of the Facility and the Generator has developed and implemented an operation and maintenance plan based on those instructions;
- (f) if the Generator is a corporation or other form of business entity, the Generator is duly incorporated, formed or registered (as applicable) under the laws of its jurisdiction of incorporation, formation or registration (as applicable);
- (g) the Generator has all necessary power, authority and capacity to enter into this Agreement and to perform its obligations under this Agreement;
- (h) this Agreement constitutes a legal and binding obligation on the Generator, enforceable against the Generator in accordance with its terms;
- (i) the Generator holds all permits, licenses and other authorizations that may be necessary to enable it to own and operate the Facility; and
- (j) any individual signing this Agreement on behalf of the Generator has been duly authorized by the Generator to sign this Agreement and has the full power and authority to bind the Generator.

- 6.2 London Hydro represents and warrants to the Generator as follows, and acknowledges that the Generator is relying on such representations and warranties without independent inquiry in entering into this Agreement:

- (a) London Hydro is duly incorporated under the laws of Ontario;
- (b) London Hydro has all necessary power, authority and capacity to enter into this Agreement and to perform its obligations under this Agreement;
- (c) this Agreement constitutes a legal and binding obligation on London

- Hydro, enforceable against London Hydro in accordance with its terms;
and
- (d) any individual signing this Agreement on behalf of London Hydro has been duly authorized by London Hydro to sign this Agreement and has the full power and authority to bind London Hydro.

7. Disconnection Device at the Point of Connection

- 7.1 The Generator shall furnish and install a disconnection switch at the point of connection for the Facility that opens, with a visual break, all ungrounded poles of the connection circuit. The disconnection switch at the point of connection shall be rated for the voltage and fault current requirements of the Facility, and shall meet all applicable CSA standards, ESA requirements, and all other applicable laws. The switch enclosure, if applicable, shall be properly grounded.
- 7.2 The disconnection switch at the point of connection shall be accessible at all times, located for ease of access to the London Hydro personnel, and shall be capable of being locked in the open position. The Generator shall follow London Hydro's procedures for switching, clearance, tagging, and locking.

8. Modifications to the Facility

- 8.1 The Generator shall not modify its connection assets or the Facility except in accordance with this section. Where the modification will not increase the maximum generation electrical output of the Facility, the Generator shall give London Hydro no less than 15 working day's notice prior to the date on which the modification will be completed.
- 8.2 Where the modification will increase the maximum generator electrical output of the Facility, the Generator shall submit a new application for connection to London Hydro who shall process that application for connection in accordance with the Code. The Generator shall not commence such modification until that process has been completed.

9. Insurance

- 9.1 Throughout the term of this Agreement, the Generator shall carry commercial general liability insurance for third party bodily injury, personal injury, and property damage in an amount as follows:
- if the Facility is a Small Embedded Generation Facility (see section 2.1)
not less than \$1,000,000 per occurrence and in the annual aggregate
 - if the Facility is a Mid-sized Embedded Generation Facility (see section 2.1) not less than \$2,000,000 per occurrence and in the annual aggregate

Prior to execution of this Agreement, the Generator shall provide London Hydro with a valid certificate of insurance. The Generator shall provide London Hydro with prompt notice of any cancellation of the Generator's insurance by the insurer.

10. Liability and Force Majeure

- 10.1 The liability provisions of section 2.2 of the Code apply to this Agreement and are hereby incorporated by reference into, and form part of, this Agreement.
- 10.2 A Party shall have a duty to mitigate any losses relating to any claim for indemnification from the other Party that may be made in relation to that other Party. Nothing in this section shall require the mitigating Party to mitigate or alleviate the effects of any strike, lockout, restrictive work practice or other labour dispute.
- 10.3 A Party shall give prompt notice to the other Party of any claim with respect to which indemnification is being or may be sought under this Agreement.
- 10.4 The force majeure provisions of section 2.3 of the Code apply to this Agreement and are hereby incorporated by reference into, and form part of, this Agreement.

11. Facility Commissioning and Testing

- 11.1 The Generator shall give London Hydro at least 15 days advance written notice of the date(s) and time(s) on which the Facility will be commissioned and tested prior to connection. The Generator shall give London Hydro the same notice in relation to the commissioning and testing of any material modification to the Generator's connection assets or Facility that occurs after connection.
- 11.2 London Hydro shall have the right to witness the commissioning and testing activities referred to in section 11.1.

12. Notice

- 12.1 Any notice, demand, consent, request or other communication required or permitted to be given or made under or in relation to this Agreement shall be given or made: by courier or other personal form of delivery; by registered mail; by facsimile; or by electronic mail. Notices shall be addressed to the applicable representative of the Party identified in Schedule F.
- 12.2 A notice, demand, consent, request or other communication referred to in section 12.1 shall be deemed to have been made as follows:
 - (a) where given or made by courier or other form of personal delivery, on

- the date of receipt;
- (b) where given or made by registered mail, on the date of receipt;
- (c) where given or made by facsimile, on the day and at the time of transmission as indicated on the sender's facsimile transmission report; and
- (d) where given or made by electronic mail, on the day and at the time when the notice, demand, consent, request or other communication is recorded by the sender's electronic communications system as having been received at the electronic mail destination.

13. Access to Facility

- 13.1 Each Party shall ensure that its facilities are secured at all times.
- 13.2 The Generator shall permit and, if the land on which the Facility is located is not owned by Generator, cause such landowner to permit London Hydro's employees and agents to enter the property on which the Facility is located at any reasonable time. Such access shall be provided for the purposes of inspecting and/or testing the Facility as and when permitted by this Agreement, the Code or the London Hydro Conditions of Service or as required to ensure the continued safe and satisfactory operation of the Facility, to ensure the accuracy of London Hydro's meters, to establish work protection, or to perform work.
- 13.3 Any inspecting and/or testing referred to in section 13.2 shall not relieve the Generator from its obligation to operate and maintain the Facility and any related equipment owned by the Generator in a safe and satisfactory operating condition and in accordance with this Agreement.
- 13.4 London Hydro shall have the right to witness any testing done by the Generator of the Facility and, to that end, the Generator shall provide London Hydro with at least fifteen working days advance notice of the testing.
- 13.5 Notwithstanding section 10.1, where London Hydro causes damage to the Generator's property as part of this access, London Hydro shall pay to the Generator the Generator's reasonable costs of repairing such property or, if such property cannot be repaired, replacing such property.
- 13.6 Notwithstanding section 10.1, if the Generator has been given access to London Hydro's property, and if the Generator causes damage to London Hydro's property as part of that access, the Generator shall pay to London Hydro reasonable costs of repairing such property or, if such property cannot be repaired, replacing such property.

14. Disconnection of Facility for System Operations

- 14.1 If the Generator requests it, the Distributor will provide the Generator with reasonable notice of any planned equipment outages in the Distributor's distribution system that occur on or after the date of the Generator's request which will impact the Facility or its connection.
- 14.2 The Distributor will make reasonable efforts to ensure that the outages referred to in section 14.1 will be of minimal duration and cause minimal inconvenience to the Generator.
- 14.3 In connection with any planned equipment outage, either Party may disconnect or isolate, or require the disconnection or isolation of, its Facility or distribution system (as applicable) from the other Party's Facility or distribution system (as applicable) so that the employees, contractors or agents of either Party may construct, maintain, repair, replace, remove, investigate, inspect or operate its own Facility or distribution system (as applicable) in accordance with the terms of this Agreement and good utility practice.
- 14.4 Where practical, the Generator shall notify London Hydro prior to temporarily isolating or disconnecting the Facility from the London Hydro distribution system.

15. Disconnection of Facility for Other Reasons

- 15.1 The Generator shall discontinue operation of the Facility and London Hydro may isolate or disconnect the Facility from the London Hydro distribution system, upon any of the following:
 - (a) termination of this Agreement in accordance with section 19;
 - (b) if the Generator's connection assets or the Facility are modified by the Generator in a manner contrary to section 8.1;
 - (c) during an emergency or where necessary to prevent or minimize the effects of an emergency;
 - (d) in accordance with section 31, 31.1 or 40(5) of the *Electricity Act, 1998*, other applicable law, the Code, the London Hydro License or the London Hydro Conditions of Service; or
 - (e) where required to comply with a decision or order of an arbitrator or court made or given under Schedule G.
- 15.2 In the event of disconnection under section 15.1(b), the Facility shall remain isolated or disconnected from the London Hydro distribution system until the connection process referred to in section 8.1 has been completed.
- 15.3 In the event of disconnection under section 15.1(c), London Hydro shall reconnect, or permit the reconnection of the Facility to London Hydro's distribution system when it is reasonably satisfied that the emergency has ceased and that all other requirements of this Agreement are met.

- 15.4 In the event of disconnection under section 15.1(d) or 15.1(e), London Hydro shall reconnect, or permit the reconnection of the Facility to London Hydro's distribution system when London Hydro is reasonably satisfied that the reason for the disconnection no longer exists, the Generator agrees to pay all Board-approved reconnection costs charged by London Hydro, and London Hydro is reasonably satisfied of the following, where applicable:
- (a) the Generator has taken all necessary steps to prevent the circumstances that caused the disconnection from recurring and has delivered binding undertakings to London Hydro that such circumstances shall not recur; and
 - (b) any decision or order of a court or arbitrator made or given under Schedule G that requires a Party to take action to ensure that such circumstances shall not recur has been implemented and/or assurances have been given to the satisfaction of the affected Party that such decision or order will be implemented.
- 15.5 Where the Facility has been isolated or disconnected, each Party shall be entitled to decommission and remove its assets associated with the connection. Each Party shall, for that purpose, ensure that the other Party has all necessary access to its site at all reasonable times.
- 15.6 The Generator shall continue to pay for distribution services provided up to the time of isolation or disconnection of its Facility.
- 15.7 The Generator shall pay all reasonable costs including, but not limited to, the costs of removing any of the London Hydro equipment from the Generator's site, that are directly attributable to the isolation or disconnection of the Facility and, where applicable, the subsequent decommissioning of the Facility. London Hydro shall not require the removal of the protection and control wiring on the Generator's site.
- 15.8 While the Facility is isolated or disconnected, London Hydro shall not be required to convey electricity to or from the Facility.

16. Dispute Resolution

- 16.1 Any dispute between the Generator and London Hydro arising under, or in relation to this Agreement will be resolved in accordance with Schedule G. The Parties shall comply with the procedure set out in Schedule G before taking any civil or other proceeding in relation to the dispute, provided that nothing shall prevent a Party from seeking urgent or interlocutory relief from a court of competent jurisdiction in the Province of Ontario in relation to any dispute arising under or in relation to this Agreement.

17. Amendments

- 17.1. The Parties may not amend this Agreement without leave of the Board except where and to the extent permitted by this Agreement.
- 17.2. The Parties may by mutual agreement amend this Agreement to reflect changes that may from time to time be made to the Code during the term of this Agreement.
- 17.3. The Parties may by mutual agreement amend any portion of a schedule that was originally to be completed by the Parties.
- 17.4. No amendment made under section 17.2 or 17.3 shall be contrary to or inconsistent with the Code or the remainder of this Agreement.
- 17.5. The Parties shall amend this Agreement in such manner as may be required by the Board.
- 17.6. Any amendment to this Agreement shall be made in writing and duly executed by both Parties.

18. Waiver

- 18.1. A waiver of any default, breach or non-compliance under this Agreement is not effective unless in writing and signed by the Party to be bound by the waiver. The waiver by a Party of any default, breach or non-compliance under this Agreement shall not operate as a waiver of that Party's rights under this Agreement in respect of any continuing or subsequent default, breach or non-compliance, whether of the same or any other nature.

19. Term of Agreement and Termination

- 19.1. This Agreement shall become effective upon execution by the Parties, and shall continue in effect until terminated in accordance with section 19.2 or 19.3.
- 19.2. The Generator may, if it is not then in default under this Agreement, terminate this Agreement at any time by giving London Hydro thirty days prior written notice setting out the termination date.
- 19.3. Except as set out in Schedule H, London Hydro may terminate this Agreement upon any material breach of this Agreement by the Generator (a "Default"), if the Generator fails to remedy the Default within the applicable cure period referred to in section 19.4 after receipt of written notice of the Default from London Hydro.
- 19.4. The Generator shall cure a Default within the applicable cure period specified

in the Code or the London Hydro Conditions of Service. If no such cure period is specified in relation to a given Default, the cure period shall be sixty working days.

- 19.5 Termination of this Agreement for any reason shall not affect:
- (a) the liabilities of either Party that were incurred or arose under this Agreement prior to the time of termination; or
 - (b) the provisions that expressly apply in relation to disconnection of the Generator's facilities following termination of this Agreement.
- 19.6 Termination of this Agreement for any reason shall be without prejudice to the right of the terminating Party to pursue all legal and equitable remedies that may be available to it including, but not limited to, injunctive relief.
- 19.7 The rights and remedies set out in this Agreement are not intended to be exclusive but rather are cumulative and are in addition to any other right or remedy otherwise available to a Party at law or in equity. Nothing in this section 19.7 shall be interpreted as affecting the limitations of liability arising from section 10.1 or the obligation of a Party to comply with section 16 while this Agreement is in force.
- 19.8 Sections 19.5 to 19.7 shall survive termination of this Agreement.

20. Exchange and Confidentiality of Information

- 20.1 Confidential information in respect of a Party means (i) information disclosed by that Party to the other Party under this Agreement that is in its nature confidential, proprietary or commercially sensitive and (ii) information derived from the information referred to in (i), but excludes the following:
- (a) information that is in the public domain; or
 - (b) information that is, at the time of the disclosure, in the possession of the receiving Party, provided that it was lawfully obtained from a person under no obligation of confidence in relation to the information.
- 20.2 Subject to section 20.3, each Party shall treat all confidential information disclosed to it by the other Party as confidential and shall not, without the written consent of that other Party:
- (a) disclose that confidential information to any other person; or
 - (b) use that confidential information for any purpose other than the purpose for which it was disclosed or another applicable purpose contemplated in this Agreement.

Where a Party, with the written consent of the other Party, discloses confidential information of that other Party to another person, the Party shall

take such steps as may be required to ensure that the other person complies with the confidentiality provisions of this Agreement.

- 20.3 Nothing in section 20.2 shall prevent the disclosure of confidential information:
- (a) where required or permitted under this Agreement, the Code, the Market Rules or the London Hydro License;
 - (b) where required by law or regulatory requirements;
 - (c) where required by order of a government, government agency, regulatory body or regulatory agency having jurisdiction;
 - (d) if required in connection with legal proceedings, arbitration or any expert determination relating to the subject matter of this Agreement, or for the purpose of advising a Party in relation thereto;
 - (e) as may be required to enable London Hydro to fulfill its obligations to any reliability organization; or
 - (f) as may be required during an emergency or to prevent or minimize the effects of an emergency.
- 20.4 Notwithstanding section 10.1, a Party that breaches section 20.2 shall be liable to the other Party for any and all losses of the other Party arising out of such breach.
- 20.5 The Parties agree that the exchange of information, including, but not limited to, confidential information, under this Agreement is necessary for maintaining the reliable operation of London Hydro's distribution system. The Parties further agree that all information, including, but not limited to, confidential information, exchanged between them shall be prepared, given and used in good faith and shall be provided in a timely and cooperative manner.
- 20.6 Each Party shall provide the other with such information as the other may reasonably require to enable it to perform its obligations under this Agreement.
- 20.7 Each Party shall, as soon as practicable, notify the other Party upon becoming aware of a material change or error in any information previously disclosed to the other Party under this Agreement and, in the case of the Generator, in any information contained in its Application. The Party shall provide updated or corrected information as required to ensure that information provided to the other Party is up to date and correct.

21. Assignment, Successors and Assigns

- 21.1 Except as set out in Schedule H, the Generator shall not assign its rights or obligations under this Agreement in whole or in part without the prior written consent of London Hydro, which consent shall not be unreasonably withheld or unduly delayed. London Hydro may withhold its consent to any proposed assignment until the proposed assignee assumes, in writing, all of the

Generator's obligations contained in this Agreement.

- 21.2 London Hydro shall have the right to assign this Agreement in whole upon written notification to the Generator.
- 21.3 This Agreement shall be binding upon and enure to the benefit of the Parties and their respective successors and permitted assigns.

22. Governing Law

- 22.1 This Agreement shall be governed by the laws of the Province of Ontario and the federal laws of Canada applicable therein.

23. Entire Agreement

- 23.1 Except as expressly provided herein, this Agreement constitutes the entire agreement between the Parties with respect to the subject-matter hereof and supersedes all prior oral or written representations and agreements of any kind whatsoever with respect to the subject-matter hereof.

IN WITNESS WHEREOF, the Parties hereto, intending to be legally bound, have caused this Agreement to be executed by their duly authorized representatives.

PER: _____

Date (dd/mm/yyyy)

~~I have authority to bind the corporation.~~

LONDON HYDRO INC.

PER: _____

William A. Milroy, P. Eng., VP Engineering and Operations
I have authority to bind the corporation.

Date (dd/mm/yyyy)

I acknowledge that this agreement will be recommended by the Civic Administration and submitted to Council during the next committee/Council cycle.



Scott Mathers

I acknowledge that the attached Connection Agreement details the agreed to terms, which will be followed, for the Operation of the Organic Rankine Cycle generator located at 109 Greenside Ave. It is my understanding that the entirety of this Agreement will be recommended for submission and approval by Council during the next committee/Council cycle.

Greg Sheil, P.Eng.
Manager of Standards & Generation
London Hydro

SCHEDULE A

Application and Connection Cost Agreement (recitals)

See the attached CIA Application, CIA Summary Report, Offer to Connect Letter and ESA Certificate.

Attach the Connection Impact Assessment Form filled by the Generator, and any other relevant information with respect to the Generator's application to connect.



Connection Impact Assessment Application Form

This Application Form is for Generators applying for a Connection Impact Assessment (CIA). In certain circumstances, London Hydro may require additional information to conduct the Impact Assessment. Should this be the case the Generator will be duly advised.

This Application Form is required for:

- **New** Generators applying for Connection Impact Assessment (“CIA”)
- **New** Generators applying for revision to their original Connection Impact Assessment (“CIA”)
- **Existing** Generators to verify information related to current connection to the London Hydro system. It is part of the overall Distribution Connection Agreement.

NOTES:

1. Applicants and generators are cautioned NOT to incur major expenses until London Hydro has completed a Connection Impact Assessment (CIA) study and approval to connect the proposed generation is granted.
2. All fields below are mandatory, except where noted. Incomplete applications may be returned by London Hydro Inc. (“London Hydro”).
3. All technical submissions (Connection Impact Assessment, single line diagrams, etc.) must be signed and sealed by a licensed Ontario Professional Engineer (P.Eng.).

Date: 11/12/2018 (dd / mm / yyyy)

Contact Person Name: ROBERT TREMBLAY
Signature:

Application Type: New CIA Application CIA Revision/Rework

LDC Name: LONDON HYDRO INC.
 Contact Person: Dane Kirilovic
 Mailing Address: 111 Horton Street, P.O. Box 2700
London, ON, N6A 4H6
 Telephone: 519-661-5800 ext. 5723
 Fax: 519-661-5275
 E-mail: generation@londonhydro.com



GREENWAY WASTEWATER TREATMENT PLANT ORC ENERGY RECOVERY SYSTEM

1. Original CIA Project ID# (if applicable): _____ Project Name: _____
2. Project Type: FIT Net Metering Load Displacement
3. Independent Electricity System Operator (IESO) Feed-In Tariff (FIT) #: N/A
4. Project Dates: Proposed Start of Construction: 20/05/2019 (dd/mm/yyyy) (estimated dates)
Proposed In-Service: 25/05/2020 (dd/mm/yyyy)
5. Project Size: Nameplate Capacity 960 kW
6. Project Location: Municipal Address 109 GREENSIDE AVE LONDON, ON N6J 2X5

7. Project Information:

Choose a Single Point of Contact: Owner Consultant

	Generator (Mandatory)	Owner (Mandatory)	Consultant (Optional)
Company/Person	CORPORATION OF THE CITY OF LONDON	CORPORATION OF THE CITY OF LONDON	GHD LTD
Contact Person	MARK ELLIOTT	MARK ELLIOTT	ROBERT TREMBLAY
Mailing Address Line 1	109 GREENSIDE AVE	109 GREENSIDE AVE	455 Phillip St
Mailing Address Line 2	LONDON, ON N6J 2X5	LONDON, ON N6J 2X5	Waterloo, ON N2L 3X2
Telephone	519-963-1366	519-963-1366	519-340-3881
Cell	226-927-5287	226-927-5287	519-240-2861
Fax	519-661-0199	519-661-0199	
E-mail	melliott@london.ca	melliott@london.ca	robert.tremblay@ghd.com

Preferred method of communication with London Hydro: E-mail Telephone Mail Fax

8. Customer Status:

Billing Account Number: 6263701

Customer name registered to this Account: GREENWAY PCC - CITY OF LONDON

Are you a HST registrant? Yes No

If yes, provide your HST registration number: - RT 0001
119420883

9. Fuel Type:

- Wind Turbine Hydraulic Turbine Steam Turbine Solar/ Photovoltaic
 Diesel Engine Gas Turbine Fuel Cell Biomass
 Co-generation/CHP (Combined Heat & Power) Bio-diesel
 Anaerobic Digester Battery
 Other (Please Specify) ORGANIC RANKIN CYCLE TURBINE,
 (Thermal vaporised Oil)

10. Please provide a sketch of your proposed point of connection to London Hydro distribution system.

Drawing / Sketch No. 8811165-E010, Rev 4

11. Connection to London Hydro's Distribution System (provided in your original IFA):

- a. Proposed connection voltage to London Hydro's distribution system: 4.16kV at PCC.
(LV side of LH owned 27.6kV:4.16kV transformer)
- b. Feeder Name: 26M54
- c. Hydro One Transformer Station Name: TALBOT TS
- d. GPS coordinates of the connection point 42°58'28.6"N, 81°16'52.5"W
- e. Fault contribution from Generator's facilities, with the fault location at the PCC:
- Three-phase generators: 3-phase short circuit 8.5 (approx) MVA; Shall be verified based on the short circuit study report.
 Single-phase generators: 1-phase short circuit _____ MVA.

12. Single Line Diagram (SLD):

Provide detailed and updated SLD of the EG facility including the Demarcation Point / Point of Common Coupling ("PCC") to London Hydro's distribution system. This drawing shall include, but not be limited to:

- Electrical equipment at EG's facilities, their principal ratings, impedances, winding configurations, neutral grounding methods, etc.
- Protective relaying, synchronizing and revenue metering arrangements. The device numbers should be in accordance with those adopted in the ANSI / IEEE Standard C37.2 – 1979: *IEEE Standard Electrical Power System Device Function Numbers*.

The SLD shall include the following, as applicable:

- Disconnecting device at the connection point with London Hydro's distribution system
- Load break switches
- Fuses
- Circuit breakers
- Interface step-up transformer
- Intermediate transformer(s)
- CTs and VTs (quantity, location, connection, ratio)
- Generators (rotating / static)
- Power factor correction capacitors and their switching arrangements (particularly for induction units)
- Motors
- Power cables
- Surge arresters
- Any other relevant electrical equipment.

- SLD Drawing Number: 8811165-E010 Rev. 4

13. Generator Characteristics

a. Characteristics of Existing Generators

If Generator's facilities include existing generators, provide details as an attached document. N/A

b. Characteristics of New Generators:

NOTE:

Please provide the manufacturer's technical data (electrical) for the generator or inverter.

Number of generating unit(s): 1
 Manufacturer / Type or Model No: NIDEC / LSA 50.2 L8 / 4P
 Rated capacity of each unit: 960 kW / 1200 kVA
 If unit outputs are different, please fill in additional sheets to provide the information.
 Rated frequency: 60 Hz
 Rotating Machine Type:
 Synchronous Induction Inverter Other (Please Specify) _____
 (If the machine type is "Other", please provide values equivalent to a Synchronous or Induction type Generator)
 Generator connecting on: single phase three phase

Limits of range of reactive power at the machine output:
 i. Lagging (over-excited): 720 kVAR power factor 0.8
 ii. Leading (under-excited) 480 kVAR power factor -0.9
 Limits of range of reactive power at the PCC:
 iii. Lagging (over-excited): _____ kVAR power factor _____
 iv. Leading (under-excited) _____ kVAR power factor _____

Starting inrush current: _____ pu (multiple of full load current)
 Generator terminal connection: delta star
 Neutral grounding method of star connected generator:
 Solid Ungrounded Impedance: R 17.3 ohms X _____ ohms
 Resistance

For Synchronous Units:

i. Nominal machine voltage: .6 kV
 ii. Minimum power limit for stable operation: 960 kW
 iii. Unsaturated reactances on: 1200 kVA base .6 kV base
 Direct axis subtransient reactance, Xd'' 0.116 pu
 Direct axis transient reactance, Xd' 0.136 pu
 Direct axis synchronous reactance, Xd 2.52 pu
 Zero sequence reactance, X0 0.005 pu
 iv. Provide a plot of generator capability curve (MW output vs MVAR)
 Document Number: 609243, Sheet 8 of 11, Rev. 1

For Induction Units:

i. Nominal machine voltage: _____ kV
 ii. Unsaturated reactances on: _____ kVA base _____ kV base
 Direct axis subtransient reactance, Xd'' _____ pu
 Direct axis transient reactance, Xd' _____ pu
 iii. Total power factor correction installed: _____ kVAR
 • Number of regulating steps _____
 • Power factor correction switched per step _____ kVAR
 • Power factor correction capacitors are automatically switched off when generator breaker opens
 Yes No

For SPC / Inverter type units:

i. Terminal voltage _____ V
 ii. Line - interactive type (i.e. intended for parallel operation with electric utility) Yes No
 iii. Power factor _____ p.u.
 iv. Battery backup provided Yes No
 v. Maximum fault current for terminal faults _____ A
 vi. Standards according to which built _____
 vii. Provide Manufacturer's technical brochure and specification sheet _____ Doc. No

14. Interface Step-Up Transformer Characteristics:

a. Transformer ownership: Customer / London Hydro
 b. Transformer rating: 5000 kVA
 c. Nominal voltage of high voltage winding: 27.6 kV
 d. Nominal voltage of low voltage winding: 4.16 kV
 e. Transformer type: single phase three phase
 f. Impedances on: Z=5%
 _____ kVA base _____ kV base
 R: _____ pu, X: _____ pu
 delta star
 g. High voltage winding connection:
 Grounding method of star connected high voltage winding neutral:
 Solid Ungrounded Impedance: R: _____ ohms X: _____ ohms
 Nameplate rating and impedance values of High Voltage Grounding Transformer (If applicable):
 Voltage: _____ V Rating: _____ KVA R: _____ pu X: _____ pu

- h. Low voltage winding connection: delta star
 Grounding method of star connected low voltage winding neutral:
 Solid Ungrounded Impedance: R: _____ ohms X: _____ ohms

NOTE:

- The term 'High Voltage' refers to the connection voltage to London Hydro's distribution system and 'Low Voltage' refers to the generation or any other intermediate voltage.

15. Intermediate Transformer Characteristics (if applicable):

- a. Transformer rating: 1500 kVA
 b. Nominal voltage of high voltage winding: 4.16 kV
 c. Nominal voltage of low voltage winding: .6 kV
 d. Transformer type: single phase three phase
 e. Impedances on: Z= 5% (assumed) _____ kVA base _____ kV base
 R _____ pu X _____ pu
 f. High voltage winding connection: delta star
 Grounding method of star connected high voltage winding neutral:
 Solid Ungrounded Impedance: R _____ ohms X _____ ohms
 g. Low voltage winding connection: delta star
 Grounding method of star connected low voltage winding neutral:
 Solid Ungrounded Impedance: R _____ ohms X _____ ohms

NOTE: The term 'High Voltage' refers to the intermediate voltage that is input to the interface step-up transformer and the 'Low Voltage' refers to the generation voltage.

16. Load information: BASED ON YEARLY DATA FROM LONDON HYDRO & 4160 NOMINAL VOLTAGE

- a. Maximum load of the facility: 3967 kVA 3694 kW
 b. Maximum load current (referred to the nominal voltage at the connection point to London Hydro's system): 953 A
 c. Maximum inrush current to loads (referred to the nominal voltage at the connection point to London Hydro's system): _____ A NOT AVAILABLE

Attached Documents:

Item No.	Description	Document No.	No. of Pages
1			
2			
3			

Attached Drawings:

Item No.	Description	Document No.	No. of Pages
1			
2			
3			

CHECKLIST

Please ensure the following items are completed prior to submission. The application shall be returned if incomplete:

- Completed form stamped by a Professional Engineer
- Signed Study Agreement along with payment listed in the Study Agreement
- Single Line Diagram (SLD) of the Generator's facilities, must be stamped by a Professional Engineer

NOTE:

By submitting a completed CIA application, the Proponent authorizes the collection by London Hydro Inc. ("London Hydro"), of any agreements and any information pertaining to agreements made between the Proponent and the Ontario Power Authority from the Ontario Power Authority, the information set out in the CIA application and otherwise collected in accordance with the terms hereof, the terms of London Hydro's Conditions of Service and the requirements of the Distribution System Code and the use of such information for the purposes of the connection of the generation facility to London Hydro's distribution system.

Expected Monthly Generation, Consumption and Output From the EG Facility:

Expected:	Total Generation		Total Internal Consumption		Total Output (to London Hydro's Distribution System)	
	(a)		(b)		(a-b)*	
	kWh	Peak kW	kWh	Peak kW	kWh	Peak kW
January		960 kW (max)				
February		960 kW (max)				
March		960 kW (max)				
April		960 kW (max)				
May		960 kW (max)				
June		960 kW (max)				
July		960 kW (max)				
August		960 kW (max)				
September		960 kW (max)				
October		960 kW (max)				
November		960 kW (max)				
December		960 kW (max)				

* This value would be negative when the generators are not in operation or when the internal consumption exceeds generation.

Notes:

1. Total generation shall vary, depending upon the heat available from the incinerator.



Connection Impact Assessment

Greenway Wastewater Treatment Plant ORC Energy Recovery System A Load Displacement Project

Summary Report

Prepared for
London Hydro

April 9, 2019

Prepared by:
Meir Klein, P. Eng.



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Executive Summary

This report is a summary of a connection impact assessment (CIA) study of a load displacement Organic Rankine Cycle (ORC) generator proposed to be connected to London Hydro's feeder 26M54 out of Talbot TS. The proposed 960 kW generator will be located inside the Greenway Waste Water Treatment Plant (WWTP) in London, Ontario and its generated power will be used solely to displace the local plant's load.

The purpose of the CIA study is to identify potential adverse electrical system impacts of the proposed ORC generator and determine mitigating options if any adverse impacts are found. This study assessed the impact of the generator on London Hydro's feeder with regards to a number of specific performance criteria.

The key conclusions of the study are as follows:

1. The proposed generator is not expected to have an adverse impact on the feeder's voltage or short circuit fault levels
2. The transfer trip from Talbot TS, proposed by the proponent, is required
3. The proposed synchronization scheme and its impact on the plant needs to be reviewed and an alternative scheme to synchronize through a 4.16 kV breaker needs to be investigated
4. Other requirements and connection issues, which are not part of this CIA, will be addressed by London Hydro.

1. Purpose

This report is a summary of a connection impact assessment (CIA) study of a load displacement Organic Rankine Cycle (ORC) generator proposed to be connected to London Hydro's feeder 26M54 out of Talbot TS. The proposed 960 kW generator will be located inside the Greenway Waste Water Treatment Plant (WWTP) in London, Ontario and its generated power will be used solely to displace the local plant's load.

The purpose of the CIA study is to identify potential adverse electrical system impacts of the proposed ORC generator and determine mitigating options if any adverse impacts are found. This study assessed the impact of the generator on London Hydro's feeder with regards to a number of specific performance criteria.

2. Project Description

The project covered by this CIA report is described in the table below:

Project name	Greenway WWTP ORC Energy Recovery System
Energy program	Load displacement
Developer	City of London
Municipal address	109 Greenside Ave, London, ON
Generation capacity (kW)	960
Type	Thermal generator
Generator	1200 kVA ORC, NIDEC LSA 50.2 L8 /4p
Generator rated voltage (V)	600
X''d (saturated)	9.9%
Main WWTP transformer	5 MVA, 27.6/4.16 kV, Delta/Yg, Z=5%
Generator step up transformer	1.5 MVA, 4.16/0.6 kV, Yg/Delta, Z=5%
High voltage feeder	27.6 kV, 26M54 out of Talbot TS, Bus Q1Q2
PCC voltage	27.6 kV
Other generation on feeder (kW)	1715 solar PV

3. Study Results

The table below summarizes the study findings:

Assessment Criterion	Finding
Impact on voltage	Criterion satisfied
Load flow analysis	Criterion satisfied
Continuous current rating	Criterion satisfied
Short circuit currents (TSC and LH limits)	Criterion satisfied
Proposed synchronization scheme through a 600 V breaker	Energizing the 4.16/0.6 kV GSU from the 4.16 kV side may result in an inrush current that will cause a noticeable voltage drop mainly on the plant's 4.16 kV bus
Transfer trip from Talbot TS	The proposed transfer trip is required
Connection to London Hydro's distribution system	An interlocking scheme is required to ensure that the generator is not online when the WWTP is supplied from an alternate feeder

4. Conclusions

The main conclusions of the study are as follows:

1. The proposed generator is not expected to have an adverse impact on the feeder's voltage or short circuit fault levels
2. The transfer trip from Talbot TS, proposed by the proponent, is required
3. The proposed synchronization scheme and its impact on the plant needs to be reviewed and an alternative scheme to synchronize through a 4.16 kV breaker needs to be investigated
4. Other requirements and connection issues, which are not part of this CIA, will be addressed by London Hydro.



111 Horton St.
P.O. Box 2700
London, ON N6A 4H6

Powering London.
Empowering You.

December 12th, 2019

Mark Elliott
Corporation of the City of London
109 Greenside Ave
London, ON N6J 2X5

RE: **109 Greenside Ave— 960kW Load Displacement**

This letter confirms London Hydro's costs associated with the connection of a load displacement generation service located at **109 Greenside Ave.** are **\$62,150.00 (\$55,000.00 + \$7,150.00 HST)**. This letter also summarizes London Hydro's and the customer's requirements and responsibilities for this service.

Hydro One Networks Inc. costs associated with the connection of a CHPSOP 2.0 generation service located at **109 Greenside Ave.** are **\$327,700.00 (\$290,000.00 + \$37,700.00 HST)**. Please refer to the Hydro One CCRA (42,290 CCRA Agreement) and Terms and Conditions (Terms and Conditions - CCRA LDC Embedded Generator 2012-1).

The customer will be required to provide a **disconnection device** capable of accepting a blocking signal from London Hydro and Hydro One in the event that the generator must be taken offline.

The customer's electrical contractor will be responsible for supply and installation of two 48" x 48" x 12" meter cabinets to accommodate London Hydro's metering as well as all other equipment required to interface with the customer's disconnection device. As well the customer's electrical contractor must provide a dedicated 120VAC supply receptacle in the metering cabinet. The meter cabinet must be installed on the load side of a fused disconnect or breaker and be grouped with all other meters in the same location as the main service entrance equipment.

Radio communication will be utilized for SCADA communication in replacement of the two phone lines detailed below. A radio RF study will be conducted to determine the feasibility of utilizing this method. If the results indicate that it is not feasible for radio communication to be used, then two phone lines as detailed below will need to be installed.

Communication requirements to be supplied by the customer are as follows:

- 1 dedicated dial up phone line at the customer's facility, 4 conductors with the phone number tagged to the conductor.
- Phone conductor to be run in 1/2 inch EMT conduit (or rigid PVC conduit) from the connected source to the meter cabinet.
- The 1/2 inch EMT conduit (or rigid PVC conduit) to be terminated with a 4 inch by 4 inch by 2 inch metal box within 18 inches of the meter cabinet.
- One foot of telephone conductor to be coiled in the 4 inch by 4 inch by 2 inch metal box.
- A 4 pin female RJ11 base board jack terminated on the end of the one foot coiled phone conductor in the 4 inch by 4 inch by 2 inch metal box.



Female RJ-11 Jack

Telephone Connector (RJ11)

Pin	Colour	Signal
1	Yellow	Line 2 tip
2	Green	Line 1 ring
3	Red	Line 1 tip
4	Black	Line 2 ring

- The jack should be labelled with the phone number.

The customer will be responsible for the monthly cost associated with the phone line rental and the numerical phone number must be provided to London Hydro.

The customer is also responsible for arranging with Bell Canada for an additional dedicated phone line to be installed at London Hydro's facilities at 111 Horton Street. The customer is responsible for all costs associated with the setup of this line as well as the monthly cost associated with the phone line rental.

London Hydro will supply the customer with one dry contact for OFFLINE control to their equipment. This will be an isolated contact with a 6A rating @ 24Vdc or 120Vac. As well, the customer will supply to the metering cabinet, one dry isolated contact with similar specifications as above. This will be London Hydro's verification that the customer is OFFLINE. This control wiring will be installed in conduit directly into the metering cabinet.

The above cost assumes all work will be performed during regular working hours (between 07:30 AM and 04:00 PM, Monday through Friday). **London Hydro will require a minimum of 4-6 weeks from receipt of the customer's payment to engineer, procure materials and schedule this project.**

Should you require additional information or clarification of these items, please contact our office.

Yours truly,

LONDON HYDRO

A handwritten signature in blue ink, consisting of a stylized 'D' followed by a long horizontal line.

Dane Kirilovic C.E.T.
Engineering Technologist
519 661 5800 ext. 5612
Kirilovd@londonhydro.com

February 11th, 2021

Mark Elliott
Corporation of the City of London
109 Greenside Ave
London, ON N6J 2X5

RE: **109 Greenside Ave– 960kW Load Displacement**

This letter confirms London Hydro's costs associated with the installation of primary voltage transformers located at **109 Greenside Ave.** are **\$15,142.00 (\$13,400.00 + \$1,742.00 HST)**. This letter also summarizes London Hydro's and the customer's requirements and responsibilities for this service.

As requested the marshaling box will be installed on the riser pole located near the London Hydro owned transformers. Please see attached standard for a primary metering kit. Please note that the installation will similar to this with no current transformers being installed.

The above cost assumes all work will be performed during regular working hours (between 07:30 AM and 04:00 PM, Monday through Friday). **London Hydro will require a minimum of 4-6 weeks from receipt of the customer's payment to engineer, procure materials and schedule this project.**

Should you require additional information or clarification of these items, please contact our office.

Yours truly,

LONDON HYDRO

Dane Kirilovic C.E.T.
Engineering Technologist
519 661 5800 ext. 5612
Kirilovd@londonhydro.com



**Electrical
Safety
Authority**

400 Sheldon Dr, Unit 1, Cambridge, ON , N1T 2H9

For inquiries:

TOLL FREE TEL: 1-877-372-7233

TOLL FREE FAX: 1-800-667-4278

www.esasafe.com

Connection Authorization Verification - Contractor Copy

J M R ELECTRIC LTD
301 THAMES RD E
EXETER ON N0M 1S3

NOTICE DATE: June 10, 2021
NOTIFICATION #: 16478810
INSPECTOR: Taylor, Michael
TELEPHONE: (519)521-8284
PRINT DATE: June 10, 2021
CUSTOMER ID: 381

Authorization Sent to:

LONDON HYDRO INC
PO 2700-111 HORTON ST
LONDON ON N6A 4H6

Supply Authority Business #: (519)661-5555

Re:

CITY OF LONDON
ORC ENERGY RECOVERY SYSTEM
109 GREENSIDE AVE
LONDON ON N6J 2X5

Connection Information:

Connection Type: STANDARD
Voltage Phase: HIGH VOLTAGE
Ampere Rating: OTHER
Metering Description: N/A
Service Details: NEW

Connection Authorization is only **Valid for 6 months** following the Notice Date.
After 6 months, **Re-inspection & NEW Connection Authorization are Required.**

THIS DOCUMENT IS PROVIDED FOR INFORMATION PURPOSES ONLY AND IS IN NO WAY INTENDED TO IMPLY THAT THE CONNECTION HAS BEEN COMPLETED OR WILL PROCEED AS INDICATED HEREIN. THIS CONNECTION AUTHORIZATION IS SUBJECT TO CHANGE AND THE ESA DOES NOT ACCEPT ANY LEGAL RESPONSIBILITY FOR THE INFORMATION CONTAINED HEREIN OR FOR ANY CONSEQUENCES, INCLUDING DIRECT OR INDIRECT LIABILITY, ARISING OUT OF OR RESULTING FROM ACCESS TO OR USE OF OR RELIANCE ON THIS DOCUMENT. THE ESA PROVIDES THIS DOCUMENT WITHOUT WARRANTIES OF ANY KIND EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES AS TO THE CURRENCY, ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED AND/OR CONCERNING THE DOCUMENT'S FITNESS FOR A PARTICULAR PURPOSE OR USE, ITS MERCHANTABILITY, OR ITS NON-INFRINGEMENT OF ANY THIRD PARTY'S INTELLECTUAL PROPERTY RIGHTS.

SCHEDULE B

Single Line Diagram, Connection Point and Location of Facilities (section 2.3)

B.1 Single Line Diagram and Connection Point

Attach the Single Line Diagram

B.2 List of Facilities on the Property of the Other Party

B.2.1 The following facilities of the Generator are located on the property of London Hydro:

Not applicable

B.2.2 The following facilities of London Hydro are located in the property of the Generator:

Communication, data acquisition and disconnection equipment, etc. related to London Hydro operations in regards to this project.

B.3 Metering Installation Diagram

Included in the Single Line Diagram

SCHEDULE C

List of Other Contracts (section 3.4)

C1. Reserve Capacity

London Hydro shall make available for the Generator the Reserve Capacity set out in this Schedule to this Agreement, such Reserve Capacity to be utilized by the Generator only in the event of a Forced Outage or a Scheduled Outage of the generator(s) while connected to its preferred (normal) feeder. Pricing per kilowatt shall be as per the latest approved OEB Rate Order.

The Reserve Capacity agreed to by the Generator and London Hydro shall be as follows:

 0 kilowatts of Reserved Capacity



Schedule “D”

Operating Procedures for the Connection of the City of London Organic Rankine Cycle Generator to the London Hydro Inc. Distribution System

May 2021

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1 INTRODUCTION

1.1 Background

The Corporation of the City of London Waste Water and Treatment Plant (“Greenway”) located at 109 Greenside Avenue London, Ontario N6J 2X5 has an Organic Rankine Cycle (ORC) Energy Recovery System that uses waste heat to generate electricity at their facility. These operating procedures will apply to this ORC facility, which is connected to London Hydro Inc.’s (“London Hydro”) distribution system. Greenway is connected to the 27.6 kV feeder 26M54 out of Talbot transformer station (“T.S.”) at approximately 7.3 km from the transformer station. The feeder is normally supplied by the 27.6 kV ‘Q1Q2’ bus at Talbot T.S.

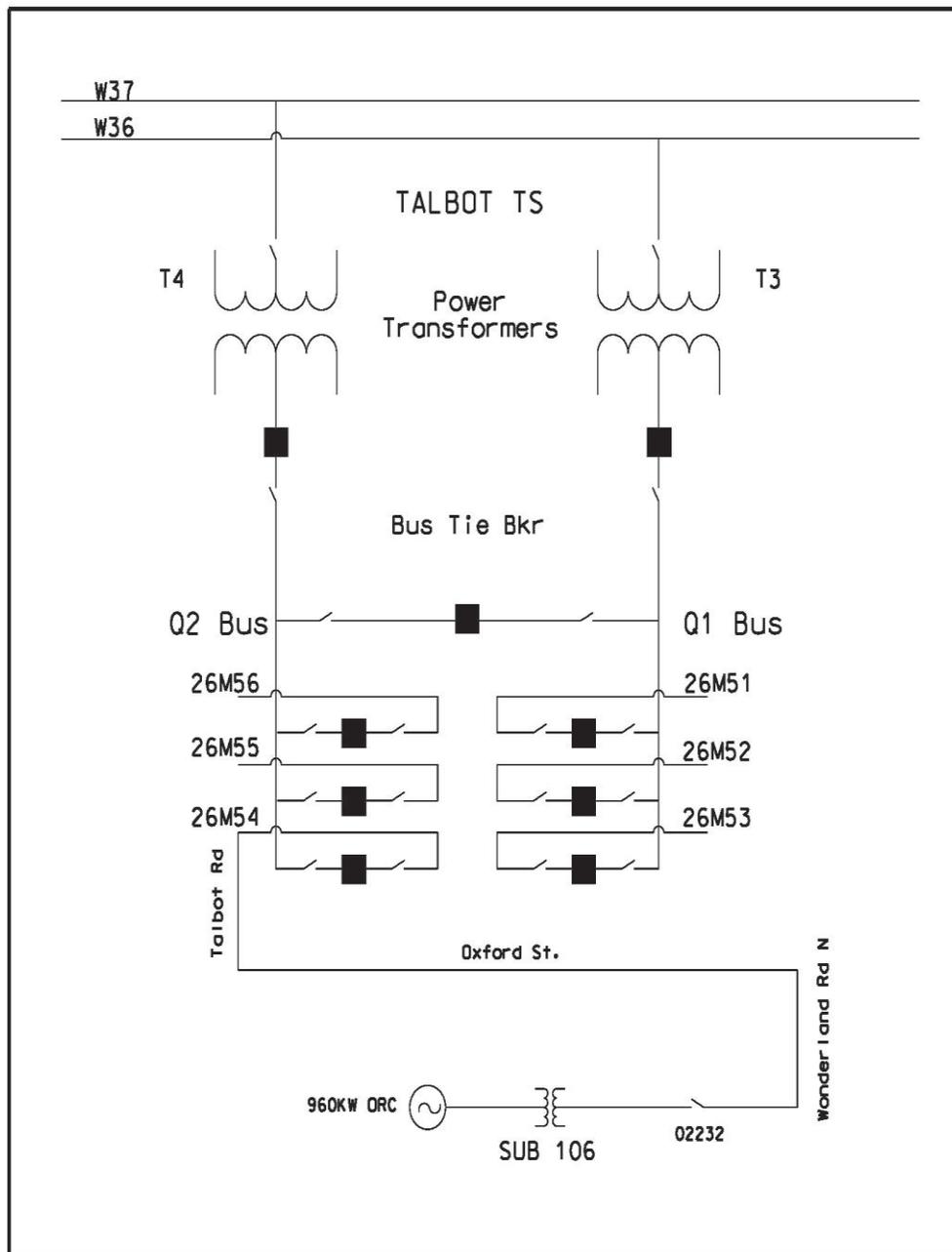


Figure 1-1, Arrangement of the Approved Generation Supply Feeder to Greenway

1.2 Intent

This document establishes the responsibilities and operating procedures to be observed by London Hydro and the City of London (COL) for the safe, secure and efficient operation of the ORC, thereby permitting their connection to the London Hydro distribution system and bulk electrical system.

The commercial arrangements (e.g. term of agreement, responsibilities for operating and maintenance costs, energy tariffs, technical performance requirements, liabilities for damages, remedies for nonperformance, etc.) are defined in a companion legal document entitled the *London Hydro Form of Connection Agreement for a Small or a Mid-Sized Embedded Generation* between London Hydro Inc. and the City of London.

1.3 Intended Audience

These Operating Procedures are intended to be a primary resource document for London Hydro System Operating Centre System Operators, Power Systems Engineers, and the COL Facility Power Plant electricians responsible for the day-to-day operation of Greenway's private distribution system, and the ORC facilities.

1.4 Definitions

The following terms are used throughout this document.

Agreement refers to the *London Hydro Form of Connection Agreement for a Small or a Mid-sized Embedded Generation Facility*, as amended from time to time by written consent of both parties.

Bulk Electric System a term commonly applied to the portion of an electric utility system that encompasses the electrical generation resources and bulk transmission system.

Supporting Guarantee A supporting guarantee is a guarantee issued in support of a Work Permit(s) and/or another Supporting Guarantee(s). It certifies that an isolated or isolated and de-energized condition exists at points under the control of the issuer of the Supporting Guarantee.

Control Authority has exclusive authority to perform, direct, instruct, or authorize the operation of specific devices in a definitive, clearly specified manner, is not synonymous with ownership, nor does it necessarily convey total independence of action

Emergency means any abnormal system condition that requires automatic or immediate manual action to prevent or limit loss of distribution or transmission facilities or generation supply that could adversely affect the reliability of the electric system.

Hold-Off means a procedure used to limit automatic operation of apparatus to facilitate work or to reduce work hazards.

IESO means Independent Electricity System Operator.

Island means a portion of a power system or several power systems that is electrically separated from the distribution grid due to the disconnection of a distribution system element.

Load Shedding means the process of deliberately removing (either manually or automatically) preselected customer demand from a power system in response to an abnormal condition to maintain the integrity of the system and minimize overall customer outages.

Medium-voltage means anything less than 50 kilovolts and above 1 kilovolt.

Operating Control means the control exercised by an operating authority when issuing instructions, in broad outline and terms, to another operating authority which, in turn may exercise its own judgement as to the proper time and method for carrying out such instructions.

Point of Common Coupling (PCC) means the connection point between the Greenway facility and the LDC distribution system. This is the interface point between ownerships.

Qualified means operating personnel are assessed for satisfactory performance and are considered qualified, with respect to competence and ability to perform the required tasks, having demonstrated a knowledge and familiarity with the apparatus, equipment, systems and devices and particularly established operational rules and procedures, including the potential dangers associated with the work, operation or process.

Supervisory Control and Data Acquisition (SCADA) means a system of remote control and telemetry used to monitor and control the electric system.

Synchronize means the process of connecting two previously separated alternating current apparatuses after matching frequency, voltage, phase angles, etc. (e.g. paralleling a generator to the electric system).

System Operator means an individual in an electric system control center whose responsibility is to monitor and control that electric system in real time.

Telemetry means the process by which measurable electrical quantities from substations and generating stations are instantaneously transmitted using telecommunication techniques.

Work Permit means a written protection guarantee issued by a London Hydro operator to a qualified person, under which specific work on specific apparatus is authorized.

1.5 Supplementary Operating Memorandums

From time to time, it may become necessary to supplement these Operating Procedures with information and interim instructions for dealing with situations that were unforeseen when this Schedule D was created (or last revised).

London Hydro may issue additional instructions and information by way of a Supplementary Operating Memorandum that will become part of this Schedule upon approval by the COL. The format of the Supplementary Operating Memorandum is included as Appendix B. Alternatively this Schedule D maybe reissued by London Hydro and the COL in its entirety.

1.6 Safe Work Planning

Safe work planning practices such as pre-job plans and tailboard conference procedures shall be followed whenever both parties (i.e. the COL and London Hydro) are involved in work on the interconnected system. Nothing in these Operating Procedures should be interpreted as altering the intent of London Hydro's safe work practices manual or safe operating procedures. Any contradictions are to be identified and resolved prior to work commencing.

2 RESPONSIBILITIES

2.1 Operating Authority & Operating Control

London Hydro has *Operating Control* of the feeder circuit breakers at Talbot T.S. Hydro One's Ontario Grid Control Centre is the *Controlling Authority* for all the circuit breakers supplying the London Hydro distribution system, and executes circuit breaker operations.

The City of London has *Control Authority* and has exclusive *Operating Control* of all 4.16 kV switching elements within the customer interconnected substation at Greenway Waste Water Treatment Plant, the ORC, and the private internal distribution system.

The operating personnel shall be as listed in Appendix D.

2.2 Training Requirements

The COL Facility electricians or designated representatives shall be qualified in ORC operation and be able to respond quickly and effectively to normal and emergency operations and conditions.

The COL Facility electricians or designated representatives shall be familiar with and be adequately trained in proper procedures for setting power distribution and control devices, protective relays, circuit breakers and operation of isolation switches in or out of service.

2.3 Maintenance Requirements

London Hydro and the COL are each responsible for the maintenance (both preventive and corrective) of the equipment under their respective ownership.

2.3.1 London Hydro

London Hydro's inspection and maintenance activities are prescribed within *System Inspection Requirements and Maintenance*, of the Ontario Energy Board's *Distribution System Code*.

2.3.2 Hydro One Networks

Hydro One's inspection and maintenance program for transformer stations fulfill the performance requirements defined within, *Requirements for Operations and Maintenance*, of the Ontario Energy Board's *Transmission System Code*.

2.3.3 City of London

The COL shall have a preventative maintenance program covering the ORC, including ancillary equipment, which reflects good industry practice.

The COL shall have a preventative maintenance program covering their electrical power coupling substation and other privately-owned medium-voltage distribution system devices that reflects good industry practice, in general accordance with the current NETA Standard, *Maintenance Testing Specifications for Electrical Power Distribution Equipment and Systems* or other standards as applicable.

In addition, the schedule outlined in the Protection and Control Systems Equipment section of the most recent Hydro One Technical Interconnection Requirements (TIR) document shall be used to re-verify interconnection Protection and Control sub-systems. The appropriate sections are listed below:

- every 8 years for IED-based protection sub-systems that employ comprehensive self-diagnostic features to detect and provide alarm telemetry
- every 4 years for electromechanical or other non IED-based protection sub-systems that do not employ comprehensive self-diagnostic features to detect and provide alarm telemetry

The COL shall have a program for periodically verifying the communication channels associated with the TT/DGEO Freewave radio protection terminal equipment to verify that the channels are operational and that their characteristics lay within specific tolerances. Such testing shall be carried out every two (2) years, and shall include signal adequacy tests and channel performance tests.

Note: If Hydro One personnel are required to participate in the verification of the Freewave radio protection channels and terminal equipment, the COL will bear all incurred costs. In such cases, the COL shall provide London Hydro with a purchase order so that Hydro One's charges may be passed on to the COL.

London Hydro, at its discretion, may participate in commissioning, inspecting, and testing customer protection (including Freewave radio protection terminal equipment) systems to ensure that equipment connected to the

distribution system will not materially reduce or adversely affect the current level of reliability of the supply feeder circuits.

2.4 Telemetry Requirements

The COL shall provide facilities and connections for telemetry of key operating information to London Hydro’s SCADA Master Station. See Tables 2-1, 2-2, and 2-3.

Table 2-1, SCADA Information

Station Name	Equipment Name	Telemetry Point
Greenway	B07-SWG3A.52-G	MW
Greenway	B07-SWG3A.52-G	MX
Greenway	B07-SWG3A.52-G	AMP R
Greenway	B07-SWG3A.52-G	AMP W
Greenway	B07-SWG3A.52-G	AMP B
Greenway	B07-SWG3A.52-G	VOLT R/W
Greenway	B07-SWG3A.52-G	VOLT W/B
Greenway	B07-SWG3A.52-G	VOLT R/B

Table 2-2, Alarms

Station Name	Equipment Name	Alarm Telemetry Point
Greenway	B07-SWG3A.52-G	TT Comm Channel Fail
Greenway	B07-SWG3A.52-G	Transfer Trip Protection Fail
Greenway	B07-SWG3A.52-G	Breaker Fail (52-G1)

Table 2-3, Status

Station Name	Equipment Name	Status Telemetry Point
Greenway	B07-SWG3A.52-G	OPEN/CLOSE
Greenway	B07.89-G	OPEN/CLOSE
Greenway	B20-SWG1B.52-L1	OPEN/CLOSE
Greenway	B20-SWG1B.52-L2	OPEN/CLOSE
Greenway	B20-SWG1B.52-T	OPEN/CLOSE
Greenway	B20-SWG1B.52-F2	OPEN/CLOSE
Greenway	B08-SWG2A.52-L1	OPEN/CLOSE
Greenway	B08-SWG2A.52-L2	OPEN/CLOSE
Greenway	B08-SWG2A.52-T	OPEN/CLOSE
Greenway	B08-SWG2A.52-G1	OPEN/CLOSE

3 COMMON OPERATING DIAGRAM

London Hydro Operators, Hydro One Operators, and the COL Facility electricians shall refer to the Common Operating Diagram (included as Appendix A) when discussing planned work or operating problems. It is the responsibility of the COL to provide London Hydro with the latest revisions of all diagrams including SLD’s, etc. in a timely manner. The Common Operating Diagram and SLD must be readily available and accessible on site at all times.

4 COMMUNICATIONS BETWEEN CONTROL ROOMS

4.1 Communication Protocol

Communications between the COL Facility electricians and London Hydro's System Operators shall normally be by landlines and/or cellular telephone.

Published and/or unlisted office and emergency telephone numbers of staff responsible for operating activities are listed in Appendix D.

The COL and London Hydro will inform each other of any changes to the telephone listings as soon as is possible.

4.2 Exception – Emergency Operations

During an emergency, Hydro One, London Hydro or the COL may take whatever immediate action it deems necessary and is qualified to perform to safeguard public safety, life, and property without first notifying the other parties.

The party who is taking such action shall promptly report the action taken and the reason for it to the other party's controlling authority.

The COL shall notify London Hydro as soon as is practical of all significant events with respect to the medium-voltage system that occur within the ORC Greenway Facility, including:

- All faults in their equipment that have caused protection operations;
- When their protection operations disconnect them from the London Hydro distribution system.

Hydro One (the provincial transmitter) may be required from time to time by the Independent Electricity System Operator (IESO) to interrupt supply to London Hydro during an emergency to protect the stability, reliability, and integrity of the provincial transmission grid. When Hydro One advises London Hydro of the transmission system's emergency status and when to expect reconnection to the transmission system, this information will be conveyed to the COL.

5 AUTOMATIC OPERATING SYSTEMS

5.1 Review of Objectives

The automatic protective and control systems associated with the COL's ORC Greenway facility are intended to prevent or protect against the following adverse conditions on London Hydro's distribution system:

- A synchronizing check is required whenever reconnecting to the grid and there is a possibility of a difference between the generator frequency and the grid frequency
- Inadvertent and unwanted re-energization of a London Hydro de-energized circuit
- Overcurrent
- Voltage unbalance
- Ground faults
- Frequency outside permitted safe limits
- Voltage outside permitted limits (prevent inrush due to transformer energization)
- Power factor or reactive power (VAR) outside permitted limits
- Abnormal waveforms

- Breaker failure
- Unintentional energization of customer owned substation by London Hydro

There shall be no changes or modifications to equipment related to the ORC connection such as but not limited to protection systems, medium-voltage electrical plant, protection settings, and metering system configuration without prior notification to London Hydro.

5.2 Transfer Trip / Distributed Generator End Open

Since the Transfer Trip / Distributed Generator End Open Freewave radio protection terminal equipment is only installed on the 26M54 feeder, anytime the COL Greenway / load is temporarily transferred to another feeder, the COL shall not be allowed to connect the ORC onto London Hydro's distribution system. London Hydro has the sole right to temporarily transfer COL's Greenway / load at its discretion to accommodate loading, system problems, construction activity, etc.

In the event of a line fault or over-current condition on the 26M54 circuit, to ensure that the feeder circuit breaker doesn't reclose before the COL's ORC has been electrically separated from London Hydro's distribution system, a Transfer Trip / Distributed Generator End Open (TT/DGEO) Freewave radio protection system shall be provided between the 26M54 feeder circuit breaker and Greenway.

A trip signal to the 26M54 feeder circuit breaker (originating from either the Q bus protection system or the 26M54 feeder protection system) is transmitted via Freewave radio to the COL Greenway facility to simultaneously trip the main circuit breaker designated B07-SWG3A.52-G, thereby electrically separating the ORC from London Hydro's distribution system.

The 26M54 feeder circuit breaker will be prevented from reclosing until it receives a permissive signal (DGEO) from the COL Greenway Facility indicating that the B07-SWG3A.52-G breaker or the B08-SWG2A.52-G1 (breaker fail scheme) have in fact tripped or any one the upstream breakers are open (B08-SWG2A.52-T or B08-SWG2A.52-L2 or B20-SWG1B.52-F2 or B20-SWG1B.52-L2), thereby separating the ORC from London Hydro's distribution system. In addition, if for some reason the COL breaker B07-SWG3A.52-G is out of service, it should not inhibit the operation of the Talbot T.S. breaker.

The TT/DGEO terminal equipment shall include monitoring circuitry that continuously assesses the condition of the interconnecting Freewave radio connection.

Upon failure of the Freewave radio connection:

- The reclosing operation is blocked on the 26M54 feeder circuit breaker
- An annunciation is activated within COL Greenway Facility and, if the condition prevails for more than 5 seconds, the main breaker B07-SWG3A.B07-SWG3A.52-G shall automatically be tripped.

5.3 Protection and Controls

5.3.1 Power Factor

The ORC shall be set so that the nominal power factor is in the range of 0.95 lag to unity (i.e. reactive power is not supplied to London Hydro's distribution system).

5.3.2 Automatic Synchronizing Control

An automatic synchronizing device is required whenever paralleling two different systems that are out of phase. Otherwise, facility equipment may experience mechanical stress that may in some circumstances lead to severe damage. Breaker B07-SWG3A.52-G is a synchronizing breaker.

5.3.3 Generator Protection

As a minimum, the COL Greenway ORC shall be equipped with the following protections:

- Synchronization check (function 25)
- Under-voltage protection (function 27)
- Reverse power protection (function 32)
- Breaker failure protection (function 50BF)
- Instantaneous overcurrent protection (function 50)
- Ground instantaneous overcurrent protection (function 50G)
- Time overcurrent protection (function 51)
- Ground time overcurrent protection (51G)
- Over-voltage protection (function 59)
- Under/Over-frequency protection (function 81O/U)

Note: The function designations given in the brackets are explicitly defined within IEEE Standard C37.2, *Electrical Power System Device Function Numbers*.

The COL Greenway ORC may have more protective relays than listed above.

5.3.4 Electrical Interlocks

An interlocking scheme shall be installed and commissioned such that in no way can the two London Hydro feeders supplying the COL Greenway facility be paralleled. In addition, the interlocks shall prevent the generator from being connected to a non-approved feeder, at any point within the customer's electrical distribution system.

6 NORMAL (PRE-CONTINGENCY) OPERATING PROCEDURES

6.1 Planned Switching on the 26M54 Feeder Circuit

For planned switching on the 26M54 feeder circuit that requires the COL's customer substation to be transferred to another distribution feeder, arrangements will have to be made to disconnect the ORC from London Hydro's distribution system.

When possible, London Hydro will endeavour to notify the COL a minimum of twelve hours in advance of planned switching that will require changing the supply feeder to the COL Greenway Facility.

It is understood that there are special situations when the notification will not be possible or the notification period will be considerably less. By way of example, if the discovered condition of a distribution system element was deemed to pose a potential threat to public safety or system reliability, London Hydro may not delay corrective action and, as such, a notification period may not be possible.

6.2 Customer Isolation Request

This subsection outlines the general procedure used to de-energize the high-voltage (4.16kV) secondary circuit to permit the customer to carry out corrective repairs and/or acceptance or maintenance tests on their underground circuit. Exact switching procedure will be determined based on the isolation request in accordance to the Utility Work Protection Code.

- A request for isolation can be submitted by completing a "Customer Isolation Request Form". The form can be made available upon request to systemoperating@londonhydro.com

- Customer substation isolations are billable, and will be billed on actual time and material rates.
- Once the application has been received, a cost estimate can be provided prior to issuing purchase order
- Isolation request forms shall be submitted at least 10 business days before the outage date required.
- London Hydro will not operate any customer-owned equipment. The Contractor shall be responsible for operating such equipment.
- The Contractor shall be competent in operating electrical equipment and understand the requirements to complete work safely.
- London Hydro is not responsible for damage created due to Contractor error, customer equipment condition, closing in on temporary working grounds, etc.
- London Hydro will make every reasonable attempt to isolate and reconnect the customer at the required times, however there may be instances where London Hydro may delay or cancel the outage due to weather, labour shortages or other unknown causes.

6.3 Failure of the Communication System for Revenue Metering

In the event of a failure of the communication system that is used by London Hydro’s MV-90 metering data collection system to interrogate the interval-style revenue meters installed within the COL’s substation, London Hydro will notify the COL and co-ordinate to repair the London Hydro owned communication equipment. Failed revenue metering communication will result in a charge for each manual meter read, required weekly, and will continue until such time as the communication is restored.

Further details are provided in Appendix C.

6.4 Failure of the Radio Communication System for SCADA

In the event of a failure of the radio communication system which extends between London Hydro’s SCADA master station and the COL Greenway Facility, London Hydro will co-ordinate with the COL to initiate immediate repairs carried out by London Hydro.

6.5 Failure of the COL Greenway Revenue Meters or Instrument Transformers

In the event that the PCC meter (or associated instrument transformers) fails, thereby preventing the recording or transmission of meter data, the ORC must be taken offline or disconnected until the meter or IT is replaced. Please see Appendix C for more details.

7 POST-CONTINGENCY OPERATING PROCEDURES

7.1 Automatic Operations on the 26M54 Feeder Circuit

7.1.1 Successful Reclosure Operation on 26M54 Feeder Circuit

A fault or overcurrent condition on the 26M54 circuit will result in the following automatic operations:

- Tripping of the Talbot T.S. 26M54 circuit breaker;
- Tripping of breaker B07-SWG3A.52-G and
- Reclosing (upon receipt of TT/DGEO permissive) of the Talbot TS 26M54 circuit breaker.

In all cases the COL Greenway Facility electricians must contact London Hydro’s System Operating Centre prior to reconnection to ensure the cause has been found and it is safe to reconnect.

7.1.2 Lockout Operation on 26M54 Feeder Circuit

For lockout operations on the 26M54 feeder circuit, the COL Greenway ORC will have to remain disconnected from London Hydro’s distribution system until such time as the underlying problem is found (often by London Hydro crews patrolling the line) and remedial works are completed on London Hydro’s system.

Depending upon the nature of the underlying problem and the expected timeframe to complete repairs, London Hydro will restore supply to the COL Greenway Facility in a timely fashion by reconfiguring the 26M54 feeder circuit via switching operations.

London Hydro’s system operators will endeavor to keep the COL Facility electricians apprised of the status of remedial repairs and the expected time when the COL Greenway ORC may be reconnected in parallel.

In all cases the COL Greenway Facility electricians must contact London Hydro’s System Operating Centre prior to reconnection to ensure the cause has been found and it is safe to reconnect.

7.2 Failure of Freewave Radio Protection Circuit

As noted in Section 5.2, failure of the TT/DGEO Freewave radio protection circuit that interconnects the COL Greenway substation with Talbot T.S. will result in annunciation and separation of the ORC from London Hydro’s distribution system if the condition prevails for more than a predefined duration.

Once repairs are completed, arrangements may be made to reconnect the ORC in parallel with London Hydro’s distribution system in accordance with established protocols for such activities.

With respect to responsibility for the work and costs associated with breakdown maintenance:

- If maintenance or repair is required on the Freewave radio protection terminal equipment located at the COL Greenway facility, the COL will bear all incurred costs.
- If maintenance is required on the Freewave radio protection terminal equipment located within Talbot T.S., Hydro One will bear all incurred costs.

8 PROVISION OF INFORMATION

8.1 Maintenance Records

The COL shall maintain records setting out the results of all performance testing and monitoring conducted to demonstrate compliance with the Agreement for seven (7) years from the date of the testing or monitoring activity and shall make those records available to London Hydro upon request.

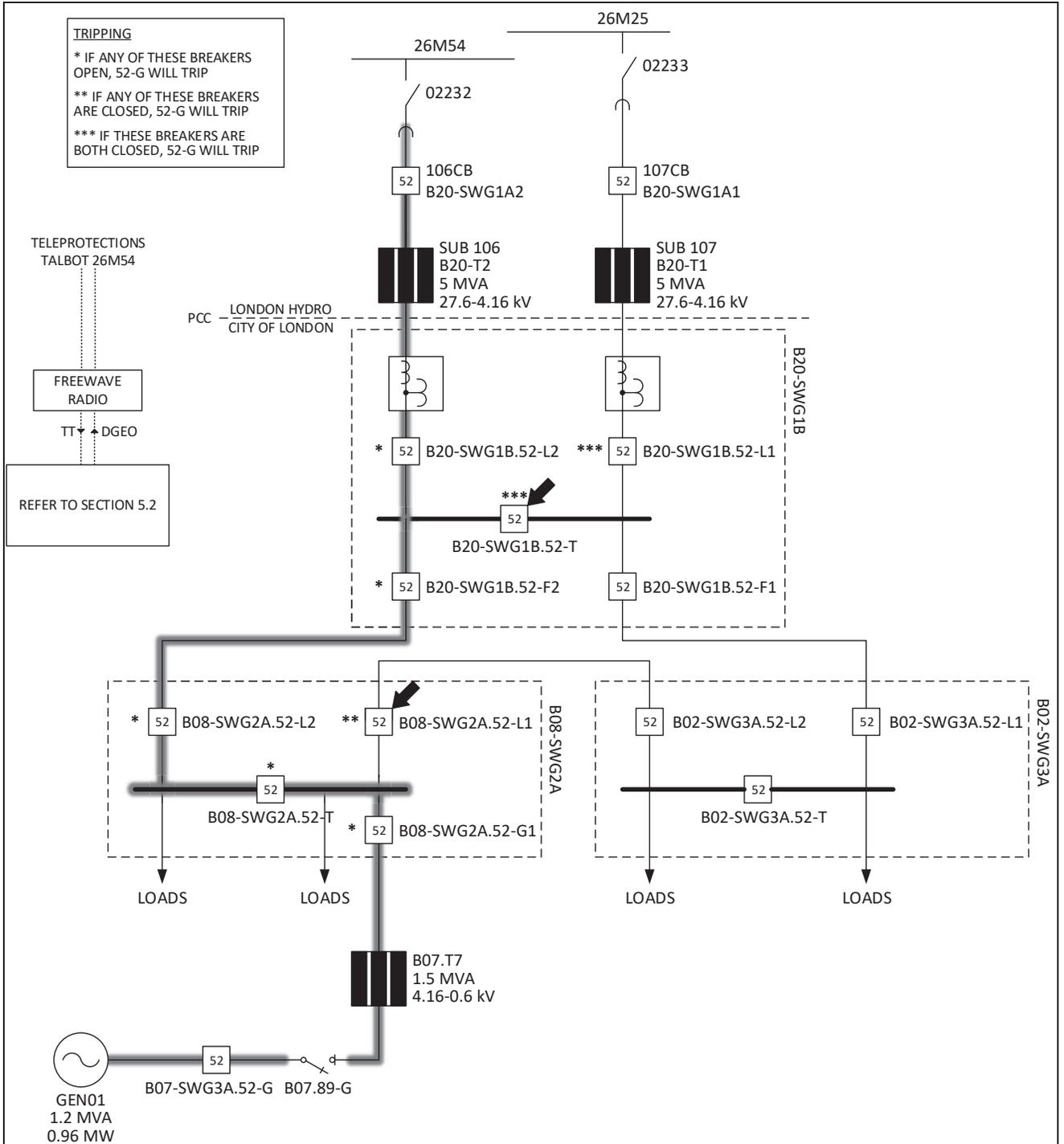
8.2 Revenue Metering Data Via the Commerce App

For help with access to information on your revenue meter please contact London Hydro’s Customer Relationship Manager for a demonstration.



Appendix A

Common Operating Diagram



Appendix B
Supplementary Operating Memorandum



Supplementary Operating Memorandum: #1

Subject:

Effective Date:

**Example
Only**

Authorizations:

Rolf Reiners
London Hydro Inc.

Name
City of London Inc.

◆ - - - ◆

Appendix C

Metering Terms and Conditions

City of London (COL) and London Hydro Inc.

1. **London Hydro Responsibility:** London Hydro will be responsible for installation, maintenance, commissioning, replacements, testing, MC-sealing and ongoing routine maintenance of the Point of Common Coupling (PCC) main meter. The Primary meter is also used for SCADA communications to London Hydro Operations. London Hydro reserves the right to perform tests at any time on the meter.

London Hydro will be responsible for all metering costs including but not limited to current transformers (CT's), potential transformers (PT's); electric meters; internal communications system and equipment; failed equipment replacement will result in a bill for time and materials; all spare equipment and storage; MC-sealing; exchange and replacements; and all related metering system costs, initially and on an ongoing basis.
2. **Trouble Call Communications:** Trouble calls for inability to communicate to or from external stakeholders such as London Hydro or Hydro One, will be directed to London Hydro and their qualified meter technician.
3. **Metering and Physical Access:** The metering cabinet and IT compartment must be locked and under London Hydro access control with a London Hydro lock.

Appendix D

Telephone Contact Information

London Hydro Inc.	
• System Operator (routine)	519-661-5800 Ext. 5585
• System Operator (emergency)	519-661-0480
• System Operating Supervisor (Rolf Reiners)	519-661-5800 Ext. 5450
• Manager Operations Engineering (Hassan El-Madhoun)	519-661-5800 Ext. 5853
•	
City of London	
• Normal Business Hours Contact (Chief Operator)	<u>519-661-2489 Ext. 1008</u>
• After Hours Contact (Chief Operator)	519-661-2489 Ext 1008
• Greenway Control Room	519-808-2455
• Supervisor of Operations (Chris McKenzie)	519-808-3432
• Manager of Operations (Mark Spitzig)	519-808-2760

SCHEDULE E

Billing and Settlement Procedures (section 5.3)

E RATES AND CHARGES

E.1 Competitive Charges to London Hydro

The London Hydro meters will be used as the basis for deriving monthly Totalized Net Bills (one billing account). London Hydro shall comply with RSC, HONI TRS, DSC, IESO market rules (Global adjustments) and OEB approved London Hydro Rate Orders (and all other applicable statutes, regulations, rules, codes and guidelines) in calculating the settlement costs. The Customer will make payment for total net charges within London Hydro's payment terms the same as any other distribution customer.

When the London Hydro settlement meter is not located at the Connection Point London Hydro shall determine and make adjustments to the measured quantities to reflect the inherent transformation and/or line losses, as defined in the London Hydro COS, IESO market rules, OPA rules and RSC, where applicable. For Capacity Power delivered from the Generator at the Connection Point to London Hydro, in excess of General Power supplied by London Hydro to the Generator in a given settlement hour, London Hydro shall settle with and make payments to the Generator in respect of the Capacity Power delivered by the Generator to London Hydro. The Generator has an opportunity, but not an obligation, to deliver Capacity Power to London Hydro. London Hydro agrees to purchase all Capacity Power delivered at the Delivery Point. London Hydro shall pay the Generator for all such delivered Capacity Power in a given settlement hour at HOEP, as per Section 3.2 of the RSC.

E.2 Competitive Charges to the Generator

The Generator shall settle with and make all payments to London Hydro in respect of the General Power supplied by London Hydro to the Generator. The Generator shall pay London Hydro for all such delivered General Power in a given settlement hour using the Customer Supply Option rules defined in either the RSC, SSSC, or retailer contract.

E.3 Non-Competitive Charges to the Generator

The Generator shall pay to London Hydro the demand and energy regulated charges for General Power using the OEB approved London Hydro regulated rates and more particularly described in London Hydro's documented COS. All non-competitive charges are applied against the General Power.

E.4 Taxes

The Generator shall pay to London Hydro and London Hydro shall pay to the Generator, as the case may be, the full amount of all Harmonized Sales Tax, Value-Added Taxes, Business Transfer Taxes, and/or any other taxes which may be imposed upon the rates and charges from time to time by any Governmental authority.

E.5 Billing Statements

London Hydro shall prepare a Totalized Net Bill for the Billing Period showing the amount billed for Power delivered and Power received as soon as practical after the end of the Billing Period (approximately 11 business days is typically required to determine the settlement prices, outlined in the RSC), and such Total Net Bill shall be remitted to the Generator with payment to be due (either to London Hydro, or to the Generator, as the case may be) within sixteen (16) days after the date of issue. London Hydro shall forward such Total Net Bill to the Generator forthwith after issue. If payment is not paid by the Generator by the due date, it shall be subject to interest and penalty charges and or disconnection for late payment on the same basis as other distribution customers of London Hydro.

E.6 Adjustment of Rates and Charges

The London Hydro OEB approved regulated rates and charges may be revised from time to time.

SCHEDULE G

Dispute Resolution (section 16.1)

- G.1 The Party claiming a dispute will provide written notice to the other Party. The Parties will make reasonable efforts through or by their respective senior executives to resolve any dispute within sixty days of receipt of such notice.
- G.2 The nature of the dispute may require civic administration of the City to obtain instructions from Council or delegated authority to bind the City. If a dispute is settled by the senior executives of the Parties, the Parties shall prepare and execute minutes setting forth the terms of the settlement. Such terms shall bind the Parties. The subject-matter of the dispute shall not thereafter be the subject of any civil or other proceeding, other than in relation to the enforcement of the terms of the settlement. If a Party fails to comply with the terms of settlement, the other Party may submit the matter to arbitration under section G.3. A copy of the minutes referred to in this section from which all confidential information has been expunged shall be made available to the public by London Hydro upon request.
- G.3 If the senior executives of the Parties cannot resolve the dispute within the time period set out in section G.1 or such longer or shorter period as the Parties may agree, either Party may submit the dispute to binding arbitration under sections G.4 to G.8 by notice to the other Party.
- G.4 The Parties shall use good faith efforts to appoint a single arbitrator for purposes of the arbitration of the dispute. If the Parties fail to agree upon a single arbitrator within ten working days of the date of the notice referred to in section G.3, each Party shall within five working days thereafter choose one arbitrator. The two arbitrators so chosen shall within fifteen working days select a third arbitrator.
- G.5 Where a Party has failed to choose an arbitrator under section G.4 within the time allowed, the other Party may apply to a court to appoint a single arbitrator to resolve the dispute.
- G.6 A person may be appointed as an arbitrator if that person:
- (a) is independent of the Parties;
 - (b) has no current or past substantial business or financial relationship with either Party, except for prior arbitration; and
 - (c) is qualified by education or experience to resolve the dispute.
- G.7 The arbitrator(s) shall provide each of the Parties with an opportunity to be heard orally and/or in writing, as may be appropriate to the nature of the dispute.
- G.8 The *Arbitration Act, 1991* (Ontario) shall apply to an arbitration conducted under this Schedule G.
- G.9 The decision of the arbitrator(s) shall be final and binding on the Parties and

- may be enforced in accordance with the provisions of the *Arbitration Act, 1991* (Ontario). The Party against which the decision is enforced shall bear all costs and expenses reasonably incurred by the other Party in enforcing the decision.
- G.10 A copy of the decision of the arbitrator(s) from which any confidential information has been expunged shall be made available to the public by London Hydro upon request.
- G.11 Subject to section G.12, each Party shall be responsible for its own costs and expenses incurred in the arbitration of a dispute and for the costs and expenses of the arbitrator(s) if appointed to resolve the dispute.
- G.12 The arbitrator(s) may, if the arbitrator(s) consider it just and reasonable to do so, make an award of costs against or in favour of a Party to the dispute. Such an award of costs may relate to either or both the costs and expenses of the arbitrator(s) and the costs and expenses of the Parties to the dispute.
- G.13 If a dispute is settled by the Parties during the course of an arbitration, the Parties shall prepare and execute minutes setting forth the terms of the settlement. Such terms shall bind the Parties, and either Party may request that the arbitrator(s) record the settlement in the form of an award under section 36 of the *Arbitration Act, 1991* (Ontario). The subject-matter of the dispute shall not thereafter be the subject of any civil or other proceeding, other than in relation to the enforcement of the terms of the settlement.
- G.14 If a Party fails to comply with the terms of settlement referred to in section G.13, the other Party may submit the matter to arbitration under section G.3 if the settlement has not been recorded in the form of an award under section 36 of the *Arbitration Act, 1991* (Ontario).
- G.15. A copy of the minutes referred to in section G.13 from which all confidential information has been expunged shall be made available to the public by London Hydro upon request.
- G.16 The Parties may not, by means of the settlement of a dispute under section G.2 or section G.13, agree to terms or conditions that are inconsistent with or contrary to the Code or this Agreement.

SCHEDULE F

Contacts for Notice (section 12.1)

Telephone Contact Information

London Hydro Inc.		
•	System Operator (routine)	519-661-5800 Ext. 5585
•	System Operator (emergency)	519-661-0480
•	Operations Supervisor (Rolf Reiners)	519-661-5800 Ext. 5450
•	Distribution Engineer (Hassan El-Madhoun)	519-661-5800 Ext. 5853
•		
City of London		
•	Normal business hours contact (Chief Operator)	519-661-2489 Ext. 1008
•	After hours contact (Chief Operator)	519-661-2489 Ext. 1008
	Greenway Control Room	519-808-2455
•	Supervisor of Operations (Chris McKenzie)	519-808-3432
•	Manager of Operations (Mark Spitzig)	519-808-2760

Parties to Receive Notices

If to Generator:

City of London (Greenway WWTP)
109 Greenside Avenue
London, Ontario
N6J 2X5

Attention: Kirby Oudekerk P.Eng., Division Manager
Email: koudeker@london.ca
Mark Spitzig, Manager of Operations
Email: mospitzig@london.ca

If to London Hydro:

London Hydro Inc.
111 Horton Street
London, Ontario
N6A 4H6

Attention: William A. Milroy, P.Eng., V.P. of Engineering & Operations
Email: milroyw@londonhydro.com

SCHEDULE H

Provisions Applicable if Facility Financed by a Lender (sections 19.3, 20.3 and 21.1)

- H.1 For the purposes of this Schedule, "lender" means a bank or other entity whose principal business is that of a financial institution and that is financing or refinancing the Facility.
- H.2 Where notice of a Default has been served on the Generator under section 19.3, an agent or trustee for and on behalf of a lender ("Security Trustee") or a receiver appointed by the Security Trustee ("Receiver") shall upon notice to London Hydro be entitled (but not obligated) to exercise all of the rights and obligations of the Generator under this Agreement and shall be entitled to remedy the Default specified in the notice within the applicable cure period referred to in section 19.4. London Hydro shall accept performance of the Generator's obligations under this Agreement by the Security Trustee or Receiver in lieu of the Generator's performance of such obligations, and will not exercise any right to terminate this Agreement under section 19.3 due to a Default if the Security Trustee, its nominee or transferee, or the Receiver acknowledges its intention to be bound by the terms of this Agreement and such acknowledgment is received within 30 days of the date of receipt by the Generator of the notice of Default.
- H.3 The Generator may, without the prior written consent of London Hydro, assign by way of security only all or any part of its rights or obligations under this Agreement to a lender. The Generator shall promptly notify London Hydro upon making any such assignment.
- H.4 The Generator may disclose confidential information of London Hydro to a lender or a prospective lender.

Bill No. [no. inserted by Clerk's Office]
2021

By-law No. [inserted by Clerk's]

A By-law to authorize the Mayor and City Clerk to execute an Agreement between The Corporation of the City of London and the local power distribution company (London Hydro) with respect to the connection of power generation at Greenway Wastewater Treatment Plant.

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 the Municipal Council deems it appropriate for The Corporation of the City of London (the "City") and the local power distribution company ("London Hydro") to enter into an agreement to allow for power generation at the Greenway Wastewater Treatment Plant;

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

1. The Mayor and City Clerk are hereby authorized to execute the Connection Agreement with the local power distribution company (London Hydro) as it relates to the commissioning and operation of the Organic Rankine Cycle power generation from waste heat system at Greenway Wastewater Treatment Plant, attached hereto as Schedule 'A'.
2. This by-law comes into force and effect on the day it is passed.

PASSED in Open Council on August 10, 2021.

Ed Holder
Mayor

Catharine Saunders
City Clerk

First Reading –
Second Reading –
Third Reading –

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: RFT 21-51 Supply and Delivery of Steel Guiderail and Accessories
Date: June 27, 2021

Recommendation

That, on the recommendation of the Deputy City Manager, Environment & Infrastructure the following actions **BE TAKEN** with respect to the tender RFT 21-51, Supply and Delivery of Steel Guiderail and Accessories:

- a) approval hereby **BE GIVEN** to enter into an eight month contract, with four (4) one year options for the Supply and Delivery of Steel Guiderail and Accessories to Royal Fence Limited at the quoted price of \$478,840.00, it being noted that this is an irregular result where pricing exceeds the budget but award can proceed in accordance with the Procurement of Goods and Service Policy, Section 8.10 a);
- b) the Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, as required, to give effect to these recommendations; and,
- c) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this contract.

Linkage to the Corporate Strategic Plan

This report supports the Strategic Plan in the following areas:

- Building a Sustainable City:
 - Infrastructure is built, maintained and operated to meet the long-term needs of our community; and,
 - Growth and development is well planned and sustainable over the long term
- Leading in Public Service:
 - Exceptional and valued customer service; and,
 - Leader in public service as an employer and a steward of public funds.

Background

The City of London's Road Operations Service maintains steel guide rail and post and cable infrastructure within the road allowance. There are approximately 100 locations throughout the city and repairs are required due to traffic collisions or the age of the infrastructure. Maintenance of these roadside safety devices are an important for road safety and risk management.

Discussion

Purchasing Process

The tender for the Supply and Delivery of Steel Guiderail and Accessories was posted on April 21, 2021 and closed May 6, 2021. Two contractors submitted tender prices as listed below, excluding HST.

CONTRACTOR		TENDER PRICE SUBMITTED
1.	Royal Fence Limited	\$474,840.00
2.	Peninsula Construction Inc.	\$550,208.40

The tender submissions have been checked by Environment & Infrastructure and Purchasing and Supply staff. The results of the tendering process reflect a competitive process. The submitted low bid by Royal Fence Limited meets the tender requirements.

The tender result exceeds the \$350,000 operation budget line item for this service so is being reported as an irregular result. The tender results and award of this contract is in the best interests of the Corporation. A portion of this service is conducted on a cost-recovery basis for which the cost of collision repairs are recovered through insurance claims with no impact on City budget. Additionally, the City-led work is scalable to the operational budget available. The irregular result can be accepted through Procurement of Goods and Services Policy, section 8.10 a) whereby Committee and City Council shall approve the award where the value of the lowest compliant bid is in excess of the City Council approved budget including any contingency allowance.

Financial Impact

Funding for the current year has been included in the 2021 operating budget and will be requested in future operating budget submissions. This contract can be managed within the funds available. The collision repair portion of this service is cost-recoverable and the City asset management component is scalable using the items in the contract.

Conclusion

Maintenance of roadside safety devices is an important asset and risk management service. Civic Administration has reviewed the results of the tender bids and recommends Royal Fence Limited as the supplier that provides the best value. The expenditures under this unit-price contract will be managed within the budget available.

Prepared by: John Parsons, C.E.T.
Division Manager, Road Operations

Submitted By: Doug MacRae, P.Eng., MPA
Director, Transportation & Mobility

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

c: John Freeman, Manager of Purchasing and Supply
Royal Fence Limited, 2309 Westchester Bourne, Dorchester ON, N0L1G0

Report to Civic Works Committee

To: Chair and Members
Civic Works Committee

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

Subject: Emergency Purchase of a MagnaDrive Adjustable Speed Drive

Date: July 27, 2021

Recommendation

That, on the recommendation of the Deputy City Manager, Environment & Infrastructure, the following actions be taken with respect to the emergency, non-competitive purchase of a MagnaDrive Adjustable Speed Drive for the Southeast Reservoir and Pumping Station:

- a) The purchase order for the purchase of a MagnaDrive Adjustable Speed Drive from SCG Process under Section 14.2 of the Procurement of Goods and Services Policy at a total price of \$94,382.00 (HST excluded), **BE CONFIRMED**; and
- b) The financing for this project **BE APPROVED** as set out in the Sources of Financing Report attached hereto as Appendix 'A'.

Executive Summary

Purpose

This report informs Committee and Council of an Emergency Purchase made under section 14.2 of the Procurement of Goods and Services Policy. A critical mechanical component, common to all the larger pumps within Southeast Pumping Station, has prematurely failed in all the larger pumps.

Context

London's Southeast Reservoir and Pumping Station transfers all drinking water received from the Elgin Area Primary Water Supply System into the City of London Drinking Water System. The station consists of four larger pumps and two smaller pumps. In early May 2021, premature failure was discovered on four key components that are common to all four larger pumps. All four larger pumps are inoperable until replacement components can be sourced and installed. While the ongoing investigation into all remediation options continues, City Administration decided that one of the larger pumps must be returned to service as soon as possible to maintain operational preparedness. To accomplish this goal, an Emergency Purchase of one replacement component identical to the original four components was made under section 14.2 of the Procurement of Goods and Services Policy.

Linkage to the Corporate Strategic Plan

This report supports the 2019 – 2023 Strategic Plan through the strategic focus area of Building a Sustainable City, by ensuring that London's infrastructure is built, maintained, and operated to meet the long-term needs of our community.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

None

1.2 Emergency Procurement

The Procurement of Goods and Services Policy outlines the processes that Civic Administration is required to follow to obtain the best value when purchasing goods or contracting services. In the event of an “Emergency”, section 14.2 Procurement in Emergencies permits Civic Administration to purchase goods/services under “Emergency” conditions in a non-competitive manner. In this section, “Emergency” means:

“an event or occurrence that the City Manager or Managing Director deems an immediate threat to:

- *Public Health;*
- *The maintenance of essential City services; or*
- *The welfare and protection of persons, property, or the environment; and the event or occurrence necessitates the immediate need for goods or services to mitigate the emergency and time does not permit for a competitive procurement process.”*

When section 14.2 is used, Civic Administration is required to follow defined protocols, and the emergency procurement must be reported to Committee and Council.

2.0 Discussion and Considerations

The City of London receives approximately 15% of its drinking water from the Elgin Area Primary Water Supply System (EAPWSS). Water is pumped to London through large-diameter watermains and received into the Southeast Reservoir. Water is then pumped into London’s network of watermains from the Southeast Reservoir by the Southeast Pumping Station.

The Southeast Pumping Station and Reservoir (SERPS) began service in September 2017. The station utilizes four larger pumps powered by 500 Hp electric motors and two smaller pumps powered by 150 Hp motors. The amount of water delivered by the larger pumps is controlled by a component called an Adjustable Speed Drive (ASD). In early May 2021, Water Operations staff noticed that the ASD on one of the larger pumps had failed. A subsequent investigation revealed that all four large pumps were experiencing the same premature failure and could no longer be used safely.

Upon discovering the damage, the four larger pumps were locked out of service and the control software for the station was modified to increase the pumping capacity of the two smaller pumps. Technical consultations were initiated with the ASD’s manufacturer, MagnaDrive Corporation in Bellevue, Washington, USA. The cause of the failures remains unknown. The most severely damaged unit was shipped to the manufacturer on May 12, 2021 for analysis to help determine the cause of the failure and to assess whether repairs are feasible and practical.

It is hoped that the manufacturer’s assessment will provide valuable guidance in determining next steps. This assessment has been delayed due to significant delays at the Canada/US border. At the writing of this report, the City has received information stating that the unit may cross the border on Friday, June 25, 2021 (more than six weeks after shipping).

3.0 Key Issues and Considerations

Through internal discussions, City Administration agreed that the primary goal is to return one of the larger pumps to service at SERPS as soon as possible. Although the two smaller pumps can provide the normal daily volume of water required from SERPS, there is no ability to pump significantly more water. Any unforeseen mechanical issues with either of the two small pumps at SERPS could adversely impact the City’s ability to

meet water demands.

City administration determined that the most prudent course of action would be to purchase one new MagnaDrive ASD from SCG Process. This purchase will provide the quickest return to service of one larger pump at SERPS and provide time to perform further analysis regarding the cause of the failures and the best course of action for the three remaining larger pumps.

On June 16, 2021, a Purchase Order was issued to SCG Process in the amount of \$94,382.00 (pre-taxes) for the purchase of one new replacement MagnaDrive ASD. The shipping date for the new ASD is August 19, 2021.

4.0 Financial Impact/Considerations

Sufficient funding for the purchase of the new Adjustable Speed Drive exists within the Southeast Pumping Station Optimization & Renewal Annual Program. Additional sources of funding may be required when the longer-term plan for the other three larger pumps is finalized, and these developments will be reported to Committee.

Conclusion

Sudden premature failure of identical mechanical pump components on four separate pumps at London's Southeast Reservoir and Pumping Station has impacted operational capacity to meet London's water demands. Although sufficient pumping capacity remains to meet London's needs, the ability to mitigate further unexpected water supply challenges has been significantly diminished. An emergency purchase of one component identical to the four failed components was deemed to be the most prudent course of action to restore pumping capacity while investigating the cause of the component failure and determining the most appropriate actions regarding the long-term remediation of the failed components.

Prepared by: John Simon, P.Eng.
Division Manager, Water Operations

Submitted by: Scott Mathers, MPA, P. Eng.
Director, Water, Wastewater & Stormwater

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

Appendix 'A' Sources of Financing

cc: Dan Huggins, Water Quality Manager
John Freeman, Manager III, Purchasing and Supply
Zeina Nsair, Financial Business Administrator, Finance and Corporate Services

Appendix "A"

#21118

July 27, 2021

(Award Contract)

Chair and Members
Civic Works Committee

RE: Emergency Purchase of a MagnaDrive Adjustable Speed Drive
(Subledger FWSSERPE)
Capital Project EW110420 - Southeast Pumping Station Optimization and Renewal
SCG Process - \$94,382.00 (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
Construction	100,000	96,043	3,957
Total Expenditures	\$100,000	\$96,043	\$3,957
Sources of Financing			
Drawdown from Water Works Renewal Reserve Fund	100,000	96,043	3,957
Total Financing	\$100,000	\$96,043	\$3,957

Financial Note:

Contract Price	\$94,382
Add: HST @13%	12,270
Total Contract Price Including Taxes	106,652
Less: HST Rebate	-10,609
Net Contract Price	\$96,043

Jason Davies
Manager of Financial Planning & Policy

jg

Report to Civic Works Committee

To: Chair and Members
Civic Works Committee

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

Subject: Renewal of the Lead Service Extension Replacement Loan Program

Date: July 27, 2021

Recommendation

That, on the recommendation of the Deputy City Manager, Environment and Infrastructure, the proposed amending by-law to the “By-law to provide for a Lead Service Extension Replacement Loan Program” for owner-occupied dwellings of three or less dwelling units”, attached as Appendix “A”, **BE INTRODUCED** at the Municipal Council meeting on August 10, 2021.

Executive Summary

Purpose

The purpose of this report is to extend the amending by-law for the Lead Service Extension Loan Program.

Context

The Lead Service Extension Loan Program provides financial assistance to the owners of owner-occupied dwellings consisting of three or less dwelling units who wish to have their lead water service extension lines replaced. The program expired on December 31, 2020. It is supported through an existing reserve fund with an adequate uncommitted balance (approximately \$118,000) to provide assistance to qualified loan applicants. Due to continued concerns regarding lead water piping, and the continued public demand for assistance, it is being recommended that the program be extended to accommodate all qualified loan applicant requests.

Linkage to the Corporate Strategic Plan

This recommendation supports the following 2019-2023 Strategic Plan areas of focus:

- Leading in Public Service:
 - Trusted, open, and accountable in service of our community;
 - Exceptional and valued customer service; and
 - Leader in public service as an employer, a steward of public funds, and an innovator of service.
- Strengthening Our Community:
 - access to the services and supports that promote well-being, health, and safety in their neighbourhoods and across the city
- Building a Sustainable City:
 - London’s infrastructure is built, maintained, and operated to meet the long-term needs of our community

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

The reports listed below can be found at www.london.ca/d.aspx?s=/Meetings/ccminutes.htm :

- Renewal of the Lead Service Extension Replacement Loan Program, November 3, 2015, Environment & Transportation Committee, Agenda Item #20;
- Extension of the Lead Service Extension Replacement Loan Pilot Program, August 23, 2010, Environment & Transportation Committee, Agenda Item #20;
- Extension of the Lead Service Extension Replacement Loan Pilot Program, August 11, 2008, Environment & Transportation Committee, Agenda Item #2;
- Facilitating Replacement of Lead Services – Lead Service Extension Replacement Loan Program, July 9, 2007, Environment & Transportation Committee, Agenda Item #5.

2.0 Discussion and Considerations

2.1 Background

The water in London's Distribution System has very low to undetectable levels of lead, but many homes built before 1953 are connected to the distribution system by lead water services. The water service is the pipe that conveys water from the City's watermain to the plumbing in the customer's house. Water services run across both public and private property. The public portion runs from the watermain to the property line, and the private portion runs from the property line to the building. As water travels through lead service pipes, it has the ability to uptake lead; and in some cases, the lead levels can exceed the Provincial Standard. Complete lead service replacement is the most effective method of reducing lead levels in drinking water.

The Lead Service Extension Loan Program was created to provide financial assistance for the replacement of lead water services for owner-occupied homes. When a property owner chooses to replace their lead service extension (located on private property), the City, concurrently replaces the lead piping located on City property, at no additional cost to the homeowner.

As stated in previous reports, Civic Administration is continuing to employ a three-pronged approach to address elevated lead levels in the drinking water of Londoners with lead service pipes:

- education and awareness;
- replacement of lead services; and
- adjustments to the water treatment process at the regional water supply system facilities.

Approximately 90 applications have been approved and processed through the Lead Service Extension Loan Program since its inception (September 2007). The City has replaced approximately 5,500 water services (public portion) during the same time period, through various Capital Works projects, and by one-off individual customer requests. Many homeowners have replaced their portion without utilizing the City's financial assistance, although there continues to be interest to access this service. The average loan amount for program participants has been approximately \$2,000. Despite

the low uptake, this service continues to be warranted due to public health interest and reliance on the program.

3.0 Financial Impact/Considerations

The Lead Service Extension Loan Program is supported through the Lead Service Replacement Program Reserve Fund which has an uncommitted balance of approximately \$118,000 to provide loans to qualified applicants. The loan amounts are transferred to the applicant's tax roll, providing the City a convenient method to collect repayment of the loan over a ten-year period. At the current application processing rate, along with the loan repayments being made to the reserve fund, it is anticipated that the existing reserve fund balance will be sufficient to carry the program for approximately the next decade.

Loan amounts are subject to interest charges. For an average loan of \$2,000, at the current interest rate charge, this would result in approximately \$200 in interest paid by the homeowner to the City over the course of the ten-year loan.

4.0 Key Issues and Considerations

Since the expiration of the Lead Service Extension Loan Program on December 31, 2020, there has been continued interest from citizens who wish to partake in the loan program. Given that the existing reserve fund has sufficient funding, and in order to provide benefit to those who have requested assistance in 2021, it is recommended to allow retroactive cost coverage for these applications.

Conclusion

It is recommended that the Lead Service Extension Loan Program be extended to continue providing financial assistance to qualified loan applicants as requested, and that cost coverage be extended retroactively to January 1, 2021. Interest in the program is low, but consistent. It is prudent to continue the program to provide financial assistance to those seeking it, recognizing the associated public health interest and utilizing the funds available to this program.

Prepared by: John Simon, P.Eng., Division Manager, Water Operations

Submitted by: Scott Mathers, MPA, P. Eng., Director, Water, Wastewater, and Stormwater

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

Appendix 'A' Lead Service Extension Replacement Loan Program By-law

CC: Scott Koshowski, P.Eng, Water Operations Engineer
Jason Davies, CPA, CMA, Manager III, Financial Planning & Policy

Bill No.
2021

By-law No.

A By-law to amend By-law No. A.-6123-196, as amended, entitled "A By-law to provide for a Lead Service Extension Replacement Loan Program Pilot Project for owner-occupied dwellings of three or less dwelling units.

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 Council considers it to be in the interests of the Municipality to continue the Lead Service Extension Replacement Loan Program Pilot Project;

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

1. Schedule "A" of By-law No. A.-6123-196 is amended by deleting it in its entirety.
2. This by-law includes the new Schedule "A" attached hereto and the Schedule is hereby declared to form part of this by-law.
3. That the Program is retroactive and shall apply to any approved lead service extension replacements dated on, or after, January 1, 2021, prior to the coming into force of this by-law.
4. This by-law shall come into force and effect on August 10, 2021 and shall be repealed at such time as when all lead service stubs have been replaced or when there is no longer any funding for the Project.

PASSED in Open Council August 10, 2021

Ed Holder
Mayor

Cathy Saunders
City Clerk

First reading - August 10, 2021
Second reading – August 10, 2021
Third reading – August 10, 2021

Schedule “A”

Lead Service Extension Replacement Loan Program Project Guidelines

Purpose

Some homes in London built before the mid-1950s have lead levels in their water that are higher than Provincial Standards. Many of these homes have lead water service pipes running from the City’s water main in the street into the home. The City’s goal at this time is to replace the City’s service stub (located on City property) in conjunction with the property owner replacing the service extension (located on private property), subject to availability of funds. During this project, the property owner may be eligible for a loan to replace the owner’s portion of the water service pipe. Such loan is only available to residential properties consisting of three or less dwelling units.

Definitions

“*Contractor*” means the person hired by the owner to conduct the work;

“*dwelling*” means a building containing one to three dwelling units;

“*dwelling unit*” has the same meaning as contained in the City’s Zoning By-law;

“*owner*” means an owner in fee simple under the *Land Titles Act*, R.S.O. 1990, c. L.5;

“*property*” means a separate parcel of land which has been assigned a property identifier under section 141 of the *Land Titles Act*, R.S.O. 1990, c. L.5;

“*service extension*” means the portion of a water service pipe located on private property from the property line to the meter location, or for a fire service to the inside of the exterior wall of a structure, ie. an extension of a service stub;

“*service stub*” means the portion of a water service pipe located on City property from a main to the property line which will always include one control valve;

“*water service pipe*” means the pipe and fittings that convey potable water from a connection on a main or private main to the meter location, or, for a fire service, to the inside of the exterior wall of a structure.

Funding

The Program will be funded in an amount determined by Council in its sole discretion from time to time, which will be placed in an interest-bearing revolving loan fund which will receive loan payments and accumulate interest. The cost of lien registrations, discharges, loan defaults, and promotional costs will be a charge to this fund. Loan commitments will be provided subject to funding availability as determined by Council at its sole discretion from time to time.

Eligible Work

The only work that is eligible for this Program is the replacement of service extensions by the owner that:

- are substantially composed of lead;
- are of the same size as existing or the minimum size for the area; and
- supply residential properties (containing up to three dwelling units).

Eligibility for Loan

The applicant(s) for the loan must meet the following criteria in order to qualify for the Program:

- must be the owner(s) of the property;
- all owners of the property must apply for the loan;
- have obtained a minimum of 3 quotes for the work from *bona fide* qualified Contractors;
- has not commenced replacement of service extension prior to loan approval;
- all property taxes must be paid in full at the time of application and throughout the loan process;
- there must be no other outstanding debts to the City of London;
- the owner(s) must not have defaulted on any City-sponsored loan or grant program in the past;
- the owner(s) must complete and sign the Loan Agreement;
- the owner(s) must meet all conditions of this Program.

Approval of all loan applications is also subject to availability of funding at any given time, as determined by council.

Manufacturing businesses, or industrial or commercial enterprises, are not eligible for this Program.

The Deputy City Manager, Environment and Infrastructure retains the right and absolute discretion to reject any application which provides three or more quotes which in his or her opinion are excessive.

Loan Details

Loans may be available to cover all or part of the estimated cost (as approved and determined by the Deputy City Manager, Environment and Infrastructure) of replacing the owner's service extension (located on private property, from the water meter to the property line). Loans will not be available to cover any other associated costs (e.g. it will not cover the costs of relocating internal plumbing, repaving of an entire driveway, restoration of landscaped yards, or any other such costs that are deemed by the Deputy City Manager, Environment and Infrastructure to be unnecessary for the replacement of the owner's service extension).

The loan if approved will only be paid to the owner upon receipt of invoices for completed work, and inspection of the completed work by City staff under the plumbing permit.

The maximum amount of each loan will be determined in each case by the Deputy City Manager, Environment and Infrastructure, based on the Deputy City Manager, Environment and Infrastructure's determination of the reasonable cost and scope of the proposed work.

The loan amount plus interest will be transferred to the owner's tax roll, over a ten-year period. The loan amount plus interest will be repayable on the final tax installment due dates, and calculated as Local Improvement charges are calculated. Interest rates for this Program must be updated annually, consistent with the timing of updating the Local Improvement interest rates.

Loan approvals are subject to the availability of funding at any given time, as determined by Council. Loan applications will be processed in chronological order based on the date of receipt of applications.

Loan approvals will be valid for six months and will expire if the work is not completed within that time period (unless extended at the Deputy City Manager, Environment and Infrastructure's discretion).

Security

The loan will be added to the owners tax roll, and may also be secured through the registration of a lien on title for the total loan amount. Liens will be noted on the next tax roll. Liens will be registered and discharged by the City.

Repayment of the Loan

Repayments of the loan plus interest will be made through taxes as set out in the agreement signed by the owner(s). Full repayment (including interest) can be made at any time with no penalty to the owner. At the discretion of the City, the loan may be transferable to a new owner provided that the new owner agrees in writing to the terms and conditions of the loan. In the event of default in loan repayment over 30 days, or in the event of sale of the property, the outstanding balance (including principal and interest) may be immediately payable.

Application Procedure

1. The applicant owner(s) will be required to complete an application form provided by the Deputy City Manager, Environment and Infrastructure. Every person who is registered on title as an owner of the property is required to sign the application.

In addition to the completed application form the applicant owner(s) must provide:

- a minimum of 3 quotes for the work from *bona fide* qualified Contractors . The quotes must detail what work is to be done, and separate out costs for each portion of work (i.e. separate line item prices for service extension replacement, driveway restoration, front yard restoration, internal plumbing modifications up to the water meter, etc.). Only prices for service extension replacement are eligible for the loan;
- the Owner(s) will complete and sign the Loan Agreement;
- such other further information or documentation as may be required by the Deputy City Manager, Environment and Infrastructure;
- owner must have City confirm that the service extension material is lead.

Any work that is started or completed prior to the loan application approval will be ineligible under this Program.

2. City reviews application and supporting documentation and decides whether to approve the loan amount, and determines approximately how much the loan amount will be. City advises applicant in writing of its decision.
3. Applicant or Contractor obtains any necessary permits, including a plumbing permit from the City's Building Division (7th Floor, City Hall, 300 Dufferin Avenue, London, 519-661-4555) prior to work commencing. Failure to obtain a plumbing permit prior to work commencing will result in cancellation of any approved loan amounts.
4. The Contractor must co-ordinate work with the City well in advance. The Contractor is responsible to obtain all utility locates for the work for both private property and City property.
5. The Contractor or the applicant must arrange for an inspection by the City with respect to the plumbing permit. Plumbing permits that have not had an inspection by the City will result in cancellation of any approved loan amounts.
6. Within six months of receiving loan approval the owner(s) must submit to the City the final invoice from the Contractor setting out the amount due for the work. Any owner submitting an invoice more than six months after the loan approval will be ineligible for payment of the loan. The City will not provide a loan for an amount greater than the approximate loan amount set out in paragraph 2 above, even where the final invoice is greater than the approximate loan amount.
7. The City may register a lien on the owner's title for the amount of the loan.
8. The City may advance either the invoice amount submitted by the Contractor, or the amount of the approximate loan amount as set out in paragraph 2 above, whichever is less, to the applicant owner(s).

Information to Accompany Application

- complete application form signed by all owners;
- a minimum of 3 quotes for the work from *bona fide* qualified Contractors. The quotes must detail what work is to be done, and separate out costs for each portion of work (i.e. separate line item prices for service extension replacement, driveway restoration, front yard restoration, internal plumbing modifications up to the water meter, etc.). Only prices related to the service extension replacement are eligible for the loan;
- such other further information or documentation as may be required by the Deputy City Manager, Environment and Infrastructure.

Discontinuation of Program

The terms of the Program are subject to change. Council may periodically review the Program Guidelines to determine if the Program should continue, be modified, or cease to issue any new loans. The City may discontinue the Program at any time.

City Not Liable

In order to qualify for a loan, the owner agrees that the City shall not be liable for any damages to the owner's property as a result of any lead service extension replacement.

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: July 27, 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 July 27, 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 August 10, 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. All items have been agreed to with one exception: Section 11.6:

11.6 Customer Indemnity

The Customer will indemnify the Supplier for any loss suffered by the Supplier or its Representatives due to the Customer's breach of this Agreement.

This section as currently stated exposes the Corporation to risk. The removal of this section by Envirosuite was non-negotiable. The provision requires the City hold Envirosuite harmless and indemnify them for negligence or breach of contract.

City staff recommend accepting this requirement as the benefits far outweigh the risk, and the City will mitigate risks associated with the agreement by using risk control measures through optimum levels of oversight, control and insurance.

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.

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



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.

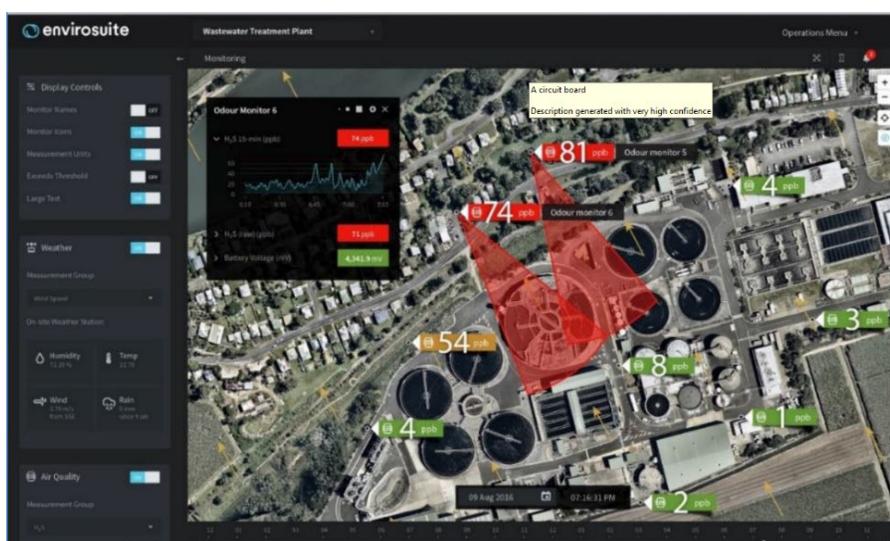
The Metal-Oxide Semiconductor (MOS) odour intensity sensor is an "electronic nose" that provides a second method for detecting odours.

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.

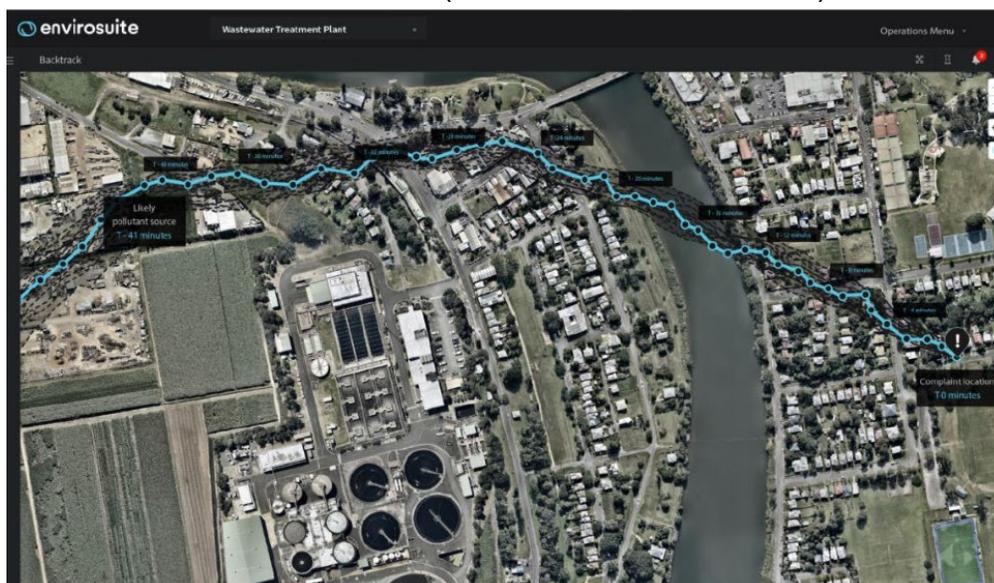
If increased levels of hydrogen sulphide and/or odour intensity are detected by one or more of the sensors, the weather station is used to help to determine where the odours may be coming from, as shown in the example in Figure 2.

**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
July 27, 2021	CWC meeting
August 10	Council approval
Late August	Execution of contract and ordering of equipment <i>(table continues)</i>

Tentative Timeframe	Remaining Steps
August to November	Final coordination with MECP, other project partners, completion of website hosted by Envirosuite
October	Installation of equipment, calibration
November	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

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 August 10, 2021

Ed Holder
Mayor

Catharine Saunders
City Clerk

First Reading – August 10, 2021
Second Reading – August 10, 2021
Third Reading – August 10, 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

- ii. 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 Indemnity

The Customer will indemnify the Supplier for any loss suffered by the Supplier or its Representatives due to the Customer's 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"

#21123

July 27, 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

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.	

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: RFT 21-03 Rental of Winter Maintenance Equipment with
Operator, Sander and Salters with Plow and Wing
Date: July 27, 2021

Recommendation

That, on the recommendation of the Deputy City Manager, Environment & Infrastructure the following actions **BE TAKEN** with respect to the tender RFT 21-03, Rental of Winter Maintenance Equipment with Operator, Sander and Salter with Plow and Wing:

- a) The bids submitted by Mobil Services Inc., S&B Construction Ltd., B and A Davies Paving and Construction Inc., Ferrari Concrete Ltd. and CH Excavating (2013) at their tendered prices **BE ACCEPTED**;
- b) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this contract; and,
- c) Approval 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.

Linkage to the Corporate Strategic Plan

This report supports the Strategic Plan in the following areas:

- Building a Sustainable City:
 - Infrastructure is built, maintained and operated to meet the long-term needs of our community; and,
- Leading in Public Service:
 - Exceptional and valued customer service; and,
 - Leader in public service as an employer and a steward of public funds.

Background

The City of London's Road Operations group provides winter maintenance services as prescribed by O.Reg. 239/02: Minimum Maintenance Standards for Municipal Highways. Salt and Sand are used to provide safe roads and the material is applied using a fleet of rental spreader trucks to supplement the city owned fleet. With this service being seasonal, rental units with operators is required.

Discussion

Purpose

The purpose of this tender was to seek competitive pricing for the Rental of Winter Maintenance Equipment with Operator, Sander and Salter with Plow and Wing. The term is tender is for seven (7) years with fixed hourly operating rates. This contract will replace the previous five-year contract that expired in Spring 2021.

Purchasing Process

Tender 21-03 was posted on April 1, 2021 and closed on June 30, 2021. The tender included a minimum of four units per bidder for improved program management. The tender response exceeded the equipment needs required to deliver service. Six (6) bids

were received for a total of twenty-five (25) units with operators. Twenty-one (21) units were selected from five (5) bidders based on the service needs. An additional unit was added to the roster to accommodate growth. The pricing within the tenders indicates a competitive market. It is anticipated that the recommended bidders will meet all terms and conditions of this tender.

Financial Impact

The tender bids received reflect a significant increase in the hourly rates from the previous tender in 2016. The contract arrangement has traditionally set consistent rates for several years. Given the current contract has been in place for five years, multi-year cost escalation was expected. An additional component of the increase is related to insurance and resources required to provide this service. Specific feedback from bidders advised that the cost to obtain and retain insurance for this activity is a pressure.

The anticipated expenditure through this contract is estimated to be \$4,000,000 annually and is subject to annual variance based on winter conditions. Funding for the current year has been included in the 2021 operating budget and future budget forecasts.

The impact of renewing multi-year winter maintenance service contracts has been identified as a budget pressure. The total winter operating budget is \$16,613,000. In preparing for this impact, other cost pressures and service enhancements, the current base budget represents a \$2 M increase over the previous multi-year budget.

Conclusion

Winter road operations in accordance with O.Reg. 239/02: Minimum Maintenance Standards for Municipal Highways is an important service for mobility, road safety and risk management. The City manages this service with a combination of in-house and contracted service that provides service flexibility and resource allocation.

Civic Administration has reviewed the results of the tender bids and recommends tender acceptance based on competitive pricing and value to the City.

Prepared By: **John Parsons, C.E.T.**
Division Manager, Road Operations

Submitted By: **Doug MacRae, P.Eng., MPA**
Director, Transportation & Mobility

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

c: John Freeman, Manager of Purchasing and Supply
 Mobil Services Inc., 5 Bayview Court, London, ON, N5W 5W4
 S&B Construction Ltd., 36312 Talbot Line, Shedden, ON, N0L 2E0
 B and A Davies Paving and Construction Inc. 5279 Colonel Talbot Rd., London,
 ON, N6P 1H8
 Ferrari Concrete Ltd., 5606 Westdel Bourne, London, ON, N6P 1P3
 CH Excavating (2013), 4201 Blakie Rd., London, ON, N6L 1B9

DEFERRED MATTERS

CIVIC WORKS COMMITTEE

as of July 19, 2021

File No.	Subject	Request Date	Requested/Expected Reply Date	Person Responsible	Status
1.	<p><u>Rapid Transit Corridor Traffic Flow</u> That the Civic Administration BE DIRECTED to report back on the feasibility of implementing specific pick-up and drop-off times for services, such as deliveries and curbside pick-up of recycling and waste collection to local businesses in the downtown area and in particular, along the proposed rapid transit corridors.</p>	December 12, 2016	Q3, 2021	K. Scherr J. Dann	
2.	<p><u>Garbage and Recycling Collection and Next Steps</u> That, on the recommendation of the Managing Director, Environmental and Engineering Services and City Engineer, with the support of the Director, Environment, Fleet and Solid Waste, the following actions be taken with respect to the garbage and recycling collection and next steps: ii) an Options Report for the introduction of a semi or fully automated garbage collection system including considerations for customers and operational impacts.</p>	January 10, 2017	Q1, 2022	K. Scherr J. Stanford	
3.	<p><u>Bike Share System for London – Update and Next Steps</u> That, on the recommendation of the Managing Director, Environmental and Engineering Services and City Engineer, the following actions be taken with respect to the potential introduction of bike share to London: that the Civic Administration BE DIRECTED to finalize the bike share business case and prepare a draft implementation plan for a bike share system in London, including identifying potential partners, an operations plan, a marketing plan and financing strategies, and submit to Civic Works Committee by January 2020; it being noted that a communication from C. Butler, dated August 8, 2019, with respect to the above matter was received.</p>	August 12, 2019	Q3, 2021	K. Scherr J. Stanford	

File No.	Subject	Request Date	Requested/Expected Reply Date	Person Responsible	Status
4.	<p><u>Best Practices for Investing in Energy Efficiency and GHG Reduction</u> That Civic Administration BE REQUESTED to develop a set of guidelines to evaluate efficiency and Greenhouse Gas reduction investments and provide some suggested best practices.</p>	June 18, 2019	Q4, 2021	K. Scherr J. Stanford	
5.	<p><u>MADD Canada Memorial Sign</u> That the following actions be taken with respect to the memorial sign request submitted by Shauna and David Andrews, dated June 1, 2020, and supported by Mothers Against Drunk Driving (MADD) Canada:</p> <p>a) the Civic Administration BE DIRECTED to engage in discussions with MADD Canada regarding MADD Canada Memorial Signs and bring forward a proposed Memorandum of Understanding with MADD Canada for Council's approval;</p> <p>it being noted that MADD will cover all sign manufacturing and installation costs;</p> <p>it being further noted that the Ministry of Transportation and MADD have set out in this Memorandum of Understanding ("MOU") the terms and conditions for the placement of memorial signs on provincial highways which is not applicable to municipal roads;</p> <p>it being further noted that MADD provides messages consistent with the London Road Safety Strategy; and,</p> <p>b) the Civic Administration BE DIRECTED to work with MADD Canada to find a single permanent location in London for the purpose of memorials.</p>	July 14, 2020	Q4, 2021	D. MacRae A. Salton	
6.	<p><u>Street Renaming By-law, Policies and Guidelines</u> That the following actions be taken with respect to the street renaming of Plantation Road:</p>	September 22, 2020	TBD	G. Kotsifas	

File No.	Subject	Request Date	Requested/Expected Reply Date	Person Responsible	Status
	<p>b) the Civic Administration BE DIRECTED to undertake a review of City's By-laws, Policies and Guidelines relating to street naming processes and approvals and report back to the Civic Works Committee on any recommended changes to the process(es) that would support and implement the City's commitment to eradicate anti-Black, anti-Indigenous and people of colour oppression; it being noted that the report back is to include a review of the request set out in the above-noted petition, recognizing that, historically, the word "Plantation" has a strong correlation to slavery, oppression and racism;</p>				
7.	<p><u>Updates - 60% Waste Diversion Action Plan Including Green Bin Program</u> d) the Civic Administration BE DIRECTED to: i) continue to prioritize work activities and actions that also contribute to the work of the London Community Recovery Network; and, ii) submit a report to the Civic Works Committee by June 2021 that outlines advantages, disadvantages, and implementation scenarios for various waste reduction and reuse initiatives, including but not limited to, reducing the container limit, examining the use of clear bags for garbage, mandatory recycling by-laws, reward and incentive systems, and additional user fees.</p>	November 17, 2020	Q3, 2021	K. Scherr J. Stanford	
8.	<p><u>Green Bin Program Design - Community Engagement Feedback</u> That, on the recommendation of the Managing Director, Environmental and Engineering Services and City Engineer the following actions be taken with respect to the staff report dated March 30, 2021, related to the Green Bin Program Design and Community Engagement Feedback:</p> <p>e) the Civic Administration BE DIRECTED to report back at a future meeting of the Civic Works Committee on the outcome of the procurement processes and provide details on the preferred mix of materials to collect in the Green Bin and any final design adjustments based on new information; and,</p>	March 30, 2021	TBD, September 2021	K. Scherr J. Stanford	

File No.	Subject	Request Date	Requested/Expected Reply Date	Person Responsible	Status
	f) the Civic Administration BE DIRECTED to report back to the Civic Works Committee by September 2021 on municipal programs options, advantages, disadvantages and estimated costs to address bi-weekly garbage concerns.				
9.	<p><u>Imperial Road Sidewalk - Councillor M. Cassidy</u> That the Civic Administration BE DIRECTED to report back to a future meeting of the Civic Works Committee with the results of the photometric study on Imperial Road and the detailed design of the proposed sidewalk on the east side of Imperial Road prior to tendering or commencing work; it being noted that a communication, dated March 24, 2021, from Councillor M. Cassidy, with respect to this matter, was received.</p>	March 30, 2021	TBD	K. Scherr D. MacRae	
10.	<p><u>3rd Report of the Cycling Advisory Committee</u> b) the following actions be taken with respect to a City of London PumpTrack: ii) the Civic Administration BE REQUESTED to report back on the process and fees associated with a feasibility study with respect to the establishment of a pumptrack facility in the City of London; it being noted that the communication, as appended to the agenda, from B. Cassell and the delegation from S. Nauman, with respect to this matter, was received</p>	May 11, 2021	TBD	K. Scherr, S. Stafford	